

Lillian Schmitt Elementary – Bid Package #2

Addendum #3

March 20, 2024

This addendum is hereby made a part of the Drawings and Specifications on the subject work as though originally included therein. The following amendments, additions, and/or corrections shall govern this package.

General

- 1) All bids must be received no later than Friday, 3/22/24 at 2PM (Bids to be dropped off at BCSC School Corporation Office : 1200 Central Avenue, Columbus, IN 47201.)
- 2) Bids to be publicly read aloud at BCSC Corporation Office Terrace Room at 2:15PM on 3/22/24.
- 3) If you intend to mail your bid, please send an email to Nate Werner at nwerner@maxwellbuilds.com or call at 513-630-8618 to notify CMc.
- 4) Zoom Link for contractors to attend virtually:

Join Zoom Meeting https://us02web.zoom.us/j/89064812122?pwd=QjR5ZHIMWUINYm1zQ3JjQTBLNnZDZz09 Meeting ID: 890 6481 2122 Passcode: 6VfSt5 One tap mobile +13092053325,,89064812122#,,,,*634460# US +13126266799,,89064812122#,,,,*634460# US (Chicago) Meeting ID: 890 6481 2122 Passcode: 634460 Find your local number: https://us02web.zoom.us/u/kd3yxUjdvR

- 5) See the attached ****Updated Bid Forms that must be included within bid envelope**.** These include revised Alternates and Allowances Forms.
- 6) Substitution Requests will no longer be considered. This is the final Addendum that will be issued.

7) Bid Category #1 General Trades

- a. See Q&A #5 below for specific scope information.
- b. BC-1 is responsible for new concrete trench for mechanical pipes in addition as shown on updated Structural drawings.
- c. BC-1 is responsible for patching and repairing glue up ceiling panels as indicated on drawings.
- d. BC-1 is responsible for 08 36 15 Glazed Aluminum Sectional Doors furnishing and installation.

8) Bid Category #2 Sitework and Paving

a. BC-2 is responsible for SWPP reporting per IDEM requirements.

 BC-2 is responsible for the Site Furnishings such as bike racks and flag poles shown on L drawings with the exception of the Maya Lin Stone. Maya Lin Stone is by BC-1 per MCS BC-1 Note #130.

9) Bid Category #7 Windows and Glazing

- a. All glazing including glazing for wood doors and borrowed lites to be by BC-7.
- b. Aluminum Storefronts by BC-7. BC-7 is responsible for all hardware for storefronts.

10) Bid Category #8 Plumbing/HVAC

- a. BC-1 is responsible for new concrete trench for mechanical pipes in addition as shown on updated Structural drawings.
- b. See attached preliminary submittals/ cost information regarding the Owner's prepurchase equipment.

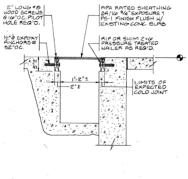
11) Bid Category #10 Painting and Coatings

- a. Multiple Contract Summary Note #14 has hereby been removed from scope of work. Refer to Addendum #1 for caulking clarification.
- b. BC-10 is responsible for painting glue up ceiling panels.

Questions and Answers

- **1)** Is BC-2 responsible for SWPPP reporting initial setup, weekly inspections, rainfall inspections, etc.? If so, this only needs to be in effect from when sitework stops until finished, correct?
 - a. CM Response: BC-2 is responsible for SWPP reporting per IDEM requirements.
 - 2) Please confirm that BC-2 is responsible for the Site Furnishings shown on L drawings with the exception of the Maya Lin Stone? These include items such as bike racks and flag poles?
 - a. CM Response: This is confirmed. BC-2 is responsible for the Site Furnishings such as bike racks and flag poles shown on L drawings with the exception of the Maya Lin Stone. Maya Lin Stone is by BC-1 per MCS BC-1 Note #130.
 - **3)** Who is responsible for furnishing and installing aluminum doors and/or aluminum door hardware?
 - a. CM Response: Aluminum Storefronts by BC-7. BC-7 is responsible for all hardware for storefronts.
 - 4) Who is responsible for 08 36 15 Glazed Aluminum Sectional Doors furnishing and installation?
 - a. CM Response: BC-1 is responsible for 08 36 15 Glazed Aluminum Sectional Doors furnishing and installation.
 - 5) Clarify the exterior wall details on A401 and who is responsible for certain items?
 - a. CM Response: Generally, metal studs by BC-5, exterior gypsum board by BC-5, vapor barrier by BC-1, rigid insulation by BC-1, masonry/wall panels by BC-1, blocking by BC-1, steel plates by BC-1, coping/fascia by BC-11, gravel stop by BC-11, roofing membrane by BC-11, insulation under roofing membrane by BC-11.
 - i. Specifically, all blocking on A121 is by BC-11. All blocking on A401 is by BC-1.
 - ii. Specifically, anywhere there are metal wall panels, rigid insulation under membrane by BC-1.
 - iii. Specifically, anywhere there is PVC membrane and no metal wall panels, rigid insulation by BC-11.
 - iv. Generally, BC-11 is responsible for everything under roofing membrane except for metal studs and first layer of dense glass unless otherwise noted.
 - 6) Who is responsible for glazing in wood doors?
 - a. CM Response: All glazing including glazing for wood doors and borrowed lites to be by BC-7.

- 7) On mechanical drawings in the tunnel level, there is a note about removing piping and installing new piping (hydronic) to be in existing trench. What type of trench is this? Pipe buried in dirt or an open trench with pipe in it?
 - a. See below detail from 1990 drawings for reference.



- 8) Where is the location of any 10 21 23 cubicle curtain track?
 - a. CM Response: The curtains were tagged in the Clinic on A901B in Addendum 1.
- **9)** Who is responsible for patching, painting, and repairing glue up ceiling panels as indicated on drawings?
 - a. CM Response: BC-1 is responsible for patching and repairing glue up ceiling panels as indicated on drawings. BC-10 is responsible for painting glue up ceiling panels.
- **10)** Are the panels in the hallway to be laminate or hardwood? Details on A611 mention hardwood but the other panels on the project around the doors and on the column at the reception desk are laminate. Please clarify.
 - a. Response Per CSO's Attached Narrative: The details on A611 for the panels in the hallway were updated in addendum 2 to be laminate instead of hardwood. See in this addendum for related keynote number change.
- **11)** Can you confirm all casework is to have locks per general casework note G?
 - a. Response Per CSO's Attached Narrative: See revised casework lock locations in CSO's addendum.
- 12) In Addendum #1 Under section 3.030 A501-Door Schedule B. Door and Frame Schedule Unit A 1. Change material finish of door 140 from HM, PT to WD, ST. Can you please verify this, it doesn't appear there is a Door # 140 in Unit A Door Schedule.
 - a. Response Per CSO's Attached Narrative: This change was meant to refer to door #148, not door #140.
- **13)** Specification 08 14 19 Flush Wood Doors/2.05/C/2 says factory install glazing in doors indicated to be factory finished. We have specified in our Multiple Contract Summary that the glazing is to be provided and installed by windows and glazing contractor. Please confirm if this is acceptable and glazing does not need to be factory installed?
 - a. Response Per CSO's Attached Narrative: Glazing being provided and installed by the windows and glazing contractor instead of factory installed is acceptable
- **14)** Site furnishings spec section on barrier gates. The manufacturer listed in specs does not provide a powder coat finish. They provide galvanized steel or aluminum. Will either of these options work? If not, and we need to provide powder coated, which material is required to powder coat?
 - a. Response Per CSO's Attached Narrative: Please include a galvanized steel barrier gate without a powder coat finish.

- **15)** On drawing C400 & C401 storm structure #403 is shown as a 9' diameter perforated manhole as well as a type C manhole (which type C means it is a 48" diameter manhole). Please confirm what this manhole diameter is supposed to be?
 - a. Response Per CSO's Attached Narrative: The diameter is supposed to be 9 feet. The label has been adjusted to "Type N" on
 - Sheet C400 and Sheet C401, which corresponds to a 9-foot diameter manhole.
- **16)** Please provide dimensions/material type for the wood beam wraps shown on A603. Please provide clarity for these beam wraps.
 - Response Per CSO's Attached Narrative: See section 7/A402 for detail on hardwood wrap in media center. Color and size to match adjacent existing beams, approximately 1' - 4 1/8", field verify.

Updated Specifications:

- 1) Refer to Addendum #3 Document Attached from CSO Noting Changes.
- 2) Refer to attached specs which have been **added**. Refer to sections above to see which bid categories specs were added to.
 - a. ADD spec section 06 42 19 Plastic-Laminate-Faced Wood Paneling

Updated Drawings:

1) Refer to Addendum #3 Document Attached from CSO Noting Changes

DOCUMENT 004323 - ALTERNATES FORM

Project: Bartholomew Consolidated School Corporation Renovations Project BP#2 – Lillian Schmitt Elementary School Lillian Schmitt Elementary School: 2675 California St, Columbus, IN 47201

Owner: Bartholomew Consolidated School Corporation Architect: CSO Architects

Construction Manager: Maxwell Construction Company

Bid Submitted By:_____

Bid Category: No.____ Description_____

DESCRIPTION

- A. The undersigned Bidder proposes the amount below be added to or deducted from the Base Bid if alternates are accepted by Owner. Amounts listed for each alternate include costs of related coordination, modification, or adjustment.
- B. If the alternate does not affect the Contract Sum, the Bidder shall indicate "NO CHANGE."
- C. If the alternate does not affect the Work of this Contract, the Bidder shall indicate "NOT APPLICABLE."
- D. The Bidder shall be responsible for determining from the Contract Documents the effects of each alternate on the Contract Time and the Contract Sum.
- E. Owner reserves the right to accept or reject any alternate, in any order, and to award or amend the Contract accordingly within 90 days of the Notice of Award unless otherwise indicated in the Contract Documents.
- F. Acceptance or non-acceptance of any alternates by the Owner shall have no effect on the Contract Time unless the "Schedule of Alternates" Article below provides a formatted space for the adjustment of the Contract Time.

SCHEDULE OF ALTERNATES AS FOLLOWS:

Bartholomew Consolidated School Corporation Project BP#2 – Lillian Schmitt Elementary

Lillian Schmitt Elementary (LSE)

Alternate No. 1 – Remove and Replace Bleachers Complete with Hussey

Responsible Bid Categories: BC-1 General Trades/BC-9 Electrical and Technology

ADD_____ DEDUCT_____ NO CHANGE_____ NOT APPLICABLE_____

	Dollars (\$)
(Written Amount)	、	(Numerical)

- Description: Base bid to include existing bleachers to remain. Alternate #1 to include <u>ADD</u> to removal and replacement of existing bleachers complete.
- Base bid to include existing conditions for bleachers. Alternate #1 to include <u>ADD</u> to wire power to new bleachers installed.
- Manufacturer: Hussey

Alternate No. 1A – Remove and Replace Bleachers Complete with Alternate Approved Manufacturer

Responsible Bid Categories: BC-1 General Trades/BC-9 Electrical and Technology

ADD	DEDUCT	NO CHANGE	NOT APPLICABLE

(Written Amount) Dollars (\$______(Numerical)

- Description: Base bid to include existing bleachers to remain. Alternate #1A to include <u>ADD</u> to removal and replacement of existing bleachers complete.
- Base bid to include existing conditions for bleachers. Alternate #1A to include <u>ADD</u> to wire power to new bleachers installed.
- Manufacturer: Alternate Approved Manufacturer per Specification 12 66 00

Alternate No. 2 – Remove and Replace Existing Manual Basketball Goals

Responsible Bid Categories: BC-1 General Trades/BC-9 Electrical and Technology

ADD_____DEDUCT_____NO CHANGE_____NOT APPLICABLE_____

_____ Dollars (\$_____)
(Written Amount)

- Description: Base bid to include existing manual basketball goals to remain. Alternate #2 to include <u>ADD</u> to remove and replace existing manual basketball goals and install retractable basketball goals.
- Base bid to include existing conditions for basketball goals. Alternate #2 to include <u>ADD</u> to wire power to retractable basketball goals.

Alternate No. 3 – Remove and Replace Basketball Wall Padding

Responsible Bid Categories: BC-1 General Trades

ADD	_ DEDUCT	NO CHANGE	NOT APPLICABLE_	
			Dollars	s (\$)
	(Writte	n Amount)		(Numerical)
Description	. Base bid to incl	ude existing basketbal	l wall padding to remain	Alternate #3 to in-

Description: Base bid to include existing basketball wall padding to remain. Alternate #3 to include ADD to remove and replace basketball wall padding complete.

Alternate No. 4 – South Sitework Shown on L202

Responsible Bid Categories: BC-2 Sitework/BC-3 Site Concrete/BC-9 Electrical and Technology

ADD	DEDUCT	NO CHANGE	NOT APPLICABLE	_
			Dollars (\$)
	(Writte	en Amount)		(Numerical)

- Description: Base bid to include north sitework as shown on drawings "L" drawings. Alternate #4 to include ADD to complete south sitework as identified in alternate area shown on drawing L102 and L202.
- Base bid to include exterior electrical work per drawing E100 with the exception of 5 'FD-1' light poles and bases. Alternate #4 to include exterior electrical work in "south sitework alternate" area. This includes 5 'FD-1' light poles and bases. Area/parameters for this alternate shown on L202. All electrical work in these parameters to be included in this alternate.

Alternate No. 5 – South Sitework Shown on L202 (Alternate #4) Timeline Summer 2025

Responsible Bid Categories: BC-2 Sitework/BC-3 Site Concrete/BC-9 Electrical and Technology

ADD DEDUCT NO CHANGE_	NOT APPLICABLE
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Dollars (\$ (Written Amount)

(Numerical)

Description: Alternate #4 to include Alternate #4 South Sitework scope of work occurring in Summer of 2025 and/or Summer of 2026 (exact schedule to be determined after bid). Alternate #5 to include a deduct to do Alternate #4 South Sitework scope of work in Summer of 2025.

Alternate No. 6 – Exterior Sitework (BC-2, BC-3, BC-9) Timeline Summer 2025

Responsible Bid Categories: BC-2 Sitework/BC-3 Site Concrete/BC-9 Electrical and Technology

ADD_____ DEDUCT_____ NO CHANGE_____ NOT APPLICABLE_____

Dollars (§_____)

Bartholomew Consolidated SECTION 004323 -School Corporation Project ALTERNATES FORM (Up-BP#2 - Lillian Schmitt Elemendated Per Addendum #3) tary (Written Amount) (Numerical) Description: Base bid to include sitework occurring in Summer of 2025 and/or Summer of 2026 (exact schedule to be determined after bid). Alternate #6 to include a deduct to do all sitework for these BC's in summer of 2025. Alternate No. 7 - Roofing Manufacturers - Carlisle Responsible Bid Categories: BC-11 Roofing ADD_____DEDUCT_____NO CHANGE_____NOT APPLICABLE_____ (Written Amount) _____ Dollars (\$_____ Description: Base bid to include Sika Sarnfil as roofing manufacturer in accordance with division 7 specifications. Alternate #7 to include a deduct for Carlisle as roofing manufacturer in accordance with Division 7 specifications. Alternate No. 7A - Roofing Manufacturers - Fibertite Responsible Bid Categories: BC-11 Roofing ADD_____ DEDUCT_____ NO CHANGE_____ NOT APPLICABLE_____ _____Dollars (\$____ (Written Amount) (Numerical) Description: Base bid to include Sika Sarnfil as roofing manufacturer in accordance with division 7 specifications. Alternate #7A to include a deduct for Fibertite as roofing manufacturer in accordance with Division 7 specifications. SUBMISSION OF BID SUPPLEMENT Respectfully submitted this _____ day of ______, 2024 Submitted By:_____(Insert name of bidding firm or corporation) Authorized Signature: (Handwritten signature) Signed By:_____(Type or print name) Title: (Owner/Partner/President/Vice President)

END OF DOCUMENT 004323

Bartholomew Consolidated School Corporation Project BP#2 – Lillian Schmitt Elementary

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the contract documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to contractor. If necessary, additional requirements will be issued by Change Order.
- B. Hourly rates used as part of the allowance must be approved by the Construction Manager prior to start of work. The rate will remain in effect for the duration of the project.
- C. All OH&P for Allowances to be included within Base-Bid.
- D. Types of allowances include the following:
 - **1.** Lump-sum allowances.
 - **2.** Unit-cost allowances.
 - **3.** Contingency allowances.
 - **4.** Testing and Inspection allowances
- E. Related Requirements:
 - 1. Section 00 43 21 "Allowance Form"
 - 2. Section 012200 "Unit Prices" for procedures for using unit prices.
 - **3.** Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 - **4.** Section 014000 "Quality Requirements" for procedures governing the use of allowances for testing and inspections.

1.3 DEFINITIONS

A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1.4 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's or Construction Manager's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.5 ACTION SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 COORDINATION

A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.8 LUMP-SUM ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect or Construction Manager under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.9 UNIT-COST ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect or Construction Manager under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect or Construction Manager under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
 - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.10 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect or Construction Manager for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.11 TESTING AND INSPECTING ALLOWANCES

- A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.
- B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.

- C. Costs of testing and inspection services not specifically required by the Contract Documents are Contractor responsibilities and are not included in the allowance.
- D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

1.12 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, required maintenance materials, and similar margins.
 - **1.** Include installation costs in purchase amount only where indicated as part of the allowance.
 - **2.** If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 - **3.** Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to unit-cost allowances.
 - 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs due to a change in the scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
 - 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.
 - 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

A. BC-1 <u>General Trades</u>

- 1. Include Allowance of \$16,000 to be used for unforeseen items associated with structural work.
- 2. Include Allowance of \$18,000 to be used for unforeseen existing roof decking work.
- 3. Include Allowance of \$27,000 for temporary wall openings to be used as directed by CMc.
- 4. Include Allowance of two hundred (200) 30-Yard dumpsters.
- 5. Include Allowance of \$65,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.
- 6. Include Allowance of \$2,500 per thousand brick Allowance. Allowance includes furnishing face brick. Material allowance and installation is included in this Section and is part of Contract Sum/Price.

B. BC-2 Sitework

1. Include Allowance of \$30,000 to be used as directed by CMc for miscellaneous materials, equipment, labor, and/or scope changes.

C. BC-3 <u>Site Concrete</u>

1. Include Allowance of \$15,000 to be used as directed by CMc for miscellaneous materials, equipment, labor, and/or scope changes.

D. BC-4 <u>Countertop</u>, Cabinetry, and Casework

1. Include Allowance of \$28,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

E. BC-5 Framing, Drywall, and Acoustical Ceiling

- 1. Include Allowance of \$25,000 for temporary wall partitions to be used as directed by CMc.
- 2. Include Allowance of \$12,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

F. BC-6 Flooring and Tiling

1. Include Allowance of \$40,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

G. BC-7 Windows and Glazing

1. Include Allowance of \$16,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

H. BC-8 Plumbing/Heating, Ventilation, and Air Conditioning

- 1. Include Allowance of \$75,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.
- 2. Include Allowance of \$25,000 for Plumbing unforeseen existing valve and fitting relocation/replacement.

I. BC-9 Electrical and Technology

- 1. Include Allowance of \$45,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.
- 2. Include Allowance of \$30,000 to be used for technology/card readers added by owner.

J. BC-10 Painting and Coating

1. Include Allowance of \$7,500 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

K. BC-11 Roofing

1. Include Allowance of \$37,000 to be used as directed by the CMc for miscellaneous materials, equipment, labor, and/or scope changes.

END OF SECTION 012100

ADDENDUM

ADDENDUM NO: 3

BID PACKAGE NO: 2

PROJECT: BCSC L.C. Schmitt Elementary Renovations

PROJECT NO: 2021049

DATE: 03/19/2024

This Addendum is issued in accordance with the provisions of "The General Conditions of the Contract for Construction," Article 1, "Contract Documents" and becomes a part of the Contract Documents as provided therein. This Addendum includes:

Addendum Pages:ADD3-1-ADD3-7Attachments:Specifications: 06 42 19 Plastic-Laminate-Faced Wood Paneling, Preliminary division 23
pre purchased equipment submittals
Revised Sheets: C000, C400, C401, S201A, S202A, S402, S701, A211B, A607, A608, A611,
A800, A801A, A801B, A801C, A801D, A802C, ED210A, ED201B, ED201C, ED201D, ED301,
E100, E201A, E201B, E201C, E201D, E202C, E211A, E211B, E211C, E211D, E212C, E231B,
E301, E401, E501, E601, E611, E612, E613

PART 1 - BIDDING AND CONTRACT REQUIREMENTS

1.01 NOT USED

PART 2 - SPECIFICATIONS

- 2.01 TABLE OF CONTENTS
 - A. DIVISION 09 FINISHES
 - 1. Remove 09 78 00 Interior Wall Paneling.
- 2.02 SECTION 06 42 19 PLASTIC-LAMINATE-FACED WOOD PANELING
 - A. Insert new section 06 42 19 Plastic-Laminate-Faced Wood Paneling.
- 2.03 SECTION 23 73 23 CUSTOM AIR-HANDLING UNITS
 - A. Add the following as paragraph **1.3 WARRANTY**

"Pre-purchased equipment manufacturer warranty shall be assumed by this contractor, in addition to standard one year installation and material warranty."

2.04 SECTION 23 74 13 – PACKAGED ROOFTOP UNITS

A. Add the following as paragraph **1.3 WARRANTY**



BY: Lauren Malonev

ROBERT No. AR00900003 STATE OF NO.LANA



"Pre-purchased equipment manufacturer warranty shall be assumed by this contractor, in addition to standard one year installation and material warranty."

2.05 SECTION 23 74 13 – CUSTOM BUILT OUTDOOR CENTRAL STATION AIR-HANDLING UNITS

A. Add the following as paragraph **3.3**, **F**.

"Pre-purchased equipment manufacturer warranty shall be assumed by this contractor, in addition to standard one year installation and material warranty."

2.06 SECTION 23 81 33 – VARIABLE REFRIGERANT VOLUME AIR CONDITIONING

A. Add the following to paragraph 1.2, B.

"In addition to the pre-purchased equipment and material, the contractor is responsible for providing all necessary additional material and associated labor for a complete working system."

B. Add the following as paragraph **1.3 WARRANTY**

"Pre-purchased equipment manufacturer warranty shall be assumed by this contractor, in addition to standard one year installation and material warranty."

2.07 SECTION 23 82 24 – VERTICAL UNIT VENTILATORS

A. Add the following as paragraph **1.3 WARRANTY**

"Pre-purchased equipment manufacturer warranty shall be assumed by this contractor, in addition to standard one year installation and material warranty."

PART 3 - DRAWINGS

CIVIL

- 3.01 <u>COOD TITLE SHEET</u>
 - A. Modify the drawing index to identify the revised sheets & dates under this addendum.
- 3.02 <u>C400 DRAINGAGE PLAN</u>
 - A. Modify label for STR 403 to be Type N Manhole. 9-ft diameter is correct.

3.03 <u>C401 – DRAINAGE PROFILE</u>

A. Modify labels for STR 403 to be Type N Manhole. 9-ft diameter is correct.

STRUCTURAL

3.04 <u>S201A – FOUNDATION PLAN – UNIT A</u>

A. Add concrete trenches for underslab piping as shown on the attached sheet.

3.05 S202A – ROOF FRAMING PLAN – UNIT A & UNIT C



- A. Add additional information regarding AESS requirements for clarity.
- B. Revise framing plan to identify moment frames as shown.
- C. Add framing tags as shown on the attached sheet.

3.06 <u>S402 – TYPICAL DETAILS</u>

A. Add sections 15 and 16 to provide details for new to existing conditions.

3.07 STO1 – SECTIONS & DETAILS

A. Revise sections 1 and 3 to accommodate concrete trench for underslab piping.

ARCHITECTURAL

- 3.08 KEYNOTE LEGEND
 - A. Revise keynote 06 40 00-W PLASTIC LAMINATE ON ³/₄" PARTICLE BOARD to read 06 42 19-A PLASTIC LAMINATE ON ³/₄" PARTICLE BOARD.
 - B. Revise keynote 12 36 63 A SOLID SURFACE COUNTERTOPS to read 12 32 16-B SOLID SURFACE COUNTERTOPS.
 - C. Revise keynote 06 40 00-Z SOLID PLASTIC SURFACE ½" WINDOW STOOL to read 12 32 16-C SOLID SURFACE ½" WINDOW STOOL.

3.09 A501 – DOOR SCHEDULE

- A. Revise frame material of doors 145-3, 146-4 and 147-3 from HM to AL.
- B. Revise frame material and finish of door 178-2 from HM PT to AL AN. Remove J38 from the jamb details for this door.
- C. Revise frame material of doors C104 and C112 from AL to HM.

3.010 A211B – FIRST FLOOR REFLECTED CEILING PLAN – UNIT B

A. Revise slat direction above reception desk.

3.011 GENERAL CASEWORK NOTES (A600 SERIES)

- A. Revise note G. "ALL CASEWORK TO HAVE LOCKS PROVIDED UNLESS SPECIFICALLY NOTED OTHERWISE" to read "PROVIDE LOCKS AT ALL TEACHER WARDROBE CABINETS AND AS NOTED ON THE CASEWORK ELEVATIONS".
- 3.012 A607 CASEWORK ELEVATIONS
 - A. Add notes for casework locks as shown on the attached sheet.

3.013 A608 – CASEWORK ELEVATIONS

A. Add notes for casework locks as shown on the attached sheet.



3.014 A611 – ENLARGED MILLWORK, PLANS, SECTIONS AND DETAILS

- A. Add notes for casework locks as shown on the attached sheet.
- B. Update finish tags in plan, elevations, and section details.

3.015 GENERAL FINISH NOTES (A800 SERIES)

A. Add note "24. ANY EXTERIOR DOORS WITH RED PAINT TO BE PAINTED (P5) ON INTERIOR SIDE ONLY. EXTERIOR SIDE TO REMAIN RED."

3.016 A800 – FINISH LEGEND, NOTES & ELEVATIONS

- A. Revise "PL3" to "**NOT USED**".
- B. Update finish information for "PL1" and PL2".
- C. Update finish tags in elevations.

3.017 A801A – FIRST FLOOR FINISH PLAN – UNIT A

A. Update all classrooms, small group rooms, and activity common casework to "PL2".

3.018 A801B - FIRST FLOOR FINISH PLAN - UNIT B

- A. Update all casework to "PL2".
- B. Add "PL2" to corridor panels.
- C. Update STEM LAB 185 countertop to "SS3".

3.019 A801C – FIRST FLOOR FINISH PLAN – UNIT C

- A. Update all classrooms, small group rooms, and activity common casework to "PL2".
- B. Add "PL2" to corridor panels.

3.020 <u>A801D – FIRST FLOOR FINISH PLAN – UNIT D</u>

- A. Add finish tags to STORAGE 195 and 196B.
- B. Add floor finish tag near entrance of GYM 193.

3.021 A802C – SECOND FLOOR FINISH PLAN – UNIT C

- A. Update all classrooms, small group rooms, and activity common casework to "PL2".
- B. Add F25 note to all classrooms.

ELECTRICAL

3.01 ED201A - FIRST FLOOR PLAN - UNIT A - ELECTRICAL DEMOLITION



A. This drawing is to be reissued in its entirety.

3.02 ED201B - FIRST FLOOR PLAN - UNIT B - ELECTRICAL DEMOLITION

A. This drawing is to be reissued in its entirety.

3.03 ED201C - FIRST FLOOR PLAN - UNIT C - ELECTRICAL DEMOLITION

A. This drawing is to be reissued in its entirety.

3.04 ED201D - FIRST FLOOR PLAN - UNIT D - ELECTRICAL DEMOLITION

A. This drawing is to be reissued in its entirety.

3.05 ED301 - ENLARGED BOILER ROOM PLAN - ELECTRICAL DEMOLITION

A. This drawing is to be reissued in its entirety.

3.06 E100 - SITE PLAN – ELECTRICAL

A. This drawing is to be reissued in its entirety.

3.07 E201A - FIRST FLOOR PLAN - UNIT A – LIGHTING

- A. This drawing is to be reissued in its entirety.
- 3.08 E201B FIRST FLOOR PLAN UNIT B LIGHTING
 - A. This drawing is to be reissued in its entirety.

3.09 E201C - FIRST FLOOR PLAN - UNIT C – LIGHTING

- A. This drawing is to be reissued in its entirety.
- 3.010 E201D FIRST FLOOR PLAN UNIT D LIGHTING
 - A. This drawing is to be reissued in its entirety.
- 3.011 E202C SECOND FLOOR PLAN UNIT C LIGHTING
 - A. This drawing is to be reissued in its entirety.
- 3.012 E211A FIRST FLOOR PLAN UNIT A POWER
 - A. This drawing is to be reissued in its entirety.
- 3.013 E211B FIRST FLOOR PLAN UNIT B POWER
 - A. This drawing is to be reissued in its entirety.

3.014 E211C - FIRST FLOOR PLAN - UNIT C – POWER



A. This drawing is to be reissued in its entirety.

3.015 E211D - FIRST FLOOR PLAN - UNIT D – POWER

A. This drawing is to be reissued in its entirety.

3.016 E212C - SECOND FLOOR PLAN - UNIT C - POWER

A. This drawing is to be reissued in its entirety.

3.017 E231B - FIRST FLOOR PLAN - UNIT B - FIRE ALARM

A. This drawing is to be reissued in its entirety.

3.018 E301 - ENLARGED BOILER ROOM PLAN – ELECTRICAL

A. This drawing is to be reissued in its entirety.

3.019 E401 - DETAILS - ELECTRICAL

A. This drawing is to be reissued in its entirety.

3.020 E501 - RISER DIAGRAM – ELECTRICAL

A. This drawing is to be reissued in its entirety.

3.021 E601 - SCHEDULES - ELECTRICAL

A. This drawing is to be reissued in its entirety.

3.022 E611 - SCHEDULES - PANELBOARDS

- A. This drawing is to be reissued in its entirety.
- 3.023 E612 SCHEDULES PANELBOARDS
 - A. This drawing is to be reissued in its entirety.

3.024 E613 - SCHEDULES – PANELBOARDS

A. This drawing is to be reissued in its entirety.

PART 4 - OTHER ITEMS

- 4.01 MECHANICAL
 - A. Included as a part of this addendum are the preliminary pre purchased equipment shop drawings.

PART 5 - QUESTION AND ANSWER

- 5.01 <u>Are the panels in the hallway to be laminate or hardwood? Details on A611 mention hardwood but the other panels on the project around the doors and on the column at the reception desk are laminate.</u> <u>Please clarify.</u>
 - A. Response: The details on A611 for the panels in the hallway were updated in addendum 2 to be laminate instead of hardwood. See above in this addendum for related keynote number change.
- 5.02 <u>Can you confirm all casework is to have locks per general casework note G?</u>
 - A. Response: See revised casework lock locations above in this addendum.
- 5.03 In Addendum #1 Under section 3.030 A501-Door Schedule B. Door and Frame Schedule Unit A 1. Change material finish of door 140 from HM, PT to WD, ST. Can you please verify this, it doesn't appear there is a Door # 140 in Unit A Door Schedule.
 - A. Response: This change was meant to refer to door **#148**, not door **#140**.
- 5.04 <u>Specification 08 14 19 Flush Wood Doors/2.05/C/2 says factory install glazing in doors indicated to be</u> <u>factory finished. We have specified in our Multiple Contract Summary that the glazing is to be provided</u> <u>and installed by windows and glazing contractor. Please confirm if this is acceptable and glazing does not</u> <u>need to be factory installed?</u>
 - A. Response: Glazing being provided and installed by the windows and glazing contractor instead of factory installed is acceptable.
- 5.05 <u>Site furnishings spec section on barrier gates. The manufacturer listed in specs does not provide a</u> powder coat finish. They provide galvanized steel or aluminum. Will either of these options work? If not, and we need to provide powder coated, which material is required to powder coat?
 - A. Response: Please include a galvanized steel barrier gate without a powder coat finish.
- 5.06 On drawing C400 & C401 storm structure #403 is shown as a 9' diameter perforated manhole as well as a type C manhole (which type C means it is a 48" diameter manhole). Please confirm what this manhole diameter is supposed to be?
 - A. Response: The diameter is supposed to be 9 feet. The label has been adjusted to "Type N" on Sheet C400 and Sheet C401, which corresponds to a 9-foot diameter manhole.
- 5.07 <u>Please provide dimensions/material type for the wood beam wraps shown on A603. Please provide clarity for these beam wraps.</u>
 - A. See section 7/A402 for detail on hardwood wrap in media center. Color and size to match adjacent existing beams, approximately 1' 4 1/8", field verify.

END OF ADDENDUM

SECTION 06 42 19 - PLASTIC-LAMINATE-FACED WOOD PANELING

- 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.

1.02 SUMMARY

- A. Section Includes:
 - 1. Plastic-laminate-faced wood paneling.
 - 2. Extruded aluminum perimeter trim moldings.
- B. Related Requirements:
 - 1. Section 061053 "Miscellaneous Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing paneling that is concealed within other construction before paneling installation.

1.03 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that paneling can be installed as indicated.
- 1.04 ACTION SUBMITTALS
 - A. Product Data: For each type of product.
 - 1. Include data for fire-retardant treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements.
 - B. Shop Drawings: For plastic-laminate-faced wood paneling.
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Show details full size.
 - 3. Show locations and sizes of furring and blocking, including concealed blocking specified in other Sections.
 - C. Samples for Verification: For each type of exposed laminate, 8 by 10 inches (200 by 250 mm).
 - 1. Provide one Sample applied to core material and with specified edge material applied to one edge.

1.05 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

- B. Product Certificates: For each type of product.
- C. Evaluation Reports: For fire-retardant-treated materials, from ICC-ES.

1.06 QUALITY ASSURANCE

Columbus, IN

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Fabricator of products.
- C. Conform to building code requirements for interior finish for smoke and flame spread requirements as tested in accordance with:
 - 1. ASTM E 84 (Method of test for surface burning characteristics of building Materials)
 - 2. Required Rating Class A.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver paneling until painting and similar operations that might damage paneling have been completed in installation areas. Store paneling in installation areas or in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

1.08 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install paneling until building is enclosed, wetwork is complete, and HVAC system is operating and will maintain temperature and relative humidity at levels planned for building occupants during the remainder of the construction period.
- B. Field Measurements: Where paneling is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Locate concealed framing, blocking, and reinforcements that support paneling by field measurements before being enclosed/concealed by construction and indicate measurements on Shop Drawings.

1.09 WARRANTY

A. Manufacturer warrants any product it has manufactured and sold against defects in materials or workmanship for a period of five years from the date of original purchase and acceptance for use. This warranty extends to products assembled / installed and used in the manner intended and does not cover damage or failure caused by: misuse, abuse or accidents, exposure to extreme temperature, improper installation, improper maintenance, and exposure to water, excessive humidity or excessive moisture.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide panel system by one of the following:
 - 1. Marlite Sieva
 - 2. Panel Specialists, Inc
 - 3. Monarch Metals, Inc.

2.02 TRIM ACCESSORIES

- A. Aluminum Trim: Extruded accessories of profiles and dimensions indicated.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Fry Reglet Corp.
 - b. Gordon, Inc.
 - c. Pittcon Industries.
 - d. MM Systems Corporation.
 - 2. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221 (ASTM B 221M), Alloy 6063-T5.
 - 3. Aluminum Finishes: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - a. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 611.

2.03 PANELING, GENERAL

- A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of plastic-laminate-faced wood paneling (decorative laminate surfacing) indicated for construction, finishes, installation, and other requirements.
 - 1. Grade: Premium.
- B. Provide prefinished decorative panels where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
- C. Provide blocking, furring, or wood sheathing as substrate for required installation.

2.04 PLASTIC-LAMINATE-FACED WOOD PANELING

A. Plastic Laminate: High-pressure decorative laminate complying with NEMA LD 3 and the following requirements:

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- 1. As indicated in drawings or subject to compliance with requirements, provide selection from full line of products by one of the following (must be approved):
 - a. Abet Laminati Inc.
 - b. Arborite.
 - c. Formica Corporation.
 - d. Lamin-Art, Inc.
 - e. Panel Source International, Inc.
 - f. Wilsonart LLC.
- 2. Faces: Grade VGS.
- 3. Backs: Grade BKV.
- 4. Exposed Edges: Same as faces or Grade VGS.
- B. Panel Thickness: 1/2 or 3/4 inches.
 - 1. Dimensions: Refer to Drawings.
 - a. Note: All details were designed assuming 3/4" panel thickness. If contractor elects to use 1/2" panel, sub-framing indicated shall be increased to meet overall dimensional requirements indicated in drawings. This shall be clearly indicated in shop drawings submitted to architect for review.
- C. Panel Edge Finish: Panel edges to be finished with 1mm PVC edge banding matching adjacent surfaces.
- D. Main Laminated Panel Fire Rating: Fire Rating: ASTM E84, Class A.
- E. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed surfaces complying with the following requirements:
 - 1. As indicated in drawings or selected from laminate manufacturer's full line of colors (must be approved).
 - 2. Grain Direction: Vertical.
- F. Panel Core: Fire-retardant particleboard or fire-retardant MDF.
- G. Adhesives for Bonding Plastic Laminate: Unpigmented contact cement.
 - 1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.
- H. Fire-Retardant-Treated Paneling: Panels shall consist of fire-retardant plastic laminate and fire-retardant particleboard or fire-retardant, medium-density fiberboard (MDF). Panels shall have a flame-spread index of 25 or less and a smoke-developed index of 450 or less per ASTM E84, and be listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction.
- I. Assemble panels by gluing and concealed fastening.
- J. Mounting Devices: Concealed on back of panel, recommended by manufacturer to support weight of panel, and as follows:

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1. Metal Clips or Bar Hangers: Manufacturer's standard two-part metal "Z" clips, with one part of each clip mechanically attached to back of panel and the other part to substrate, designed to permit unit removal.

2.05 MATERIALS

- A. Materials, General: Provide materials that comply with requirements of referenced quality standard for each quality grade specified unless otherwise indicated.
- B. Wood Moisture Content: 8 to 13 percent.

2.06 FIRE-RETARDANT-TREATED MATERIALS

- A. Fire-Retardant-Treated Materials, General: Where fire-retardant-treated materials are indicated, use materials that are acceptable to authorities having jurisdiction and with fire-testresponse characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
 - 1. Use treated materials that comply with requirements of referenced quality standard. Do not use materials that are warped, discolored, or otherwise defective.
 - 2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
 - 3. Identify fire-retardant-treated materials with appropriate classification marking of qualified testing agency in the form of removable paper label or imprint on surfaces that will be concealed from view after installation.
- B. Fire-Retardant Particleboard: Made from softwood particles and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 25 or less per ASTM E84.
 - For panels 3/4 inch (19 mm) thick and less, comply with ANSI A208.1 for Grade M-2 except for the following minimum properties: modulus of rupture, 1600 psi (11 MPa); modulus of elasticity, 300,000 psi (2070 MPa); internal bond, 80 psi (550 kPa); and screw-holding capacity on face and edge, 250 and 225 lbf (1100 and 1000 N), respectively.
- C. Fire-Retardant Fiberboard: MDF panels complying with ANSI A208.2, made from softwood fibers, synthetic resins, and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 200 or less per ASTM E84.

2.07 INSTALLATION MATERIALS

- A. Required Furring, Blocking, Shims, and Hanging Strips: Provide fire-retardant-treated softwood lumber, kiln-dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls.

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- 1. See drawings for fastener intent at specific details, manufacturer to verify best application at all locations to meet intent.
- C. Installation Adhesive: Product recommended by panel fabricator for each substrate for secure anchorage.

2.08 FABRICATION

- A. Complete fabrication, including assembly, to maximum extent possible, before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
 - 1. Exposed, field cut panel edges will not be accepted. See 2.04E for required panel edge finish.
 - 2. Notify Architect seven days in advance of the dates and times paneling fabrication will be complete.
- B. Shop cut openings, to maximum extent possible, to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Before installation, condition paneling to humidity conditions in installation areas.
- B. Before installing paneling, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

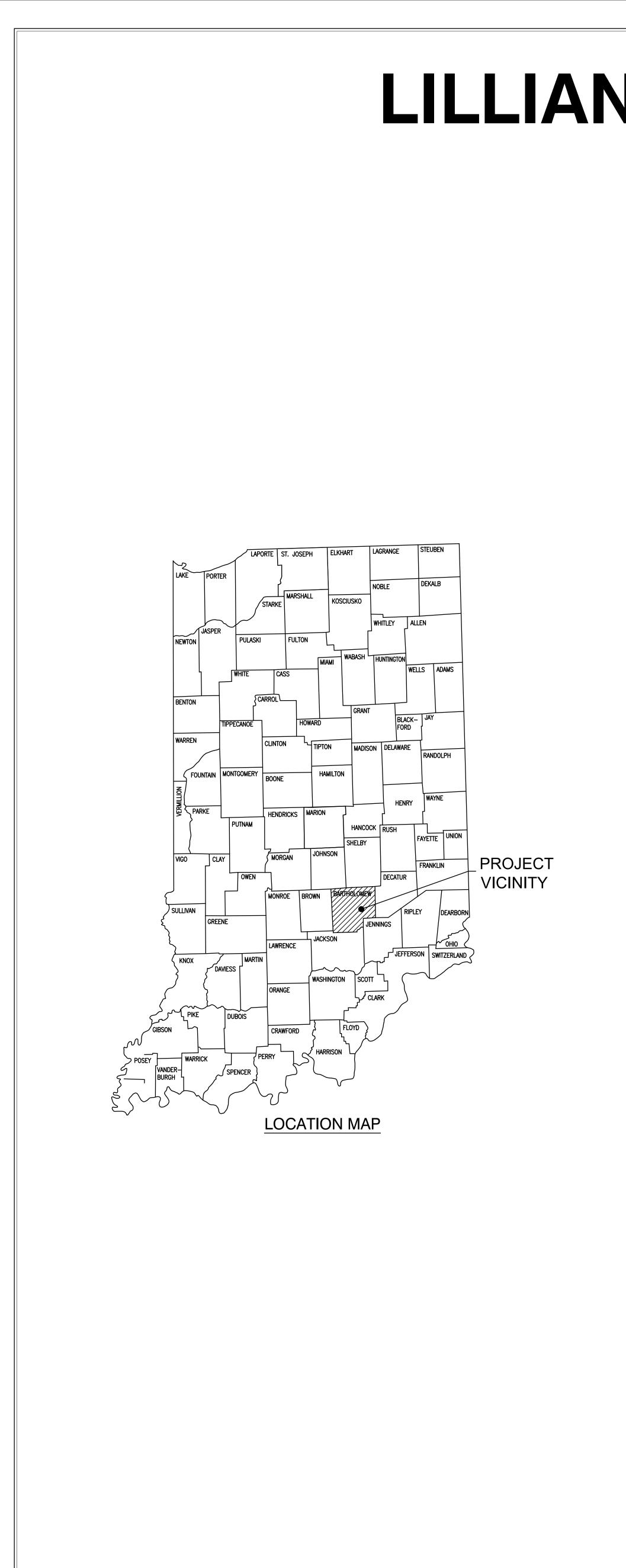
3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Grade: Install paneling to comply with quality standard grade of paneling to be installed.
- Install paneling level, plumb, true in line, and without distortion. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm). Install with no more than 1/16 inch in 96-inch (1.6 mm in 2400-mm) vertical cup or bow and 1/8 inch in 96-inch (3 mm in 2400-mm) horizontal variation from a true plane.
 - 1. For flush paneling with revealed joints, install with variations in reveal width, alignment of top and bottom edges, and flushness between adjacent panels not exceeding 1/32 inch (0.8 mm).
- D. Paneling: Anchor paneling to supporting substrate with concealed panel-hanger clips. Do not use face fastening, unless otherwise indicated.

3.03 ADJUSTING AND CLEANING

- A. Repair damaged and defective paneling, where possible, to eliminate defects. Where not possible to repair, replace paneling. Adjust for uniform appearance.
- B. Clean paneling on exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

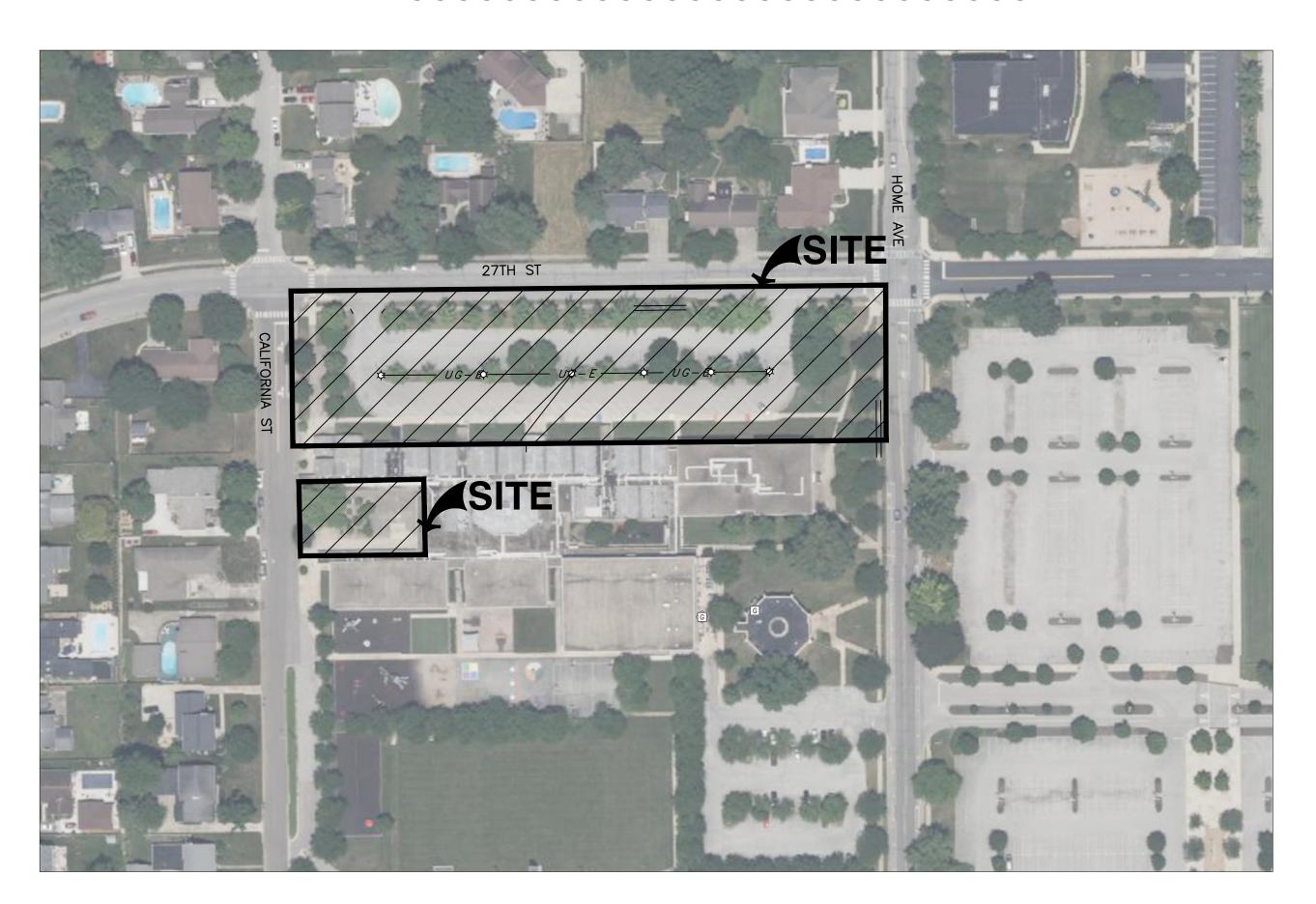
END OF SECTION



LILLIAN SCHMITT ELEMENTARY SCHOOL RENOVATIONS

2675 CALIFORNIA STREET COLUMBUS, INDIANA 47201 **100% CIVIL PLANS FEBRUARY 16, 2024**

ADDENDUM #1: MARCH 8, 2024 ADDENDUM #2: MARCH 15, 2024 ADDENDUM #3: MARCH 19, 2024





VICINITY MAP BASE IMAGE FROM GOOGLE EARTH ACCESSED JAN. 2024 SCALE: 1"=100' SCALE IN FEET 100

PROJECT TEAM:

LANDSCAPE ARCHITEC CONTEXT DESIGN 5825 LAWTON LOOP E DR INDIANAPOLIS, IN 46216 PH: (317) 485-6900 CONTACT: FRED PRAZEAU

CIVIL ENGINEER **CIVIL & ENVIRONMENTAL** CONSULTANTS, INC. 530 E. OHIO ST., STE. G INDIANAPOLIS, IN 46204 PH: (317) 655-7777 CONTACT: JONATHAN PASYK EMAIL: jpasyk@cecinc.com

UTILITIES:

GAS VECTREN

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SURVEYOR CIVIL & ENVIRONMENTAL

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> ARCHITECT CSO ARCHITECTS 8831 KEYSTONE CROSSING INDIANAPOLIS, IN 46240 PH: (317) 848-7800 CONTACT: JIM FUNK EMAIL: JFunk@CSOinc.net

SANITARY SEWER LECTRIC COLUMBUS CITY UTILITIES DUKE ENERGY 2727 CENTRAL AVE 1111 MCCLURE RD COLUMBUS, IN 47201

COLUMBUS, IN 47201 (812)372-8861

STORM SEWER WATER COLUMBUS ENGINEERING 123 WASHINGTON ST. COLUMBUS, IN 47201 (812)376-2540

ATTN: SCOTT DOMPKE

ATTN: TROY TODD

1111 MCCLURE RD COLUMBUS, IN 47201 (812)372-8861 ATTN: ANDREW BECKORT ATTN: SCOTT DOMPKE

FIRE DEPARTMENT COLUMBUS CITY UTILITIES COLUMBUS FIRE DEPARTMENT 1101 JACKSON ST. COLUMBUS, IN 47201 (812)376-2583

FLOOD NOTE:

(UN-SHADED) AS SAID PARCEL PLOTS ON MAP NUMBER 18005C0131E (DATED DECEMBER 9, 2014) OF THE FLOOD INSURANCE RATE MAPS FOR THE CITY OF COLUMBUS, BARTHOLOMEW COUNTY, INDIANA. THE ACCURACY OF THIS FLOOD HAZARD STATEMENT IS SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED FLOOD INSURANCE RATE MAP.

BENCHMARKS:

OPUS SOLUTION AND ARE ON THE 1988 NORTH AMERICAN VERTICAL DATUM (NAVD88) (GEOID 18). IT IS MY OPINION THAT THE UNCERTAINTY IN THE ÈLEVATION ÒF THE PROJECT BENCHMARK DOES NOT EXCEED 0.10 FOOT. TBM#1: SET MAGNAIL ON TOP OF A LIGHT BASE LOCATED APPROXIMATELY 140 FEET SOUTH OF THE SOUTHWEST CORNER OF THE SITE. TBM#2: NORTHEAST BOLT ON TOP OF A FIRE HYDRANT LOCATED IN THE SOUTHWEST QUADRANT OF THE INTERSECTION OF CALIFORNIA ST. AND 27TH ST. TBM#3: SOUTHWEST BOLT ON TOP OF A FIRE HYDRANT LOCATED IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF HOME AVE. AND 27TH ST. TBM#4: NORTHEAST BOLT ON TOP OF A FIRE HYDRANT LOCATED AT THE SOUTHEAST CORNER OF THE SITE.

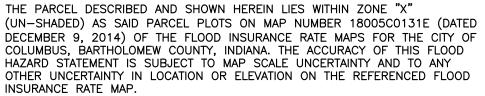
UTILITY NOTE:

SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA. EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. INDIANA 811 ONE-CALL PUBLIC UTILITY LOCATE SERVICE TICKET NUMBER 2310171909 WAS ISSUED FOR THIS SITE. AMERICAN LOCATING SERVICES, A PRIVATE SUBSURFACE UTILITY LOCATING SERVICE, WAS CONTRACTED TO PERFORM THE PRIVATE UTILITY LOCATIONS FOR THE SUBJECT SITE. THE PRIVATE UTILITIES LOCATED AND DEPICTED HEREIN WERE EITHER OBSERVED FROM MARKINGS ON THE GROUND OR USING EXISTING PLANS PROVIDED BY THE SCHOOL.

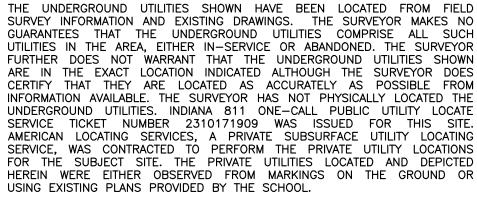
PRIOR TO ANY EXCAVATION FOR UNDERGROUND UTILITIES, THE CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO GAS, WATER, AND SANITARY SEWER. ANY CONFLICTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND THE APPROPRIATE AUTHORITIES.

PLANNING DEPARTMENT COLUMBUS PLANNING DEPARTMENT 123 WASHINGTON ST. COLUMBUS, IN 47201 (812)376-2550 ÀTTN: JEFF BERGMAN

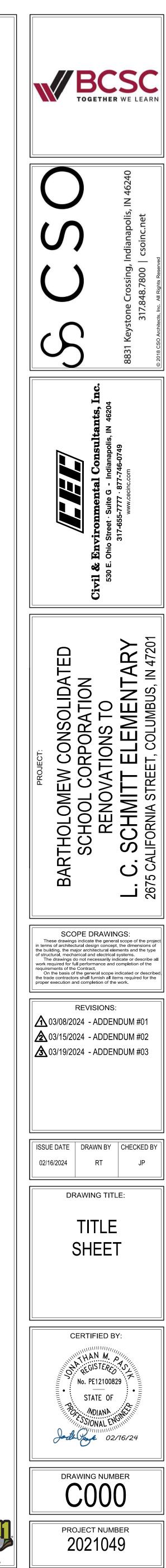
	Drawing Index	
Sheet Number	Sheet Title	Drawing No.
01	TITLE SHEET	C000
02	BOUNDARY RETRACEMENT SURVEY	BNDY
03	BOUNDARY RETRACEMENT SURVEY	BNDY
04	TOPOGRAPHIC SURVEY	ТОРО
05	TOPOGRAPHIC SURVEY	ТОРО
06	DEMOLITION PLAN	C101
07	GRADING PLAN	C300
08	FLOOD ROUTING PLAN	C301
09	GRADING PLAN - SOUTH ALTERNATE	C302
10	DRAINAGE PLAN	C400
11	DRAINAGE PROFILE	C401
12	UTILITY PLAN	C500
13	UTILITY PLAN SOUTH ALTERNATE	C501
13	PLAN DETAILS	C800
14	PLAN DETAILS	C801
15	STORMWATER POLLUTION PREVENTION PLAN	C900
16	STORMWATER POLLUTION PREVENTION NOTES	C901
17	STORMWATER POLLUTION PREVENTION PLAN - ALTERNATE	C902
18	STORMWATER POLLUTION PREVENTION DETAILS	C903
	CITY OF COLUMBUS STANDARD DETAILS	



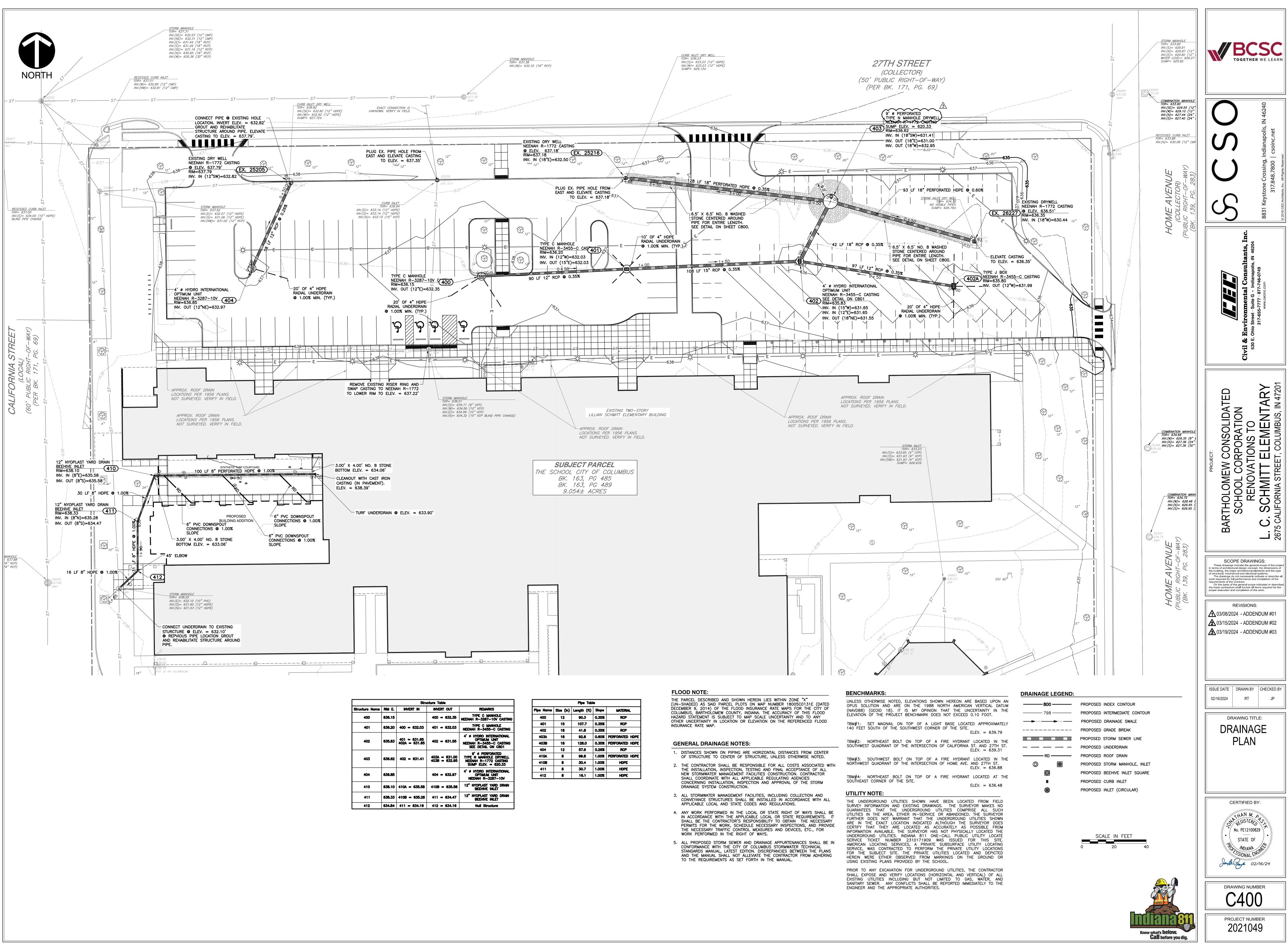
UNLESS OTHERWISE NOTED, ELEVATIONS SHOWN HEREON ARE BASED UPON AN ELEV. = 639.79ELEV. = 639.31ELEV. = 636.88ELEV. = 636.48







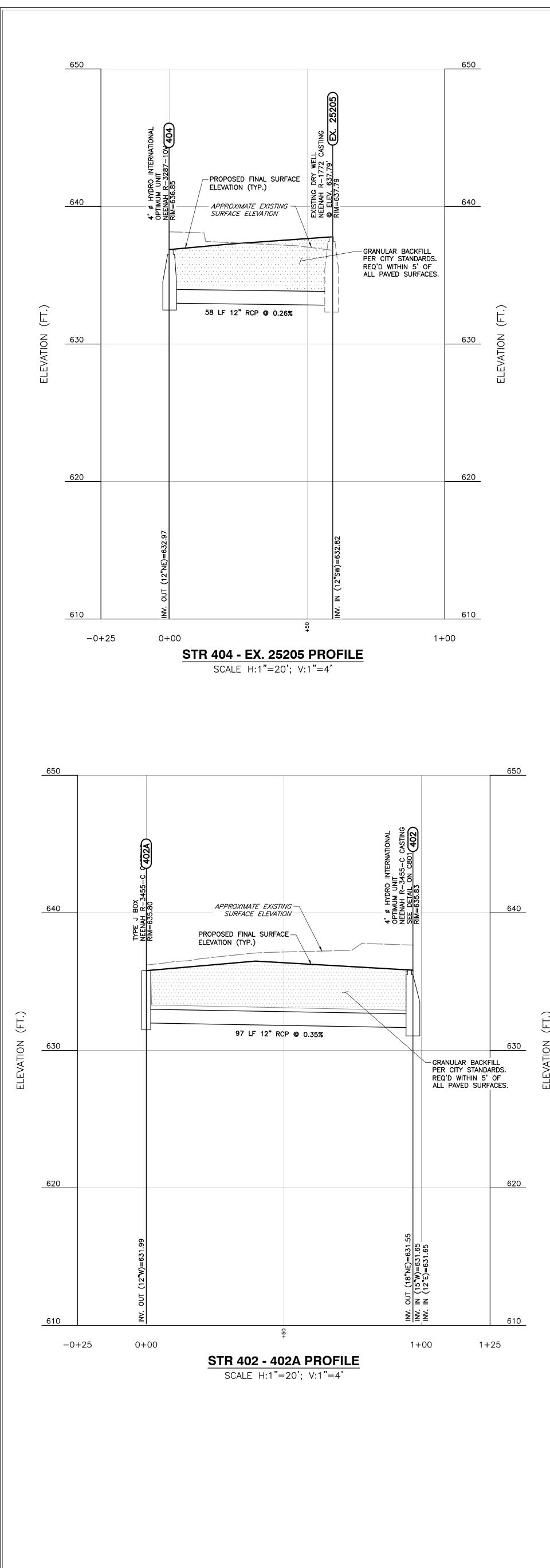
Know what's **below. Call** before you dig.



		500	icture l'able	
Structure Name	RIM E.	INVERT IN	INVERT OUT	REMARKS
400	636.15		400 = 632.35	TYPE C MANHOLE NEENAH R-3287-10V CASTING
401	636.20	400 = 632.03	401 = 632.03	TYPE C MANHOLE NEENAH R-3455-C CASTING
402	635.83	401 = 631.65 402A = 631.65	402 = 631.55	4' # HYDRO INTERNATIONAL OPTIMUM UNIT NEENAH R-3455-C CASTING SEE DETAIL ON C801
403	636.62	402 = 631.41	403A = 631.00 403B = 632.95	9' Ø PERFORATED TYPE N MANHOLE DRYWELL NEENAH R-1772 CASTING SUMP ELEV. = 620.33
404	636.85		404 = 632.97	4" # HYDRO INTERNATIONAL OPTIMUM UNIT NEENAH R-3287-10V
410	638.10	410A = 635.58	410B = 635.58	12" NYOPLAST YARD DRAIN BEEHIVE INLET
411	638.33	4108 = 635.28	411 = 634.47	12" NYOPLAST YARD DRAIN BEEHIVE INLET
412	634.84	411 = 634.16	412 = 634.16	Null Structure

		Pipe Tabl	le	
Pipe Name	Size (in)	Length (ft)	Slope	MATERIAL
400	12	90.3	0.35%	RCP
401	15	107.7	0.35%	RCP
402	18	41.8	0.35%	RCP
403A	18	92.8	0.60%	PERFORATED HDPE
403B	18	128.0	0.35%	PERFORATED HDPE
404	12	57.9	0.26%	RCP
410A	8	99.8	1.00%	PERFORATED HDPE
410B	8	30.4	1.00%	HDPE
411	8	30.7	1.00%	HDPE
412	8	16.1	1.00%	HDPE

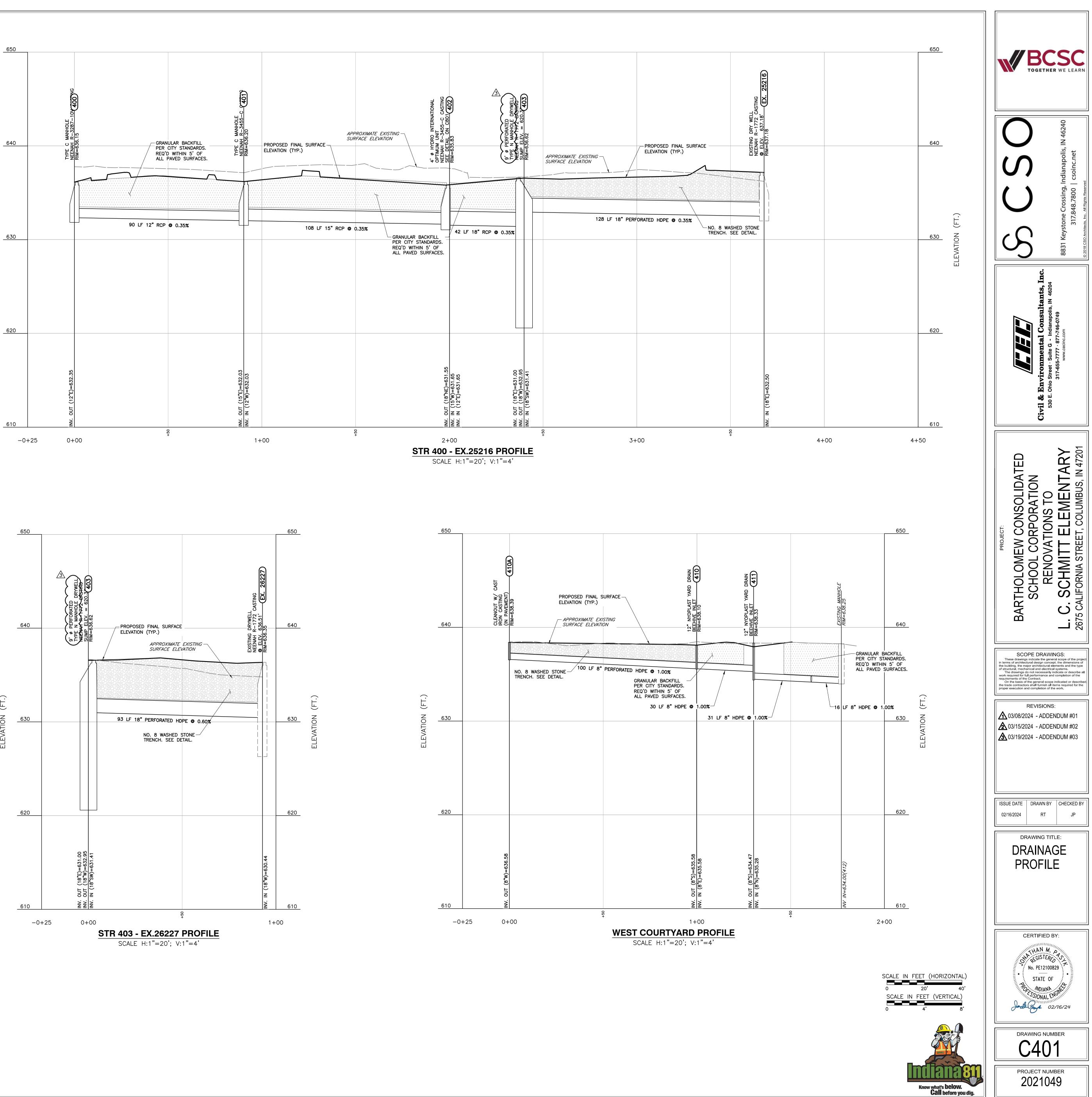
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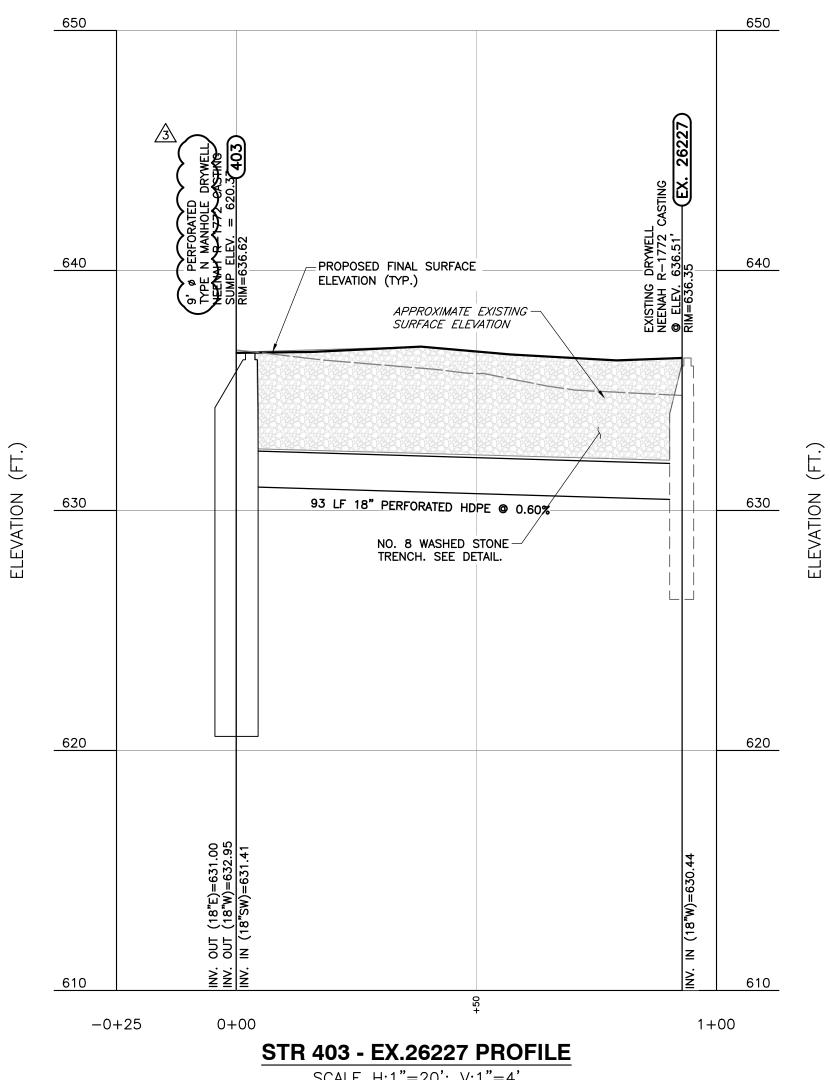


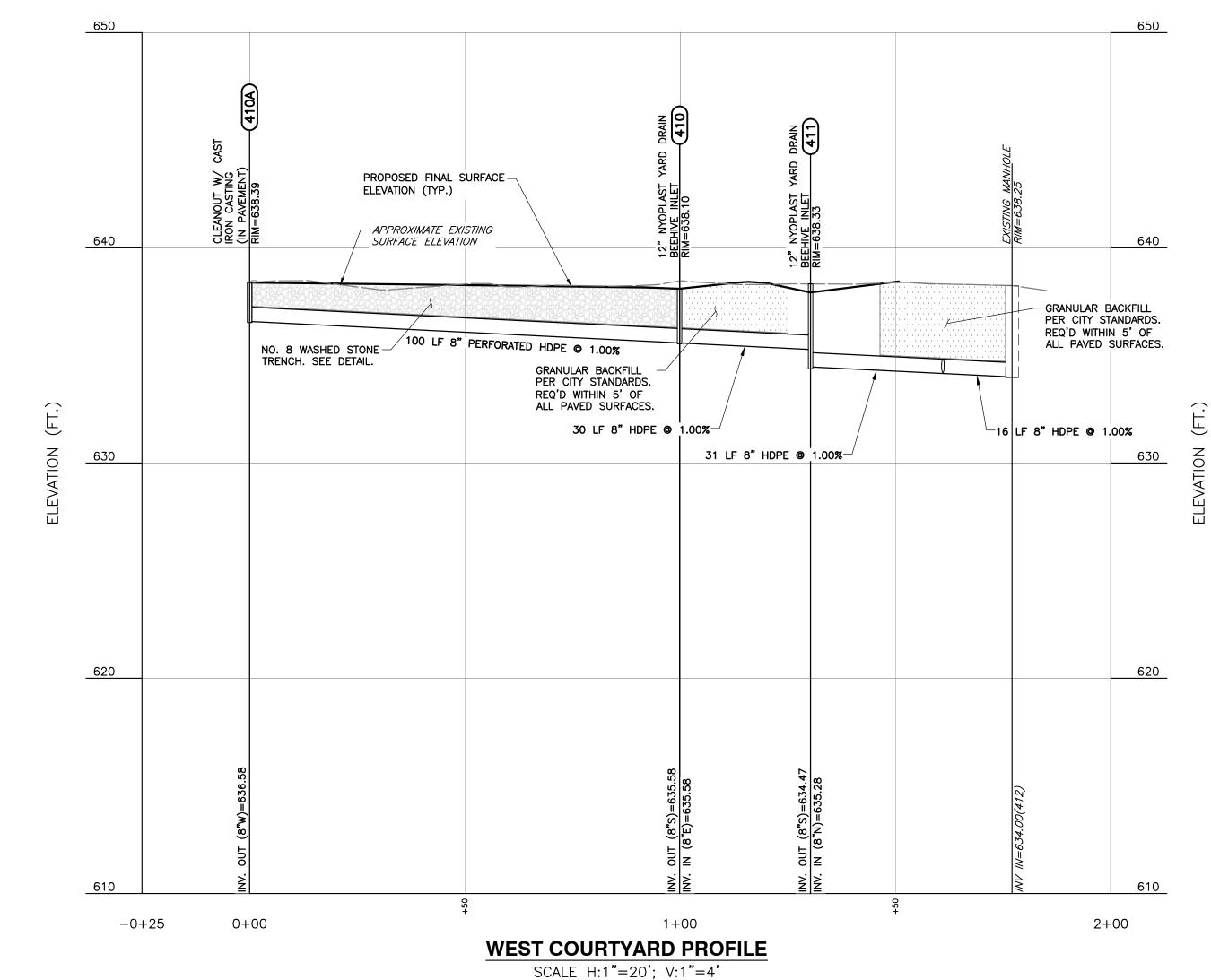
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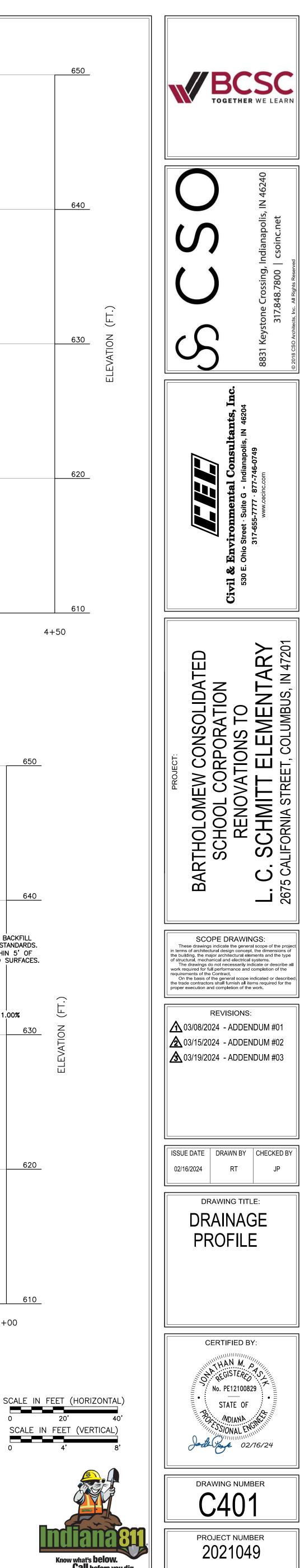
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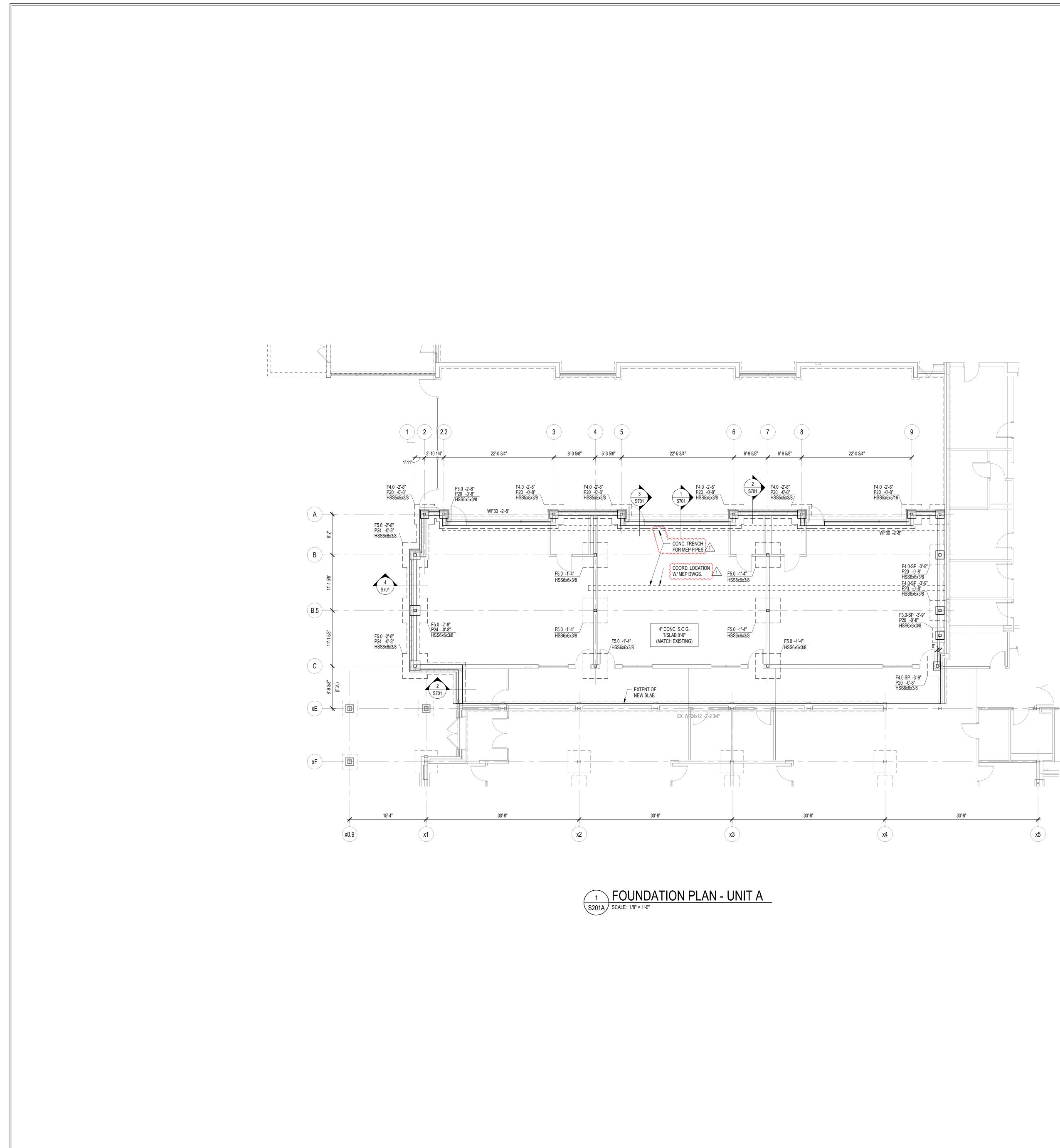
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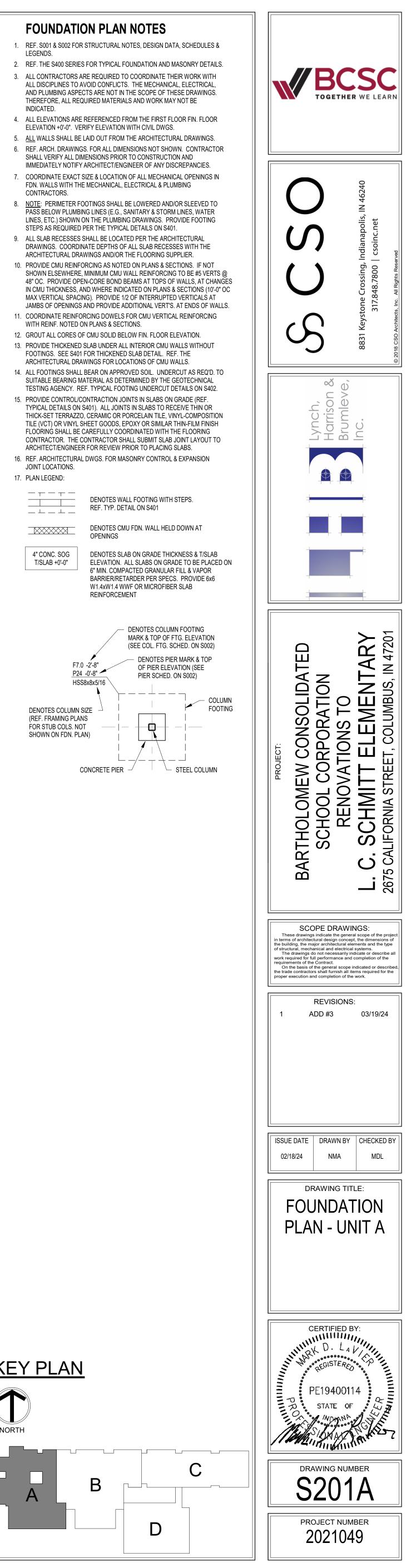


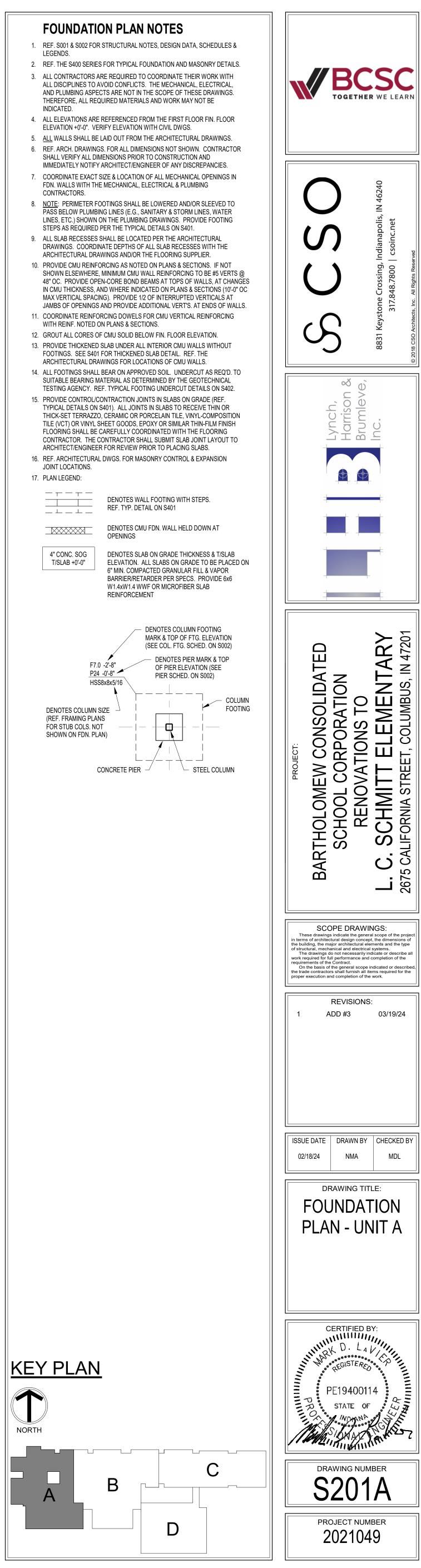


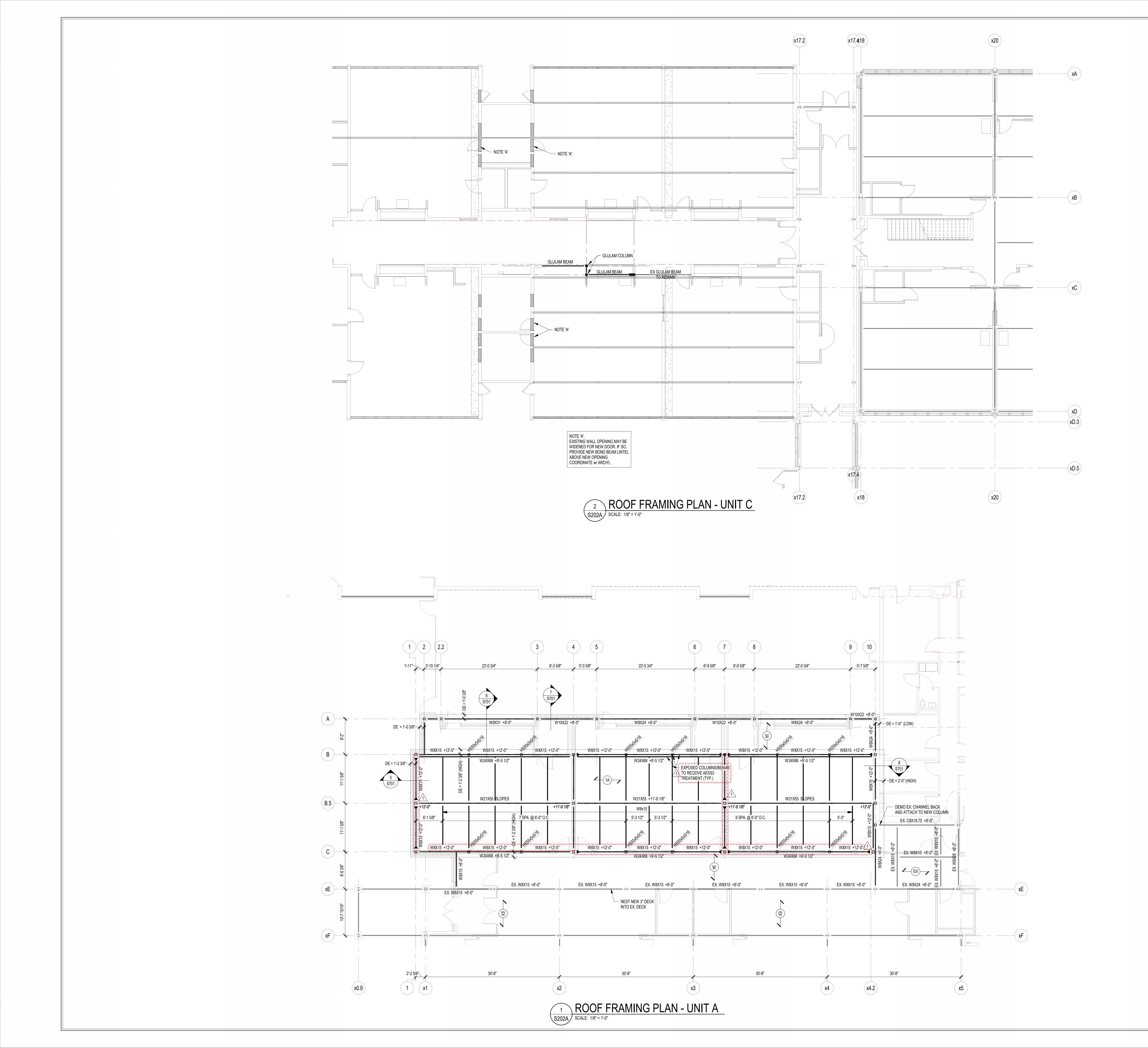




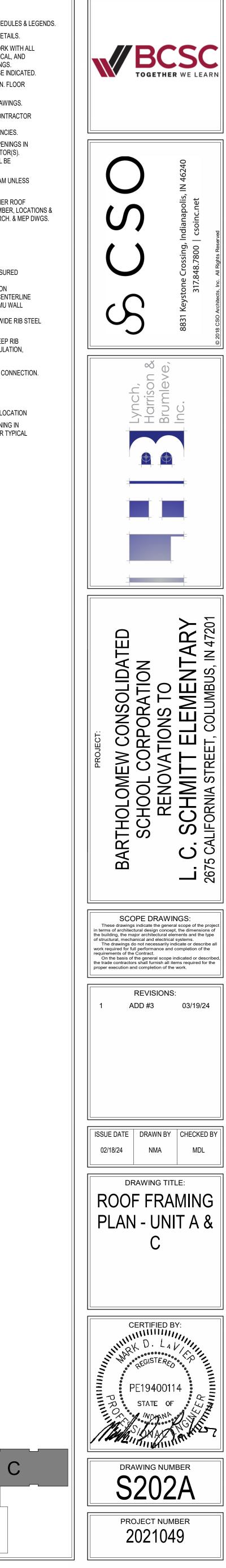


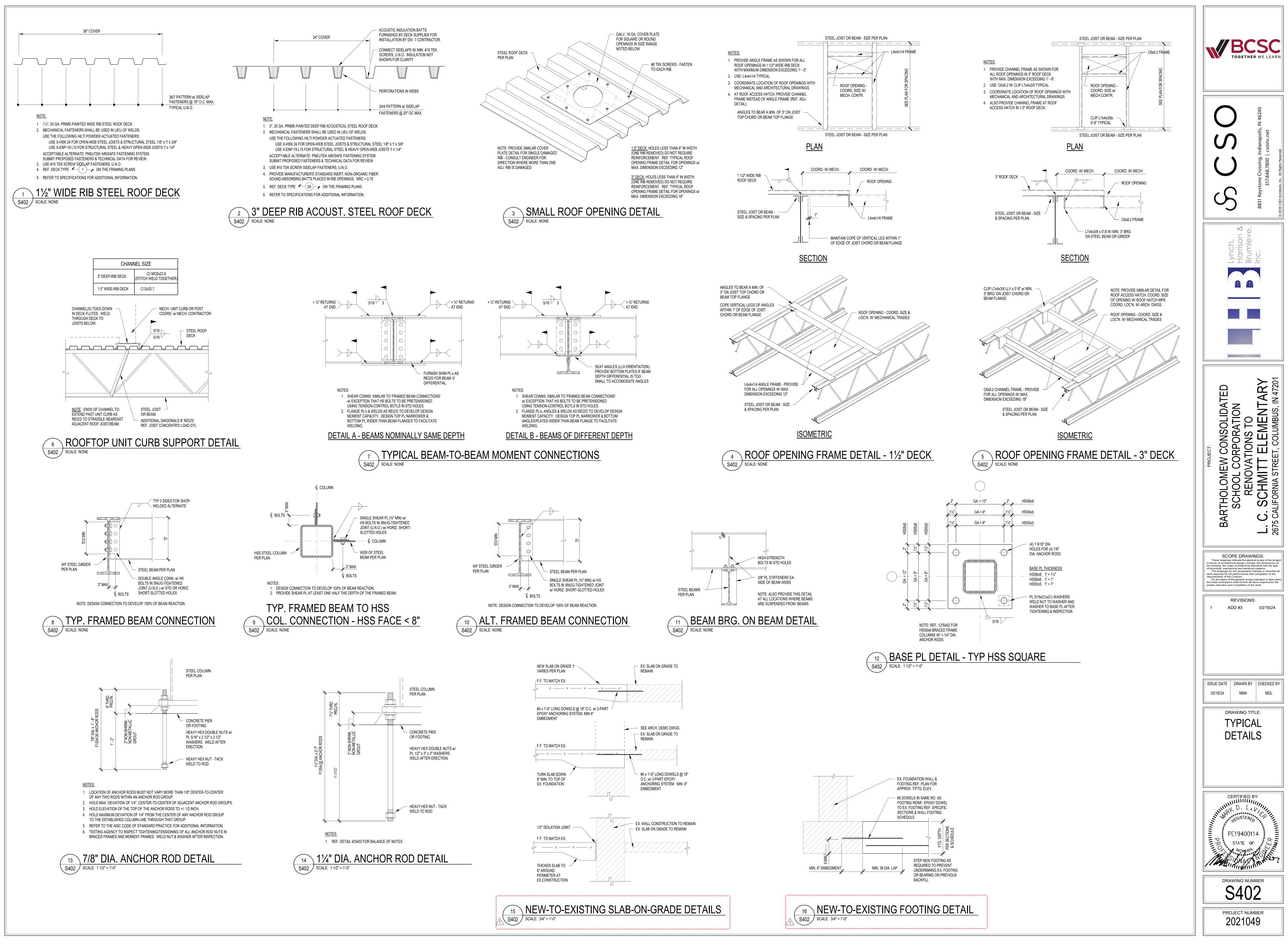


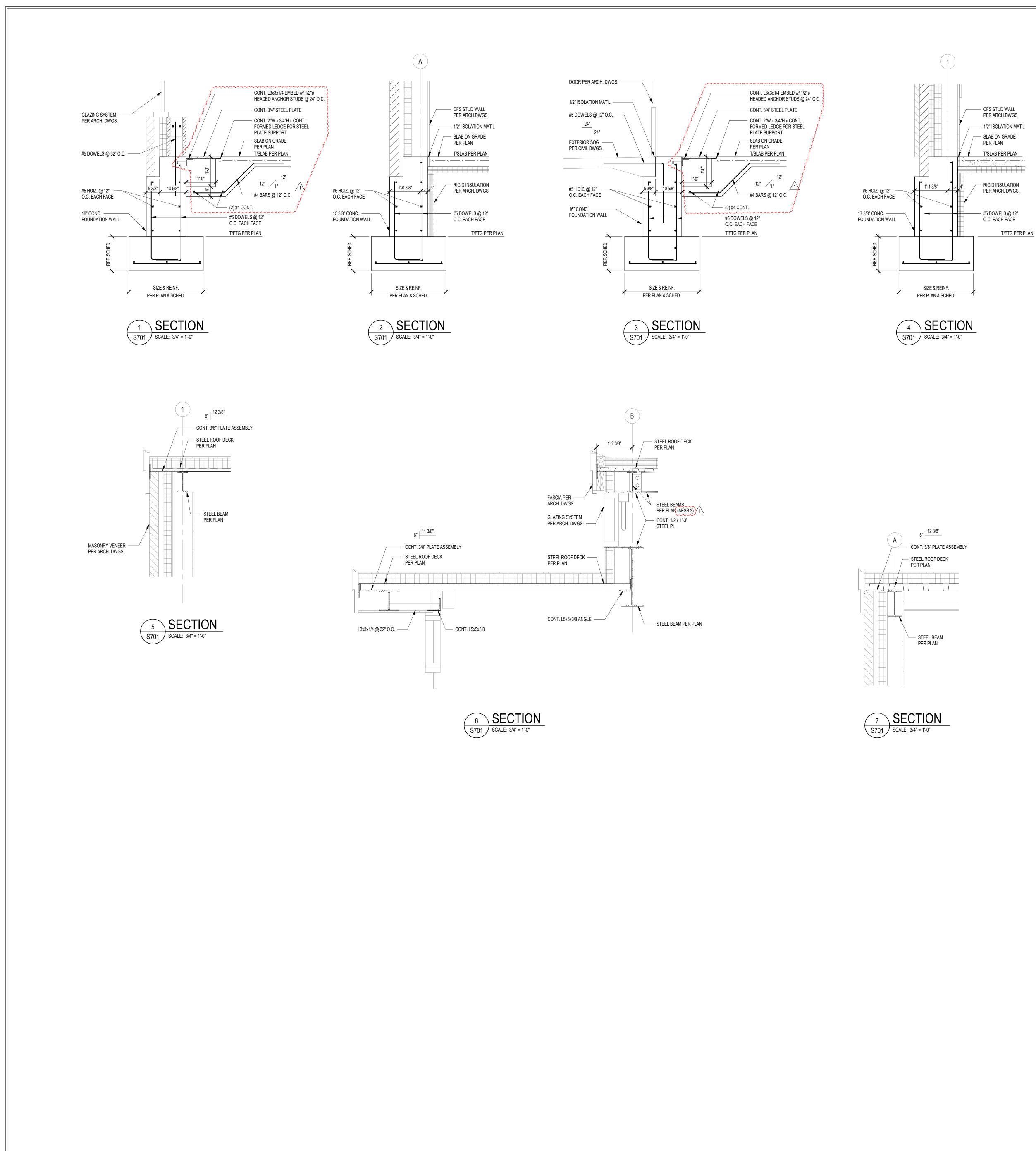




 REF. THE S400 SERIES I ALL CONTRACTORS AR DISCIPLINES TO AVOID PLUMBING ASPECTS AF THEREFORE, ALL REQU ALL ELEVATIONS ARE R ELEVATION +0'-0". VERI ALL WALLS SHALL BE L/ REF. ARCH. DRAWINGS SHALL VERIFY ALL DIME IMMEDIATELY NOTIFY A COORDINATE EXACT SI FLOOR SLAB, ROOF DEI LOCATION & SIZE OF AL VERIFIED PRIOR TO CO ALL ELEVATIONS SHOW NOTED OTHERWISE. PROVIDE FRAMES AT A OPENINGS PER TYPICA 	ITRUCTURAL NOTES, DESIGN DATA, SCHEDL FOR TYPICAL FRAMING AND MASONRY DETA E REQUIRED TO COORDINATE THEIR WORK CONFLICTS. THE MECHANICAL, ELECTRICAL RE NOT IN THE SCOPE OF THESE DRAWINGS IRED MATERIALS AND WORK MAY NOT BE IN FIRSENCED FROM THE FIRST FLOOR FIN. FI FY ELEVATION WITH CIVIL DWGS. AND OUT FROM THE ARCHITECTURAL DRAWIN FOR ALL DIMENSIONS NOT SHOWN. CONT SISIONS PRINCE TO CONSTRUCTION AND RCHITECT/ENGINEER OF ANY DISCREPANCI ZE & LOCATION OF ANY MECHANICAL OPENI CX, OR WALLS WITH THE MEP CONTRACTOR CX, OR WALLS WITH THE MEP CONTRACTORS & THE ARCH. DENOTES TOP OF STEEL, SLAB, ETC. DENOTES TOP OF STEEL, SLAB, ETC. DENOTES SLAB EDGE DIMENSION MEASUR FROM BEAM OR COLLINN CENTERLINE DENOTES SLAB EDGE DIMENSION MEASUR FROM BEAM OR COLLINN CENTERLINE DENOTES SLAB EDGE DIMENSION MEASUR FROM BEAM OR COLLINN CENTERLINE DENOTES BEAM BEARING PLATE ON CMU V DENOTES SHAB EARING PLATE ON CMU V DENOTES BEAM TO-COLLINN MOMENT COU REF. DETAIL 6005 DECK WINSULAT NRC=0.70. REF. DETAIL 4/S404. DENOTES BEAM-TO-COLUMN MOMENT COU REF. DETAILS ON S405. DENOTES BEAM-TO-COLUMN MOMENT CONNECTION. REF. DETAILS ON S404 FOR TY OPENING FRAMES.









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L3x3x1/4 ANGLE ASSEMBLY w/
 5/16" STIFFENER PLATE @ 36" O.C.

— STEEL ROOF DECK PER PLAN

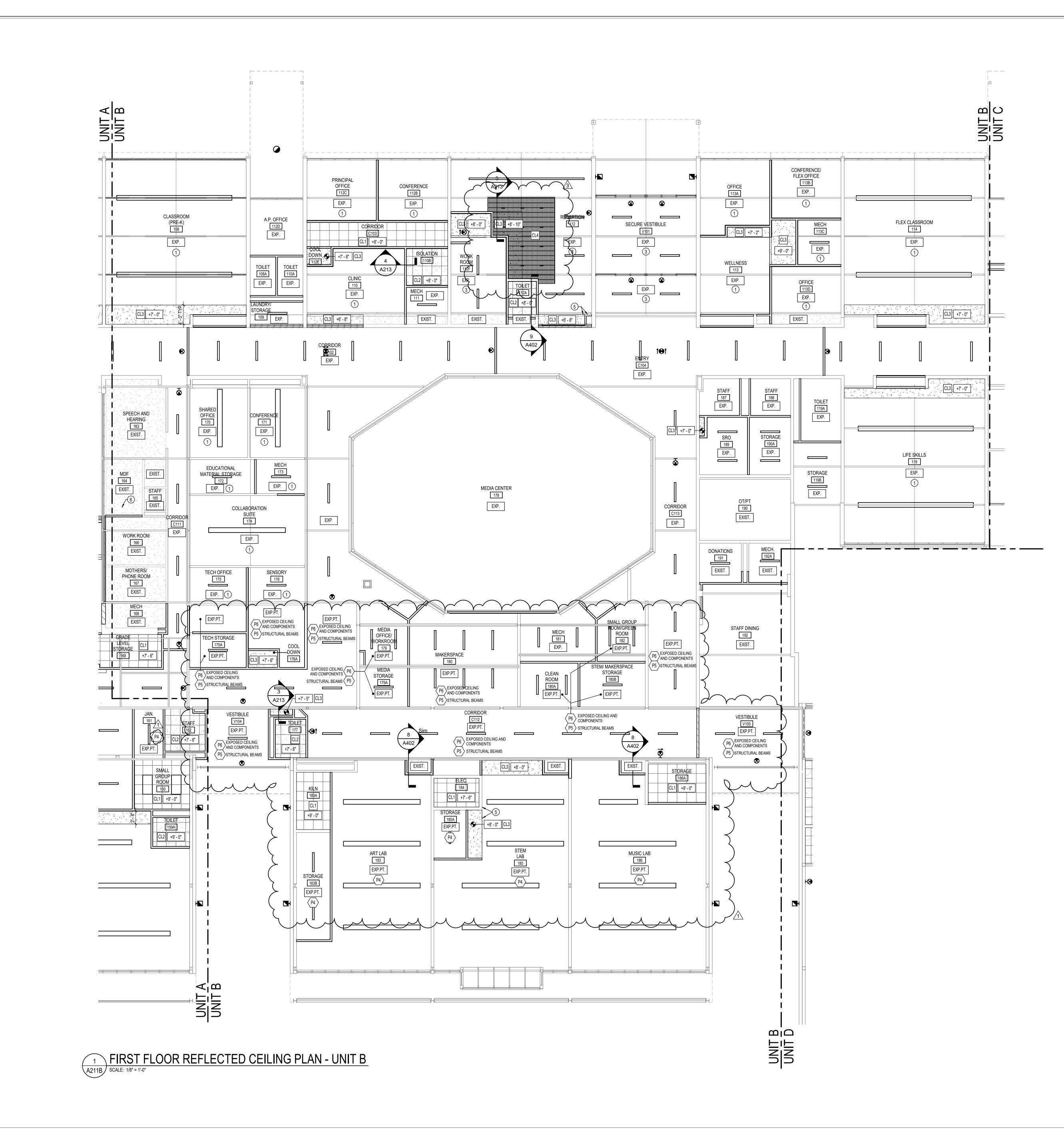
— STEEL BEAM PER PLAN

6" | 12 3/8"

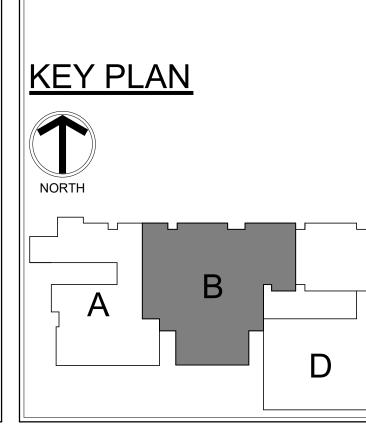
EX. ROOFING & INSULATION -----

CONT. 3/8" PLATE ASSEMBLY -





RFFI	LECTED CEILING LEG
	FLUORESCENT LIGHT FIXTURES, RECESSED OF SURFACED MOUNTED, SEE ELECTRICAL DRAW DOWNLIGHT/HIGH BAY LIGHT FIXTURE; SEE ELE DRAWINGS
	CEILING MOUNTED PROJECTOR, SEE TECHNOL RETURN/EXHAUST GRILL; SEE MECHANICAL DR
	SUPPLY AIR GRILL; SEE MECHANICAL DRAWING
	LINEAR SLOT SUPPLY AIR GRILL; SEE MECHANI
	SUSPENDED ACOUSTICAL LAY-IN CEILING MFG: ARMSTRONG MODEL #1713 STYLE: SCHOOL ZONE HIGH CAC, HIGH NRC DESCRIPTION: SQUARE EDGE COLOR: WHITE SIZE: 24" x 24" x 3/4" LOCATION: CLASSROOMS, CORRIDORS, OFFICI
	SUSPENDED ACOUSTICAL LAY-IN CEILING MFG: ARMSTRONG MODEL #1935 STYLE: ULTIMA HEALTH ZONE DESCRIPTION: SQUARE EDGE COLOR: WHITE SIZE: 2' x 2' x 3/4" LOCATION: RESTROOMS/KITCHENS
	CL3 GYPSUM WALLBOARD BULKHEAD PAINT: NOTED ON PLAN; REFER TO FINISH LEG
	SUSPENDED WOOD CEILING MFG: ARMSTRONG WOODWORKS GRILLE FOR DESCRIPTION: 75% OPEN AREA, PROVIDE 6" PE COLOR: PLAIN SLICE WHITE OAK (NOK) SIZE: 4" SLAT HEIGHT LOCATION: RECEPTION
	EXPOSED STRUCTURE NO PAINTING EXCEPT AS REQUIRED FOR M (TYPICALLY FOR CODING OF SYSTEMS) DO NOT PAINT EXPOSED WOOD DECK OR S
	EXPOSED STRUCTURE DO NOT PAINT EXPOSED WOOD DECK OR PAINT: SEE A800 SERIES FINISH PLAN NOTE
	EXISTING GYPSUM BOARD BULKHEAD OR (EXIST. PATCH AND REPAIR AS REQUIRED BY NEW APPLICABLE.
	EXIST. SUSPENDED ACOUSTICAL LAY-IN CEILING TILE AND GRID TO REMAIN.
+0' - 0"	CEILING ELEVATION MARK ABOVE FINISHED FL LOCATION IF MULTIPLE FLOOR LEVELS ARE PR
< XX>	CEILING PAINT; REFER TO FINISH LEGEND ON A
<u>REFL</u>	ECTED CEILING PLAN
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1 PATCH,	REPAIR AND PAINT EXISTING TO REMAIN GLUE-UP ACOL
2 ARMSTI	RONG INVISACOUSTICS CEILING PANELS ON METAL FURI
3 STAIN E	EXISTING WOOD DECK TO MATCH EXISTING.
4 INSTAL	L ACOUSTIC SEALANT AT THE WALL AND BEAM INTERFAC
1 PATCH,	REPAIR AND PAINT EXISTING TO REMAIN GLUE-UP ACOU
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3 STAIN E	EXISTING WOOD DECK TO MATCH EXISTING.
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TO FLO	OR DECK INTERFACES IN THIS ROOM.
5 ALIGN F	FINISH FACES.
1 PATCH, 2 ARMSTI 3 STAIN E 4 INSTALI TO FLO 5 ALIGN F	REPAIR AND PAINT EXISTING TO REMAIN GLUE-UP ACOL RONG INVISACOUSTICS CEILING PANELS ON METAL FURI EXISTING WOOD DECK TO MATCH EXISTING. L ACOUSTIC SEALANT AT THE WALL AND BEAM INTERFAC OR DECK INTERFACES IN THIS ROOM. FINISH FACES. AND REPAIR EXISTING GYPSUM BOARD CEILING WHERE
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6 PATCH	AND REPAIR EXISTING GYPSUM BOARD CEILING WHERE



<u>GEND</u>

OR AWINGS ELECTRICAL IOLOGY DRAWINGS DRAWINGS INGS ANICAL DRAWINGS

CES, ETC.

GEND ON A800.

ORTE PERIMETER TRIM

R MEP

R STRUCTURE DTES. R CEILING TO REMAIN. EW WORK WHERE

FLOOR (AT THAT PRESENT)

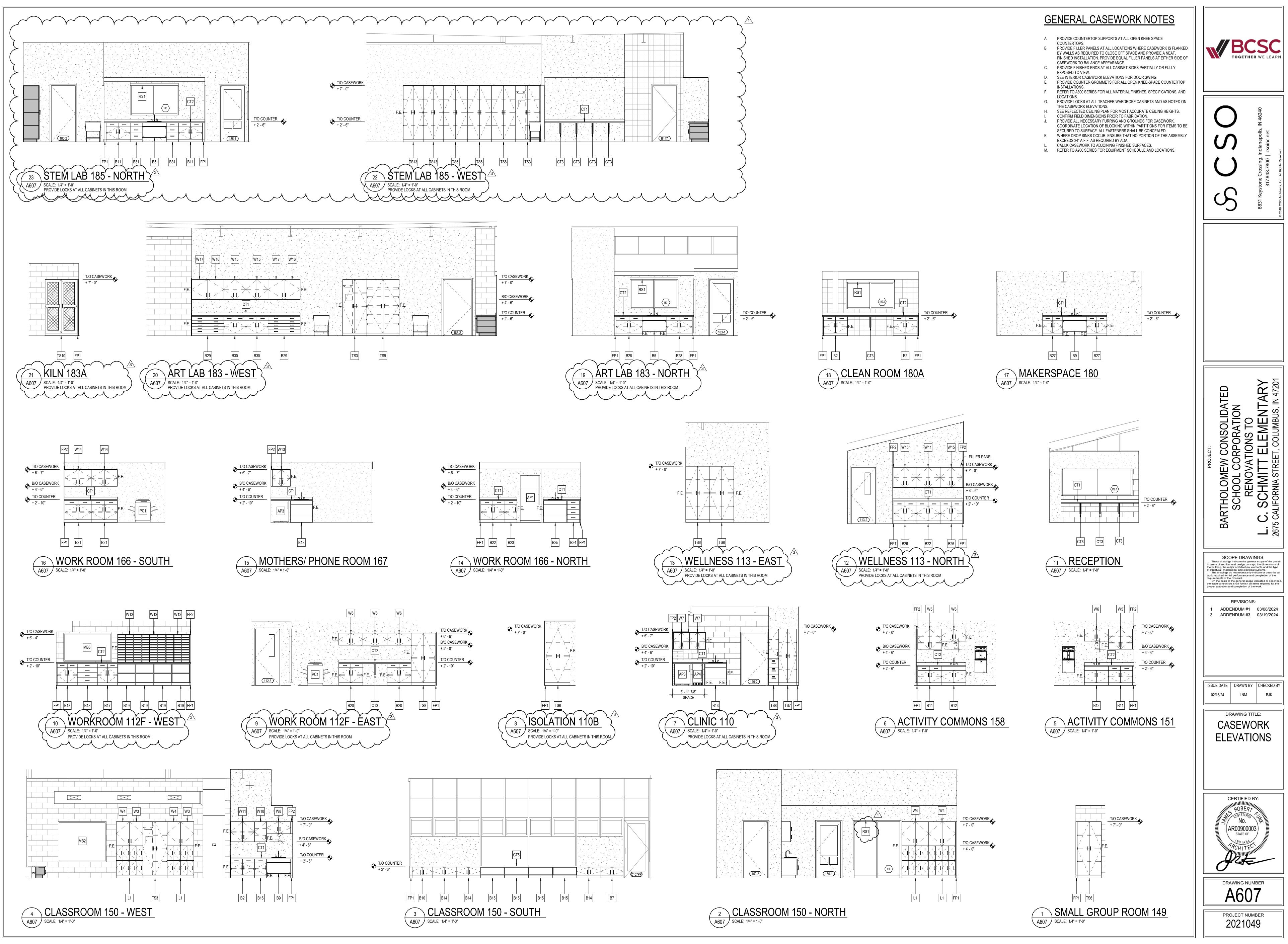
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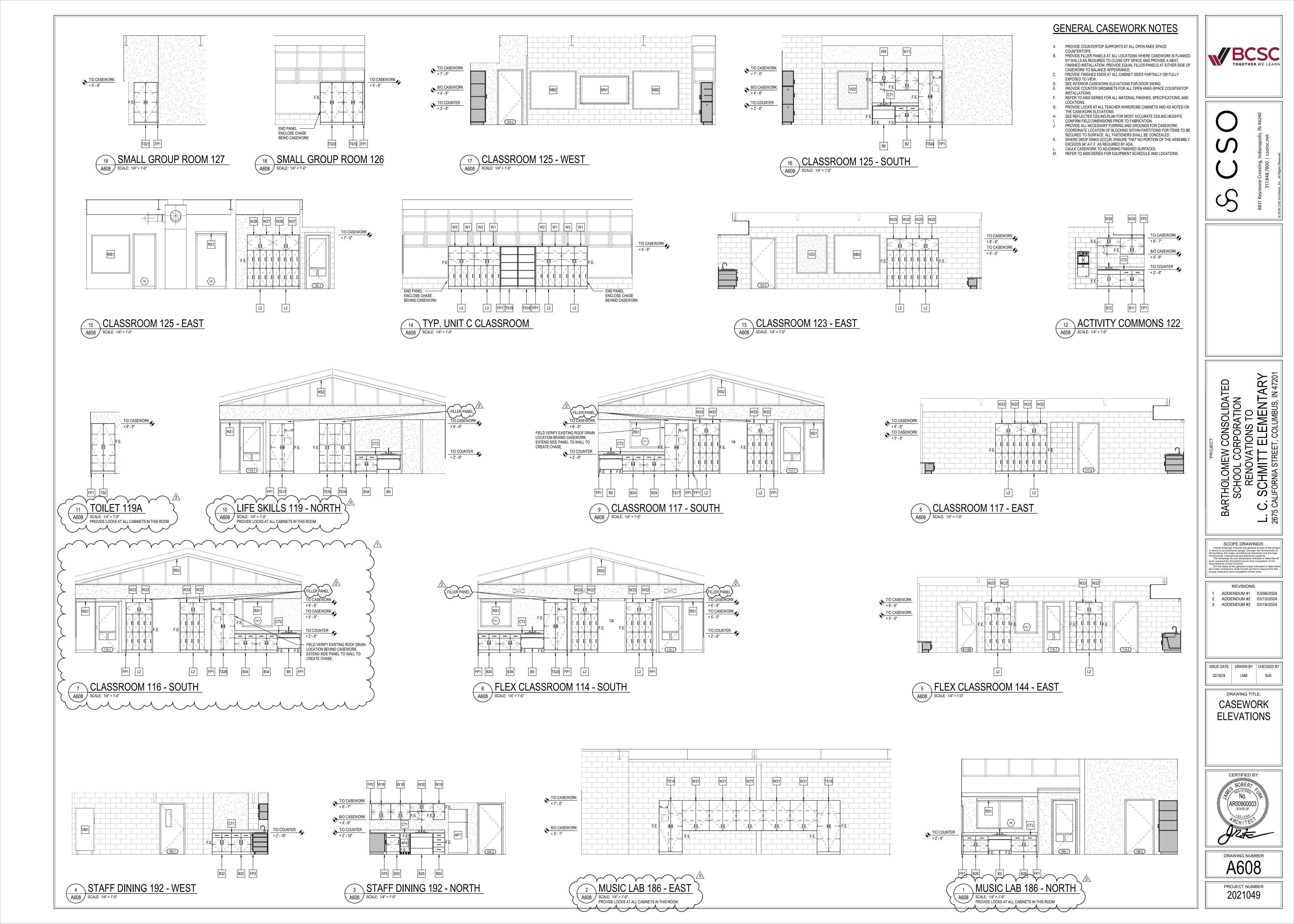
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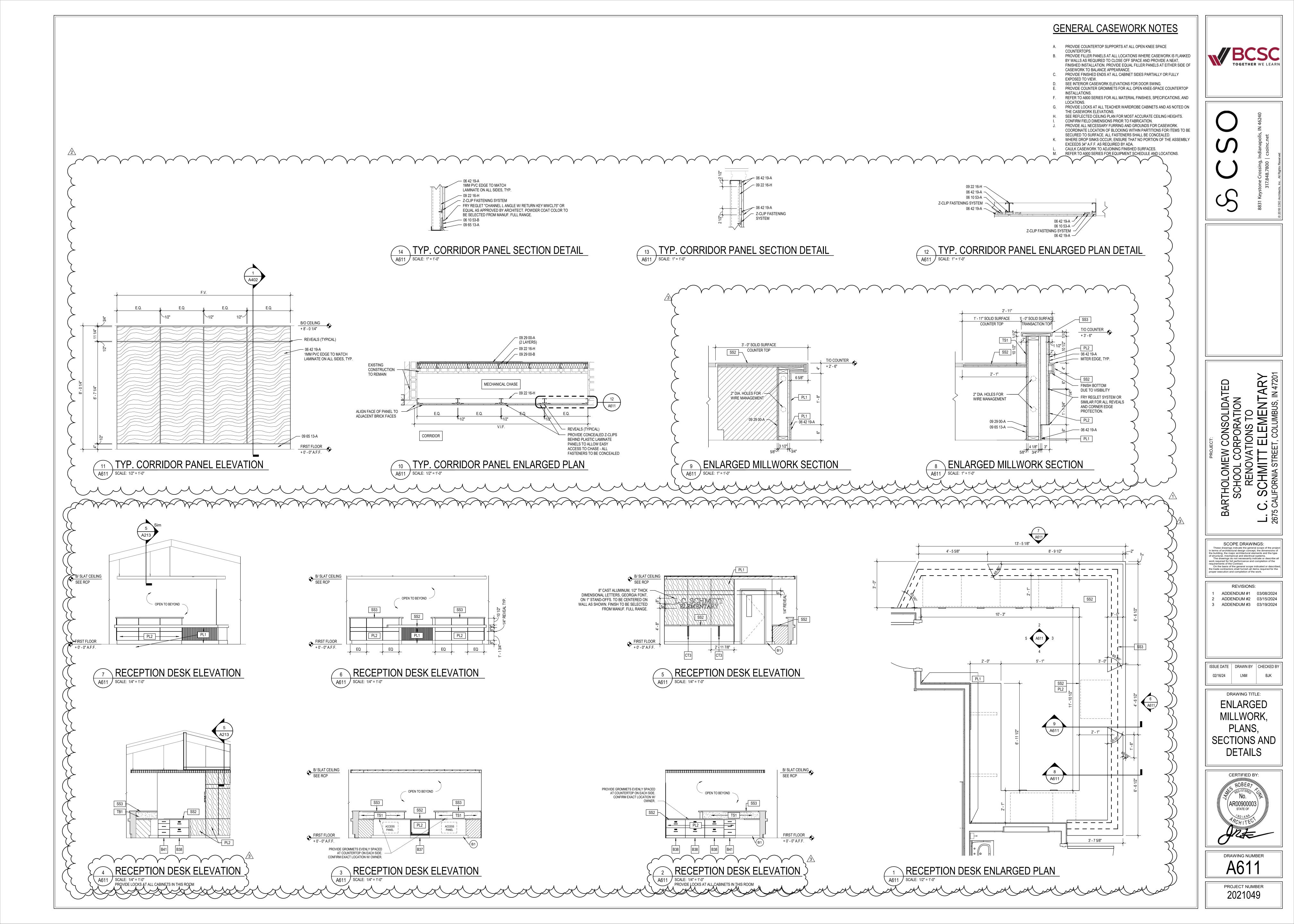
OUSTICAL TILE. JRRING. FACES, AS WELL AS BEAM

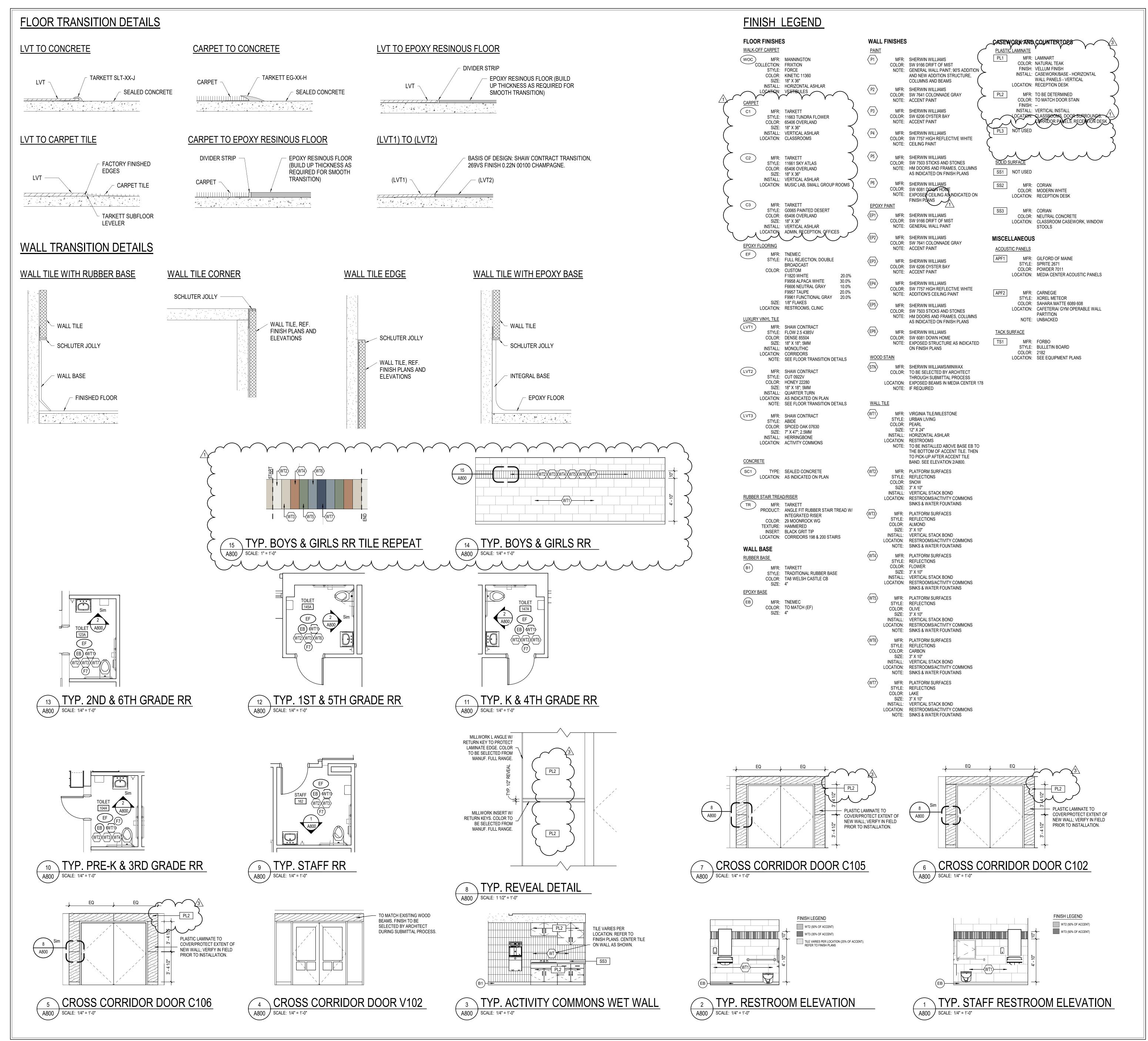
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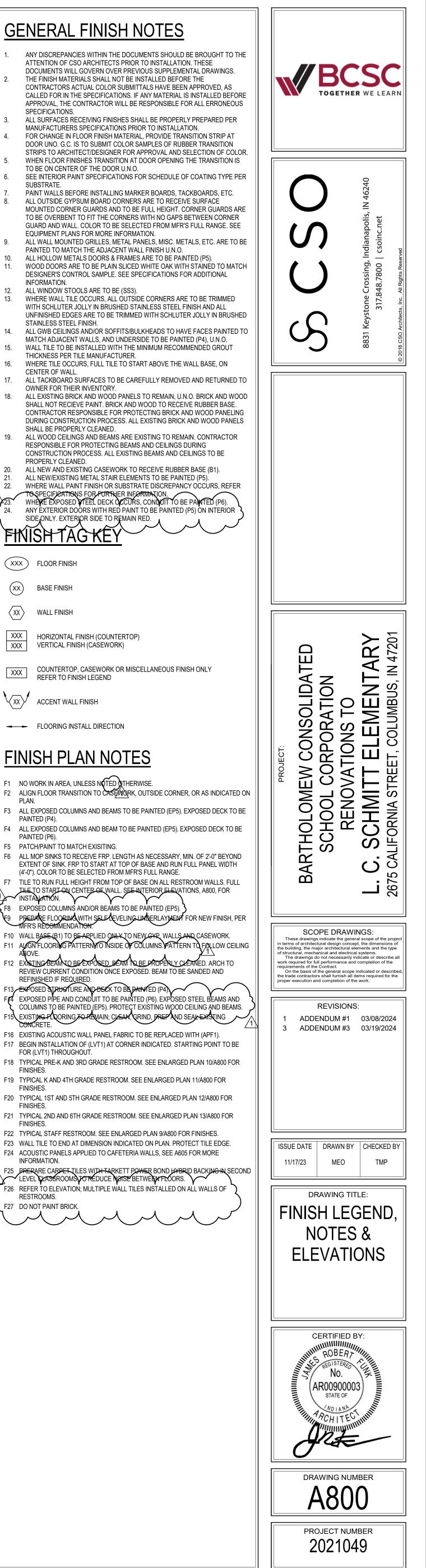


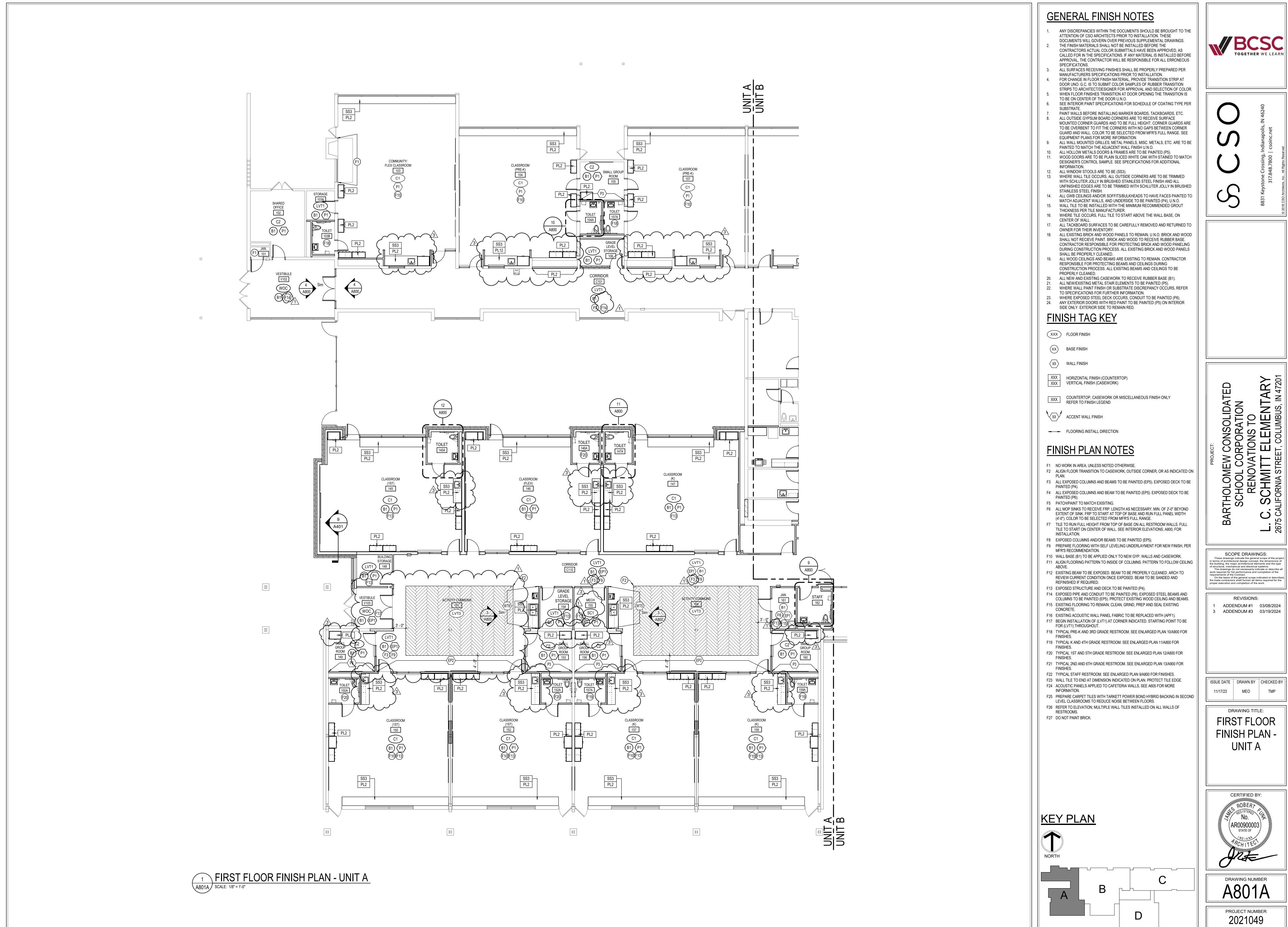


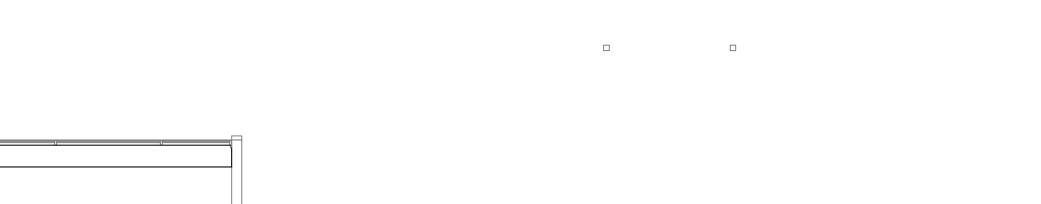


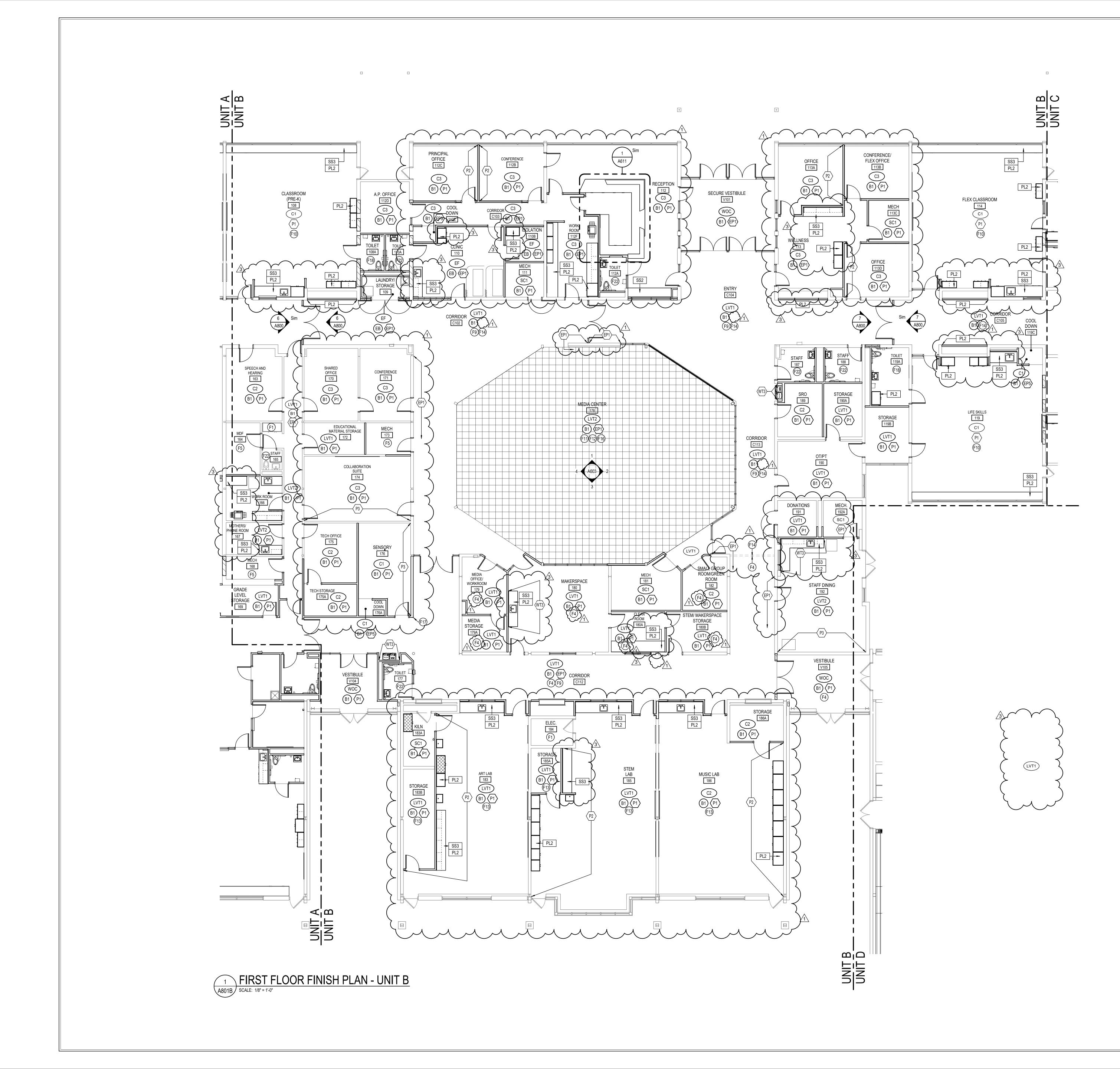


ANY DISCREPANCIES WITHIN THE DOCUMENTS SHOULD BE BROUGHT TO THE ATTENTION OF CSO ARCHITECTS PRIOR TO INSTALLATION. THESE DOCUMENTS WILL GOVERN OVER PREVIOUS SUPPLEMENTAL DRAWINGS. THE FINISH MATERIALS SHALL NOT BE INSTALLED BEFORE THE CONTRACTORS ACTUAL COLOR SUBMITTALS HAVE BEEN APPROVED. AS CALLED FOR IN THE SPECIFICATIONS. IF ANY MATERIAL IS INSTALLED BEFORE APPROVAL, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL ERRONEOUS SPECIFICATIONS. ALL SURFACES RECEIVING FINISHES SHALL BE PROPERLY PREPARED PER MANUFACTURERS SPECIFICATIONS PRIOR TO INSTALLATION. FOR CHANGE IN FLOOR FINISH MATERIAL, PROVIDE TRANSITION STRIP AT DOOR UNO. G.C. IS TO SUBMIT COLOR SAMPLES OF RUBBER TRANSITION STRIPS TO ARCHITECT/DESIGNER FOR APPROVAL AND SELECTION OF COLOR WHEN FLOOR FINISHES TRANSITION AT DOOR OPENING THE TRANSITION IS TO BE ON CENTER OF THE DOOR U.N.O. SEE INTERIOR PAINT SPECIFICATIONS FOR SCHEDULE OF COATING TYPE PER SUBSTRATE. PAINT WALLS BEFORE INSTALLING MARKER BOARDS, TACKBOARDS, ETC. ALL OUTSIDE GYPSUM BOARD CORNERS ARE TO RECEIVE SURFACE MOUNTED CORNER GUARDS AND TO BE FULL HEIGHT. CORNER GUARDS ARE TO BE OVERBENT TO FIT THE CORNERS WITH NO GAPS BETWEEN CORNER GUARD AND WALL. COLOR TO BE SELECTED FROM MFR'S FULL RANGE. SEE EQUIPMENT PLANS FOR MORE INFORMATION. ALL WALL MOUNTED GRILLES, METAL PANELS, MISC. METALS, ETC. ARE TO BE PAINTED TO MATCH THE ADJACENT WALL FINISH U.N.O. 10. ALL HOLLOW METALS DOORS & FRAMES ARE TO BE PAINTED (P5). WOOD DOORS ARE TO BE PLAIN SLICED WHITE OAK WITH STAINED TO MATCH DESIGNER'S CONTROL SAMPLE. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. 12. ALL WINDOW STOOLS ARE TO BE (SS3). 13. WHERE WALL TILE OCCURS, ALL OUTSIDE CORNERS ARE TO BE TRIMMED WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL FINISH AND ALL UNFINISHED EDGES ARE TO BE TRIMMED WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL FINISH. 14. ALL GWB CEILINGS AND/OR SOFFITS/BULKHEADS TO HAVE FACES PAINTED TO MATCH ADJACENT WALLS, AND UNDERSIDE TO BE PAINTED (P4), U.N.O. 15. WALL TILE TO BE INSTALLED WITH THE MINIMUM RECOMMENDED GROUT THICKNESS PER TILE MANUFACTURER. 16. WHERE TILE OCCURS, FULL TILE TO START ABOVE THE WALL BASE, ON CENTER OF WALL. 17. ALL TACKBOARD SURFACES TO BE CAREFULLY REMOVED AND RETURNED TO OWNER FOR THEIR INVENTORY. 18. ALL EXISTING BRICK AND WOOD PANELS TO REMAIN, U.N.O. BRICK AND WOOD SHALL NOT RECIEVE PAINT. BRICK AND WOOD TO RECEIVE RUBBER BASE. CONTRACTOR RESPONSIBLE FOR PROTECTING BRICK AND WOOD PANELING DURING CONSTRUCTION PROCESS. ALL EXISTING BRICK AND WOOD PANELS SHALL BE PROPERLY CLEANED. 19. ALL WOOD CEILINGS AND BEAMS ARE EXISTING TO REMAIN. CONTRACTOR RESPONSIBLE FOR PROTECTING BEAMS AND CEILINGS DURING CONSTRUCTION PROCESS. ALL EXISTING BEAMS AND CEILINGS TO BE PROPERLY CLEANED. 20. ALL NEW AND EXISTING CASEWORK TO RECEIVE RUBBER BASE (B1). ALL NEW/EXISTING METAL STAIR ELEMENTS TO BE PAINTED (P5). WHERE WALL PAINT FINISH OR SUBSTRATE DISCREPANCY OCCURS, REFER SPECIFICATIONS FOR FURTHER INFORMATION WHERE EXPOSED STEEL DECK OCCURS, CONDUIT TO BE PAINTED (P6). C 24. ANY EXTERIOR DOORS WITH RED PAINT TO BE PAINTED (P5) ON INTERIOR SIDE ONLY EXTERIOR SIDE TO REMAIN REL (XXX) FLOOR FINISH xx BASE FINISH $\langle XX \rangle$ WALL FINISH XXX HORIZONTAL FINISH (COUNTERTOP) VERTICAL FINISH (CASEWORK) XXX COUNTERTOP, CASEWORK OR MISCELLANEOUS FINISH ONLY REFER TO FINISH LEGEND ACCENT WALL FINISH ----- FLOORING INSTALL DIRECTION **FINISH PLAN NOTES** F1 NO WORK IN AREA, UNLESS NOTED THERWISE. F2 ALIGN FLOOR TRANSITION TO CASE WORK, OUTSIDE CORNER, OR AS INDICATED ON F3 ALL EXPOSED COLUMNS AND BEAMS TO BE PAINTED (EP5). EXPOSED DECK TO BE PAINTED (P4). F4 ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). EXPOSED DECK TO BE PAINTED (P6). F5 PATCH/PAINT TO MATCH EXISITING. F6 ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, MIN. OF 2'-0" BEYOND EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN FULL PANEL WIDTH (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. F7 TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RESTROOM WALLS. FULL THE TO START ON CENTER OF WALL. SEE INTERIOR ELEVATIONS, A800, FOR F8 EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). PREPARE FLOORING WITH SELE VELING LINDERLAYMENT FOR NEW FINISH, PER MFR'S RECOMMENDATION. F10 WALL BASE (B1) TO BE ARPLIED ONLY TO NEW GYR WALLS AND CASEWORK. F11 ALGN FLOORING PATTERNY OINSIDE OF COLUMNS, PATTERN TO FOLLOW CEILING F12 EXISTING BEANTO BE EXPOSED, BEAM TO BE PROPERLY CLEANED. ARCH TO REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO BE SANDED AND REFINISHED IF REQUIRED -13 EXPOSED STRUGTURE AND DECK TO BE PAINTED (P4), EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSED STEEL BEAMS AND COLUMNS TO BE PAINTED (EP5), PROTECT EXISTING WOOD CEILING AND BEAMS. F15 EXISTING FLOORING TO REMAIN; CLEAR, GRIND, PREPAND SEAVEXISTING F16 EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED WITH (APF1) F17 BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. STARTING POINT TO BE FOR (LVT1) THROUGHOUT F18 TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED PLAN 10/A800 FOR FINISHES. F19 TYPICAL K AND 4TH GRADE RESTROOM. SEE ENLARGED PLAN 11/A800 FOR FINISHES F20 TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PLAN 12/A800 FOR FINISHES. F21 TYPICAL 2ND AND 6TH GRADE RESTROOM. SEE ENLARGED PLAN 13/A800 FOR FINISHES. F22 TYPICAL STAFF RESTROOM. SEE ENLARGED PLAN 9/A800 FOR FINISHES F23 WALL TILE TO END AT DIMENSION INDICATED ON PLAN. PROTECT TILE EDGE. F24 ACOUSTIC PANELS APPLIED TO CAFETERIA WALLS, SEE A605 FOR MORE INFORMATION. F25 PREPARE CARPET TILES WITH TARKETT POWER BOND HYBRID BACKING IN SECOND F26 REFER TO ELEVATION; MULTIPLE WALL TILES INSTALLED ON ALL WALLS OF RESTROOMS DO NOT PAINT BRICK

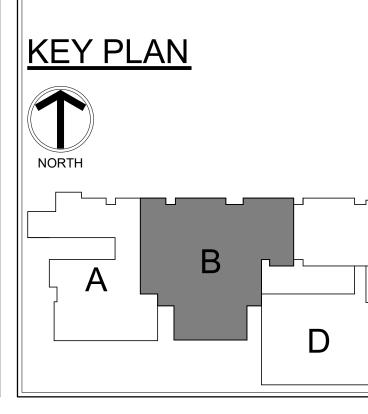


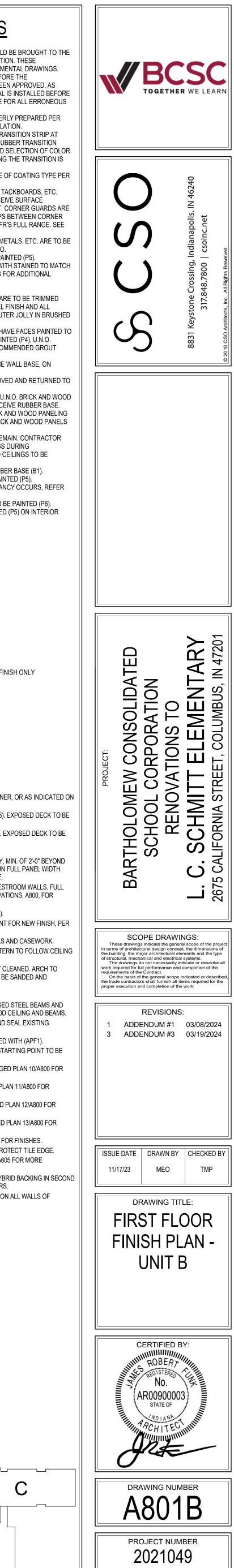


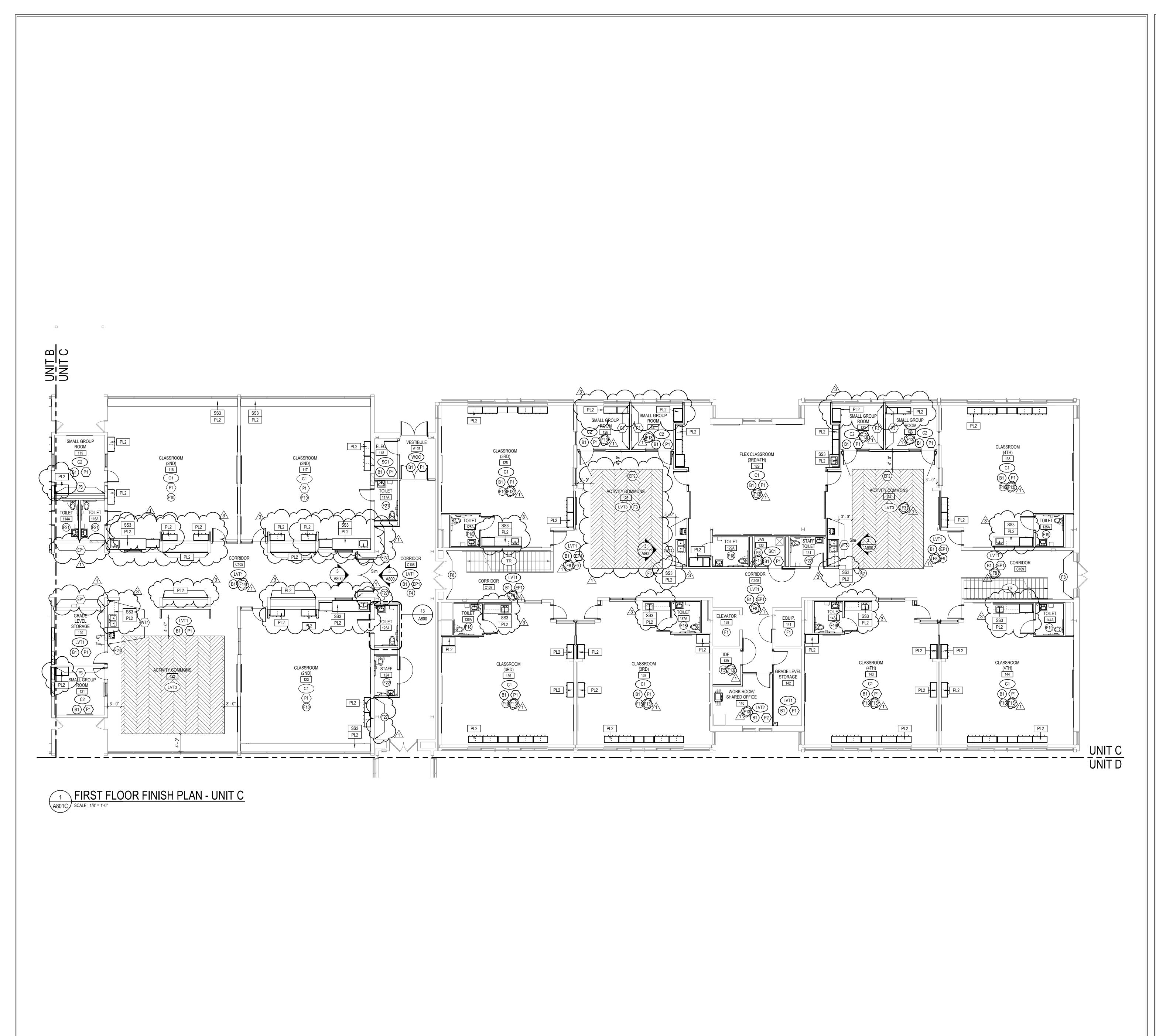




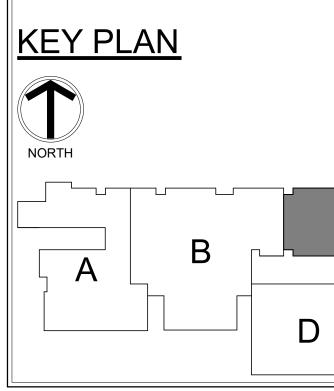
G	ENERAL FINISH NOTES
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2.	THE FINISH MATERIALS SHALL NOT BE INSTALLED BEFC CONTRACTORS ACTUAL COLOR SUBMITTALS HAVE BEE CALLED FOR IN THE SPECIFICATIONS. IF ANY MATERIAL
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	WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL UNFINISHED EDGES ARE TO BE TRIMMED WITH SCHLUT STAINLESS STEEL FINISH.
14. 15.	ALL GWB CEILINGS AND/OR SOFFITS/BULKHEADS TO HA MATCH ADJACENT WALLS, AND UNDERSIDE TO BE PAIN WALL TILE TO BE INSTALLED WITH THE MINIMUM RECO
6.	THICKNESS PER TILE MANUFACTURER. WHERE TILE OCCURS, FULL TILE TO START ABOVE THE CENTER OF WALL.
7. 8.	ALL TACKBOARD SURFACES TO BE CAREFULLY REMOV OWNER FOR THEIR INVENTORY. ALL EXISTING BRICK AND WOOD PANELS TO REMAIN, U.
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9.	SHALL BE PROPERLY CLEANED. ALL WOOD CEILINGS AND BEAMS ARE EXISTING TO REA RESPONSIBLE FOR PROTECTING BEAMS AND CEILINGS
20.	CONSTRUCTION PROCESS. ALL EXISTING BEAMS AND CEIEINGS PROPERLY CLEANED. ALL NEW AND EXISTING CASEWORK TO RECEIVE RUBB
20. 21. 22.	ALL NEW/EXISTING METAL STAIR ELEMENTS TO BE PAIN WHERE WALL PAINT FINISH OR SUBSTRATE DISCREPAN
23. 24.	TO SPECIFICATIONS FOR FURTHER INFORMATION. WHERE EXPOSED STEEL DECK OCCURS, CONDUIT TO B ANY EXTERIOR DOORS WITH RED PAINT TO BE PAINTED
FI	SIDE ONLY. EXTERIOR SIDE TO REMAIN RED.
XX	FLOOR FINISH
(\mathbf{x})	X) BASE FINISH
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XX	COUNTERTOP, CASEWORK OR MISCELLANEOUS FI
\∕x	ACCENT WALL FINISH
_	FLOORING INSTALL DIRECTION
FI	NISH PLAN NOTES
F1 F2	NO WORK IN AREA, UNLESS NOTED OTHERWISE. ALIGN FLOOR TRANSITION TO CASEWORK, OUTSIDE CORN
-2 -3	PLAN. ALL EXPOSED COLUMNS AND BEAMS TO BE PAINTED (EP5)
F4	PAINTED (P4).
F5 F6	ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5).
	ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). B PAINTED (P6). PATCH/PAINT TO MATCH EXISITING. ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY,
F7	ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I PAINTED (P6). PATCH/PAINT TO MATCH EXISITING. ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES
F7 F8	ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I PAINTED (P6). PATCH/PAINT TO MATCH EXISITING. ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA INSTALLATION.
F8 F9	ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I PAINTED (P6). PATCH/PAINT TO MATCH EXISITING. ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA INSTALLATION. EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). PREPARE FLOORING WITH SELF LEVELING UNDERLAYMENT MFR'S RECOMMENDATION.
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F8 F9 F10 F11	ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I PAINTED (P6). PATCH/PAINT TO MATCH EXISITING. ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN (4-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA INSTALLATION. EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). PREPARE FLOORING WITH SELF LEVELING UNDERLAYMENT MFR'S RECOMMENDATION. WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTE ABOVE. EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY O REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO BE
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F8 F9 F10 F11 F12 F13 F14 F15 F16 F17 F18 F19	ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). I PAINTED (P6). PATCH/PAINT TO MATCH EXISITING. ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA INSTALLATION. EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). PREPARE FLOORING WITH SELF LEVELING UNDERLAYMEN' MFR'S RECOMMENDATION. WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTE ABOVE. EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY O REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO B REFINISHED IF REQUIRED. EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSE COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP ANE CONCRETE. EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. ST FOR (LVT1) THROUGHOUT. TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED PI FINISHES.
F8 F9 F10 F11 F12 F13 F14 F15 F16 F17 F18 F19 F20	 ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). IS PAINTED (P6). PATCH/PAINT TO MATCH EXISITING. ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RESTILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVAINSTALLATION. EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). PREPARE FLOORING WITH SELF LEVELING UNDERLAYMEN' MFR'S RECOMMENDATION. WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTER ABOVE. EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY OR REFINISHED IF REQUIRED. EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). EXPOSED PIPE AND CONDUIT TO BE PAINTED (P4). EXPOSED PIPE AND CONDUIT TO BE PAINTED (P4). EXPOSED PIPE AND CONDUIT TO BE PAINTED (P4). EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND CONCRETE. EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. ST FOR (LVT1) THROUGHOUT. TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED PLINISHES. TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PLINISHES.
=8 =9 =10 =11 =12 =13 =14 =15 =16 =17 =18 =19 =20 =21 =22	ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). F PAINTED (P6). PATCH/PAINT TO MATCH EXISITING. ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN (4-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA INSTALLATION. EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). PREPARE FLOORING WITH SELF LEVELING UNDERLAYMEN' MFR'S RECOMMENDATION. WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTE ABOVE. EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY O REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO B REFINISHED IF REQUIRED. EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSE COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND CONCRETE. EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. ST FOR (LVT1) THROUGHOUT. TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL 2ND AND 6TH GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL STAFF RESTROOM. SEE ENLARGED PLAN 9/A800 F
F8 F9 F10 F11 F12 F13 F14 F15 F16 F17 F18 F19 F20 F21 F22 F23	ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). F PAINTED (P6). PATCH/PAINT TO MATCH EXISITING. ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN (4-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA INSTALLATION. EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). PREPARE FLOORING WITH SELF LEVELING UNDERLAYMEN MFR'S RECOMMENDATION. WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTE ABOVE. EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY O REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO B REFINISHED IF REQUIRED. EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSE COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND CONCRETE. EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. ST FOR (LVT1) THROUGHOUT. TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL STAFF RESTROOM. SEE ENLARGED PLAN 9/A800 F WALL TILE TO END AT DIMENSION INDICATED ON PLAN. PRO
F8 F9 F10 F11 F12 F13 F14 F15 F16 F17 F18 F19 F20 F21 F22 F23 F24 F25	 ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). IPAINTED (P6). PATCH/PAINT TO MATCH EXISITING. ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RESTILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVALINSTALLATION. EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). PREPARE FLOORING WITH SELF LEVELING UNDERLAYMENT MFR'S RECOMMENDATION. WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTER ABOVE. EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY (REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO BE REFINISHED IF REQUIRED. EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). EXPOSED DIPE AND CONDUIT TO BE PAINTED (P6). EXPOSE COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND CONCRETE. EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. ST FOR (LVT1) THROUGHOUT. TYPICAL RAND 3RD GRADE RESTROOM. SEE ENLARGED PLFINISHES. TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PLFINISHES. TYPICAL STAFF RESTROOM. SEE ENLARGED PLAN 9/A800 F WALL TILE TO END AT DIMENSION INDICATED ON PLAN. PROCOUSTIC PANELS APPLIED TO CAFETERIA WALLS, SEE A6 INFORMATION. PREPARE CARPET TILES WITH TARKETT POWER BOND HYE LEVEL CLASSROOMS TO REDUCE NOISE BETWEEN FLOORS
F8 F9 F10 F11 F12 F13 F14 F15 F16 F17 F18 F19 F20 F21 F22 F23 F24 F25 F26	 ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). E PAINTED (P6). PATCH/PAINT TO MATCH EXISITING. ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RES TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVA INSTALLATION. EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). PREPARE FLOORING WITH SELF LEVELING UNDERLAYMEN' MFR'S RECOMMENDATION. WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTE ABOVE. EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY OR REFINISHED IF REQUIRED. EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSE COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND CONCRETE. EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. ST. FOR (LVT1) THROUGHOUT. TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL 2ND AND 6TH GRADE RESTROOM. SEE ENLARGED PL FINISHES. TYPICAL STAFF RESTROOM. SEE ENLARGED PLAN 9/A800 F WALL TILE TO END AT DIMENSION INDICATED ON PLAN. PRO ACOUSTIC PANELS APPLIED TO CAFETERIA WALLS, SEE A6

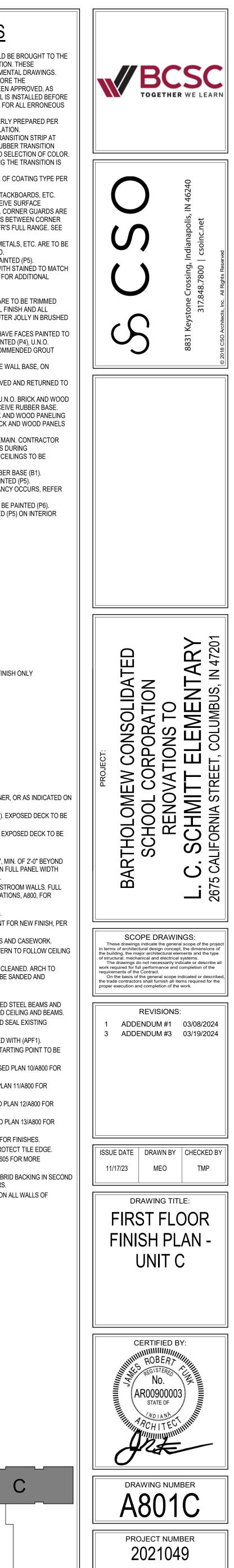


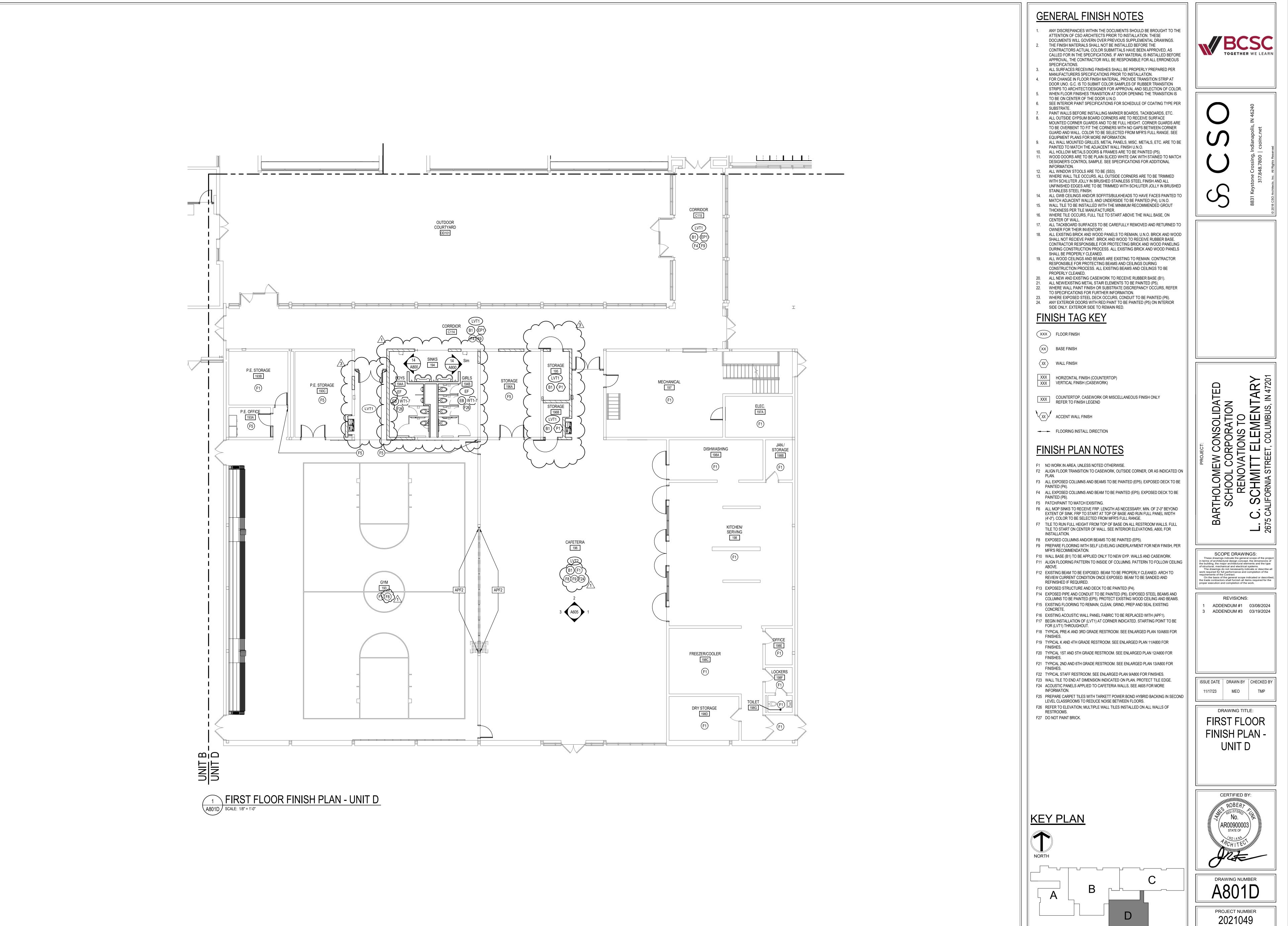


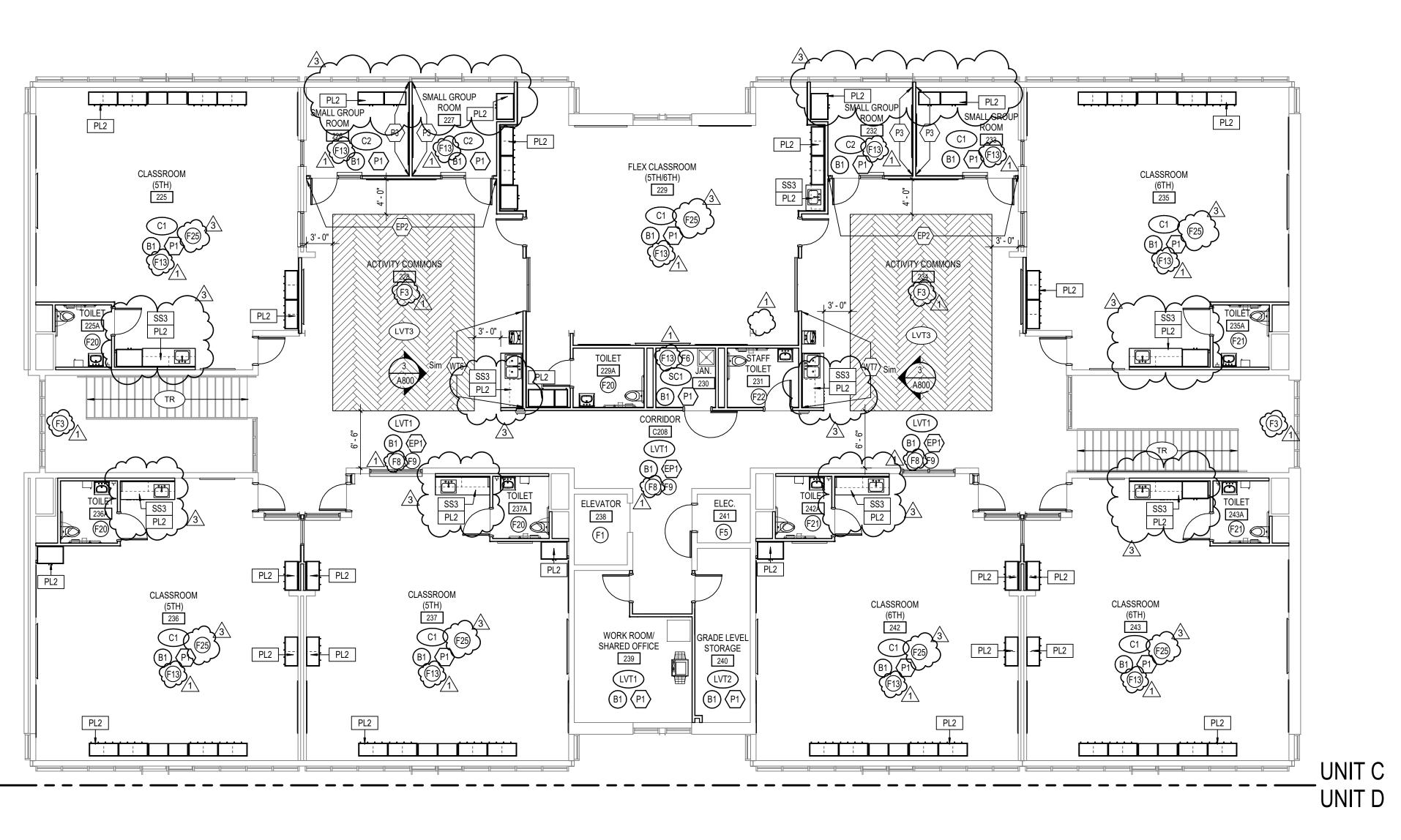


G	ENERAL FINISH NOTES
1.	ANY DISCREPANCIES WITHIN THE DOCUMENTS SHOULD
	ATTENTION OF CSO ARCHITECTS PRIOR TO INSTALLATIO DOCUMENTS WILL GOVERN OVER PREVIOUS SUPPLEME
2.	THE FINISH MATERIALS SHALL NOT BE INSTALLED BEFOR CONTRACTORS ACTUAL COLOR SUBMITTALS HAVE BEEN
	CALLED FOR IN THE SPECIFICATIONS. IF ANY MATERIAL IS APPROVAL, THE CONTRACTOR WILL BE RESPONSIBLE FO
3.	SPECIFICATIONS. ALL SURFACES RECEIVING FINISHES SHALL BE PROPERL
4.	MANUFACTURERS SPECIFICATIONS PRIOR TO INSTALLAT FOR CHANGE IN FLOOR FINISH MATERIAL, PROVIDE TRAN
	DOOR UNO. G.C. IS TO SUBMIT COLOR SAMPLES OF RUB STRIPS TO ARCHITECT/DESIGNER FOR APPROVAL AND S
5.	WHEN FLOOR FINISHES TRANSITION AT DOOR OPENING TO BE ON CENTER OF THE DOOR U.N.O.
6.	SEE INTERIOR PAINT SPECIFICATIONS FOR SCHEDULE O
7.	SUBSTRATE. PAINT WALLS BEFORE INSTALLING MARKER BOARDS, TA
8.	ALL OUTSIDE GYPSUM BOARD CORNERS ARE TO RECEIV MOUNTED CORNER GUARDS AND TO BE FULL HEIGHT. C
	TO BE OVERBENT TO FIT THE CORNERS WITH NO GAPS E GUARD AND WALL. COLOR TO BE SELECTED FROM MFR'
9.	EQUIPMENT PLANS FOR MORE INFORMATION. ALL WALL MOUNTED GRILLES, METAL PANELS, MISC. MET
10.	PAINTED TO MATCH THE ADJACENT WALL FINISH U.N.O. ALL HOLLOW METALS DOORS & FRAMES ARE TO BE PAIN
11.	WOOD DOORS ARE TO BE PLAIN SLICED WHITE OAK WITI DESIGNER'S CONTROL SAMPLE. SEE SPECIFICATIONS FO
12.	INFORMATION. ALL WINDOW STOOLS ARE TO BE (SS3).
13.	WHERE WALL TILE OCCURS, ALL OUTSIDE CORNERS ARE WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL F
	UNFINISHED EDGES ARE TO BE TRIMMED WITH SCHLUTE STAINLESS STEEL FINISH.
14.	ALL GWB CEILINGS AND/OR SOFFITS/BULKHEADS TO HAV
15.	MATCH ADJACENT WALLS, AND UNDERSIDE TO BE PAINT WALL TILE TO BE INSTALLED WITH THE MINIMUM RECOM
16.	THICKNESS PER TILE MANUFACTURER. WHERE TILE OCCURS, FULL TILE TO START ABOVE THE V
17.	CENTER OF WALL. ALL TACKBOARD SURFACES TO BE CAREFULLY REMOVE
18.	OWNER FOR THEIR INVENTORY. ALL EXISTING BRICK AND WOOD PANELS TO REMAIN, U.N
	SHALL NOT RECIEVE PAINT. BRICK AND WOOD TO RECEN CONTRACTOR RESPONSIBLE FOR PROTECTING BRICK AI
	DURING CONSTRUCTION PROCESS. ALL EXISTING BRICK SHALL BE PROPERLY CLEANED.
19.	ALL WOOD CEILINGS AND BEAMS ARE EXISTING TO REM/ RESPONSIBLE FOR PROTECTING BEAMS AND CEILINGS D
	CONSTRUCTION PROCESS. ALL EXISTING BEAMS AND CE PROPERLY CLEANED.
20. 21.	ALL NEW AND EXISTING CASEWORK TO RECEIVE RUBBEI ALL NEW/EXISTING METAL STAIR ELEMENTS TO BE PAINT
21.	WHERE WALL PAINT FINISH OR SUBSTRATE DISCREPANC TO SPECIFICATIONS FOR FURTHER INFORMATION.
23.	WHERE EXPOSED STEEL DECK OCCURS, CONDUIT TO BE
24.	ANY EXTERIOR DOORS WITH RED PAINT TO BE PAINTED SIDE ONLY. EXTERIOR SIDE TO REMAIN RED.
F١	NISH TAG KEY
<u>. </u>	
(XX	FLOOR FINISH
	X) BASE FINISH
< <u>x</u>	X > WALL FINISH
XX XX	
	COUNTERTOP, CASEWORK OR MISCELLANEOUS FIN
XX	COUNTERTOP, CASEWORK OR MISCELLANEOUS FINI REFER TO FINISH LEGEND
X	X ACCENT WALL FINISH
_	
FI	NISH PLAN NOTES
F1	NO WORK IN AREA, UNLESS NOTED OTHERWISE.
F2	ALIGN FLOOR TRANSITION TO CASEWORK, OUTSIDE CORNER
F3	PLAN. ALL EXPOSED COLUMNS AND BEAMS TO BE PAINTED (EP5). E
F4	PAINTED (P4). ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). EX
F5	PAINTED (P6). PATCH/PAINT TO MATCH EXISITING.
F6	ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, M
	EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN F (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE.
F7	TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL REST TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVATION
F8	INSTALLATION. EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5).
F9	PREPARE FLOORING WITH SELF LEVELING UNDERLAYMENT I MFR'S RECOMMENDATION.
F10	WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS A
F11	ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTER ABOVE.
F12	EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY CL REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO BE
F13	REFINISHED IF REQUIRED.
F14	EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSED
F15	COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD (EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND S
F16	CONCRETE. EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED
F17	BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. STAI FOR (LVT1) THROUGHOUT.
F18	TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED FINISHES.
F19	TYPICAL K AND 4TH GRADE RESTROOM. SEE ENLARGED PLA
F20	FINISHES. TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED P
F21	FINISHES. TYPICAL 2ND AND 6TH GRADE RESTROOM. SEE ENLARGED F
	FINISHES.
F22 F23	
F24	ACOUSTIC PANELS APPLIED TO CAFETERIA WALLS, SEE A605 INFORMATION.
F25	PREPARE CARPET TILES WITH TARKETT POWER BOND HYBR LEVEL CLASSROOMS TO REDUCE NOISE BETWEEN FLOORS.
	REFER TO ELEVATION; MULTIPLE WALL TILES INSTALLED ON
F26	RESTROOMS.
	DO NOT PAINT BRICK.





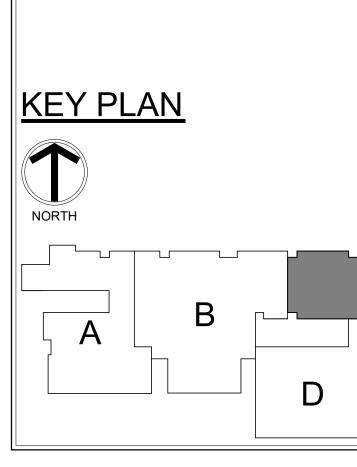


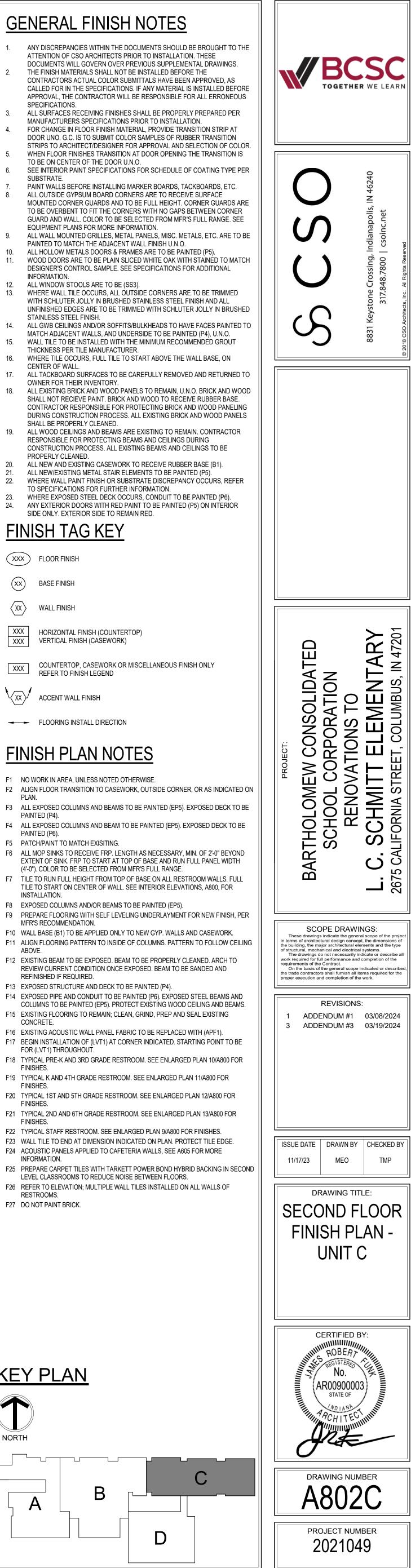


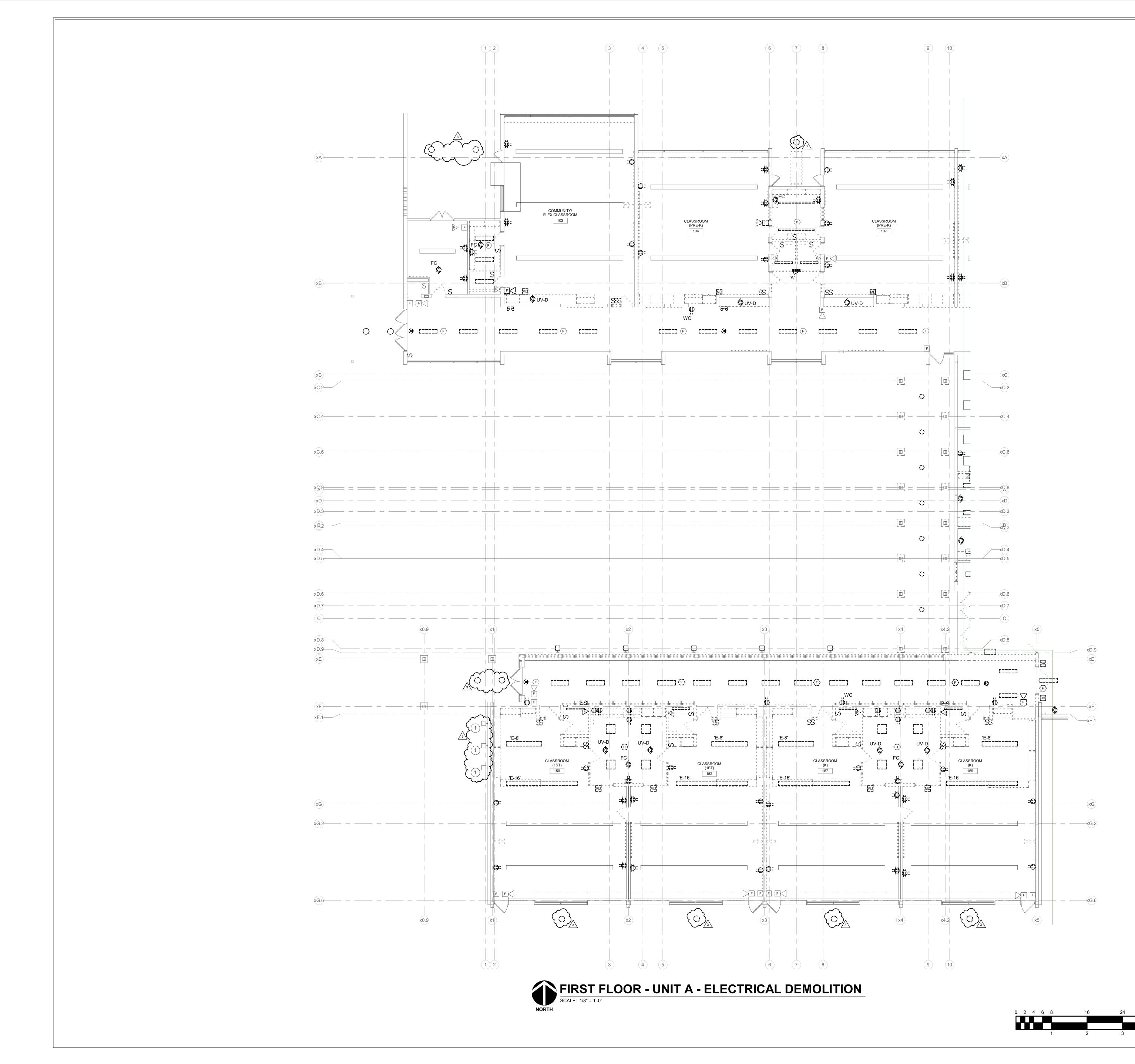
1 SECOND FLOOR FINISH PLAN - UNIT C A802C SCALE: 1/8" = 1'-0"

CALLED FOR IN THE SPECIFICATIONS. IF ANY MATERIAL IS INSTALLED BEFORE APPROVAL, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL ERRONEOUS SPECIFICATIONS. ALL SURFACES RECEIVING FINISHES SHALL BE PROPERLY PREPARED PER MANUFACTURERS SPECIFICATIONS PRIOR TO INSTALLATION. FOR CHANGE IN FLOOR FINISH MATERIAL. PROVIDE TRANSITION STRIP AT 4 DOOR UNO. G.C. IS TO SUBMIT COLOR SAMPLES OF RUBBER TRANSITION STRIPS TO ARCHITECT/DESIGNER FOR APPROVAL AND SELECTION OF COLOR. WHEN FLOOR FINISHES TRANSITION AT DOOR OPENING THE TRANSITION IS TO BE ON CENTER OF THE DOOR U.N.O. SEE INTERIOR PAINT SPECIFICATIONS FOR SCHEDULE OF COATING TYPE PER SUBSTRATE. PAINT WALLS BEFORE INSTALLING MARKER BOARDS, TACKBOARDS, ETC. ALL OUTSIDE GYPSUM BOARD CORNERS ARE TO RECEIVE SURFACE MOUNTED CORNER GUARDS AND TO BE FULL HEIGHT. CORNER GUARDS ARE TO BE OVERBENT TO FIT THE CORNERS WITH NO GAPS BETWEEN CORNER GUARD AND WALL. COLOR TO BE SELECTED FROM MFR'S FULL RANGE. SEE EQUIPMENT PLANS FOR MORE INFORMATION. ALL WALL MOUNTED GRILLES, METAL PANELS, MISC. METALS, ETC. ARE TO BE PAINTED TO MATCH THE ADJACENT WALL FINISH U.N.O. 10. ALL HOLLOW METALS DOORS & FRAMES ARE TO BE PAINTED (P5). 11. WOOD DOORS ARE TO BE PLAIN SLICED WHITE OAK WITH STAINED TO MATCH DESIGNER'S CONTROL SAMPLE. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. 12. ALL WINDOW STOOLS ARE TO BE (SS3). 13. WHERE WALL TILE OCCURS, ALL OUTSIDE CORNERS ARE TO BE TRIMMED WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL FINISH AND ALL UNFINISHED EDGES ARE TO BE TRIMMED WITH SCHLUTER JOLLY IN BRUSHED STAINLESS STEEL FINISH. 14. ALL GWB CEILINGS AND/OR SOFFITS/BULKHEADS TO HAVE FACES PAINTED TO MATCH ADJACENT WALLS, AND UNDERSIDE TO BE PAINTED (P4), U.N.O. 15. WALL TILE TO BE INSTALLED WITH THE MINIMUM RECOMMENDED GROUT THICKNESS PER TILE MANUFACTURER. 16. WHERE TILE OCCURS, FULL TILE TO START ABOVE THE WALL BASE, ON CENTER OF WALL. 17. ALL TACKBOARD SURFACES TO BE CAREFULLY REMOVED AND RETURNED TO OWNER FOR THEIR INVENTORY. 18. ALL EXISTING BRICK AND WOOD PANELS TO REMAIN, U.N.O. BRICK AND WOOD SHALL NOT RECIEVE PAINT. BRICK AND WOOD TO RECEIVE RUBBER BASE. CONTRACTOR RESPONSIBLE FOR PROTECTING BRICK AND WOOD PANELING DURING CONSTRUCTION PROCESS. ALL EXISTING BRICK AND WOOD PANELS SHALL BE PROPERLY CLEANED. 19. ALL WOOD CEILINGS AND BEAMS ARE EXISTING TO REMAIN. CONTRACTOR RESPONSIBLE FOR PROTECTING BEAMS AND CEILINGS DURING CONSTRUCTION PROCESS. ALL EXISTING BEAMS AND CEILINGS TO BE PROPERLY CLEANED. 20. ALL NEW AND EXISTING CASEWORK TO RECEIVE RUBBER BASE (B1). 21. ALL NEW/EXISTING METAL STAIR ELEMENTS TO BE PAINTED (P5). 22. WHERE WALL PAINT FINISH OR SUBSTRATE DISCREPANCY OCCURS, REFER TO SPECIFICATIONS FOR FURTHER INFORMATION. 23. WHERE EXPOSED STEEL DECK OCCURS, CONDUIT TO BE PAINTED (P6). 24. ANY EXTERIOR DOORS WITH RED PAINT TO BE PAINTED (P5) ON INTERIOR SIDE ONLY. EXTERIOR SIDE TO REMAIN RED. FINISH TAG KEY (XXX) FLOOR FINISH (XX) BASE FINISH XX WALL FINISH XXX HORIZONTAL FINISH (COUNTERTOP) XXX VERTICAL FINISH (CASEWORK) XXX COUNTERTOP, CASEWORK OR MISCELLANEOUS FINISH ONLY REFER TO FINISH LEGEND ACCENT WALL FINISH - FLOORING INSTALL DIRECTION FINISH PLAN NOTES F1 NO WORK IN AREA, UNLESS NOTED OTHERWISE. F2 ALIGN FLOOR TRANSITION TO CASEWORK, OUTSIDE CORNER, OR AS INDICATED ON PLAN. F3 ALL EXPOSED COLUMNS AND BEAMS TO BE PAINTED (EP5). EXPOSED DECK TO BE PAINTED (P4). F4 ALL EXPOSED COLUMNS AND BEAM TO BE PAINTED (EP5). EXPOSED DECK TO BE PAINTED (P6). F5 PATCH/PAINT TO MATCH EXISITING. F6 ALL MOP SINKS TO RECEIVE FRP. LENGTH AS NECESSARY, MIN. OF 2'-0" BEYOND EXTENT OF SINK. FRP TO START AT TOP OF BASE AND RUN FULL PANEL WIDTH (4'-0"). COLOR TO BE SELECTED FROM MFR'S FULL RANGE. F7 TILE TO RUN FULL HEIGHT FROM TOP OF BASE ON ALL RESTROOM WALLS. FULL TILE TO START ON CENTER OF WALL. SEE INTERIOR ELEVATIONS, A800, FOR INSTALLATION. F8 EXPOSED COLUMNS AND/OR BEAMS TO BE PAINTED (EP5). F9 PREPARE FLOORING WITH SELF LEVELING UNDERLAYMENT FOR NEW FINISH, PER MFR'S RECOMMENDATION. F10 WALL BASE (B1) TO BE APPLIED ONLY TO NEW GYP. WALLS AND CASEWORK. F11 ALIGN FLOORING PATTERN TO INSIDE OF COLUMNS. PATTERN TO FOLLOW CEILING ABOVE. F12 EXISTING BEAM TO BE EXPOSED. BEAM TO BE PROPERLY CLEANED. ARCH TO REVIEW CURRENT CONDITION ONCE EXPOSED. BEAM TO BE SANDED AND REFINISHED IF REQUIRED. F13 EXPOSED STRUCTURE AND DECK TO BE PAINTED (P4). F14 EXPOSED PIPE AND CONDUIT TO BE PAINTED (P6). EXPOSED STEEL BEAMS AND COLUMNS TO BE PAINTED (EP5). PROTECT EXISTING WOOD CEILING AND BEAMS. F15 EXISTING FLOORING TO REMAIN; CLEAN, GRIND, PREP AND SEAL EXISTING CONCRETE. F16 EXISTING ACOUSTIC WALL PANEL FABRIC TO BE REPLACED WITH (APF1). F17 BEGIN INSTALLATION OF (LVT1) AT CORNER INDICATED. STARTING POINT TO BE FOR (LVT1) THROUGHOUT. F18 TYPICAL PRE-K AND 3RD GRADE RESTROOM. SEE ENLARGED PLAN 10/A800 FOR FINISHES. F19 TYPICAL K AND 4TH GRADE RESTROOM. SEE ENLARGED PLAN 11/A800 FOR FINISHES. F20 TYPICAL 1ST AND 5TH GRADE RESTROOM. SEE ENLARGED PLAN 12/A800 FOR FINISHES. F21 TYPICAL 2ND AND 6TH GRADE RESTROOM. SEE ENLARGED PLAN 13/A800 FOR FINISHES. F22 TYPICAL STAFF RESTROOM. SEE ENLARGED PLAN 9/A800 FOR FINISHES. F23 WALL TILE TO END AT DIMENSION INDICATED ON PLAN. PROTECT TILE EDGE. F24 ACOUSTIC PANELS APPLIED TO CAFETERIA WALLS, SEE A605 FOR MORE

- INFORMATION. F25 PREPARE CARPET TILES WITH TARKETT POWER BOND HYBRID BACKING IN SECOND
- LEVEL CLASSROOMS TO REDUCE NOISE BETWEEN FLOORS. F26 REFER TO ELEVATION; MULTIPLE WALL TILES INSTALLED ON ALL WALLS OF
- RESTROOMS. F27 DO NOT PAINT BRICK.







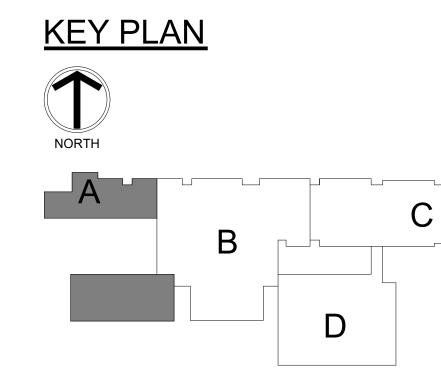
WORK TO BE REMOVED

GENERAL NOTES:

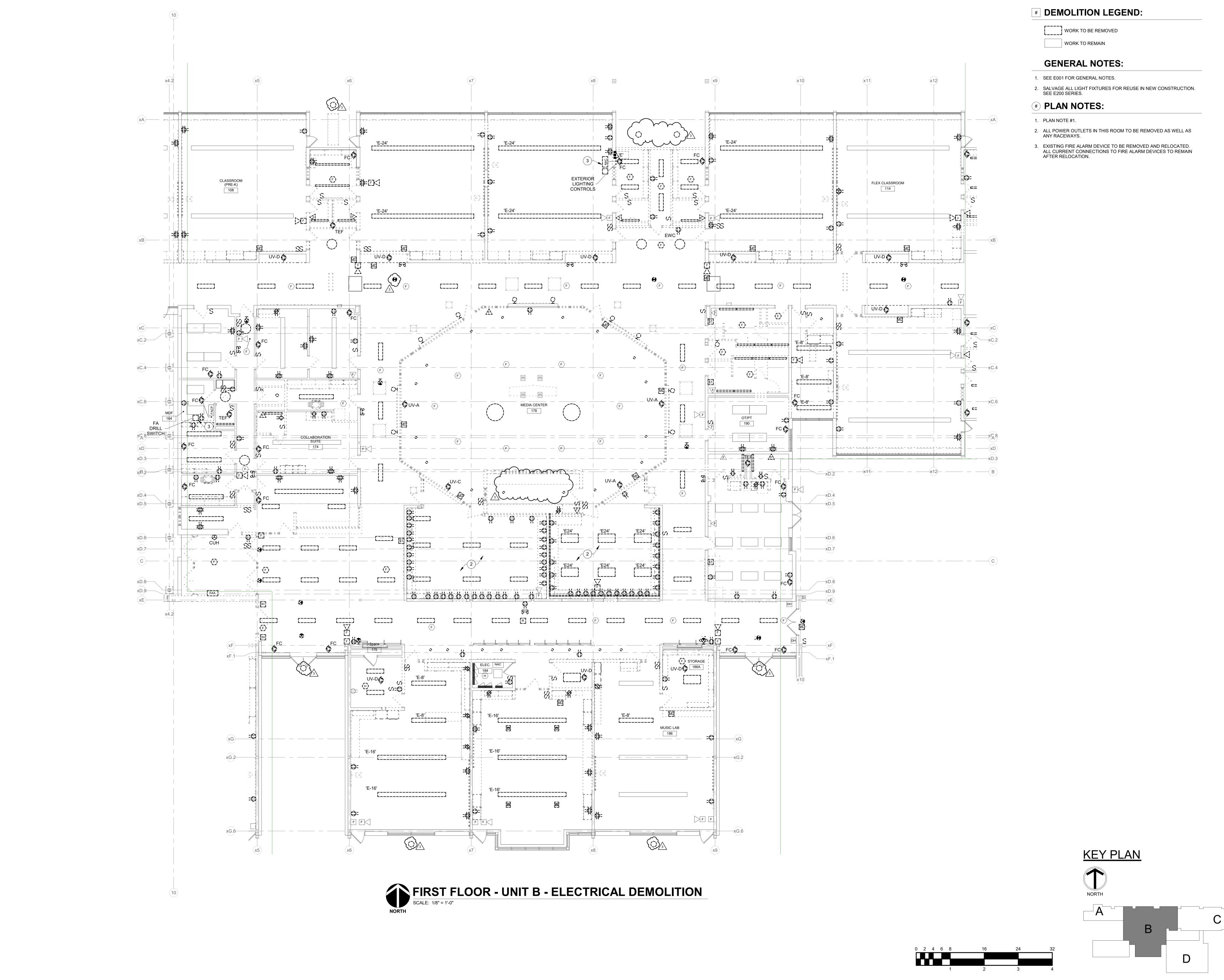
 SEE E001 FOR GENERAL NOTES.
 SALVAGE ALL LIGHT FIXTURES FOR REUSE IN NEW CONSTRUCTION. SEE E200 SERIES.

PLAN NOTES:

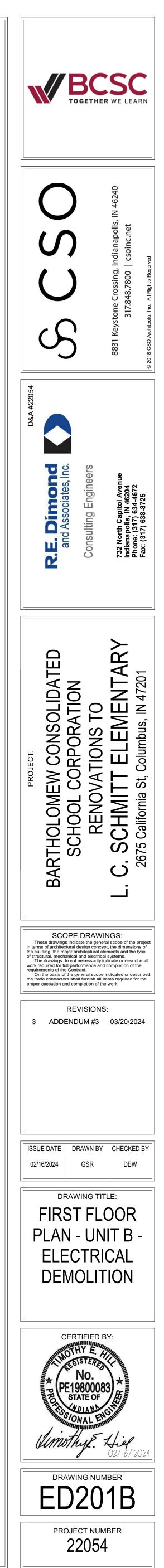
1. EXISTING BUILDING MOUNTED LIGHT FIXTURE TO BE REMOVED.

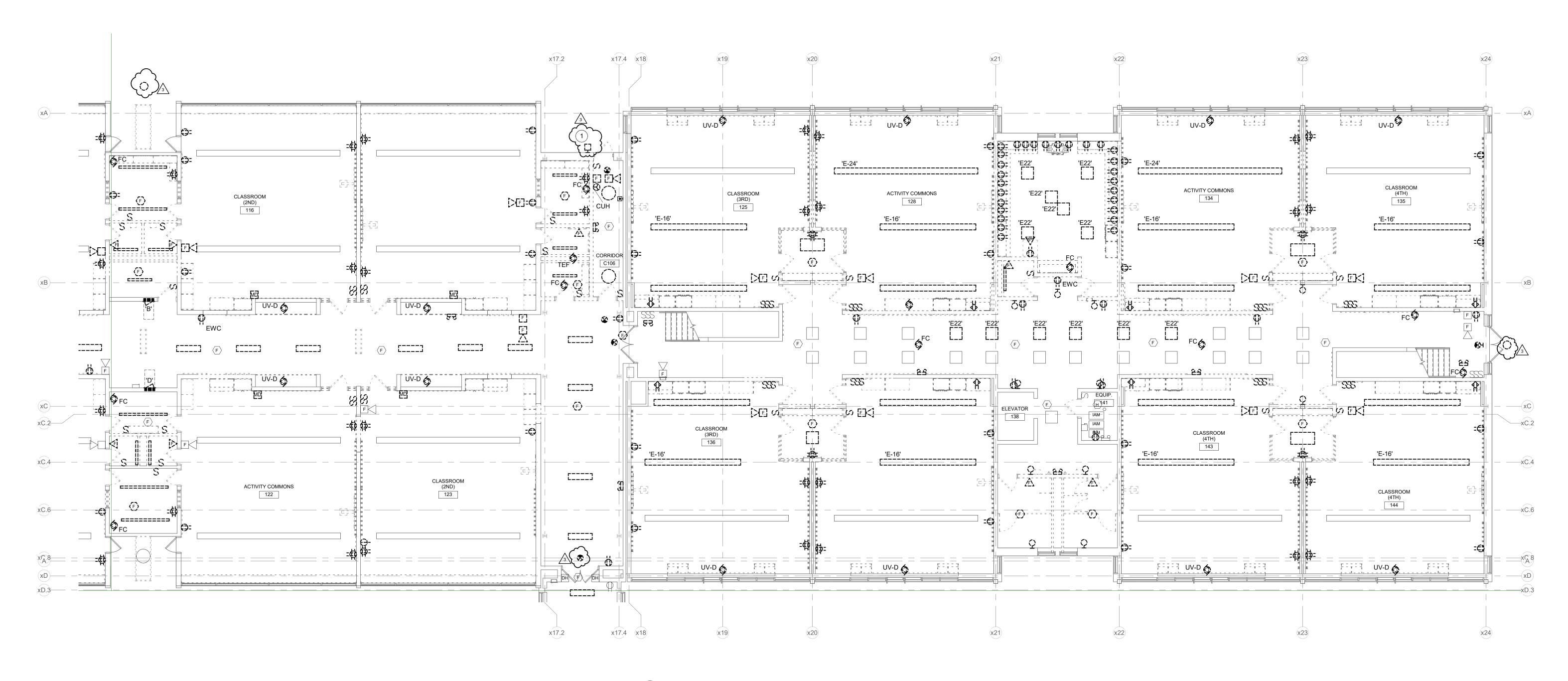














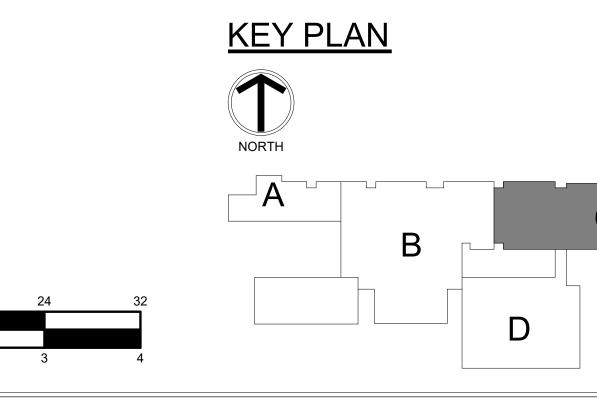
WORK TO BE REMOVED WORK TO REMAIN

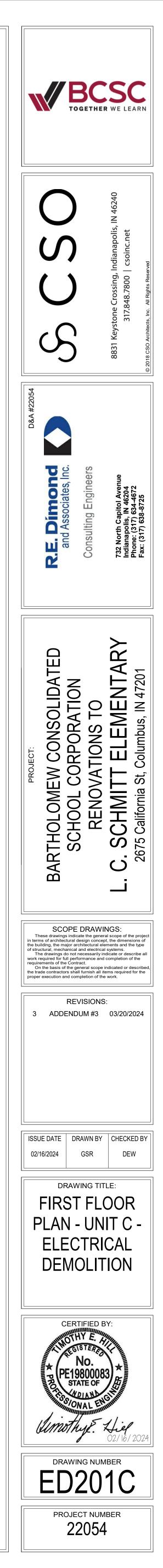
GENERAL NOTES:

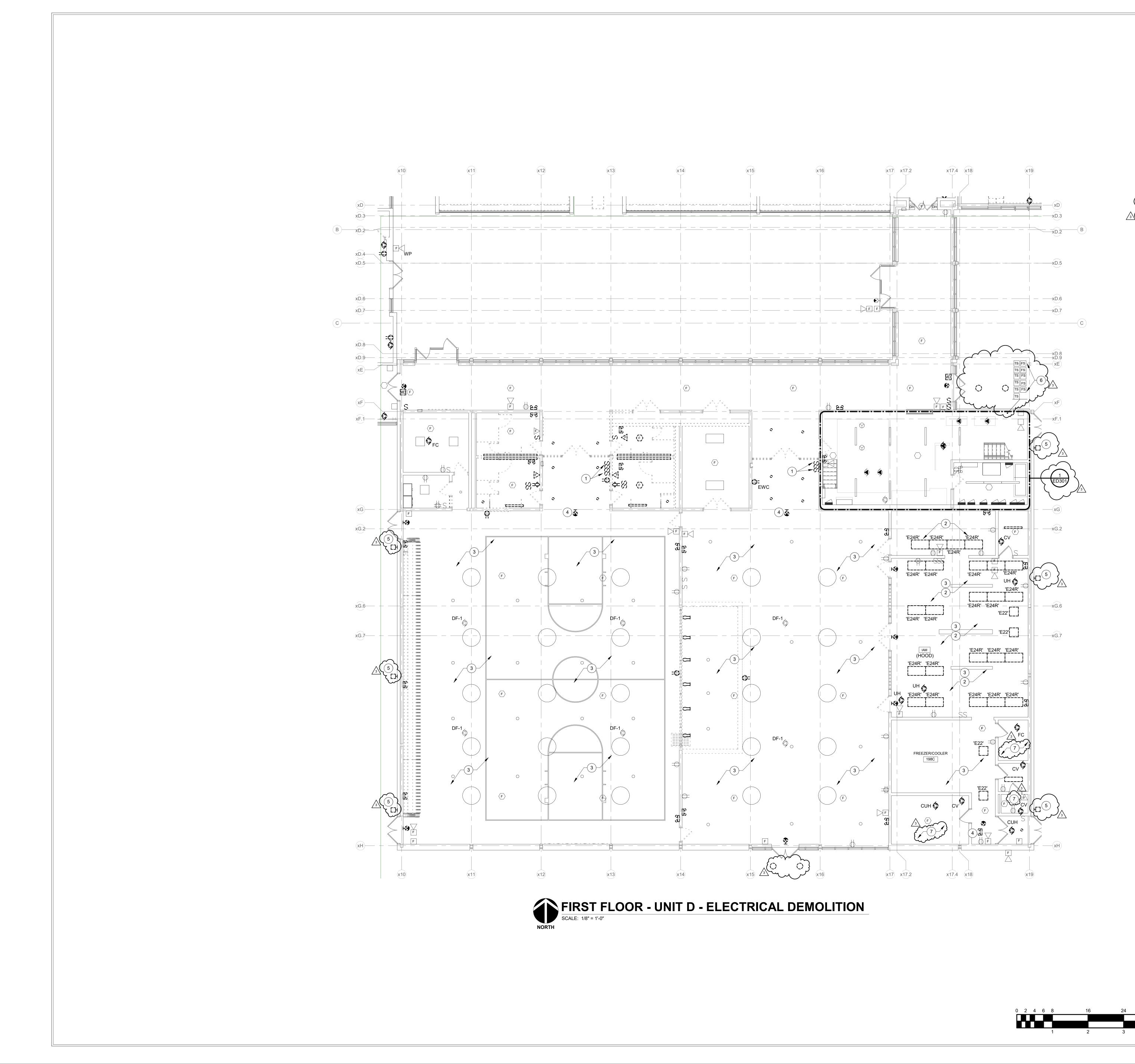
1. SEE E001 FOR GENERAL NOTES. SALVAGE ALL LIGHT FIXTURES FOR REUSE IN NEW CONSTRUCTION. SEE E200 SERIES.

1. EXISTING BUILDING MOUNTED LIGHT FIXTURE TO BE REMOVED.

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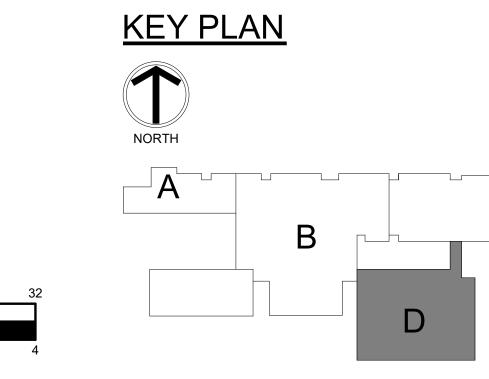
- WORK TO BE REMOVED WORK TO REMAIN
- **GENERAL NOTES:**

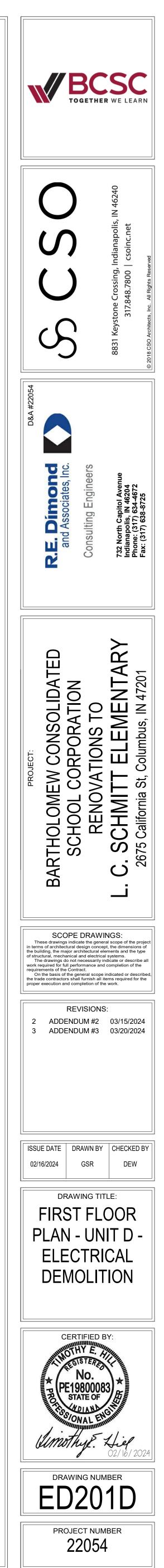
1. SEE E001 FOR GENERAL NOTES.

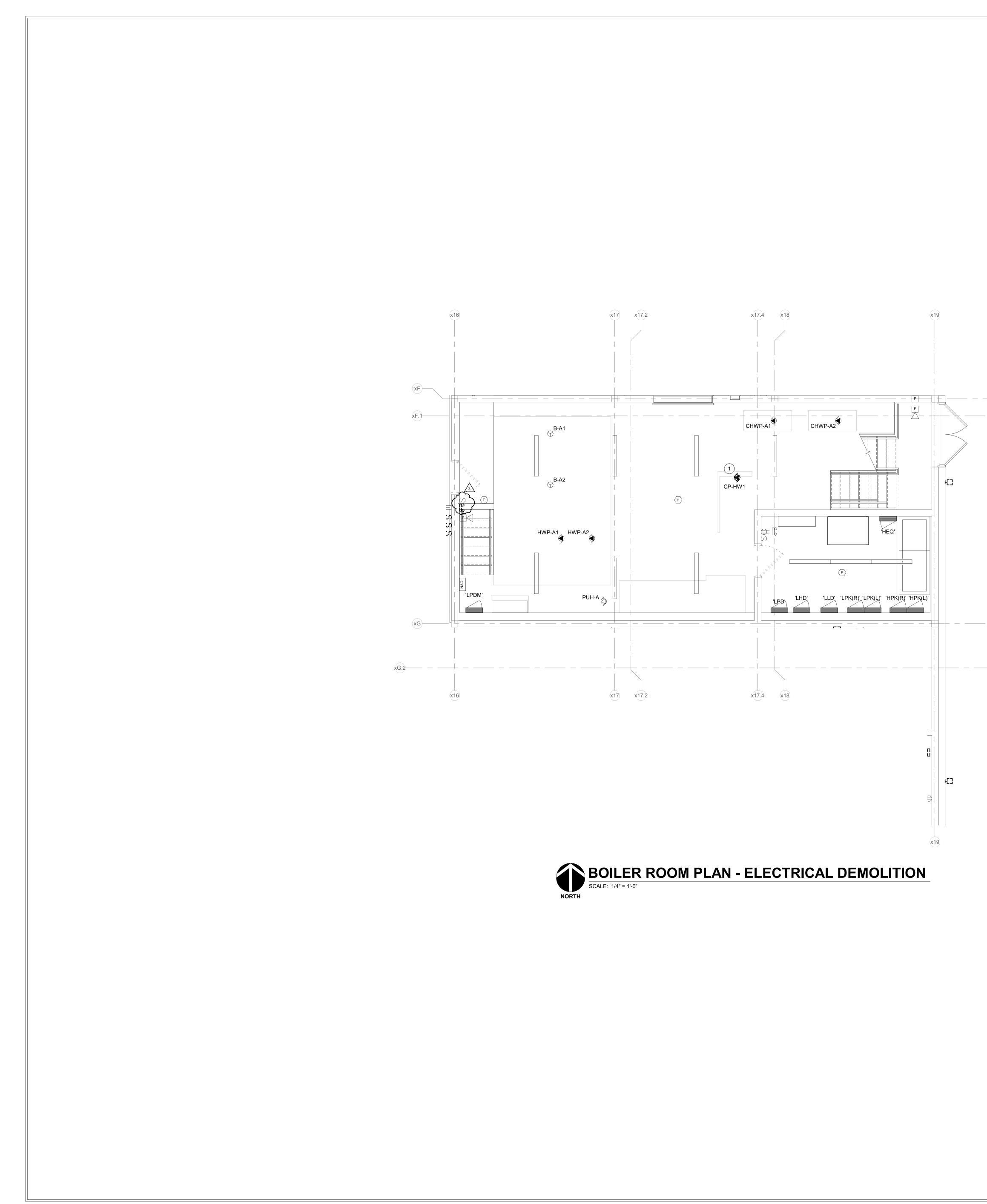
PLAN NOTES:

- LIGHTING CONTROLS TO BE RELOCATED. SEE E200 SERIES FOR RELOCATION.
- LIGHT FIXTURE/FIXTURES TO BE REMOVED BUT KEPT FOR USE IN NEW CONSTRUCTION. SEE E200 SERIES FOR RELOCATION.
- REMOVE EXIT SIGN AND EMERGENCY LIGHTS. CIRCUITS TO REMAIN IN THIS AREA FOR USE IN NEW CONSTRUCTION. PREPARE FOR NEW DEVICE IN EXISTING LOCATION.

4. FIXTURE TO BE REPLACED AND RELOCATED IN NEW CONSTRUCTION. EXISTING BUILDING MOUNTED LIGHT FIXTURE TO BE REMOVED. EXISTING FLOW AND TAMPER SWITCHES IN ROOM TO REMAIN. ALL EXISITING LIGHTING TO REMAIN IN THIS AREA.







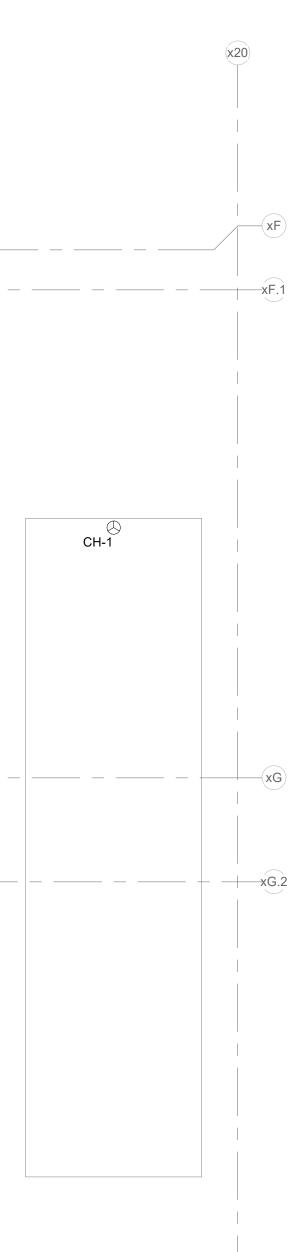
WORK TO BE REMOVED

GENERAL NOTES:

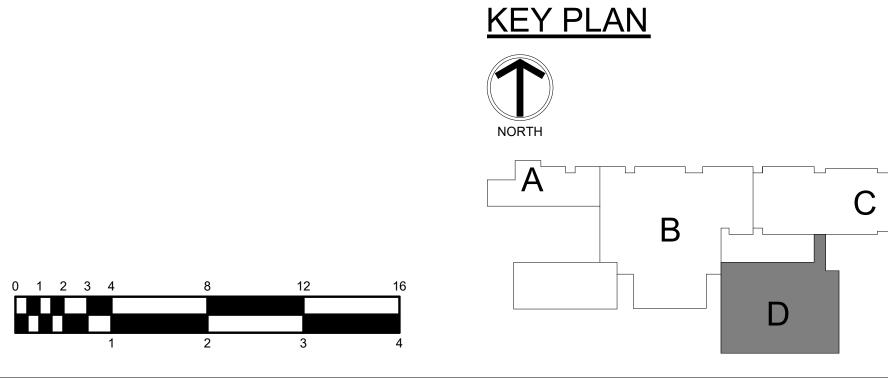
1. SEE E001 FOR GENERAL NOTES.

PLAN NOTES:

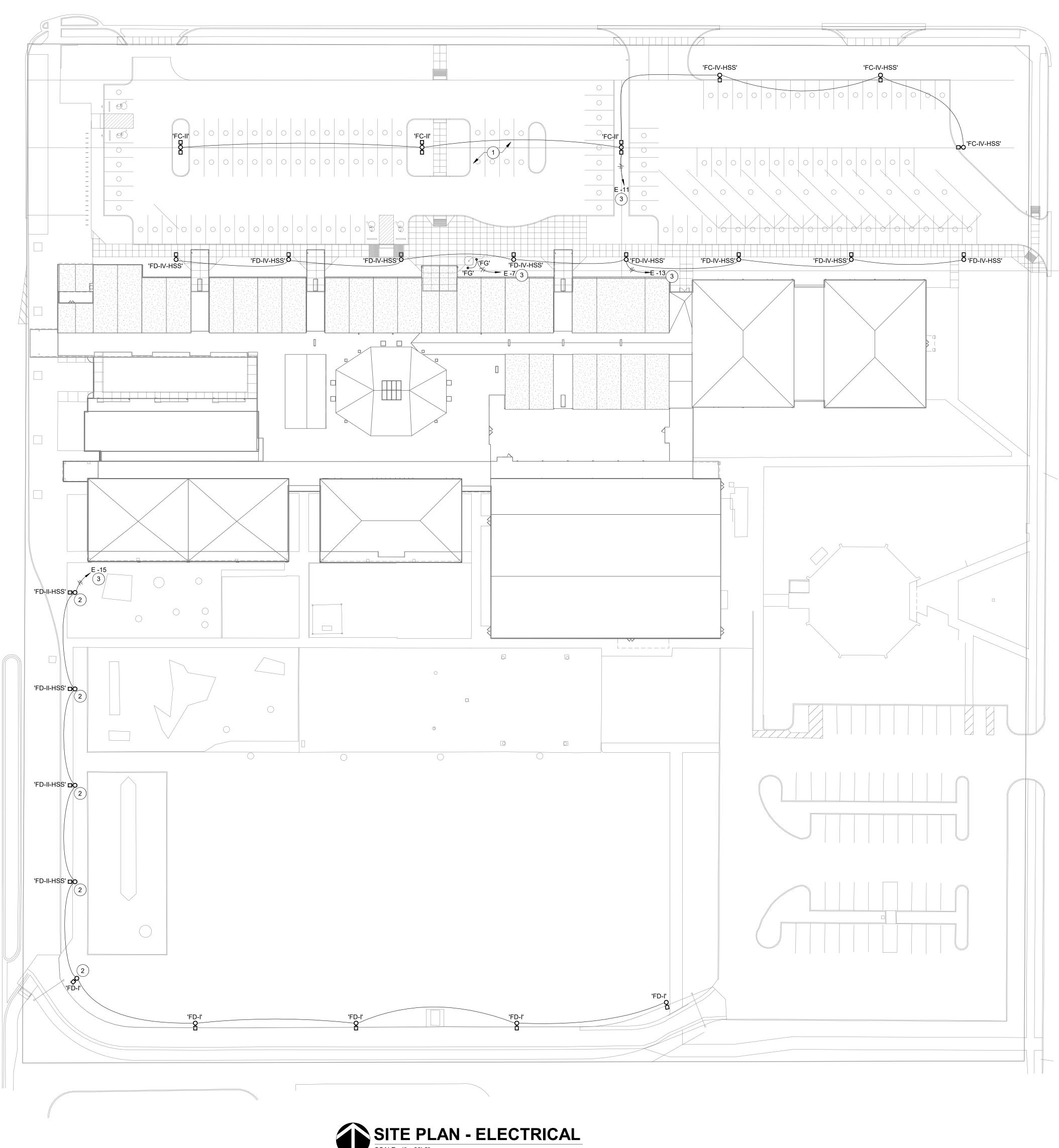
1. REMOVE MECHANICAL EQUIPMENT AND ALL ASSOCIATED WIRING BACK TO PANELBOARD.



(x20)

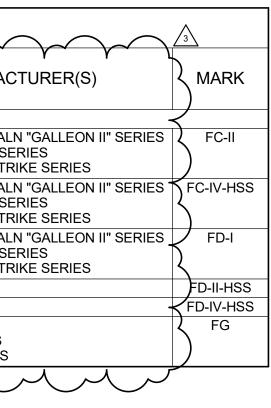






	EXTERIOR LIGHT	FIXTUR	E SCHI	EDULE					
MARK	DESCRIPTION	MOUNTING	TOTAL FIXTURE WATTS	CRI	WATTS	COLOR	LUMENS	VOLTS	MANUFACTU
									►
FC-II	CAST ALUMINUM FIXTURE, POWDERCOATED FINISH, TYPE II DISTRIBUTION, TWO FIXTURE HEADS AT 180-DEGREES, WET LOCATION LISTED, 25-FOOT TALL SQUARE NON-TAPERED STEEL POLE, POWDERCOAT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATALOG OF STANDARD FINISHES.	POLE	242	70	121W/HEAD	3000K	17,000/HEAD		MCGRAW EDISON GALN "C LITHONIA RSX1 LED SERIE EXO SLING MICRO STRIKE
FC-IV-HSS	CAST ALUMINUM FIXTURE, POWDERCOATED FINISH, TYPE IV DISTRIBUTION, HOUSE SIDE SHIELD, ONE FIXTURE HEAD, WET LOCATION LISTED, 25-FOOT TALL SQUARE NON-TAPERED STEEL POLE, POWDERCOAT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATALOG OF STANDARD FINISHES.	POLE	121	70	121W/HEAD	3000K	17,000/HEAD	120 V	MCGRAW EDISON GALN "C LITHONIA RSX1 LED SERIE EXO SLING MICRO STRIKE
FD-I	CAST ALUMINUM FIXTURE, POWDERCOATED FINISH, TYPE I DISTRIBUTION, ONE FIXTURE HEAD, WET LOCATION LISTED, 15-FOOT TALL SQUARE NON-TAPERED STEEL POLE, POWDERCOAT, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATALOG OF STANDARD FINISHES.	POLE	44	70	44W/HEAD	3000K	5,750/HEAD	120 V	MCGRAW EDISON GALN "C LITHONIA RSX1 LED SERIE EXO SLING MICRO STRIKE
FD-II-HSS	SAME AS FIXTURE TYPE 'FD-I,' EXCEPT TYPE II DISTRIBUTION AND HOUSE SIDE SHIELD.	POLE	44	70	44W/HEAD	3000K	5,750/HEAD	120 V	
FD-IV-HSS	SAME AS FIXTURE TYPE 'FD-I,' EXCEPT TYPE IV DISTRIBUTION AND HOUSE SIDE SHIELD.	POLE	44	70	44W/HEAD	3000K	5,750/HEAD	120 V	-
FG	FLAGPOLE FIXTURE, 10-INCH ON-GRADE ADJUSTABLE FLOOD, MEDIUM FLOOD OPTICS (NEMA 5x5), WET LOCATION LISTED, IP67 RATED. VERIFY FINAL LOCATION AND FINISH WITH ARCHITECT PRIOR TO ROUGH-IN. PROVIDE FINAL AIMING. PROVIDE CONCRETE BASE PER ELECTRICAL DETAILS. FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATALOG OF STANDARD COLORS.	ON-GRADE	49	70	49W	4000K	3,500	120	VISTA 1059 SERIES LIGMAN UOD SERIES HYDREL TPS2 SERIES

SCALE: 1" = 30'-0"



RENOVATION LEGEND:

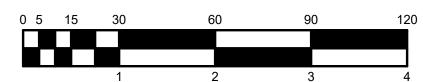
WORK TO BE INSTALLED
WORK TO REMAIN

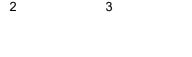
GENERAL NOTES:

1. SEE E001 FOR GENERAL NOTES. 2. SEE DRAWING E-403 FOR EXTERIOR LIGHT FIXTURE MOUNTING DETAILS.

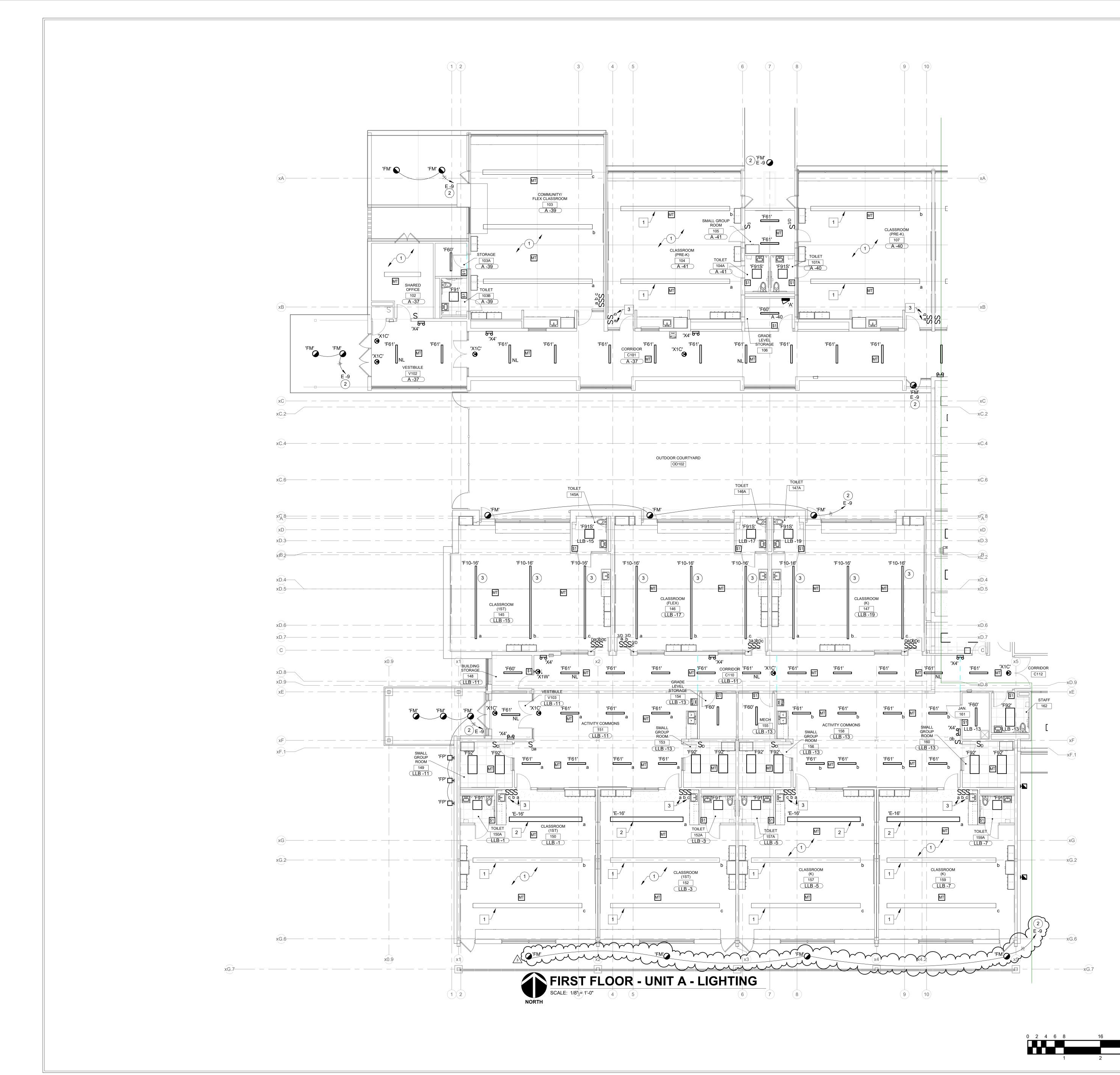
PLAN NOTES:

- 1. SIX (6) EXISTING PARKING LOT FIXTURES TO BE REMOVED COMPLETE FROM EXISTING NORTH PARKING LOT.
- 2. ALIGN FIXTURE NORTH-SOUTH BETWEEN EXISTING TREES. AVOID ROOT SYSTEM AS PRACTICABLE.
- CONNECT TO CIRCUIT INDICATED THROUGH LIGHTING RELAY PANEL IN ELECTRICAL ROOM 118; SEE DRAWING E201C. SEE DRAWING E-403 FOR RELAY PANEL AND CONTROL DETAILS.









WORK TO BE INSTALLED
WORK TO REMAIN

GENERAL NOTES:

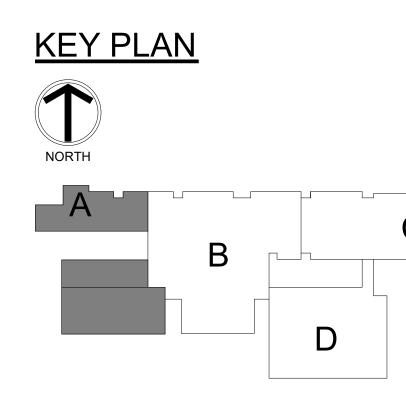
- 1. SEE E001 FOR GENERAL NOTES.
- 2. LIGHT FIXTURES CONTAINING PREFIX 'E' ARE RELOCATED FIXTURES. SEE E601 SHEET FOR SALVAGED LIGHT FIXTURE COUNT.
- 3. PLAN NOTES ANNOTATED INSIDE SQUARE SYMBOLS ARE PART OF ALTERNATE BID PACKAGE FOR LIGHTING.

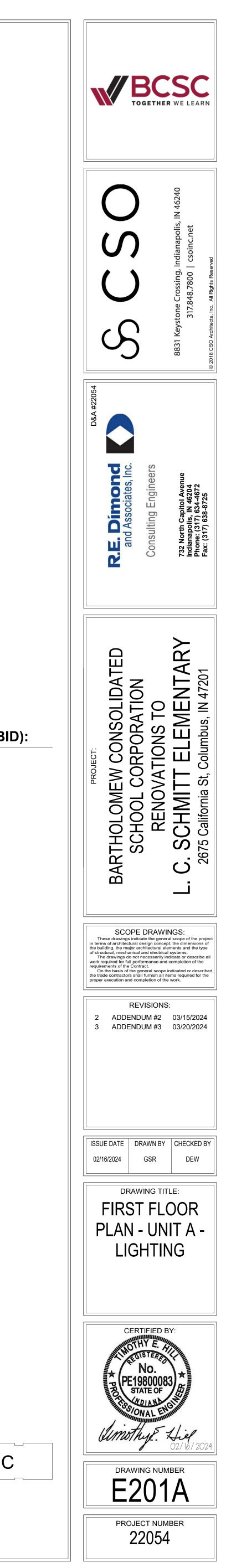
PLAN NOTES:

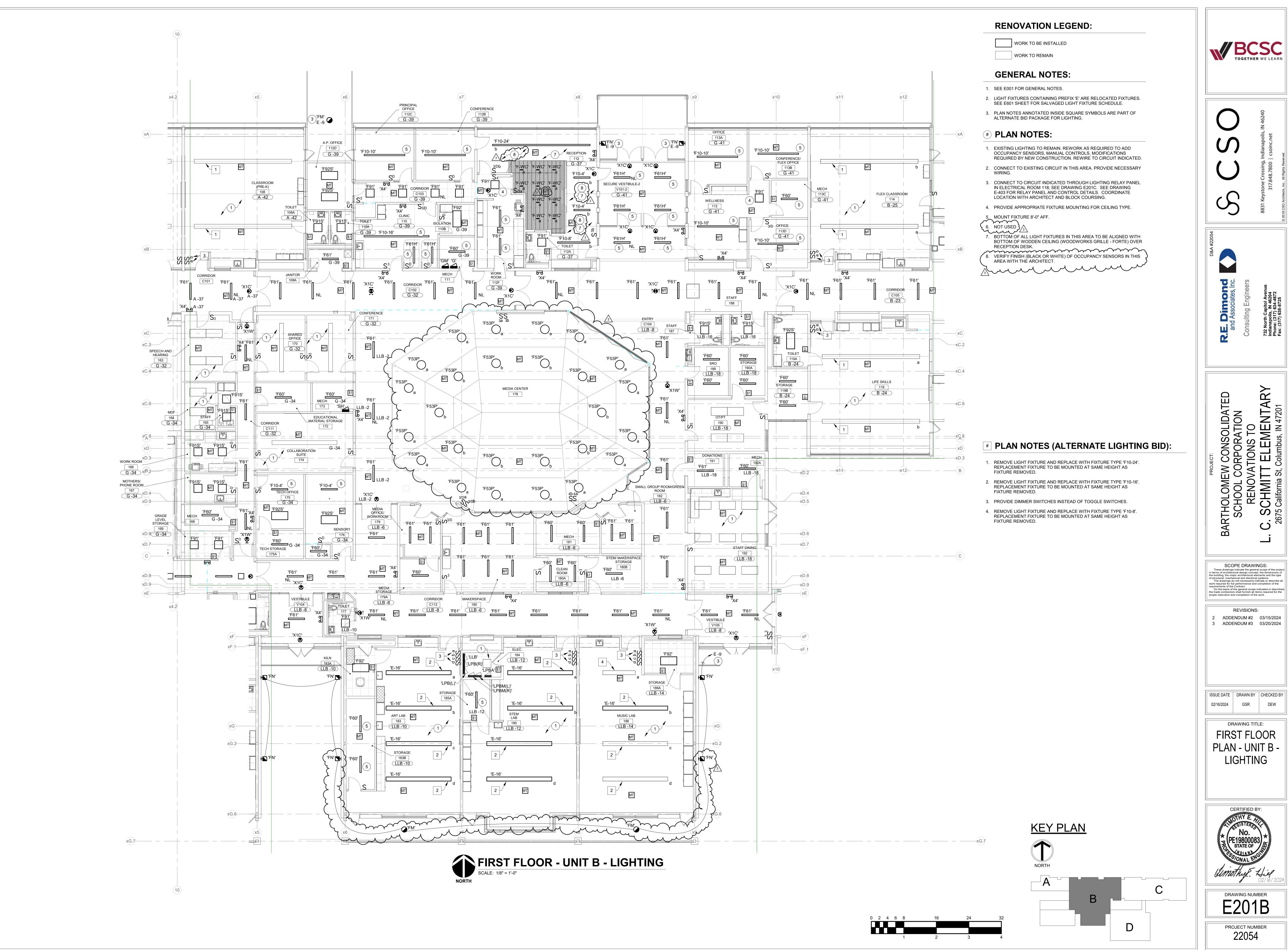
- EXISTING CLASSROOM LIGHTING TO REMAIN. REWORK AS REQUIRED TO ADD OCCUPANCY SENSORS, MANUAL CONTROLS, MODIFICATIONS REQUIRED BY NEW CONSTRUCTION. REWIRE TO CIRCUIT INDICATED.
- 2. CONNECT TO CIRCUIT INDICATED THROUGH LIGHTING RELAY PANEL IN ELECTRICAL ROOM 118; SEE DRAWING E201C. SEE DRAWING E-403 FOR RELAY PANEL AND CONTROL DETAILS. COORDINATE LOCATION WITH ARCHITECT AND BLOCK COURSING.
- 3. FIXTURES TO BE INSTALLED 9'-0" AFF.

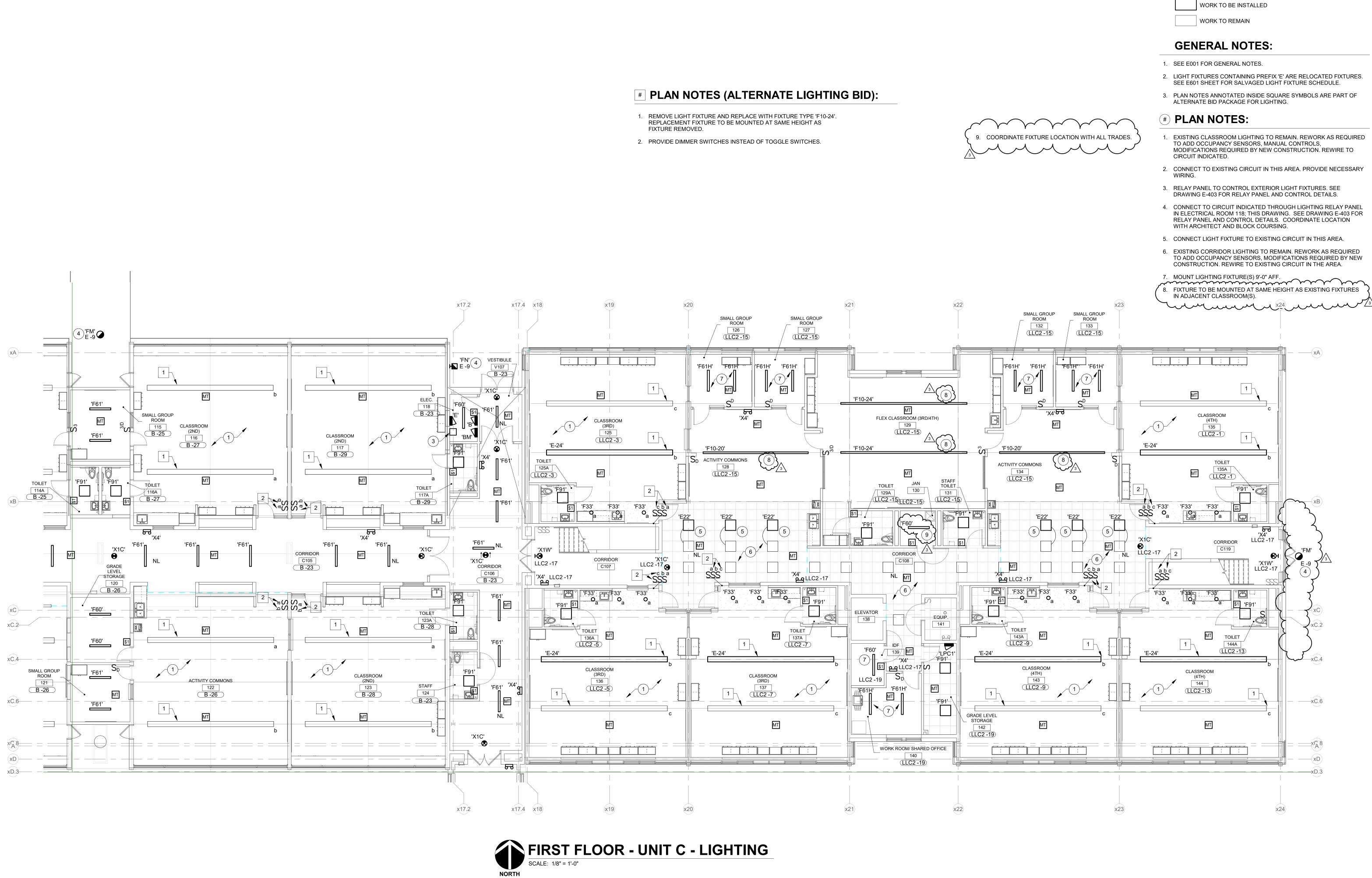
PLAN NOTES (ALTERNATE LIGHTING BID):

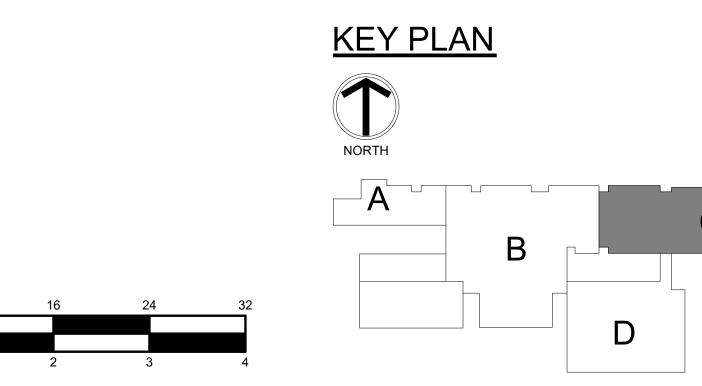
- REMOVE LIGHT FIXTURE AND REPLACE WITH FIXTURE TYPE 'F10-24'. REPLACEMENT FIXTURE TO BE MOUNTED AT SAME HEIGHT AS FIXTURE REMOVED.
- 2. REMOVE LIGHT FIXTURE AND REPLACE WITH FIXTURE TYPE 'F10-16'. REPLACEMENT FIXTURE TO BE MOUNTED AT SAME HEIGHT AS FIXTURE REMOVED.
- 3. PROVIDE DIMMER SWITCHES INSTEAD OF TOGGLE SWITCHES.





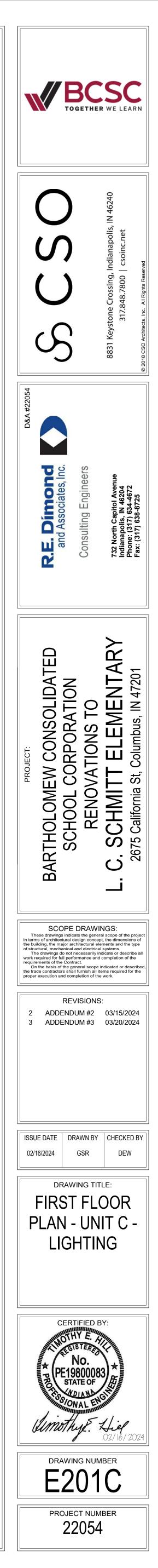


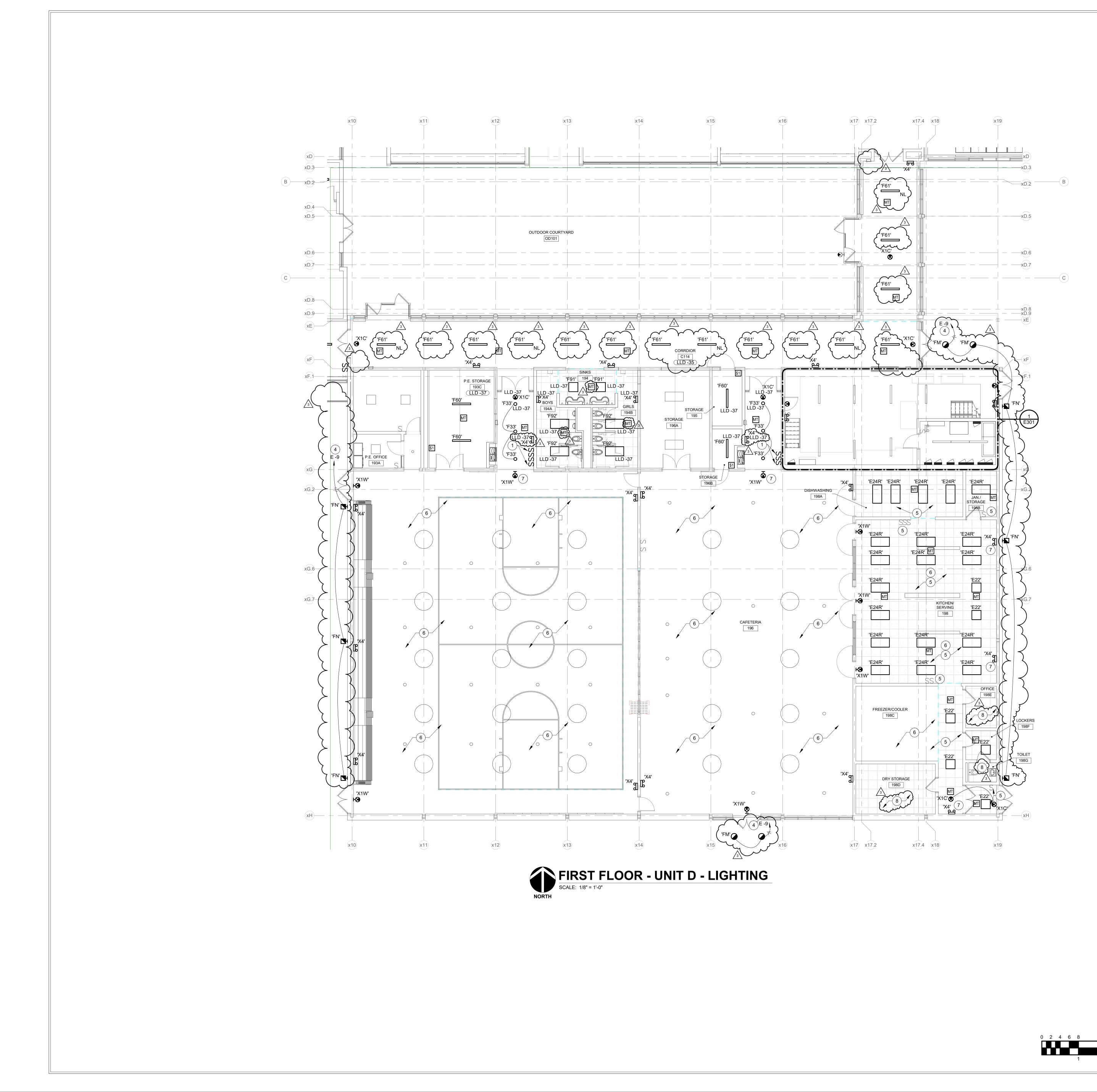




0 2 4 6 8

RENOVATION LEGEND:







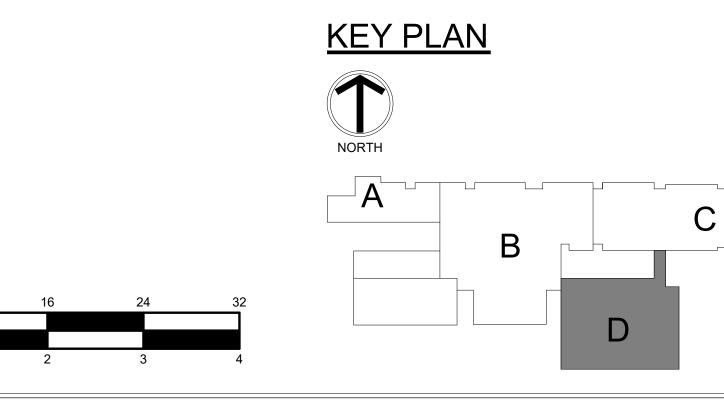
WORK TO BE INSTALLED
WORK TO REMAIN

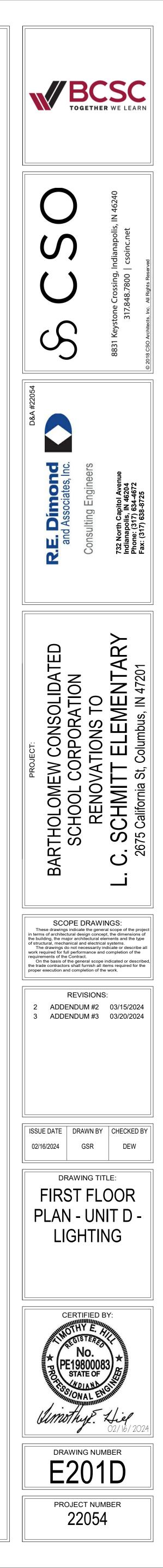
GENERAL NOTES:

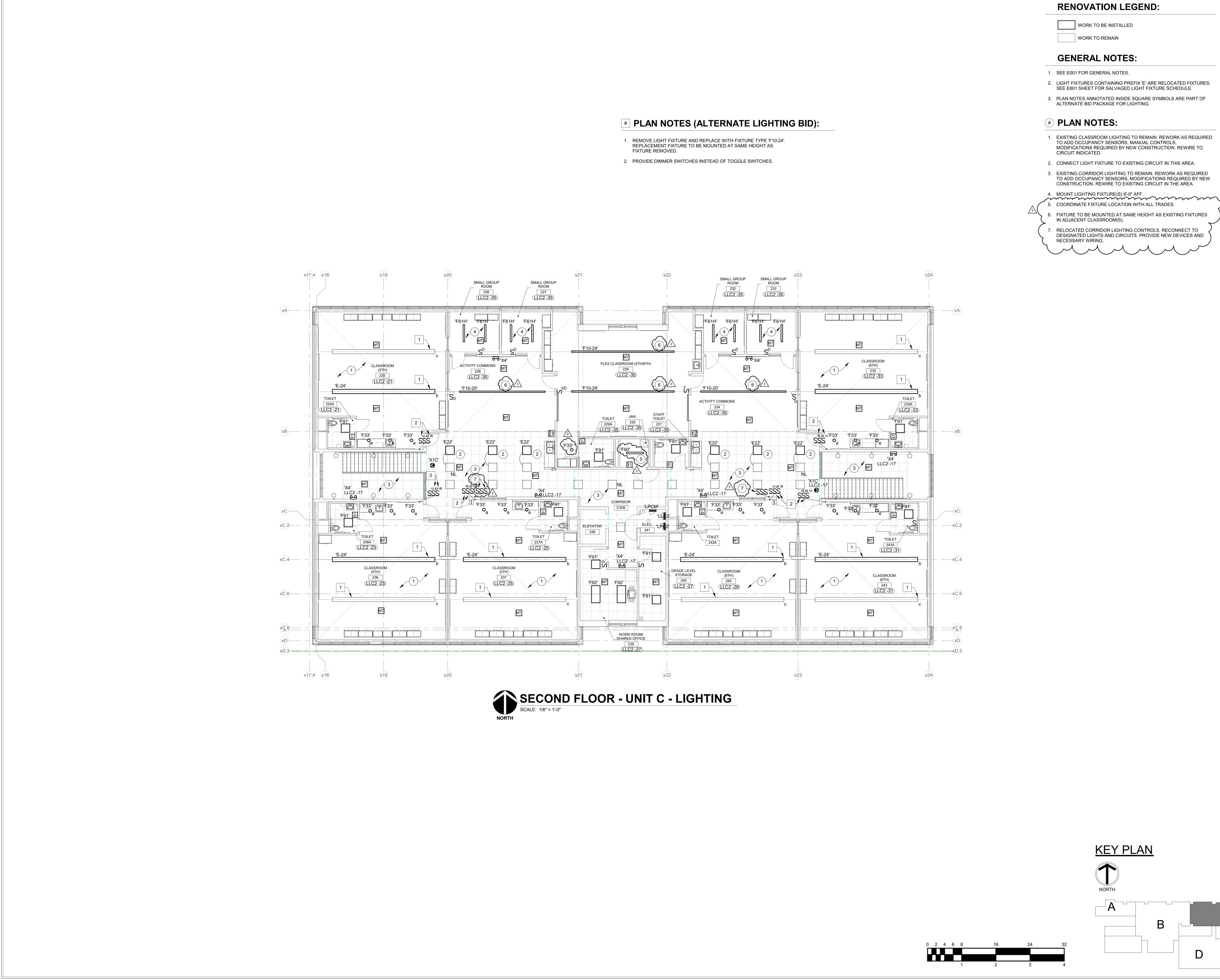
 SEE E001 FOR GENERAL NOTES.
 LIGHT FIXTURES CONTAINING PREFIX 'E' ARE RELOCATED FIXTURES. SEE E601 SHEET FOR SALVAGED LIGHT FIXTURE SCHEDULE.

PLAN NOTES:

- RELOCATED COURT LIGHTING CONTROLS. RECONNECT TO DESIGNATED LIGHTS AND CIRCUITS. PROVIDE NEW DEVICES AND NECESSARY WIRING.
- NEW LIGHTING CONTROLS IN THIS AREA. CONNECT TO EXISTING CIRCUITS AND PROVIDE NECESSARY WIRING.
- CONNECT TO EXISTING CIRCUIT IN THIS AREA. PROVIDE NECESSARY WIRING.
- CONNECT TO CIRCUIT INDICATED THROUGH LIGHTING RELAY PANEL IN ELECTRICAL ROOM 118; SEE DRAWING E201C. SEE DRAWING E-403 FOR RELAY PANEL AND CONTROL DETAILS. COORDINATE LOCATION WITH ARCHITECT AND BLOCK COURSING.
- 5. REWORK AS REQUIRED TO ADD OCCUPANCY SENSORS AND MODIFICATIONS REQUIRED BY NEW CONSTRUCTION. REWIRE TO EXISTING CIRCUIT IN THE AREA. PROVIDE NEW LIGHT SWITCHES.
- 6. ALL NEW EMERGENCY LIGHTS AND EXIT SIGNS IN THIS ARE TO BE CONNECTED TO EXISTING CIRCUITS.
- 7. RELOCATED EXIT SIGN OR EMERGENCY LIGHT. REPLACE EXISTING FIXTURE WITH FIXTURE SPECIFIED.
- 8. ALL EXISITING LIGHTING TO REMAIN IN THIS AREA.



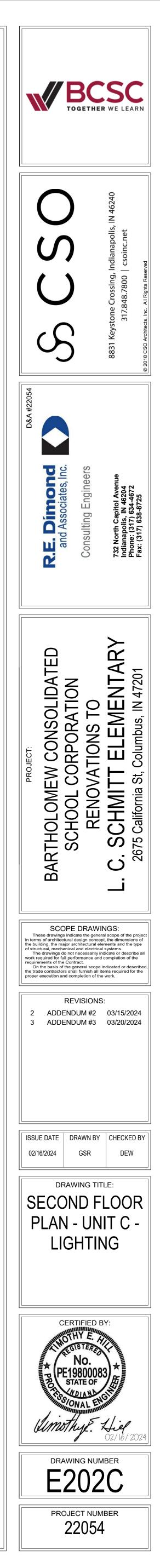




WORK TO BE INSTALLED
WORK TO REMAIN

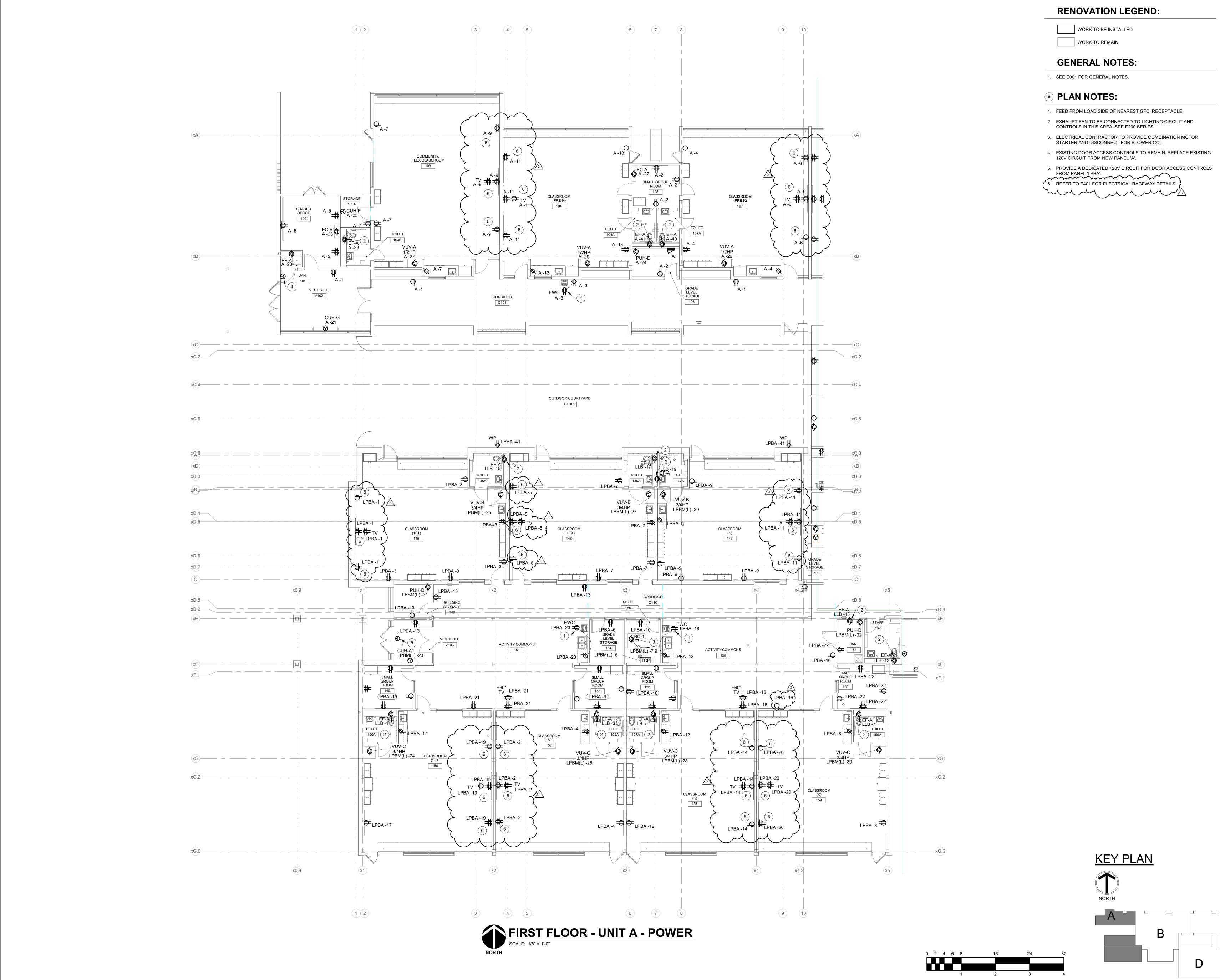
- 2. LIGHT FIXTURES CONTAINING PREFIX 'E' ARE RELOCATED FIXTURES.

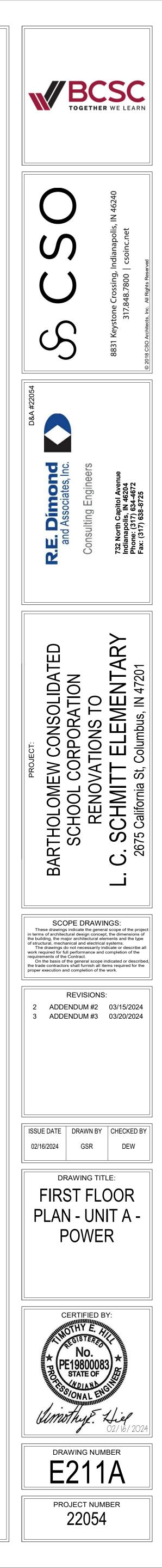
- 1. EXISTING CLASSROOM LIGHTING TO REMAIN. REWORK AS REQUIRED MODIFICATIONS REQUIRED BY NEW CONSTRUCTION. REWIRE TO
- CONSTRUCTION. REWIRE TO EXISTING CIRCUIT IN THE AREA.
- 6. FIXTURE TO BE MOUNTED AT SAME HEIGHT AS EXISTING FIXTURES
- 7. RELOCATED CORRIDOR LIGHTING CONTROLS. RECONNECT TO DESIGNATED LIGHTS AND CIRCUITS. PROVIDE NEW DEVICES AND

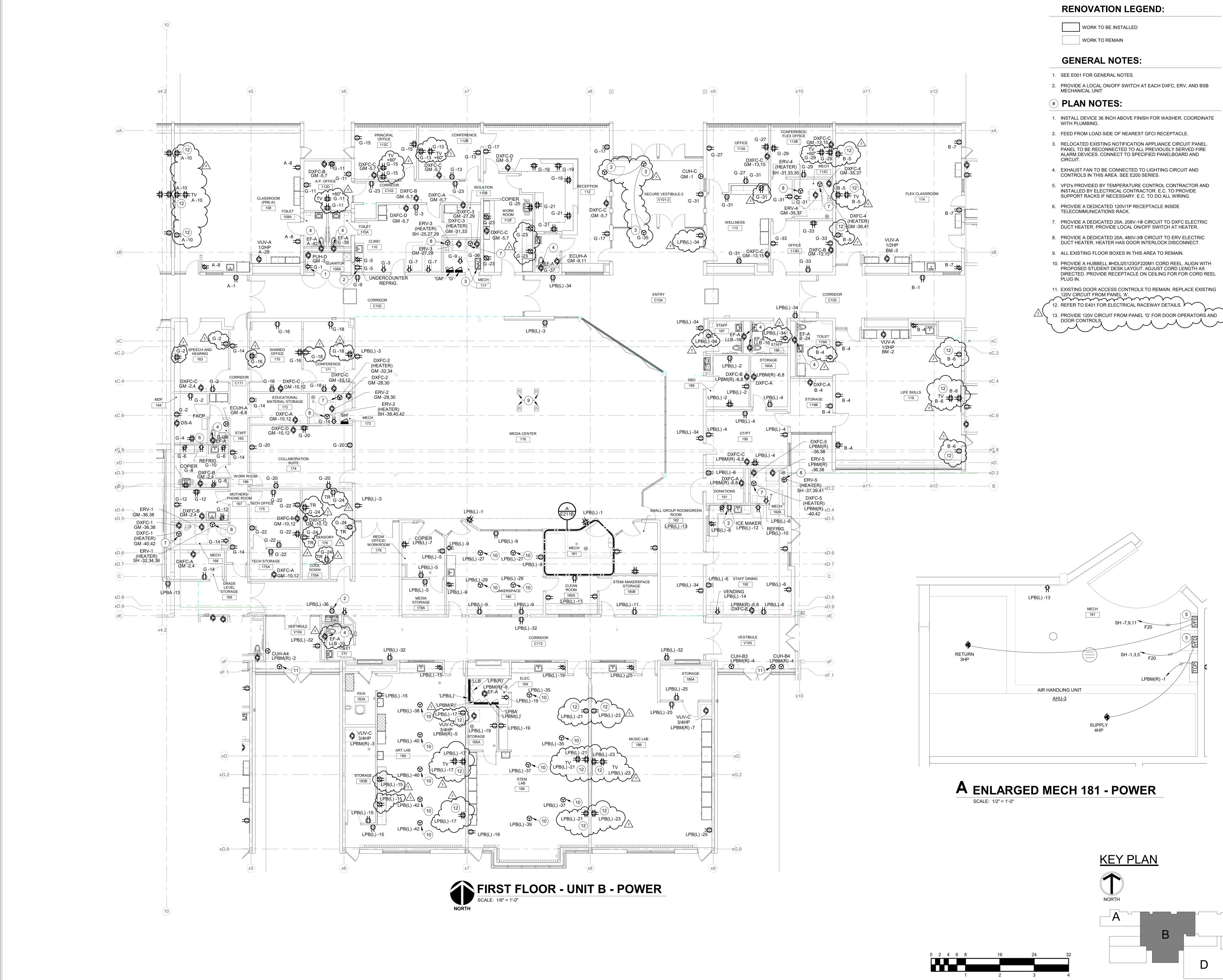


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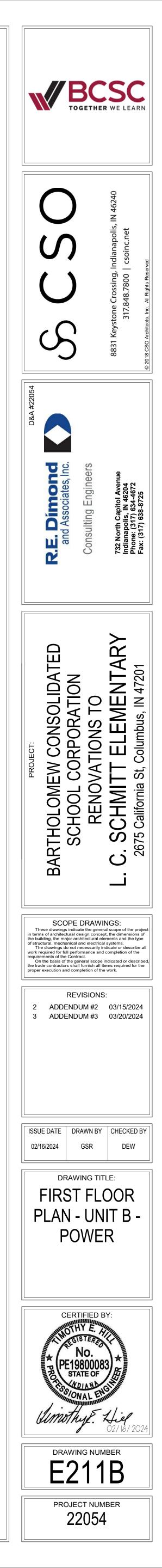
D

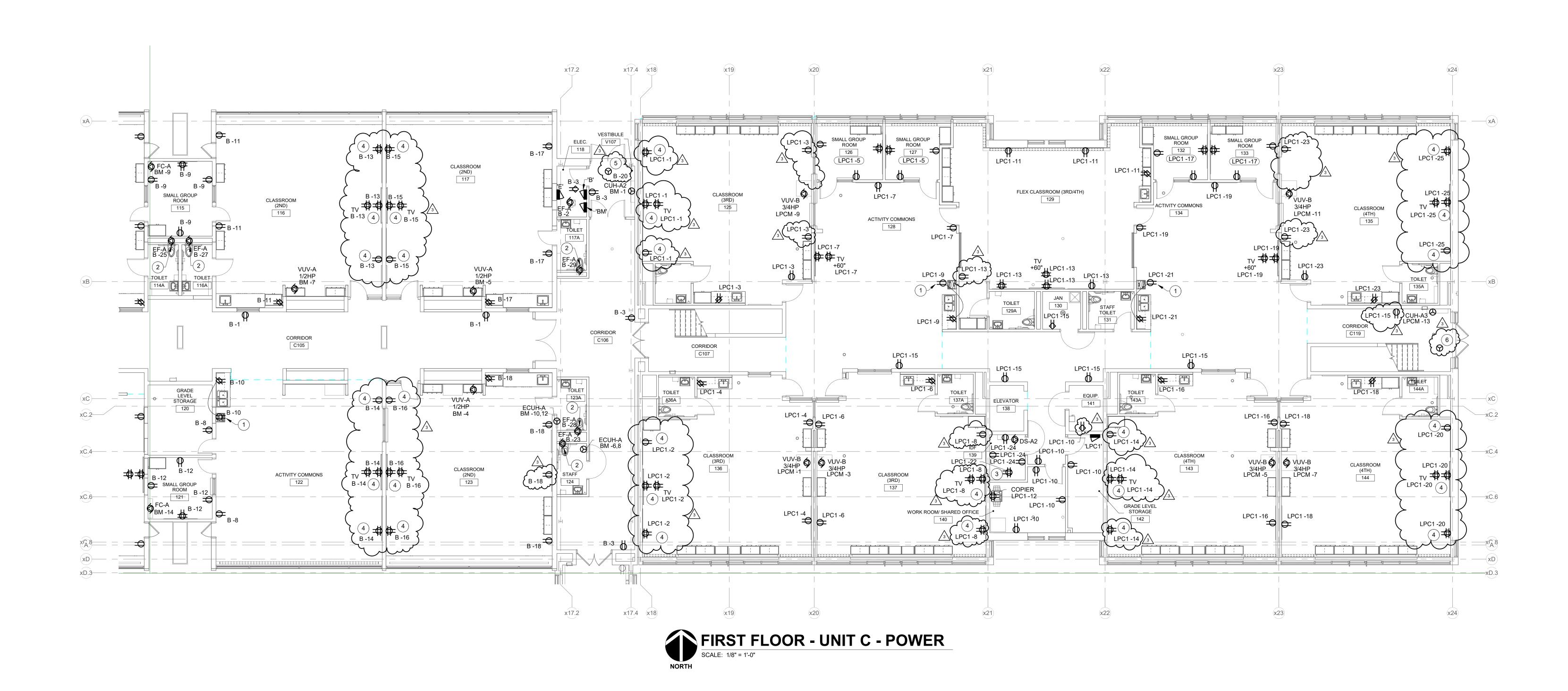






WORK TO BE INSTALLED
WORK TO REMAIN





- WORK TO BE INSTALLED
- **GENERAL NOTES:**
- 1. SEE E001 FOR GENERAL NOTES.

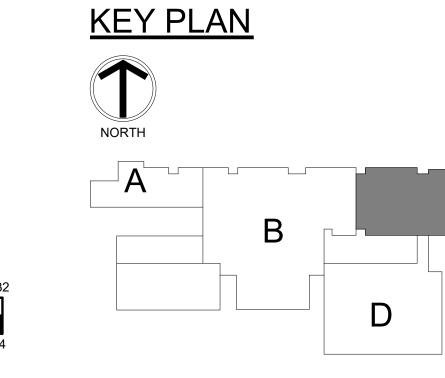
PLAN NOTES:

- 1. FEED FROM LOAD SIDE OF NEAREST GFCI RECEPTACLE.
- 2. EXHAUST FAN TO BE CONNECTED TO LIGHTING CIRCUIT AND CONTROLS IN THIS AREA. SEE E200 SERIES.
- 3. PROVIDE A DEDICATED 120V/1P RECEPTACLE INSIDE

120V CIRCUIT FROM NEW PANEL 'LPC1

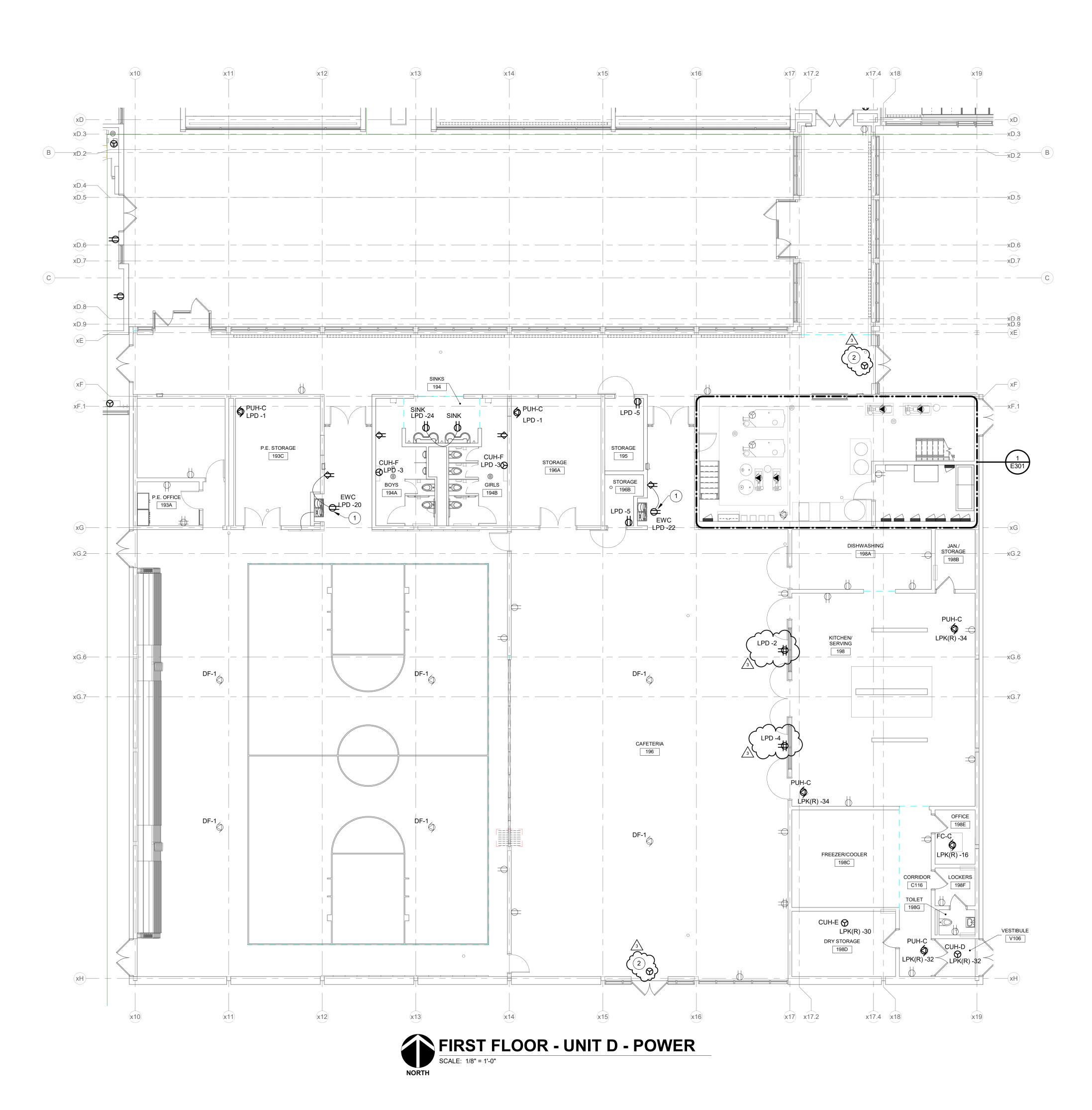
- 4. REFER TO E401 FOR ELECTRICAL RACEWAY DETAILS.
- REFER TO E401 FOR ELECTRICAL RACEWAY DETAILS.
 PROVIDE 120V CIRCUIT FROM PANEL 'B' FOR DOOR OPERATORS AND DOOR CONTROLS.

6. EXISTING DOOR ACCESS CONTROLS TO REMAIN. REPLACE EXISTING







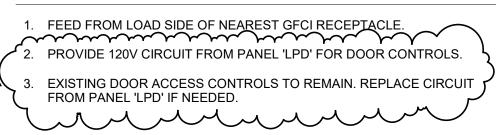


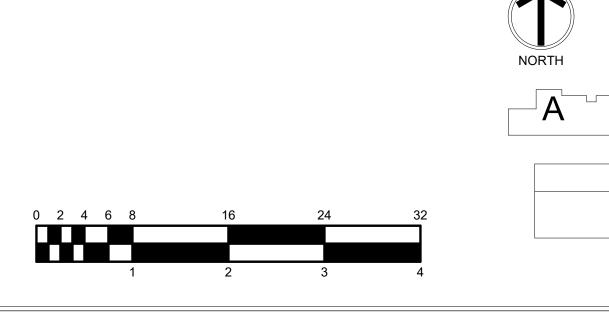
WORK TO BE INSTALLED

GENERAL NOTES:

1. SEE E001 FOR GENERAL NOTES.

PLAN NOTES:



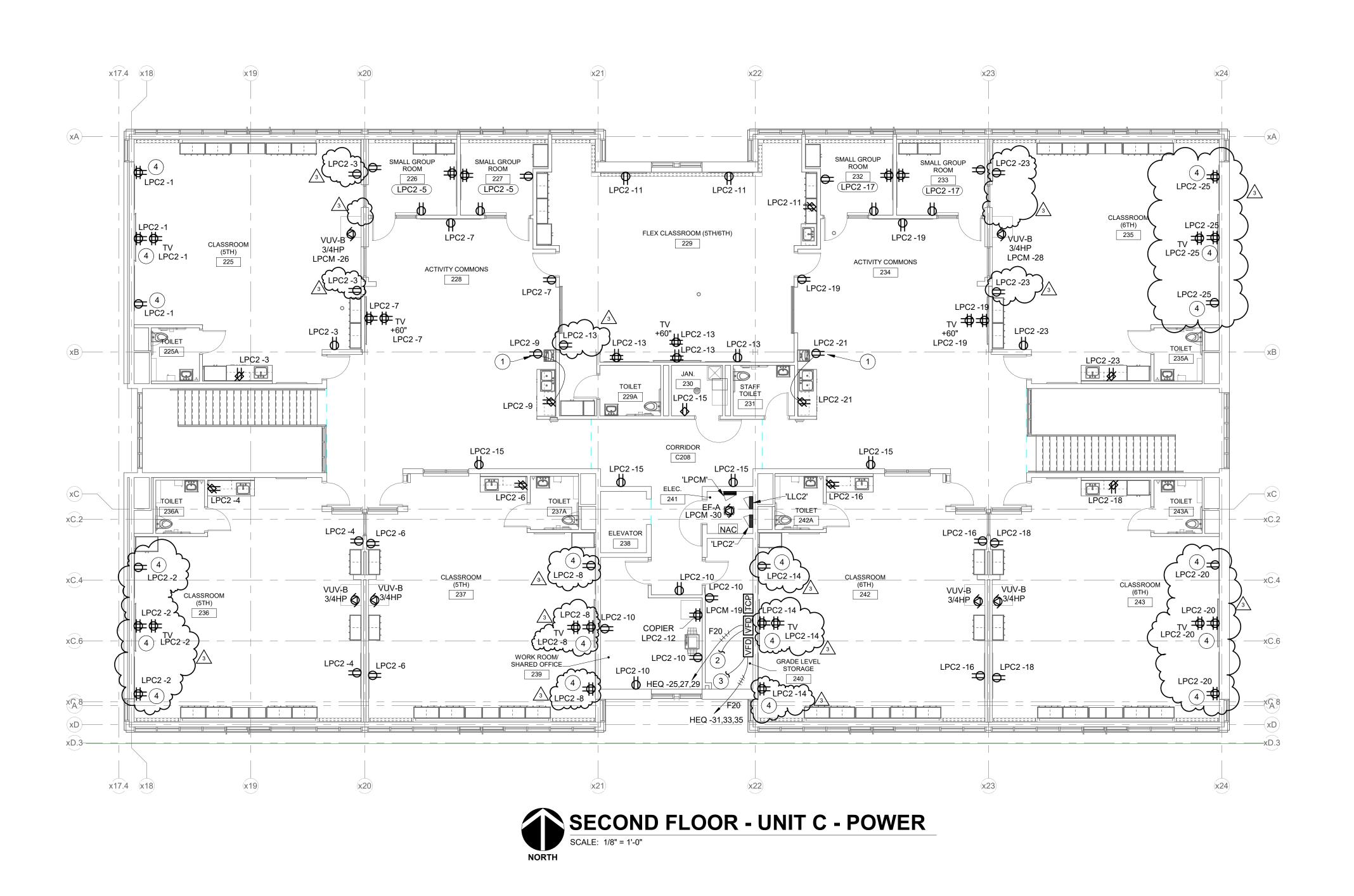


В

С

<u>KEY PLAN</u>





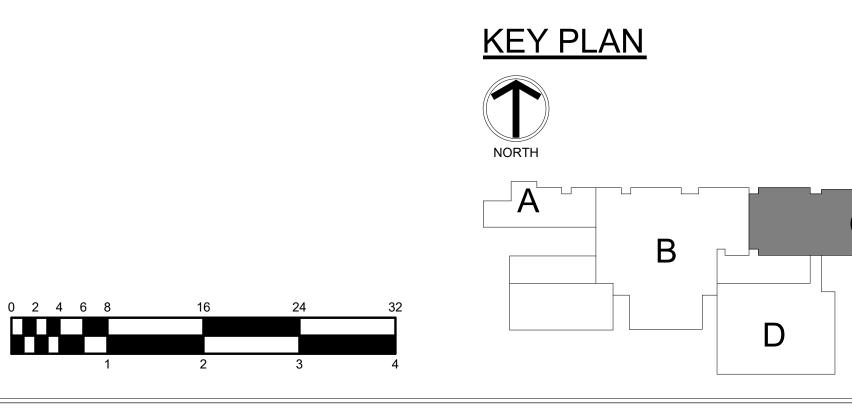
- WORK TO BE INSTALLED WORK TO REMAIN

GENERAL NOTES:

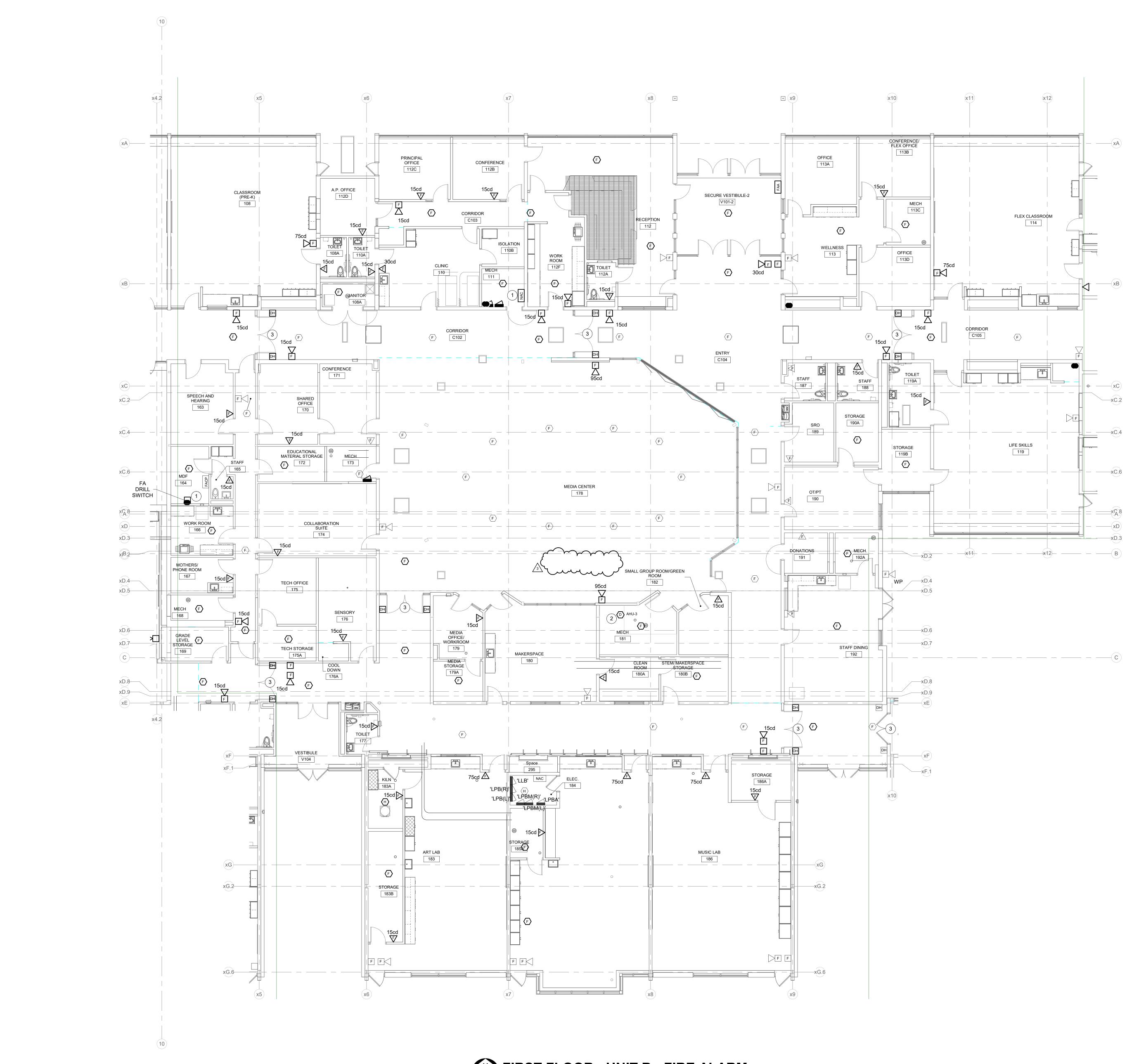
1. SEE E001 FOR GENERAL NOTES.

PLAN NOTES:

- 1. FEED FROM LOAD SIDE OF NEAREST GFCI RECEPTACLE.
- 2. CONTROL WIRING TO AIR HANDLING UNIT (AHU-4) SUPPLY FAN ON UNIT C ROOF. 3#12, 1#12 GND, 3/4" C.
- 3. CONTROL WIRING TO AIR HANDLING UNIT (AHU-4) RETURN FAN ON
- UNIT C ROOF. 3#12, 1#12 GND, 3/4" C. 4. REFER TO E401 FOR ELECTRICAL RACEWAY DETAILS.









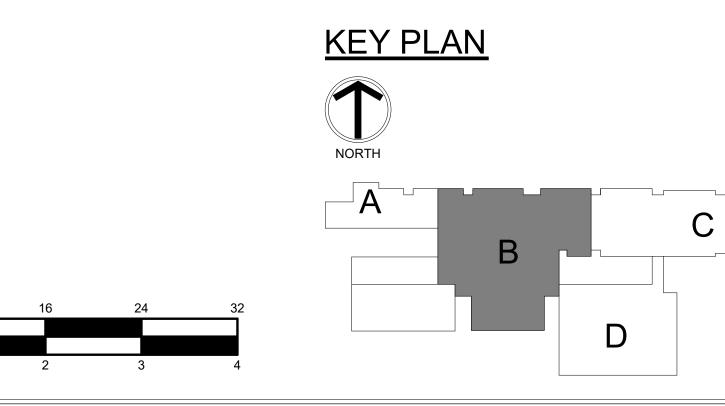
WORK TO BE INSTALLED

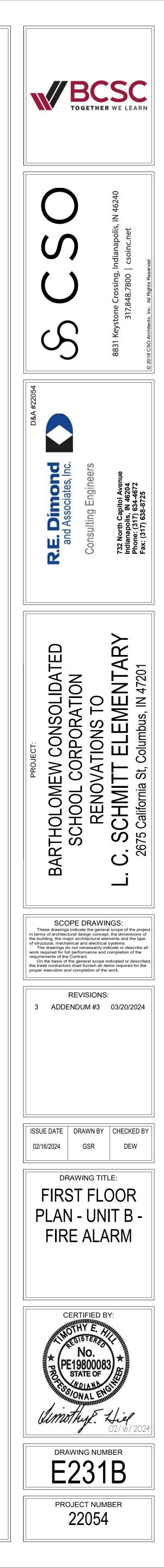
GENERAL NOTES:

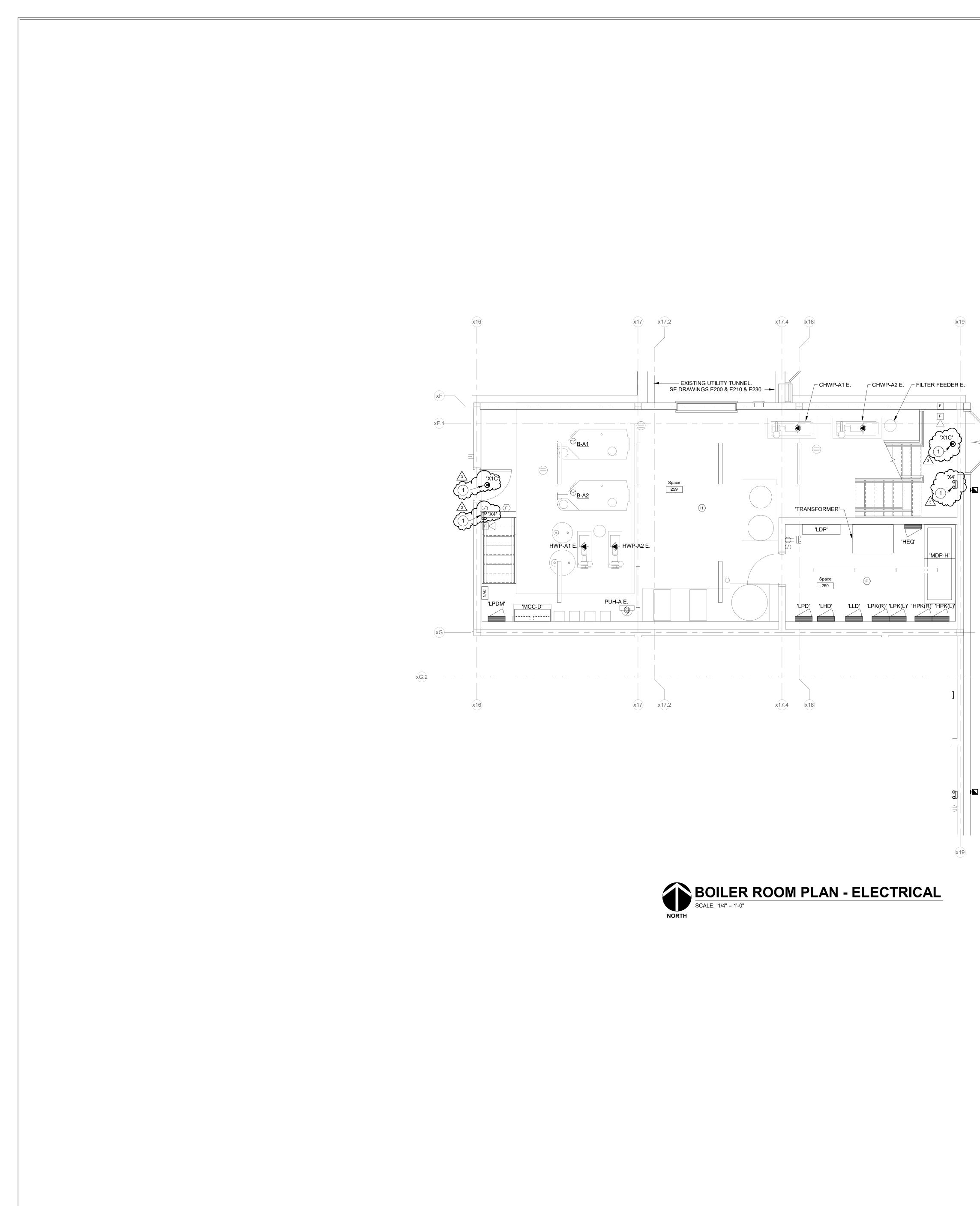
1. REFER TO SHEET E001 FOR ADDITIONAL GENERAL NOTES.

PLAN NOTES:

- 1. RELOCATED FIRE ALARM DEVICE. ALL PREVIOUS DEVICE CONNECTIONS TO REMAIN.
- 2. INSTALL DUCT MOUNTED SMOKE DETECTOR IN AHU RETURN AND WIRE TO SHUT DOWN AHU.
- 3. PROVIDE FIRE ALARM HOLD OPENS AS SHOWN AND CONNECT TO ELECTRONIC HOLD OPEN PROVIDED IN DOOR CLOSER. INTERFACE WITH LOCK DOWN SYSTEM.



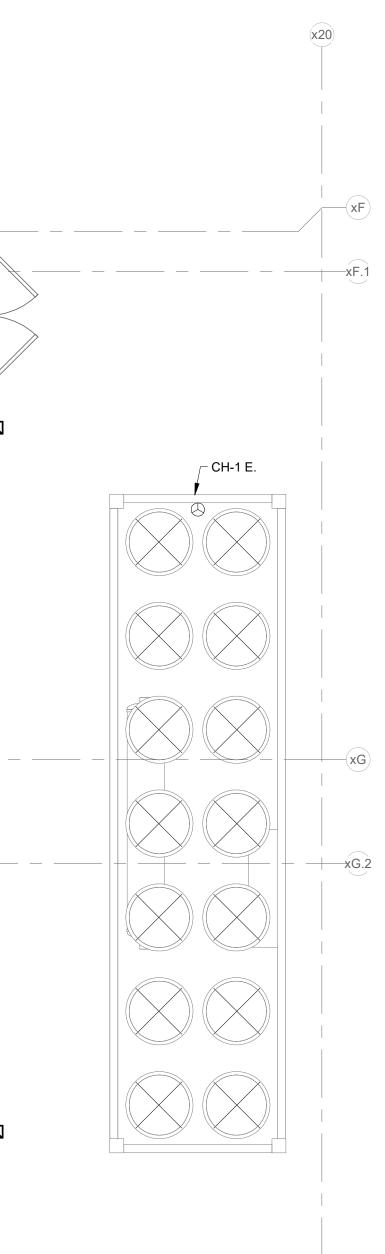




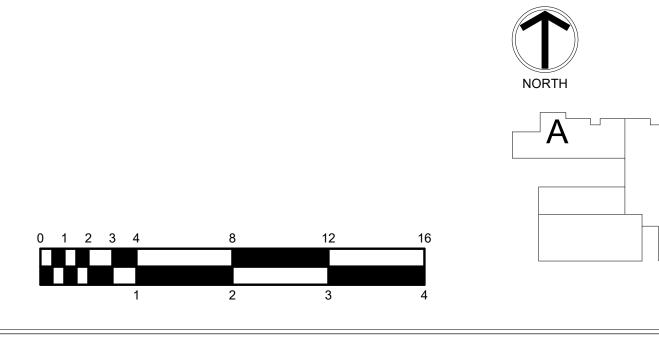
WORK TO BE INSTALLED

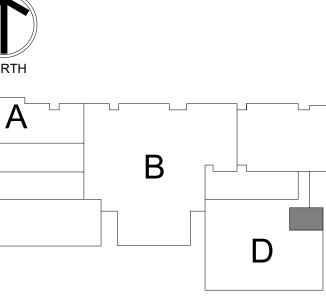
GENERAL NOTES:

~~	1. SEE E001 FOR GENERAL NOTES.
\langle	# PLAN NOTES:
Č	1. CONNECT FIXTURE TO EXISTING LIGHTING CIRCUIT IN ROOM.
$\sqrt{3}$	MMM

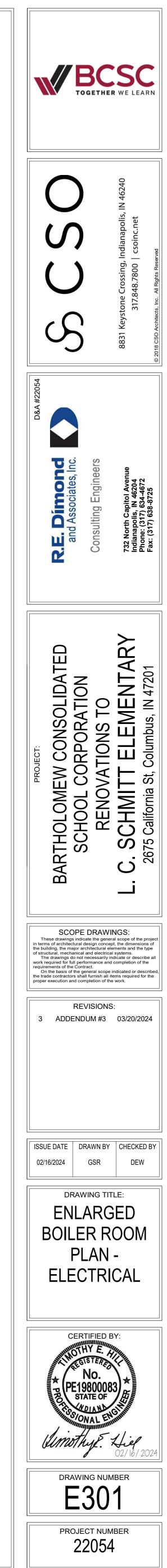


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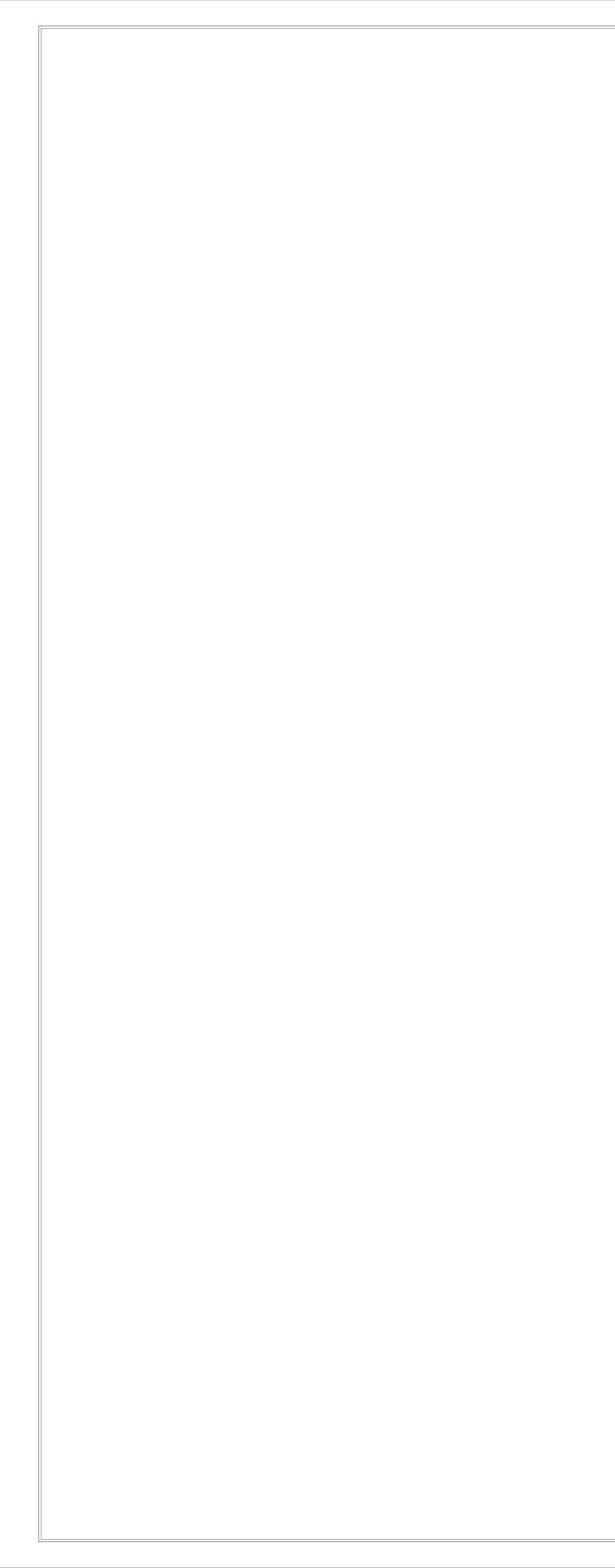


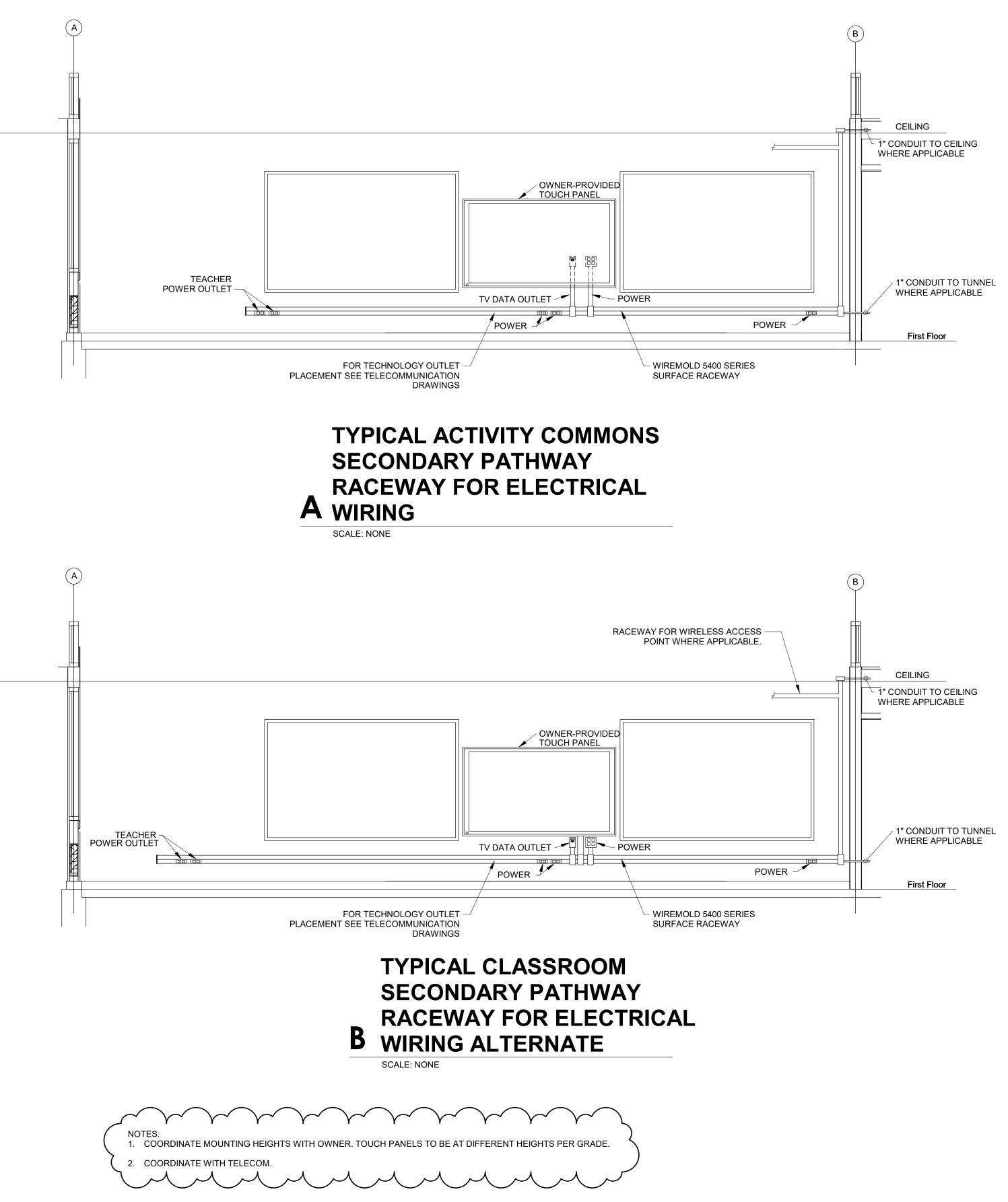


<u>KEY PLAN</u>

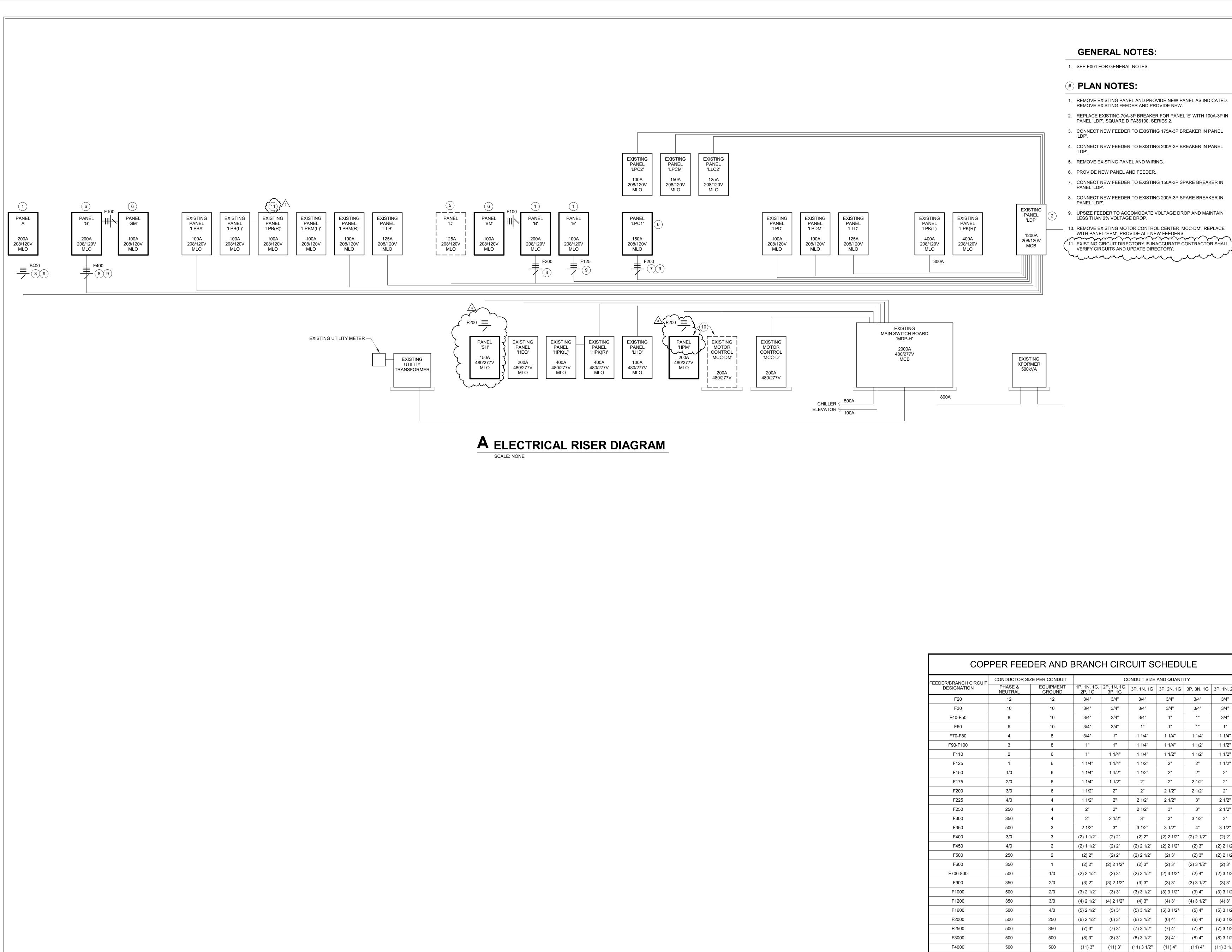


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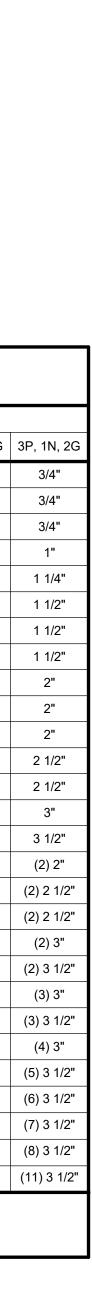








DER/BRANCH CIRCUIT	CONDUCTOR SI	ZE PER CONDUIT		C	ONDUIT SIZE	AND QUANT	ITY	
DESIGNATION	PHASE & NEUTRAL	EQUIPMENT GROUND	1P, 1N, 1G, 2P, 1G	2P, 1N, 1G, 3P, 1G	3P, 1N, 1G	3P, 2N, 1G	3P, 3N, 1G	3
F20	12	12	3/4"	3/4"	3/4"	3/4"	3/4"	
F30	10	10	3/4"	3/4"	3/4"	3/4"	3/4"	
F40-F50	8	10	3/4"	3/4"	3/4"	1"	1"	
F60	6	10	3/4"	3/4"	1"	1"	1"	
F70-F80	4	8	3/4"	1"	1 1/4"	1 1/4"	1 1/4"	
F90-F100	3	8	1"	1"	1 1/4"	1 1/4"	1 1/2"	
F110	2	6	1"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	
F125	1	6	1 1/4"	1 1/4"	1 1/2"	2"	2"	
F150	1/0	6	1 1/4"	1 1/2"	1 1/2"	2"	2"	
F175	2/0	6	1 1/4"	1 1/2"	2"	2"	2 1/2"	
F200	3/0	6	1 1/2"	2"	2"	2 1/2"	2 1/2"	
F225	4/0	4	1 1/2"	2"	2 1/2"	2 1/2"	3"	
F250	250	4	2"	2"	2 1/2"	3"	3"	
F300	350	4	2"	2 1/2"	3"	3"	3 1/2"	
F350	500	3	2 1/2"	3"	3 1/2"	3 1/2"	4"	
F400	3/0	3	(2) 1 1/2"	(2) 2"	(2) 2"	(2) 2 1/2"	(2) 2 1/2"	
F450	4/0	2	(2) 1 1/2"	(2) 2"	(2) 2 1/2"	(2) 2 1/2"	(2) 3"	-
F500	250	2	(2) 2"	(2) 2"	(2) 2 1/2"	(2) 3"	(2) 3"	-
F600	350	1	(2) 2"	(2) 2 1/2"	(2) 3"	(2) 3"	(2) 3 1/2"	
F700-800	500	1/0	(2) 2 1/2"	(2) 3"	(2) 3 1/2"	(2) 3 1/2"	(2) 4"	
F900	350	2/0	(3) 2"	(3) 2 1/2"	(3) 3"	(3) 3"	(3) 3 1/2"	
F1000	500	2/0	(3) 2 1/2"	(3) 3"	(3) 3 1/2"	(3) 3 1/2"	(3) 4"	
F1200	350	3/0	(4) 2 1/2"	(4) 2 1/2"	(4) 3"	(4) 3"	(4) 3 1/2"	
F1600	500	4/0	(5) 2 1/2"	(5) 3"	(5) 3 1/2"	(5) 3 1/2"	(5) 4"	
F2000	500	250	(6) 2 1/2"	(6) 3"	(6) 3 1/2"	(6) 4"	(6) 4"	(
F2500	500	350	(7) 3"	(7) 3"	(7) 3 1/2"	(7) 4"	(7) 4"	
F3000	500	500	(8) 3"	(8) 3"	(8) 3 1/2"	(8) 4"	(8) 4"	
F4000	500	500	(11) 3"	(11) 3"	(11) 3 1/2"	(11) 4"	(11) 4"	(





SALVAGED LIGHT FIXTURE SC	HE
MARK COUNT DESCRIPTION	
E22 26 EXISTING 2 BY 2-FOOT FIXTURE. R	RECE
E24 6 EXISTING 2 BY 4-FOOT FIXTURE. SURF/	ACE
E24R 24 SAME AS 'E24' EXCEPT RECES	SSE
E-8 10 EXISTING 8 FOOT FLORESCENT F	FIXT
E-16 26 SAME AS 'E-8' EXCEPT LENGTH. MADE UP OF 2 SECTI	IONS
E-24 10 SAME AS 'E-8' EXCEPT LENGTH. MADE UP OF 3 SECTI	IONS

NOTE: 1. VERIFY PROPER OPERATION AND REPLACE BALLASTS AND DRIVERS AS REQUIRED.

2. REPLACE ALL FLORESCENT TUBES WITH NEW. VERIFY COLOR TEMPERATURE WITH OWNER/ARCHITECT.

3. COUNT ONLY SHOWN FOR REFERENCE. VERIFY IN FIELD.

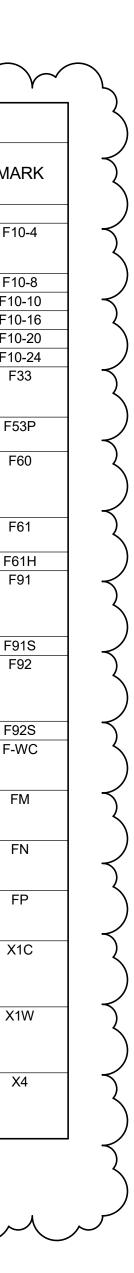
4. FIXTURES MAY BE TAKEN APART TO FORM DESIRED LENGTHS.

5. ALL RELOCATED FIXTURES MUST BE MOUNTED TO MATCH EXISTING (OR PREVOUSLY EXISTING) FIXTURES IN RELOCATION AREA.

HEDULE

ESSED. E MOUNTED. NS OF TYPE 'E-8' FIXTURES. NS OF TYPE 'E-8' FIXTURES.

						E	HEDUL	JRE SCH	LIGHT FIXTU	
MAR	MANUFACTURER(S)	OLTS	LUMENS	COLOR	WATTS	CRI	TOTAL FIXTURE WATTS	MOUNTING	DESCRIPTION	ARK
F10-4	JESCO LIN-DI SERIES FOCAL POINT SEEM 2 MARK SLOT 2 SERIES		1319/FT	3500K	10W/FT	80	40	SUSPENDED	LINEAR DIRECT/INDIRECT 2.5-INCH WIDE BY LENGTH INDICATED, AIRCRAFT CABLE, ALUMINUM HOUSING, ADJUSTABLE COLOR TEMPERATURE, WHITE LENS, 0-10V DIMMING.	10-4
F10-8		120 V	1319/FT	3500K	10W/FT	80	80	SUSPENDED	LINEAR DIRECT/INDIRECT 2.5-INCH WIDE BY LENGTH INDICATED, AIRCRAFT CABLE, WHITE LENS, 0-10V DIMMING.	10-8
F10-1		120 V	1319/FT	3500K	10W/FT	80	100	SUSPENDED	SAME AS 'F10-4' EXCEPT DIFFERENT LENGTH.	0-10
F10-1		120 V	1319/FT	3500K	10W/FT	80	160	SUSPENDED	SAME AS 'F10-4' EXCEPT DIFFERENT LENGTH.	0-16
F10-2		120 V	1319/FT	3500K	10W/FT	80	200	SUSPENDED	SAME AS 'F10-4' EXCEPT DIFFERENT LENGTH.	0-20
F10-2		120 V	1319/FT	3500K	10W/FT	80	240	SUSPENDED	SAME AS 'F10-4' EXCEPT DIFFERENT LENGTH.	0-24
F33	HALO COMMERCIAL HC8 SERIES LITHONIA LDN8 SERIES PRESCOLITE LC8 SERIES		1100	3500K	14.4W	80	14	RECESSED	OPEN DOWNLIGHT, 8-INCH DIAMETER APERTURE, CLEAR SEMI-SPECULAR REFLECTOR, SELF FLANGED, 0-10V DIMMING TO 10-PERCENT, NON-IC RATED.	-33
F53F	DEMI INTERIOR PENDENT	120 V	6617	3500K	68W	80	68	PENDENT	24-INCH DIAMETER PENDENT FIXTURE, STEM MOUNTED, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATALOG OF STANDARD FINISHES, INTEGRAL DRIVER, 2 FT TOTAL LENGTH.	53P
F60	COLUMBIA MPS SERIES CREE LS4 SERIES LITHONIA CSS SERIES METALUX SNLED SERIES		5000	3500K	48W	80	48	SURFACE/ CHAIN HUNG	4-FOOT LENSED INDUSTRIAL, FORMED STEEL HOUSING, WHITE FINISH, SEMI-FROST ACRYLIC DIFFUSER.	-60
F61	ILP QWIKLINK	120 V	5000	VERIFY	38W	80	38	SURFACE	4-FOOT LENSED INDUSTRIAL, FORMED STEEL HOUSING, WHITE FINISH, FROSTED ACRYLIC LENS, SELECTABLE LUMEN OUTPUT AND TEMPERATURE.	-61
F61F		120 V	5000	VERIFY	38W	80	38	SUSPENDED	SAME AS 'F61' EXCEPT SUSPENDED	61H
F91	COLUMBIA CFP22 SERIES CREE C-TR-A-FP22 LITHONIA CPANL22 SERIES METALUX 22FP SERIES	120 V	3200	3500K	32W	80	32	RECESSED	2 BY 2-FOOT FLAT PANEL, ACRYLIC LENS, EDGE-LIT, 0-10V DIMMING TO 10-PERCENT	91
F91S		120 V	3200	3500K	32W	80	32	SURFACE	SAME AS 'F91' EXCEPT SURFACE MOUNTED.	91S
F92	COLUMBIA CFP24 SERIES CREE C-TR-A-FP24 SERIES LITHONIA CPANL24 SERIES METALUX 24FP SERIES	120 V	4000	3500K	40W	80	40	RECESSED	2 BY 4-FOOT FLAT PANEL, ACRYLIC LENS, EDGE-LIT, 0-10V DIMMING TO 10-PERCENT	-92
F92S		120 V	4000	3500K	40W	80	40	RECESSED	SAME AS 'F92' EXCEPT SURFACE MOUNTED.	92S
F-WC	USAI LIGHTING MICRO MULTI-CELL SERIES	120 V	60/W TO 72/W	3500K	21W	80	21	(IN DESCRIPTION)	LINEAR DOWNLIGHT WITH INTEGRAL DRIVER, SUITABLE FOR 'WOODWORKS GRILLE - FORTE' CEILING, 6 CELL, PLACED BETWEEN SLATS, ARCHITECT TO SELECT FINISH, 35 DEGREE BEAM, VERIFY CEILING MODEL WITH ARCHITECT BEFORE ORDERING, BOTTOM OF FIXTURE ALIGNED WITH BOTTOM OF CEILING.	-WC
FM	KENALL MR17FD SERIES NEWSTAR GWRO SERIES COOPER TRB/TRR SERIES		2000	3000K	20W	70	20	SURFACE CEILING	17-INCH NOMINAL DIAMETER ROUND FIXTURE, CAST ALUMINUM HOUSING, FROSTED POLYCARBONATE LENS, WET LOCATION LISTED, GASKETED, INTEGRAL EMERGENCY BATTERY BACKUP, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATALOG OF STANDARD FINISHES.	-M
FN	EXO SG SERIES LITHONIA WPX SERIES LUMARK AXCS SERIES		2000	3000K	20W	70	20	SURFACE WALL	ARCHITECTURAL WALL PACK, CAST ALUMINUM HOUSING, GASKETED, FULL CUTOFF, WET LOCATION LISTED, INTEGRAL EMERGENCY BATTERY BACKUP, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATALOG OF STANDARD COLORS.	FN
FP	EXO SG SERIES LITHONIA WPX SERIES LUMARK AXCS SERIES		2000	3000K	20W	70	20	SURFACE WALL	SAME AS FIXTURE 'FN,' EXCEPT NO INTEGRAL EMERGENCY BATTERY BACKUP.	FP
X1C	DUAL-LITE SE SERIES SURE-LITES CX SERIES LITHONIA LE SERIES MULE MD SERIES		N/A	GREEN	5W	80	5	SURFACE CEILING	THERMOPLASTIC EXIT SIGN, WHITE HOUSING, SELF POWERED, SELF DIAGNOSTIC.	(1C
X1W	DUAL-LITE SE SERIES SURE-LITES CX SERIES LITHONIA LE SERIES MULE MD SERIES		N/A	GREEN	5W	80	5	SURFACE WALL	THERMOPLASTIC EXIT SIGN, WHITE HOUSING, SELF POWERED, SELF DIAGNOSTIC.	(1W
X4	DUAL-LITE EV SERIES SURE-LITES SEL25 SERIES LITHONIA ELM2 SERIES MULE SQ-80-LED SERIES	-	N/A	WHITE	5W	80	5	SURFACE WALL	EMERGENCY LIGHTING UNIT, 90-MINUTE EMERGENCY CAPACITY, DAMP LOCATION LISTED, SELF DIAGNOSTIC.	X4





NT Description Note Am Pole Am	Crt Description Note And Posce A B C Posce Amp Posce Note Addition Note	NT Description NOTE AVE POLE A B C POLE AVE NOTE	DESCRIPTION NOTE AMP PoLE A B C POLE AMP NOTE DESCRIPTION OCT CULIAD VISTRILL VISTO 20 A 1	VIX Description NOTE AUX B C POLE AUV DESCRIPTION CKT DESCRIPTION CKT 1 CUL4-2VESTBULE V107 20 A 1 1000/1170 1 20 A VUVA-12HP LEX CLASSROOM (2ND) 117 20 A 1 20 A VUVA-12HP LEX CLASSROOM (2ND) 117 20 A 1 20 A ECULH ASTAP 12A 6 5 VUVA-12HP ELX CLASSROOM (2ND) 117 20 A 1 20 A ECULH ASTAP 12A 6 6 FARACE 20 A 1 07760 2 20 A ECULH ASTOLE F123A 10 20 A RECEPT CORR.100K (VSE1 107 20 A 1 20 A RECEPT 12K (2ASSROOM 114 20 A 1 20 A RECEPT 1 3 SPARE 20 A 1 20 A RECEPT 12K (2ASSROOM 114 20 A 1 20 A RECEPT 1 20 A RECEPT 1 20 A RECEPT 3 SPARE 20 A 1 20 A SPARE 20 A SPARE 20 A </th <th>NT DESCRIPTION NOTE Ame Pole Ame C Pole Ame C Pole Ame C Pole Ame Cover Ame Cover Ame Cover Ame Cover Ame Cover Ame Cover Ame B C Pole Ame Cover Ame Cover Ame Ame<!--</th--><th>T DESCRIPTION NOTE AMP POLE AMP POLE AMP POLE AMP POLE AMP DESCRIPTION CKT CULHA2VESTRULE V107 20A 1 1000/1176 120A 1 20A 1</th></th>	NT DESCRIPTION NOTE Ame Pole Ame C Pole Ame C Pole Ame C Pole Ame Cover Ame Cover Ame Cover Ame Cover Ame Cover Ame Cover Ame B C Pole Ame Cover Ame Cover Ame Ame </th <th>T DESCRIPTION NOTE AMP POLE AMP POLE AMP POLE AMP POLE AMP DESCRIPTION CKT CULHA2VESTRULE V107 20A 1 1000/1176 120A 1 20A 1</th>	T DESCRIPTION NOTE AMP POLE AMP POLE AMP POLE AMP POLE AMP DESCRIPTION CKT CULHA2VESTRULE V107 20A 1 1000/1176 120A 1 20A 1
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11 SPARE 20 Å 1 0 / 750 2 20 Å ECUHA 101LE 1723 12 1 RECEPT 1 20 Å 1 <	11 SPARE 20 Å 1 0/750 2 0/750 0/750 2 0/750 2 0/750 2 0/750 2 0/750 2 0/750 <	11 SPARE 20 A 1 0/750 2 20 A 1 10	SPARE 20 A 1 0/750 2 20 A FAR OLIC 192A 12 SPARE 20 A 1 0/0 1 20 A FAR OLIC -ASML GROUP ROM 121 14 RECET CLASSROOM (2ND) 116 20 A 1 1280 / 1280	1 SPARE 20A 1 0/750 2 2/A ECUPA 101E1 123A 12 1 ECUPA 101E1 123A 1 1 1 ECUPA 101E1 123A 1 1 ECUPA 101E1 123A 1 1 ECUPA 101E	11 SPARE 20A 1 000 20A 20A 1 20A ECUHA 101E 173A 12 14 ECUHA 101E 173A 14 14 12 14 12 000 1 20A 1 20A <th< td=""><td>SPARE 20 Å 1 00/750 2 20 Å ECUPA 10[E1 123A 12 SPARE 20 Å 1 00/0 1 20 Å 1 200 Å 1</td></th<>	SPARE 20 Å 1 00/750 2 20 Å ECUPA 10[E1 123A 12 SPARE 20 Å 1 00/0 1 20 Å 1 200 Å 1
13 SPARE 20 Å 1 0 / 0 1 20 Å 1	13 SPARE 20 Å 1 0/0 1 20 Å	13 SPARE 20A 1 0/0 1 20A FAN COLFC-ASMALL GROUP ROOM 121 14 15 SPARE 20A 1 0/0 1 20A SPARE 16 120A RECEPT 120A 120A RECEPT 17 SPARE 20A 1 0/0 1 20A SPARE 16 120A RECEPT 120A 120A <t< td=""><td>SPARE 20 A 1 0 / 0 1 20 A 1</td><td>3 SPARE 20 Å 1 0 / 0 1 20 Å 1 20 Å</td><td>3 SPARE 20 Å 1 0 / 0 1 20 Å 1 1 <t< td=""><td>1 0 / 0 0 / 0 1 0 / 0 7 FAN COLL FC-A SMALL GOUP ROOM 121 14 1 0 / 0 1 0 / 0 1 2 / 0 SPARE 16 16 16 16 16 16 16 16 16 16 17 RECEPT CLASSROOM (2ND) 117 20 / 0 1 16 16 16 16 16 17 16 16 16 17 16 17 16 17 16 17 16 16 16 17 16 16 16 17 16 16 17 16 17 16 17 16 17 16 17 16 17 16 18 16 17 14 16 16 17 16 17 16 17 16 18 16 17 16 17 16 17 16 17 16 17 16 18 16 17 16 16 16 17 16 16 16 17 16 17 16 16 16 <</td></t<></td></t<>	SPARE 20 A 1 0 / 0 1 20 A 1	3 SPARE 20 Å 1 0 / 0 1 20 Å	3 SPARE 20 Å 1 0 / 0 1 20 Å 1 1 <t< td=""><td>1 0 / 0 0 / 0 1 0 / 0 7 FAN COLL FC-A SMALL GOUP ROOM 121 14 1 0 / 0 1 0 / 0 1 2 / 0 SPARE 16 16 16 16 16 16 16 16 16 16 17 RECEPT CLASSROOM (2ND) 117 20 / 0 1 16 16 16 16 16 17 16 16 16 17 16 17 16 17 16 17 16 16 16 17 16 16 16 17 16 16 17 16 17 16 17 16 17 16 17 16 17 16 18 16 17 14 16 16 17 16 17 16 17 16 18 16 17 16 17 16 17 16 17 16 17 16 18 16 17 16 16 16 17 16 16 16 17 16 17 16 16 16 <</td></t<>	1 0 / 0 0 / 0 1 0 / 0 7 FAN COLL FC-A SMALL GOUP ROOM 121 14 1 0 / 0 1 0 / 0 1 2 / 0 SPARE 16 16 16 16 16 16 16 16 16 16 17 RECEPT CLASSROOM (2ND) 117 20 / 0 1 16 16 16 16 16 17 16 16 16 17 16 17 16 17 16 17 16 16 16 17 16 16 16 17 16 16 17 16 17 16 17 16 17 16 17 16 17 16 18 16 17 14 16 16 17 16 17 16 17 16 18 16 17 16 17 16 17 16 17 16 17 16 18 16 17 16 16 16 17 16 16 16 17 16 17 16 16 16 <
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17 SPARE 20 Å 1 0/0 1 20 Å SPARE 18 19 SPARE 20 Å 1 0/0 1 20 Å SPARE 20 1 0/0 1 20 Å SPARE 20 1 20 Å SPARE 20 1 0/0 1 20 Å SPARE 20 1 0/0 1 20 Å SPARE 20 1 20 Å 1 20 Å SPARE 20	17 SPARE 20A 1 0/0 1 20A 1	17 SPARE 20 Å 1 0 / 0 1 20 Å	SPARE 20A 1 20A	7 SPARE 20 Å 1 0/0 1 20 Å SPARE 1 20 Å 1	17 SPARE 20A 1 0/0 1 20A SPARE 18 19 SPARE 20A 1 0/0 1 20A SPARE 20A 1 20A 0/0 1 20A	SPARE 20A 1 0/0 1 20A
10 SPARE 20 Å 1 0 / 0 1 20 Å SPARE 20 Å 1 0 / 0 1 20 Å SPARE 20 Å 1 0 / 0 1 20 Å SPARE 20 Å 1 0 / 0 1 20 Å SPARE 20 Å 1 0 / 0 1 20 Å SPARE 21 SPARE 20 Å 1 0 / 0 1 20 Å 1 20 Å 1 0 / 0 1 20 Å 1 </td <td>19 SPARE 2 0 0 0 1 2</td> <td>10 SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A 1 2</td> <td>SPARE 20A 1 0 / 0 1 20A SPARE 22A 1 0 / 0 1 20A SPARE 22A 1 0 / 0 1 20A SPARE 22A 1 0 / 0 1 20A Item Control of the control o</td> <td>9 SPARE 20A 1 0/0 1 20A SPARE 20A 1 0/0 1 20A SPARE 20A 1 0/00 1 20A SPARE 20A 1 0/048/107 1 20A LIGHTING AND EFA 117 20A 1 20A 1</td> <td>19 SPARE 20A 1 0/0 1 20A 1 20A SPARE 20A 1 0/0 1 20A 1 20A<</td> <td>1 0/0 1 0/0 1 20A 1 1 20A 1 0/0 1 20A 1 20A 1 20A 1 20A</td>	19 SPARE 2 0 0 0 1 2	10 SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A 1 2	SPARE 20A 1 0 / 0 1 20A SPARE 22A 1 0 / 0 1 20A SPARE 22A 1 0 / 0 1 20A SPARE 22A 1 0 / 0 1 20A Item Control of the control o	9 SPARE 20A 1 0/0 1 20A SPARE 20A 1 0/0 1 20A SPARE 20A 1 0/00 1 20A SPARE 20A 1 0/048/107 1 20A LIGHTING AND EFA 117 20A 1	19 SPARE 20A 1 0/0 1 20A 1 20A SPARE 20A 1 0/0 1 20A 1 20A<	1 0/0 1 0/0 1 20A 1 1 20A 1 0/0 1 20A 1 20A 1 20A 1 20A
21 SPARE 20 Å 1 0 / 0 1 20 Å	21 SPARE 20 1 0/0 1 20 1<	21 SPARE 20 Å 1 0 / 0 1 20 Å	SPARE 20 A 1 0 / 0 1 20 A SPARE 22 SPARE 20 A 1 0 / 0 1 20 A SPARE 22 SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1<	1 SPARE 20A 1 0/0 1 20A 1 <	21 SPARE 20A 1 0/0 1 20A 1	SPARE 20A 1 0/0 1 20A 1 20A 1 1 20A 1 1 20A <
23 SPARE 20 Å 1 0/0 1 20 Å	23 SPARE 20 1 0/0 1 20 1 0/0 1 20 1 20 20 1 <td>23 SPARE 20 Å 1 000 1 20 Å 1 20 Å</td> <td>SPARE 20 Å 1 0 / 0 1 20 Å 1</td> <td>33 SPARE 20 A 1 0/0 1 20 A 1 20 A 1 0/0 1 20 A <</td> <td>33 SPARE 20 Å 1 0 / 0 1 20 Å 1 20 Å</td> <td>9 9 1 0 0 1 20 1 20 9</td>	23 SPARE 20 Å 1 000 1 20 Å	SPARE 20 Å 1 0 / 0 1 20 Å 1	33 SPARE 20 A 1 0/0 1 20 A 1 20 A 1 0/0 1 20 A <	33 SPARE 20 Å 1 0 / 0 1 20 Å	9 9 1 0 0 1 20 1 20 9
27 SPARE 20 Å 1 0 / 0 1 20 Å	27 SPARE 20A 1 0/0 1 20A 1	27 SPARE 20 Å 1 0 / 0 1 20 Å SPARE 20 Å 1 972 / 972 1 20 Å 1 1 20 Å 1 1 20 Å 1 20 Å <td>SPARE 20 Å 1 0 / 0 1 20 Å 1</td> <td>7 SPARE 20 Å 1 0 / 0 1 20 Å 1 20 Å 20 Å 1 20 Å 1</td> <td>27 SPARE 20 Å 1 0 / 0 1 20 Å 1 20 Å</td> <td>1 1 1 0 1 20 1 20 20 1</td>	SPARE 20 Å 1 0 / 0 1 20 Å 1	7 SPARE 20 Å 1 0 / 0 1 20 Å 1 20 Å 20 Å 1	27 SPARE 20 Å 1 0 / 0 1 20 Å	1 1 1 0 1 20 1 20 20 1
29 SPARE 20 A 1 0 1 20 A 1 0/0 1 20 A 1 20 A 1 0/0 1 20 A 1 <td>29 SPARE 20A 1 0/0 1 20A 1 20A 1 0/0 1 20A 1</td> <td>29 SPARE 20 Å 1 0/0 1 20 Å 1 20</td> <td>SPARE 20 A 1 0 / 0 1 20 A 1</td> <td>9 SPARE 20 A 1 0 1 20 A <td< td=""><td>29 SPARE 20 1 0 1 20 <td< td=""><td>1 1 1 0 1</td></td<></td></td<></td>	29 SPARE 20A 1 0/0 1 20A 1 20A 1 0/0 1 20A 1	29 SPARE 20 Å 1 0/0 1 20 Å 1 20	SPARE 20 A 1 0 / 0 1 20 A 1	9 SPARE 20 A 1 0 1 20 A 1 20 A <td< td=""><td>29 SPARE 20 1 0 1 20 <td< td=""><td>1 1 1 0 1</td></td<></td></td<>	29 SPARE 20 1 0 1 20 <td< td=""><td>1 1 1 0 1</td></td<>	1 1 1 0 1
31 SPARE 20 Å 1 0 / 0 1 20 Å 1 0 / 0 1 20 Å	31 SPARE 20A 1 0/0 1 20A 1 0/0 1 20A 1	31 SPARE 20 Å 1 0 / 0 1 20 Å 1 20 Å 1 0 / 0 1 20 Å	SPARE 20A 1 0/0 1 20A	1 SPARE 20 Å 1 0 / 0 1 20 Å	31 SPARE 20 A 1 0/0 1 20 A 1 0/0 1 20 A <	9 9 1 0/0 1 20<
33 SPARE 20A 1 0/0 1 20A 1 20A 1 0/0 1 20A 1 10A 1 10A 1 10A 1 10A 1 10A 1 10A 1	33 SPARE 20 A 1 0 / 0 1 20 A 10 10 A	33 SPARE 20 A 1 0 / 0 1 20 A 1	SPARE 20A 1 0/0 1 20A 1 20A 1 0/0 1 20A 1 20A 1 0/0 1 20A 1 0/10 1 20A 1 100 1 20A 1 100 1 20A 1 100 1 20A 1 100<	33 SPARE 20 Å 1 0/0 1 20 Å 10 Å	33 SPARE 20 A 1 0/0 1 20 A 10 A	3 SPARE 1 0 0 0 1 10
35 SPARE 20A 1 0/0 1 20A 1	35 SPARE 20 1 0/0 1 20 1 0/0 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 3 3 SPARE 20 1 0/0 1 20 1 20 20 3 20 1 20 20 20 3 20 20 20 3 20 20 20 3 20 20 20 3 20 20 20 3 20 20 20 3 20 20 20 3 20 20 20 3 20 20 20 3 20 20 20 3 20 20 20 20 20 3 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	35 SPARE 20 A 1 0/0 1 20 A SPARE 36 37 SPARE 38 39 SPARE 20 A 1 0/10 1 20 A 1 0/10 1 20 A 1 0/10 1 20 A 37 SPARE 20 A 1 0/10 1 10 A 100 A	SPARE 20 Å 1 0 / 0 1 20 Å SPARE 36 SPARE 20 Å 1 0 / 0 1 20 Å SPARE 38 SPARE 20 Å 1 0 / 0 1 20 Å SPARE 38 SPARE 20 Å 1 0 / 0 1 20 Å SPARE 20 Å 1 0 / 4102 0 / 3302 3 100 Å SPARE 20 Å 1 0 / 0 1 20 Å SPARE 20 Å 1 0 / 3302 3 100 Å	35 SPARE 20A 1 0/0 1 20A 1	35 SPARE 20 1 0/0 1 20 1 20 36 SPARE 20 1 0/0 1 20 1 20 37 SPARE 20 1 0/0 1 20 1 20 37 SPARE 20 1 0/0 1 20 1 20 37 SPARE 20 1 0/0 1 20 1 20 37 SPARE 20 1 0/0 1 20 1 20 1 20 37 SPARE 20 1 0/0 1 20 1 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 1 20 1 1 20 1 1 20 1 1 20 1 1 20 1<	i SPARE 1 1 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 3
37 SPARE 20 A 1 0 / 0 1 20 A 1 0 / 0 1 20 A 38 39 SPARE 20 A 1 0 / 0 1 20 A 1 0 / 302 0 / 302 0 / 302 0 / 0 0 0 / 0 0 / 0 0 / 0 0 / 0 0 0 / 0 0 0 / 0 0 0 0 <t< td=""><td>37 SPARE 20 Å 1 0/0 I 20 Å 1 0/402 I 0/402 I 0/402 I 0/402 I 0/302 I 0 0 0 0 1</td><td>37 SPARE 20 Å 1 0/0 1 20 Å 20 Å 1 0/402 1 0/402 3 0 0 1 1 20 Å 1 0/402 3 100 Å 0 1 100 Å 100</td><td>SPARE 20A 1 0/0 1 20A 1 0/0 1 20A 33 SPARE 20A 1 0/4102 0/302 3 10A SPARE 20A 1 0/0 1 20A SPARE 20A 1 0/4102 0/302 3 10A 10A SPARE 20A 1 0/0 1 20A SPARE 20A 1 0/4102 0/302 3 10A 10A SPARE 20A 1 0/0 1 20A SPARE 20A 1 0/4102 0/20A 1 0/20A 3 10A 10</td><td>37 SPARE 20 A 1 0 / 0 1 20 A 1 20 A 1 0 / 4102 </td><td>37 SPARE 20 A 1 0 / 0 1 20 A 1 20 A 1 0 / 4102 </td><td>1 1 0 1 0 1 20 A 1 0 1 20 A 3 1 1 1 20 A 1 0 1 20 A 3</td></t<>	37 SPARE 20 Å 1 0/0 I 20 Å 1 0/402 I 0/402 I 0/402 I 0/402 I 0/302 I 0 0 0 0 1	37 SPARE 20 Å 1 0/0 1 20 Å 20 Å 1 0/402 1 0/402 3 0 0 1 1 20 Å 1 0/402 3 100 Å 0 1 100 Å 100	SPARE 20A 1 0/0 1 20A 1 0/0 1 20A 33 SPARE 20A 1 0/4102 0/302 3 10A SPARE 20A 1 0/0 1 20A SPARE 20A 1 0/4102 0/302 3 10A 10A SPARE 20A 1 0/0 1 20A SPARE 20A 1 0/4102 0/302 3 10A 10A SPARE 20A 1 0/0 1 20A SPARE 20A 1 0/4102 0/20A 1 0/20A 3 10A 10	37 SPARE 20 A 1 0 / 0 1 20 A 1 20 A 1 0 / 4102	37 SPARE 20 A 1 0 / 0 1 20 A 1 20 A 1 0 / 4102	1 1 0 1 0 1 20 A 1 0 1 20 A 3 1 1 1 20 A 1 0 1 20 A 3
39 SPARE 20 A 1 0 / 00<	39 SPARE 20 A 1 0/0 1 20 A 1 20 A 1 0/302 3 10 A P 41 SPARE 20 A 1 0/0 1 20 A 3 0/0 1 20 A 1 0/2676 0/2676 0	39 SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 302 3 100 A P 41 SPARE 20 A 1 0 / 0 1 20 A SPARE 20 A 1 0 / 0 / 302 3 100 A P TOTAL CONNECTED LOAD (VA): 10/80 VA 2676 VA 2676 VA 2676 VA 2676 VA 2070 A 11626 VA 10812 VA 0 / 2676 VA	SPARE 20 A 1 0/0 1 20 A SPARE 40 1 0/302 3 100 A SPARE 20 A 1 0/0 1 20 A SPARE 42 41 SPARE 20 A 1 0/2676 0/2676 0 100 A 100 A </td <td>9 SPARE 20 A 1 0/0 1 20 A 1 20 A 1 20 A 1 0/0 1 20 A 1 0/20 A 1 1 0/20 A 1 0/20 A 1 0/20 A 1<td>39 SPARE 20 A 1 0 / 0 1 20 A 1 0 / 0 1 20 A 3 30 A 1 30 A SPARE 40 41 SPARE 20 A 1 0 / 0.302 3 10 A Prove A 10 A Prov A 10 A</td><td>9 SPARE 20 A 1 0 / 0 1 20 A 1 0 / 302 0 / 302 0 / 0 0 0 / 0 0 / 0</td></td>	9 SPARE 20 A 1 0/0 1 20 A 1 20 A 1 20 A 1 0/0 1 20 A 1 0/20 A 1 1 0/20 A 1 0/20 A 1 0/20 A 1 <td>39 SPARE 20 A 1 0 / 0 1 20 A 1 0 / 0 1 20 A 3 30 A 1 30 A SPARE 40 41 SPARE 20 A 1 0 / 0.302 3 10 A Prove A 10 A Prov A 10 A</td> <td>9 SPARE 20 A 1 0 / 0 1 20 A 1 0 / 302 0 / 302 0 / 0 0 0 / 0 0 / 0</td>	39 SPARE 20 A 1 0 / 0 1 20 A 1 0 / 0 1 20 A 3 30 A 1 30 A SPARE 40 41 SPARE 20 A 1 0 / 0.302 3 10 A Prove A 10 A Prov A 10 A	9 SPARE 20 A 1 0 / 0 1 20 A 1 0 / 302 0 / 302 0 / 0 0 0 / 0 0 / 0
41 SPARE 20 A 1 0 / 0 1 20 A SPARE 42 41 SPARE 20 A 1 0 / 2676 0 / 2676 50 TOTALS : 4102 VA 3302 VA 2676 VA 5 5 5 10722 VA 11626 VA 10812 VA	41 SPARE 20 A 1 0/0 1 20 A 9 0/2676 0/2676 0 </td <td>41 SPARE 20 A 1 0 / 0 1 20 A SPARE 41 SPARE 20 A 1 0 / 2676</td> <td>SPARE 20 A 1 0 / 0 1 20 A SPARE 41 SPARE 20 A 1 0 / 2676 0</td> <td>All SPARE QOA 1 O/O 1 20 A SPARE 42 All SPARE 42 41 SPARE 20 A 1 O/2676 0/2676 V TOTALS : 4102 VA 3302 VA 2676 VA V V V 1072 VA 11626 VA 10812 VA</td> <td>A1 SPARE 20 A 1 20 A 1 20 A 1 20 A 1 20 A 0 / 2676 0 0 V V V V V V V V V 0 / 2676 0</td> <td>SPARE 20 A 1 0 / 0 1 20 A 20 A 1 0 / 2676</td>	41 SPARE 20 A 1 0 / 0 1 20 A SPARE 41 SPARE 20 A 1 0 / 2676	SPARE 20 A 1 0 / 0 1 20 A SPARE 41 SPARE 20 A 1 0 / 2676 0	All SPARE QOA 1 O/O 1 20 A SPARE 42 All SPARE 42 41 SPARE 20 A 1 O/2676 0/2676 V TOTALS : 4102 VA 3302 VA 2676 VA V V V 1072 VA 11626 VA 10812 VA	A1 SPARE 20 A 1 20 A 1 20 A 1 20 A 1 20 A 0 / 2676 0 0 V V V V V V V V V 0 / 2676 0	SPARE 20 A 1 0 / 0 1 20 A 20 A 1 0 / 2676
TOTALS : 4102 VA 3302 VA 2676 VA	TOTALS: 4102 VA 3302 VA 2676 VA TOTAL CONNECTED LOAD (VA): 10812 VA 10812 VA 10812 VA TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 28 A	TOTALS : 4102 VA 3302 VA 2676 VA TOTAL CONNECTED LOAD (VA) : 10722 VA 11626 VA 10812 VA TOTAL CONNECTED LOAD (VA) : 10080 VA TOTAL CONNECTED LOAD (AMPS) : 28 A EMARKS: NOTES: NOTES: NOTES:	TOTALS : 4102 VA 3302 VA 2676 VA TOTAL CONNECTED LOAD (VA) : 10812 VA 10812 VA 10812 VA TOTAL CONNECTED LOAD (VA) : 1080 VA TOTAL CONNECTED LOAD (AMPS) : 28 A MARKS: NOTES: NOTES: NOTES:	TOTALS : 4102 VA 3302 VA 2676 VA	TOTALS : 4102 VA 3302 VA 2676 VA	
	TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 28 A TOTAL CONNECTED LOAD (AMPS): 92 A TOTAL CONNECTED LOAD (AMPS): 92 A	TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 28 A TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 92 A TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 92 A TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 92 A TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 92 A TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 92 A	TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 28 A Marks: Total connected Load (VA): 10080 VA Total connected Load (AMPS): 92 A			TOTALS: 4102 VA 3302 VA 2676 VA 2676 VA 10812 VA 10812 VA
		EMARKS: λ_{A} NOTES: λ_{A} NOTES:		TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 28 A TOTAL CONNECTED LOAD (AMPS): 92 A		
	REMARKS: $\langle \Lambda \rangle$ NOTES: NOTES:				Y TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 28 A TOTAL CONNECTED LOAD (AMPS): 92 A	TOTAL CONNECTED LOAD (VA): 10080 VA TOTAL CONNECTED LOAD (AMPS): 28 A TOTAL CONNECTED LOAD (AMPS): 92 A TOTAL CONNECTED LOAD (AMPS): 92 A
	γ - PROVIDE NEW PANEL γ_3	ROVIDE NEW PANEL JO REPLACE EXISTING PANELBOARD 'B' AND 'D'	VIDE NEW PANEL /3			
ROVIDE NEW PANEL TO REPLACE EXISTING PANELBOARD 'B' AND 'D'				ROVIDE NEW PANEL TO REPLACE EXISTING PANELBOARD 'B' AND 'D'	EMARKS: PROVIDE NEW PANEL Notes: Rovide New Panel - PROvide New Panel to Replace Existing PanelBoard 'B' and 'D' Notes:	
ROVIDE NEW PANEL /3		\mathcal{N}		ROVIDE NEW PANEL JO REPLACE EXISTING PANELBOARD 'B' AND 'D'		
REMARKS: \ NOTES:		- PROVIDE NEW PANEL TO REPLACE EXISTING PANELBOARD 'B' AND 'D'	- PROVIDE NEW PANEL JO REPLACE EXISTING PANELBOARD B' AND 'D'			
ROVIDE NEW PANEL 1/3				ROVIDE NEW PANEL //3		
ROVIDE NEW PANEL JO REPLACE EXISTING PANELBOARD 'B' AND 'D'				ROVIDE NEW PANEL //3		
	ROVIDE NEW PANEL J - PROVIDE NEW PANEL PANEL J - PROVIDE NEW PANEL	ROVIDE NEW PANEL JO REPLACE EXISTING PANELBOARD 'B' AND 'D'	VIDE NEW PANEL /3			
ROVIDE NEW PANEL / 3				ROVIDE NEW PANEL /3		
ROVIDE NEW PANEL J/3				ROVIDE NEW PANEL //3		
ROVIDE NEW PANEL JTO REPLACE EXISTING PANELBOARD 'B' AND 'D'	$\mathbf{A} = \mathbf{A}$		~ 1 \downarrow \downarrow \downarrow \downarrow \downarrow	ROVIDE NEW PANEL TO REPLACE EXISTING PANELBOARD 'B' AND 'D'		
		ROVIDE NEW PANEL 1/3				
		I = V = DROVIDE NEW DANEL I/3				
	(REMARKS:) (NOTES:)					γ

	GM		P	ANE	ELBOA	RD SCH	IEDULI	Ε			
LOCAT	ION : MECH 111	SCCR (AMPS R	MS SYMM): (2	22,000		: 208Y/120V 3Ф	4-Wire+Ground	AMP	: 100 A MA	IN : MLO NEMA: Type 1 MOUNTING :	SURFACE
СКТ	DESCRIPTION		NOTE AMP	POLE	A	В	С	POLE	AMP NOTE	DESCRIPTION	СК
1	CUH-C SECURE VESTIBULE	-2 V101-2	20 A	1	300 / 420		1	2	20 A	DXFC UNIT ROOM 163, 166-168	2
3	PUH-D JANITOR 108/	4	20 A	1		96 / 420		2	20 A	DXFC UNIT ROOM 183, 186-188	4
5 7	DXFC UNIT ROOM 110, 112	2, C103	20 A	2	945 / 750		945 / 750	2	20 A	ECUH-A STAFF 165	6 8
9 11	ECUH-A TOILET 112/	Ą	20 A	2		750 / 735	750 / 735	2	20 A	DXFC UNIT ROOM 170-172, 174-176	10
13			00.0	0	420 / 0			1	20 A	SPARE	14
15	DXFC UNIT ROOM 113, 17	13А-В	20 A	2		420 / 0		1	20 A	SPARE	16
17	SPARE		20 A	1			0/0	1	20 A	SPARE	18
19	SPARE		20 A	1	0 / 0			1	20 A	SPARE	20
21	SPARE		20 A	1		0 / 0		1	20 A	SPARE	22
23 25	SPARE		20 A	2	0 / 0		0 / 0	2	15 A	SPARE	24 26
27 29	ERV-3 AND DXFC-3 MECI	H 111	15 A	2		546 / 546	546 / 546	2	15 A	ERV-2 AND DXFC-2 MECH 173	28 30
31 33	DXFC-3 DUCT HEATER ME	CH 111	20 A	2	1500 / 1500	1500 / 1500		2	20 A	DXFC-2 DUCT HEATER MECH 173	32
35 37	ERV-4 AND DXFC-4 MECH	113C	15 A	2	546 / 546		546 / 546	2	15 A	ERV-1 AND DXFC-1 MECH 168	36
39 41	DXFC-4 DUCT HEATER MEC	CH 113C	20 A	2		1500 / 1500	1500 / 1500	2	20 A	DXFC-1 DUCT HEATER MECH 168	40
			то	TALS :	6926 VA	9512 VA	8362 VA				
REMAR		NECTED LOAD	(VA): 24800 V	/A		TOTA NOTES:	LCONNECTED	LOAD	(AMPS) : 69 A		

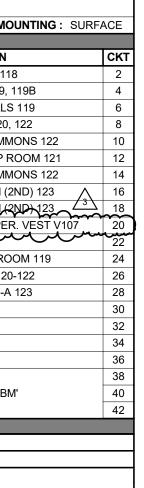
PROVIDE NEW PANEL

			DISTRI	BUTION PAN	EL	
PANEL CONFI MAIN:	GURATION: 208Y	″/120V 3Ф 4-Wire	e+Ground MCB	LOCATION: ENCLOSURE: TRIM:	ELEC. 197A SQUARE D - E1 SERIES	
SCCR	(AMPS RMS SYMM.):			MODIFICATIONS:		
NO.	Load Name	Rating	POLES	PHASE A	PHASE B	
1	PANELBOARD 'E'	100 A	3	4 A	11 A	
2	E. 100A BREAKER	100 A	3			
3	E. PANELBOARD 'LPD'	100 A	3			
4	E. PANELBOARD 'LPDM'	100 A	3			
5	E. PANELBOARD 'LPBM'	100 A	3			
6	E. PANELBOARD 'LPC2'	100 A	3			
7	E. PANELBOARD 'LPBA'	100 A	3			
8	E. PANELBOARD 'LPB'	100 A	3			
9	E. PANELBOARD 'LLB'	125 A	3			
10	E. PANELBOARD 'LLD'	125 A	3			
11	E. PANELBOARD 'LLC2'	125 A	3			
12	PANELBOARD 'LPC1'	150 A	3	94 A	46 A	
13	E. PANELBOARD 'LPCM'	150 A	3			
14	PANELBOARD 'A'	175 A	3	44 A	75 A	
15	E. PANELBOARD 'LPK'	300 A	3			
16	PANELBOARD 'B'	200 A	3	89 A	97 A	
17	PANEL 'LDP' DISCONNECT	1200 A	3			
18	PANELBOARD 'G'	200 A	3	163 A	168 A	
total Remai		9684 VA ISTING SQUARE	TOTAL LOAD (A): E D HCWM I-LINE PANEL	388 A		

	G			P	ANI ANI	CLBOA	KD 2CI						
LOCA	TION : MECH 111	SCCR (AMPS R	MS SYN	им): ζ	22,000		: 208Y/120V 3Ф	4-Wire+Ground	AMP	: 200 A	MAIN : MCB	NEMA: Туре	e 1 MOUN
скт	DESCRIPTION		NOTE		POLE	Α	В	с		AMP N	OTE	DESCR	
1	WASHER JANITOR CLOSE	TMC	NOIL	20 A		1920 / 1080		C		20 A		RECEPT RO	-
3	RECEPT ROOM 110	-		20 A	1	19207 1000	360 / 180		1	20 A		RECEPT	
5	UNDER, REFRIG, CLINI	-		20 A	1		3007 100	680 / 540	1	20 A		RECEPT WOR	
7	RECEPT CLINIC 110			20 A	1	360 / 1000		0007 040	1	20 A		COPIER WOR	
9	RECEPT MECH 111, CORRIE	-		20 A	1	0007 1000	360 / 1000		1	20 A		REFRIG. WOF	
11	RECEPT A.P. OFFICE 1			20 A	1		0007 1000	1440 / 720	1	20 A	REC	EPT MOTHERS	
13	RECEPT CONFERENCE			20 A	1	1080 / 1260		1110,120	1	20 A		EPT ROOM 168.	
15	RECEPT PRINCIPAL OFFIC			20 A	1	1000 / 1200	1260 / 1080		1	20 A		RECEPT SHAR	
17	RECEPT RECEPTION			20 A	1		12007 1000	540 / 1080	1	20 A		RECEPT CON	
19	RECEPT RECEPTION			20 A	1	1080 / 1080		0.00, 1000	1	20 A	REC	EPT COLLABO	-
21	RECEPT RECEPTION			20 A	1	1000 / 1000	1080 / 1260		1	20 A		RECEPT TECH	
23	RECEPT ROOM 112F, 0			20 A	1			1080 / 1080	1	20 A		RECEPT SE	
25	COPIER WORK ROOM			20 A	1	1000 / 0			1	20 A		SPA	
27	RECEPT OFFICE 113	BA		20 A	1		720 / 0		1	20 A		SPA	RE
29	RECEPT CONFERENCE/FLEX	OFFICE 113B		20 A	1			1260 / 0	1	20 A		SPA	RE
31	RECEPT ROOM 113, 1	13C		20 A	1	1080 / 1007			1	20 A	L	IGHTING C102	, C111, 163,
33				20 <u>A</u>	1		1080 / 959		1	20 A		LIGHTING 164	-169, 172-1
35	DOOR CONTROL AND OPER. V10	01-2, C104, 112	~ ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	20 A	1			1500 / 1000	1	20 A		NAC PANEL	MECH 111
37	LIGHTING RECEPTION	112		20 A	1	652 / 6926							
39	LIGHTING 110-112			20 A	1		1230 / 9512		3	100 A		PANELBO	ARD 'GM'
41	LIGHTING ROOM 113, VES	ST. V101		20 A	1			647 / 8362					
	\rightarrow				TALS :	19525 VA	20081 VA	19929 VA					
~	$\gamma \sim 1000$ Total con	INECTED LOAD	(VA): 5	59535	VA		TOTA	AL CONNECTED	LOAD	(AMPS) :	165 A		
REMA PROV	RKS:						NOTES:						

	SH				\sim \sim		RD SCH						
LOCA	TION: MECH 173	SCCR (AMPS	SRMS SYN	/M): کرو	5,000		: 480Y/277V 3Ф	4-Wire+Ground	AMP	150 A	MAIN : MLO	NEMA: Type 1	MOUN
СКТ	DESCRIPTI	ON	NOTE	AMP	POLE	Α	В	C	POLE		NOTE	DESCRIPT	ΓΙΟΝ
1 3 5	AIR HANDLING UN SUPPLY FAN MECH 18	4HP		20 A	3	2105 / 5900	2105 / 5900	2105 / 5900	3	30 A		OHRU- UNIT LOCATED AF	
7 9 11	AIR HANDLING UN RETURN FAN MECH 18	3HP		20 A	3	1333 / 4598	1333 / 4598	1333 / 4598	3	25 A		OHRU- UNIT LOCATED AF	
13 15 17	SPARE SPARE SPARE			20 A 20 A 20 A	1 1 1	0 / 5900	0 / 5900	0 / 5900	3	30 A		OHRU- UNIT LOCATED AF	
19 21 23	SPARE			20 A	3	0 / 0	0/0	0 / 0	3	30 A		SPARE	<u> </u>
25 27 29	ERV-3 DUCT HEATE	R MECH 111		20 A	3	3000 / 0	3000 / 0	3000 / 0	3	20 A		SPARE	E
31 33 35	ERV-4 DUCT HEATER	MECH 113C		20 A	3	3000 / 3000	3000 / 3000	3000 / 3000	3	20 A	E	RV-1 DUCT HEATI	ER MECH
37 39 41	ERV-5 DUCT HEATEF	MECH 192A		20 A	3	3000 / 3000	3000 / 3000	3000 / 3000	3	20 A	E	RV-2 DUCT HEATI	ER MECH
				-	TALS :	34837 VA	34837 VA	34837 VA					
		CONNECTED LOA	AD (VA) :	104511	VA			L CONNECTED	LOAD	(AMPS) :	126 A		
REMA PROV	RKS: IDE NEW PANEL						NOTES:						

				TCHBOARD		
PANEL ID CONFIGU MAIN: MC SCCR (AN	RATION: 48	DP-H 30Y/277V 3Ф 4-Wire 000 A	∍+Ground	LOCATION: ENCLOSURE: TRIM: MODIFICATIONS:	Space 260 SQUARE D - TYPE 1	
NO.	Load Name	Rating	POLES	PHASE A	PHASE B	PHA
1	E. PANEL 'HPK'	400 A	3			
2 E	. TRANSFORMER TO 'LD	P' 800 A	3			
3	E. CHILLER	500 A	3			
4	PANEL 'HPM'	200 A	3	75 A	75 A	75
5	E. BREAKER ON	200 A	3			-
6	E. BREAKER OFF	50 A	3			-
7	E. PANEL 'LHD'	100 A	3			
8	E. BREAKER OFF	100 A	3			
9	E. ELEVATOR	100 A	3			
10	PANELBOARD 'SH'	150 A	3	126 A	126 A	12
11	E. MCC-D	200 A	3			-
12	E. BREAKER ON	200 A	3			-
TOTAL LO	S:	167003 VA EXISTING SWITCH	TOTAL LOAD (A): IBOARD - SQUARE D QED 1 NECTED TO 200A BREAKER ON PANEL U			



HASE C 10 A

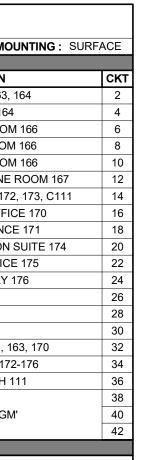
54 A

61 A

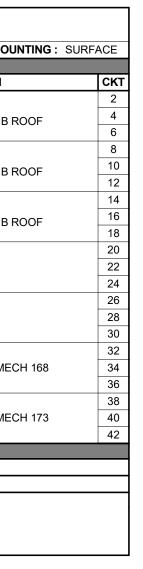
90 A

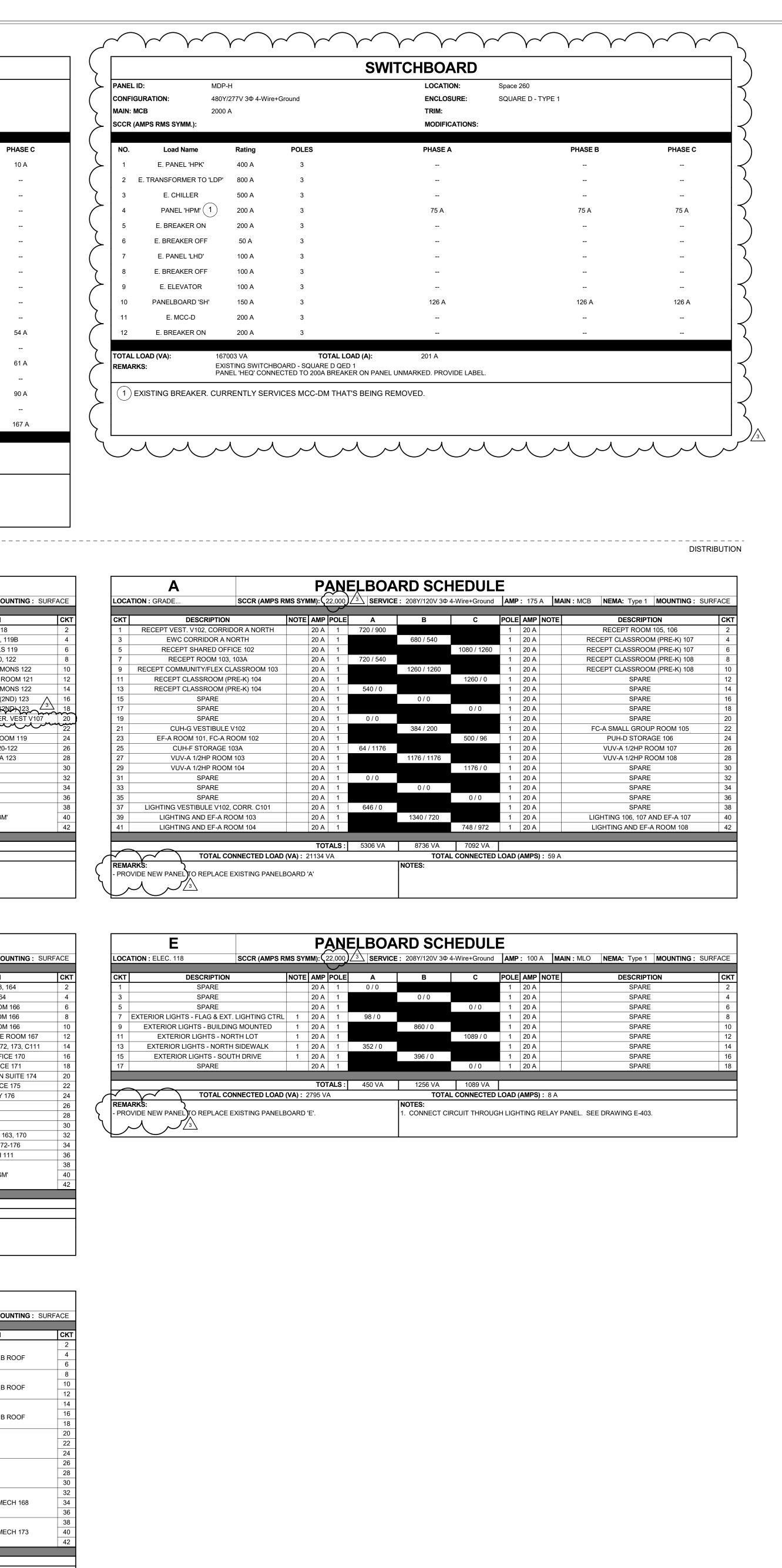
167 A

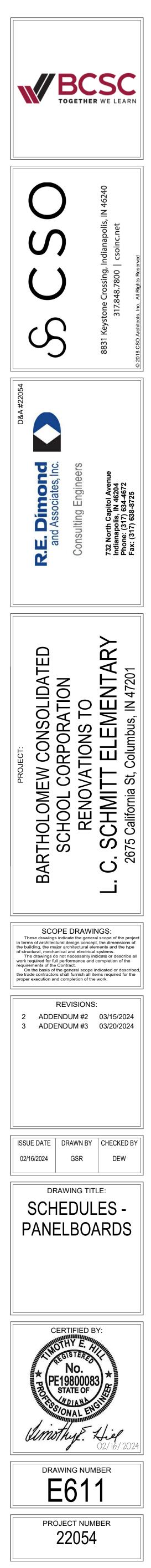
		$\overline{}$	~						
СКТ	DESCRIPTION	NOTE AMP PO	DLE	Α	В	С	POLE	AMP NC	DESCRIPTION
1	RECEPT VEST. V102, CORRIDOR A NORTH	20 A 🥤	1	720 / 900			1	20 A	RECEPT ROOM 105, 106
3	EWC CORRIDOR A NORTH	20 A -	1		680 / 540		1	20 A	RECEPT CLASSROOM (PRE-K) 107
5	RECEPT SHARED OFFICE 102	20 A 🥤	1			1080 / 1260	1	20 A	RECEPT CLASSROOM (PRE-K) 107
7	RECEPT ROOM 103, 103A	20 A 🥤	1	720 / 540			1	20 A	RECEPT CLASSROOM (PRE-K) 108
9	RECEPT COMMUNITY/FLEX CLASSROOM 103	20 A 🥤	1		1260 / 1260		1	20 A	RECEPT CLASSROOM (PRE-K) 108
11	RECEPT CLASSROOM (PRE-K) 104	20 A 2	1			1260 / 0	1	20 A	SPARE
13	RECEPT CLASSROOM (PRE-K) 104	20 A 2	1	540 / 0			1	20 A	SPARE
15	SPARE	20 A -	1		0 / 0		1	20 A	SPARE
17	SPARE	20 A -	1			0 / 0	1	20 A	SPARE
19	SPARE	20 A 2	1	0 / 0			1	20 A	SPARE
21	CUH-G VESTIBULE V102	20 A -	1		384 / 200		1	20 A	FC-A SMALL GROUP ROOM 105
23	EF-A ROOM 101, FC-A ROOM 102	20 A -	1			500 / 96	1	20 A	PUH-D STORAGE 106
25	CUH-F STORAGE 103A	20 A -	1	64 / 1176			1	20 A	VUV-A 1/2HP ROOM 107
27	VUV-A 1/2HP ROOM 103	20 A -	1		1176 / 1176		1	20 A	VUV-A 1/2HP ROOM 108
29	VUV-A 1/2HP ROOM 104	20 A -	1			1176 / 0	1	20 A	SPARE
31	SPARE	20 A -	1	0/0			1	20 A	SPARE
33	SPARE	20 A -	1		0 / 0		1	20 A	SPARE
35	SPARE	20 A -	1			0/0	1	20 A	SPARE
37	LIGHTING VESTIBULE V102, CORR. C101	20 A -	1	646 / 0			1	20 A	SPARE
39	LIGHTING AND EF-A ROOM 103	20 A -	1		1340 / 720		1	20 A	LIGHTING 106, 107 AND EF-A 107
41	LIGHTING AND EF-A ROOM 104	20 A -	1			748 / 972	1	20 A	LIGHTING AND EF-A ROOM 108
						-			
		TOTAL	S :	5306 VA	8736 VA	7092 VA			
/	TOTAL CONNECTED LOAD	(VA): 21134 VA				L CONNECTED	LOAD (AMPS) : 5	59 A
Remar	RK5: /IDE NEW PANEL TO REPLACE EXISTING PANEL				NOTES:				



LOCA	TION : ELEC. 118 SCCR (AMPS RI	MS SYN	им):ζ2	22,000		E: 208Υ/120V 3Φ 4	1-Wire+Ground	AMP	: 100 /	MAIN : MLO	NEMA: Type 1	MOUNTING : SURF
				\bigcirc								
СКТ	DESCRIPTION	NOTE	AMP	POLE	Α	В	С	POLE	AMP	NOTE	DESCRIPT	ION
1	SPARE		20 A	1	0 / 0			1	20 A		SPARE	
3	SPARE		20 A	1		0 / 0		1	20 A		SPARE	
5	SPARE		20 A	1			0/0	1	20 A		SPARE	
7	EXTERIOR LIGHTS - FLAG & EXT. LIGHTING CTRL	1	20 A	1	98 / 0			1	20 A		SPARE	
9	EXTERIOR LIGHTS - BUILDING MOUNTED	1	20 A	1		860 / 0		1	20 A		SPARE	
11	EXTERIOR LIGHTS - NORTH LOT	1	20 A	1			1089 / 0	1	20 A		SPARE	
13	EXTERIOR LIGHTS - NORTH SIDEWALK	1	20 A	1	352 / 0			1	20 A		SPARE	
15	EXTERIOR LIGHTS - SOUTH DRIVE	1	20 A	1		396 / 0		1	20 A		SPARE	
17	SPARE		20 A	1			0 / 0	1	20 A		SPARE	
			TOT	TALS :	450 VA	1256 VA	1089 VA					
\checkmark	TOTAL CONNECTED LOAD	(VA) : 2	2795 V	A		TOTAL	CONNECTED	LOAD (AMPS)	:8A		
PRO	NRKS: VIDE NEW PANEL TO REPLACE EXISTING PANELB	OARD	'E'.			NOTES: 1. CONNECT CIF	RCUIT THROUG	H LIGH	ITING R	ELAY PANEL. SE	E DRAWING E-403	





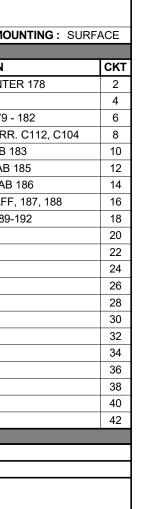


LP	B(L)			Ρ	AN	ELBOA	RD SCH	HEDUL	E			
LOCATION : ELEC		SCCR (AMPS	RMS SY	MM):		SERVICE	: 208Y/120V 3Ф	4-Wire+Ground	AMP	100	A MA	AIN : MLO NEMA: Type 1
СКТ	DESCRIPTION	N	NOTE	AMP	POLE	A	В	С	POLE		NOTE	DESCRIP
1 RE	ECEPT MEDIA CEN	TER 178	E	20 A	1	720 / 720			1	20 A	E	RECEPT S
	ECEPT MEDIA CEN		E	20 A	1		540 / 1080	540 / 4000	1	20 A	E	RECEPT OT
-	RECEPT WORKROO		E	20 A 20 A	1	1000 / 180		540 / 1080	1	20 A 20 A	E E	RECEPT ROO RECEPT STAFF
	ECEPT MAKERSPA		E	20 A	1	10007-180	1080 / 1000		1	20 A	E	REFRIG. STAFF
11 R	ECEPT ROOM 180	A, 180B	E	20 A	1			720 / 680	1	20 A	E	ICE MAKER STAF
	RECEPT ROOM 18		E	20 A	1	900 / 1000			1	20 A	E	VENDING STAFF
15 17	RECEPT ART LAE		E	20 A 20 A	1		1080 / 0	1260 / 0	1	20 A 20 A	E E	SPAR SPAR
	RECEPT STEM LA		E	20 A	1	900 / 0		120070	1	20 A	E	SPAR
	RECEPT STEM LA	B 185	E	20 A	1		1260 / 0		1	20 A	ER	FIRE ALARM CONTRO
	RECEPT MUSIC LA		E	20 A	1	700 / 0		1260 / 0	1	20 A	E	SPAR
	RECEPT MUSIC LA		E	20 A 20 A	1	720 / 0	720 / 0		1	20 A 20 A	E E	SPAR SPAR
	RD REELS MAKERS		E	20 A	1		12010	720 / 0	1	20 A	E	SPAR
31	LIGHTS TUNNE	EL	ER	20 A	1	0 / 720			1	20 A	Е	RECEPT CORRIDOR
33	LIGHTS TUNNE		ER	20 A	1	_	0 / 1440		1	20 A	E	RECEPT CORRIDO
	ORD REELS STEM		E	20 A 20 A	1	720 / 360		720 / 680	1	20 A 20 A	E	EWC CORRIE CORD REELS A
	ORD REELS STEM			20 A	1	7207360	360 / 720		1	20 A		CORD REELS A
41	SPACE				1			0 / 720	1	20 A		CORD REELS A
									1			
		ONNECTED LOAD		-	TALS :	7940 VA	9280 VA	8380 VA) · 71 Δ	
REMARKS:	TOTAL			20000			NOTES:		LUAD	(/un 0		
EXISTING SQUARE	E D PANELBOARD 1	TYPE 'NQOD'					E - CONNECT T ER - EXISTING (LEAVE	E AS SP	PARE IF UNUSED.
СКТ	. 184	SCCR (AMPS	RMS SY	MM):			: 208Y/120V 3Ф	4-Wire+Ground		125	A M /	AIN : MLO NEMA: Type 1
	DESCRIPTION			MM):	POLE	SERVICE			AMP		A MA	
	DESCRIPTION HTING AND EF-A R	N ROOM 150	NOTE E	AMP 20 A	1	SERVICE	: 208Y/120V 3Ф В	4-Wire+Ground	AMP POLE	AMP 20 A	NOTE E	DESCRIP LIGHTING MEDIA
3 LIG	DESCRIPTION HTING AND EF-A R HTING AND EF-A R	N ROOM 150 ROOM 152	NOTE E E	AMP 20 A 20 A	1	SERVICE	: 208Y/120V 3Ф	4-Wire+Ground	AMP POLE	AMP 20 A 20 A	NOTE E E	DESCRIP LIGHTING MEDIA SPAR
3 LIG 5 LIG	DESCRIPTION HTING AND EF-A R	N COOM 150 COOM 152 COOM 157	NOTE E	AMP 20 A 20 A 20 A	1	SERVICE	: 208Y/120V 3Ф В	4-Wire+Ground	AMP POLE	AMP 20 A	NOTE E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO
3 LIG 5 LIG	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R	N COOM 150 COOM 152 COOM 157 COOM 159	NOTE E E E	AMP 20 A 20 A	1 1 1	SERVICE A 1187 / 1892	: 208Y/120V 3Ф В	4-Wire+Ground	AMP POLE	AMP 20 A 20 A 20 A	NOTE E E E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROC LGT VEST. V104, V105 &
3 LIG 5 LIG 7 LIG 9 11 LIGHTING	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1	N ROOM 150 ROOM 152 ROOM 157 ROOM 159 ROOM 159 ROOM 159 ROOM 159 ROOM 159 ROOM 159 ROOM 159 ROOM 150 ROOM 150 ROO	NOTE E E E E E E E R	 AMP 20 A 	1 1 1 1 1 1 1	A 1187 / 1892 1187 / 1154	E: 208Y/120V 3Φ B 1187 / 0	4-Wire+Ground	AMP POLE 1 1 1 1 1 1 1 1	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A	NOTE E E E E E E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE
3LIG5LIG7LIG91111LIGHTING13LIGHTING	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1 NG ROOM 153-156,	N COOM 150 COOM 152 COOM 157 COOM 159 C. 184 151, V103, C110 158, 160, 161	NOTE E E E E E E E E E E E E E E	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892	E: 208Y/120V 3Φ B 1187 / 0 0 / 1328	4-Wire+Ground C 1187 / 668	AMP POLE 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A	NOTE E E E E E E E E E E E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS
3 LIG 5 LIG 7 LIG 9	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1	N COOM 150 COOM 152 COOM 157 COOM 159 C. 184 151, V103, C110 158, 160, 161 COOM 145	NOTE E E E E E E E R	 AMP 20 A 	1 1 1 1 1 1 1	A 1187 / 1892 1187 / 1154	E: 208Y/120V 3Φ B 1187 / 0	4-Wire+Ground C 1187 / 668	AMP POLE 1 1 1 1 1 1 1 1	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A	NOTE E E E E E E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A
3LIG5LIG7LIG91111LIGHTING13LIGHTING15LIG17LIG	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R	N COOM 150 COOM 152 COOM 157 COOM 159 C. 184 151, V103, C110 158, 160, 161 COOM 145 COOM 146	NOTE E E E E E E E E E E E E E E E E E	 AMP 20 A 	1 1 1 1 1 1 1 1 1 1	A 1187 / 1892 1187 / 1154	E: 208Y/120V 3Φ B 1187 / 0 0 / 1328	4-Wire+Ground C 1187 / 668 857 / 958	AMP POLE 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	NOTE E E E E E E E E E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING ROO
3 LIG 5 LIG 7 LIG 9	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R HTING AND EF-A R SPARE	N COOM 150 COOM 152 COOM 157 COOM 159 C. 184 151, V103, C110 158, 160, 161 COOM 145 COOM 146	NOTE E	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892 1187 / 1154 1333 / 792	E: 208Y/120V 3Φ B 1187 / 0 0 / 1328	4-Wire+Ground C 1187 / 668 857 / 958 812 / 1058	AMP POLE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A	NOTE E E E E E E E E E E E E E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING ROO SPAR SPAR
3 LIG 5 LIG 7 LIG 9	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R SPARE SPARE	N COOM 150 COOM 152 COOM 157 COOM 159 C. 184 151, V103, C110 158, 160, 161 COOM 145 COOM 146	NOTE E E E E E E E E E E E E E E E	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1 1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892 1187 / 1154 1333 / 792 812 / 0	E 208Y/120V 3Φ B 1187 / 0 0 / 1328 812 / 664	4-Wire+Ground C 1187 / 668 857 / 958	AMP POLE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	NOTE E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING ROO SPAR SPAR
3 LIG 5 LIG 7 LIG 9	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R HTING AND EF-A R SPARE	N COOM 150 COOM 152 COOM 157 COOM 159 C. 184 151, V103, C110 158, 160, 161 COOM 145 COOM 146	NOTE E	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892 1187 / 1154 1333 / 792	E 208Y/120V 3Φ B 1187 / 0 0 / 1328 812 / 664	4-Wire+Ground C 1187 / 668 857 / 958 812 / 1058	AMP POLE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A	NOTE E E E E E E E E E E E E E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING AND EF-A LIGHTING AND EF-A LIGHTING ROO SPAR SPAR SPAR
3 LIG 5 LIG 7 LIG 9	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R SPARE SPARE SPARE	N COOM 150 COOM 152 COOM 157 COOM 159 C. 184 151, V103, C110 158, 160, 161 COOM 145 COOM 146	NOTE E E E E E E E E E E E E E E E	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892 1187 / 1154 1333 / 792 812 / 0	E: 208Y/120V 3Φ B 1187 / 0 0 / 1328 812 / 664 0 / 0	4-Wire+Ground C 1187 / 668 857 / 958 812 / 1058	AMP POLE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	NOTE E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING ROO SPAR SPAR SPAR SPAR
3 LIG 5 LIG 7 LIG 9	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R HTING AND EF-A R SPARE SPARE SPARE SPARE SPACE SPACE SPACE	N COOM 150 COOM 152 COOM 157 COOM 159 C. 184 151, V103, C110 158, 160, 161 COOM 145 COOM 146	NOTE E	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892 1187 / 1154 1333 / 792 812 / 0	E: 208Y/120V 3Φ B 1187 / 0 0 / 1328 812 / 664 0 / 0 0 / 0	4-Wire+Ground C 1187 / 668 857 / 958 812 / 1058 0 / 0	AMP POLE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A	NOTE E E E E E E E E E E E E E E E E E E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING ROO SPAR SPAR SPAR SPAR SPAR SPAR
3 LIG 5 LIG 7 LIG 9	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE	N COOM 150 COOM 152 COOM 157 COOM 159 C. 184 151, V103, C110 158, 160, 161 COOM 145 COOM 146	NOTE E E E E E E E E E E E E E E E	AMP 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892 1187 / 1154 1333 / 792 812 / 0 0 / 0	E: 208Y/120V 3Φ B 1187 / 0 0 / 1328 812 / 664 0 / 0	4-Wire+Ground C 1187 / 668 857 / 958 812 / 1058 0 / 0 0 / 0	AMP POLE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A	NOTE E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROC LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING AND EF-A LIGHTING AND EF-A LIGHTING ROC SPAR SPAR SPAR SPAR SPAR SPAR
3 LIG 5 LIG 7 LIG 9	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R HTING AND EF-A R SPARE SPARE SPARE SPARE SPACE SPACE SPACE	N COOM 150 COOM 152 COOM 157 COOM 159 C. 184 151, V103, C110 158, 160, 161 COOM 145 COOM 146	NOTE E	AMP 20 A 20 A	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892 1187 / 1154 1333 / 792 812 / 0 0 / 0	E: 208Y/120V 3Φ B 1187 / 0 0 / 1328 812 / 664 0 / 0 0 / 0	4-Wire+Ground C 1187 / 668 857 / 958 812 / 1058 0 / 0	AMP POLE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A	NOTE E E E E E E E E E E E E E E E E E E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROC LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING AND EF-A SPAR SPAR SPAR SPAR SPAR SPAR SPAR SPA
3 LIG 5 LIG 7 LIG 9	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC G ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE	N COOM 150 COOM 152 COOM 157 COOM 159 C. 184 151, V103, C110 158, 160, 161 COOM 145 COOM 146	NOTE E	AMP 20 A 20 A	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892 1187 / 1154 1333 / 792 812 / 0 0 / 0 0 / 0	E: 208Y/120V 3Φ B 1187 / 0 0 / 1328 812 / 664 0 / 0 0 / 0	4-Wire+Ground C 1187 / 668 857 / 958 812 / 1058 0 / 0 0 / 0	AMP POLE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A 20 A	NOTE E E E E E E E E E E E E E E E E E E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROC LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING AND EF-A SPAR SPAR SPAR SPAR SPAR SPAR SPAR SPA
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3 LIG 5 LIG 7 LIG 9	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC 3 ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R HTING AND EF-A R SPARE SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	N ROOM 150 ROOM 152 ROOM 157 ROOM 159 2. 184 151, V103, C110 158, 160, 161 ROOM 145 ROOM 145 ROOM 146 ROOM 147 CONNECTED LOAE	NOTE E E E E E E E E E E E E E E E E E E	AMP 20 A 20 A 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892 1187 / 1154 1333 / 792 812 / 0 0 / 0 0 / 0 0 / 0 8357 VA ELBOA	E: 208Y/120V 3Φ B 1187 / 0 0 / 1328 812 / 664 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 3991 VA TOTA NOTES: E - CONNECT T ER - EXISTING O	4-Wire+Ground C 1187 / 668 857 / 958 812 / 1058 812 / 1058 0 / 0 0 / 0 C CONNECTED O EXISTING BRE CIRCUIT TO REN	AMP POLE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A 20 A <tr< td=""><td>NOTE E E E E E E E E E E E E E E E E E E</td><td>DESCRIP LIGHTING MEDIA SPAF LIGHTING ROC LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING ROC SPAF SPAF SPAF SPAF SPAF SPAF SPAF SPAF</td></tr<>	NOTE E E E E E E E E E E E E E E E E E E	DESCRIP LIGHTING MEDIA SPAF LIGHTING ROC LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING ROC SPAF SPAF SPAF SPAF SPAF SPAF SPAF SPAF
3 LIG 5 LIG 7 LIG 9 11 11 LIGHTING 13 LIGHTING 15 LIG 17 LIG 19 LIG 21 23 25 27 29 31 33 35 37 39 41 EEMARKS: EXISTING SQUARE ELP .OCATION : Space Image: Comparison of the system	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC 3 ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R HTING AND EF-A R SPARE SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	N ROOM 150 ROOM 152 ROOM 157 ROOM 159 ROOM 159 ROOM 159 ROOM 145 ROOM 145 ROOM 145 ROOM 146 ROOM 147 ROOM 147 ROOM 147 ROOM 147 ROOM 147 ROOM 147 ROOM 147 ROOM 147 ROOM 147 ROOM 145 ROOM 146 ROOM 147 ROOM 145 ROOM 146 ROOM 147 ROOM 145 ROOM 146 ROOM 145 ROOM 146 ROOM 145 ROOM 155 ROOM 155 ROO	NOTE E <	AMP 20 A 20 A 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892 1187 / 1154 1333 / 792 812 / 0 0 / 0 0 / 0 8357 VA ELBOA SERVICE	B 1187 / 0 0 / 1328 812 / 664 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 3991 VA TOTA NOTES: E - CONNECT T ER - EXISTING O	4-Wire+Ground C 1187 / 668 857 / 958 812 / 1058 812 / 1058 0 / 0 0 / 0 C CONNECTED O EXISTING BRE CIRCUIT TO REN	AMP POLE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A 20 A <tr< td=""><td>NOTE A</td><td>DESCRIF LIGHTING MEDIA SPAF LIGHTING ROC LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING AND EF-A LIGHTING ROC SPAF SPAF SPAF SPAF SPAF SPAF SPAF SPAF</td></tr<>	NOTE A	DESCRIF LIGHTING MEDIA SPAF LIGHTING ROC LGT VEST. V104, V105 & LIGHTING AR LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING AND EF-A LIGHTING ROC SPAF SPAF SPAF SPAF SPAF SPAF SPAF SPAF
3 LIG 5 LIG 7 LIG 9	DESCRIPTION HTING AND EF-A R HTING AND EF-A R HTING AND EF-A R NAC PANEL ELEC 3 ROOM 148, 149, 1 NG ROOM 153-156, HTING AND EF-A R HTING AND EF-A R SPARE SPARE SPARE SPARE SPARE SPACE	N ROOM 150 ROOM 152 ROOM 157 ROOM 159 R. 184 151, V103, C110 158, 160, 161 ROOM 145 ROOM 145 ROOM 147 ROOM 147 ROOM 147 ROOM 147 ROOM 147 ROOM 147 ROOM 147 ROOM 147 ROOM 146 ROOM 147 ROOM 146 ROOM 146 ROOM 147 ROOM 147 ROOM 146 ROOM 146 ROOM 147 ROOM 147 ROOM 145 ROOM 146 ROOM 145 ROOM 146 ROOM 145 ROOM 146 ROOM 145 ROOM 145 ROOM 146 ROOM 145 ROOM 155 ROOM 155 ROO	NOTE E <	AMP 20 A 20 A 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SERVICE A 1187 / 1892 1187 / 1154 1333 / 792 812 / 0 0 / 0 0 / 0 8357 VA ELBOA SERVICE	В 1187 / 0 0 / 1328 812 / 664 0 / 0 0	4-Wire+Ground C 1187 / 668 857 / 958 812 / 1058 812 / 1058 0 / 0 0 / 0 EXISTING BRE CIRCUIT TO REM HEDULL 4-Wire+Ground	AMP POLE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMP 20 A 20 A <tr< td=""><td>NOTE E E E E E E E E E E E E E E E E E E</td><td>DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO LGT VEST. V104, V105 8 LIGHTING ART LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING AND EF-A LIGHTING AND EF-A SPAR SPAR SPAR SPAR SPAR SPAR SPAR SPA</td></tr<>	NOTE E E E E E E E E E E E E E E E E E E	DESCRIP LIGHTING MEDIA SPAR LIGHTING ROO LGT VEST. V104, V105 8 LIGHTING ART LIGHTING STE LIGHTING MUS LIGHTING AND EF-A LIGHTING AND EF-A LIGHTING AND EF-A SPAR SPAR SPAR SPAR SPAR SPAR SPAR SPA

СКТ	DESCRIPTION	NOTE	AMP	POLE	Α	В	C	POLE	AMP	NOTE	DESCRIPTION
1	VUV-B 3/4HP CLASSROOM (3RD) 136	E	20 A	1	1656 / 0			2	20 A	Е	SPARE
3	VUV-B 3/4HP CLASSROOM (3RD) 137	E	20 A	1		1656 / 0		2	20 A		SPARE
5	VUV-B 3/4HP CLASSROOM (4TH) 143	E	20 A	1			1656 / 0	2	20.4	Е	SPARE
7	VUV-B 3/4HP CLASSROOM (4TH) 144	E	20 A	1	1656 / 0			2	20 A		SPARE
9	VUV-B 3/4HP CLASSROOM (3RD) 125	E	20 A	1		1656 / 1656		1	20 A	E	VUV-B 3/4HP CLASSROOM
11	VUV-B 3/4HP CLASSROOM (4TH) 135	E	20 A	1			1656 / 1656	1	20 A	E	VUV-B 3/4HP CLASSROOM
13	CUH-A3 CORRIDOR C119	E	20 A	1	190 / 0			2	20.4	Е	CDARE
15	SPARE	E	20 A	1		0 / 0		2	20 A	E	SPARE
17	SPARE	E	20 A	1			0 / 0	2	20.4	Е	SPARE
19	TCP AHU-4 GRADE LEVEL STORAGE 240	E	20 A	1	1000 / 0			2	20 A		SPARE
21	EXHAUST FAN EF-D1 AREA C ROOF	E	20 A	1		696 / 1656		1	20 A	E	VUV-B 3/4HP CLASSROOM
23	EXHAUST FAN EF-D2 AREA C ROOF	E	20 A	1			696 / 1656	1	20 A	E	VUV-B 3/4HP CLASSROOM
25	EXHAUST FAN EF-D2 AREA C ROOF	E	20 A	1	696 / 1656			1	20 A	E	VUV-B 3/4HP CLASSROOM
27	EXHAUST FAN EF-G AREA C ROOF	E	20 A	1		300 / 1656		1	20 A	E	VUV-B 3/4HP CLASSROOM
29	EXHAUST FAN - #7 - E&W	ER	20 A	1			0 / 300	1	20 A	E	EF-A ELEC. 241
31	FIRE ALARM - NAC PANEL	ER	20 A	1	0 / 0			1	20 A	ER	EXHAUST FAN - #
33	AUXILLARY FANS - HALLS	ER	20 A	1		0 / 0		1	20 A	ER	EXHAUST FAN - #
35	EXHAUST FAN - #12	ER	20 A	1			0 / 0	1	20 A	E	SPARE
37	EXHAUST FAN - #2	E	20 A	1	0 / 0			1	20 A	E	SPARE
39	EXHAUST FAN - #5	ER	20 A	1		0 / 0		1	20 A	E	SPARE
41	IRV - 1	ER	20 A	1			0 / 0	1	20 A	E	SPARE
			-	TALS :	6854 VA	9276 VA	7620 VA				
	TOTAL CONNECTED LOAD) (VA) : 2	23750	VA		ΤΟΤΑ	L CONNECTED	LOAD (AMPS): 66 A	
REMAF Existii		<u>, (11) 1</u>				NOTES:	O EXISTING BRE	AKER.			PARE IF UNUSED.



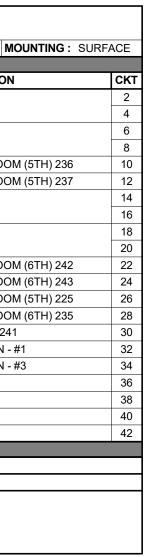
	_PB(R)				ARD SCH						
LOCATION : I	ELEC. 184	SCCR (AMPS RMS SYMM):		SERVIC	E: 208Υ/120V 3Φ	4-Wire+Ground	AMP	: 100 A	MAIN : MLO	NEMA: Type 1	MOUNTIN
СКТ	DESCRIPTION	NOTE AMP	POLE	Α	В	С	POLE	AMP N	OTE	DESCRIPT	ΓΙΟΝ
1	EXISTING	20 A	1	0/0			1	20 A		EXISTIN	1G
3	EXISTING	20 A	1		0 / 0		1	20 A		EXISTIN	1G
5	EXISTING	20 A	1			0 / 0	1	20 A		EXISTIN	1G
7	EXISTING	20 A	1	0/0			1	20 A		EXISTIN	1G
9	EXISTING	20 A	1		0 / 0		1	20 A		EXISTIN	1G
11	EXISTING	20 A	1			0 / 0	1	20 A		EXISTIN	1G
13	EXISTING	20 A	1	0/0			1	20 A		EXISTIN	1G
15	EXISTING	20 A	1		0 / 0		1	20 A		EXISTIN	IG
17	EXISTING	20 A	1			0/0	1	20 A		EXISTIN	IG
19	EXISTING	20 A	1	0/0			1	20 A		EXISTIN	IG
21	EXISTING	20 A	1		0/0		1	20 A		EXISTIN	1G
23	EXISTING	20 A	1			0/0	1	20 A		EXISTIN	IG
25	EXISTING	20 A	1	0/0			1	20 A		EXISTIN	IG
27	EXISTING	20 A	1		0 / 0		1	20 A		EXISTIN	1G
29						0/0	1	20 A		EXISTIN	1G
31	EXISTING	20 A	2	0/0			1	20 A		EXISTIN	IG
33					0 / 0		1	20 A		EXISTIN	1G
35	EXISTING	20 A	2			0/0	1	20 A		EXISTIN	1G
37				0/0			1			SPACE	Ē
39	EXISTING	20 A	2		0 / 0		1			SPACE	Ξ
41	SPACE		1			0/0	1			SPACE	Ξ
			TALS :	0 VA	0 VA	0 VA					
	TOTAL CO	NNECTED LOAD (VA): 0 VA				L CONNECTED	LOAD	AMPS) :	0 A		
REMARKS:					NOTES:						
	UARE D PANELBOARD TY	'PE 'NQOD' IRECTORY. CONTRACTOR TO									



LPBM(L)

LOCATIO	N : ELEC. 184 SCCR (AMPS	RMS SYI	MM):		SERVICE	: 208Y/120V 3Ф	4-Wire+Ground	AMF	P: 100	A MAIN	: MLO NEMA: Type 1 MOUNTING : SUF	RFACE
СКТ	DESCRIPTION	NOTE	AMP	POLE	Α	В	С	POLE	AMP	NOTE	DESCRIPTION	СК
1	SPARE	E	20 A	1	0 / 0			1	20 A	E	SPARE	2
3	SPARE	E	20 A	1		0 / 0		1	20 A	E	SPARE	4
5	TCP MECH 155	E	20 A	1			0 / 0	1	20 A	E	SPARE	6
7	BLOWER COIL BC-1 MECH 155	E	20 A	2	500 / 0			1	20 A	E	SPARE	8
9	BEOWER COLE BE-T MECT 135		20 A	2		500 / 0		1	20 A	E	SPARE	10
11	SPARE	Е	20 A	2			0 / 0	1	20 A	E	SPARE	12
13	SFARE		20 A	2	0 / 0			1	20 A	E	SPARE	14
15	SPARE	E	20 A	2		0 / 0		1	20 A	E	SPARE	16
17	SPARE		20 A	2			0 / 0	1	20 A	E	SPARE	18
19	ODADE		20.4	2	0 / 0			1	20 A	ER	LIBRARY FLOOR BOX	20
21	SPARE	E	20 A	2		0 / 0		1	20 A	E	SPARE	22
23	CUH-A1 VESTIBULE V103	E	20 A	1			190 / 1656	1	20 A	E	VUV-C 3/4HP CLASSROOM (1ST) 150	24
25	VUV-B 3/4HP CLASSROOM (1ST) 145	E	20 A	1	1656 / 1656			1	20 A	E	VUV-C 3/4HP CLASSROOM (1ST) 152	26
27	VUV-B 3/4HP CLASSROOM (1ST) 146	E	20 A	1		1656 / 1656		1	20 A	E	VUV-C 3/4HP CLASSROOM (1ST) 157	28
29	VUV-B 3/4HP CLASSROOM (1ST) 147	E	20 A	1			1656 / 1656	1	20 A	E	VUV-C 3/4HP CLASSROOM (1ST) 159	30
31	PUH-D BUILDING STORAGE 148	E	20 A	1	96 / 96			1	20 A	E	PUH-D JAN. 161	32
33	SPARE	E	20 A	1		0 / 0		1	20 A	E	SPARE	34
35	SPARE	E	20 A	1			0 / 0	1	20 A	E	SPARE	36
37	SPARE	E	20 A	1	0 / 0			1			SPACE	38
39	SPACE			1		0 / 0		1			SPACE	40
41	SPACE			1			0 / 0	1			SPACE	42
			-	ALS :	4004 VA	3812 VA	5158 VA					
	TOTAL CONNECTED LOA	AD (VA) :	12974 \	/A			L CONNECTED	LOAD	(AMPS): 36 A		
REMARK EXISTING	S: S SQUARE D PANELBOARD TYPE 'NQOD'					NOTES: E - CONNECT TO ER - EXISTING C					E IF UNUSED. EAVE AS SPARE IF UNUSED.	

PANELBOARD SCHEDULE



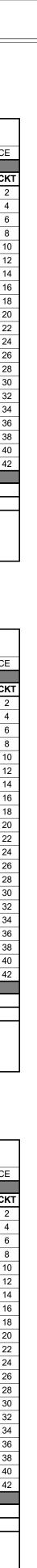
LPC2	PAN	IELBOA	RD SCI	HEDUL	E			LPC1		PAN	ELBOA	RD SCH	HEDUL	E	
OCATION : Space 13 SCCF	(AMPS RMS SYMM):	SERVICE	: 208Y/120V 3Φ	0 4-Wire+Ground	AMP: 100 A MA	IN: MLO NEMA: Type 1 MOUNTING: SUR	FACE LOCA	FION : GRADE LEVEL	SCCR (AMPS F	RMS SYMM): (22,000		: 208Y/120V 3Φ	4-Wire+Ground	AMP : 150 A	MAIN : MLO NEMA: Type 1 MOUNTING :
KT DESCRIPTION	NOTE AMP POL	E A	В	C	POLE AMP NOTE	DESCRIPTION	СКТ	DESCRIPTION		NOTE AMP POLE	A	В	C	POLE AMP	NOTE DESCRIPTION
RECEPT CLASSROOM (5TH) 22	E 20 A 1	1260 / 1260			1 20 A E	RECEPT CLASSROOM (5TH) 236	2 1	RECEPT CLASSROOM ((3RD) 125	20 A 1	1260 / 1260			1 20 A	RECEPT CLASSROOM (3RD) 136
RECEPT CLASSROOM (5TH) 22	E 20 A 1		720 / 540		1 20 A E	RECEPT CLASSROOM (5TH) 236	4 3	RECEPT CLASSROOM ((3RD) 125	20 A 1		720 / 540		1 20 A	RECEPT CLASSROOM (3RD) 136
RECEPT ROOM 226, 227	E 20 A 1			1440 / 540	1 20 A E	RECEPT CLASSROOM (5TH) 237	6 5	RECEPT ROOM 126	6, 127	20 A 1			1440 / 540	1 20 A	RECEPT CLASSROOM (3RD) 137
RECEPT ACTIVITY COMMONS 2	B E 20 A 1	1080 / 1260			1 20 A E	RECEPT CLASSROOM (5TH) 237	8 7	RECEPT ACTIVITY COM	MONS 128	20 A 1	1080 / 1260			1 20 A	RECEPT CLASSROOM (3RD) 137
EWC ACTIVITY COMMONS 228	E 20 A 1		680 / 900		1 20 A E	RECEPT ROOM 239, 240, SOUTH C208	10 9	EWC ACTIVITY COMMO	ONS 128	20 A 1		680 / 1080		1 20 A	RECEPT ROOM 140, 141, 142, SOUTH C1
RECEPT FLEX CLASSROOM (5TH/6T	I) 229 E 20 A 1			540 / 1000	1 20 A E	COPIER WORK ROOM/ SHARED OFFICE 239	12 11	RECEPT FLEX CLASSROOM	(3RD/4TH) 129	20 A 1			540 / 1000	1 20 A	COPIER WORK ROOM/ SHARED OFFICE
RECEPT FLEX CLASSROOM (5TH/6T	I) 229 E 20 A 1	1440 / 1260			1 20 A E	RECEPT CLASSROOM (6TH) 242	14 13	RECEPT FLEX CLASSROOM	(3RD/4TH) 129	20 A 1	1440 / 1260			1 20 A	RECEPT CLASSROOM (4TH) 143
RECEPT ROOM 230, CORRIDOR C	208 E 20 A 1		900 / 540		1 20 A E	RECEPT CLASSROOM (6TH) 242	16 15	RECEPT ROOM 130, CORR	RIDOR C108	20 A 1		1080 / 540		1 20 A	RECEPT CLASSROOM (4TH) 143
RECEPT ROOM 232, 233	E 20 A 1			1080 / 540	1 20 A E	RECEPT CLASSROOM (6TH) 243	18 17	RECEPT ROOM 132	2, 133	20 A 1			1080 / 540	1 20 A	RECEPT CLASSROOM (4TH) 144
RECEPT ACTIVITY COMMONS 2	4 E 20 A 1	1080 / 1260			1 20 A E	RECEPT CLASSROOM (6TH) 243	20 19	RECEPT ACTIVITY COM	MONS 134	20 A 1	1080 / 1260			1 20 A	RECEPT CLASSROOM (4TH) 144
RECEPT ACTIVITY COMMONS 2	4 E 20 A 1		680 / 0		1 20 A E	SPARE	22 21	EWC ACTIVITY COMMO	ONS 134	20 A 1		680 / 180		1 20 A	RECEPT IDF 139
RECEPT CLASSROOM (6TH) 23	E 20 A 1			720 / 0	1 20 A E	SPARE	24 23	RECEPT CLASSROOM ((4TH) 135	20 A 1			720 / 540	1 20 A	RECEPT IDF139
RECEPT CLASSROOM (6TH) 23	E 20 A 1	1260 / 0			1 20 A E	SPARE	26 25	RECEPT CLASSROOM ((4TH) 135	20 A 1	1260 / 0			1 20 A	SPARE
SPARE	E 20 A 1		0 / 0		1 20 A E	SPARE	28 27	SPARE		20 A 1		0 / 0		1 20 A	SPARE
SPARE	E 20 A 1			0 / 0	1 20 A E	SPARE	30 29	SPARE		20 A 1			0 / 0	1 20 A	SPARE
SPARE	E 20 A 1	0 / 0			1 20 A E	SPARE	32 31	SPARE		20 A 1	0 / 0			1 20 A	SPARE
SPARE	E 20 A 1		0 / 0		1 20 A E	SPARE	34 33	SPARE		20 A 1		0 / 0		1 20 A	SPARE
5 SPARE	E 20 A 1			0 / 0	1 20 A E	SPARE	36 35	SPARE		20 A 1			0 / 0	1 20 A	SPARE
SPARE	E 20 A 1	0 / 0			1 20 A E	SPARE	38 37	SPARE		20 A 1	0 / 0			1 20 A	SPARE
9 SPARE	E 20 A 1		0 / 0		1 20 A E	SPARE	40 39	SPARE		20 A 1		0 / 0		1 20 A	SPARE
SPARE	E 20 A 1			0 / 0	1 20 A ER	ELEVATOR CONTROL	42 41	SPARE		20 A 1			0 / 0	1 20 A	SPARE
	TOTALS	: 11160 VA	4960 VA	5860 VA						TOTALS :	11160 VA	5500 VA	6400 VA		
	D LOAD (VA) : 21980 VA	. 11100 VA			LOAD (AMPS): 61 A					(VA): 23060 VA	THOUVA			LOAD (AMPS) :	64 A
IARKS: STING SQUARE D PANELBOARD TYPE 'NG			NOTES: E - CONNECT T		EAKER. LEAVE AS SP	ARE IF UNUSED.	PROV			(17) · 2000 VA		NOTES:			

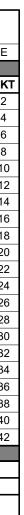
SURF	ACE
	СКТ
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	LPBA						RD SCH							
LOCA	TION : ELEC. 184	SCCR (AMPS R	MS SY	MM):		SERVICE	: 208Y/120V 3Φ 4	4-Wire+Ground	AMF	•: 100 A	M	AIN : MLO NEMA: Type 1	MOUNTING :	SURFACE
СКТ	DESCRIPTION	1	NOTE		POLE	A	В	С	POLE		NOTE	DESCRIPT	ΓΙΟΝ	СК
1	RECEPT CLASSROOM	(1ST) 145	E	20 A	1	1260 / 1260			1	20 A	Е	RECEPT CLASSRO	OM (1ST) 152	2
3	RECEPT CLASSROOM	(1ST) 145	E	20 A	1		900 / 360		1	20 A	Е	RECEPT CLASSRO	OM (1ST) 152	4
5	RECEPT CLASSROOM (FLEX) 146	E	20 A	1			1260 / 1080	1	20 A	Е	RECEPT ROOM	A 153, 154	6
7	RECEPT CLASSROOM (FLEX) 146	E	20 A	1	720 / 360			1	20 A	Е	RECEPT CLASSR	OOM (K) 159	8
9	RECEPT CLASSROOM	Л (K) 147	E	20 A	1		900 / 1080		1	20 A	Е	RECEPT ROOM	A 155, 156	10
11	RECEPT CLASSROOM	Л (K) 147	E	20 A	1			1260 / 360	1	20 A	Е	RECEPT CLASSR	OOM (K) 157	12
13	RECEPT ROOM 148, 169 & TG	CORRIDOR C110	E	20 A	1	900 / 1260			1	20 A	Е	RECEPT CLASSR	OOM (K) 157	14
15	RECEPT SMALL GROUP	ROOM 149	E	20 A	1		900 / 1080		1	20 A	Е	RECEPT ACTIVITY (COMMONS 158	16
17	RECEPT CLASSROOM	(1ST) 150	E	20 A	1			360 / 680	1	20 A	Е	EWC ACTIVITY CC	MMONS 158	18
19	RECEPT CLASSROOM	(1ST) 150	E	20 A	1	1260 / 1260			1	20 A	Е	RECEPT CLASSR	OOM (K) 159	20
21	RECEPT ACTIVITY COM	MONS 151	E	20 A	1		900 / 1080		1	20 A	Е	RECEPT ROOM	/ 160, 161	22
23	EWC ACTIVITY COMM	ONS 151	E	20 A	1			680 / 0	1	20 A	Е	SPARE	=	24
25	SPARE		E	20 A	1	0 / 0			1	20 A	Е	SPARE	Ξ	26
27	SPARE		E	20 A	1		0 / 0		0	00.4	-	004.00	_	28
29			_	CO A	0			0 / 0	2	20 A	Е	SPARE	=	30
31	SPARE		E	60 A	2	0 / 0			<u>_</u>	20.4	Е	SPARE	_	32
33			_	CO A	~		0 / 0		2	20 A	E	SPARE	=	34
35	SPARE		E	60 A	2			0/0	2	00.4	_	SPARE	_	36
37	SPARE		E	20 A	1	0 / 0			2	20 A	Е	SPARE	=	38
-39	SPARE	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	م ے	20 A	1		0/0		0	20.4	Е	SPARE	_	40
41	RECEPT OUTDOOR COURT		E	20 A	1}			360 / 0	2	20 A	E	SPARE	=	42
m	······	mmm	in	in	س مر									
					ALS :	8280 VA	7200 VA	6040 VA						
		ONNECTED LOAD	(VA) :	21520 V	/Α			CONNECTED	LOAD	(AMPS)	: 60 A	l l		
REMA							NOTES:							
EXIST	ING SQUARE D PANELBOARD T	YPE 'NQOD'					E - CONNECT TO	DEXISTING BRE	EAKER	. LEAVE	AS SF	PARE IF UNUSED.		

LOCATIO	DN : ELEC. 184	SCCR (AMPS	RMS SY	MM):		SERVICE	: 208Y/120V 3Ф	4-Wire+Ground	AMF	•: 100 A	M/	NIN: MLO NEMA: Type 1 MOUNTING: SU	JRFACE
СКТ	DESCRIPTION	1	NOTE		POLE	A	В	С	POLE	AMP	NOTE	DESCRIPTION	СК
1	TCP AHU-3 MECH	181	E	20 A	1	1000 / 190			1	20 A	Е	CUH-A VESTIBULE V104	2
3	VUV-C 3/4HP STORAG	GE 183B	E	20 A	1		1656 / 200		1	20 A	Е	CUH-B VESTIBULE V105	4
5	VUV-C 3/4HP STORAC	GE 185A	E	20 A	1			1656 / 525	2	20 A		DXFC UNIT ROOM 189-192	6
7	VUV-C 3/4HP MUSIC I	LAB 186	E	20 A	1	1656 / 525			2	20 A		DAFC UNIT ROOM 189-192	8
9	EF-A ELEC. 18	4	E	20 A	1		300 / 0		1	20 A	Е	SPARE	1(
11	EXHAUST FAN EF-F AREA	B ROOFTOP	E	20 A	1			300 / 0	1	20 A	Е	SPARE	12
13	SPARE		E	20 A	1	0 / 0			1	20 A	Е	SPARE	14
15	SPARE		E	20 A	1		0 / 0		1	20 A	Е	SPARE	16
17	SPARE		E	20 A	1			0 / 0	1	20 A	Е	SPARE	18
19	SPARE		E	20 A	1	0 / 0			1	20 A	Е	SPARE	20
21	SPARE		E	20 A	1		0 / 0		1	20 A	Е	SPARE	22
23	SPARE		E	20 A	1			0 / 0	1	20 A	Е	SPARE	24
25	SPARE		E	20 A	1	0 / 0			1	20 A	Е	SPARE	26
27	SPARE		E	20 A	1		0 / 0		1	20 A	Е	SPARE	28
29	SPARE		E	20 A	1			0 / 0	1	20 A	Е	SPARE	30
31	SPARE		E	20 A	1	0 / 0			1	20 A	Е	SPARE	32
33	SPARE		E	20 A	1		0 / 0		1	20 A	Е	SPARE	34
35	SPARE		E	20 A	1			0 / 546	0	45.0			36
37	SPARE		E	20 A	1	0 / 546			2	15 A		ERV-5 AND DXFC-5 MECH. 192A	38
39	SPACE				1		0 / 1500		2	20.4			40
41	SPACE				1			0 / 1500	2	20 A		DXFC-5 DUCT HEATER MECH. 192A	42
				тот		3917 VA	3656 VA	4527 VA					
		ONNECTED LOA	D (VA) :	12099 V	Ά			L CONNECTED	LOAD	(AMPS)	: 34 A		
REMARK EXISTINO	'S: G SQUARE D PANELBOARD T	YPE 'NQOD'					NOTES: E - CONNECT T	O EXISTING BRI	EAKER	. LEAVE	AS SF	ARE IF UNUSED.	

OCAT	ION : Space 13 SCCR (AMPS	RMS SYN	MM):		SERVIC	E: 208Υ/120V 3Φ	4-Wire+Ground	AMP	: 125/	A M	AIN: MLO NEMA: Type 1 MOUNTING: SU	RFACE
кт	DESCRIPTION	NOTE	AMP	POLE	A	В	С	POLE	AMP	NOTE	DESCRIPTION	СК
1	LIGHTING CLASSROOM (3RD) 135	E	20 A	1	715 / 0			1	20 A	Е	SPARE	2
3	LIGHTING CLASSROOM (3RD) 125	E	20 A	1		715 / 0		1	20 A	Е	SPARE	4
5	LIGHTING CLASSROOM (3RD) 136	E	20 A	1			715 / 0	1	20 A	Е	SPARE	6
7	LIGHTING CLASSROOM (3RD) 137	E	20 A	1	715 / 0			1	20 A	Е	SPARE	8
9	LIGHTING CLASSROOM (4TH) 143	E	20 A	1		715 / 0		1	20 A	ER	LIGHTS 1ST FLOOR CORRIDOR	10
11	LIGHTS ELEVATOR ROOM	ER	20 A	1			0 / 0	1	20 A	ER	LIGHTS 1ST FLOOR CORRIDOR	12
13	LIGHTING CLASSROOM (4TH) 144	E	20 A	1	715 / 0			1	20 A	Е	SPARE	14
15	LIGHTING ROOM 136-134	E	20 A	1		1306 / 0		1	20 A	ER	TIME CLOCK-C-W-OU-LGT	16
17	CORRIDOR EXIT, EM LGT 1ST & 2ND FLR	E	20 A	1			80 / 0	1	20 A	Е	SPARE	18
19	LIGHTING ROOM 139, 140, 142	E	20 A	1	188 / 0			1	20 A	Е	SPARE	20
21	LIGHTING CLASSROOM (5TH) 225	E	20 A	1		715 / 0		1	20 A	Е	SPARE	22
23	LIGHTING CLASSROOM (5TH) 236	E	20 A	1			715 / 0	1	20 A	Е	SPARE	24
25	LIGHTING CLASSROOM (5TH) 237	E	20 A	1	715 / 0			1	20 A	Е	SPARE	26
27	LIGHTING ROOM 239, 240	E	20 A	1		176 / 0		1	20 A	Е	SPARE	28
29	LIGHTING CLASSROOM (6TH) 242	E	20 A	1			715 / 0	1	20 A	Е	SPARE	30
31	LIGHTING CLASSROOM (6TH) 243	E	20 A	1	715 / 0			1	20 A	ER	LIGHTS 2ND FLOOR CORRIDOR	32
33	LIGHTING CLASSROOM (6TH) 235	E	20 A	1		715 / 0		1	20 A	ER	LIGHTS 2ND FLOOR CORRIDOR	34
35	LIGHTING ROOM 226-234	E	20 A	1			1306 / 0	1	20 A	Е	SPARE	36
37	SPARE	E	20 A	1	0 / 0			1	20 A	Е	SPARE	38
39	SPARE	E	20 A	1		0/0		1	20 A	Е	SPARE	40
41	SPARE	E	20 A	1			0 / 0	1	20 A	Е	SPARE	42
			TOT	ALS :	3764 VA	4343 VA	3532 VA					
	TOTAL CONNECTED LOA				5704 VA							

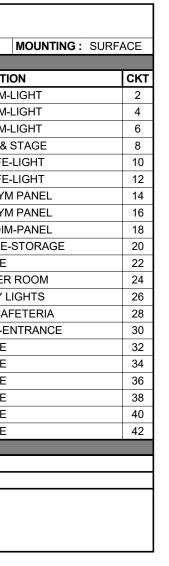






CKT DESCRIPTION NOTE AMP POLE A B C POLE AMP NOTE DI 1 DIMMER-GYM-LIGHTING ER 20 A 1 0/0 1 20 A ER DIMM 3 DIMMER-GYM-LIGHTING ER 20 A 1 0/0 1 20 A ER DIMM 5 DIMMER-GYM-LIGHTING ER 20 A 1 0/0 1 20 A ER DIMM 7 DIMMER-GYM-LIGHTING ER 20 A 1 0/0 1 20 A ER DIMM 9 DIMMER-CAFE-LIGHTS ER 20 A 1 0/0 1 20 A ER DIMM 13 DIMMER-CAFE-LIGHTS ER 20 A 1 0/0 1 20 A ER DIM-SP 15 DIMMER-GYM-LIGHTING ER 20 A 1 0/0 1 20 A ER DIM-SP 17 SPARE-DIM-GYM PANEL ER <th></th> <th>LLD</th> <th></th> <th>P</th> <th>4NI</th> <th>ELBOA</th> <th>RD SCI</th> <th>HEDUL</th> <th>Ε</th> <th></th> <th></th> <th></th>		LLD		P	4NI	ELBOA	RD SCI	HEDUL	Ε																																																																																																																																																																																																																																																																							
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5 DIMMER-GYM-LIGHTING ER 20 A 1 0/0 1 20 A ER DIMMER-GYM-LIGHTING 9 DIMMER-CAFE-LIGHTS ER 20 A 1 0/0 1 20 A ER DIMMER-CAFE-LIGHTS 11 DIMMER-CAFE-LIGHTS ER 20 A 1 0/0 1 20 A ER DIMMER-CAFE-LIGHTS 13 DIMMER-CAFE-LIGHTS ER 20 A 1 0/0 1 20 A ER DIMMER-CAFE-LIGHTS 15 DIMMER-GYM-LIGHTING ER 20 A 1 0/0 1 20 A ER DIMMER-CAFE-LIGHTS 16 DIMMER-GYM-LIGHTING ER 20 A 1 0/0 1 20 A ER DIMMER-CAFE-LIGHTS 17 SPARE-DIM-GYM PANEL ER 20 A 1 0/0 1 20 A ER DIMMER-CAFE-LIGHTS 19 LGTS-CORR & COURT YARD ER 20 A 1 0/0 1 20 A E LIGHTS 21 LGTS-CORR & COURT YARD ER 20 A 1 0/0 1 2	1	DIMMER-GYM-LIGHTING				0 / 0				_		DIMMER-GYM-L																																																																																																																																																																																																																																																																				
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	3	DIMMER-GYM-LIGHTING	ER	20 A	1		0 / 0		1	20 A	ER	DIMMER-GYM-L																																																																																																																																																																																																																																																																				
9DIMMER-CAFE-LIGHTSER20A10/0120AERDIMM11DIMMER-CAFE-LIGHTSER20A10/0120AERDIMM13DIMMER-CAFE-LIGHTSER20A10/0120AERDIMM15DIMMER-GYM-LIGHTINGER20A10/0120AERDIM17SPARE-DIM-GYM PANELER20A10/0120AERDIM19LGTS-CORR & COURT YARDER20A10/0120AERDIA21LGTS-CORR & COURT YARDER20A10/0120AERLIGHT23LIGHTS-COURTYARDER20A10/0120AERLIGHT25LIGHTS-COURTYARDER20A10/0120AERLIGHT29TWO-POLE-LIGHTS-PILOTER20A10/0120AERLIGHT31 $?$ ER20A10/0120AEII33 $?$ ER20A10/0120AEII34LIGHTING CORRDIOR C114E20A1532/0120AEII39SPAREE20A10/0120AEIIII39SPAREE20A10/0120AEIIII <tr <="" td=""><td>5</td><td>DIMMER-GYM-LIGHTING</td><td>ER</td><td>20 A</td><td>1</td><td></td><td></td><td>0 / 0</td><td>1</td><td>20 A</td><td>ER</td><td>DIMMER-GYM-L</td></tr> <tr><td>11DIMMER-CAFE-LIGHTSER20 A100 A120 AERDIMMER-CAFE-LIGHTS13DIMMER-CAFE-LIGHTSER20 A10/0120 AERDIMMER-GYM-LIGHTINGER20 A10/0120 AERLIGHTS-COURTYARDER20 A10/0120 AERLIGHTING-COURTYARDER20 A10/0120 AERLIGHTINGER20 A10/0120 AERLIGHTING-DICH-LIGHTS-PILOTER20 A10/0120 AERLIGHTING-CORRDIOR-C114ER20 A10/0120 AERLIGHTING-CORRDIOR-C114E20 A10/0120 AEIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII<</td><td>7</td><td>DIMMER-GYM-LIGHTING</td><td>ER</td><td>20 A</td><td>1</td><td>0 / 0</td><td></td><td></td><td>1</td><td>20 A</td><td>ER</td><td>LIGHTS GYM & S</td></tr> <tr><td>13DIMMER-CAFE-LIGHTSER20 A10 / 0120 AERDIM-SP15DIMMER-GYM-LIGHTINGER20 A10 / 0120 AERDIM-SP17SPARE-DIM-GYM PANELER20 A10 / 00 / 0120 AERSPARE19LGTS-CORR & COURT YARDER20 A10 / 00 / 0120 AERSPARE21LGTS-MEZZ-DISPLAY CASEER20 A10 / 00 / 0120 AERLIGHT25LIGHTS - COURT YARDER20 A10 / 00 / 0120 AERLIGHT25LIGHTS - COURT YARDER20 A10 / 00 / 0120 AERLIGHT26TWO-POLE-LIGHTS-PILOTER20 A10 / 00 / 0120 AERLIGHTS-COURTYARD29TWO-POLE-LIGHTS-PILOTER20 A10 / 0120 AERLIGHTS-COURTYARD31?ER20 A10 / 0120 AERLIGHTS-COURTYARD33?ER20 A10 / 0120 AEIIIGHTS-COURTS</td><td>9</td><td>DIMMER-CAFE-LIGHTS</td><td>ER</td><td>20 A</td><td>1</td><td></td><td>0 / 0</td><td></td><td>1</td><td>20 A</td><td>ER</td><td>DIMMER-CAFE-I</td></tr> <tr><td>15 DIMMER-GYM-LIGHTING ER 20 A 1 0/0 1 20 A ER DIMMER-GYM-LIGHTING ER 20 A 1 0/0 1 20 A ER DIMMER-GYM-PANEL ER 20 A 1 0/0 1 20 A ER DIMMER-GYM-PANEL ER 20 A 1 0/0 1 20 A ER DIMMER-GYM-PANEL ER 20 A 1 0/0 1 20 A ER DIMMER-GYM-PANEL ER 20 A 1 0/0 1 20 A ER DIMMER-GYM-PANEL ER 20 A 1 0/0 1 20 A ER DIMMER-GYM-PANEL ER 20 A 1 0/0 1 20 A ER DIMMER-GYM-PANEL ER 20 A 1 0/0 1 20 A ER LIGHTS-COURTYARD ER 20 A 1 0/0 1 20 A ER LIGHTS-COURTYARD ER 20 A 1 0/0 1 20 A ER LIGHTS-COURTYARD ER 20 A 1 0/0 1 20 A ER LIGHTS-COURTYARD ER 20 A</td><td>11</td><td>DIMMER-CAFE-LIGHTS</td><td>ER</td><td>20 A</td><td>1</td><td></td><td></td><td>0 / 0</td><td>1</td><td>20 A</td><td>ER</td><td>DIMMER-CAFE-I</td></tr> <tr><td>17SPARE-DIM-GYM PANELER20 A100 A120 AERSPARE19LGTS-CORR & COURT YARDER20 A1000120 AER20 A121LGTS-CORR & COURT YARDER20 A1000120 AERLGTS-CORR & COURT YARDER20 A1000120 AERLGTS-CORR & COURT YARDER20 A1000120 AERLIGHTS-COURTYARDER20 A1000120 AERLIGHT25LIGHTS - COURTYARDER20 A1000120 AERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARD27SPAREER20 A1000000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDER20 A1000120 AERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDERLIGHTS-COURTYARDER</td><td>13</td><td>DIMMER-CAFE-LIGHTS</td><td>ER</td><td>20 A</td><td>1</td><td>0 / 0</td><td></td><td></td><td>1</td><td>20 A</td><td>ER</td><td>DIM-SPARE-GYM</td></tr> <tr><td>19 LGTS-CORR & COURT YARD ER 20 A 1 0/0 1 20 A ER LGTS-P.E 21 LGTS-CORR & COURT YARD ER 20 A 1 0/0 1 20 A E 23 LGTS-MEZZ-DISPLAY CASE ER 20 A 1 0/0 1 20 A ER LIGHT 25 LIGHTS - COURTYARD ER 20 A 1 0/0 1 20 A ER EM 27 SPARE ER 20 A 1 0/0 1 20 A ER EM 29 TWO-POLE-LIGHTS-PILOT ER 20 A 1 0/0 1 20 A ER LIGHTS- 31 ? ER 20 A 1 0/0 1 20 A E LIGHTS- 33 ? ER 20 A 1 0/0 1 20 A E </td><td>15</td><td>DIMMER-GYM-LIGHTING</td><td>ER</td><td>20 A</td><td>1</td><td></td><td>0 / 0</td><td></td><td>1</td><td>20 A</td><td>ER</td><td>DIM-SPARE-GYM</td></tr> <tr><td>21LGTS-CORR & COURT YARDER20 A10/0120 AE23LGTS-MEZZ-DISPLAY CASEER20 A10/00/0120 AERLIGHT25LIGHTS - COURTYARDER20 A10/0120 AEREM EMER27SPAREER20 A10/00/0120 AERLIGHTS-COURTYARD29TWO-POLE-LIGHTS-PILOTER20 A10/00/0120 AERLIGHTS-COURTYARD31?ER20 A10/0120 AERLIGHTS-COURTYARDER20 A10/0120 AERLIGHTS-COURTYARD33?ER20 A10/00/0120 AELIGHTS-COURTYARDE20 A10/0120 AE33PAREER20 A1532 / 0605 / 0120 AEII<td>17</td><td>SPARE-DIM-GYM PANEL</td><td>ER</td><td>20 A</td><td>1</td><td></td><td></td><td>0 / 0</td><td>1</td><td>20 A</td><td>ER</td><td>SPARE-GYM-DIM-</td></td></tr> <tr><td>23LGTS-MEZZ-DISPLAY CASEER20 A10/0120 AERLIGHT25LIGHTS - COURTYARDER20 A10/0120 AEREREMER27SPAREER20 A10/0120 AERLGTS-G29TWO-POLE-LIGHTS-PILOTER20 A10/0120 AERLGTS-G31?ER20 A10/0120 AERLIGHTS-G33?ER20 A10/0120 AELIGHTS-G35LIGHTING CORRDIOR C114E20 A1532/0605/0120 AE37LGTN 193C, 194, 195, 196B. GYM & CAFE ENTE20 A1532/0120 AE39SPAREE20 A10/0120 AE</td><td>19</td><td>LGTS-CORR & COURT YARD</td><td>ER</td><td>20 A</td><td>1</td><td>0 / 0</td><td></td><td></td><td>1</td><td>20 A</td><td>ER</td><td>LGTS-P.E. OFFICE-S</td></tr> <tr><td>25 LIGHTS - COURTYARD ER 20 A 1 0 / 0 1 20 A ER EME EME 27 SPARE ER 20 A 1 0 / 0 1 20 A ER EME EME 20 A 1 0 / 0 1 20 A ER EME EME 20 A 1 0 / 0 1 20 A ER LIGTS - COURTYARD ER 20 A 1 0 / 0 1 20 A ER LIGTS - COURTYARD ER 20 A 1 0 / 0 1 20 A ER LIGTS - COURTYARD ER 20 A 1 0 / 0 0 / 0 1 20 A ER LIGTS - COURTYARD ER 20 A 1 0 / 0 1 20 A ER LIGHTS - COURTYARD ER 20 A 1 0 / 0 1 20 A E<!--</td--><td>21</td><td>LGTS-CORR & COURT YARD</td><td>ER</td><td>20 A</td><td>1</td><td></td><td>0 / 0</td><td></td><td>1</td><td>20 A</td><td>E</td><td>SPARE</td></td></tr> <tr><td>$\begin{array}{ c c c c c c c c c c c c c c c c c c c$</td><td>23</td><td>LGTS-MEZZ-DISPLAY CASE</td><td>ER</td><td>20 A</td><td>1</td><td></td><td></td><td>0 / 0</td><td>1</td><td>20 A</td><td>ER</td><td>LIGHTS-BOILER</td></tr> <tr><td>29 TWO-POLE-LIGHTS-PILOT ER 20 A 1 0 / 0 1 20 A ER 10 31 ? ER 20 A 1 0 / 0 1 20 A ER 20 A 1 0 / 0 1 20 A ER 20 A 1 0 / 0 1 20 A ER 20 A 1 0 / 0 1 20 A ER 20 A 1 0 / 0 1 20 A E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td><td>25</td><td>LIGHTS - COURTYARD</td><td>ER</td><td>20 A</td><td>1</td><td>0 / 0</td><td></td><td></td><td>1</td><td>20 A</td><td>ER</td><td>EMERGENCY LI</td></tr> <tr><td>31 ? ER 20 A 1 0 / 0 1 20 A E 33 ? ER 20 A 1 0 / 0 1 20 A E 35 LIGHTING CORRDIOR C114 E 20 A 1 605 / 0 1 20 A E 37 LGTN 193C, 194, 195, 196B. GYM & CAFE ENT E 20 A 1 532 / 0 1 20 A E 39 SPARE E 20 A 1 0 / 0 1 20 A E</td><td>27</td><td>SPARE</td><td>ER</td><td>20 A</td><td>1</td><td></td><td>0 / 0</td><td></td><td>1</td><td>20 A</td><td>ER</td><td>LGTS-GYM & CAF</td></tr> <tr><td>33 ? ER 20 A 1 0/0 1 20 A E 35 LIGHTING CORRDIOR C114 E 20 A 1 605 / 0 1 20 A E 37 LGTN 193C, 194, 195, 196B. GYM & CAFE ENT E 20 A 1 532 / 0 1 1 20 A E 39 SPARE E 20 A 1 0 / 0 1 20 A E</td><td>29</td><td>TWO-POLE-LIGHTS-PILOT</td><td>ER</td><td>20 A</td><td>1</td><td></td><td></td><td>0 / 0</td><td>1</td><td>20 A</td><td>ER</td><td>LIGHTS-D-WING-EN</td></tr> <tr><td>35 LIGHTING CORRDIOR C114 E 20 A 1 605 / 0 1 20 A E 37 LGTN 193C, 194, 195, 196B. GYM & CAFE ENT E 20 A 1 532 / 0 1 20 A E 39 SPARE E 20 A 1 0 / 0 1 20 A E</td><td>31</td><td>?</td><td>ER</td><td>20 A</td><td>1</td><td>0 / 0</td><td></td><td></td><td>1</td><td>20 A</td><td>E</td><td>SPARE</td></tr> <tr><td>37 LGTN 193C, 194, 195, 196B. GYM & CAFE ENT E 20 A 1 532 / 0 1 20 A E 39 SPARE E 20 A 1 0 / 0 1 20 A E</td><td>33</td><td>?</td><td>ER</td><td>20 A</td><td>1</td><td></td><td>0 / 0</td><td></td><td>1</td><td>20 A</td><td>E</td><td>SPARE</td></tr> <tr><td>39 SPARE E 20 A 1 0/0 1 20 A E</td><td>35</td><td>LIGHTING CORRDIOR C114</td><td>E</td><td>20 A</td><td>1</td><td></td><td></td><td>605 / 0</td><td>1</td><td>20 A</td><td>E</td><td>SPARE</td></tr> <tr><td></td><td>37 L</td><td>GTN 193C, 194, 195, 196B. 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				T01		500 V/A	0.)(A	COE) (A																																																																																																																																																																																																																																																																								
TOTALS : 532 VA 0 VA 605 VA TOTAL CONNECTED LOAD (VA) : 1137 VA TOTAL CONNECTED LOAD (AMPS) : 3 A				-	_	332 VA	-			(

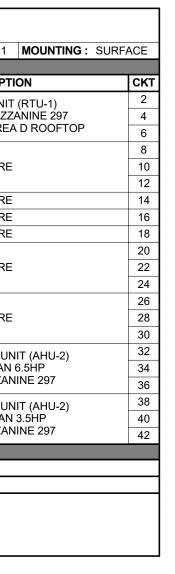
	НРМ		P	ANI	ELBOA	RD SCH	IEDULI						
	MECH. MEZZANINE 297	SCCR (AMPS RMS SYN	IM): {	65,000		: 480Y/277V 3Ф	4-Wire+Ground	AMP	: 200	A M	AIN : MLO	NEMA: Type 1	M
СКТ	DESCRIPTION	NOTE	AMP	POLE	A	В	С	POLE	AMP	NOTE	1	DESCRIP	TION
1 3 5	E. EXHAUST FAN EF-	11	20 A	3	443 / 6371	443 / 6371	443 / 6371	3	30 A			ROOFTOP UN VFD MECH. MEZ IT LOCATED ARE	ZANI
7 9 11	SPARE SPARE SPARE		20 A 20 A 20 A	1 1 1	0 / 0	0 / 0	0 / 0	3	30 A			SPAR	E
13	SPARE		20 A	1	0 / 0			1	20 A			SPAR	E
15	SPARE		20 A	1		0/0		1	20 A			SPAR	E
17	SPARE		20 A	1			0 / 0	1	20 A			SPAR	E
19 21	SPARE SPARE		20 A 20 A	1 1	0 / 0	0 / 0		3	20 A			SPAR	E
23 25 27 29	SPARE		20 A 40 A	1 3	0 / 0	0/0	0 / 0	3	20 A			SPAR	
31 33 35	AIR HANDLING UNIT (AF SUPPLY FAN 14HP MECH. MEZZANINE 29		40 A	3	5817 / 3047	5817 / 3047	5817 / 3047	3	20 A			AIR HANDLING L SUPPLY FAI MECH. MEZZA	N 6.5
37 39 41	AIR HANDLING UNIT (AF RETURN FAN 6HP MECH. MEZZANINE 29	,	20 A	3	3047 / 2105	3047 / 2105	3047 / 2105	3	20 A			AIR HANDLING L RETURN FA MECH. MEZZA	N 3.5
			то	TALS :	20831 VA	20831 VA	20831 VA						
$\overline{\gamma}$	TOTAL CON	NECTED LOAD (VA): 6	2492	VA		ΤΟΤΑ	L CONNECTED	LOAD	AMPS): 75 A	۱		
-		ACE MOTOR CONTROL	. CEN	TER 'MC	C-DM'.	NOTES:							



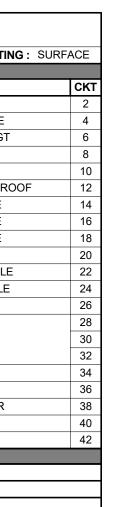
	LPDM	P	AN	ELBO	ARD SCH	IEDUL	E					LPD		PAN	ELBO	ARD SCH	HEDUL	E			
	I : MECHANICAL 197 SCCR (AMP	S RMS SYMM):		SERVIO	CE : 208Υ/120V 3Φ	4-Wire+Ground	AMP: 225	A MAIN : MLO	NEMA: Type 1 MOUNTING : SU	JRFACE	LOCATION	: ELEC. 197A	SCCR (AMPS RMS S	YMM):	SERVIC	Ε : 208Y/120V 3Φ	4-Wire+Ground	AMP	: 100 A M	AIN : MLO NEMA: Type 1 MOUNTING :	SURFACE
									· · ·				\sim		Ì						
кт	DESCRIPTION	NOTE AM	_	Α	В	C	POLE AMP		DESCRIPTION	СКТ	СКТ	DESCRIPTION				В	C			DESCRIPTION	
1	TAC - PANEL	ER 20 /		0 / 0			1 20 A		RECEPTACLE - B.R.	2	1	PUH-C STORAGE 193C,) 20 A 1	400 / 180			(1	20 A E	RECEPT CAFETERIA 196	2
3	TAC - PANEL	ER 20 /			0 / 0		1 20 A		RECEPTACLE - B.R.	4	3	CUH-F RESTROOM 194A,		3 20 A 1		400 / 180		(1	20 A E		
5	SPARE	ER 20 /				0/0	1 20 A		CHILLER PIPE HEAT TAPE	6	5	RECEPT STORAGE 195,		3 20 A 1			360 / 0	-			
7	SPARE	ER 20 /		0 / 0			1 20 A		PUMP #5 FUEL	8	7	SPARE		20 A 1	0 / 0			1	20 A ER	SPARE	8
9	SPARE	ER 20 /			0 / 0		1 20 A		PUMP #6 FUEL	10	9	SPARE		20 A 1		0 / 0		1	20 A E	SPARE	10
1	UNIT HEATER - KITCHEN	ER 20 /	¥ 1			0 / 0	1 20 A	ER	EXHAUST FAN #10	12	11	SPARE		20 A 1			0 / 0		20 A E	SPARE	12
13	SOUTH BOILER CONTROL	ER 20 /	¥ 1	0 / 0		_	1 20 A	ER	NORTH BOILER CONTROL	14	13	SPARE		20 A 1	0 / 0			1	20 A ER	SPARE	14
15	WATER HEATER #2	ER 20 /	A 1		0 / 0		1 20 A	ER	L. WATER CIRCULATING P.	16	15	SPARE	EF	20 A 1		0 / 0		1	20 A E	SPARE	16
17	WATER HEATER #1	ER 20 /	¥ 1			0 / 0	1 20 A	ER	R. WATER CIRCULATING P.	18	17	SPARE	EF	20 A 1			0 / 0	1	20 A ER	SPARE	18
19	?	ER 20 /	¥ 1	0 / 0			1 20 A	ER	SPARE	20	19	SPARE	EF	20 A 1	0 / 360			1	20 A E	EWC GYM	20
21	SPARE	ER 20 /	A 1		0 / 0		1 20 A	ER	SPARE	22	21	SPARE	EF	20 A 1		0 / 360		1	20 A E	EWC CAFETERIA 196	22
23	SPARE	ER 20 /	۱ ۱			0 / 0	1 20 A	ER	SPARE	24	23	SPARE	E	20 A 1			0 / 360	1	20 A E	SINKS RESTROOM 194	24
25	SPARE	ER 20 /	\ 1	0/0			1 20 A	ER	RECEPTACLE B.R.	26	25			00.0	0 / 360			1	20 A E	RECEPT RESTROOM 194	26
27	SPARE	ER 20 /	¥ 1		0 / 0		1 20 A	ER	SPARE	28	27	SPARE	E	20 A 2		0 / 0		1	20 A ER	SPARE	28
29						0/0	1 20 A	ER	SPARE	30	29	00405					0/0				30
31	SPARE	ER 20 /	A 3	0/0			1 20 A	ER	RECEPTACLE B.R.	32	31	SPARE	E	20 A 2	0/0			2	20 A ER	SPARE	32
33					0 / 0		1		SPACE	34	33		_			0 / 0		1	20 A ER	SPARE	34
35	PUH-B1 STORAGE 297A	20 /	A 1			864 / 1000	1 20 A	тс	P RTU-1 MECH. MEZZANINE 297	36	35	SPARE	E	20 A 2			0/0		· · · · · · · · · · · · · · · · · · ·		36
37	PUH-B2 MECH. MEZZANINE 297	20 /	A 1	864 / 1000			1 20 A	TC	P AHU-1 MECH. MEZZANINE 297	38	37				0/0			2	20 A ER	SPARE	38
39	PUH-B3 MECH. MEZZANINE 297	20 /			864 / 1000		1 20 A		P AHU-2 MECH. MEZZANINE 297	40	39	SPARE	E	20 A 2		0/0			,		40
41	EF-E 1/4HP MECH. MEZZANINE 297	20 /				696 / 360	1 20 A		RACK RECEPT MECH. MEZZ. 297	42	41	SPACE		1			0/0	2	20 A ER	SPARE	42
														-							
		т	DTALS :	1864 VA	1864 VA	2920 VA								TOTALS :	1300 VA	940 VA	720 VA				
	TOTAL CONNECTED LO	AD (VA): 6648	VA		TOTA	L CONNECTED	LOAD (AMPS): 18 A				TOTAL CON	NECTED LOAD (VA)	: 2960 VA	•	TOTA	L CONNECTED	LOAD ((AMPS): 8 A		
REMARKS EXISTING	: PANELBOARD				NOTES: ER - EXISTING (MAIN. VERIFY	IN FIELD. LEAVE A	AS SPARE IF UNUSED.		REMARKS EXISTING	: SQUARE D PANELBOARD TYP	E 'NQOD'			NOTES: E - CONNECT T ER - EXISTING (. LEAVE AS SF	PARE IF UNUSED.	

	LPK(L)			P	ANE	ELBOA	RD SCH	IEDULI	E				
LOCA	TION : ELEC. 197A	SCCR (AMPS RI	MS SYI	MM):		SERVIC	Ε: 208Y/120V 3Φ	4-Wire+Ground	AMP	: 400	А М	AIN : MLO NEMA: Type 1	MOUNTING
СКТ	DESCRIPTION		NOTE		POLE	Α	В	С	POLE	AMP	NOTE	DESCRIPTIO	ON
1	RECEPT-FLOOR-SALAD) BAR	ER	20 A	1	0 / 0		_	1	20 A	ER	REFRIGERAT	FOR
3	SERV-TABL-CASH RE	G-W	ER	20 A	1		0 / 0		1	20 A	ER	SERV-TAB-CASH	REGIS-E
5	SERV-TABL-COMPR-L	GTS	ER	20 A	1			0 / 0	1	20 A	ER	SERVING-TABLE-C	OMP LGT
7	ANSEL-SYST-CONTRAC	CTOR	ER	20 A	1	0 / 0			1	20 A	ER	EXHAUST FA	N - 6
9	SPARE		E	20 A	1		0 / 0		1	20 A	ER	T. EXHAUST F	AN - 3
11	SPARE		E	20 A	1			0 / 300	1	20 A	Е	EXHAUST FAN EF-C KI	TCHEN ROC
13	SPARE		E	20 A	1	0 / 0			1	20 A	ER	WORK-TABLE-RE	CEPT-E
15	SPARE		E	20 A	1		0 / 0		1	20 A	ER	RECEPT-WORK-1	TABLE-E
17	SPARE		E	20 A	1			0 / 0	1	20 A	ER	RECEPT-WORK-1	TABLE-E
19				20.4	0	0 / 0			1	20 A	ER	KETLLE - CON	TROL
21	MICROWAVE		ER	30 A	2		0 / 0		1	20 A	ER	RECEPTACLE - WO	RK TABLE
23			ER	00.4	0			0 / 0	1	20 A	ER	RECEPTACLE-WOR	RK TABLE
25	REF-HALF&HALF-E-W	AR	ER	20 A	2	0 / 0			1			SPACE	
27				00.4	0		0 / 0						
29	REFR-HALF&HALF-W-	WAR	ER	20 A	2			0 / 0	3	90 A	ER	STOVE	
31						0 / 0							
33	QUART-MIXER		ER	20 A	3		0 / 0		1	20 A	ER	110 V-REFRIG-W	ARMER
35								0 / 0	1	20 A	ER	ICE MACHI	NE
37	RECEPT-KIT-EAST W	ALL	ER	20 A	1	0 / 0			1	20 A	ER	RECEPT-OFFICE-	LOCKER
39	RECEPT-LOCKER-STO	RAGE	ER	20 A	1		0 / 0		1	20 A	Е	SPARE	
41	SPARE		E	20 A	1			0 / 0	1	20 A	Е	SPARE	
				тот	ALS :	0 VA	0 VA	300 VA					
	TOTAL CON	NECTED LOAD	(VA) : 🗧	300 VA			ΤΟΤΑ	L CONNECTED	LOAD	(AMPS)	:1A		
REMA EXIST	RKS: ING SQUARE D PANELBOARD TYI	PE 'NQOD'					NOTES: E - CONNECT TO ER - EXISTING C			LEAVE	AS SF	PARE IF UNUSED.	

	HPK(L)		P	ANE	ELBOA	RD SCI	HEDULI		3				
	· /	SCCR (AMPS RMS SYN				Ξ: (480Y/277V 3Φ				A MAIN	: MLO NEMA: Type 1	MOUNTING :	SURFACE
			,			un	Cumer						
СКТ	DESCRIPTION	NOTE	AMP	POLE	Α	В	С	POLE	AMP	NOTE	DESCRIPT	ION	СК
1					0 / 0								2
3	EXISTING CIRCUIT		20 A	3		0 / 0		3	20 A		EXISTING CI	RCUIT	4
5							0 / 0						6
7					0 / 0								8
9	EXISTING CIRCUIT		20 A	3		0 / 0		3	20 A		EXISTING CI	RCUIT	10
11							0 / 0						12
13					0/0								14
15	EXISTING CIRCUIT		20 A	3		0 / 0		3	20 A		EXISTING CI	RCUIT	16
17							0 / 0						18
19					0/0								20
21	EXISTING CIRCUIT		40 A	3		0 / 0		3	40 A		EXISTING CI	RCUIT	22
23							0 / 0						24
25					0/0			1			SPACE		26
27	EXISTING CIRCUIT		30 A	3		0 / 0		1			SPACE		28
29							0 / 0	1			SPACE		30
31	SPACE			1	0 / 0			1			SPACE		32
33	SPACE			1		0 / 0		1			SPACE		34
35	SPACE			1			0 / 0	1			SPACE		36
37	SPACE			1	0 / 0			1			SPACE		38
39	SPACE			1		0 / 0		1			SPACE		40
41	SPACE			1			0 / 0	1			SPACE		42
				TALS :	0 VA	0 VA	0 VA						
	TOTAL CON	NECTED LOAD (VA) : 0) VA				L CONNECTED	LOAD	(AMPS)	:0A			
REMARKS: EXISTING SO	QUARE D PANELBOARD.					NOTES: ALL CIRCUITS T	TO REMAIN.						



	LHD		P/	ANE	ELBO	ARD SC	HEDUL	.E					
	I: ELEC. 197A SCCR (A	MPS RMS SYM	IM):		SERVIO	CE: None		AMP	: 100 A	MAIN : MLO	NEMA: Type 1	MOUNTING : S	URFACE
СКТ	DESCRIPTION	NOTE	AMP	POLE	A	В	С	POLE	AMP N	OTE	DESCRIPTIC	N	СКТ
1	EXISTING CIRCUIT		20 A	1	0 / 0			1	20 A		EXISTING CIRC	UIT	2
3	EXISTING CIRCUIT		20 A	1		0 / 0		1	20 A		EXISTING CIRC	UIT	4
5	EXISTING CIRCUIT		20 A	1			0 / 0	1	20 A		EXISTING CIRC	UIT	6
7	EXISTING CIRCUIT		20 A	1	0/0			1	20 A		EXISTING CIRC	UIT	8
9	EXISTING CIRCUIT		20 A	1		0 / 0		1	20 A		EXISTING CIRC	UIT	10
11	EXISTING CIRCUIT		20 A	1			0 / 0	1	20 A		EXISTING CIRC	UIT	12
13	EXISTING CIRCUIT		20 A	1	0/0			1	20 A		EXISTING CIRC	UIT	14
15	EXISTING CIRCUIT		20 A	1		0 / 0		1	20 A		EXISTING CIRC	UIT	16
17	EXISTING CIRCUIT		20 A	1			0 / 0	1	20 A		EXISTING CIRC	UIT	18
19	EXISTING CIRCUIT		20 A	1	0/0			1	20 A		EXISTING CIRC	UIT	20
21	SPACE			1		0 / 0							22
23	SPACE			1			0 / 0	3	20 A		EXISTING CIRC	UIT	24
25	SPACE			1	0/0								26
27	SPACE			1		0 / 0							28
29	SPACE			1			0 / 0	3	20 A		EXISTING CIRC	UIT	30
31	SPACE			1	0 / 0								32
33	SPACE			1		0 / 0							34
35	SPACE			1			0 / 0	3	20 A		EXISTING CIRC	UIT	36
37	SPACE			1	0 / 0								38
39	SPACE			1		0 / 0		1			SPACE		40
41	SPACE			1			0 / 0	1			SPACE		42
				_									
			-	ALS :	0 VA	0 VA	0 VA						
	TOTAL CONNECTED	LOAD (VA): 0	VA				AL CONNECTE	DLOAD	(AMPS) :	Not Computed			
REMARKS EXISTING	: SQUARE D PANELBOARD.					NOTES: ALL CIRCUITS	TO REMAIN.						



	LPK(R)		P	ANI	ELBOA	RD SCH	IEDUL	Ε				
LOCATION	: ELEC. 197A	SCCR (AMPS RMS SY	MM):		SERVICE	Ξ : 208Y/120V 3Φ	4-Wire+Ground	AMF	• : 400	А МА	AIN : MLO NEMA: Type 1 MOUNTING : SUR	FACE
СКТ	DESCRIPTION	NOTE		POLE	A	В	С	POLE		NOTE	DESCRIPTION	C
1	LIGHTS - HOOD	ER	20 A	1	0/0			1	20 A	ER	SP-CIR-KIT-JBOX-A-OFF	2
3	SP-IN-HOOD-FOR-CONT	ROL ER	20 A	1		0/0		1	20 A	ER	SP-CIR-KIT-JBOX-A-OFF	4
5	SPARE	ER	20 A	1			0/0	1	20 A	ER	SP-CIR-KIT-JBOX-A-OFF	6
7	DISH-AREA-LIGHTS	ER	20 A	1	0/0			1	20 A	ER	?	8
9	LIGHTS - KITCHEN	ER	20 A	1		0 / 300		1	20 A		EXHAUST FAN EF-B KITCHEN ROOF	1
11	LIGHTS-KITCHEN	ER	20 A	1			0/0	1	20 A	ER	EXHAUST FAN - 5	1
13					0/0			1	20 A	ER	LIGHTS - FREEZER - COOLER	1
15	COMPRESSOR	ER	20 A	3		0 / 200		1	20 A	E	FAN COIL FC-A OFFICE 198E	1
17							0/0					1
19					0/0			2	30 A	ER	HOT-FD-SERVING-TAB-E	2
21	WALK-IN-COOLER-CO	M ER	20 A	3		0/0		_				2
23							0/0	2	30 A	ER	HOT-FD-SERVING-TAB-W	2
25					0/0					_		2
27	WALK-IN-FREEZR-CC	M ER	30 A	3		0 / 0		2	20 A	E	SPARE	2
29							0 / 600	1	20 A	Р	CUH-E DRY STORAGE 198D	3
31					0 / 244			1	20 A	Р	CUH-D VEST. V106, PUH-C CORR. C116	3
33	SPARE	E	20 A	3		0 / 288		1	20 A	Р	HEATER PUH-C SERVING 198	3
35							0/0	1	20 A	Р	SPARE	3
37					0/0							3
39	SPARE	E	20 A	3		0/0		3	20 A	E	SPARE	4
41							0 / 0					4
			1									
				TALS :	244 VA	788 VA	600 VA					
		NECTED LOAD (VA) :	1632 V	A			L CONNECTED	LOAD	(AMPS):5A		
REMARKS: EXISTING S	QUARE D PANELBOARD TYP	E 'NQOD'				NOTES: E - CONNECT TO ER - EXISTING C P - PROVIDE NE	CIRCUIT TO REA		. LEAVI	E AS SP	ARE IF UNUSED.	

	HPK(R)			ANE								
LOCATION :	ELEC. 197A	SCCR (AMPS RMS SY	MM):	_	SERVIC	E: 480Y/277V 34	4-Wire+Ground) AMP	: 400	∧ Μ ∕	NIN: MLO NEMA: Type 1 MOUNTING: SU	JRFAC
скт	DESCRIPTION	NOTE	AMP	POLE	A	B	C	POLE	AMP	NOTE	DESCRIPTION	C
1					0 / 0							
3	EXISTING CIRCUIT		20 A	3		0 / 0		3	20 A		EXISTING CIRCUIT	
5							0 / 0					
7					0 / 0							
9	EXISTING CIRCUIT		20 A	3		0 / 0		3	20 A		EXISTING CIRCUIT	
11							0 / 0					
13					0/0							
15	EXISTING CIRCUIT		20 A	3		0 / 0		3	20 A		EXISTING LOAD	
17							0 / 0					
19					0 / 0			1			SPACE	
21	EXISTING CIRCUIT		40 A	3		0 / 0		1			SPACE	
23							0 / 0	1			SPACE	
25					0 / 0			1			SPACE	
27	EXISTING CIRCUIT		90 A	3		0 / 0		1			DO NOT REMOVE THIS TWISTOUT	
29							0 / 0	1			DO NOT REMOVE THIS TWISTOUT	
31	SPACE			1	0 / 0			1			SPACE	:
33	SPACE			1		0 / 0		1			SPACE	:
35	SPACE			1			0 / 0	1			SPACE	:
37	SPACE			1	0 / 0			1			SPACE	
39	SPACE			1		0 / 0		1			SPACE	
41	SPACE			1			0 / 0	1			SPACE	
					0.1/4			1				
				ALS :	0 VA	AV 0						
REMARKS:	TUTAL CON	NECTED LOAD (VA) :	U VA			NOTES:	AL CONNECTED	LUAD	(AIVIPS)	: U A		
	QUARE D PANELBOARD.					ALL CIRCUITS	TO REMAIN					

HEQ		PANELBOARD SCHEDULE										
	DN: ELEC. 197A SC	CR (AMPS RMS S	YMM):		SERVIC	Е: 480Y/277V 3Ф	4-Wire+Ground	AMP	: 200	∧ Μ	AIN: MLO NEMA: Type 1 MOUNTING: SU	JRFAC
СКТ	DESCRIPTION	NOT	EAMP	POLE	A	В	C C	POLE	AMP	NOTE	DESCRIPTION	
1	SPARE	E	20 A		0/0	_	_	1	20 A	E	SPARE	
3	SPARE	E	20 A	1		0/0		1	20 A	Е	SPARE	
5	SPARE	E	20 A	1			0/0	1	20 A	E	SPARE	
7					0 / 0							
9	SPARE	E	15 A	3		0/0		3	20 A		SPARE	
11							0/0					
13					0 / 0							
15	SPARE	E	15 A	3		0/0		3	15 A	E	SPARE	
17							0 / 0					
19					0 / 0							
21	SPARE	E	15 A	3		0 / 0		3	15 A	Е	SPARE	
23							0 / 0					
25	AIR HANDLING UNIT (AHU-	1)			3047 / 0							
27	SUPPLY FAN 7.5HP	É E	20 A	3		3047 / 0		3	15 A	Е	SPARE	
29	UNIT LOCATED ON AREA C R	OOF					3047 / 0					
31	AIR HANDLING UNIT (AHU-	1)			2105 / 0							
33	RETURN FAN 4HP	E	15 A	3		2105 / 0		3	15 A	E	SPARE	
35	UNIT LOCATED ON AREA C R	OOF					2105 / 0					
37	SPACE			1	0 / 0			1			SPACE	
39	SPACE			1		0 / 0		1			SPACE	
41	SPACE			1			0 / 0	1			SPACE	
						-		1				
			-	TALS :	5152 VA	5152 VA	5152 VA					
		CTED LOAD (VA) :	15457	VA			AL CONNECTED	LOAD	(AMPS)	: 19 A		
REMARKS: EXISTING SQUARE D 'NF' PANELBOARD					NOTES: E - CONNECT T	O EXISTING BRI	EAKER	LEAVE	AS SF	ARE IF UNUSED.		





INDIANA THERMAL SOLUTIONS



Date: February 20, 2024	Freight: Allowed and prepaid				
Project: Lilian Schmitt Elementary School	Payment Terms: Net 30 Days				
Engineer: RE Dimond Associates	Delivery Terms: FOB Jobsite				

We offer to furnish the following equipment in accordance with each manufacturer's standard terms and conditions of sale, if purchased directly. Terms of this Offer of Sale are net 30 days from invoice date, with a 1.5% service charge per month applicable thereafter. Pricing stated does not include any state or federal taxes, incidental fees or permits. Pricing includes freight F.O.B. factory. Guaranteed payment terms may be required based on credit worthiness and past payment history. Retainage of any kind is unacceptable. The purchaser shall reimburse attorney's fees incurred by Indiana Thermal Solutions to pursue payment. Purchaser grants to Indiana Thermal Solutions a security interest in the goods listed on this offer of sale. Purchaser agrees that any dispute arising form this offer of sale shall be submitted to Marion County Circuit Court and purchaser agrees that it will be subject to personal jurisdiction in that court. This Offer of Sale and the associated pricing herein are valid for 60 days.

Bid Category #3: Custom Air Handling Units

Oty: (3) Nortek Temtrol Custom Air Handling Units

Tags: AHU 1 - 3

- 3" double wall construction
- Fiberglass insulation on indoor units
- ➢ L shaped configuration on AHU − 3
- > Hot water coils as specified with galvanized frame
- > Chilled water cooling coils with stainless steel coil casing and drain pans
- > AHU 1 includes FWT design with coplanar silencer and Motor Overload Panel
- > Direct drive plenum fans wired to junction box external to unit section
- Lights as required
- > Access doors open against pressure
- > AHU 3 inlcudes performated liner on return air section and coplanar silencer on fan
- > OA/RA/EA dampers as required
- > Unit to ship in sections per submittals
- Startup assistance
- 2 year parts warranty

NOT INCLUDED:

- Disconnects or VFD's
- > Controls, actuators, or sensors of any kind
- Installation of any kind
- Labory warranty

Sincerely,

Brian Rockey Sales Engineer

INDIANA THERMAL SOLUTIONS



Date: February 20, 2024	Freight: Allowed and prepaid					
Project: Lilian Schmitt Elementary School	Payment Terms: Net 30 Days					
Engineer: RE Dimond Associates	Delivery Terms: FOB Jobsite					

We offer to furnish the following equipment in accordance with each manufacturer's standard terms and conditions of sale, if purchased directly. Terms of this Offer of Sale are net 30 days from invoice date, with a 1.5% service charge per month applicable thereafter. Pricing stated does not include any state or federal taxes, incidental fees or permits. Pricing includes freight F.O.B. factory. Guaranteed payment terms may be required based on credit worthiness and past payment history. Retainage of any kind is unacceptable. The purchaser shall reimburse attorney's fees incurred by Indiana Thermal Solutions to pursue payment. Purchaser grants to Indiana Thermal Solutions a security interest in the goods listed on this offer of sale. Purchaser agrees that any dispute arising form this offer of sale shall be subject to personal jurisdiction in that court. This Offer of Sale and the associated pricing herein are valid for 60 days.

Bid Category #4: Packaged Rooftop Units

Oty: (1) Daikin Rebel Rooftop Unit

Tags: RTU - 1

- ➢ 460/60/3 phase with 65 kva fused disconnect switch
- > 0 100% enthalpy economizer with barometric relief
- > 2" & 4" filter rack; 2" filters provided
- > Double wall foam panel construction
- ➢ R410a refrigerant
- Inverter compressor with suction and discharge service valves
- MicroTech Controller with BacNet Interface
- > Single zone vav application
- ➢ 5:1 turndown natural gas burner
- > Modulating hot gas reheat coil for dehumidification
- Comination temp/humidity stat (field installed)
- > 24" flat roof curb
- > Startup
- I year parts warranty & 5 year compressor parts warranty & 10 year heat exchanger parts warranty

NOT INCLUDED & EXCEPTIONS:

- Installation of any kind
- > OA monitoring or smoke detectors

<u>Total Net Price</u>......\$ 49,500.00 (Current lead time is 10 – 12 weeks)

Sincerely,

Brian Rockey Sales Engineer

INDIANA THERMAL SOLUTIONS



Date: February 20, 2024	Freight: Allowed and prepaid				
Project: Lilian Schmitt Elementary School	Payment Terms: Net 30 Days				
Engineer: RE Dimond Associates	Delivery Terms: FOB Jobsite				

We offer to furnish the following equipment in accordance with each manufacturer's standard terms and conditions of sale, if purchased directly. Terms of this Offer of Sale are net 30 days from invoice date, with a 1.5% service charge per month applicable thereafter. Pricing stated does not include any state or federal taxes, incidental fees or permits. Pricing includes freight F.O.B. factory. Guaranteed payment terms may be required based on credit worthiness and past payment history. Retainage of any kind is unacceptable. The purchaser shall reimburse attorney's fees incurred by Indiana Thermal Solutions to pursue payment. Purchaser grants to Indiana Thermal Solutions a security interest in the goods listed on this offer of sale. Purchaser agrees that any dispute arising form this offer of sale shall be subject to personal jurisdiction in that court. This Offer of Sale and the associated pricing herein are valid for 60 days.

Bid Category #5: Custom Built Outdoor Central Station Air Handling Units

Oty: (1) Nortek Temtrol Custom Air Handling Units

Tags: AHU-4

- ➢ 3" double wall construction
- > Foam insulation on outdoor units
- > Hot water coils as specified with galvanized frame
- > Chilled water cooling coils with stainless steel coil casing and drain pans
- > Direct drive plenum fans wired to junction box external to unit section
- > Lights as required
- > Access doors open against pressure
- > OA/RA/EA dampers as required
- > Unit to ship in sections per submittals
- > Startup assistance
- > 2 year parts warranty

NOT INCLUDED:

- > Disconnects or VFD's
- > Controls, actuators, or sensors of any kind
- Installation of any kind
- Labory warranty

Total Net Price \$ 79,500.00 (Current lead time is 13 weeks)

Sincerely,

Brian Rockey Sales Engineer

INDIANA THERMAL SOLUTIONS



Date: February 20, 2024	Freight: Allowed and prepaid
Project: Lilian Schmitt Elementary School	Payment Terms: Net 30 Days
Engineer: RE Dimond Associates	Delivery Terms: FOB Jobsite

We offer to furnish the following equipment in accordance with each manufacturer's standard terms and conditions of sale, if purchased directly. Terms of this Offer of Sale are net 30 days from invoice date, with a 1.5% service charge per month applicable thereafter. Pricing stated does not include any state or federal taxes, incidental fees or permits. Pricing includes freight F.O.B. factory. Guaranteed payment terms may be required based on credit worthiness and past payment history. Retainage of any kind is unacceptable. The purchaser shall reimburse attorney's fees incurred by Indiana Thermal Solutions to pursue payment. Purchaser grants to Indiana Thermal Solutions a security interest in the goods listed on this offer of sale. Purchaser agrees that any dispute arising form this offer of sale shall be submitted to Marion County Circuit Court and purchaser agrees that it will be subject to personal jurisdiction in that court. This Offer of Sale and the associated pricing herein are valid for 60 days.

Bid Category #6: Variable Refrigerant Volume Air Conditioning

Oty: (Lot) Daikin AC Variable Refrigerant Volume System

Tags: CHRU 1 - 3, DXFC 1 - 5, DXFC A - E, ERV 1 - 4

- Daikin Emerion Heat Recovery Condensing Units 460/60/3 phase
 - > Indoor fan coils
 - Wall mounted or vertical ahu style 208/1
 - Electric heat kits for vertical ahu style (field installed)
 - Wall mounted stat (field installed)
 - ➢ Energy recovery ventilators − 208/1
 - Electric duct heaters (field installed)
 - o Unit controller per unit
 - ➢ Multiport branch selectors − 208/1
 - > All required Daikin Refnet pipe joints
 - > Central control panel with BacNet IP Interface
 - > Startup included
 - > 10 year parts warranty

NOT INCLUDED:

- Disconnects on any of the indoor or outdoor units
- > Field refrigerant piping or field refrigerant
- > Temperature control wiring
- > Stands or curbs for the outdoor units
- > Installation of any kind
- Labory warranty

Sincerely,

Brian Rockey Sales Engineer

INDIANA THERMAL SOLUTIONS



Date: February 20, 2024	Freight: Allowed and prepaid
Project: Lilian Schmitt Elementary School	Payment Terms: Net 30 Days
Engineer: RE Dimond Associates	Delivery Terms: FOB Jobsite

We offer to furnish the following equipment in accordance with each manufacturer's standard terms and conditions of sale, if purchased directly. Terms of this Offer of Sale are net 30 days from invoice date, with a 1.5% service charge per month applicable thereafter. Pricing stated does not include any state or federal taxes, incidental fees or permits. Pricing includes freight F.O.B. factory. Guaranteed payment terms may be required based on credit worthiness and past payment history. Retainage of any kind is unacceptable. The purchaser shall reimburse attorney's fees incurred by Indiana Thermal Solutions to pursue payment. Purchaser grants to Indiana Thermal Solutions a security interest in the goods listed on this offer of sale. Purchaser agrees that any dispute arising form this offer of sale shall be submitted to Marion County Circuit Court and purchaser agrees that it will be subject to personal jurisdiction in that court. This Offer of Sale and the associated pricing herein are valid for 60 days.

Bid Category #7: Vertical Unit Ventilators

Oty: (31) Temspec Vertical Unit Ventilators

Tags: VUV - A (9), VUV B & C (22)

- > VUV A built custom 84" tall with top discharge
- > VUV B & C include 5 sided top acoustical plenum (field installed)
- \geqslant 1/2" closed cell insulation
- > 115/1/60 ECM supply fan motor for 0-10 vdc input signal
- Internal wiring with unfused disconnect switch, fan relay, door micro-switch and 75 VA control transformer
- Electrical/control enclosure
- Cabinet finiah: Standard "Light Grey" "Off-White" or "Beige" powder coat finish
- Hinged access panels secured with Phillips head fast-lead captive fasteners
- Ultra-low leakage outdoor & return air dampers
- Face & bypass control dampers
- > 2" MERV 10 filters (3 extra sets provided)
- Stainless steel drain pans for cooling coil
- Heavy duty return air grille
- Top acoustical discharge plenum (VUV C Only)
- Side piping chases
- ➢ Rear plenum (VUV C Only)
- > Duct shroud (VUV A & B)
- Top piping connections
- Chilled water cooling coil
- > Hot water preheat coil
- > Internally mounted shut off valves
- > Control items all wired to terminal strip
 - Modulating spring return OA/RA damper with JCI actuator
 - Modulating non-spring return face & bypass damper JCI actuator
 - o Current sensor for supply fan motor
 - o Mixed air and discharge air temperature sensors
- 2 year parts warranty

NOT INCLUDED:

- Supply DDC controller and any additional temperature sensors
- Supply and installation of CO2 sensor, zone/temperature sensor, humidity sensor
- > Barometric or powered relief
- Louvers, wall sleeves, block off panels, or raised base
- ➢ Condensate pumps
- > Start-up or labor warranty

Sincerely,

-

Brian Rockey Sales Engineer

INDIANA THERMAL SOLUTIONS



Submittal Data

Project: L.C. Schmitt Elementary School

Date: 2/16/2024

Engineer: R.E. Dimond

Customer: Bartholomew Consolidated School Corporation

Qty	Tag	Description
4	AHU 1 - 4	Temtrol Customer Air Handling Units
	N	
Subm	itted by:	Drawings in this submittal package describe the

Submitted by: Brian Rockey Indiana Thermal Solutions Drawings in this submittal package describe the equipment we propose to furnish for this project and are submitted for approval to manufacture.

6872 Hillsdale Court, Indianapolis, IN 46250 Phone: (317) 570-5400 / Fax: (317) 570-5414 www.ITS-Indiana.com



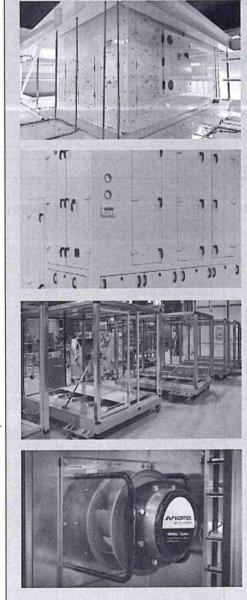
TEMTROL

Preliminary

Schmitt Elementary

PRELIMINARY SUBMITTAL

Generated Date:	2024-02-19
Revision:	P1
QUOTE #	24-0139
EQUIPMENT	AHU - 1, AHU - 2, AHU - 4, AHU - 3
REPRESENTATIVE	Brian Rockey Indiana Thermal Solutions, LLC: Indianapolis 6872 Hillsdale Court Indianapolis, IN 46250, USA Phone: (317) 570-5400
	Fax: (317) 570-5414 Email: brianr@its-indiana.com
SALES APPLICATIONS CONTACT	Jessy Grace Email: jessy.grace@nortek.com



IMPORTANT NOTICE ABOUT THIS SUBMITTAL:

This revision supersedes previous revisions. Approval of this submittal indicates that it has been thoroughly reviewed and approved by all relevant mechanical, electrical, and structural disciplines involved in the project. The equipment Nortek Air Solutions proposes to furnish will be produced in accordance with the contents of this submittal. Nortek Air Solutions is not responsible or liable for features or performance requirements included in plans & specifications that were not furnished to Nortek Air Solutions prior to the preparation of this submittal. An approved and/or reviewed submittal, returned to Nortek Air Solutions with a "Release For Production", shall be deemed to be in essential compliance with plans & specifications and shall be manufactured in accordance with the contents of this submittal. In the event of any discrepancy between this submittal and plans & specifications or other contract documents, this submittal will control.

Approved By:

Signature of Responsible: __

_____ Date _

Name of Responsible (Print):

Title:

Generated By: Brian Rockey, Indiana Thermal Solutions, LLC: Ir

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TEMTROL

Project

Project Revision History	1
Project Notes	2
Unit Designs	
AHU - 1	3
Unit Design Options	5
Fans	10
Coils	19
Components	23
Electrical	27
Unit Data	31
AHU - 2	38
Unit Design Options	40
Fans	45
Coils	52
Components	56
Electrical	60
Unit Data	63
AHU - 3	69
Unit Design Options	71
Fans	76
Coils	85
Components	88
Electrical	92
Unit Data	95
AHU - 4	99
Unit Design Options	101
Fans	106
Coils	113
Components	116
Electrical	120
Unit Data	123
Terms and Conditions	132



PROJECT	Schmitt Elementary
QUOTE #	24-0139
EQUIPMENT	AHU - 1, AHU - 2, AHU - 4, AHU - 3

Date	Revision	Description	
2024-02-19	P1	Initial Revision	

Design Assistant



Project Notes

Project Name: Schmitt Elementary

Quote #: 24-0139

100 Project Notes

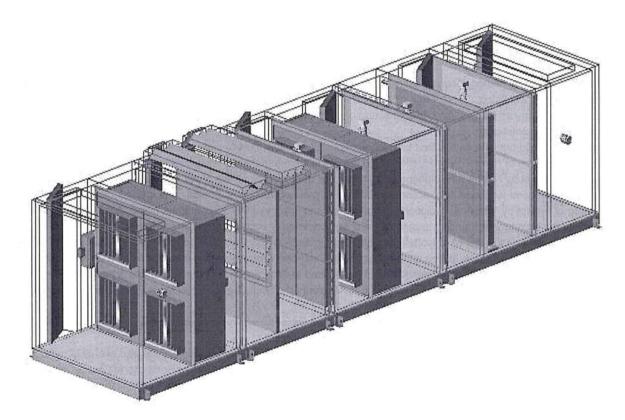
100.1 Exceptions and Clarifications

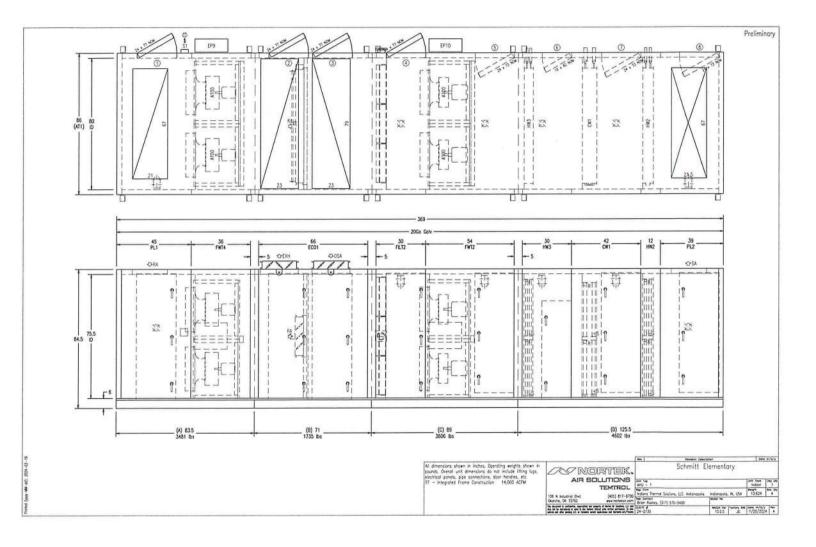
- The proposed unit is designed for mounting on a mounting surface or structure sized and reinforced to support the weight of the unit component sections. Such a mounting surface or structure shall provide support at the entire perimeter dimension of the unit as well as across the entire width of the unit at every base section split. Larger unit base channel sizing may be required where the installation requires point loading of sections with unsupported spans such as at unit base splits across the width of the unit, and at unsupported perimeter base channel locations.
- 2. All controls (Thermostats, DDC and accessories) and control wiring are NOT included unless specifically mentioned as being provided and mounted by Nortek Air Solutions.
- 3. All piping, valves and plumbing accessories, and piping insulation are NOT included unless specifically mentioned as being provided and mounted by Nortek Air Solutions.
- 4. All offloading, rigging, installation, reassembling of unit sections, commissioning, startup and field labor are NOT included unless specifically mentioned as being provided by Nortek Air Solutions.
- 5. Supervision of any field unit assembly is NOT included unless specifically mentioned as being provided and mounted by Nortek Air Solutions.
- 6. Factory Leak & Deflection Testing, Sound Testing, and Field Testing is NOT included unless specifically mentioned as being provided by Nortek Air Solutions.
- Exception is taken to any schedules, specifications, engineering drawings, plans and items incorporated by reference beyond those provided to Nortek Air Solutions.
- 8. The quoted price is valid until the date stated in this quotation, pricing is subject to change thereafter. Availability of components and materials at the time of release to production could affect the estimated lead times given in this quotation. The agreed upon unit pricing, following receipt by Nortek Air Solutions of a written and approved purchase order, will be protected for forty-five (45) days. If the order is not released for production, accompanied by approved equipment submittals and credit approval within forty-five (45) days from date of receipt by Nortek Air Solutions of the written and approved PO, the equipment pricing is subject to change. Nortek reserves the right to revisit pricing should material and commodity costs increase beyond 10%.
- 9. Quoted pricing is based on the standard Nortek Air Solutions Limited Warranty which is 18 months from shipment or 12 months from startup, whichever occurs first, unless specifically noted. Extended warranty pricing is available on request. Equipment must be operated under normal conditions and serviced and maintained in accordance with the operations & maintenance manuals provided at the time of installation in order to be eligible for warranty coverage. Labor for replacement parts is not included. See Nortek Air Solutions Limited Warranty for complete terms.
- 10. Shipping and handling prices are estimated and are quoted FCA Seller's Factory for domestic delivery and EXW Seller's Factory for international delivery and are subject to surcharges at time of shipment.
- 11. The estimated shipping and handling prices are based on equipment configuration, section sizes, and overall dimensions. Please note that subsequent changes to any of the above may result in additional costs. Nortek Air Solutions will not be responsible for additional shipping and handling costs which are a result of changes to the quoted equipment, partial shipments, weekend delivery, layovers, storage, or extraordinary shipping requirements. Any units not accepted to ship per the release acknowledgment ship date will result in storage fees of \$1250/week per trailer until units are shipped.
- 12. All units are configured and bagged for shipment based on economy and shipping limits. Hoods and external pipe houses ship unassembled and separate from unit. Units that include demounted sections will ship in separate sections unless otherwise noted in the submittal/proposal. Shipping configurations may require disassembly and/or assembly by the installing contractor. There will be no gasketing installed between demounted sections. Gasketing between splits must be installed by the installing contractor.



PROJECT	Schmitt Elementary
QUOTE #	24-0139-001
UNIT TAG	AHU - 1
QUANTITY	1

Revision	History	
Date	Rev	Revision Description







TEMTROL

PROJECT	Schmitt Elementary
QUOTE #	24-0139-001
UNIT TAG	AHU - 1
QUANTITY	1

Unit Design Options

Design Assistant

10.0.0 / 2.0.3.1



Unit Design Options Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

100 Unit Design Summary

100.1 Electrical

1. Short Circuit Current Rating (SCCR) @ 65 kA



Unit Design Options

Project Name: Schmitt Elementary

TEMTROL

Unit Tag: AHU - 1

Quote #: 24-0139-001

101 Unit Details

101.1 Weights / Jobsite Elevation				
1. Shipping Weight	13,506 lb	3. Elevation	39 ft	
2. Operating Weight	13,624 lb			

101.2 Preparation for Shipment 1. Cleaning & Wrapping Ship on open bed truck and heat shrink wrap.

<u> </u>	
2. Knockdown Construction	No

102 Unit Construction

102.1 Construction			
1. Cabinet Construction	ITF - Integrated Frame	6. Panel Fastener	Drive Screws
2. Design Environment	Indoor	7. Thermal Break	Modified Thermal Break
3. Panel Depth	3 in	8. Mounting	Slab Mounted
4. Caulk Type	Standard		
5. Model #			

1. Exterior Material	16Ga Galv Pre-Paint	8. Blankoff Finish	None		
2. Interior Liner type(s)	See Drawing	9. Internal Wall Material	16Ga Galv		
3. Exterior Paint Type	Polyester Resin	Insulation by liner type			
4. Interior Paint Type	None	10. Solid liner	HD Fiberglass Roll (R12.5)		
5. Paint Color	Sandstone				
6. Meets Salt Spray Rating	2500 Hours				
7. Blankoff Material	16Ga Galv (See Exceptions)				

Exceptions:

1. Chilled Water Coil 1: blankoff material is 16Ga 304 SS

102.3 Base Construction			
1. Base Structure Material	Steel Tube	7. Base Structure Height	See Drawing
2. Base Floor Material	16Ga Galv	8. Sub Floor Material	20Ga Galv
3. Base Floor Seams	Caulked	9. Floor Coating	None
4. Insulation	Polyurethane Foam	10.R Value	20
5. Floor Drain	None	11.Lifting Lugs	Yes - Welded
6. Floor Options	None		

102.4 Box Dimensions

Box	X	Y	Z	Shipping Weight	Operating Weight
A	83.500 in	86.000 in	84.500 in	3,481 lb	3,481 lb
В	71.000 in	86.000 in	84.500 in	1,735 lb	1,735 lb
С	89.000 in	86.000 in	84.500 in	4,011 lb	3,806 lb
D	125.500 in	86.000 in	84.500 in	4,279 lb	4,602 lb

102.5 Notes / Features

1. Box dimensions do not include lifting lugs, electrical panels, pipe connections, door handles, etc.

103 Doors

103.1 All Doors (including those associated with specific components)											
#	Box	Section	Type ¹	Width	Height	Hinge	Swing	Window	Interior	Exterior	Options ³
1	Α	PL1	3" TBF	24	77	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO
2	В	ECO1	3" TBF	24	77	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO
3	В	ECO1	3" TBF	24	77	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO
4	С	FILT2	3" TBF	24	77	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO
5	С	FWT2	3" TBF	24	73	LH	In	None	16Ga Galv	16Ga Galv Pre-Paint	TO

Date/Revision: 2024-02-19 / Rev. P1 Unit Design Revision A

P1 106 N Industrial Blvd. Okarche, Ok 73762 (405) 817-9700 FAX (405) 263-4980 This Document is confidential, copyrighted and property of Nortek Air Solutions LLC.



Unit Design Options

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

Quote #: 24-0139-001

103 Doors (Continued)

#	Box	Section	Type ¹	Width	Height	Hinge	Swing	Window	Interior	Exterior	Options ³
6	D	HW3	3" TBF	18	60	LH	In	None	16Ga Galv	16Ga Galv Pre-Paint	то
7	D	CW1	3" TBF	24	73	LH	In	None	16Ga Galv	16Ga Galv Pre-Paint	TO
8	D	PL2	3" TBF	24	73	LH	In	None	16Ga Galv	16Ga Galv Pre-Paint	TO

103.2 Notes / Features

1. Door Types

TBF = Thermal Break Factory

2. All doors insulated with Polyurethane Foam.

3. Options: TO = Tool Operated Handle

105 Internal Walls

105.1 All Internal Walls (including those associated with specific components)									
Box	Section	Wall Name	Depth	Panel Mat.	Liner Mat.	Insulated			
В	Economizer 1	InternalWall 1	2.000 in	Default	16Ga Galv	False			



Unit Design Options

Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

106 Static Pressure Summary

06.1.1 Return		
Tunnel	Description	APD (in.H20)
AirTunnel 1	FANWALL 4 (Return) 14,000 ACFM @ 1.00 in.H20	0.00
AirTunnel 1	RA Opening (Return Air)	0.00
AirTunnel 1	EXH Opening - Damper (Exhaust Air)	0.17
	Total Static Pressure:	0.17
06.1.2 Supply		
Tunnel	Description	APD (in.H20)
AirTunnel 1	OSA Opening - Damper (Outside Air)	0.02
AirTunnel 1	Chilled Water Coil 1	0.60
AirTunnel 1	Hot Water Coil 2	0.13
AirTunnel 1	RA Opening - Damper (25.5x71)	0.02
AirTunnel 1	FANWALL 2 (Supply) 14,000 ACFM @ 4.00 in.H20	0.00
AirTunnel 1	SA Opening (Supply Air)	0.23
AirTunnel 1	Filter 2, Pre / Final (Average Pressure Drop)	1.29
	Total Static Pressure:	2.29
06.1.3 Unassigne	d	
Tunnel	Description	APD (in.H20)
AirTunnel 1	Hot Water Coil 3	0.05
	Total Static Pressure:	0.05

Legend: ESP - External Static Pressure, OSA - Outside Air, EXH - Exhaust Air, RA - Return Air, SA - Supply A

106.2 Notes/Legend

1. Summary report does not include static pressure of components supplied by others in the field unless otherwise noted.



PROJECT	Schmitt Elementary
QUOTE #	24-0139-001
UNIT TAG	AHU - 1
QUANTITY	1

Fans



Fans

Project Name: Schmitt Elementary

TEMTROL

Unit Tag: AHU - 1

200 FANWALL 2 (Supply) : FWT2 : Box C

18-80 - 182T - 36 x 38 x 26 - B2

200.1 Configuration /	Quantity		END AND STREET	Harry Malas		Shired Conversion
1. Function	Supply Fan	Cell Size	6.Height	7.Width	8.Depth	9.Overall Depth
2. Quantity	4		36	38	26	33.25
3. Array	2 Rows x 2 Cols	10. Elev. / Temp.		39 ft / 70.0 °F		
4. Construction	PentaCube	11. Motor &	& Wheel Weight	161 lb	13. Redundant	0
5. Inlet Cone Location	Upstream Removable	12. Fan Cell Weight		363 lb	14. Empty	0
		15. Ship Lo	oose Fan (Whee	I, Motor and Mo	unting Base)	0

200.2 Options			
1. Coplanar Insulation	Standard Melamine	8. Cell Finish	None
2. Extended Coplanar	No	9. Insulation Retainer	No
3. Back Draft Dampers	FBD8	10. Inlet Attenuation	None
4. Inlet Cone Type	A100 Curved Cone	11.Blankoff Material	16Ga Galv
5. Solid Perimeter Material	None	12. Blankoff Finish	None
6. Discharge Safety Guard	No	13. Removal Rail	No
7. Cell Material	Steel		

200.3 Fan Wheel							
1. Wheel Type	HPF-A100	4. Width	80				
2. Diameter	18	5. Max RPM	3862				
3. Balancing Planes	1	6. Wheel Finish	None				

200.4 Motor	Contraction of the second second		
1. Manufacturer	Toshiba	6. Model	40A003L1ZVS210
2. HP Each / Total	3.5 / 14	7. Efficiency	88.5
3. Poles / RPM	4-Pole / 1,750	8. Service Factor	1.15
4. Frame / Casing	182T / TEAO	9. Shaft Isolation	Ceramic Bearings
5. Volts / Phase / Hz	460/3/60	10.FLA Each / Total	4.5 / 18.0 Amps
		11. Motor HP Safety Factor	3.0 %

200.5 Variable Freq	uency Drive			
1. Quantity	0	3. Maximum Hertz	77.70	
2. Voltage	460/3/60	4. Input Line Reactor	No	

200.6 Control System	A CONTRACT ON THE REAL PROPERTY OF			a service serv
1. Redundant VFD	No	5. Flow Monitoring	None	
2. Drive	Standard	6. Fans to Monitor	None	
3. Optimization Control	No			
4. Control Method	By Others			

200.7 Notes / Features

1. To view patents and other pending U.S. or Canadian applications visit www.nortekair.com/patents.

2. Cone constant = 2104, cone flow differential pressure = 2.76 in.H2O at 3500 CFM per fan.

3. The estimated VFD input watts are based on the motor and VFD efficiency at the selected load and RPM.

4. Fans balanced to a maximum allowable level of 0.022 inches per second peak.



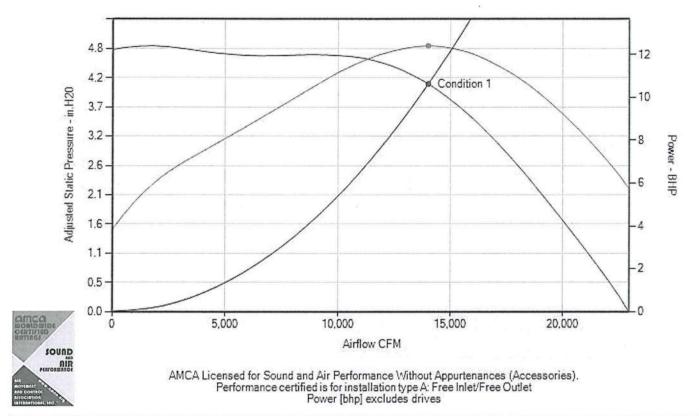
Fans

Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

200 FANWALL 2 (Supply) : FWT2 : Box C (Continued) 18-80 - 182T - 36 x 38 x 26 - B2



200.8 Operating Cor	ditions	1. 2. 2. 24	1000		- Sel			10			1	r the set	Ser Sert	NIP NIP	1.00
	Usage	CEM	SP (in	.H20)	0	cell Q	ty	DDM	Um	Fanwhe	el BHP	Vel.	Matta	FEG	CEI
	(%) CFM	Input	Adj.	On	Off	Fail	RPIN	RPM Hz	Each	Total	(ft/min)) Watts	% O.P.	FEI	
Condition 1	100	14,000	4.00	4.12	4	0	0	2,181	74.8	3.11	12.42	463	10,879	FEG85 2%	1.31

Design Assistant

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

18-80 - 182T - 36 x 38 x 26 - B2 200 FANWALL 2 (Supply) : FWT2 : Box C (Continued)

Bare Fan Sound Power with Coplanar Silencer (dB re: 10E-12 watts) 11.1.1.0.01.1.07

105	Inlet - LwA: 91, Lw: 97
100	96
95	
90	86
85 80	79 80 79
75	To a start of the
100-	
90	85
80	80 80 79 76
70	72
60 L	63
00-	63 Hz 125 Hz 250 Hz 500 Hz 1K Hz 2K Hz 4K Hz 8K Hz Outlet - LwA: 86, Lw: 92

200.9 Bare Fan Sound Power	with Coplana	ar Silend	er (dB re	e: 10E-12	watts)				Same 2	a herbanes	ALC: N
Operating Condition	1.00	63	125	250	500	1k	2k	4k	8k	LwA	Lw
Condition 1	Inlet	79	76	96	86	80	80	79	77	91	97
	Outlet	85	80	90	80	79	76	72	63	86	92

106 N Industrial Blvd. Okarche, Ok 73762

(405) 817-9700 FAX (405) 263-4980



Quote #: 24-0139-001

ans



Project Name: Schmitt Elementary

Unit Tag: AHU - 1

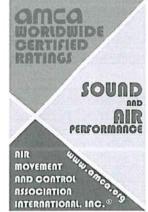
200 FANWALL 2 (Supply) : FWT2 : Box C (Continued)

200.10 AMCA Statement

Nortek Air Solutions LLC certifies that the HPF-A100 fan wheel shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances or accessories, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product. Performance certified is for installation type A: Free Inlet/Free Outlet Power [bhp] excludes drives

FWTRating DLL: Ver-1.6 / May 2022



32

Quote #: 24-0139-001

18-80 - 182T - 36 x 38 x 26 -



AIR SOLUTIONS

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

201 FANWALL 4 (Return) : FWT4 : Box A

20-105 - 143T - 36 x 38 x 28 - B2

Quote #: 24-0139-001

201.1 Configuration / 0	Quantity	and a state of the	and the second	A E A BAR AND A BAR	ADAMA DI PARA	WOLKS DENTITY IN THE
1. Function	Return Fan		6.Height	7.Width	8.Depth	9.Overall Depth
2. Quantity	4	Cell Size	36	38	28	35.25
3. Array	2 Rows x 2 Cols	10. Elev. /	Temp.	39 ft / 70.0 °F		
4. Construction	PentaCube	11. Motor &	& Wheel Weight	122 lb	13. Redundant	0
5. Inlet Cone Location	Upstream Removable	12.Fan Ce	ell Weight	331 lb	14. Empty	0
		15. Ship Lo	oose Fan (Whee	I, Motor and Mo	unting Base)	0

201.2 Options		a to minimum of the second second	and the second second second second second
1. Coplanar Insulation	Standard Melamine	8. Cell Finish	None
2. Extended Coplanar	No	9. Insulation Retainer	No
3. Back Draft Dampers	FBD8	10. Inlet Attenuation	None
4. Inlet Cone Type	A100 Curved Cone	11.Blankoff Material	16Ga Galv
5. Solid Perimeter Material	None	12. Blankoff Finish	None
6. Discharge Safety Guard	No	13. Removal Rail	No
7. Cell Material	Steel		

201.3 Fan Wheel				Here in the second
1. Wheel Type	HPF-A100	4. Width	105	
2. Diameter	20	5. Max RPM	3521	
3. Balancing Planes	1	6. Wheel Finish	None	

201.4 Motor			
1. Manufacturer	Toshiba	6. Model	40A001L1ZVS210
2. HP Each / Total	1.5/6	7. Efficiency	85.5
3. Poles / RPM	4-Pole / 1,745	8. Service Factor	1.15
4. Frame / Casing	143T / TEAO	9. Shaft Isolation	Ceramic Bearings
5. Volts / Phase / Hz	460/3/60	10.FLA Each / Total	2.1 / 8.4 Amps
		11. Motor HP Safety Factor	3.0 %

I. Quantity	0	3. Maximum Hertz	41.56	
2. Voltage	460/3/60	4. Input Line Reactor	No	

201.6 Control System	- AND AND A REAL PROPERTY OF A DATA			
1. Redundant VFD	No	5. Flow Monitoring	None	
2. Drive	Standard	6. Fans to Monitor	None	
3. Optimization Control	No			
4. Control Method	By Others			

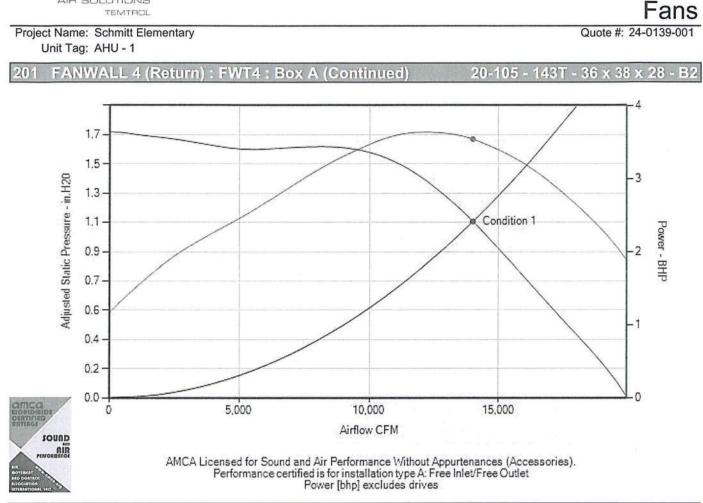
201.7 Notes / Features

1. To view patents and other pending U.S. or Canadian applications visit www.nortekair.com/patents.

2. Cone constant = 2524, cone flow differential pressure = 1.92 in.H2O at 3500 CFM per fan.

3. The estimated VFD input watts are based on the motor and VFD efficiency at the selected load and RPM.

4. Fans balanced to a maximum allowable level of 0.022 inches per second peak.



201.8 Operating Con	ditions			in the	10	2234				Seller .	2.4 2. 2	18	1		A. S.
Operating Condition	Usage	OFM	SP (in	.H20)	C	ell Q	ty	RPM	11-	Fanwhe	el BHP	Vel.	Watts	FEG	FEI
Operating Condition	(%)	CFM	Input	Adj.	On	Off	Fail	RPIN	Hz	Each	Total	(ft/min)	vvalls	% O.P.	FEI
Condition 1	100	14,000	1.00	1.12	4	0	0	1,148	39.5	.89	3.55	463	3,317	FEG80 1%	1.49

AIR SOLUTIONS

- 14	A	-	7

Design Assistant

ans

Project Name: Schmitt Elementary

95	Inlet - LwA: 80, Lw: 89
90	
85	83
80	
75	73 73 71
70	65
65	61
60	
90	75 79 75 79 73 71 67 60
50	50
40 L	
	63 Hz 125 Hz 250 Hz 500 Hz 1K Hz 2K Hz 4K Hz 8K Hz Outlet - LwA: 77, Lw: 87

201.9 Bare Fan Sound Power	with Coplana	r Silend	cer (dB re	e: 10E-12	watts)	21-191-2	Contraction of	la sel te se	Section 1	1 - DURING	Tio a b
Operating Condition		63	125	250	500	1k	2k	4k	8k	LwA	Lw
	Inlet	73	87	83	73	73	71	65	61	80	89
Condition 1	Outlet	75	85	79	73	71	67	60	50	77	87

106 N Industrial Blvd. Okarche, Ok 73762

(405) 817-9700 FAX (405) 263-4980

Unit Tag: AHU - 1 201 FANWALL 4 (Return) : FWT4 : Box A (Continued) 20-105 - 143T - 36 x 38 x 28 - B2 Bare Fan Sound Power with Coplanar Silencer (dB re: 10E-12 watts) Inlet - LwA- 90 Lwr 99

Preliminary





Project Name: Schmitt Elementary

Unit Tag: AHU - 1

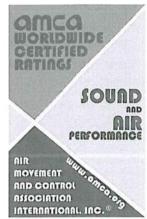
201 FANWALL 4 (Return) : FWT4 : Box A (Continued) 20-105 - 143T - 36 x 38 x 28 -

201.10 AMCA Statement

Nortek Air Solutions LLC certifies that the HPF-A100 fan wheel shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances or accessories, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product. Performance certified is for installation type A: Free Inlet/Free Outlet Power [bhp] excludes drives

FWTRating DLL: Ver-1.6 / May 2022



32

Quote #: 24-0139-001



PROJECTSchmitt ElementaryQUOTE #24-0139-001UNIT TAGAHU - 1QUANTITY1

Coils



Coils

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

300 Chilled Water Coil 1 : CW1 : Box D

5WC - 6 - 33 x 70 x 5 - 10 A

300.1 Coil Layout				
1. Coil Hand	Left	6. Rack Style	None	
2. Configuration	Single	7. Rack Finish	None	
3. Connection Orientation	Straight	8. Blankoff Material	16Ga 304 SS	
4. Connection Material	Red Brass	9. Blankoff Finish	None	
5. Connection Type	MPT			

300.2 Construction	on				WE ALL DESCRIPTION OF A DESCRIPTION
1. Quantity	2	8. Stand Height	1 in	14. Casing	16Ga 304 SS
2. Serpentine	0.8333333	Tube Detai	I - Primary Surface	15. Coating	None
3. Fin Height	33.000 in	9. Material	Copper	Fin Detail -	Secondary Surface
4. Fin Length	70.000 in	10. O.D. x Wall	0.625 x 0.025 in	16. Material	Aluminum
5. Rows	5	11. Spacing	1.500 x 1.299 in	17. Thickness	0.010 in
6. Fins per Inch	10	12. Internal	Smooth	19 Configuration	Corrugated, Waffle with
7. Face Area	32.08 ft ²	13. Return Bends	0.035 in	18. Configuration	Straight Edge

Single Bank, Left Hand, 2 per unit

5WC - 6 - 33 x 70 x 5 - 10 AL

Supply / Return Connections				Vent and Drain	A CONCEPTION OF THE STATE	
Quantity	Туре	Pipe Size	Material	Туре	Vent Location	Drain Location
2	MPT	2.0 in	Red Brass	0.125 in FPT	Return Connection	Supply Connection

300.3 Condition 1			
Contraction of the second second	Entering		Leaving
1. Actual Airflow	14,000 ACFM	10. Total Capacity	623.1 MBH
2. Standard Airflow	13,721 SCFM	11. Sensible Capacity	422.9 MBH
3. Elevation	39 ft	12. Actual Face Velocity	436.36 ft/min
4. Entering Air DB	80.0 °F	13. Leaving Air DB	52.0 °F
5. Entering Air WB	67.0 °F	14. Leaving Air WB	51.8 °F
6. Fluid Type	Water	15.APD	0.60 in.H20
7. Entering Fluid Temp	44.0 °F	16.Leaving Fluid Temp	54.0 °F
8. Fluid Flow Rate	124.2 GPM	17. Fluid Velocity	3.95 ft/s
9. Fluid Fouling Internal	0.0000	18. Fluid Pressure Drop	9.82 ft.H20

Notes:

1. Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

300.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 990 lb.

6. Total fluid volume is 22.2 Gal.



AIR SOLUTIONS

Preliminary

Coils Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

301 Hot Water Coil 3 : HW3 : Box D

5WC - 4 - 34.5 x 70 x 1 - 6 AL

301.1 Coil Layout		SACING SERVICE PROPERTY AND ADDRESS OF THE OWNER.		a nether
1. Coil Hand	Left	6. Rack Style	None	
2. Configuration	Single	7. Rack Finish	None	
3. Connection Orientation	Straight	8. Blankoff Material	16Ga Galv	
4. Connection Material	Red Brass	9. Blankoff Finish	None	
5. Connection Type	MPT			

301.2 Construction	on				and the state of the second second
1. Quantity	2	Tube Detail	- Primary Surface	13. Casing	16Ga Galv
2. Serpentine	0.25	8. Material	Copper	14. Coating	None
3. Fin Height	34.500 in	9. O.D. x Wall	0.625 x 0.025 in	Fin Detail -	Secondary Surface
4. Fin Length	70.000 in	10. Spacing	1.500 x 1.299 in	15. Material	Aluminum
5. Rows	1	11. Internal	Smooth	16. Thickness	0.010 in
6. Fins per Inch	6	12. Return Bends	0.035 in	17. Configuration	Corrugated, Waffle with
7. Face Area	33.54 ft ²			T7.Configuration	Straight Edge

Single Bank, Left Hand, 2 per unit

5WC - 4 - 34.5 x 70 x 1 - 6 AL

Supply / Return Connections					Vent and Drain	A company of the second
Quantity	Туре	Pipe Size	Material	Туре	Vent Location	Drain Location
2	MPT	1.25 in	Red Brass	0.125 in FPT	Return Connection	Supply Connection

301.3 Condition 1			
のしたり、それで美しいない。	Entering		Leaving
1. Actual Airflow	14,000 ACFM		
2. Standard Airflow	14,820 SCFM	9. Sensible Capacity	384.0 MBH
3. Elevation	39 ft	10. Actual Face Velocity	417.39 ft/min
4. Entering Air DB	40.0 °F	11.Leaving Air DB	63.9 °F
5. Fluid Type	Water	12.APD	0.05 in.H20
6. Entering Fluid Temp	180.0 °F	13. Leaving Fluid Temp	140.0 °F
7. Fluid Flow Rate	19.6 GPM	14. Fluid Velocity	2.25 ft/s
8. Fluid Fouling Internal	0.0000	15. Fluid Pressure Drop	2.03 ft.H20

Notes:

1. Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

2. Hot water velocity is below recommended minimum of 2.5 fps

301.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 277 lb.

6. Total fluid volume is 5.0 Gal.

Design Assistant



Project Name: Schmitt Elementary

Unit Tag: AHU - 1

302 Hot Water Coil 2 : HW2 : Box D

5WC - 4 - 34.5 x 70 x 2 - 8 AL

5WC - 4 - 34.5 x 70 x 2 - 8 AL

302.1 Coil Layout				100.15.24
1. Coil Hand	Left	6. Rack Style	None	
2. Configuration	Single	7. Rack Finish	None	
 Connection Orientation 	Straight	8. Blankoff Material	16Ga Galv	
4. Connection Material	Red Brass	9. Blankoff Finish	None	
5. Connection Type	MPT			

302.2 Construction	on				
1. Quantity	2	Tube Detai	I - Primary Surface	13. Casing	16Ga Galv
2. Serpentine	0.5	8. Material	Copper	14. Coating	None
3. Fin Height	34.500 in	9. O.D. x Wall	0.625 x 0.025 in	Fin Detail -	Secondary Surface
4. Fin Length	70.000 in	10. Spacing	1.500 x 1.299 in	15. Material	Aluminum
5. Rows	2	11. Internal	Smooth	16. Thickness	0.010 in
6. Fins per Inch	8	12. Return Bends	0.035 in	17. Configuration	Corrugated, Waffle with
7. Face Area	33.54 ft ²				Straight Edge

Single Bank, Left Hand, 2 per unit

Vent and Drain

	Supply / Retu	irn Connections			Vent and Drain	
Quantity	Туре	Pipe Size	Material	Туре	Vent Location	Drain Location
2	MPT	1.5 in	Red Brass	0.125 in FPT	Return Connection	Supply Connection

302.3 Condition 1				a la
teres and the second	Entering		Leaving	
1. Actual Airflow	14,000 ACFM			
2. Standard Airflow	14,529 SCFM	9. Sensible Capacity	828.3 MBH	
3. Elevation	39 ft	10. Actual Face Velocity	417.39 ft/min	
4. Entering Air DB	50.0 °F	11.Leaving Air DB	102.6 °F	
5. Fluid Type	Water	12.APD	0.13 in.H20	
6. Entering Fluid Temp	180.0 °F	13. Leaving Fluid Temp	140.0 °F	
7. Fluid Flow Rate	42.3 GPM	14. Fluid Velocity	2.20 ft/s	
8. Fluid Fouling Internal	0.0000	15. Fluid Pressure Drop	2.52 ft.H20	

Notes:

1. Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in

the AHRI Directory at www.ahridirectory.org.

2. Hot water velocity is below recommended minimum of 2.5 fps

302.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 448 lb.

6. Total fluid volume is 9.6 Gal.



TEMTROL

PROJECT	Schmitt Elementary

QUOTE # 24-0139-001

UNIT TAG AHU - 1

QUANTITY 1

Components



Components Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

500 Filter 2 : FILT2 : Box C

1. Loading	Upstream Face Load	7. Bank Size	72.125 in W x 72.000 in H
2. Frame Material	Galvanized	8. Qty / set & Frame Size 1	(9) 24 in x 24 in
3. Frame Finish	None	9. Qty / set & Frame Size 2	
4. Filter Clips	(36) C-79-5	10. Qty / set & Frame Size 3	
5. Blankoff / Rack Material	16Ga Galv	11. Qty / set & Frame Size 4	
6. Blankoff / Rack Finish	None		
500.2 Pre Filter			
1. Filter Depth	2.000 in	4. Number of Sets	3
2. Efficiency	MERV 8	5. Max Face Velocity	388.89 ft/min at 14,000 ACFM
3. Manufacturer	American Air Filter	6. Model	PerfectPleat SC
500.3 Pressure Gage Speci	fications - Gage 2		and the second second
1. Manufacturer	Dwyer	3. Options	Hinged Cover
2. Model / Range	Magnehelic 2002 (0-2" w.c.)	4. Quantity	1
500.4 Final Filter	A CARLEN CHARLEN AND THE		
1. Filter Depth	4.000 in	4. Number of Sets	3
2. Efficiency	MERV 13	5. Max Face Velocity	388.89 ft/min at 14,000 ACFM
3. Manufacturer	American Air Filter	6. Model	VariCel II

1. All sets of Filters and clips to ship loose inside unit, installed by others.

Design Assistant

10.0.0/2.0.3.1



Components Quote #: 24-0139-001

Project Name: Schmitt Elementary

TEMTROL

Unit Tag: AHU - 1

600 OSA Opening : OSA : Box B : Roof

600.1 Opening Const	truction	NEW STREET, ST	Sector and the sector sector	Marshall Back
1. Description	Outside Air	4. Shape	Rectangle	
2. Max CFM	14,000 ACFM	5. Max APD	0.02 in.H20	
3. Size	79 W x 23 H in			

1. Manufacturer	Ruskin	6. Jackshaft	Yes
2. Model	Ruskin CD 50 (Aluminum)	7. Max Face Velocity	1,109.52 ft/min
0.	79.000 in (Blade Direction) x	8. Torque	88 lb-in
3. Size	23.000 in	9. End Switches	No
4. Blade Config	Parallel		
5. Blade Orientation	Horizontal		

1. Ordered with 1.500 in. Rear Flange

600.3 Damper Actuator	The second s	Contraction of the second	C. D. Martin
1. Manufacturer	6. Qty	1	
2. Model	7. Floor Mounted		
3. Direction	8. Furnished By	Others	
4. Location	9. Mounted By	Others	
5. Type	10. Wiring By	Others	

600.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

601 SA Opening : SA : Box D : Roof

601.1 Opening Construction

out. Topening cons	luction	of all high the second second of the second s		TOCK TO A DECISION
1. Description	Supply Air	4. Shape	Rectangle	
2. Max CFM	14,000 ACFM	5. Max APD	0.23 in.H20	
3. Size	67 W x 21.5 H in	6. Max Velocity	1,400.00 ft/min	

602 RA Opening : RA : Box A : Roof

602.1 Opening Const	truction			
1. Description	Return Air	4. Shape	Rectangle	
2. Max CFM	14,000 ACFM	5. Max APD	0.00 in.H20	
3. Size	67 W x 21 H in	6. Max Velocity	1,433.00 ft/min	

603 EXH Opening : EXH : Box B : Roof

603.1 Opening Cons	truction			
1. Description	Exhaust Air	4. Shape	Rectangle	
2. Max CFM	14,000 ACFM	5. Max APD	0.17 in.H20	
3. Size	79 W x 23 H in			

1. Manufacturer	Ruskin	6. Jackshaft	Yes	
2. Model	Ruskin CD 50 (Aluminum)	7. Max Face Velocity	1,109.52 ft/min	
a o:	79.000 in (Blade Direction) x	8. Torque	63 lb-in	
3. Size	23.000 in	9. End Switches	No	
 Blade Config 	Opposed			
5. Blade Orientation	Horizontal			

Unit Design Revision A

This Document is confidential, copyrighted and property of Nortek Air Solutions LLC.



Components Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

603 EXH Opening : EXH : Box B : Roof (Continued)

603.3 Damper Actuator			
1. Manufacturer	6. Qty	1	
2. Model	7. Floor Mounted		
3. Direction	8. Furnished By	Others	
4. Location	9. Mounted By	Others	
5. Туре	10. Wiring By	Others	

603.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

604 RA Opening : RA : Box B : Internal Wall

604.1 Opening Construction					
1. Description	Return Air	4. Shape	Rectangle		
2. Max CFM	14,000 ACFM	5. Max APD	0.02 in.H20		
3. Size	71 W x 25.5 H in				

1. Manufacturer	Ruskin	6. Jackshaft	Yes
2. Model	Ruskin CD 50 (Aluminum)	7. Max Face Velocity	1,113.51 ft/min
a o:	71.000 in (Blade Direction) x	8. Torque	88 lb-in
3. Size	25.500 in	9. End Switches	No
4. Blade Config	Parallel		
5. Blade Orientation	Horizontal		
Notes: 1. Ordered with 1.500 in.	Front Flange		

1. Manufacturer	6. Qty	1
2. Model	7. Floor Mounted	
3. Direction	8. Furnished By	Others
4. Location	9. Mounted By	Others
5. Type	10. Wiring By	Others

604.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others



PROJECTSchmitt ElementaryQUOTE #24-0139-001UNIT TAGAHU - 1QUANTITY1

Electrical



Electrical

Quote #: 24-0139-001

Surface mount on unit

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

700 ElecPanel 9 : FWT4 : Box A : Far Side

NEMA 4 Indoor / Outdoor

1. Volt/Phase/Hertz	460/3/60	3. Provides power to	Return Fan
2. MCA	8.9		
1. For electrical loads see	electrical drawings		
700.2 Construction			
1. Enclosure Type	MSP Panel	4. Route	C

5. Mounting

3. Size	See electrical drawings	6. Finish	Polyester Resin (Sandstone)
700.3 Options			
1. Cooling Fan	No	5. Floor Stand	No
2. Filter Kit	No	6. Control Transformer	No
3. Keypad or Touch screen on Door	No	7. Window Kit	No
4. Power Transformer	No		

700.4 Notes / Features

2. Type

1. MSP panel includes motor protection. MSP panel must be visible and within 50 feet from electrical disconnect.

701 ElecPanel 10 : FWT2 : Box C : Far Side

701.1 Electrical Service Information					
1. Volt/Phase/Hertz	460/3/60	3. Provides power to	Supply Fan		
2. MCA	19.1				
1. For electrical loads see	e electrical drawings				

701.2 Construction				
1. Enclosure Type	MSP Panel	4. Route	C	
2. Type	NEMA 4 Indoor / Outdoor	5. Mounting	Surface mount on unit	
3. Size	See electrical drawings	6. Finish	Polyester Resin (Sandstone)	

701.3 Options			
1. Cooling Fan	No	5. Floor Stand	No
2. Filter Kit	No	6. Control Transformer	No
3. Keypad or Touch screen on Door	No	7. Window Kit	No
4. Power Transformer	No		

701.4 Notes / Features

1. MSP panel includes motor protection. MSP panel must be visible and within 50 feet from electrical disconnect.

702 Lighting Circuit

702.1 Electrical Service Information				
1. Volt/Phase/Hertz	120/1/60	3. Provides power to	ElecSwitch 1, Lighting	
2. MCA	0.0			

1. For electrical loads see electrical drawings

702.2 Switches / Outlets

	Name	Box	Section	Туре	Mounted	Illum. Switch	Timer	Cover	GFCI	MOCP
·	ElecSwitch 1	A	PL1	Light Switch / 120V Outlet	External	No	None	No	Yes	20.0 Amps



Electrical

Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

702 Lighting Circuit (Continued)

702.3 Lighting Types and Quantities

(6) Vapor Proof 14W LED



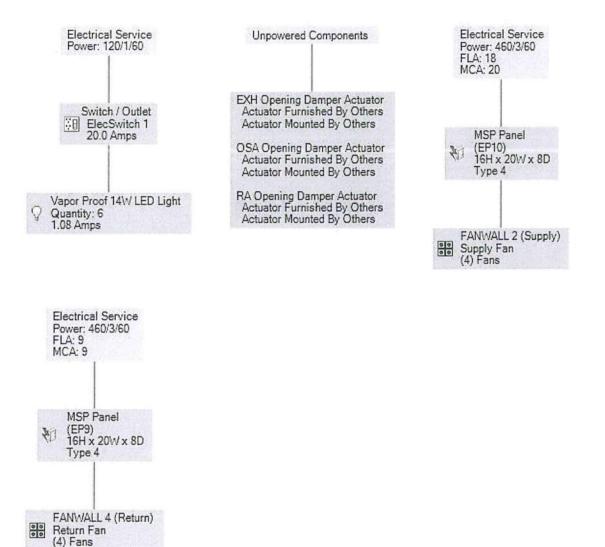
Electrical

Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

703 Electrical Layout Diagram





R SOLUTIONS TEMTROL	
PROJECT	Schmitt Elementary
QUOTE #	24-0139-001
UNIT TAG	AHU - 1
QUANTITY	1

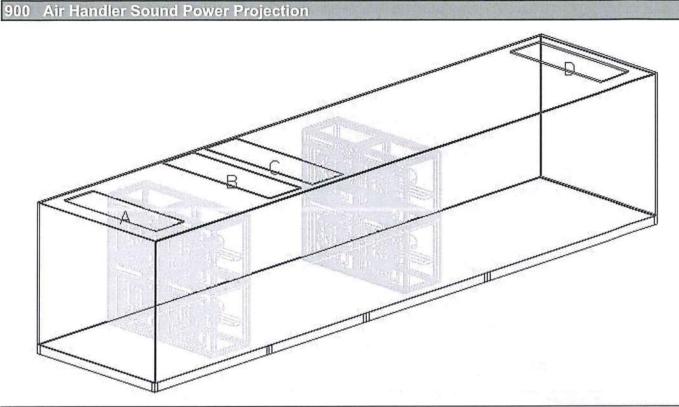
Unit Data



Project Name: Schmitt Elementary

Unit Tag: AHU - 1

Quote #: 24-0139-001



	Openings	- Condition 1		12. 34	Octa	ve Ban	d Freq. S	Sound I	Power (db re: 1	0E-12 v	watts)	
Tag	Title	Cabinet Liner	Area	63	125	250	500	1k	2k	4k	8k	LwA	Lw
A	RA Opening	Solid	9.8 ft ²	73	87	85	78	75	74	70	68	82	90
В	EXH Opening	Solid	12.6 ft ²	78	82	92	82	76	76	75	73	87	93
С	OSA Opening	Solid	12.6 ft ²	77	78	93	83	77	77	76	74	88	94
D	SA Opening	Solid	10.0 ft ²	84	79	90	80	79	76	72	63	86	92
Casing Radiated			77	78	78	63	59	57	54	51	72	83	
Floor Radiated				71	73	72	47	41	35	35	35	65	77

900.2 Notes

 Fan data accuracy as per AMCA 311 (63Hz +6 dB, remaining bands +3 dB with an additional 3 dB available in any one band). Model predictive accuracy is ±6 dB. Fan and modeling accuracy is based on ideal flow patterns and design conditions. Projected fan and system sound levels are provided for comparison purposes only — actual levels may vary.

2. Sound power projections are not valid for opening velocities over 1,500 ft/min.

3. Sound power projects are not valid with VFD motor control carrier frequencies of less than 8KHz.



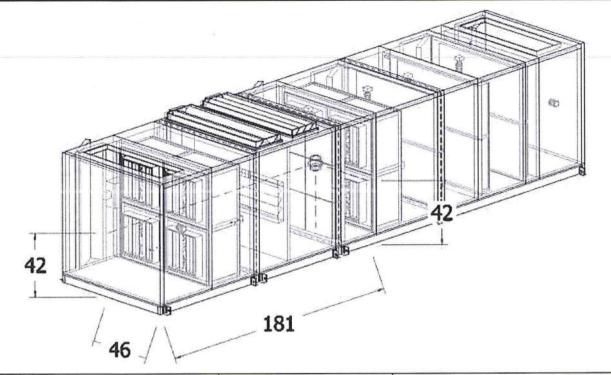
Unit Data

Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

901 Center of Gravity



Size (Inches)			Operating Weight (Doundo)	Center of Gravity (Inches)			
х	Y	Z	Operating Weight (Pounds)	Х	Y	Z	
369.00	86.00	84.50	13,624	184.00	46.00	42.00	

901.1 Notes

1. Center of gravity and weights are estimates and subject to change.

2. The center of gravity and weights shown above are based on operating weights and do not include packaging materials.

3. A 5% safety factor has been applied to the operating weights.

4. Corner weights apply to rectangular boxes only.

5. Corner weights are to assist in handling of the unit. Some units are not intended to be supported only at the corners. Contact your Sales Representative for support information.



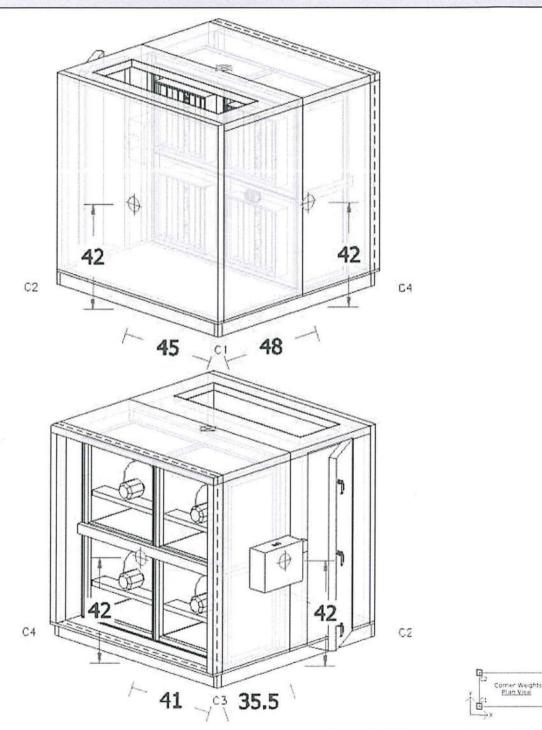
Unit Data Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

901 Center of Gravity (Continued)

901.2 Box A



Size (Inches)			(Inches)		Corner Weights (Pounds)		
Х	Y	Z	 Shipping Weight (Pounds) 	C1	C2	C3	C4
83.50	86.00	84.50	3,481	706	774	1,047	954

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

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Unit Data

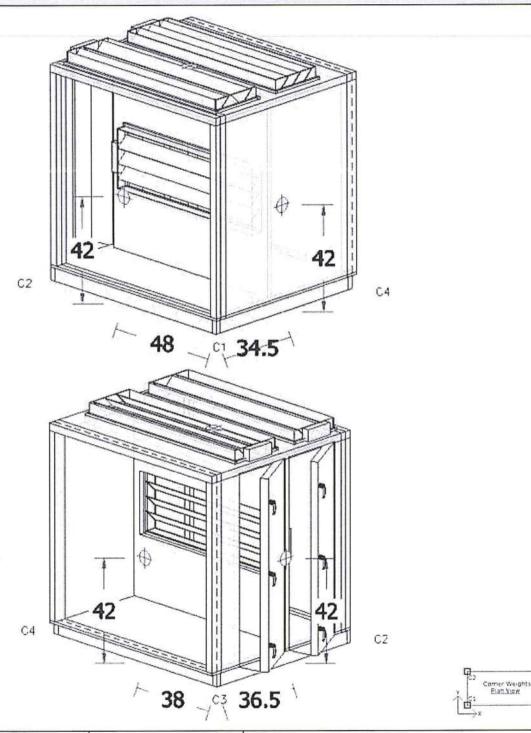
Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

901 Center of Gravity (Continued)

901.3 Box B



Size (Inches)			Objection (Mainh4 (Doundo)		Corner Weig	hts (Pounds)	
Х	Y	Z	 Shipping Weight (Pounds) 	C1	C2	C3	C4
71.00	86.00	84.50	1,735	394	498	470	372

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

-10



Unit Data

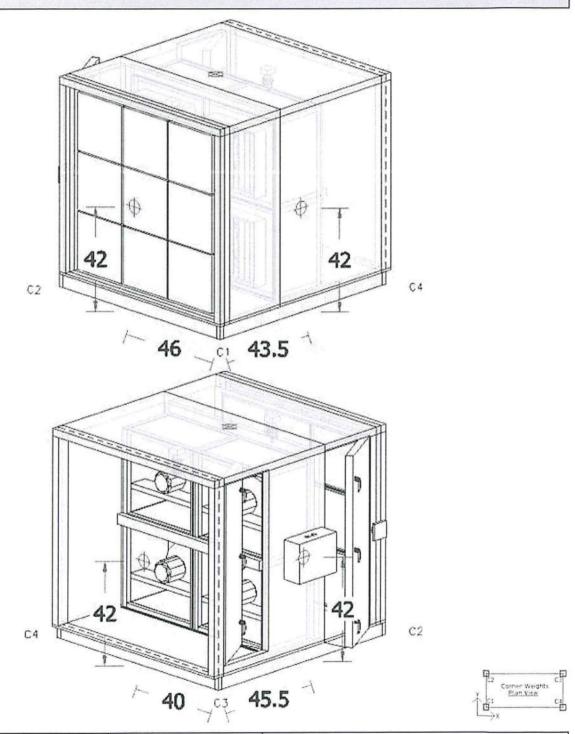
Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

901 Center of Gravity (Continued)

901.4 Box C



Size (Inches)			Chinaina Maishi (Doundo)		Corner Weig	hts (Pounds)	
Х	Y	Z	 Shipping Weight (Pounds) 	C1	C2	C3	C4
89.00	86.00	84.50	4,011	975	· 1,121	1,024	891

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.



Unit Data

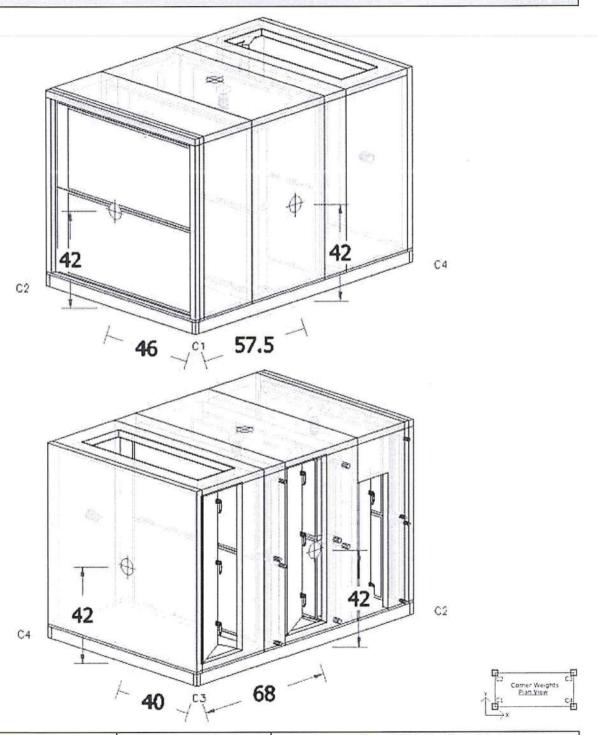
Quote #: 24-0139-001

Project Name: Schmitt Elementary

Unit Tag: AHU - 1

901 Center of Gravity (Continued)

901.5 Box D



Size (Inches)			Chinaian Waight (Dauada)	Corner Weights (Pounds)			
Х	Y	Z	 Shipping Weight (Pounds) 	C1	C2	C3	C4
125.50	86.00	84.50	4,279	1,078	1,240	1,049	912

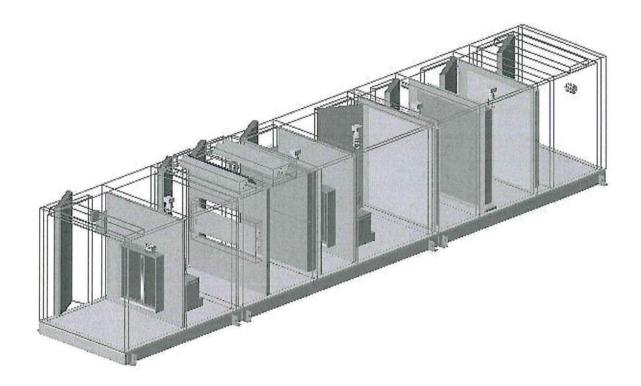
Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

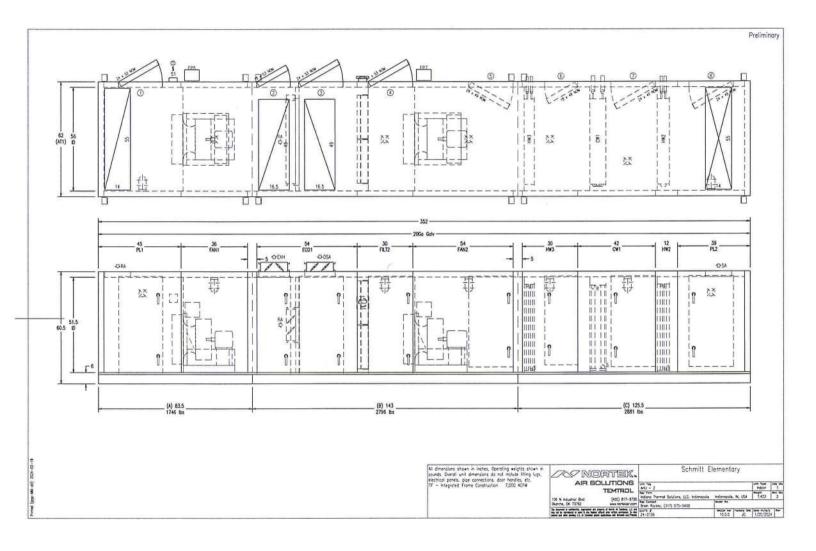


TEMTROL

PROJECT	Schmitt Elementary
QUOTE #	24-0139-002
UNIT TAG	AHU - 2
QUANTITY	1

Revision	History	
Date	Rev	Revision Description







PROJECT	Schmitt Elementary
QUOTE #	24-0139-002
UNIT TAG	AHU - 2
QUANTITY	1

Unit Design Options



Unit Design Options Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

100 Unit Design Summary

100.1 Electrical

1. Short Circuit Current Rating (SCCR) @ 65 kA



Unit Design Options

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

Quole #. 24-0139-002	Quote	#:	24-0139-002
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	0	53 - SCORE (1995)	
01	Unit	Details	

101.1 Weights / Jobsite	Elevation			18542
1. Shipping Weight	7,360 lb	3. Elevation	39 ft	
2. Operating Weight	7,423 lb			

1.	Cleaning & Wrapping	Ship on open bed truck and heat shrink wrap.
2.	Knockdown Construction	No

102 Unit Construction

102.1 Construction			
1. Cabinet Construction	ITF - Integrated Frame	6. Panel Fastener	Drive Screws
2. Design Environment	Indoor	7. Thermal Break	Modified Thermal Break
3. Panel Depth	3 in	8. Mounting	Slab Mounted
4. Caulk Type	Standard		
5. Model #	2		

1. Exterior Material	16Ga Galv Pre-Paint	8. Blankoff Finish	None	
2. Interior Liner type(s)	See Drawing	9. Internal Wall Material	16Ga Galv	
3. Exterior Paint Type	Polyester Resin	Insulation by liner type		
4. Interior Paint Type	None	10. Solid liner	HD Fiberglass Roll (R12.5)	
5. Paint Color	Sandstone			
6. Meets Salt Spray Rating	2500 Hours			
7. Blankoff Material	16Ga Galv (See Exceptions)			

Exceptions:

1. Chilled Water Coil 1: blankoff material is 16Ga 304 SS

102.3 Base Construction				
1. Base Structure Material	Steel Tube	7. Base Structure Height	See Drawing	
2. Base Floor Material	16Ga Galv	8. Sub Floor Material	20Ga Galv	
3. Base Floor Seams	Caulked	9. Floor Coating	None	
4. Insulation	Polyurethane Foam	10.R Value	20	
5. Floor Drain	None	11.Lifting Lugs	Yes - Welded	
6. Floor Options	None			

102.4 Box Dimensions

Box	X	Y	Z	Shipping Weight	Operating Weight
А	83.500 in	62.000 in	60.500 in	1,746 lb	1,746 lb
В	143.000 in	62.000 in	60.500 in	2,887 lb	2,796 lb
С	125.500 in	62.000 in	60.500 in	2,727 lb	2,881 lb

102.5 Notes / Features

1. Box dimensions do not include lifting lugs, electrical panels, pipe connections, door handles, etc.

103 Doors

103.1 All Doors (including those associated with specific components)											
#	Box	Section	Type ¹	Width	Height	Hinge	Swing	Window	Interior	Exterior	Options ³
1	A	PL1	3" TBF	24	53	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO
2	В	ECO1	3" TBF	18	53	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO
3	В	ECO1	3" TBF	24	53	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO
4	В	FILT2	3" TBF	24	53	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO
5	В	FAN2	3" TBF	24	49	RH	In	None	16Ga Galv	16Ga Galv Pre-Paint	TO
6	С	HW3	3" TBF	18	48	LH	In	None	16Ga Galv	16Ga Galv Pre-Paint	TO

Date/Revision: 2024-02-19 / Rev. P1



Unit Design Options

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

Quote #: 24-0139-002

103 Doors (Continued)

#	Box	Section	Type ¹	Width	Height	Hinge	Swing	Window	Interior	Exterior	Options ³
7	С	CW1	3" TBF	24	49	LH	In	None	16Ga Galv	16Ga Galv Pre-Paint	TO
8	С	PL2	3" TBF	24	49	LH	In	None	16Ga Galv	16Ga Galv Pre-Paint	TO

103.2 Notes / Features

1. Door Types

TBF = Thermal Break Factory

2. All doors insulated with Polyurethane Foam.

3. Options: TO = Tool Operated Handle

105 Internal Walls

105.1 All Internal Walls (including those associated with specific components)							
Box	Section	Wall Name	Depth	Panel Mat.	Liner Mat.	Insulated	
В	Economizer 1	InternalWall 1	2.000 in	Default	16Ga Galv	False	

Design Assistant



Unit Design Options

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

106 Static Pressure Summary

106.1 Condition 1

Tunnel	Description	APD (in.H20)
AirTunnel 1	RA Opening (Return Air)	0.00
AirTunnel 1	EXH Opening - Damper (Exhaust Air)	0.21
	Total Static Pressure:	0.21

Tunnel	Description	APD (in.H20)
AirTunnel 1	OSA Opening - Damper (Outside Air)	0.03
AirTunnel 1	Chilled Water Coil 1	0.68
AirTunnel 1	Hot Water Coil 2	0.16
AirTunnel 1	RA Opening - Damper (19x47)	0.03
AirTunnel 1	SA Opening (Supply Air)	0.20
AirTunnel 1	Filter 2, Pre / Final (Average Pressure Drop)	1.46
	Total Static Pressure:	2.56

Tunnel	Description	APD (in.H20)
AirTunnel 1	Plenum Fan 1 (Supply) 7,000 ACFM @ 1.50 in.H20	0.00
AirTunnel 1	Plenum Fan 2 (Supply) 7,000 ACFM @ 4.00 in.H20	0.00
AirTunnel 1	Hot Water Coil 3	0.06
	Total Static Pressure:	0.06

Legend: ESP - External Static Pressure, OSA - Outside Air, EXH - Exhaust Air, RA - Return Air, SA - Supply Air

106.2 Notes/Legend

1. Summary report does not include static pressure of components supplied by others in the field unless otherwise noted.



TEMTROL

PROJECT	Schmitt Elementary
QUOTE #	24-0139-002
UNIT TAG	AHU - 2
QUANTITY	1

Fans



TEMTROL

Quote #: 24-0139-002

Project Name: Schmitt Elementary Unit Tag: AHU - 2

200 Plenum Fan 1 (Supply) : FAN1 : Box A

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10.64	mh.	12	5 III

Fans

200.1 Configuration			
1. Function	Supply	6. Elevation	39 ft
2. Fan Quantity	1	7. Stand Height	4 in
3. Orientation	Horizontal	8. Blankoff Material	16Ga Galv
4. Drive System	Direct Drive	9. Blankoff Finish	None
5. Isol. / Defl.	None	10. Fan Construction	Galvanized
200.2 Fan Wheel			
1. Diameter	22	4. Mat / Inertia	AL / 9 lb-ft ²
2. Width	100.0 %	5. Max Wheel RPM	3,166 rpm
3. Class	III		

200.3 Motor			
1. Manufacturer	Toshiba	5. Model	4OA003L1ZVS210
2. HP	3.5	6. V/P/H	460/3/60
3. Poles / RPM	4-Pole / 1750	7. FLA	4.5 Amps
4. Frame / Casing	182T / TEAO		

200.4 Variable Freq	uency Drive		
1. Quantity	0	3. Maximum Hertz	.00
2. Voltage	460/3/60	4. Redundant VFD	No
		5. Input Line Reactor (3%)	No
		6. Individual Disconnects	No

200.5 Notes / Features

1. Include: Aluminum Wheel

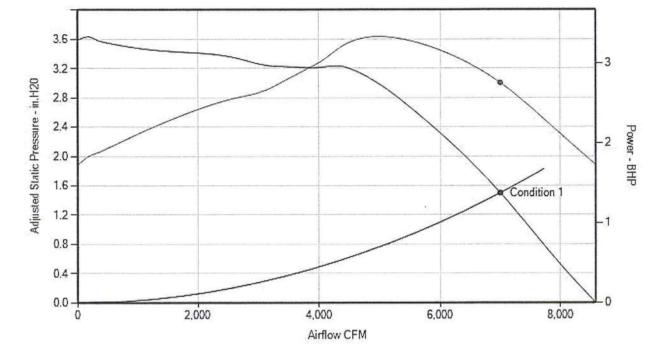
2. Back Draft Dampers

Design Assistant

10.0.0 / 2.0.3.1

Unit Tag: AHU - 2

200 Plenum Fan 1 (Supply) : FAN1 : Box A (Continued)



Power Rating BHP does no	t include transmission losses.
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200.6 Operating Conditions	S								40.8%	31 1 2 3	CARLES NO. 1	1983
Opporting Condition	Usage	CFM	SP	(in.H20)	Wheel RPM	Fan	BHP	Static Eff	Matte	Hz	FEG	FEI
Operating Condition	(%)	CFIVI	Input	Adjusted	Wheel RPIN	Each	Total	Static Ell	vvaus	пz	% O.P.	FEI
Condition 1	100	7,000	1.50	1.50	1,485	2.76	-	60.0 %	2,298	50.91	FEG80 5%	1.40

Preliminary

Quote #: 24-0139-002

Fans

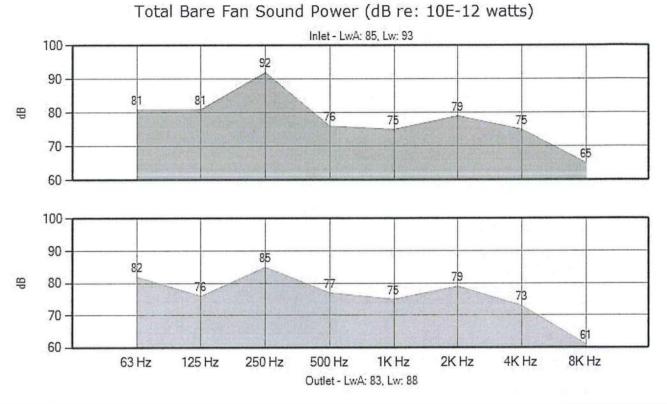
PF09



Project Name: Schmitt Elementary

Unit Tag: AHU - 2

200 Plenum Fan 1 (Supply) : FAN1 : Box A (Continued)



200.7 Bare Fan Sound Power (dB re: 10E-1	12 watts)	Market	-	1000	1999 (A. 1997)				
Operating Condition		63	125	250	500	1k	2k	4k	8k	LwA	Lw
Condition 1	Inlet	81	81	92	76	75	79	75	65	85	93
	Outlet	82	76	85	77	75	79	73	61	83	88

PF09



Fans

Project Name: Schmitt Elementary

201 Plenum Fan 2 (Supply) : FAN2 : Box B

Unit Tag: AHU - 2

PF09

201.1 Configuration			
1. Function	Supply	6. Elevation	39 ft
2. Fan Quantity	1	7. Stand Height	4 in
3. Orientation	Horizontal	8. Blankoff Material	16Ga Galv
4. Drive System	Direct Drive	9. Blankoff Finish	None
5. Isol. / Defl.	None	10. Fan Construction	Galvanized
201.2 Fan Wheel			
1. Diameter	22	4. Mat / Inertia	AL / 13 lb-ft ²
2. Width	100.0 %	5. Max Wheel RPM	3,166 rpm
3. Class	III		
201.3 Motor		and the second	New York and the second second second
1. Manufacturer	Toshiba	5. Model	40A005L1ZVS210
2. HP	6.5	6. V/P/H	460/3/60
3. Poles / RPM	4-Pole / 1740	7. FLA	8.1 Amps
4. Frame / Casing	184T / TEAO		
201.4 Variable Frequer	icy Drive	to the solution of the solution of the	
1. Quantity	0	3. Maximum Hertz	.00
2. Voltage	460/3/60	4. Redundant VFD	No
		5. Input Line Reactor (3%)	No
		6. Individual Disconnects	No

201.5 Notes / Features	
1. Include: Aluminum Wheel	
2. Back Draft Dampers	

Design Assistant



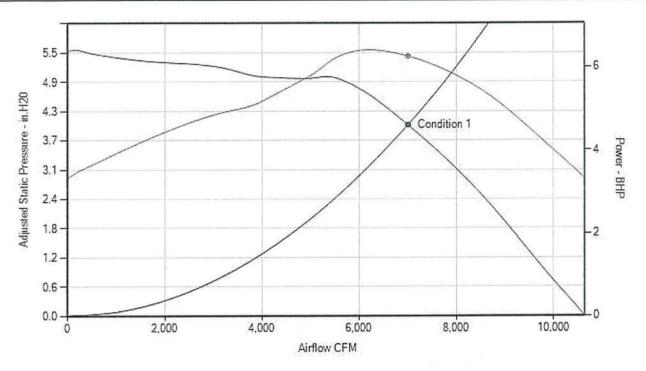
Fans

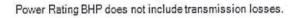
PF09

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

201 Plenum Fan 2 (Supply) : FAN2 : Box B (Continued)





201.6 Operating Condition	S			ada san it			1,007-23	812.04		LEN YOUNG		T.S.P
Operating Condition	Usage	CFM	SP	(in.H20)	Wheel RPM	Fan	BHP	Static Eff	Watte	Hz	FEG	FEI
Operating Condition	(%)	CFIM	Input		wheel RPM	Each	Total	Static Ell	vvalis	ΠZ	% O.P.	TEI I
Condition 1	100	7,000	4.00	4.00	1,846	6.27		70.4 %	5,321	63.66	FEG80 0%	1.35

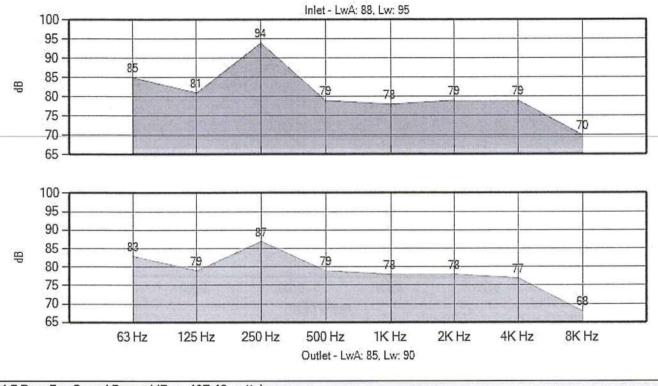
Design Assistant

Total Bare Fan Sound Power (dB re: 10E-12 watts)

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

201 Plenum Fan 2 (Supply) : FAN2 : Box B (Continued)



201.7 Bare Fan Sound Power (dB re: 10E-1	2 watts)		Ginisa di					S. Law St.	121-63
Operating Condition		63	125	250	500	1k	2k	4k	8k	LwA	Lw
	Inlet	85	81	94	79	78	79	79	70	88	95
Condition 1	Outlet	83	79	87	79	78	78	77	68	85	90

AIR SOLUTIONS TEMTROL

PF09

Quote #: 24-0139-002

Fans



PROJECT	Schmitt Elementary
QUOTE #	24-0139-002
UNIT TAG	AHU - 2
QUANTITY	1

Coils



Coils

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

300 Chilled Water Coil 1 : CW1 : Box C

5WC - 6 - 45 x 46 x 5 - 10 AL

300.1 Coil Layout				
1. Coil Hand	Left	6. Rack Style	None	
2. Configuration	Single	7. Rack Finish	None	
3. Connection Orientation	Straight	8. Blankoff Material	16Ga 304 SS	
4. Connection Material	Red Brass	9. Blankoff Finish	None	
5. Connection Type	MPT			

300.2 Construction	on			International Sector	
1. Quantity	1	8. Stand Height	1 in	14. Casing	16Ga 304 SS
2. Serpentine	0.8333333	Tube Detai	I - Primary Surface	15. Coating	None
3. Fin Height	45.000 in	9. Material	Copper	Fin Detail -	Secondary Surface
4. Fin Length	46.000 in	10.O.D. x Wall	0.625 x 0.025 in	16. Material	Aluminum
5. Rows	5	11. Spacing	1.500 x 1.299 in	17. Thickness	0.010 in
6. Fins per Inch	10	12. Internal	Smooth	19 Configuration	Corrugated, Waffle with
7. Face Area	14.38 ft ²	13. Return Bends	0.035 in	18. Configuration	Straight Edge

Single Bank, Left Hand, 1 per unit

5WC - 6 - 45 x 46 x 5 - 10 AL

Supply / Return Connections				Vent and Drain		
Quantity	Туре	Pipe Size	Material	Туре	Vent Location	Drain Location
2	MPT	2.0 in	Red Brass	0.125 in FPT	Return Connection	Supply Connection

300.3 Condition 1			
	Entering	Leaving	
1. Actual Airflow	7,000 ACFM	10. Total Capacity	271.0 MBH
2. Standard Airflow	6,861 SCFM	11. Sensible Capacity	194.2 MBH
3. Elevation	39 ft	12. Actual Face Velocity	486.96 ft/min
4. Entering Air DB	80.0 °F	13. Leaving Air DB	54.3 °F
5. Entering Air WB	67.0 °F	14. Leaving Air WB	54.0 °F
6. Fluid Type	Water	15.APD	0.68 in.H20
7. Entering Fluid Temp	44.0 °F	16.Leaving Fluid Temp	54.0 °F
8. Fluid Flow Rate	54.0 GPM	17. Fluid Velocity	2.48 ft/s
9. Fluid Fouling Internal	0.0000	18. Fluid Pressure Drop	4.62 ft.H20

Notes:

1. Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

300.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 461 lb.

6. Total fluid volume is 10.7 Gal.



Coils

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

301 Hot Water Coil 3 : HW3 : Box C

5WC - 4 - 46.5 x 46 x 1 - 6 AL

301.1 Coil Layout				
1. Coil Hand	Left	6. Rack Style	None	
2. Configuration	Single	7. Rack Finish	None	
3. Connection Orientation	Straight	8. Blankoff Material	16Ga Galv	
4. Connection Material	Red Brass	9. Blankoff Finish	None	
5. Connection Type	MPT		- 1 i i i i i i i i i i i i i i i i i i	

301.2 Construction	on				
1. Quantity	1	Tube Detai	Tube Detail - Primary Surface		16Ga Galv
2. Serpentine	0.25	8. Material	Copper	14. Coating	None
3. Fin Height	46.500 in	9. O.D. x Wall	0.625 x 0.025 in	Fin Detail -	Secondary Surface
4. Fin Length	46.000 in	10. Spacing	1.500 x 1.299 in	15. Material	Aluminum
5. Rows	1	11. Internal	Smooth	16. Thickness	0.010 in
6. Fins per Inch	6	12. Return Bends	0.035 in	17. Configuration	Corrugated, Waffle with
7. Face Area	14.85 ft ²			TT. Comgutation	Straight Edge

Single Bank, Left Hand, 1 per unit

5WC - 4 - 46.5 x 46 x 1 - 6 AL

Supply / Return Connections			nnections Vent and Drain			A show a set of the local set of the loc
Quantity	Туре	Pipe Size	Material	Туре	Vent Location	Drain Location
2	MPT	1.25 in	Red Brass	0.125 in FPT	Return Connection	Supply Connection

	Entoring	and the second	Leaving
	Entering		Leaving
 Actual Airflow 	7,000 ACFM	-18	
2. Standard Airflow	7,410 SCFM	9. Sensible Capacity	173.7 MBH
3. Elevation	39 ft	10. Actual Face Velocity	471.25 ft/min
4. Entering Air DB	40.0 °F	11. Leaving Air DB	61.6 °F
5. Fluid Type	Water	12.APD	0.06 in.H20
6. Entering Fluid Temp	180.0 °F	13. Leaving Fluid Temp	140.0 °F
7. Fluid Flow Rate	8.9 GPM	14. Fluid Velocity	1.45 ft/s
8. Fluid Fouling Internal	0.0000	15. Fluid Pressure Drop	0.99 ft.H20

Notes:

1. Coil is outside the scope of AHRI Standard 410.

2. (FH > FL) falls outside the range of AHRI Certified Coils

3. Hot water velocity is below recommended minimum of 2.5 fps

301.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 129 lb.

6. Total fluid volume is 2.5 Gal.



TEMTROL

Quote #: 24-0139-002

oils

Project Name: Schmitt Elementary Unit Tag: AHU - 2

302 Hot Water Coil 2 : HW2 : Box C

5WC - 4 - 46.5 x 46 x 2 - 8 AL

1. Coil Hand	Left	6. Rack Style	None	
2. Configuration	Single	7. Rack Finish	None	
3. Connection Orientation	Straight	8. Blankoff Material	16Ga Galv	
4. Connection Material	Red Brass	9. Blankoff Finish	None	
5. Connection Type	MPT			

302.2 Construction	on	and the second			PERSONAL PROPERTY AND
1. Quantity	1	Tube Detai	Tube Detail - Primary Surface		16Ga Galv
2. Serpentine	0.5	8. Material	Copper	14. Coating	None
3. Fin Height	46.500 in	9. O.D. x Wall	0.625 x 0.025 in	Fin Detail - Secondary Surface	
4. Fin Length	46.000 in	10. Spacing	1.500 x 1.299 in	15. Material	Aluminum
5. Rows	2	11. Internal	Smooth	16. Thickness	0.010 in
6. Fins per Inch	8	12. Return Bends	0.035 in	17 Configuration	Corrugated, Waffle with
7. Face Area	14.85 ft ²			17. Configuration	Straight Edge

Single Bank, Left Hand, 1 per unit

5WC - 4 - 46.5 x 46 x 2 - 8 AL

Supply / Return Connections			Vent and Drain			
Quantity	Туре	Pipe Size	Material	Туре	Vent Location	Drain Location
2	MPT	1.25 in	Red Brass	0.125 in FPT	Return Connection	Supply Connection

Entering			Leaving
1. Actual Airflow	7,000 ACFM		
2. Standard Airflow	7,264 SCFM	9. Sensible Capacity	376.8 MBH
3. Elevation	39 ft	10. Actual Face Velocity	471.25 ft/min
4. Entering Air DB	50.0 °F	11. Leaving Air DB	97.9 °F
5. Fluid Type	Water	12.APD	0.16 in.H20
6. Entering Fluid Temp	180.0 °F	13. Leaving Fluid Temp	140.0 °F
7. Fluid Flow Rate	19.2 GPM	14. Fluid Velocity	1.47 ft/s
8. Fluid Fouling Internal	0.0000	15. Fluid Pressure Drop	2.77 ft.H20

Notes:

1. Coil is outside the scope of AHRI Standard 410.

2. (FH > FL) falls outside the range of AHRI Certified Coils

3. Hot water velocity is below recommended minimum of 2.5 fps

302.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Top and bottom casing flange height is 1.000 in.

3. SCFM is corrected for Elevation and EDB.

4. Coils to be pressure tested at 315 PSI

5. Total operating weight is 204 lb.

6. Total fluid volume is 4.4 Gal.



PROJECT	Schmitt Elementary
QUOTE #	24-0139-002
UNIT TAG	AHU - 2
QUANTITY	1

Components



Components Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

500 Filter 2 : FILT2 : Box B

1. Loading	Upstream Face Load	7. Bank Size	48.063 in W x 48.000 in H
2. Frame Material	Galvanized	8. Qty / set & Frame Size 1	(4) 24 in x 24 in
3. Frame Finish	None	9. Qty / set & Frame Size 2	
Filter Clips	(16) C-79-5	10. Qty / set & Frame Size 3	
5. Blankoff / Rack Material	16Ga Galv	11.Qty / set & Frame Size 4	
6. Blankoff / Rack Finish	None		
500.2 Pre Filter	STORE STORE		
1. Filter Depth	2.000 in	4. Number of Sets	3
2. Efficiency	MERV 8	5. Max Face Velocity	437.50 ft/min at 7,000 ACFM
3. Manufacturer	American Air Filter	6. Model	PerfectPleat SC
500.3 Pressure Gage Spec	ifications - Gage 2		
1. Manufacturer	Dwyer	3. Options	Hinged Cover
2. Model / Range	Magnehelic 2002 (0-2" w.c.)	4. Quantity	1
500.4 Final Filter		NAME OF TAXABLE OF	
1. Filter Depth	4.000 in	4. Number of Sets	3
2. Efficiency	MERV 13	5. Max Face Velocity	437.50 ft/min at 7,000 ACFM
	American Air Filter	6. Model	VariCel II

1. All sets of Filters and clips to ship loose inside unit, installed by others.



Components

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

Quote #: 24-0139-002

600 OSA Opening : OSA : Box B : Roof 600.1 Opening Construction 1. Description Outside Air 4. Shape Rectangle 2. Max CFM 7,000 ACFM 5. Max APD 0.03 in.H20 3. Size 49 W x 16.5 H in 600.2 Damper Specifications No 1. Manufacturer Ruskin 6. Jackshaft 1,246.75 ft/min Ruskin CD 50 (Aluminum) 7. Max Face Velocity 2. Model

3. Size	49.000 in (Blade Direction) x 16.500 in	8. Torque 9. End Switches	39 lb-in No	
4. Blade Config	Parallel			
5. Blade Orientation	Horizontal			

Notes:

1. Ordered with 1.500 in. Front Flange

600.3 Damper Actuator			12.24
1. Manufacturer	6. Qty	1	
2. Model	7. Floor Mounted	nice and the second second	
3. Direction	8. Furnished By	Others	
4. Location	9. Mounted By	Others	
5. Type	10. Wiring By	Others	

600.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

601 SA Opening : SA : Box C : Roof

601.1 Opening Construction				The second
1. Description	Supply Air	4. Shape	Rectangle	
2. Max CFM	7,000 ACFM	5. Max APD	0.20 in.H20	
3. Size	55 W x 14 H in	6. Max Velocity	1,310.00 ft/min	

602 RA Opening : RA : Box A : Roof

602.1 Opening Construction				
1. Description	Return Air	4. Shape	Rectangle	
2. Max CFM	7,000 ACFM	5. Max APD	0.00 in.H20	
3. Size	55 W x 14 H in	6. Max Velocity	1,310.00 ft/min	

603 EXH Opening : EXH : Box B : Roof

603.1 Opening Construction				C. Stewart
1. Description	Exhaust Air	4. Shape	Rectangle	
2. Max CFM	7,000 ACFM	5. Max APD	0.21 in.H20	
3. Size	49 W x 16.5 H in			

kin	6. Jackshaft	No
kin CD 50 (Aluminum)	7. Max Face Velocity	1,246.75 ft/min
00 in (Blade Direction) x	8. Torque	28 lb-in
00 in	9. End Switches	No
osed		
zontal		
(00 in (Blade Direction) x 00 in osed	00 in (Blade Direction) x 8. Torque 00 in 9. End Switches

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Components Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

603 EXH Opening : EXH : Box B : Roof (Continued)

603.3 Damper Actuator		
1. Manufacturer	6. Qty	1
2. Model	7. Floor Mounted	Tel 1
3. Direction	8. Furnished By	Others
4. Location	9. Mounted By	Others
5. Type	10. Wiring By	Others

603.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

604 RA Opening : RA : Box B : Internal Wall

604.1 Opening Construction				
1. Description	Return Air	4. Shape	Rectangle	
2. Max CFM	7,000 ACFM	5. Max APD	0.03 in.H20	
3. Size	47 W x 19 H in			

1. Manufacturer	Ruskin	6. Jackshaft	No
2. Model	Ruskin CD 50 (Aluminum)	7. Max Face Velocity	1,128.78 ft/min
3. Size	47.000 in (Blade Direction) x	8. Torque	43 lb-in
	19.000 in	9. End Switches	No
4. Blade Config	Parallel		
5. Blade Orientation	Horizontal		

604.3 Damper Actuator			MALLAR P. M.
1. Manufacturer	6. Qty	1	
2. Model	7. Floor Mounted		
3. Direction	8. Furnished By	Others	
4. Location	9. Mounted By	Others	
5. Type	10. Wiring By	Others	

604.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

Design Assistant

10.0.0 / 2.0.3.1



PROJECT	Schmitt Elementary
QUOTE #	24-0139-002
UNIT TAG	AHU - 2
QUANTITY	1

Electrical



Electrical

Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

700 ElecPanel	- 5 : FA	N1 : Bo	ox A : Far Sid	6			1-6-37			12422345
700.1 Electrical Service			A ST IS GI CIU		7.50.577		CITY NO.			
1. Volt/Phase/Hertz		160/3/60		12	Dros	ides power to		Supply Fan	Constantine and a	Tale Status State
2. MCA		5.6].	. 10	vides power to		Зирріў Ган	(
1. For electrical loads s			ingo							
1. FOI electrical loads s	ee elect	incal uraw	ings							
700.2 Construction					Pape	here and	No.			
1. Enclosure Type	J	Junction B	ох	4.	4. Mounting			Surface mo	unt on un	it
2. Type	N	NEMA 4 Indoor / Outdoor			5. Finish			Polyester R	esin (Sar	ndstone)
3. Size	5	See electri	ical drawings							
700.3 Options	CISAL DEC		and the second		13030			0.000000000		TRACING AND IN
1. Cooling Fan		No	9/2-19 19 19 19 5 5 5	15	Flor	or Stand		No		
2. Filter Kit		No					or	No		
		10			6. Control Transformer 7. Window Kit			No		
Keypad or Touch so on Door	reen N	No						NO		
4. Power Transformer	1	No								
701 ElecPanel	7 : FA	N2 : Bo	ox B : Far Sid	e	100				Seven de la	
701.1 Electrical Servic	ce Inform	mation					24.24		No CEN	
1. Volt/Phase/Hertz	4	460/3/60		3.	3. Provides power to Supply Fan					
2. MCA	1	10.1								
1. For electrical loads s	ee elect	trical draw	ings							
701.2 Construction	-	0.000	Sector Sector	10-10-10-10-1	1828	A STATE OF A STATE OF A STATE	6.000			
1. Enclosure Type		Junction B	ox	4	. Mou	Inting		Surface mo	unt on un	it
2. Type			ndoor / Outdoor		5. Finish Polyester Resin (Sandstone)					ndstone)
3. Size			ical drawings						1	
			iour ururringo							
701.3 Options	Service (Self-self-	SP 10 BUS			Senters	3.20	1920 - 12	D IN MARK	and an interest
1. Cooling Fan	1	No		5.	5. Floor Stand No					
Filter Kit	1	No		6	6. Control Transformer No					
 Keypad or Touch so on Door 	reen	No		7	. Win	dow Kit		No		
4. Power Transformer	1	No								
702 Lighting Ci	trauit				1				10000000	
		A THE REAL		A LEAST AND		and a literature of the second			and the second second	
702.1 Electrical Servic		and the second se				Ser Sellonia			A STATE OF	Sec. 349
1. Volt/Phase/Hertz		120/1/60		3.	. Pro	vides power to	()	ElecSwitch	1, Lightin	g
2. MCA		0.0								
1. For electrical loads s	ee elect	trical draw	ings							
702.2 Switches / Outle	ets	199	a start and the second			THE REAL	1-1-27	125.251	02122	
		Section	Туре	Mounted	I L	llum. Switch	Time	r Cover	GFCI	MOCP
	A	PL1	Light Switch / 120V Outlet	External	100	No	None		Yes	20.0 Amp
Switch / Outlet is conr	nected to	o service.		I						
702.3 Lighting Types		antities	and the second second	and the second second			10.00		Sec. 1	
(7) Vapor Proof 14W LI	ED									

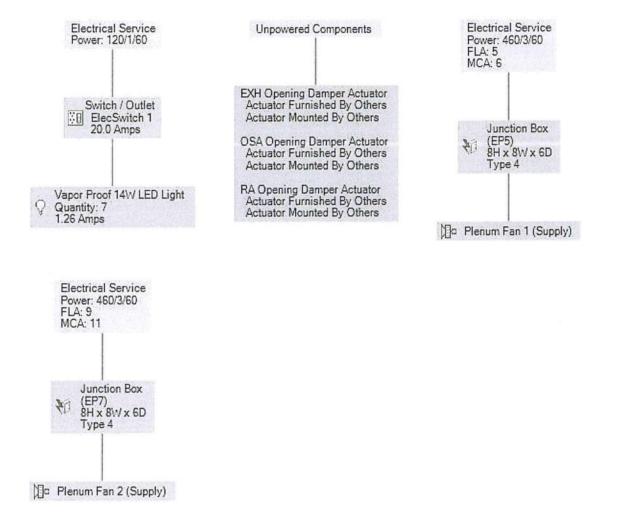
(7) Vapor Proof 14W LED



Project Name: Schmitt Elementary

Unit Tag: AHU - 2

703 **Electrical Layout Diagram**



Electrical

Quote #: 24-0139-002



PROJECT	Schmitt Elementary
QUOTE #	24-0139-002
UNIT TAG	AHU - 2
QUANTITY	1

Unit Data



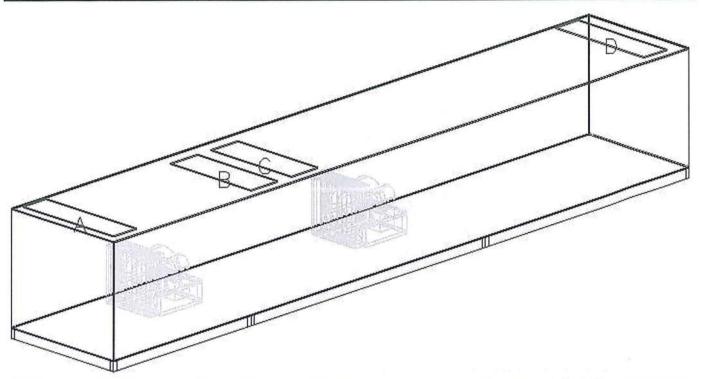
Unit Data

Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

900 Air Handler Sound Power Projection



Openings - Condition 1			Octave Band Freq. Sound Power (db re: 10E-12 watts)								51.5		
Tag	Title	Cabinet Liner	Area	63	125	250	500	1k	2k	4k	8k	LwA	Lw
A	RA Opening	Solid	5.3 ft ²	81	81	92	76	76	79	75	65	87	93
В	EXH Opening	Solid	5.6 ft ²	82	78	91	78	76	79	76	66	86	92
C	OSA Opening	Solid	5.6 ft ²	82	78	91	77	75	77	76	67	86	92
D	SA Opening	Solid	5.3 ft ²	81	78	87	79	78	79	77	68	85	90
Casing Radiated			79	75	79	61	60	62	59	49	73	83	
Floor Radiated			74	70	72	45	42	38	35	35	65	77	

900.2 Notes

 Fan data accuracy as per AMCA 311 (63Hz +6 dB, remaining bands +3 dB with an additional 3 dB available in any one band). Model predictive accuracy is ±6 dB. Fan and modeling accuracy is based on ideal flow patterns and design conditions. Projected fan and system sound levels are provided for comparison purposes only — actual levels may vary.

2. Sound power projections are not valid for opening velocities over 1,500 ft/min.

3. Sound power projects are not valid with VFD motor control carrier frequencies of less than 8KHz.



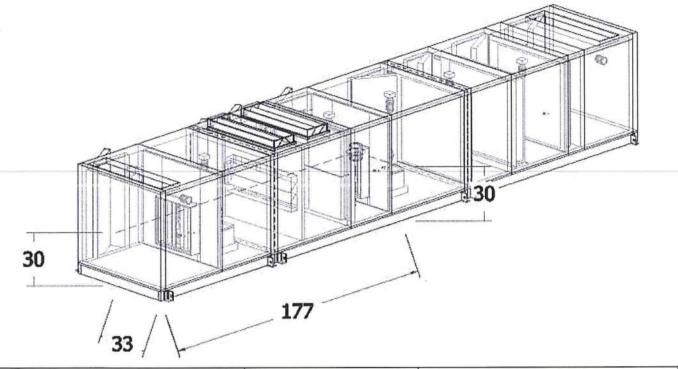
Unit Data

Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

901 Center of Gravity



	Size (Inches)		Operating Weight (Deundo)	Cent	er of Gravity (Inc	ches)
Х	Y	Z	Operating Weight (Pounds)	Х	Y	Z
352.00	62.00	60.50	7,423	179.00	33.00	30.00

901.1 Notes

1. Center of gravity and weights are estimates and subject to change.

2. The center of gravity and weights shown above are based on operating weights and do not include packaging materials.

3. A 5% safety factor has been applied to the operating weights.

4. Corner weights apply to rectangular boxes only.

5. Corner weights are to assist in handling of the unit. Some units are not intended to be supported only at the corners. Contact your Sales Representative for support information.

Design Assistant



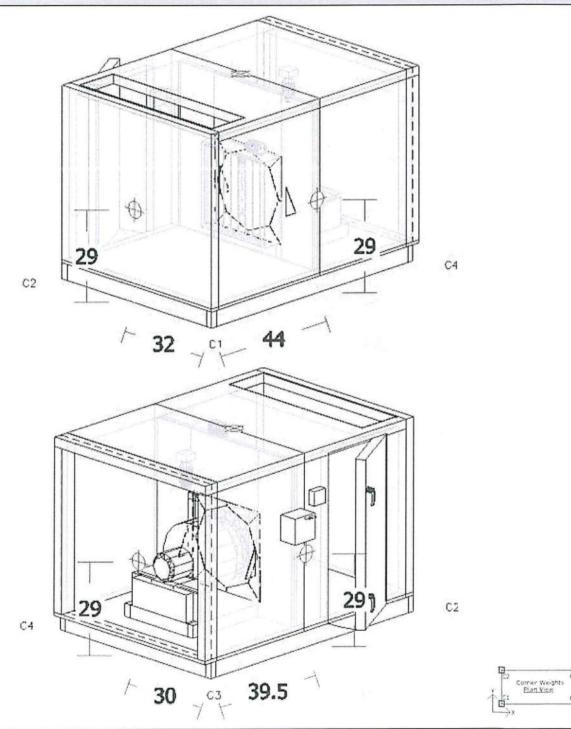
Unit Data

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

901 Center of Gravity (Continued)

901.2 Box A



-	Size (Inches)		China Maight (Doundo)	199 - 19 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199	Corner Weig	hts (Pounds)	
Х	Y	Z	 Shipping Weight (Pounds) 	C1	C2	C3	C4
83.50	62.00	60.50	1,746	400	426	475	445

◊ Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

-

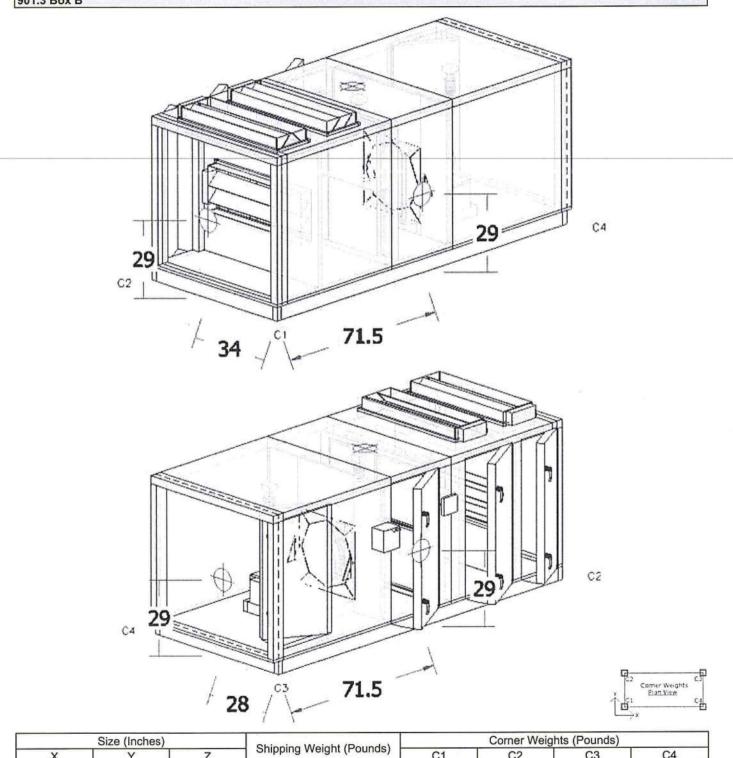


Project Name: Schmitt Elementary

Unit Tag: AHU - 2

901 Center of Gravity (Continued)

901.3 Box B



	Size (Inches)		Chinging Weight (Dounds)	Corner Weights (Pounds)			
Х	Y	Z	Shipping Weight (Pounds)	C1	C2	C3	C4
143.00	62.00	60.50	2,887	652	792	792 792	

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Design Assistant

10.0.0 / 2.0.3.1

Unit Data

Quote #: 24-0139-002



Unit Data

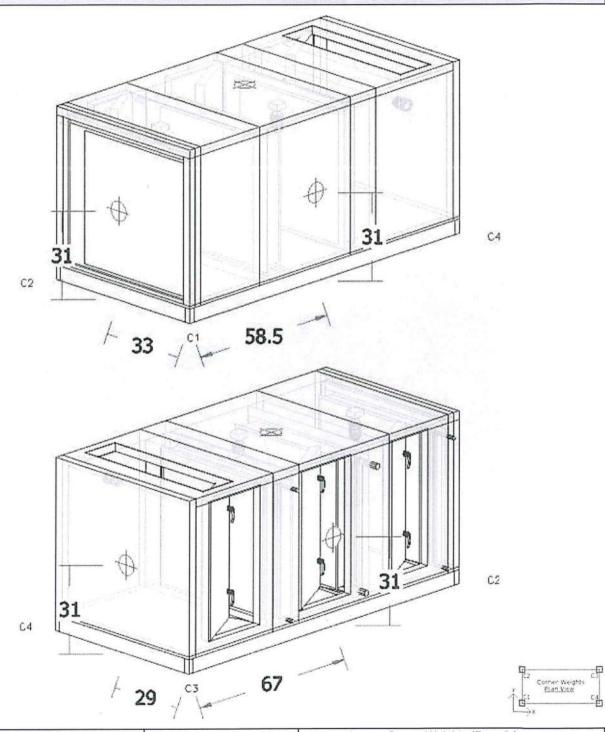
Quote #: 24-0139-002

Project Name: Schmitt Elementary

Unit Tag: AHU - 2

901 Center of Gravity (Continued)

901.4 Box C



	Size (Inches)		Chinging Waight (Dounds)	Corner Weights (Pounds)				
Х	Y	Z	 Shipping Weight (Pounds) 	C1	C2	C3	C4	
125.50	62.00	60.50	2,727	671	763	688	605	

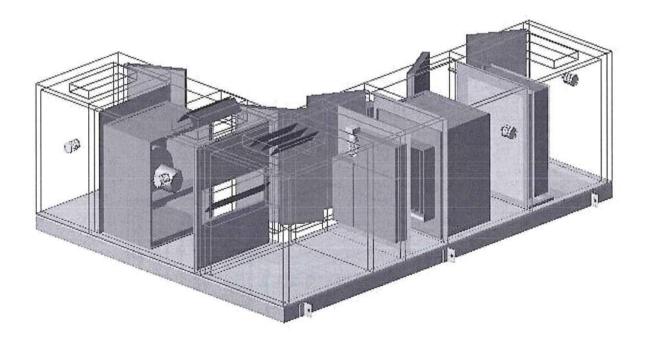
Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

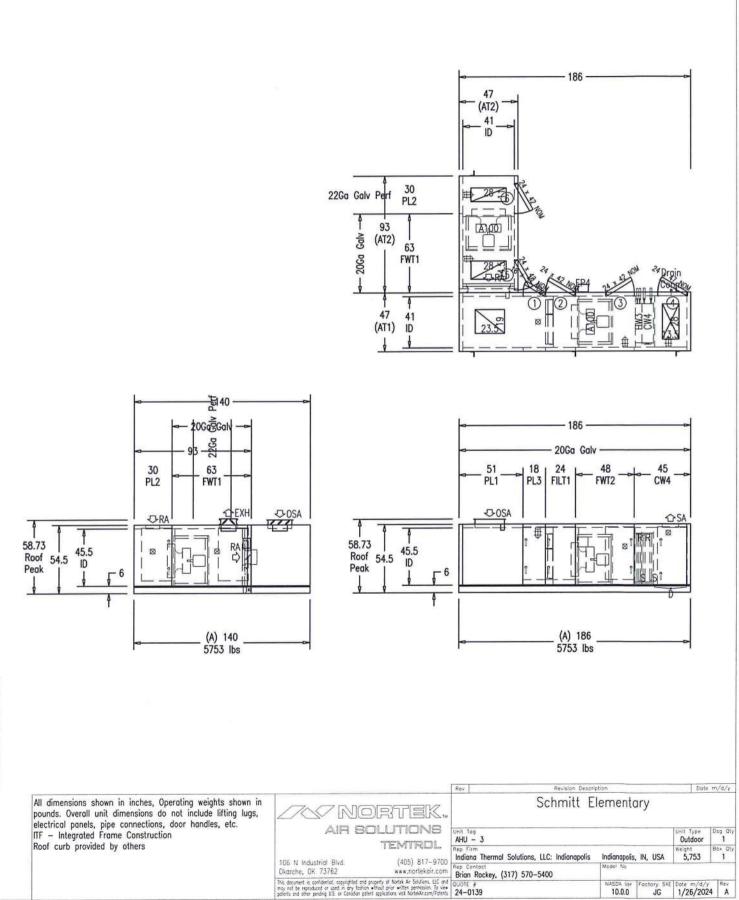


TEMTROL

PROJECT	Schmitt Elementary
QUOTE #	24-0139-005
UNIT TAG	AHU - 3
QUANTITY	1

Revision	History	
Date	Rev	Revision Description







TEMTROL

PROJECT Schmitt Elementary QUOTE # 24-0139-005 UNIT TAG AHU - 3 QUANTITY 1

Unit Design Options

Design Assistant 10.0.0 / 2.0.3.1



Unit Design Options

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

100 Unit Design Summary

100.1 Electrical

1. Short Circuit Current Rating (SCCR) @ 65 kA



Unit Design Options

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

Quote #: 24-0139-005

101	U	nit Deta	ils									N Road and	
101.	1 We	ights / Job	site Elev	ation			52.003					A MARGINE	
		ng Weight		5,682 lb				3. Elevatio	n	39 ft			
		ting Weight	t	5,753 lb									
							WIND CHANNEL		and the second second	THE REPORT OF THE PARTY OF	Sec. Sec. 19	CONTRACTOR IN	
		paration f		ent			Lauralia and	d haat shelat	Restance and set	80-00 0 A 20 A 10 A 20	S. Detter	B. B. A. B. Barris	
		ing & Wrap down Cons			No	open bed	truck an	d heat shrink	wrap.				
2. r	NOCK	down Cons	struction		INO							0.00	
102	2 U	nit Con	structio	DN	The state	-	The second				Carl and the		
102.	1 Co	nstruction						N HIGH TOTAL	STORE STORE			an estant	
1. 0	abin	et Construc	tion	ITF - Integ	grated Fra	ame		6. Panel F	astener	Drive Screws			
2. C	Desig	n Environm	ent	Outdoor	-			7. Therma	Break	Modified Ther	mal Break	<	
_		Depth		3 in			8. Mountin	g	Curb Mounted				
4. C	aulk	Туре		Standard				9. Roof Cu	irb By	Others			
5. N	lodel	#						10. Curb He	eight	8.000 in			
400	0.0				AN ANTAR	C.ATACY I	to szere	Carl Cold State			1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		
		binet Mate	rial	100- 0-	Pre Det	at an	the state of the	0 Display	Einich	Nonc			
	Exterior Material 16Ga Galv Pre-Paint Interior Liner type(s) See Drawing		nt		8. Blankoff Finish None 9. Internal Wall Material 16Ga Galv								
				See Drawing Polyester Resin			Insulation by liner type			511 - 11 - 11 - 11 - 11 - 11 - 11 - 11			
		or Paint Typ			Resin			10. Solid lin		HD Fiberglass		2.5)	
		r Paint Typ	e	None			11.Perforat	N/S C	HD Faced Fib		and the second se		
		Color Salt Spray	Dating	2500 Hou	7.			TI.Penoral	ed liner	IND Faceu Fib	ergiass n	011 (112.3)	
		off Material	Rating	16Ga Gal		contiono	1						
		Water Coil		off materia	l is 16Ga	304 SS	- Manutate	2 Northeast Control	a contraction		in the second		
		Structure M	A HEARING AND A HEARING AN	Steel Tub	e			7. Base St	ructure Height	See Drawing			
		Floor Mater	- para or material and the	16Ga Ga				8. Sub Flo			20Ga Galv		
		Floor Seam		Caulked				9. Floor Coating None					
	nsula			Polyureth	ane Foar	n		10.R Value 20					
		Drain		None				11. Lifting Lugs Yes - Removable					
6. F	loor	Options		None						•			
102.	4 Bo	x Dimensio	ons		an hear	Q. 91. 3							
	I	Зох		Х		Y		Z SI		Shipping Weight Operat		ing Weight	
		Α	1	86.000 in		140.000) in	58.72	9 in	5,682 lb	5,	753 lb	
1. B 2. T	ox di he he	eight dimen	lo not incl sions incl	ude raised	roof sear	ms and s	loped roc	of for outdoor		etc. are not shown on	drawing.		
103	8 D	oors	Ne Si				N. A. Balle		A CHARACT			No.	
103	1 AII	Doors (inc	ludina ti	nose asso	ciated wi	ith speci	fic com	onents)	1.1.1.1.1.1.1		1.19.197	22.49	
10 L	Box	Section	Type ¹	Width	Height	Hinge	Swing	Window	Interior	Exterior	r	Options ³	
1	A	PL3	3" TBF		42	LH	Out	None	20Ga Galv	16Ga Galv Pr		TO	
2	A	FILT1	3" TBF		42	LH	Out	None	20Ga Galv	16Ga Galv Pr		TO	

FWT2

CW4

3" TBF

3" TBF

24

24

42

47

RH

LH

3

4 A

A

Out

Out

None

None

20Ga Galv

20Ga Galv

16Ga Galv Pre-Paint

16Ga Galv Pre-Paint

TO

TO



Unit Design Options

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

Quote #: 24-0139-005

	-										0
#	Box	Section	Type ¹	Width	Height	Hinge	Swing	Window	Interior	Exterior	Options ³
5	A	FWT1	3" TBF	24	42	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO
6	A	PL2	3" TBF	24	42	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO

103.2 Notes / Features

1. Door Types

TBF = Thermal Break Factory

2. All doors insulated with Polyurethane Foam.

3. Options: TO = Tool Operated Handle

104 Drains

104.1 A	I Drains (inc	luding those a	associated wit	h specific	components)	Contraction of the	enter nationalités.	a stringer of the
Box	Section	Туре	Conn (in)	Hand	Above Floor	Pipe Ext.	Grating Material	Pan Material
A	CW4	Drain Pan	1.25	Left	0.00 in	0.00 in	None	16Ga 304 SS

104.2 Notes / Features

1. Drain Constructions included: Triple Pitched

105 Internal Walls

105.1 All Internal Walls (including those associated with specific components)							
Box	Section	Wall Name	Depth	Panel Mat.	Liner Mat.	Insulated	
A	FANWALL 1 (Return)	InternalWall 2	2.000 in	Default	16Ga Galv	False	



Unit Design Options Quote #: 24-0139-005

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

106 Static Pressure Summary

106.1 Condition 1

Tunnel	Description	APD (in.H20)
AirTunnel 1	OSA Opening - Damper (Outside Air)	0.07
AirTunnel 1	Filter 1, Pre / Final (Average Pressure Drop)	1.71
AirTunnel 1	SA Opening (Supply Air)	0.28
AirTunnel 1	FANWALL 2 (Supply) 4,000 ACFM @ 4.00 in.H20	0.00
AirTunnel 1	Hot Water Coil 3	0.06
AirTunnel 1	Chilled Water Coil 4	0.63
AirTunnel 2	RA Opening (Return Air)	0.00
AirTunnel 2	EXH Opening - Damper (Exhaust Air)	0.29
AirTunnel 2	RA Opening - Damper (Return Air)	0.04
AirTunnel 2	FANWALL 1 (Return) 4,000 ACFM @ 3.00 in.H20	0.00
	Total Static Pressure:	3.08

Legend: ESP - External Static Pressure, OSA - Outside Air, EXH - Exhaust Air, RA - Return Air, SA - Supply Air

106.2 Notes/Legend

1. Summary report does not include static pressure of components supplied by others in the field unless otherwise noted.



PROJECT	Schmitt Elementary
QUOTE #	24-0139-005
UNIT TAG	AHU - 3
QUANTITY	1

Fans



TEMTROL

Fans

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

200 FANWALL 2 (Supply) : FWT2 : Box A

20-80 - 182T - 40 x 36 x 28 - A1

200.1 Configuration / (Quantity		STATES STATES	New APPEND		
1. Function	Supply Fan		6.Height	7.Width	8.Depth	9.Overall Depth
2. Quantity	1	Cell Size	40	36	28	35.25
3. Array	1 Rows x 1 Cols	10. Elev. /	Temp.	39 ft / 70.0 °F		
4. Construction	PentaCube	11. Motor &	& Wheel Weight	163 lb	13. Redundant	0
5. Inlet Cone Location	Upstream Removable	12.Fan Ce	ell Weight	364 lb	14. Empty	0
		15.Ship Lo	oose Fan (Whee	I, Motor and Mou	inting Base)	0

200.2 Options			
1. Coplanar Insulation	Standard Melamine	8. Cell Finish	None
2. Extended Coplanar	No	9. Insulation Retainer	No
3. Back Draft Dampers	FBD8	10. Inlet Attenuation	None
4. Inlet Cone Type	A100 Curved Cone	11.Blankoff Material	16Ga Galv
5. Solid Perimeter Material	None	12. Blankoff Finish	None
6. Discharge Safety Guard	No	13. Removal Rail	No
7. Cell Material	Steel	1	

200.3 Fan Wheel				
1. Wheel Type	HPF-A100	4. Width	80	
2. Diameter	20	5. Max RPM	3521	
3. Balancing Planes	1	6. Wheel Finish	None	

200.4 Motor	到海洋的学习的行为。这时	 Million and a strain of the second strain str	
1. Manufacturer	Toshiba	6. Model	4OA003L1ZVS210
2. HP Each / Total	4/4	7. Efficiency	87.5
3. Poles / RPM	4-Pole / 1,740	8. Service Factor	1.15
4. Frame / Casing	182T / TEAO	9. Shaft Isolation	Ceramic Bearings
5. Volts / Phase / Hz 460/3/60	460/3/60	10. FLA Each / Total	5.1 / 5.1 Amps
		11. Motor HP Safety Factor	3.0 %

200.5 Variable Frequency Drive							
1. Quantity	0	3. Maximum Hertz	.00				
2. Voltage	460/3/60	4. Input Line Reactor	No				

200.6 Control System						
1.	Redundant VFD	No				
2.	Drive	Junction Box				
3.	Optimization Control	No				
4.	Control Method	By Others				

200.7 Notes / Features

1. To view patents and other pending U.S. or Canadian applications visit www.nortekair.com/patents.

2. Cone constant = 2524, cone flow differential pressure = 2.51 in.H2O at 4000 CFM per fan.

3. The estimated VFD input watts are based on the motor and VFD efficiency at the selected load and RPM.

4. Fans balanced to a maximum allowable level of 0.022 inches per second peak.



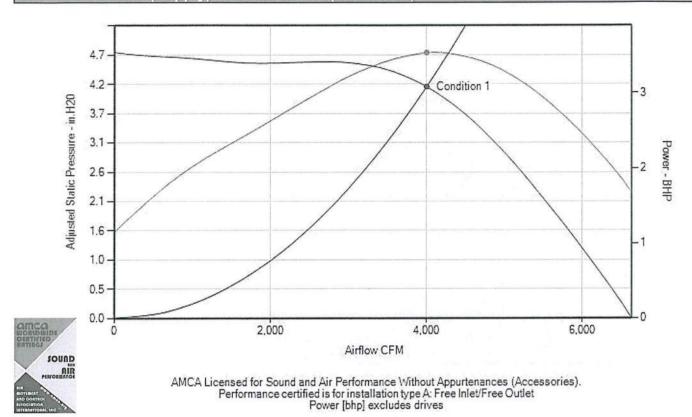
Fans

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

200 FANWALL 2 (Supply) : FWT2 : Box A (Continued) 20-80 -

20-80 - 182T - 40 x 36 x 28 - A1



200.8 Operating Con	ditions				01.73	N.S.	4.5%		, THE	122	40.0,803	148 12	1990	and the mouth	36.2
Operating Condition Usage (%)	Usage	OFM	SP (in	.H20)	C	cell Q	ty	RPM	Ll-	Fanwhe	el BHP	Vel.	Watts	FEG	FEI
		CFM	Input	Adj.	On	Off	Fail	RPIN	RPM Hz	Each	Total	(ft/min)	waits	% O.P.	FEI
Condition 1	100	4,000	4.00	4.15	1	0	0	1,960	67.6	3.54	3.54	500	3,201	FEG85 2%	1.39



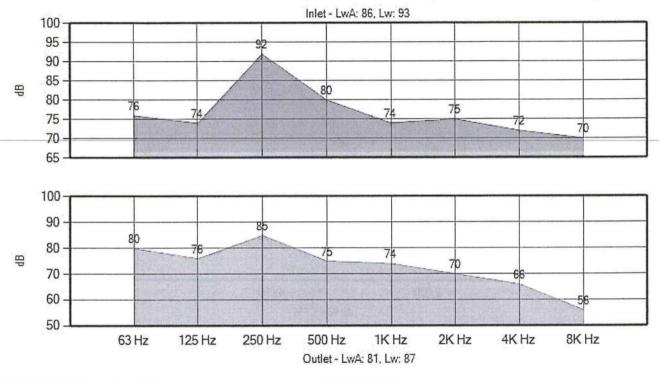
Fans

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

200 FANWALL 2 (Supply) : FWT2 : Box A (Continued) 20-80 - 182T - 40 x 36 x 28 - A1

Bare Fan Sound Power with Coplanar Silencer (dB re: 10E-12 watts)



200.9 Bare Fan Sound Power	with Coplana	ar Silend	cer (dB re	e: 10E-12	watts)				and the set	1.12	NUST.
Operating Condition		63	125	250	500	1k	2k	4k	8k	LwA	Lw
0	Inlet	76	74	92	80	74	75	72	70	86	93
Condition 1	Outlet	80	76	85	75	74	70	66	56	81	87



Project Name: Schmitt Elementary

Unit Tag: AHU - 3

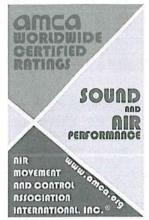
200 FANWALL 2 (Supply) : FWT2 : Box A (Continued)

200.10 AMCA Statement

Nortek Air Solutions LLC certifies that the HPF-A100 fan wheel shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances or accessories, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product. Performance certified is for installation type A: Free Inlet/Free Outlet Power [bhp] excludes drives

FWTRating DLL: Ver-1.6 / May 2022



20-80 - 182T - 40 x 36 x 28



Fans

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

201 FANWALL 1 (Return) : FWT1 : Box A

20-80 - 182T - 40 x 36 x 28 - A1

201.1 Configuration / 0	Quantity	Contra and		V THE AND A STATE	A STATE AND	Waller of Benter Part
1. Function	Return Fan		6.Height	7.Width	8.Depth	9.Overall Depth
2. Quantity	1	Cell Size	40	36	28	35.25
3. Array	1 Rows x 1 Cols	10. Elev. /	Temp.	39 ft / 70.0 °F		
4. Construction	PentaCube	11. Motor	& Wheel Weight	163 lb	13. Redundant	0
5. Inlet Cone Location	Upstream Removable	12. Fan Ce	ell Weight	364 lb	14. Empty	0
15. Ship Loose Fan (Wheel, Motor and Mounting Base) 0						0

201.2 Options	new well-been not at health	a some some statement of the	solions has colleged his of palaugh
1. Coplanar Insulation	Standard Melamine	8. Cell Finish	None
2. Extended Coplanar	No	9. Insulation Retainer	No
3. Back Draft Dampers	FBD8	10. Inlet Attenuation	None
4. Inlet Cone Type	A100 Curved Cone	11. Blankoff Material	16Ga Galv
5. Solid Perimeter Material	None	12. Blankoff Finish	None
6. Discharge Safety Guard	No	13. Removal Rail	No
7. Cell Material	Steel		•

201.3 Fan Wheel				的目的主要的情况
1. Wheel Type	HPF-A100	4. Width	80	
2. Diameter	20	5. Max RPM	3521	
3. Balancing Planes	1	6. Wheel Finish	None	

201.4 Motor			
1. Manufacturer	Toshiba	6. Model	4OA003L1ZVS210
2. HP Each / Total	3/3	7. Efficiency	89.5
3. Poles / RPM	4-Pole / 1,760	8. Service Factor	1.15
4. Frame / Casing	182T / TEAO	9. Shaft Isolation	Ceramic Bearings
5. Volts / Phase / Hz 460/3/60	10. FLA Each / Total	4 / 4.0 Amps	
		11. Motor HP Safety Factor	3.0 %

201.5 Variable Frequency Drive							
1. Quantity	0	3. Maximum Hertz	.00				
2. Voltage	460/3/60	4. Input Line Reactor	No				

20	201.6 Control System							
1.	Redundant VFD	No						
2.	Drive	Junction Box						
3.	Optimization Control	No						
4.	Control Method	By Others						

201.7 Notes / Features

1. To view patents and other pending U.S. or Canadian applications visit www.nortekair.com/patents.

2. Cone constant = 2524, cone flow differential pressure = 2.51 in.H2O at 4000 CFM per fan.

3. The estimated VFD input watts are based on the motor and VFD efficiency at the selected load and RPM.

4. Fans balanced to a maximum allowable level of 0.022 inches per second peak.

NORTEK.	
AIR SOLUTIONS	
TEMTROL	

2

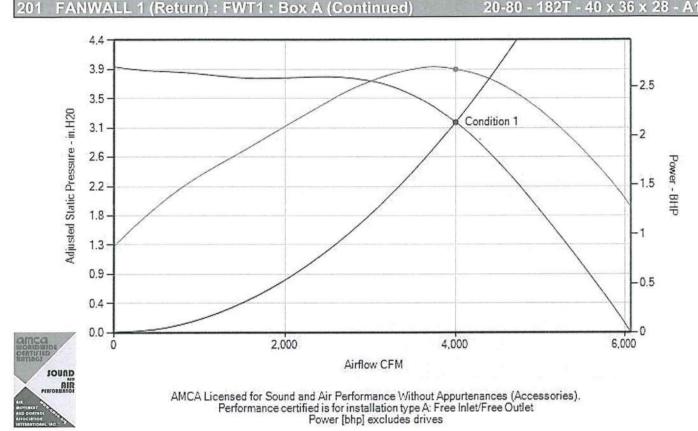
Fans Quote #: 24-0139-005

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

FANWALL 1 (Return) : FWT1 : Box A (Continued

20-80 - 182T - 40 x 36 x 28 - A1



201.8 Operating Con	ditions				120				14.0.2	ありいたり	and the main	and the	A STATE	AND ALL AND A	
Operating Condition	Usage	OFM	SP (in	.H20)	C	cell Q	ty	DDM	L.	Fanwhe	el BHP	Vel.	Watts	FEG	FEI
	on (%) CFM	CFIM	Input	Adj.	On	Off	Fail	RPM Hz	Each	Total	(ft/min)	walls	% O.P.	FEI	
Condition 1	100	4,000	3.00	3.15	1	0	0	1,791	61.1	2.67	2.67	500	2,374	FEG85 0%	1.48



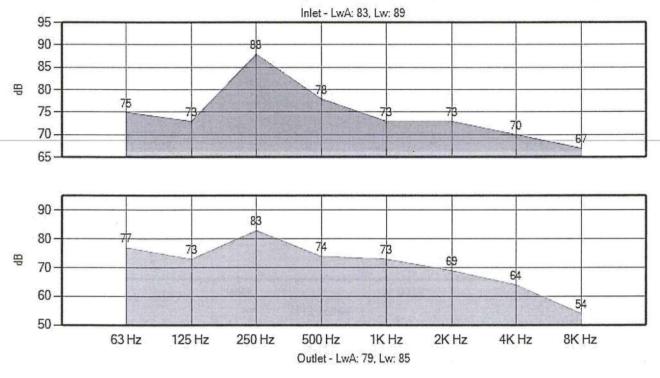
Fans

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

201 FANWALL 1 (Return) : FWT1 : Box A (Continued) 20-80 - 182T - 40 x 36 x 28 - A1

Bare Fan Sound Power with Coplanar Silencer (dB re: 10E-12 watts)



201.9 Bare Fan Sound Power	with Coplana	ar Silene	cer (dB re	e: 10E-12	watts)				- Chilling		
Operating Condition		63	125	250	500	1k	2k	4k	8k	LwA	Lw
Condition 1	Inlet	75	73	88	78	73	73	70	67	83	89
Condition 1	Outlet	77	73	83	74	73	69	64	54	79	85



Project Name: Schmitt Elementary

Unit Tag: AHU - 3

201 FANWALL 1 (Return) : FWT1 : Box A (Continued)

201.10 AMCA Statement

Nortek Air Solutions LLC certifies that the HPF-A100 fan wheel shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances or accessories, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product. Performance certified is for installation type A: Free Inlet/Free Outlet Power [bhp] excludes drives

FWTRating DLL: Ver-1.6 / May 2022



Quote #: 24-0139-005

20-80 - 182T - 40 x 36 x 28



TEMTROL

PROJECT	Schmitt Elementary
QUOTE #	24-0139-005
UNIT TAG	AHU - 3
QUANTITY	1

Coils



Project Name: Schmitt Elementary

Unit Tag: AHU - 3

300 Chilled Water Coil 4 : CW4 : Box A

5WC - 6 - 39 x 31 x 5 - 10 AL

300.1 Coil Layout						
1. Coil Hand	Left	6. Rack Style	None			
2. Configuration	Single	7. Rack Finish	None			
3. Connection Orientation	Straight	8. Blankoff Material	16Ga 304 SS			
4. Connection Material	Red Brass	9. Blankoff Finish	None			
5. Connection Type	MPT					

300.2 Construction	on				
1. Quantity	1	8. Stand Height	1 in	14. Casing	16Ga 304 SS
2. Serpentine	0.8333333	Tube Detai	- Primary Surface	15. Coating	None
3. Fin Height	39.000 in	9. Material	Copper	Fin Detail -	Secondary Surface
4. Fin Length	31.000 in	10.O.D. x Wall	0.625 x 0.025 in	16. Material	Aluminum
5. Rows	5	11. Spacing	1.500 x 1.299 in	17. Thickness	0.010 in
6. Fins per Inch	10	12. Internal	Smooth	18. Configuration	Corrugated, Waffle with
7. Face Area	8.40 ft ²	13. Return Bends	0.035 in	ro. Configuration	Straight Edge

Single Bank, Left Hand, 1 per unit

5WC - 6 - 39 x 31 x 5 - 10 AL

	Supply / Retu	Irn Connections	1 - Sale - Sa		Vent and Drain	
Quantity	Туре	Pipe Size	Material	Туре	Vent Location	Drain Location
2	MPT	1.5 in	Red Brass	0.125 in FPT	Return Connection	Supply Connection

300.3 Condition 1						
Entering			Leaving	121318		
1. Actual Airflow	4,000 ACFM	10. Total Capacity	128.6 MBH			
2. Standard Airflow	3,920 SCFM	11. Sensible Capacity	100.2 MBH			
3. Elevation	39 ft	12. Actual Face Velocity	476.43 ft/min			
4. Entering Air DB	80.0 °F	13. Leaving Air DB	56.8 °F			
5. Entering Air WB	67.0 °F	14. Leaving Air WB	56.5 °F			
6. Fluid Type	Water	15.APD	0.63 in.H20			
7. Entering Fluid Temp	44.0 °F	16.Leaving Fluid Temp	54.0 °F			
8. Fluid Flow Rate	25.6 GPM	17. Fluid Velocity	1.40 ft/s			
9. Fluid Fouling Internal	0.0000	18. Fluid Pressure Drop	2.41 ft.H20			

Notes:

1. Coil is outside the scope of AHRI Standard 410.

2. (FH > FL) falls outside the range of AHRI Certified Coils

3. Chilled water velocity is below recommended minimum of 2.5 fps

300.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Coil is directly connected to the downstream side of Hot Water Coil 3.

3. Top and bottom casing flange height is 1.000 in.

4. SCFM is corrected for Elevation and EDB.

5. Coils to be pressure tested at 315 PSI

6. Total operating weight is 291 lb.

7. Total fluid volume is 6.5 Gal.



Coils

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

301 Hot Water Coil 3 : CW4 : Box A

5WC - 4 - 39 x 31 x 1 - 6 AL

5WC - 4 - 39 x 31 x 1 - 6 AL

Quote #: 24-0139

301.1 Coil Layout				1.0
1. Coil Hand	Left	6. Rack Style	None	
2. Configuration	Single	7. Rack Finish	None	
3. Connection Orientation	Straight	8. Blankoff Material	16Ga 304 SS	
4. Connection Material	Red Brass	9. Blankoff Finish	None	
5. Connection Type	MPT			

301.2 Construction	on	· · · · · · · · · · · · · · · · · · ·			A STATE STATE AND A STATE OF
1. Quantity	1	8. Stand Height	1 in	14. Casing	16Ga 304 SS
2. Serpentine	0.25	Tube Detail	- Primary Surface	15. Coating	None
3. Fin Height	39.000 in	9. Material	Copper	Fin Detail -	Secondary Surface
4. Fin Length	31.000 in	10.O.D. x Wall	0.625 x 0.025 in	16. Material	Aluminum
5. Rows	1	11. Spacing	1.500 x 1.299 in	17. Thickness	0.010 in
6. Fins per Inch	6	12. Internal	Smooth	18. Configuration	Corrugated, Waffle with
7. Face Area	8.40 ft ²	13. Return Bends	0.035 in	ro. Configuration	Straight Edge

Single Bank, Left Hand, 1 per unit

Supply / Return Connections Vent and Drain Quantity Pipe Size Material Туре Vent Location **Drain Location** Type 2 MPT 1.25 in Red Brass 0.125 in FPT **Return Connection** Supply Connection

	Entering		Leaving
1. Actual Airflow	4,000 ACFM		
2. Standard Airflow	4,234 SCFM	9. Sensible Capacity	94.0 MBH
3. Elevation	39 ft	10. Actual Face Velocity	476.43 ft/min
4. Entering Air DB	40.0 °F	11. Leaving Air DB	60.5 °F
5. Fluid Type	Water	12.APD	0.06 in.H20
6. Entering Fluid Temp	180.0 °F	13. Leaving Fluid Temp	140.0 °F
7. Fluid Flow Rate	4.8 GPM	14. Fluid Velocity	0.92 ft/s
8. Fluid Fouling Internal	0.0000	15. Fluid Pressure Drop	0.31 ft.H20

Notes:

1. Coil is outside the scope of AHRI Standard 410.

2. (FH > FL) falls outside the range of AHRI Certified Coils

3. Hot water velocity is below recommended minimum of 2.5 fps

301.4 Notes / Features

- 1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179
- 2. Coil is directly connected to the upstream side of Chilled Water Coil 4.
- 3. Top and bottom casing flange height is 1.000 in.
- 4. SCFM is corrected for Elevation and EDB.
- 5. Coils to be pressure tested at 315 PSI
- 6. Total operating weight is 96 lb.
- 7. Total fluid volume is 1.6 Gal.



PROJECT	Schmitt Elementary
QUOTE #	24-0139-005
UNIT TAG	AHU - 3
QUANTITY	1

Components



Components Quote #: 24-0139-005

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

500 Filter 1 : FILT1 : Box A

1. Loading	Upstream Face Load	7. Bank Size	36.063 in W x 36.000 in H
2. Frame Material	Galvanized	8. Qty / set & Frame Size 1	(2) 12 in x 24 in
3. Frame Finish	None	9. Qty / set & Frame Size 2	(1) 24 in x 24 in
4. Filter Clips	(12) C-79-5	10.Qty / set & Frame Size 3	
5. Blankoff / Rack Material	16Ga Galv	11.Qty / set & Frame Size 4	
6. Blankoff / Rack Finish	None		
500.2 Pre Filter			
1. Filter Depth	2.000 in	4. Number of Sets	1
2. Efficiency	MERV 8	5. Max Face Velocity	500.00 ft/min at 4,000 ACFM

3. Manufacturer	American Air Filter	6. Model	PerfectPleat SC
500.3 Final Filter			
1. Filter Depth	4.000 in	4. Number of Sets	1
2. Efficiency	MERV 14	5. Max Face Velocity	500.00 ft/min at 4,000 ACFM
3. Manufacturer	American Air Filter	6. Model	VariCel II

500.4 Notes / Features

1. All sets of Filters and clips to ship loose inside unit, installed by others.



Components

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

Quote #: 24-0139-005

600 OSA Opening : OSA : Box A : Roof

600.1 Opening Cons	truction			SOROUTAS
1. Description	Outside Air	4. Shape	Rectangle	
2. Max CFM	4,000 ACFM	5. Max APD	0.07 in.H20	
3. Size	19 W x 23.5 H in			

600.2 Damper Specifications

1. Manufacturer	TAMCO	6. Jackshaft	Yes
2. Model	TAMCO 9000 (Aluminum)	7. Max Face Velocity	1,290.03 ft/min
	23.500 in (A - Blade Direction) x	8. Torque	35 lb-in
3. Size	19.000 in (B)	9. End Switches	No
4. Blade Config	Parallel		
5. Blade Orientation	Horizontal	1 · · · · · · · · · · · · · · · · · · ·	

600.3 Damper Actuator		
1. Manufacturer	6. Qty	1
2. Model	7. Floor Mounted	66-429
3. Direction	8. Furnished By	Others
4. Location	9. Mounted By	Others
5. Type	10. Wiring By	Others

600.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Face Mounted (RH) location.

2. Damper Actuators wired by Others

601 SA Opening : SA : Box A: Roof

601 1 Opening Construction

1. Description	Supply Air	4. Shape	Rectangle	
2. Max CFM	4,000 ACFM	5. Max APD	0.28 in.H20	
3. Size	28 W x 13.5 H in	6. Max Velocity	1,524.00 ft/min	

602 RA Opening : RA : Box A Roof

602.1 Opening Const	ruction			101 1 0H
1. Description	Return Air	4. Shape	Rectangle	
2. Max CFM	4,000 ACFM	5. Max APD	0.00 in.H20	
3. Size	28 W x 11 H in	6. Max Velocity	1,871.00 ft/min	

EXH Opening : EXH : Box A : Roof 603

603.1 Opening Cons	truction			will fin
1. Description	Exhaust Air	4. Shape	Rectangle	
2. Max CFM	4,000 ACFM	5. Max APD	0.29 in.H20	
3. Size	28 W x 14.5 H in			

603.2 Damper Specifications	
1. Manufacturer	Ruskin

1. Manufacturer	Ruskin	6. Jackshaft	Yes
2. Model	Ruskin CD 60 (Galvanized)	7. Max Face Velocity	1,418.72 ft/min
a a:	28.000 in (Blade Direction) x	8. Torque	20 lb-in
3. Size	14.500 in	9. End Switches	No
4. Blade Config	Opposed		
5. Blade Orientation	Horizontal		
Notes:			
1. Ordered with 1.500 in.	Rear Flange		



Components Quote #: 24-0139-005

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

603 EXH Opening : EXH : Box A : Roof (Continued)

603.3 Damper Actuator		2. 如何的时候,我们的问题,你们就是我们的问题。
1. Manufacturer	6. Qty	1
2. Model	7. Floor Mounted	1 A 25
3. Direction	8. Furnished By	Others
4. Location	9. Mounted By	Others
5. Type	10. Wiring By	Others

603.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Face Mounted (RH) location.

2. Damper Actuators wired by Others

604 RA Opening : RA : Box A : Internal Wall

604.1 Opening Cons	truction			1.1.200
1. Description	Return Air	4. Shape	Rectangle	
2. Max CFM	4,000 ACFM	5. Max APD	0.04 in.H20	
3. Size	35 W x 12.5 H in			

604.2 Damper Specifica	tions			201225
1. Manufacturer	Ruskin	6. Jackshaft	Yes	
2. Model	Ruskin CD 60 (Galvanized)	7. Max Face Velocity	1,316.57 ft/min	
3. Size 35.000 in (Blade Direction) x 12.500 in	35.000 in (Blade Direction) x	8. Torque	21 lb-in	
	9. End Switches	No		
4. Blade Config	Parallel			
5 Blade Orientation	Horizontal			

Notes:

1. Ordered with 1.500 in. Front Flange

604.3 Damper Actuator	NUMBER OF A STREET OF A STREET	MARCA (PTD 2.
1. Manufacturer	6. Qty	1
2. Model	7. Floor Mounted	
3. Direction	8. Furnished By	Others
4. Location	9. Mounted By	Others
5. Type	10. Wiring By	Others

604.4 Notes / Features

Damper Actuators and mounting accessories furnished and mounted by Others at Face Mounted (RH) location.
 Damper Actuators wired by Others



PROJECT	Schmitt Elementary
QUOTE #	24-0139-005
UNIT TAG	AHU - 3
QUANTITY	1

Electrical



Electrical

Quote #: 24-0139-005

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

700 ElecPanel 4 : FWT2 : Box A : Far Side

1. Volt/Phase/Hertz	460/3/60	3. Provides power to	Supply Fan
2. MCA	6.4		
1. For electrical loads see ele	ectrical drawings		
700.2 Construction	Real and a second second		
1. Enclosure Type	Junction Box	4. Mounting	Surface mount on unit
2. Type	NEMA 4 Indoor / Outdoor	5. Finish	Polyester Resin (Sandstone)
3. Size	See electrical drawings		
700.3 Options	and the second second		
			No
1. Cooling Fan	No	5. Floor Stand	INO
	No No	5. Floor Stand 6. Control Transformer	No
1. Cooling Fan			

701.1 Lighting Types and Quantities

(5) Vapor Proof 14W LED



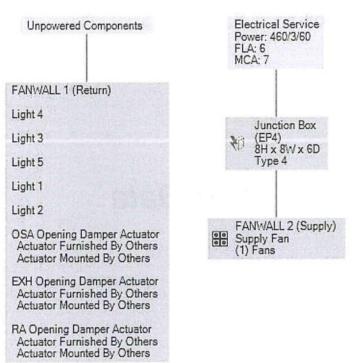
Electrical

Quote #: 24-0139-005

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

702 Electrical Layout Diagram



 Note: The FLA and MCA values shown are estimated, see the electrical schematics for the actual values.

 Date/Revision: 2024-02-19 / Rev. P1
 106 N Industrial Blvd. Okarche, Ok 73762

 Unit Design Revision A
 (405) 817-9700

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TEMTROL

PROJECT	Schmitt Elementary
QUOTE #	24-0139-005
UNIT TAG	AHU - 3
QUANTITY	1

Unit Data



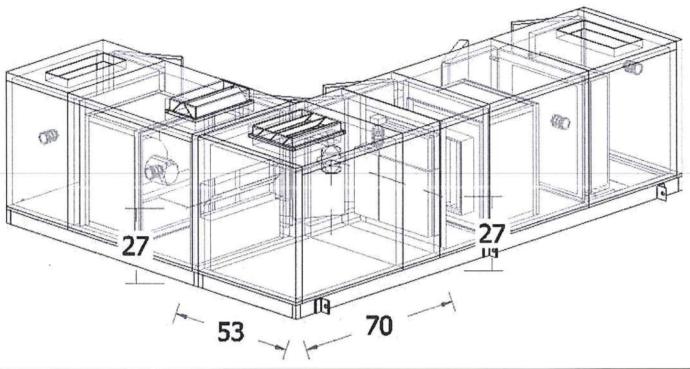
Project Name: Schmitt Elementary Unit Tag: AHU - 3 Quote #: 24-0139-005



Project Name: Schmitt Elementary

Unit Tag: AHU - 3

901 Center of Gravity



Size (Inches)		Operating Weight (Reunde)	Center of Gravity (Inches)			
х	Y	Z	Operating Weight (Pounds)	Х	Y	Z
186.00	140.00	54.50	5,753	71.00	53.00	27.00

901.1 Notes

1. Center of gravity and weights are estimates and subject to change.

2. The center of gravity and weights shown above are based on operating weights and do not include packaging materials.

3. A 5% safety factor has been applied to the operating weights.

4. Weights shown do not include roof curbs provided by others.

5. Corner weights apply to rectangular boxes only.

6. Corner weights are to assist in handling of the unit. Some units are not intended to be supported only at the corners. Contact your Sales Representative for support information.

Unit Data Quote #: 24-0139-005



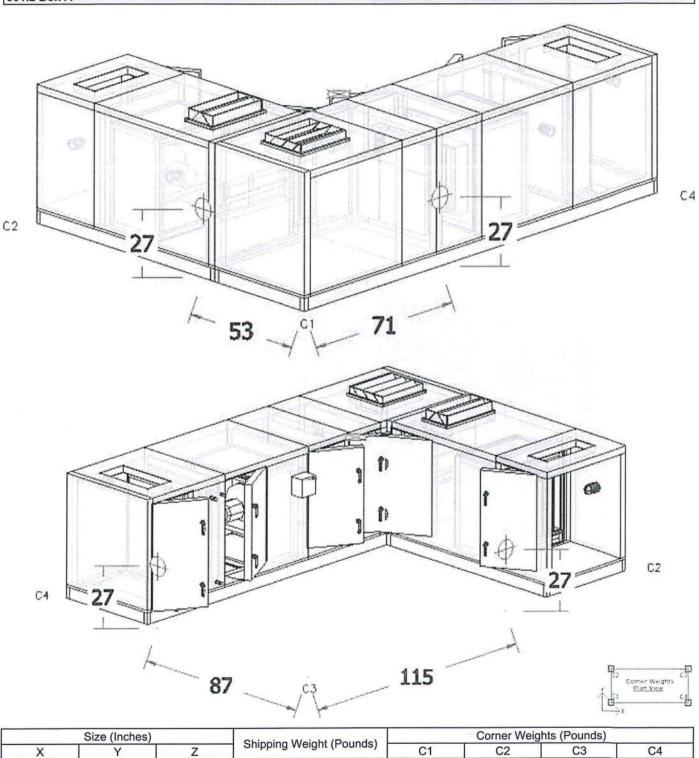
Unit Data Quote #: 24-0139-005

Project Name: Schmitt Elementary

Unit Tag: AHU - 3

901 Center of Gravity (Continued)





 186.00
 140.00
 54.50
 5,682

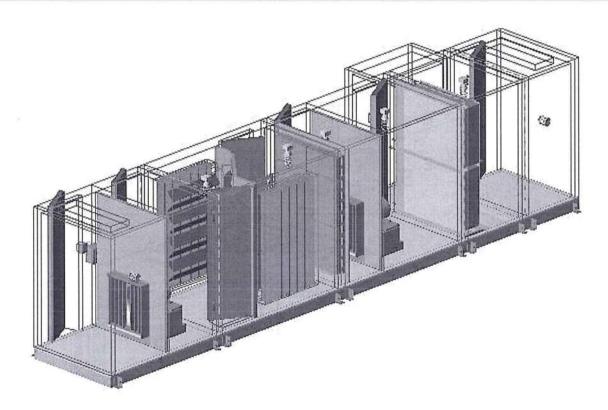
 ◊ Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change. Corner weights are not available for non-rectangular shipping boxes.

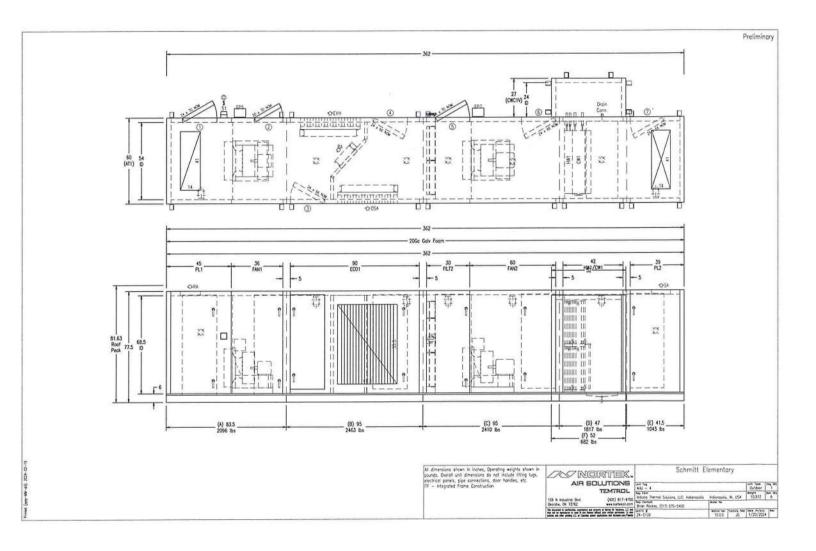


TEMTROL

PROJECT	Schmitt Elementary
QUOTE #	24-0139-004
UNIT TAG	AHU - 4
QUANTITY	1

Pov	Revision Description
	Rev







PROJECT	Schmitt Elementary
QUOTE #	24-0139-004
UNIT TAG	AHU - 4
QUANTITY	1

Unit Design Options

Design Assistant



Unit Design Options Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

100 **Unit Design Summary**

100.1 Electrical

1. Short Circuit Current Rating (SCCR) @ 65 kA



Preliminary

Unit Design Options

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

Quote #: 24-0139-004

404 Unit Details			
101 Unit Details			
101.1 Weights / Jobsite Ele	evation		
1. Shipping Weight	10,484 lb	3. Elevation	39 ft
2. Operating Weight	10,512 lb		•
101.2 Preparation for Ship	ment		
1. Cleaning & Wrapping	Ship on open bed to	ruck and heat shrink wrap.	
2. Knockdown Construction	No		
102 Unit Construct			
102.1 Construction			
1. Cabinet Construction	ITF - Integrated Frame	6. Panel Fastener	Drive Screws
2. Design Environment	Outdoor	7. Thermal Break	Modified Thermal Break
Panel Depth	3 in	8. Mounting	Slab Mounted
4. Caulk Type	Standard		
5. Model #			
102.2 Cabinet Material	onserver and the well		
1. Exterior Material	16Ga Galv Pre-Paint	8. Blankoff Finish	None
2. Interior Liner type(s)	See Drawing	9. Internal Wall Material	16Ga Galv
3. Exterior Paint Type	Polyester Resin	Insula	ation by liner type
4. Interior Paint Type	None	10. Solid liner	Polyurethane Foam (R24)
5. Paint Color	Sandstone		
6. Meets Salt Spray Rating	2500 Hours		

Exceptions:

7. Blankoff Material

1. Hot Water Coil 1: blankoff material is 16Ga 304 SS

2. Chilled Water Coil 1: blankoff material is 16Ga 304 SS

1. Base Structure Material	Steel Tube	7. Base Structure Height	See Drawing
2. Base Floor Material	16Ga Galv	8. Sub Floor Material	20Ga Galv
3. Base Floor Seams	Caulked	9. Floor Coating	None
4. Insulation	Polyurethane Foam	10.R Value	20
5. Floor Drain	None	11.Lifting Lugs	Yes - Welded and Removable
6. Floor Options	None		

Box	X	Y	Z	Shipping Weight	Operating Weight
A	83.500 in	60.000 in	81.625 in	2,096 lb	2,096 lb
В	95.000 in	60.000 in	81.625 in	2,463 lb	2,463 lb
С	95.000 in	60.000 in	81.625 in	2,525 lb	2,410 lb
D	47.000 in	60.000 in	81.625 in	1,675 lb	1,817 lb
E	41.500 in	60.000 in	81.625 in	1,043 lb	1,043 lb
F	52.000 in	27.000 in	78.125 in	682 lb	682 lb

102.5 Notes / Features

1. Box dimensions do not include lifting lugs, electrical panels, pipe connections, door handles, etc.

2. The height dimensions include raised roof seams and sloped roof for outdoor equipment.

16Ga Galv (See Exceptions)

3. Refer to unit drawing for removable lug locations. Removable lugs on demounts (if required) are not shown on drawing.

103 Doors



Preliminary

Unit Design Options

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

103 Doors (Continued)

-		Doors (inc		-			-		Lot and a s	Estadas	Ontinga
#	Box	Section	Type ¹	Width	Height	Hinge	Swing	Window	Interior	Exterior	Options ³
1	A	PL1	3" TBF	24	70	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO
2	A	FAN1	3" TBF	20	70	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	SC TO
3	В	ECO1	3" TBF	24	66	RH	In	None	16Ga Galv	16Ga Galv Pre-Paint	TO
4	В	ECO1	3" TBF	24	66	RH	In	None	16Ga Galv	16Ga Galv Pre-Paint	TO
5	С	FILT2	3" TBF	24	70	RH	Out	None	20Ga Galv	16Ga Galv Pre-Paint	TO
6	С	FAN2	3" TBF	24	66	LH	In	None	16Ga Galv	16Ga Galv Pre-Paint	TO
7	E	PL2	3" TBF	24	66	LH	In	None	16Ga Galv	16Ga Galv Pre-Paint	TO

103.2 Notes / Features

1. Door Types

TBF = Thermal Break Factory

2. All doors insulated with Polyurethane Foam.

3. Options: SC = Safety Catch, TO = Tool Operated Handle

104 Drains

104.1 A	II Drains (inclu	ding those as	sociated with	specific o	components)			
Box	Section	Туре	Conn (in)	Hand	Above Floor	Pipe Ext.	Grating Material	Pan Material
D	HW1/CW1	Drain Pan	1.25	Left	0.00 in	0.00 in	None	16Ga 304 SS

104.2 Notes / Features

1. Drain Constructions included: Triple Pitched

105 Internal Walls

Box	Section	Wall Name	Depth	Panel Mat.	Liner Mat.	Insulated
В	Economizer 1	InternalWall 1	2.000 in	Default	16Ga Galv	False
В	Economizer 1	InternalWall 6	2.000 in	Default	16Ga Galv	False
В	Economizer 1	InternalWall 7	2.000 in	Default	16Ga Galv	False



Unit Design Options Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

106 Static Pressure Summary

106.1 Condition 1

106.1.1 Return		5
Tunnel	Description	APD (in.H20)
AirTunnel 1	RA Opening (Return Air)	0.00
AirTunnel 1	EXH Opening - Louver & Damper (Exhaust Air)	0.18
	Total Static Pressure:	0.18
106.1.2 Supply		1.1.1
Tunnel	Description	APD (in.H20)
AirTunnel 1	OSA Opening - Louver & Damper (Outside Air)	0.14
AirTunnel 1	Hot Water Coil 1	0.05
AirTunnel 1	Chilled Water Coil 1	0.58
AirTunnel 1	RA Opening - Damper (62.5x16.5)	0.02
AirTunnel 1	SA Opening (Supply Air)	0.48
AirTunnel 1	Filter 2, Pre / Final (Average Pressure Drop)	1.33
	Total Static Pressure:	2.60
106.1.3 Unassigne	d	
Tunnel	Description	APD (in.H20)
AirTunnel 1	Plenum Fan 1 (Supply) 8,000 ACFM @ 1.50 in.H20	0.00
AirTunnel 1	Plenum Fan 2 (Supply) 8,000 ACFM @ 4.00 in.H20	0.00
	Total Static Pressure:	0.00

106.2 Notes/Legend

1. Summary report does not include static pressure of components supplied by others in the field unless otherwise noted.

Design Assistant

10.0.0/2.0.3.1



PROJECT	Schmitt Elementary
QUOTE #	24-0139-004
UNIT TAG	AHU - 4
QUANTITY	1

Fans



Project Name: Schmitt Elementary

Unit Tag: AHU - 4

200 Plenum Fan 1 (Supply) : FAN1 : Box A

1. Function	Supply	6. Elevation	39 ft	
2. Fan Quantity	1	7. Stand Height	4 in	
3. Orientation	Horizontal	8. Blankoff Material	16Ga Galv	
4. Drive System	Direct Drive	9. Blankoff Finish	None	
5. Isol. / Defl.	None	10. Fan Construction	Galvanized	

200.2 I all whieel				the state of the s
1. Diameter	22	4. Mat / Inertia	AL / 10 lb-ft ²	
2. Width	100.0 %	5. Max Wheel RPM	3,166 rpm	
3. Class	Ш			

200.3 Motor				
1. Manufacturer	Toshiba	5. Model	4OA003L1ZVS210	
2. HP	4	6. V/P/H	460/3/60	
3. Poles / RPM	4-Pole / 1740	7. FLA	5.1 Amps	
4. Frame / Casing	182T / TEAO			

200.4 Variable Freq	uency Drive		
1. Quantity	0	3. Maximum Hertz	.00
2. Voltage	460/3/60	4. Redundant VFD	No
		5. Input Line Reactor (3%)	No
		6. Individual Disconnects	No

200.5 Notes / Features	
1. Include: Aluminum Wheel	
2. Back Draft Dampers	

Design Assistant

Fans

PF09

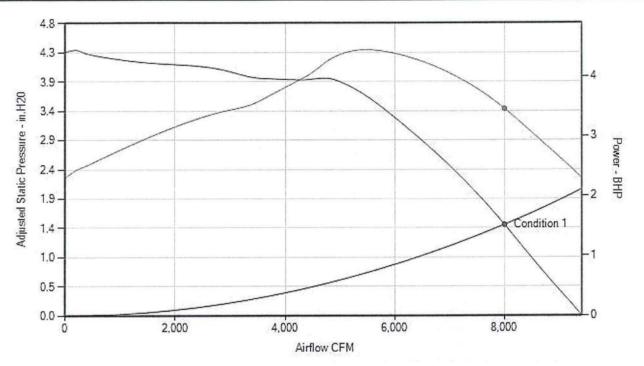
AIR SOLUTIONS TEMTROL Preliminary

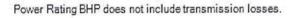
Fans

PF09

Project Name: Schmitt Elementary Unit Tag: AHU - 4

200 Plenum Fan 1 (Supply) : FAN1 : Box A (Continued)





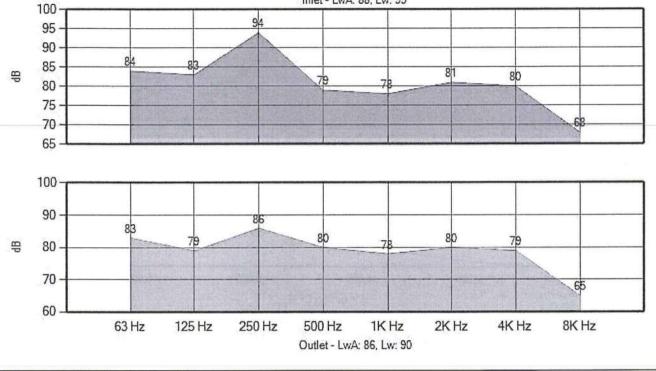
200.6 Operating Conditions	5	1	n= 40	2.46					2		Contraction of	
Operating Condition	Usage	CFM	SP	(in.H20)	Wheel RPM	Fan	BHP	Static Eff	Matte	Hz	FEG	FEI
	(%)		Input	Adjusted	Wheel RPIN	Each	Total	Static Ell	walls	112	% O.P.	FEI
Condition 1	100	8,000	1.50	1.50	1,633	3.46	-	54.7 %	2,891	56.31	FEG80 9%	1.26

Design Assistant

10.0.0 / 2.0.3.1

Project Name: Schmitt Elementary Unit Tag: AHU - 4

200 Plenum Fan 1 (Supply) : FAN1 : Box A (Continued)



Preliminary

Total Bare Fan Sound Power (dB re: 10E-12 watts)

Inlet - LwA: 88, Lw: 95

200.7 Bare Fan Sound Power (dB re: 10E-1	2 watts)	1993年1月 1993年 1995 1995 1995 1995 1995 1995 1995 199		自然の世代			N. DENT	1 Martin	1200
Operating Condition		63	125	250	500	1k	2k	4k	8k	LwA	Lw
	Inlet	84	83	94	79	78	81	80	68	88	95
Condition 1	Outlet	83	79	86	80	78	80	79	65	86	90



PF09

Fans



Preliminary

Fans

PF09

Project Name: Schmitt Elementary

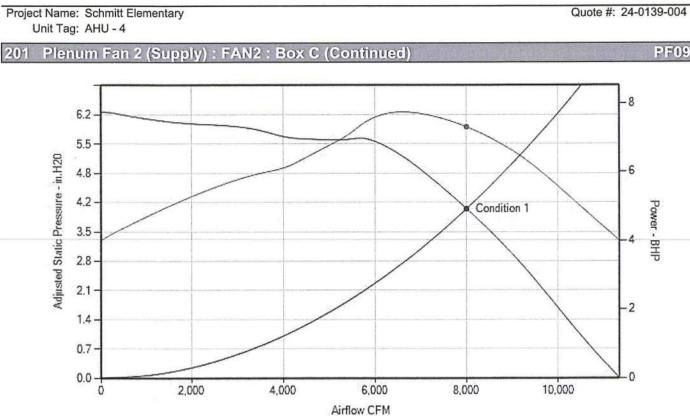
Unit Tag: AHU - 4

201 Plenum Fan 2 (Supply) : FAN2 : Box C

201.1 Configuration			
1. Function	Supply	6. Elevation	39 ft
2. Fan Quantity	1	7. Stand Height	4 in
3. Orientation	Horizontal	8. Blankoff Material	16Ga Galv
4. Drive System	Direct Drive	9. Blankoff Finish	None
5. Isol. / Defl.	None	10. Fan Construction	Galvanized
201.2 Fan Wheel			
1. Diameter	22	4. Mat / Inertia	AL / 15 lb-ft ²
2. Width	100.0 %	5. Max Wheel RPM	3,166 rpm
3. Class	Ш		2
201.3 Motor			
1. Manufacturer	Toshiba	5. Model	40AY75L1ZVS210
2. HP	7.5	6. V/P/H	460/3/60
3. Poles / RPM	4-Pole / 1760	7. FLA	9.8 Amps
4. Frame / Casing	213T / TEAO		

201.4 Variable Freq	uency Drive		
1. Quantity	0	3. Maximum Hertz	.00
2. Voltage	460/3/60	4. Redundant VFD	No
		5. Input Line Reactor (3%)	No
		6. Individual Disconnects	No

201.5 Notes / Features	
1. Include: Aluminum Wheel	
2. Back Draft Dampers	K





201.6 Operating Condition	s	Terra State	1-19	(日本)于这些				southe setting		100		
Operating Condition	Usage	CFM	SP	(in.H20)	Wheel RPM	Fan	BHP	Static Eff	Watts	Hz	FEG	FEI
	(%)	CFIN	Input	Adjusted	wheel RPIN	Each	Total	Static Ell	vvalis		% O.P.	L CI
Condition 1	100	8,000	4.00	4.00	1,964	7.30	-	69.1 %	5,940	66.95	FEG80 0%	1.37



PF09

TEMTHOL

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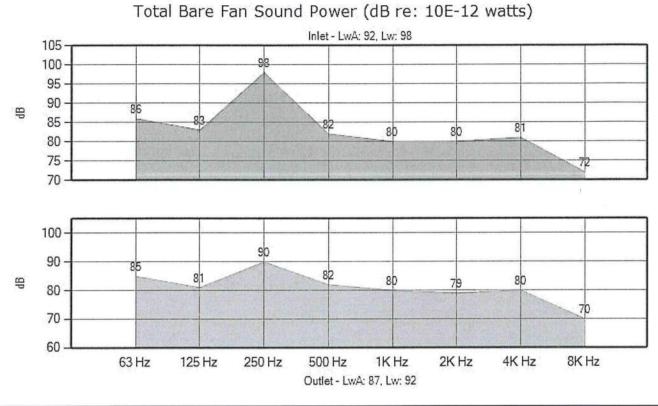


Preliminary

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

201 Plenum Fan 2 (Supply) : FAN2 : Box C (Continued)



201.7 Bare Fan Sound Power (dB re: 10E-1	2 watts)		Section 1	-		3 -		Marine H	
Operating Condition	1.1.1.1	63	125	250	500	1k	2k	4k	8k	LwA	Lw
	Inlet	86	83	98	82	80	80	81	72	92	98
Condition 1	Outlet	85	81	90	82	80	79	80	70	87	92

PF(0.9)



TEMTROL

PROJECT	Schmitt Elementary
QUOTE #	24-0139-004
UNIT TAG	AHU - 4
QUANTITY	1

Coils

Design Assistant



Coils

Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

300 Chilled Water Coil 1 : HW1/CW1 : Box D

5WC - 6 - 30 x 44 x 5 - 10 AL

300.1 Coil Layout	And Charles How of	Service and the service of the servi		Sector R
1. Coil Hand	Left	6. Rack Style	None	
2. Configuration	Single	7. Rack Finish	None	
3. Connection Orientation	Straight	8. Blankoff Material	16Ga 304 SS	
4. Connection Material	Red Brass	9. Blankoff Finish	None	
5. Connection Type	MPT			

300.2 Construction	on				日間は「読む」「自己」の言語
1. Quantity	2	8. Stand Height	1 in	14. Casing	16Ga 304 SS
2. Serpentine	0.8333333	Tube Detail	I - Primary Surface	15. Coating	None
3. Fin Height	30.000 in	9. Material	Copper	Fin Detail -	Secondary Surface
4. Fin Length	44.000 in	10. O.D. x Wall	0.625 x 0.025 in	16. Material	Aluminum
5. Rows	5	11. Spacing	1.500 x 1.299 in	17. Thickness	0.010 in
6. Fins per Inch	10	12. Internal	Smooth	10 Configuration	Corrugated, Waffle with
7. Face Area	18.33 ft ²	13. Return Bends	0.035 in	18. Configuration	Straight Edge

Single Bank, Left Hand, 2 per unit

5WC - 6 - 30 x 44 x 5 - 10 AL

No. of Land	Supply / Retu	Irn Connections			State State	
Quantity	Туре	Pipe Size	Material	Туре	Vent Location	Drain Location
2	MPT	1.5 in	Red Brass	0.125 in FPT	Return Connection	Supply Connection

300.3 Condition 1			
Entering		Leaving	
1. Actual Airflow	8,000 ACFM	10. Total Capacity	317.8 MBH
2. Standard Airflow	7,841 SCFM	11. Sensible Capacity	225.6 MBH
3. Elevation	39 ft	12. Actual Face Velocity	436.36 ft/min
4. Entering Air DB	80.0 °F	13. Leaving Air DB	53.9 °F
5. Entering Air WB	67.0 °F	14. Leaving Air WB	53.7 °F
6. Fluid Type	Water	15.APD	0.58 in.H20
7. Entering Fluid Temp	44.0 °F	16.Leaving Fluid Temp	54.0 °F
8. Fluid Flow Rate	63.3 GPM	17. Fluid Velocity	2.27 ft/s
9. Fluid Fouling Internal	0.0000	18. Fluid Pressure Drop	4.43 ft.H20

Notes:

1. Coil is NOT certified by AHRI

2. Odd tubes in Circuiting

3. Chilled water velocity is below recommended minimum of 2.5 fps

300.4 Notes / Features

1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179

2. Coil is directly connected to the downstream side of Hot Water Coil 1.

3. Top and bottom casing flange height is 1.000 in.

4. SCFM is corrected for Elevation and EDB.

5. Coils to be pressure tested at 315 PSI

6. Total operating weight is 594 lb.

7. Total fluid volume is 13.1 Gal.



Coils

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

301 Hot Water Coil 1 : HW1/CW1 : Box D

5WC - 4 - 30 x 44 x 1 - 6 AL

5WC - 4 - 30 x 44 x 1 - 6 AL

301.1 Coil Layout				Children and
1. Coil Hand	Left	6. Rack Style	None	
2. Configuration	Single	7. Rack Finish	None	
3. Connection Orientation	Straight	8. Blankoff Material	16Ga 304 SS	
4. Connection Material	Red Brass	9. Blankoff Finish	None	
5. Connection Type	MPT			

301.2 Construction	on				A Start Band Katha AL
1. Quantity	2	8. Stand Height	1 in	14. Casing	16Ga 304 SS
2. Serpentine	0.25	Tube Detai	I - Primary Surface	15. Coating	None
3. Fin Height	30.000 in	9. Material	Copper	Fin Detail -	Secondary Surface
4. Fin Length	44.000 in	10. O.D. x Wall	0.625 x 0.025 in	16. Material	Aluminum
5. Rows	1	11. Spacing	1.500 x 1.299 in	17. Thickness	0.010 in
6. Fins per Inch	6	12. Internal	Smooth	19 Configuration	Corrugated, Waffle with
7. Face Area	18.33 ft ²	13. Return Bends	0.035 in	18. Configuration	Straight Edge

Single Bank, Left Hand, 2 per unit

Supply / Return Connections Vent and Drain Quantity Pipe Size Vent Location Drain Location Туре Material Type MPT 1.25 in Red Brass 0.125 in FPT **Return Connection** Supply Connection 2

Entering			Leaving
1. Actual Airflow	8,000 ACFM		
2. Standard Airflow	8,468 SCFM	9. Sensible Capacity	204.9 MBH
3. Elevation	39 ft	10. Actual Face Velocity	436.36 ft/min
4. Entering Air DB	40.0 °F	11. Leaving Air DB	62.3 °F
5. Fluid Type	Water	12.APD	0.05 in.H20
6. Entering Fluid Temp	180.0 °F	13. Leaving Fluid Temp	140.0 °F
7. Fluid Flow Rate	10.5 GPM	14. Fluid Velocity	1.20 ft/s
8. Fluid Fouling Internal	0.0000	15. Fluid Pressure Drop	0.45 ft.H20

Notes:

1. Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

2. Hot water velocity is below recommended minimum of 2.5 fps

301.4 Notes / Features

- 1. Manufacturer: Nortek Air Solutions, 5510 SW 29th Street, Oklahoma City, OK 73179
- 2. Coil is directly connected to the upstream side of Chilled Water Coil 1.
- 3. Top and bottom casing flange height is 1.000 in.
- 4. SCFM is corrected for Elevation and EDB.
- 5. Coils to be pressure tested at 315 PSI
- 6. Total operating weight is 194 lb.

7. Total fluid volume is 3.1 Gal.



PROJECT	Schmitt Elementary
QUOTE #	24-0139-004
UNIT TAG	AHU - 4
QUANTITY	1

Components



Preliminary

Components Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

500 Filter 2 : FILT2 : Box C

1. Loading	Upstream Face Load	7. Bank Size	48.063 in W x 60.000 in H
2. Frame Material	Galvanized	8. Qty / set & Frame Size 1	(4) 24 in x 24 in
3. Frame Finish	None	9. Qty / set & Frame Size 2	(2) 12 in x 24 in
4. Filter Clips	(24) C-79-5	10.Qty / set & Frame Size 3	
5. Blankoff / Rack Material	16Ga Galv	11. Qty / set & Frame Size 4	
6. Blankoff / Rack Finish	None		
500.2 Pre Filter			
1. Filter Depth	2.000 in	4. Number of Sets	3
2. Efficiency	MERV 8	5. Max Face Velocity	400.00 ft/min at 8,000 ACFM
3. Manufacturer	American Air Filter	6. Model	PerfectPleat SC
500 3 Pressure Gage Speci	ifications - Gage 2		
500.3 Pressure Gage Speci 1. Manufacturer		3. Options	Hinged Cover
	ifications - Gage 2 Dwyer Magnehelic 2002 (0-2" w.c.)	3. Options 4. Quantity	Hinged Cover 1
1. Manufacturer	Dwyer		
Manufacturer Model / Range S00.4 Final Filter	Dwyer		
1. Manufacturer 2. Model / Range	Dwyer Magnehelic 2002 (0-2" w.c.)	4. Quantity	1



Components

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

Quote #: 24-0139-004

600 OSA Opening : OSA : Box B : Near Side 600.1 Opening Construction 1. Description Outside Air 4. Shape Rectangle 2. Max CFM 8,000 ACFM 5. Max APD 0.14 in.H20 41.5 W x 55.5 H in 3. Size 600.2 Damper Specifications No 1. Manufacturer 6. Jackshaft Ruskin 569.94 ft/min Ruskin CD 50 (Aluminum) 7. Max Face Velocity 2. Model 38,500 in (Blade Direction) x 8. Torque 98 lb-in

3. Size	52.500 in	9. End Switches	No	
4. Blade Config	Parallel			
5. Blade Orientation	Horizontal			
Notes:				

1. Ordered with 1.500 in. Front Flange

600.3 Damper Actuator	the design of the second second	
1. Manufacturer	6. Qty	1
2. Model	7. Floor Mounted	
3. Direction	8. Furnished By	Others
4. Location	9. Mounted By	Others
5. Type	10. Wiring By	Others

600.4 Louver Specifications				
1. Manufacturer	Ruskin	4. Options		
2. Model	EME6625D	5. Max Face Velocity 500.16 ft/min		
3. Size	41.5 W x 55.5 H in	6. Max Free Area Velocity 1,457.09 ft/min		

600.5 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

601 SA Opening : SA : Box E : Roof

601.1 Opening Const 1. Description	Supply Air	4. Shape	Rectangle	2.
2. Max CFM	8,000 ACFM	5. Max APD	0.48 in.H20	
3. Size	41 W x 14 H in	6. Max Velocity	2,007.00 ft/min	

602 RA Opening : RA : Box A : Roof

602.1 Opening Construction				
1. Description	Return Air	4. Shape	Rectangle	
2. Max CFM	8,000 ACFM	5. Max APD	0.00 in.H20	
3. Size	41 W x 14 H in	6. Max Velocity	2,007.00 ft/min	

603 EXH Opening : EXH : Box B : Far Side

603.1 Opening Construction				
1. Description	Exhaust Air	4. Shape	Rectangle	
2. Max CFM	8,000 ACFM	5. Max APD	0.18 in.H20	
3. Size	41.5 W x 55.5 H in			



Components Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

603 EXH Opening : EXH : Box B : Far Side (Continued)

1. Manufacturer	Ruskin	6. Jackshaft	No	
2. Model	Ruskin CD 50 (Aluminum)	7. Max Face Velocity	569.94 ft/min	
0.0:	38.500 in (Blade Direction) x	8. Torque	70 lb-in	
3. Size	52.500 in	9. End Switches	No	
4. Blade Config	Opposed			
5. Blade Orientation	Horizontal			

1. Ordered with 1.500 in. Front Flange

603.3 Damper Actuator		And the second
1. Manufacturer	6. Qty	1
2. Model	7. Floor Mounted	
3. Direction	8. Furnished By	Others
4. Location	9. Mounted By	Others
5. Type	10. Wiring By	Others

603.4 Louver Specific	ations		
1. Manufacturer	Ruskin	4. Options	
2. Model	EME6625D	5. Max Face Velocity	500.16 ft/min
3. Size	41.5 W x 55.5 H in	6. Max Free Area Velocity	1,457.09 ft/min

603.5 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others

604 RA Opening : RA : Box B : Internal Wall

604.1 Opening Cons	truction	Card bolinich unit that einer the	interaction built and the second second
1. Description	Return Air	4. Shape	Rectangle
2. Max CFM	8,000 ACFM	5. Max APD	0.02 in.H20
3. Size	16.5 W x 62.5 H in		

 Manufacturer 	Ruskin	6. Jackshaft	No
2. Model	Ruskin CD 50 (Aluminum)	7. Max Face Velocity	1,117.09 ft/min
	16.500 in (Blade Direction) x	8. Torque	50 lb-in
3. Size	62.500 in	9. End Switches	No
4. Blade Config	Parallel		
5. Blade Orientation	Horizontal		

1. Ordered with 1.500 in. Front Flange

604.3 Damper Actuator	Victory Letters	et at a with the	- 2 - S
1. Manufacturer	6. Qty	1	
2. Model	7. Floor Mounted		
3. Direction	8. Furnished By	Others	
4. Location	9. Mounted By	Others	1.22
5. Type	10. Wiring By	Others	

604.4 Notes / Features

1. Damper Actuators and mounting accessories furnished and mounted by Others at Left Hand location.

2. Damper Actuators wired by Others



PROJECT	Schmitt Elementary
QUOTE #	24-0139-004
UNIT TAG	AHU - 4
QUANTITY	1

Electrical

Date/Revision: 2024-02-19 / Rev. P1

Design Assistant 10.0.0 / 2.0.3.1



Preliminary

Electrical

Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

700 ElecPanel 5 : F	AN1 : Bo	ox A : Far Sid	e	NELS NORTHER				
700.1 Electrical Service Inf	ormation		Sec. 304	200-2 211 -02	(a) (b)		54. MAR	
1. Volt/Phase/Hertz	460/3/60		3.	Provides power to		Supply Fan		
2. MCA	6.4							
1. For electrical loads see el	ectrical draw	ings						
700.2 Construction								
1. Enclosure Type	Junction E	ox	4.	Mounting		Surface mo	unt on un	iit
2. Type	NEMA 4 In	ndoor / Outdoor	5.	Finish		Polyester R	esin (Sar	ndstone)
3. Size		ical drawings						
700.3 Options					ST 100			19122 (53.5)
1. Cooling Fan	No		5.	Floor Stand		No		
2. Filter Kit	No		6.	Control Transform	ner	No		
 Keypad or Touch screen on Door 	the statement of the st			Window Kit		No		
4. Power Transformer	No							
701 ElecPanel 7 : F	AN2 : Bo	ox C : Far Sid	le					
701.1 Electrical Service Int	ormation							9
1. Volt/Phase/Hertz	460/3/60		3.	Provides power to)	Supply Fan		
2. MCA								
1. For electrical loads see el		vinas						
701.2 Construction		CONTRACTOR OF STREET				0.1		
1. Enclosure Type	Junction E			. Mounting . Finish		Surface mo		
2. Type		ndoor / Outdoor	5.	FINISN		Polyester Resin (Sandstone)		
3. Size	See electr	ical drawings						
701.3 Options		Mar Warts	New Training		1	Steel and		Diff Value
1. Cooling Fan	No		5.	5. Floor Stand No				
2. Filter Kit	No		6.	6. Control Transformer No				
 Keypad or Touch screen on Door 	No		7.	Window Kit		No		
4. Power Transformer	No							
702 Lighting Circu	it				100			
702.1 Electrical Service In	formation		WENGAL	CYOCARC LAST		Alexand	1 al na	
1. Volt/Phase/Hertz	120/1/60		3.	Provides power to)	ElecSwitch	1, Lightin	Ig
2. MCA	0.0							
1. For electrical loads see e	ectrical drav	vings						
702.2 Switches / Outlets	Set of the set	LT. 7990.151	2000125		LAN E.S	1251 3. 11	1000	30.000.000
Name Box	Section	Туре	Mounted	Illum. Switch	Time	r Cover	GFCI	MOCP
ElecSwitch 1 A	PL1	Light Switch / 120V Outlet	External	No	None	e Yes	Yes	20.0 Amp
 Switch / Outlet is connected 	d to service.							
702.3 Lighting Types and	Quantities					-		1.1.1.1.1
(7) Vapor Proof 14W LED	quantities		No. Dr. Com					
(i) tupor i toor itti LLD								



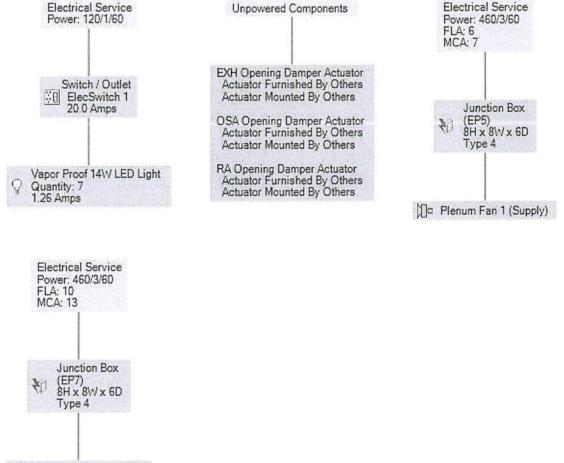
Electrical

Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

703 Electrical Layout Diagram



Plenum Fan 2 (Supply)



TEMTROL PROJECT Sch

PROJECT Schmitt Elementary QUOTE # 24-0139-004 UNIT TAG AHU - 4 QUANTITY 1

Unit Data

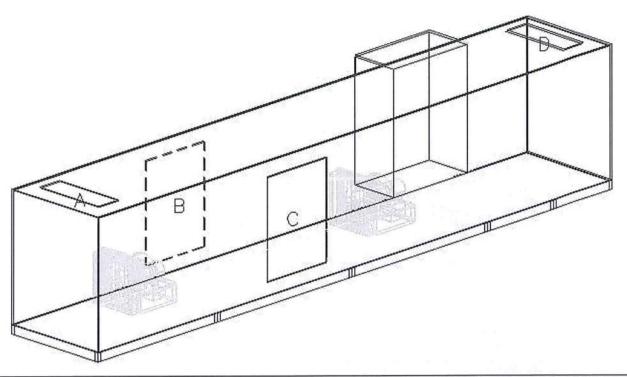


Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

900 Air Handler Sound Power Projection



Openings - Condition 1		Octave Band Freq. Sound Power (db re: 10E-12 watts)						watts)					
Tag	Title	Cabinet Liner	Area	63	125	250	500	1k	2k	4k	8k	LwA	Lw
A ²	RA Opening	Solid	4.0 ft ²	82	82	93	77	76	79	77	65	88	94
В	EXH Opening	Solid	16.0 ft ²	83	80	93	81	79	80	80	68	88	94
С	OSA Opening	Solid	16.0 ft ²	84	82	96	81	79	79	80	71	90	97
D ²	SA Opening	Solid	4.0 ft ²	82	79	88	79	77	76	76	66	85	90
Casing Radiated		84	77	83	71	71	62	61	51	78	87		
	Floor	Radiated		74	71	74	46	43	37	35	35	67	78

900.2 Notes

 Fan data accuracy as per AMCA 311 (63Hz +6 dB, remaining bands +3 dB with an additional 3 dB available in any one band). Model predictive accuracy is ±6 dB. Fan and modeling accuracy is based on ideal flow patterns and design conditions. Projected fan and system sound levels are provided for comparison purposes only — actual levels may vary.

2. Sound power projections are not valid for opening velocities over 1,500 ft/min.

3. Sound power projects are not valid with VFD motor control carrier frequencies of less than 8KHz.



Project Name: Schmitt Elementary

Unit Tag: AHU - 4

Quote #: 24-0139-004

GT

901 Center of Gravity

Size (Inches)		Operating Maight (Doundo)	Center of Gravity (Inches)			
Х	Y	Z	 Operating Weight (Pounds) 	Х	Y	Z
362.00	87.00	77.50	10,512	194.00	34.00	37.00

193

901.1 Notes

1. Center of gravity and weights are estimates and subject to change.

2. The center of gravity and weights shown above are based on operating weights and do not include packaging materials.

3. A 5% safety factor has been applied to the operating weights.

4. Corner weights apply to rectangular boxes only.

5. Corner weights are to assist in handling of the unit. Some units are not intended to be supported only at the corners. Contact your Sales Representative for support information.



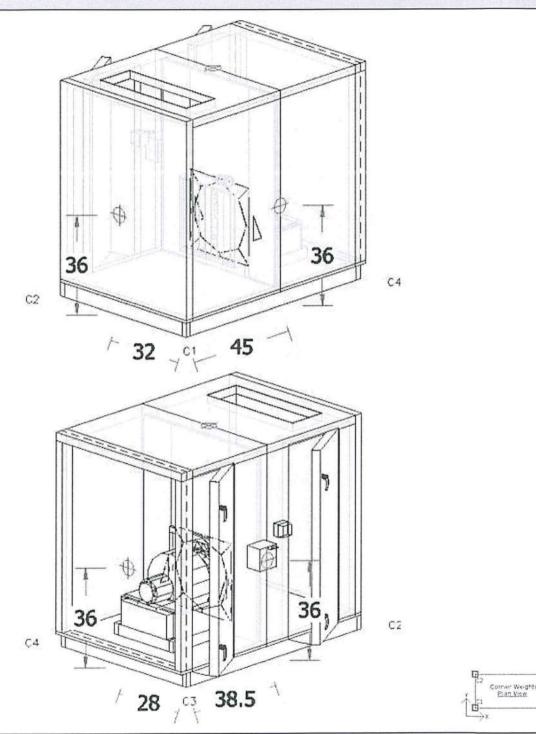
Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

901 Center of Gravity (Continued)

901.2 Box A



	Size (Inches)	10 - 10 - 14 - 14	Objectes (Maisht (Deurda)	State and state	Corner Weig	hts (Pounds)	
Х	Y	Z	Shipping Weight (Pounds)	C1	C2	C3	C4
83.50	60.00	77.50	2,096	451	515	603	527

◊ Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Design Assistant

10.0.0/2.0.3.1

Ð

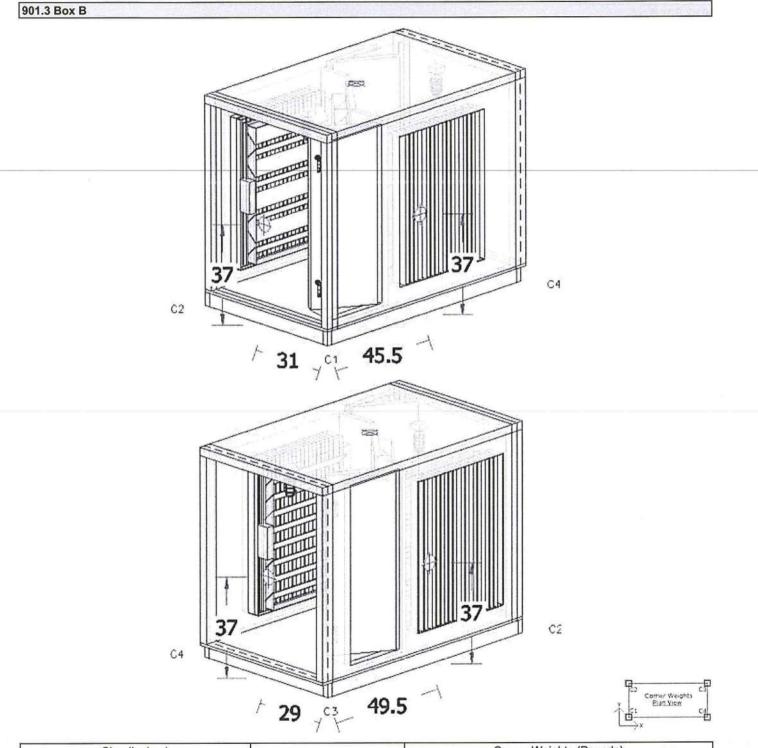


Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

901 Center of Gravity (Continued)



	Size (Inches)		Inches) Chipping Weight (Pounds)		Corner Weights (Pounds)			
Х	Y	Z	 Shipping Weight (Pounds) 	C1	C2	C3	C4	
95.00	60.00	77.50	2,463	620	663	610	570	

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Design Assistant 10.0.0 / 2.0.3.1



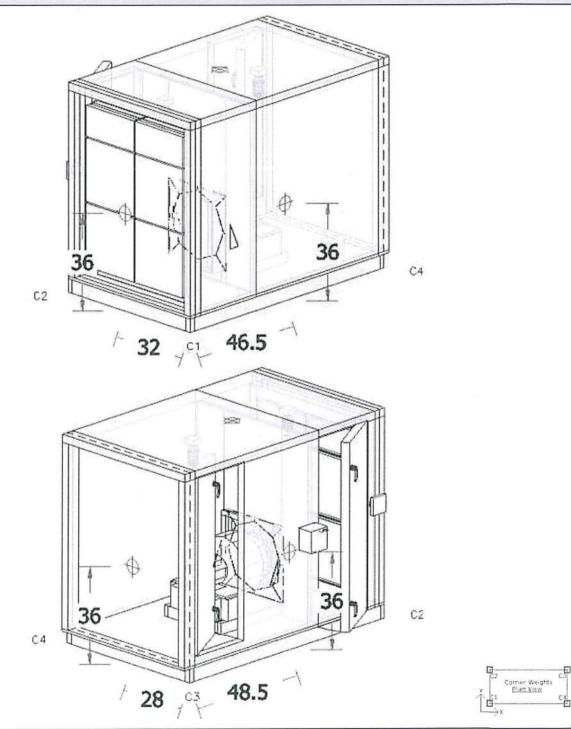
Unit Data Quote #: 24-0139-004

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

901 Center of Gravity (Continued)

901.4 Box C



Size (Inches)			Objectes Weight (Deutsda)	Corner Weights (Pounds)			
Х	Y	Z	 Shipping Weight (Pounds) 	C1	C2	C3	C4
95.00	60.00	77.50	2,525	614	702	645	564

O Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Design Assistant

10.0.0/2.0.3.1

NORTEK. AIR SOLUTIONS

Preliminary

Unit Data Quote #: 24-0139-004

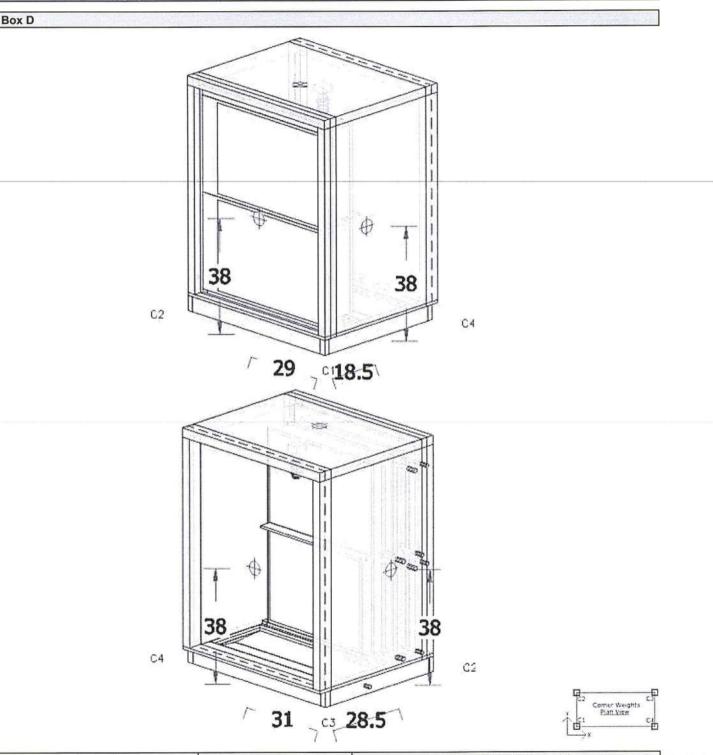
Project Name: Schmitt Elementary

TEMTROL

Unit Tag: AHU - 4

901 Center of Gravity (Continued)

901.5 Box D



Size (Inches)			Objector Micheld (Bounds)	Corner Weights (Pounds)			
Х	Y	Z	- Shipping Weight (Pounds)	C1	C2	C3	C4
47.00	60.00	77.50	1,675	525	491	319	341

Ocenter of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

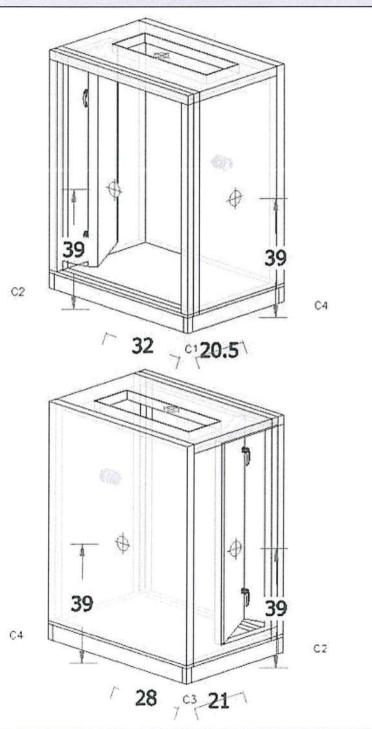


Project Name: Schmitt Elementary

Unit Tag: AHU - 4

901 Center of Gravity (Continued)

901.6 Box E



102		d
	Corner Weights	
A la	CUMUNISM	C4

Size (Inches)			Chinning Waight (Doundo)	Corner Weights (Pounds)			
Х	Y	Z	Shipping Weight (Pounds)	C1	C2	C3	C4
41.50	60.00	77.50	1,043	246	281	275	240

O Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Design Assistant

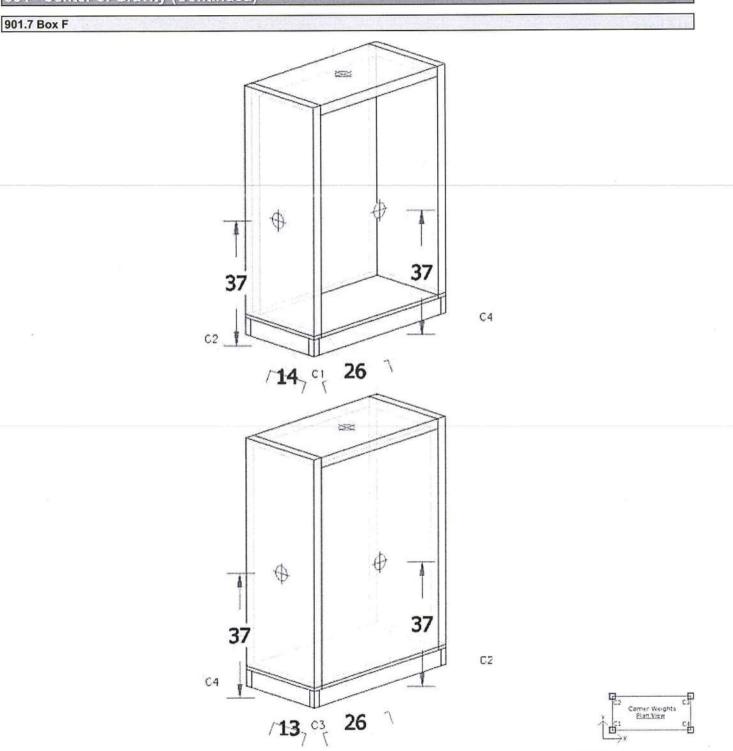
NORTEK.

AIR SOLUTIONS TEMTROL

Project Name: Schmitt Elementary

Unit Tag: AHU - 4

901 Center of Gravity (Continued)



Size (Inches)			Objection Matcheld (Devender)	Corner Weights (Pounds)			
Х	Y	Z	 Shipping Weight (Pounds) 	C1	C2	C3	C4
52.00	27.00	74.00	682	164	177	177	164

◊ Center of gravity, weight, and corner weights shown are based on shipping weight. Values are estimates and subject to change.

Unit Data

Quote #: 24-0139-004



PROJECT Schmitt Elementary QUOTE # 24-0139

Terms and Conditions

NORTEK AIR SOLUTIONS TERMS AND CONDITIONS OF SALE

These Terms and Conditions of Sale and the non-conflicting provisions in Seller's quotation, acknowledgement or invoice from Seller form the parties' agreement (the "Agreement") which governs all sales of any products ("Products") and services ("Services") from Nortek Air Solutions, LLC or its North American affiliates or business units selling Products and Services ("Seller") to purchaser ("Buyer"). Seller disclaims any Buyer terms that are different or conflicting. Any agreed exceptions to these terms and conditions shall be made in writing and attached to this Agreement.

1. Prices and Taxes. Prices are those in effect when Seller accepts a purchase order. Seller may accept or reject purchase orders in its sole discretion. All sales are subject to prior credit approval. Buyer must pay or promptly reimburse. Seller for any sales, use or any other local, state, provincial or federal taxes arising from the sale or delivery of the Products and Services or provide an exemption certificate.

2. Payment. Unless otherwise agreed in writing. Buyer shall pay invoices, without setoff, NET 30 days from invoice date in the currency specified on the invoice. If Buyer fails to make payment (a) Buyer shall pay all of Seller's costs arising from Buyer's failure to pay according to terms including attorneys' fees, commissions, and product cancellation costs. (b) Seller may accelerate all Buyer payments, and (c) Seller may terminate or suspend further performance under the Agreement and any other agreements with Buyer. Past due amounts are subject to service charges of 11/2% per month (or the maximum amount permitted by law) and, if credit terms have been agreed to in writing, Seller reserves the right to charge lawful rates of interest upon any outstanding balance, whether past due or not. If in Seller's judgment, reasonable grounds for insecurity arise concerning Buyer's ability to make payment when due, Seller may demand additional satisfactory security or adequate assurance of due performance, may refuse delivery except for cash, including payment for all goods previously delivered under the contract, or may stop delivery or reclaim the Products, in addition to all other remedies provided for by law. Buyer's purchase order, and any shipping or delivery instructions, shall each constitute the Buyer's separate written representation that it is solvent.

3. Changes. Seller may revise prices, dates of delivery, and warranties upon acceptance of requests by Buyer for modifications to Products or Services. If Buyer rejects proposed changes to made-to-order Products deemed necessary by Seller to conform to the applicable specification, Seller is relieved of its obligation to conform to such specification.

4. Shipment and Delivery. Deliveries of Products, risk of loss and title (subject to reservation of Seller's security interest) pass to Buyer FCA Seller's facility (Incoterms 2010) for domestic shipments or EXW Seller's Facility (Incoterms 2010) for international shipments. Buyer is responsible for all demurrage or detention charges. Title to any software provided with Products remains with Seller or its supplier. Any claims for shortages or transit damages must be submitted directly to the carrier. All shipping dates are

approximate and not guaranteed. Seller reserves the right to make partial shipments. Seller is not bound to tender delivery of any Products for which Buyer has not provided shipping instructions. If shipment of Products is postponed or delayed by Buyer for any reason, including a Force Majeure Event (see Section 9), Seller may move Products to storage at Buyer's cost and risk of loss, the Products then deemed delivered. Products may not be returned except with the prior written consent of Seller, which may include additional terms.

5. Inspection and Acceptance. Unless otherwise agreed in writing signed by Seller, Buyer shall inspect Products upon receipt at the first delivery destination. Buyer's failure to inspect Products and give written notice to Seller of rejection within ten (10) days after receipt at first delivery destination shall constitute Buyer's irrevocable acceptance of Products delivered. Notice of any latent defect must be delivered to Seller in writing within ten (10) days of start-up.

6. Limited Warranty. Unless otherwise agreed in writing signed by Seller:

(a) Seller warrants: (i) All Products (excluding software and spare parts) manufactured by Seller will conform to the specifications and submittals provided by Seller and will be free of defects in material and workmanship ("Defects") for 12 months following start-up or 18 months following ship date, whichever occurs first, under normal use and regular service and maintenance, if installed and maintained pursuant to Seller's instructions. Extended warranties, if offered, may be purchased for an additional fee at the time of Product sale. For warranty purposes, start-up occurs when the equipment (or any portion thereof) is started for operation regardless of when the building may be ready for operation. (Per submittal, certain DX Products require Seller or its authorized Agent to perform start up or Product warranties are void. Any Seller required completed start-up form shall be delivered to Seller within six (6) months from shipment, or start-up will be deemed to have occurred on the ship date.) . With the exception of OEM parts that may provide a longer pass-through warranty term from the third party manufacturer, new spare parts will be free of Defects for 3 months following ship date. Refer to New Spare Parts Warranty Policy.

. Buyer must notify Seller in writing of any Defect promptly upon discovery and if such notification occurs within the applicable warranty period, Seller shall remedy such Defect by, at Seller's option, adjustment, repair or replacement of Products or any affected portion of Products, or providing a refund of the portion of the purchase price attributable to the defective portion of the Product. Buyer must grant Seller access to the premises at which Products are located at all reasonable times so that Seller may evaluate the Defect and make repairs or replacements on site. Repaired or replaced portions of Products are warranted until the later of the end of the original warranty period applicable to the defective portion of Products repaired or replaced or 30 days following the completion of the repair or ship date of the replacement parts; and (ii) Services will be of workmanlike quality. If Buyer notifies Seller in writing of any nonconforming

Services within 30 days after Services are completed, Seller shall re-perform, if able to be cured, those Services directly affected by such failure, at its sole expense. Buyer's sole remedy for such nonconforming Services is limited to Seller's cost of re-performing the Services.

b) Buver is responsible for disassembly, removal and re-assembly or otherwise of non-Seller supplied products. Seller does not warrant and shall have no obligation with respect to any Products or parts that: (i) have been repaired or altered by someone other than Seller or Seller's authorized representative; (ii) have been subject to misuse, abuse, neglect, intentional misconduct, accident, Buyer or third party negligence, unauthorized modification or alteration, use beyond rated capacity, improper grounding, voltage irregularities, a Force Majeure Event, or improper, or a lack of, maintenance; (iii) are comprised of materials provided by, or designed pursuant to instructions from, Buyer; (iv) have failed due to ordinary wear and tear; or (v) have been exposed to adverse operating or environmental conditions, including but not limited to contaminants, corrosive agents, chemicals or minerals, (vi) were manufactured or furnished by others and which are not an integral part of a product manufactured by Selleror (vii) have not been fully paid for by Buyer. Refrigerants, fluids, oils and expendable items such as filters are not covered by this Limited Warranty. If Seller has relied upon any specifications, information, representations or descriptions of operating conditions or other data supplied by Buyer or its agents to Seller in the selection or design of Products, and actual operating conditions or other conditions differ, any warranties or other provisions contained herein that are affected by such conditions will be null and void.

(c) Buyer is solely responsible for determining the fitness and suitability of Products for the use contemplated by Buyer. Buyer shall ensure that (i) the Products are used only for the purposes and in the manner for which they were designed and supplied, (ii) all persons likely to use or come into contact with the Products receive appropriate training and copies of applicable instructions and documentation supplied by Seller, (iii) all third parties who use or may be affected by or rely upon the Products are given full and clear warning of any hazards associated with them or limitations of their effectiveness and that safe working practices are adopted and complied with, (iv) any warning notices displayed on the Products are supplied agrees not to remove or obscure such warning notices.

(d) If Software is Licensed: To the extent available and authorized by the Third Party Software supplier, Seller hereby assigns to Buyer any warranties provided by Third Party Software providers. Seller provides Third Party Software "as is," without any warranties, express or implied. Seller has no obligation for Third Party Software failures.

(e) THE WARRANTIES SET FORTH IN THIS SECTION 6 ARE SELLER'S SOLE AND EXCLUSIVE WARRANTIES WITH RESPECT TO PRODUCTS. SOFTWARE AND SERVICES, AND ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY AGAINST INFRINGEMENT; AND ALL IMPLIED WARRANTIES OF

> NAS Terms and Conditions of Sale Issue date January 1, 2016 rev 02 February 24, 2017

MERCHANTABILITY, USAGE OF TRADE, AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to Buyer. SELLER DOES NOT WARRANT THAT THE OPERATION OF SOFTWARE WILL BE UNINTERRUPTED OR ERROR FREE, OR THAT ANY DEFECT OR MALFUNCTION IN THE SOFTWARE IS CORRECTABLE OR WILL BE CORRECTED. THE REMEDIES PROVIDED IN THIS SECTION 6 ARE BUYER'S EXCLUSIVE REMEDIES FOR ANY AND ALL CLAIMS ARISING FROM OR RELATED TO PRODUCTS AND SERVICES. All warranty claims must be received by Seller in writing on or before the end of the applicable warranty period.

7. Limitation of Remedy and Liability. Unless otherwise provided by law, Seller's total liability under the Agreement, whether in law, equity, contract, infringement, negligence, strict liability or other otherwise, shall not exceed the price paid by Buyer under the Agreement for the Product or Services giving rise to the claim. Under no circumstances shall Seller be liable for special, incidental, indirect, delay or liquidated, punitive or consequential damages for any reason. "Consequential damages" includes, without limitation. loss of anticipated profits: business interruption; loss of use, revenue, reputation or data; costs incurred, including without limitation, costs for capital, fuel or power; loss or damage to property or equipment; and environmental clean-up. Any action arising under or relating to the Agreement, (whether based in law, equity, contract, infringement, negligence, strict liability, other tort or otherwise), must be commenced with one year from the date the claim arose. Seller assumes no obligation or liability for technical advice given or not given, or results obtained. Seller has set its prices and entered into the Agreement in reliance upon the limitations of liability and other terms and conditions specified herein, which allocate the risk between Buyer and Seller and form a basis of this bargain between the parties.

8. Indemnity. (a) Seller shall defend at its own expense any action brought against Buyer by a third party alleging that Products (the "Indemnified Items") directly infringe any United States patent, and shall pay all damages and costs finally awarded in any such action, provided that Buyer has promptly notified Seller in writing of the action, delivers all necessary assistance in the defense of the action, and permits Seller to control all aspects of the defense, including settlement rights. Seller has no obligation with regard to: (i) any non-Seller originated Products, software or processes, including Indemnified Items or processes which have been modified or combined with non-Seller products or processes: (ii) any Indemnified Items or process provided pursuant to a design provided by or on behalf of Buyer; (iii) any patent issued after the date of the Agreement; (iv) any action settled or otherwise terminated without the prior written consent of Seller; or (v) any claims arising from, or related to, Seller's adherence to any specifications or instructions provided by or on behalf of Buyer.

(b) Buyer shall indemnify, defend and hold harmless Seller and its affiliates and their respective shareholders, officers, directors, members, agents and employees against all expenses, costs (including reasonable attorneys' fees), claims, demands, damages, liability, suits or the like arising in connection with or out of (i) any breach by Buyer of the Agreement; or (ii) Seller's adherence to specifications or use of material furnished or specified by Buyer or any of its agents. Additionally, if all or a part of the Indemnified Items sold hereunder are incorporated into an improvement to real property owned by a third party, Buyer will indemnify, defend and hold harmless Seller and its affiliates and their respective shareholders, officers, directors, members, agents and employees against any claim by such third party or its guests or invitees to the extent that the claim seeks to recover damages or otherwise to invoke any legal or equitable remedies beyond those for which Seller has agreed to be liable hereunder.

9. Excuse of Performance. Seller has no liability for nonperformance due to acts of God; acts of Buyer; war (declared or undeclared); terrorism or other criminal conduct: fire: flood; weather; sabotage; strikes, or labor or civil disturbances; governmental requests, restrictions, laws, regulations, orders, omissions or actions; unavailability of. or delays in, utilities or transportation; default of suppliers or other inability to obtain necessary materials; embargoes or any other events or causes beyond Seller's reasonable control (each, a "Force Majeure Event"). Deliveries or other performance may be suspended for an appropriate period of time or canceled by Seller upon notice to Buyer in the event of a Force Majeure Event, but the remainder of the Agreement will otherwise remain unaffected as a result of the Force Majeure Event. If Seller determines that its ability to perform the Services or the total demand for Products is hindered, limited or made impracticable due to a Force Majeure Event, Seller may delay delivery of Products and Services and allocate its available supply of Products (without obligation to acquire other supplies of any such Products) among its customers on such basis as Seller determines to be equitable without liability for any failure of performance. In the event of a Force Majeure Event, the date of delivery will be extended by a period equal to the delay plus a reasonable time to train and resume production, and the price will be equitably adjusted to compensate Seller for such delay and related costs and expenses.

10. Laws and Regulations. Compliance with any federal, state, provincial or local laws, regulations and directives ("Laws") relating to the installation, operation or use of Products or Services is the sole responsibility of Buyer. In addition, Buyer shall comply with all applicable laws, rules, regulations and orders related to anti-bribery or anticorruption legislation (including without limitation the U.S. Foreign Corrupt Practices Act of 1977 and all national, state, provincial or territorial anti-bribery and anti-corruption statutes). The Agreement is governed by the laws of the State where Seller's principal office is located, without giving effect to its conflict of laws rules, and the parties consent to the exclusive jurisdiction and venue of the federal and state courts located in such State. The application of the United Nations Convention on Contracts for the International Sale of Goods does not apply.

11. Drawings. Any designs, manufacturing drawings or other information submitted to Buyer remain the exclusive property of Seller. Buyer shall not, without Seller's prior

NAS Terms and Conditions of Sale Issue date January 1, 2016 rev 02 February 24, 2017 written consent, copy such information or disclose such information to a third party.

12. Cancellation. Buyer may cancel orders only upon reasonable advance written notice and upon payment to Seller of cancellation charges which include: (a) all costs and expenses incurred by Seller, and (b) a fixed sum of 10% of the total price of Products to compensate for disruption in scheduling, planned production and other indirect and administrative costs.

13. Export Control. Certain Products may be subject to export controls under the Laws of the US and other countries. Buyer must comply with all such Laws and not export, re-export or transfer, directly or indirectly, any such Product except in compliance with such Laws.

14. Assignment. Buyer acknowledges that Seller, through its affiliates (i.e., parents, subsidiaries and other affiliates) offers expanded manufacturing capability, and Seller may in its sole discretion manufacture, supply or deliver from any location or source, including any of its affiliates, any Products or Services and such manufacture, supply or delivery from such affiliates shall also be subject to these Terms and Conditions.

15. General Provisions. The Agreement constitutes the entire agreement between the parties and supersedes all other communications between the parties relating to the subject matter of the Agreement. Seller's guotations are offers that may only be accepted in full. No conditions, usage or trade, course of dealing or performance, understanding or agreement purporting to modify, vary, explain, reject, or supplement the Agreement shall be binding unless made in writing and signed by both parties, expressly and specifically referencing the Agreement, and no modification or objection shall be caused by Seller's receipt, acknowledgment, or acceptance of purchase orders, shipping instruction forms, or other documentation containing different or additional terms to those set forth herein. No waiver by either party with respect to any breach or default or of any right or remedy and no course of dealing, shall be deemed to constitute a continuing waiver of any other breach or default or of any other right or remedy, unless such waiver is expressed in writing signed by both parties, specifically referencing the Agreement. Nothing in the Agreement confers upon any person other than Seller and Buyer any right or remedy under or by reason of this Agreement. All typographical or clerical errors made by Seller in any quotation, acknowledgment or publication are subject to correction.

BUYER accepts these terms and conditions:

INDIANA THERMAL SOLUTIONS



Submittal Data

Project: L.C. Schmitt Elementary School

Date: 2/16/2024

Engineer: R.E. Dimond

Customer: Bartholomew **Consolidated School Corporation**

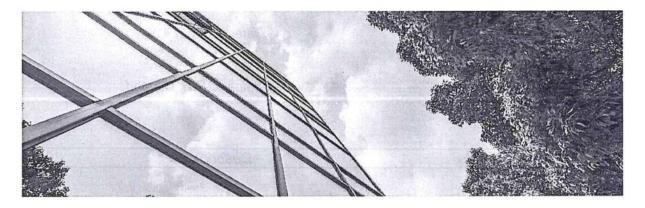
Qty	Tag	Description
1	RTU 1	Daikin Applied Packaged Rooftop Units
Submi	itted by:	Drawings in this submittal package describe the
	Rockey	equipment we propose to furnish for this project

Indiana Thermal Solutions

and are submitted for approval to manufacture.

6872 Hillsdale Court, Indianapolis, IN 46250 Phone: (317) 570-5400 / Fax: (317) 570-5414 www.ITS-Indiana.com





SUBMITTAL DATA

Job Name

Schmitt Elementary HVAC Replacement

For

Sold To

Prepared For

Customer PO#

Prepared By

Justin Holcomb

Date

2/16/2024

Technical Data Sheet - RTU-1

Rebel Drawings - RTU-1

3 7

Technical Data Sheet

Job Information		Technical Data Sheet	
Job Name	Schmitt Elementary HVA	C Replacement	
Date	2/16/2024		
Submitted By	Justin Holcomb		
Software Version	12.43		*
Unit Tag	RTU-1		

Unit Overview

Model Number Voltage V/Hz/Phase	Voltage	Design Cooling	AHRIB60 Stan	dard Efficiency	ASHRAE 90.1-2019
	Capacity Btu/hr	EER	IEER	Compliant	
DPS010A	460/60/3	119300	12.1	18.8	ASHRAE 90.1-2019 compliant

Model Number:	DPS010A	
Model Type:	Cooling	
Heat Type:	Gas	
Hot Gas Reheat:	MHGRH with Combination Space Temperature and Humidity Sensor	
Energy Recovery:	None	
Application:	Variable Air Volume, Single Zone (Mixed Air or 100% OA)	
Controls:	Microtech III	
Outside Air:	0-100% Economizer with Comparative Enthalpy Control	
Altitude:	0 ft	
Approval	cETLus	

	Dimensions and	Weight	
Length	Height*	Width	Weight*
91.0 in	56.8 in	96.5 in	2388 ю
	Corner Wei	zhts	
L1	L2	L3	L4
373 lb	339 lb	797 lb	879 іь
	Constructi	on	
Exterior	Insulation and Liners	Air	Opening Location
		Return	Supply
Painted Galvanized Steel	1" Injected Foam, R-7, Galvanized Steel Liner	Bottom	Bottom
trical			
Unit FLA	MCA	MROPD	SCCR
21.0 A	23.0 A	30 A	65 kAIC
Note:	Use only copper supply wires with a terminals must be made with copp		conductor rating. Connections to
urn/Outside/Exhaust Air			

Return/Outside/Exhaust Air					
Outside Air Option					
Туре	Damper Pressure Drop	Exhaust Air Type			
90.1 and California Title 24 Compliant Economizer	0.07 inH ₂ O	Barometric Relief			

Technical Data Sheet

Filter Section					
A.C. Strength of the out		Physical		and the second se	
Туре	Quantity / Size	Face Area	Face Velocity	Air Pressure Drop	
COMBO RACK - 2" MERV8 filters from actory & blank 4" rack	6 / 18 in x 24 in x 2 in	18.0 ft²	166.7 ft/min	0.05	

				Physical	P. 32	The second second		
Coil Type	Refrigerant Type	Fins per Inch	Rows	Face Area	a Face V	/elocity	Air Pressure drop	Drain Pan Material
Cu Tube/ Al Fin	R410A	15	4	15.4 ft ²	194.4	1 ft/min	0.17 inH ₂ O	Stainless Steel
			Coolin	ng Performance	approved and	usion le consti		1. 31 50.3
	Capacity			Indoor	Air Temperatu	re		Ambient air
Total	Sensible	Moisture	Ente	ring		Leaving		Temperature
Btu/hr	Btu/hr	Removal lb/h	Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F	Dewpoint °F	۴F
119300	83828	30.7	80.0	67.0	54.4	54.1	53.8	95.0

Hot Gas Reheat Coil Section						
Туре	Face Area	Air Pressure Drop	Total Capacity	Leaving Air Temperature		
				Dry Bulb	Wet Bulb	
Aluminum Tube Micro-Channel	14.6 ft²	0.04 inH ₂ O	50627 Btu/hr	70.0 °F	59.9 °F	

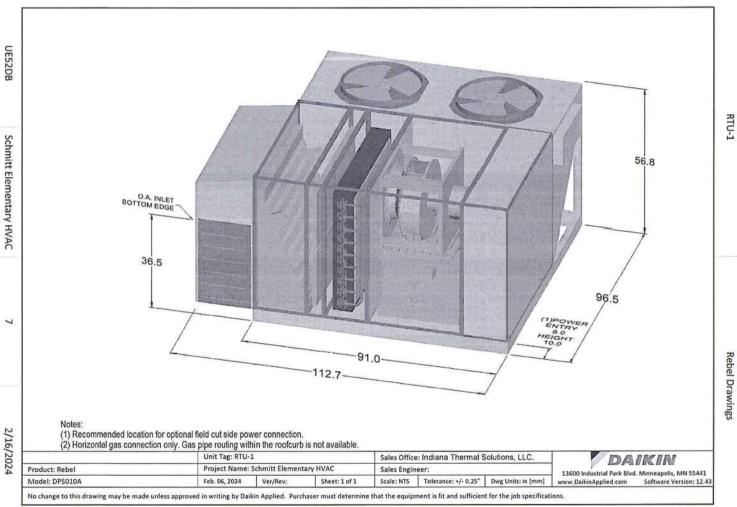
		Fan			
Туре	Fan Wheel Diameter	Fan Series	Fan Isolation	Total Input Power (kW)	Fan Energ Index (FEI
SWSI AF	18 in	Series II	None	1.19404	1.506
0		Performance			
Airflow	Total Static Pressure	Fan Speed	Brake Horsepower	Altitude	
3000 CFM	1.9 inH₂O	1539 rpm	1.37 HP	0 f	ť
	Motor			Driv	/e
Туре	Horsepower	Efficiency	FLA	Туре	
ECM Motor	8.0	Premium	6.8 A	Direct Drive	

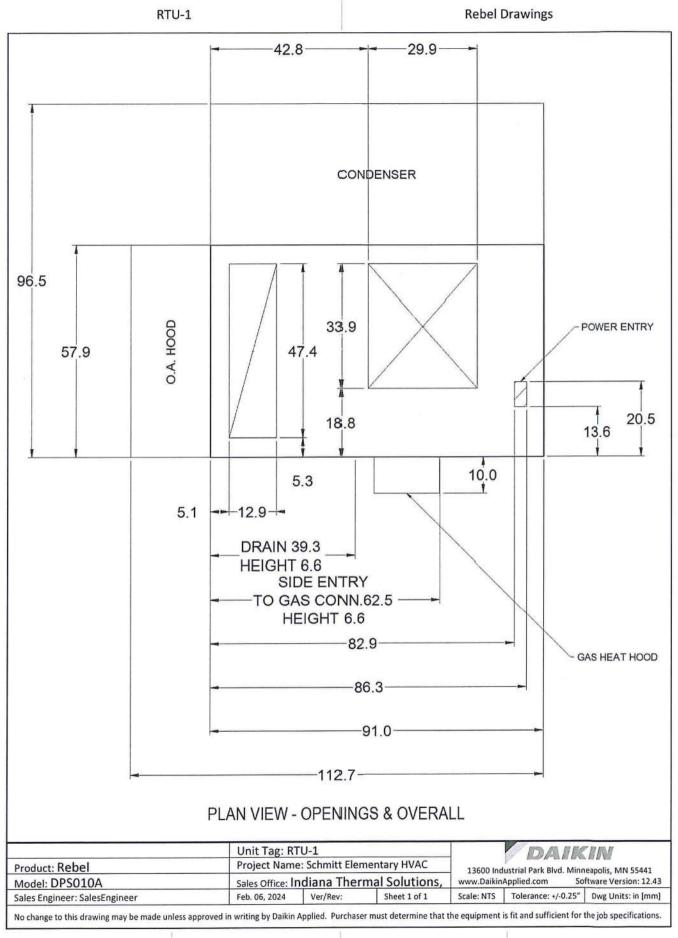
s Heat Section				The second second		The set the set	and the second second second
			Phys	ical			
Airflow	Max Allowat Temp I		Size	Conne	ction (Qty) Size	Heat Ex	changer Material
3000 CFM	60.0	°F	200 MBH	(1) 0.75	in. Female NPT	Stai	nless Steel
			Perform	mance			
Capacity	Air Temperat	ture Dry Bulb	Air Pre	essure Drop	Gas Pr	essure	Modulation
Btu/hr	Entering °F	Leavin °F	ig i	inH₂O	Minimum inH₂O	Maximum inH ₂ O	
160000	60.0	109.2	2	0.02	5	14	Modulating 5: Turndown

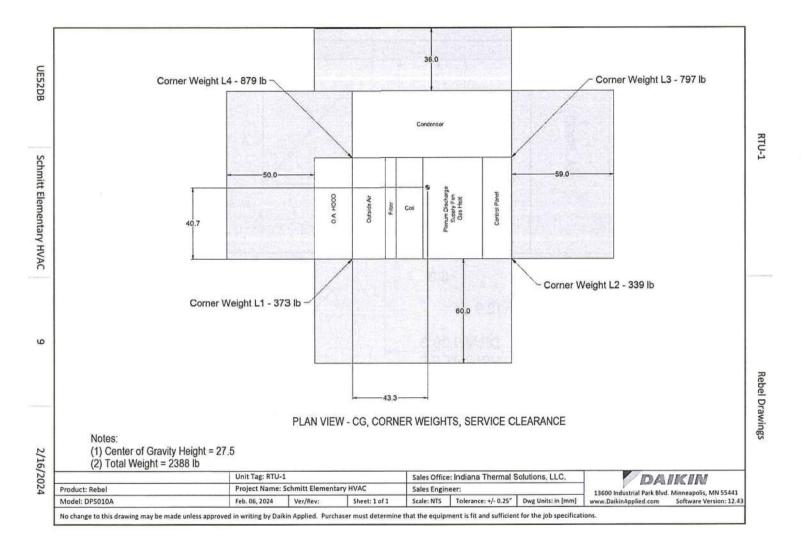
Technical Data Sheet

nit Discharge Condi	itions					
and the second states of the second se	Contract Charles	AirTemp		1994 - 1995 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		
Motor Heat Btu/hr	Moisture Remov	val Unit Leavin °		Unit Leaving Wet Bulb °F	Unit Leaving Dewpoint °F	
5532	30.7	56	.2	54.7	53.8	
		Minimum	Airflows			
N	lotes: Refer to fan curv	ve for applicability of	approximate airfle	ows		
ondensing Section				- Charles and		
Selection of the	HER STREET, STORES	Comp	ressor	and the second second second		
Туре	Quantity	Refrigerant Charge Ib	Total Power	Capacity Control	Compressor Isolation	
Inverter Scroll + Fixed Scroll	2	25.8	8.12 kW	Mod Control with Inverter Compressor	Rubber in Shear	
		Compress	sor Amps:			
	Compressor 1			4.5 A		
	Compressor 2			7.9 A		
		Conden	ser Coil			
Ту	pe	Fins p	er Inch	Fin	Material	
Aluminum N	Aicrochannel	23		Aluminum		
Coil Optic	ons: Vandal Guard					
A CARE STREAM		Condenser	Fan Motors		and the second second	
	Number of Motors*			Full Load Current (Total)	
	2			1.8 A		
	AH	IRI 360 Certified Data at A	HRI 360 Standard Con	ditions		
Net Ca	apacity	EER	IEER	and a state of the second state of the second state of the	RAE 90.1	
121000	0 Btu/hr	12.1	18.8	ASHRAE 90.1	-2019 compliant	
nternal Pressure Dre	op Calculation					
External Stat	tic Pressure:		1.50 i	nH₂O		
	Filter:		0.05 i	nH₂O		
	Outside Air:		0.07 i	nH₂O		
DX Coil:			0.17 i	nH₂O		
Hot Gas Reheat:		0.04 inH ₂ O				
Gas Heat:			0.02 i	nH₂O		
Total Sta	tic Pressure:		1.86 i	nH₂O		
ound						
		A description of the second se	und Power (db)			
Frequency 63		250 Hz 500 H		2 kHz 4 kH		
Inlet 77		83 78		74 69		
Discharge 77		86 83		80 77		
Radiated* 85	5 85	81 78	76	71 64	57	

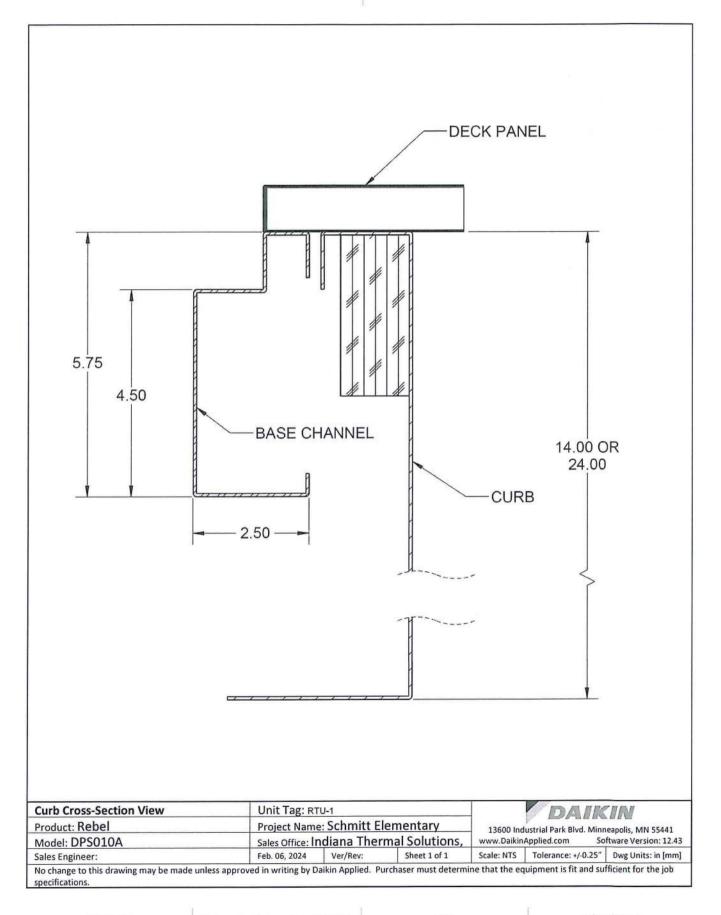
options	
	Unit
Smoke Detectors:	Return Air Smoke Detector
	Electrical
Field Connection:	Fused Disc: 65 kAIC - 208/230/460V: 22 kAIC 575V
Powered Receptacle:	Field powered 115V GFI outlet
Power Options:	Phase Failure Monitor
Pris District And And	Controls
Communication Card:	BACnet/MSTP card, Field installed
actory Installed Sensors	
eaving Coil/Entering Fan Tempera	ture Sensor
uct High Limit Switch	
eturn Air Temperature Sensor	
ischarge Air Temperature sensor -	– Wired in unit, mounted in supply duct
utside Air Temperature Sensor	
eturn Air Enthalpy Sensor	
utside Air Enthalpy Sensor	
irty Filter On/Off Switch	
upply Fan Air Proving Via Modbus	
Varranty	
Parts:	Standard One Year
Compressor:	Additional Four Year, Five Year Total
Gas Heat Exchanger:	Extended Nine Year, Ten Year Total
HRI Certification	
AHRI GERTIFIED.	
All equipmer	nt is rated and certified in accordance with AHRI 360.
otes	
Forklift slots to remove unit f lifted onto curb per IOM inst	from a truck bed. The fork lift slots are not to be used to place unit on a roof curb. Unit is to be ructions.
ccessories	
	Mandatory
Part Number	Description
090016710	MT III Com Mod for Applied Rooftops, BACnet MS/TP
910191961	Combo Digital Temp and Humidity Sensor w/Adj setpoint and tenent override
	Optional
Part Number 910119532	Description 24" Roof Curb, No ERW, Size 007 - 015











Overview

Smoke detectors are use to detect smoke in the return air stream, supply air stream, or both. A set of normaly closed contact will open in the presence of smoke. This can be used to shut down the RTU by either cutting power across the terminal of a thermostat controlled RTU or as a signal to DDC controlled RTU.



Features

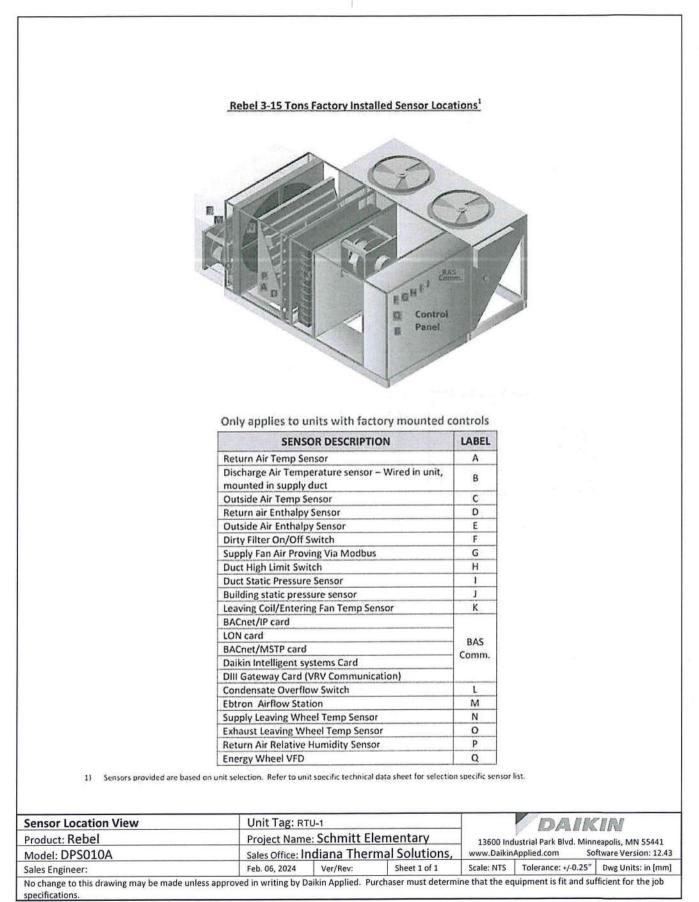
- Universal voltage: 24 VAC, 24 VDC, 115 VAC, or 230 VAC
- · Visual indication of power and alarm status
- Two alarm contacts and one trouble contact
- Interchangeable "plug-in" photoelectric or ionization heads
- Compatible with building automation and fire alarm systems
- · Dust filtering included in detector head
- Interconnect up to 30 detectors for common function

Specifications

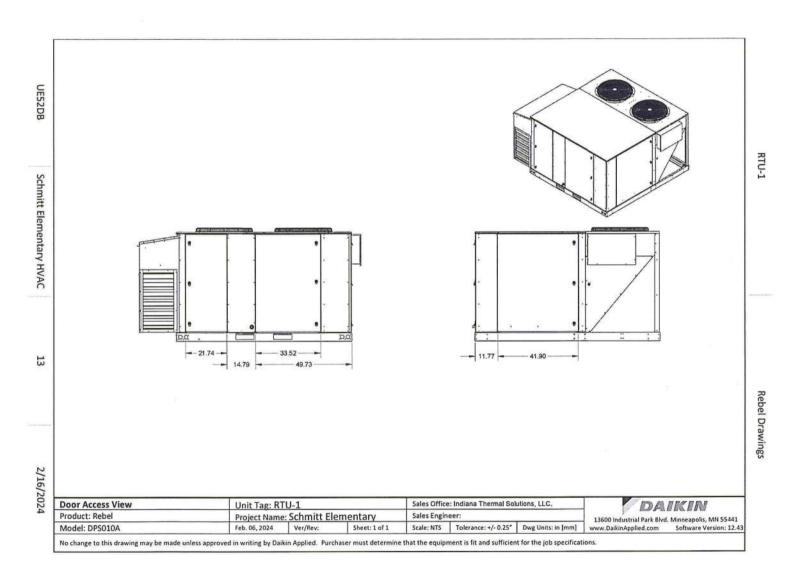
Daikin Part Number	113126601
Supply Voltage	24 VAC: @ 35 mA standby, 74 mA alarm; 24 VDC:@ 15 mA standby, 56 mA alarm; 115 VAC: @ 25 mA standby, 32 mA alarm; 230 VAC @ 12 mA standby, 16 mA alarm
Frequency	50/60 Hz
Air Velocity	0-2000 fpm (0-10.2 mps)
Radioactive Element	For HS-100-N only Americium 241, 0.9 µCi
Relay Output Alarm	1-SPDT, 10A, 115 VAC, resistive; 1-SPST-NO, 2A Trouble 1-SPST-NC, 10A, 115 VAC resistive
Wiring Terminations	Solid or stranded, 12 to 22 AWG terminals
Operating Humidity	0% to 85% RH non-condensing
Operating Temperature	HS-100-N 32° to 158°F (0° to 70°C)
Enclosure Rating	White plastic, NEMA 1
Dimensions	6" (Dia.) × 4.0"(H) (15.2 × 10.2 cm)

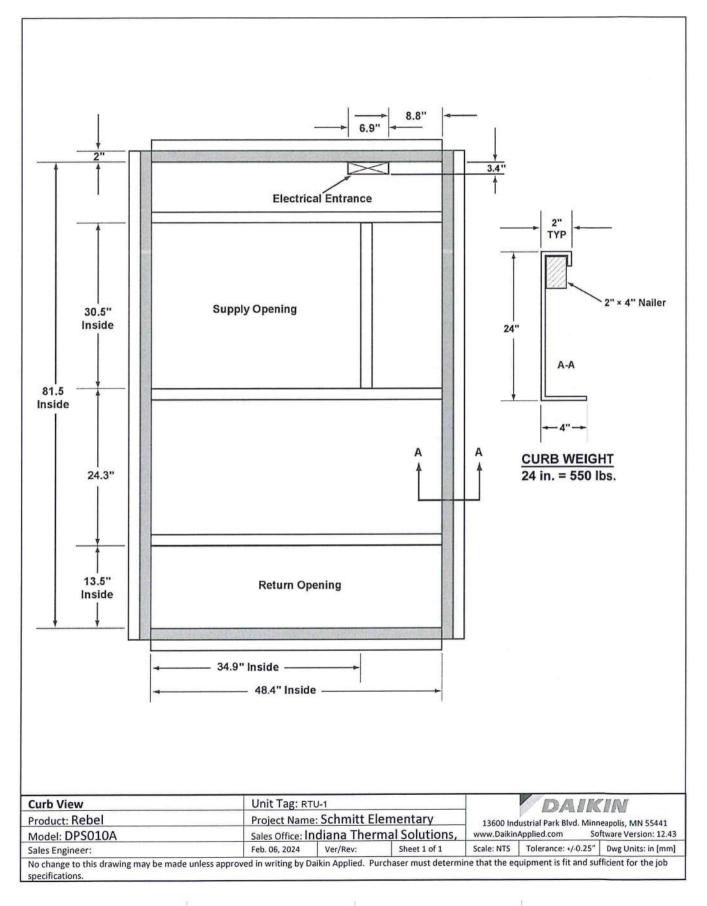
Smoke Detector - 113126601	Unit Tag: RT	Unit Tag: RTU-1 Project Name: Schmitt Elementary Sales Office: Indiana Thermal Solutions,			DAIKIN				
Product: Rebel	Project Name				13600 Industrial Park Blvd. Minneapolis, MN 5544				
Model: DPS010A	Sales Office: Ir				www.DaikinApplied.com Software Version: 12.4				
Sales Engineer:	Feb. 06, 2024	Ver/Rev:	Sheet 1 of 1	Scale: NTS	Tolerance: +/-0.25"	Dwg Units: in [mm]			





12





Introduction

The space temperature and humidity sensor is designed to work with the ${\rm MicroTech}^\oplus$ III unit controller to measure the space conditions.

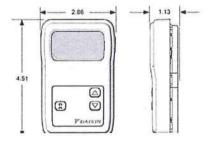
This device is not a traditional 7-day programmable thermostat. It does not provide a scheduling function. However, it does have a tenant override button to force the unit occupied outside of normal scheduled operation.

On CAV and single zone VAV systems, it acts as the control device for heating and cooling operations during occupied and unoccupied time periods.

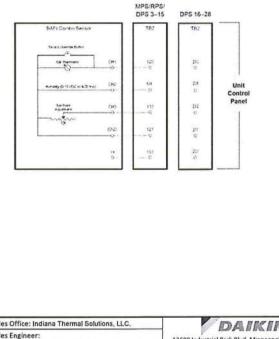
On duct pressure control VAV systems, it is not used as the occupied mode control device but it is used to control unoccupied operation.

The humidity sensing element is used to enable the dehumidification sequence in the RTU. This sequence overcools the air to remove moisture and then reheats it to avoid overcooling the space. The RTU must have a valid source of reheat for this to feature to be useful. Valid reheat sources include hot gas reheat, liquid subcooling, modulating natural gas heat, or modulating hot water/steam heat. Staged heating options are not functional in the MicroTech III for use in dehumidification.

The sensor features a large format LCD display that displays the space temperature and humidity. The display alternates between displaying humidity and temperature on a timed interval. Also included are setpoint adjustment keys to increase or decrease the temperature setpoint. Humidity setpoint is not adjustable through this device. Humidity setpoint must be changed through the MicroTech III. When the adjustment keys are first pressed, the display will show the current reading for the temperature setpoint. Further pressing of these keys will change that setpoint value.



Daikin Part Number	910191961			
Pawer	18 to 30 VAC			
Power Consumption	50 mA max. DC, 1.5 VA max. AC			
Ambient	32"F to 122"F (1"C to 50"C)			
	0% to 95% RH, Non-Cond.			
B	Setpoint Up/Down buttons			
Button Options	Tenant Override button			
Wiring	16-22 AWG shielded			



2/16/2024

UE52DB

Schmitt Elementary HVAC

15

Space Temp/Humidity Sensor – 910191961	Unit Tag: RTU-1		Sales Office	e: Indiana Thermal Sol	utions, LLC.	DAIKIN		
Product: Rebel	Project Name	: Schmitt Ele	ementary	Sales Engin	eer:		13600 Industrial Park Blvd	
Model: DPS010A	Feb. 06, 2024	Ver/Rev:	Sheet: 1 of 1	Scale: NTS	Tolerance: +/- 0.25"	Dwg Units: in [mm]		Software Version: 12.43

Rebel Drawings

INDIANA THERMAL SOLUTIONS



Submittal Data

Project: L.C. Schmitt Elementary School

Date: 2/19/2024

Customer: Bartholomew Consolidated School Corporation

Engineer: R.E. Dimond

Qty	Tag	Description
7	DXFC-A	Daikin 0.5 ton Wall Mounted Unit
7	DXFC-B	Daikin 0.75 ton Wall Mounted Unit
12	DXFC-C	Daikin 1 ton Wall Mounted Unit
4	DXFC-D	Daikin 1.5 ton Wall Mounted Unit
5	DXFC-1A,1B,2,3,4,5	Daikin 1 ton Air Handling Unit (with Electric Heat) Daikin Energy
5	ERV-1-5	Recovery Ventilator (Duct Electric Heaters field installed)
1	OHRU-2	Daikin 10 ton Emerion Outdoor Unit
2	OHRU-1, OHRU-3	Daikin 12 ton Emerion Outdoor Unit
2	BSB-1B, BSB-3A	6 port Branch Selector Box
2	BSB-1A, BSB-3B	8 port Branch Selector Box
1	BSB-2	10 Port Branch Selector Box

Submitted by:

Indiana Thermal Solutions

Drawings in this submittal package describe the

equipment we propose to furnish for this project

and are submitted for approval to manufacture.

6872 Hillsdale Court, Indianapolis, IN 46250 Phone: (317) 570-5400 / Fax: (317) 570-5414 www.ITS-Indiana.com



VRV Selection

Project Report

Report details

Produced on: 2/19/2024 Application version: 2024.2.16.2

Project details

Project name: Schmitt Elementary HVAC Replacement

Solution name: VRV-1

Client Name: R.E. Diamond

Customer reference:

Quotation reference:

Project number: 622980/780071

Selection parameters of the indoor units can be found in the Engineering Data Books Selection parameters of the outdoor units can be found in the Engineering Data Books Only the data published in the data book are correct. This program uses close approximations of these data.



Material list

Model	Quantity	Description
REYQ120AAYDA	1	VRV EMERION (460V) (VRV EMERION (460V))
REYQ144AAYDA	2	VRV EMERION (460V) (VRV EMERION (460V))
BSF6Q54TVJ	2	Branch selector unit
BSF8Q54TVJ	2	Branch selector unit
BS10Q54TVJ	1	Branch selector unit
FXAQ07PVJU	7	FXAQ - Wall Mounted Unit
FXAQ09PVJU	7	FXAQ - Wall Mounted Unit
FXAQ12PVJU	12	FXAQ - Wall Mounted Unit
FXAQ18PVJU	4	FXAQ - Wall Mounted Unit
FXTQ12TAVJUA	5	FXTQ_TA(A) - Multi Position Air Handler
VAM300GVJU	5	CEILING MOUNTED DUCT TYPE ERV
KHRP25M72TUA	2	Refnet branch piping kit
DCM601B71	1	intelligent Touch Manager (iTM)
BRC1E73	5	new Navigation Remote Controller
BRC1H71W	35	Madoka Remote Controller
DCM014A51	CM014A51 1 ITM BACnet Server Gatew with client or MS-TP, max	
HKSX03XC	5	Heater Kit 3kW (208/240V)
KHFP26A100CA	3	Branch Selector Closed Pipe Kit

Piping	Liquid	Suction	Discharge	Total
	ft	ft	ft	ft 875.0 186.5 890.5 79.0 196.5
1/4"	875.0	0.0	0.0	875.0
3/8"	186.5	0.0 0.0 875.0 0.0		186.5
1/2"	15.5			890.5
5/8"	0.0	0.0	79.0	79.0
3/4"	0.0	79.0	117.5	196.5
7/8"	0.0	107.5	5.5	113.0
1 1/8"	0.0	15.5	0.0	15.5



Table of abbreviations

Abbreviation	Description
Name	Logical name of the device
FCU	Device model name
Tmp C	Indoor conditions in cooling
Rq TC	Required total cooling capacity
Max TC	Available total cooling capacity
Rq SC	Required sensible cooling capacity
Tevap	Evaporating temperature of indoor unit coil
Max SC	Available sensible cooling capacity
Tmp H	Indoor temperature in heating
Rq HC	Required heating capacity
Max HC	Available heating capacity
Sound	Sound pressure level low and high
PS	Power supply (voltage and phases)
MCA	Minimum Circuit Amps
MOP	Maximum Overcurrent Protection
WxHxD	WidthxHeightxDepth
Weight	Weight of the device



OHRU-1 - REYQ144AAYDA

Capacity data at conditions and connection ratio (97) as entered

Name	FCU	Cooling							
	and the state	Tmp C	Rq TC	Max TC	Rq SC	Tevap	Max SC		
		°F (DBT/WBT)	BTU/h	BTU/h	BTU/h	°F	BTU/h		
DXFC-B	FXAQ09PVJU	78.8/65.5	n/a	8,994	n/a	42.8	7,016		
DXFC-B	FXAQ09PVJU	78.8/65.5	n/a	8,994	n/a	42.8	7,016		
DXFC-D	FXAQ18PVJU	78.8/65.5	n/a	17,039	n/a	42.8	12,802		
DXFC-B	FXAQ07PVJU	78.8/65.5	n/a	7,095	n/a	42.8	5,937		
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348		
DXFC-A	FXAQ07PVJU	78.8/65.5	n/a	7,095	n/a	42.8	5,937		
DXFC-A	FXAQ07PVJU	78.8/65.5	n/a	7,095	n/a	42.8	5,937		
DXFC-1	FXTQ12TAVJUA	78.8/65.5	n/a	11,342	n/a	42.8	9,373		
DXFC-A	FXAQ07PVJU	78.8/65.5	n/a	7,095	n/a	42.8	5,937		
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348		
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348		
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348		
DXFC-2	FXTQ12TAVJUA	78.8/65.5	n/a	11,342	n/a	42.8	9,373		
EVR-1	VAM300GVJU	n/a	n/a	n/a	n/a	42.8	n/a		
ERV-2	VAM300GVJU	n/a	n/a	n/a	n/a	42.8	n/a		
			0						

Name	FCU	Heating				
		Tmp H	Rq HC	Max HC BTU/h		
		°F	BTU/h			
DXFC-B	FXAQ09PVJU	68.0	n/a	11,100		
DXFC-B	FXAQ09PVJU	68.0	n/a	11,100		
DXFC-D	FXAQ18PVJU	68.0	n/a	21,000		
DXFC-B	FXAQ07PVJU	68.0	n/a	8,700		
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000		
DXFC-A	FXAQ07PVJU	68.0	n/a	8,700		
DXFC-A	FXAQ07PVJU	68.0	n/a	8,700		
DXFC-1	FXTQ12TAVJUA	68.0	n/a	14,000		
DXFC-A	FXAQ07PVJU	68.0	n/a	8,700		
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000		
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000		
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000		
DXFC-2	FXTQ12TAVJUA	68.0	n/a	14,000		
EVR-1	VAM300GVJU	n/a	n/a	n/a		
ERV-2	VAM300GVJU	n/a	n/a	n/a		
			n/a			



Name	FCU	Room Sound PS		MCA	MOP	WxHxD	Weight		
			dBA		A		inch	lbs	
DXFC-B	FXAQ09PVJU		31 - 37	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-B	FXAQ09PVJU		31 - 37	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-D	FXAQ18PVJU		37 - 43	208-230V 1ph	0.4	15A	41.3 x 11.4 x 9.3	30.9	
DXFC-B	FXAQ07PVJU		29 - 35	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-A	FXAQ07PVJU		29 - 35	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-A	FXAQ07PVJU		29 - 35	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-1	FXTQ12TAVJUA		- 36	208-230V 1ph	4.9	15A	17.5 x 45.0 x 21.0	115.0	
DXFC-A	FXAQ07PVJU		29 - 35	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-2	FXTQ12TAVJUA		- 36	208-230V 1ph	4.9	15A	17.5 x 45.0 x 21.0	115.0	
EVR-1	VAM300GVJU		-	208-230V 1ph	1.6		34.6 x 12.0 x 31.5	71.0	
ERV-2	VAM300GVJU		-	208-230V 1ph	1.6		34.6 x 12.0 x 31.5	71.0	

Remarks

Outdoor vs. indoor position

Outdoor unit placed 8.0ft above the indoor units.

OHRU-2 - REYQ120AAYDA

Capacity data at conditions and connection ratio (102) as entered

Name	FCU	Cooling								
		Tmp C	Rq TC	Max TC	Rq SC	Tevap	Max SC			
		°F (DBT/WBT)	BTU/h	BTU/h	BTU/h	°F	BTU/h			
DXFC-D	FXAQ18PVJU	78.8/65.5	n/a	17,039	n/a	42.8	12,802			
DXFC-B	FXAQ09PVJU	78.8/65.5	n/a	8,994	n/a	42.8	7,016			
DXFC-B	FXAQ09PVJU	78.8/65.5	n/a	8,994	n/a	42.8	7,016			
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348			
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348			
DXFC-D	FXAQ18PVJU	78.8/65.5	n/a	17,039	n/a	42.8	12,802			
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348			
DXFC-A	FXAQ07PVJU	78.8/65.5	n/a	7,095	n/a	42.8	5,937			
DXFC-3	FXTQ12TAVJUA	78.8/65.5	n/a	11,342	n/a	42.8	9,373			
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348			
ERV-3	VAM300GVJU	n/a	n/a	n/a	n/a	42.8	n/a			
			0							

DA	8 6 .8
DA	

Name	FCU	Heating						
		Tmp H	Rq HC	Max HC				
		°F	BTU/h	BTU/h				
DXFC-D	FXAQ18PVJU	68.0	n/a	21,000				
DXFC-B	FXAQ09PVJU	68.0	n/a	11,100				
DXFC-B	FXAQ09PVJU	68.0	n/a	11,100				
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000				
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000				
DXFC-D	FXAQ18PVJU	68.0	n/a	21,000				
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000				
DXFC-A	FXAQ07PVJU	68.0	n/a	8,700				
DXFC-3	FXTQ12TAVJUA	68.0	n/a	14,000				
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000				
ERV-3	VAM300GVJU	n/a	n/a	n/a				
			n/a					

Name	FCU	Room	Sound	PS	MCA	MOP	WxHxD	Weight	
	1. 外部分数 1. 经公司	1	dBA		Α		inch	lbs	
DXFC-D	FXAQ18PVJU		37 - 43	208-230V 1ph	0.4	15A	41.3 x 11.4 x 9.3	30.9	
DXFC-B	FXAQ09PVJU		31 - 37	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-B	FXAQ09PVJU		31 - 37	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-D	FXAQ18PVJU		37 - 43	208-230V 1ph	0.4	15A	41.3 x 11.4 x 9.3	30.9	
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-A	FXAQ07PVJU		29 - 35	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-3	FXTQ12TAVJUA		- 36	208-230V 1ph	4.9	15A	17.5 x 45.0 x 21.0	115.0	
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5	
ERV-3	VAM300GVJU		-	208-230V 1ph	1.6		34.6 x 12.0 x 31.5	71.0	

Remarks

Outdoor vs. indoor position

Outdoor unit placed 8.0ft above the indoor units.



OHRU-3 - REYQ144AAYDA

Capacity data at conditions and connection ratio (93) as entered

Name	FCU	almont Statest		Coolin	g		
		Tmp C	Rq TC	Max TC	Rq SC	Tevap	Max SC
		°F (DBT/WBT)	BTU/h	BTU/h	BTU/h	°F	BTU/h
DXFC-B	FXAQ09PVJU	78.8/65.5	n/a	8,994	n/a	42.8	7,016
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348
DXFC-4	FXTQ12TAVJUA	78.8/65.5	n/a	11,342	n/a	42.8	9,373
DXFC-A	FXAQ09PVJU	78.8/65.5	n/a	8,994	n/a	42.8	7,016
DXFC-5	FXTQ12TAVJUA	78.8/65.5	n/a	11,342	n/a	42.8	9,373
DXFC-C	FXAQ12PVJU	78.8/65.5	n/a	11,342	n/a	42.8	8,348
DXFC-B	FXAQ09PVJU	78.8/65.5	n/a	8,994	n/a	42.8	7,016
DXFC-A	FXAQ07PVJU	78.8/65.5	n/a	7,095	n/a	42.8	5,937
DCFX-A	FXAQ07PVJU	78.8/65.5	n/a	7,095	n/a	42.8	5,937
DXFC-E	FXAQ18PVJU	78.8/65.5	n/a	17,039	n/a	42.8	12,802
ERV-4	VAM300GVJU	n/a	n/a	n/a	n/a	42.8	n/a
ERV-5	VAM300GVJU	n/a	n/a	n/a	n/a	42.8	n/a
			0				

Name	FCU	Heating						
		Tmp H	Rq HC	Max HC				
		°F	BTU/h	BTU/h				
DXFC-B	FXAQ09PVJU	68.0	n/a	11,100				
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000				
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000				
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000				
DXFC-4	FXTQ12TAVJUA	68.0	n/a	14,000				
DXFC-A	FXAQ09PVJU	68.0	n/a	11,100				
DXFC-5	FXTQ12TAVJUA	68.0	n/a	14,000				
DXFC-C	FXAQ12PVJU	68.0	n/a	14,000				
DXFC-B	FXAQ09PVJU	68.0	n/a	11,100				
DXFC-A	FXAQ07PVJU	68.0	n/a	8,700				
DCFX-A	FXAQ07PVJU	68.0	n/a	8,700				
DXFC-E	FXAQ18PVJU	68.0	n/a	21,000				
ERV-4	VAM300GVJU	n/a	n/a	n/a				
ERV-5	VAM300GVJU	n/a	n/a	n/a				
			n/a					

Name	FCU	Room	Sound	PS	MCA	MOP	WxHxD	Weight
			dBA		Α		inch	lbs
DXFC-B	FXAQ09PVJU		31 - 37	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5
DXFC-4	FXTQ12TAVJUA		- 36	208-230V 1ph	4.9	15A	17.5 x 45.0 x 21.0	115.0
DXFC-A	FXAQ09PVJU		31 - 37	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5
DXFC-5	FXTQ12TAVJUA		- 36	208-230V 1ph	4.9	15A	17.5 x 45.0 x 21.0	115.0
DXFC-C	FXAQ12PVJU		31 - 38	208-230V 1ph	0.4	15A	31.3 x 11.4 x 9.3	26.5
DXFC-B	FXAQ09PVJU		31 - 37	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5
DXFC-A	FXAQ07PVJU		29 - 35	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5

The VRV Selection application is property of Daikin Europe N.V. Daikin Europe N.V. cannot be held liable for any inaccuracy, reliability of the outcome of the VRV Selection application.



Name	FCU	Room	Sound	PS	MCA	MOP	WxHxD	Weight	
			dBA		Α		inch	lbs	
DCFX-A	FXAQ07PVJU		29 - 35	208-230V 1ph	0.3	15A	31.3 x 11.4 x 9.3	26.5	
DXFC-E	FXAQ18PVJU		37 - 43	208-230V 1ph	0.4	15A	41.3 x 11.4 x 9.3	30.9	
ERV-4	VAM300GVJU		-	208-230V 1ph	1.6		34.6 x 12.0 x 31.5	71.0	
ERV-5	VAM300GVJU		-	208-230V 1ph	1.6		34.6 x 12.0 x 31.5	71.0	

Remarks

Outdoor vs. indoor position

Outdoor unit placed 8.0ft above the indoor units.



Table of abbreviations

Abbreviation	Description
Name	Logical name of the device
Model	Device model name
A	Optimized selection: Larger outdoor model selected than standard proposed model
CR	Connection ratio
Tmp C	Outdoor conditions in cooling
WFR per module	Water flow per outdoor unit module
СС	Available cooling capacity
Rq CC	Required cooling capacity
PIC	Power input in cooling mode
InC	Water inlet temperature in cooling mode
OutC	Water outlet temperature in cooling mode
Tmp H	Outdoor conditions in heating (dry bulb temp. / RH)
HC	Available heating capacity (integrated heating capacity)
Rq HC	Required heating capacity
PIH	Power input in heating mode
InH	Water inlet temperature in heating mode
OutH	Water outlet temperature in heating mode
Piping	Largest distance from indoor unit to outdoor unit
Bse Refr	Standard factory refrigerant charge (16.4ft actual piping length) excluding extra
	refrigerant charge. For calculation of extra refrigerant charge refer to the databook
Ex Refr	Extra refrigerant charge
PS	Power supply (voltage and phases)
MCA	Minimum Circuit Amps
MOP	Maximum Overcurrent Protection
FLA	Fan Motor Input
RLA	Nominal Running Amps
WxHxD	WidthxHeightxDepth
Weight	Weight of the device
EER	EER value at nominal condition
EER2	EER2 value at nominal condition
IEER	IEER value at nominal condition
COP47	COP value at nominal condition and at ambient temperature of 47°F
COP17	COP value at nominal condition and at ambient temperature of 17°F



Outdoor details

Name Model	Model	CR	Singl	Cooling	H	Piping			
		Tmp C	CC	CC Rq CC		HC	Rq HC		
	%	°F	BTU/h	BTU/h	°F (DBT/WBT)	BTU/h	BTU/h	ft	
OHRU-1	REYQ144AAYDA	96.5	95.0	134,091	65,730	-2.0/-2.0	104,279	81,000	95.1
OHRU-2	REYQ120AAYDA 🛦	102.1	95.0	112,172	57,936	-2.0/-2.0	81,268	71,450	102.4
OHRU-3	REYQ144AAYDA	92.7	95.0	133,676	63,132	-2.0/-2.0	103,227	77,850	129.2

Name Model		PS	MCA	MOP	RLA	FLA	WxHxD	Weight
		同時間的時候	Α	Α	Α	Α	inch	lbs
OHRU-1	REYQ144AAYDA	460V 3ph	21.3	25.0	11.7		48.8 x 65.4 x 30.1	800.3
BSB-1A	BSF8Q54TVJ	208-230V 1ph	0.8	15.0			23.3 x 9.5 x 23.7	81.6
BSB-1B	BSF6Q54TVJ	208-230V 1ph	0.6	15.0			23.3 x 9.5 x 23.7	72.8
OHRU-2	REYQ120AAYDA	460V 3ph	16.6	20.0	9.6		48.8 x 65.4 x 30.1	727.5
BSB-2	BS10Q54TVJ	208-230V 1ph	1.0	15.0			32.3 x 11.7 x 18.9	101.4
OHRU-3	REYQ144AAYDA	460V 3ph	21.3	25.0	11.7		48.8 x 65.4 x 30.1	800.3
BSB-3A	BSF6Q54TVJ	208-230V 1ph	0.6	15.0			23.3 x 9.5 x 23.7	72.8
BSB-3B	BSF8Q54TVJ	208-230V 1ph	0.8	15.0			23.3 x 9.5 x 23.7	81.6

Name	Efficiency Metrics - Ducted											
	EER	EER2	IEER	COP47	COP17	SCHE	SEER	SEER2	HSPF	HSPF2		
OHRU-1	12		22.5	3.35	2.1	22.1						
OHRU-2	12.4		23.5	3.48	2.25	22.2						
OHRU-3	12		22.5	3.35	2.1	22.1						

Name	Efficiency Metrics - Non Ducted											
	EER	EER2	IEER	COP47	COP17	SCHE	SEER	SEER2	HSPF	HSPF2		
OHRU-1	12.5		26.5	3.8	2.2	25.6						
OHRU-2	13.2		27.5	4	2.38	26.1						
OHRU-3	12.5		26.5	3.8	2.2	25.6						



Sound Data

Name	Model	Sound Power		Sound Pressure	
	0.00	Cooling	Heating	Cooling	Heating
OHRU-1	REYQ144AAYDA	-	-	65	-
OHRU-2	REYQ120AAYDA	-	-	61	-
OHRU-3	REYQ144AAYDA	-	-	65	-

Refrigerant information

Name	Model	Refrigerant type	GWP	Base charge	Extra charge	Total	Total CO2
				lbs	lbs	refrigerant charge lbs	equivalent tonnes
OHRU-1	REYQ144AAYDA	R410A	2087.5	25.79	23.93	49.73	47.09
OHRU-2	REYQ120AAYDA	R410A	2087.5	25.79	11.97	37.76	35.76
OHRU-3	REYQ144AAYDA	R410A	2087.5	25.79	26.66	52.46	49.67

The system(s) contain fluorinated greenhouse gases.

OHRU-1 - REYQ144AAYDA

Model	Quantity	Description	
REYQ144AAYDA	1	VRV EMERION (460V) (VRV EMERION (460V))	
BSF6Q54TVJ	1	Branch selector unit	
BSF8Q54TVJ	1	Branch selector unit	
FXAQ07PVJU	4	FXAQ - Wall Mounted Unit	
FXAQ09PVJU	2	FXAQ - Wall Mounted Unit	
FXAQ12PVJU	4	FXAQ - Wall Mounted Unit	
FXAQ18PVJU	1	FXAQ - Wall Mounted Unit	
FXTQ12TAVJUA	2	FXTQ_TA(A) - Multi Position Air Handler	
VAM300GVJU	2	CEILING MOUNTED DUCT TYPE ERV	
KHRP25M72TUA	1	Refnet branch piping kit	
BRC1E73	2	new Navigation Remote Controller	
BRC1H71W	13	Madoka Remote Controller	
HKSX03XC	2	Heater Kit 3kW (208/240V)	
KHFP26A100CA	1	Branch Selector Closed Pipe Kit	

Piping	Liquid	Suction	Discharge	Total
	ft	ft	ft	ft
1/4"	268.5	0.0	0.0	268.5
3/8"	67.5	0.0	0.0	67.5
1/2"	4.5	268.5	0.0	273.0
5/8"	0.0	0.0	25.0	25.0
3/4"	0.0	25.0	42.5	67.5
7/8"	0.0	42.5	4.5	47.0
1 1/8"	0.0	4.5	0.0	4.5



Refrigerant information

Refrigerant type	GWP	Base charge Ibs	Extra charge Ibs	Total refrigerant charge Ibs	Total CO2 equivalent tonnes
R410A	2087.5	25.79	23.93*)	49.73	47.09

The system(s) contain fluorinated greenhouse gases.

Pipe capacities

Maximum Connection Index	Diameters
53.9	3/8"×5/8"×1/2"
71.9	3/8"x3/4"x5/8"
110.9	3/8"×7/8"×3/4"
161.9	1/2"x1 1/8"x3/4"
229.9	5/8"x1 1/8"x1 1/8"
299.9	3/4"x1 3/8"x1 1/8"
> 299.9	3/4"x1 5/8"x1 1/8"
Main pipe size up	5/8"x1 1/8"x7/8"

Piping limitations

Description	Value
Maximum total length	3,280.8ft
Maximum longest actual length	541.3ft
Maximum longest equivalent length	623.4ft
Maximum main pipe length (size up of main pipe required if longer)	•
Maximum length first branch to indoor unit(size up of intermediate pipes required if longer)	131.2ft
Maximum length first branch to indoor unit	295.3ft
Maximum length of indoor units to nearest branch	131.2ft
Maximum length difference between longest and shortest distance to indoor units	131.2ft
Maximum height difference, outdoor unit below indoor units	360.9ft
Minimum connection ratio, outdoor unit below indoor units	-
Maximum height difference, outdoor unit above indoor units	360.9ft
Minimum connection ratio, outdoor unit above indoor units	-
Maximum height difference in technical cooling, outdoor unit below indoor units	360.9ft
Maximum height difference in technical cooling, outdoor unit above indoor units	360.9ft
Maximum height difference between indoor units	98.4ft
Connection ratio range	50.0% - 200.0%
Refrigerant pipe diameters	5/8" (liquid) x 1 1/8" (gas) x 7/8" (discharge)
Maximum equivalent length from BP unit or VRV indoor to VRV REFNET (size up of intermediate pipes required if longer)	1=1
Maximum equivalent length from BP unit or VRV indoor to VRV REFNET	295.3ft
Maximum actual length between CM and HM	
Maximum height difference between CM and HM	-



OHRU-2 - REYQ120AAYDA

Model	Quantity	Description	
REYQ120AAYDA	1	VRV EMERION (460V) (VRV EMERION (460V))	
BS10Q54TVJ	1	Branch selector unit	
FXAQ07PVJU	1	FXAQ - Wall Mounted Unit	
FXAQ09PVJU	2	FXAQ - Wall Mounted Unit	
FXAQ12PVJU	4	FXAQ - Wall Mounted Unit	
FXAQ18PVJU	2	FXAQ - Wall Mounted Unit	
FXTQ12TAVJUA	1	FXTQ_TA(A) - Multi Position Air Handler	
VAM300GVJU	1	CEILING MOUNTED DUCT TYPE ERV	
BRC1E73	1	new Navigation Remote Controller	
BRC1H71W	10	Madoka Remote Controller	
HKSX03XC	1	Heater Kit 3kW (208/240V)	

Piping	Liquid	Suction	Discharge	Total
NA ELES	ft	ft	ft	ft
1/4"	279.5	0.0	0.0	279.5
1/2"	10.0	279.5	0.0	289.5
3/4"	0.0	0.0	10.0	10.0
1 1/8"	0.0	10.0	0.0	10.0

Refrigerant information

Refrigerant type	GWP	Base charge Ibs	Extra charge Ibs	Total refrigerant charge lbs	Total CO2 equivalent tonnes
R410A	2087.5	25.79	11.97*)	37.76	35.76

The system(s) contain fluorinated greenhouse gases.

Pipe capacities

Maximum Connection Index	Diameters
53.9	3/8"x5/8"x1/2"
71.9	3/8"x3/4"x5/8"
110.9	3/8"x7/8"x3/4"
161.9	1/2"×1 1/8"×3/4"
229.9	5/8"x1 1/8"x1 1/8"
299.9	3/4"x1 3/8"x1 1/8"
> 299.9	3/4"x1 5/8"x1 1/8"
Main pipe size up	5/8"x1 1/8"x3/4"



Piping limitations

Description	Value
Maximum total length	3,280.8ft
Maximum longest actual length	541.3ft
Maximum longest equivalent length	623.4ft
Maximum main pipe length (size up of main pipe required if longer)	-
Maximum length first branch to indoor unit(size up of intermediate pipes required if longer)	131.2ft
Maximum length first branch to indoor unit	295.3ft
Maximum length of indoor units to nearest branch	131.2ft
Maximum length difference between longest and shortest distance to indoor units	131.2ft
Maximum height difference, outdoor unit below indoor units	360.9ft
Minimum connection ratio, outdoor unit below indoor units	-
Maximum height difference, outdoor unit above indoor units	360.9ft
Minimum connection ratio, outdoor unit above indoor units	
Maximum height difference in technical cooling, outdoor unit below indoor units	360.9ft
Maximum height difference in technical cooling, outdoor unit above indoor units	360.9ft
Maximum height difference between indoor units	98.4ft
Connection ratio range	50.0% - 200.0%
Refrigerant pipe diameters	5/8" (liquid) x 1 1/8" (gas) x 3/4" (discharge)
Maximum equivalent length from BP unit or VRV indoor to VRV REFNET (size up of intermediate pipes required if longer)	
Maximum equivalent length from BP unit or VRV indoor to VRV REFNET	295.3ft
Maximum actual length between CM and HM	-
Maximum height difference between CM and HM	-

OHRU-3 - REYQ144AAYDA

Model	Quantity	Description
REYQ144AAYDA	1	VRV EMERION (460V) (VRV EMERION (460V))
BSF6Q54TVJ	1	Branch selector unit
BSF8Q54TVJ	1	Branch selector unit
FXAQ07PVJU	2	FXAQ - Wall Mounted Unit
FXAQ09PVJU	3	FXAQ - Wall Mounted Unit
FXAQ12PVJU	4	FXAQ - Wall Mounted Unit
FXAQ18PVJU	1	FXAQ - Wall Mounted Unit
FXTQ12TAVJUA	2	FXTQ_TA(A) - Multi Position Air Handler
VAM300GVJU	2	CEILING MOUNTED DUCT TYPE ERV
KHRP25M72TUA	1	Refnet branch piping kit
BRC1E73	2	new Navigation Remote Controller
BRC1H71W	12	Madoka Remote Controller
HKSX03XC	2	Heater Kit 3kW (208/240V)
KHFP26A100CA	2	Branch Selector Closed Pipe Kit



Piping	Liquid	Suction	Discharge	Total
	ft	ft	ft	ft
1/4"	327.0	0.0	0.0	327.0
3/8"	119.0	0.0	0.0	119.0
1/2"	1.0	327.0	0.0	328.0
5/8"	0.0	0.0	54.0	54.0
3/4"	0.0	54.0	65.0	119.0
7/8"	0.0	65.0	1.0	66.0
1 1/8"	0.0	1.0	0.0	1.0

Refrigerant information

Refrigerant type	GWP	Base charge lbs	Extra charge Ibs	Total refrigerant charge lbs	Total CO2 equivalent tonnes
R410A	2087.5	25.79	26.66*)	52.46	49.67

The system(s) contain fluorinated greenhouse gases.

Pipe capacities

Maximum Connection Index	Diameters
53.9	3/8"x5/8"x1/2"
71.9	3/8"x3/4"x5/8"
110.9	3/8"x7/8"x3/4"
161.9	1/2"x1 1/8"x3/4"
229.9	5/8"x1 1/8"x1 1/8"
299.9	3/4"x1 3/8"x1 1/8"
> 299.9	3/4"x1 5/8"x1 1/8"
Main pipe size up	5/8"x1 1/8"x7/8"

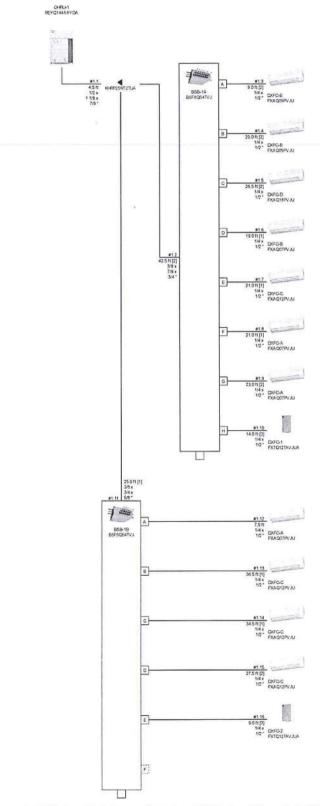


Piping limitations

Description	Value
Maximum total length	3,280.8ft
Maximum longest actual length	541.3ft
Maximum longest equivalent length	623.4ft
Maximum main pipe length (size up of main pipe required if longer)	
Maximum length first branch to indoor unit(size up of intermediate pipes required if longer)	131.2ft
Maximum length first branch to indoor unit	295.3ft
Maximum length of indoor units to nearest branch	131.2ft
Maximum length difference between longest and shortest distance to indoor units	131.2ft
Maximum height difference, outdoor unit below indoor units	360.9ft
Minimum connection ratio, outdoor unit below indoor units	-
Maximum height difference, outdoor unit above indoor units	360.9ft
Minimum connection ratio, outdoor unit above indoor units	-
Maximum height difference in technical cooling, outdoor unit below indoor units	360.9ft
Maximum height difference in technical cooling, outdoor unit above indoor units	360.9ft
Maximum height difference between indoor units	98.4ft
Connection ratio range	50.0% - 200.0%
Refrigerant pipe diameters	5/8" (liquid) x 1 1/8" (gas) x 7/8" (discharge)
Maximum equivalent length from BP unit or VRV indoor to VRV REFNET (size up of intermediate pipes required if longer)	-
Maximum equivalent length from BP unit or VRV indoor to VRV REFNET	295.3ft
Maximum actual length between CM and HM	
Maximum height difference between CM and HM	(m)



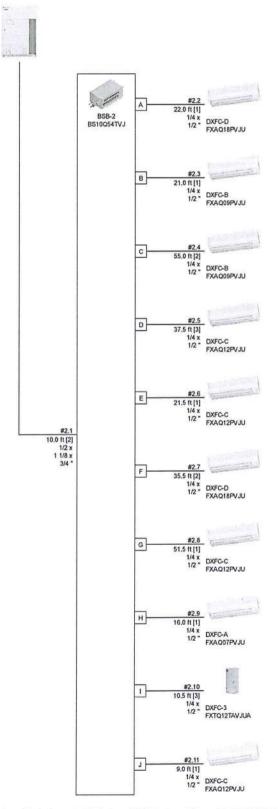
Piping OHRU-1





Piping OHRU-2

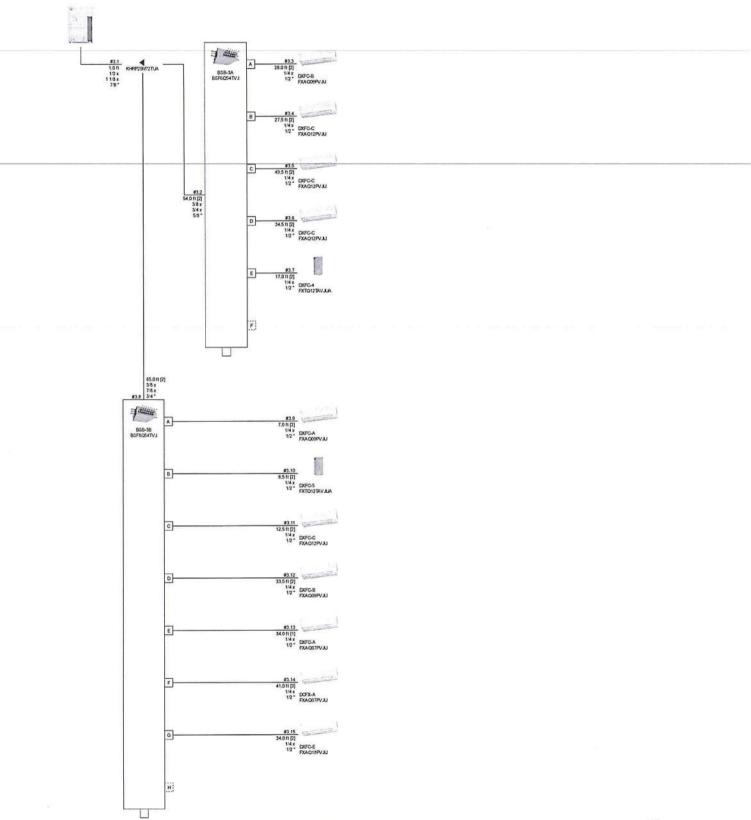
OHRU-2 REYQ120AAYDA





Piping OHRU-3

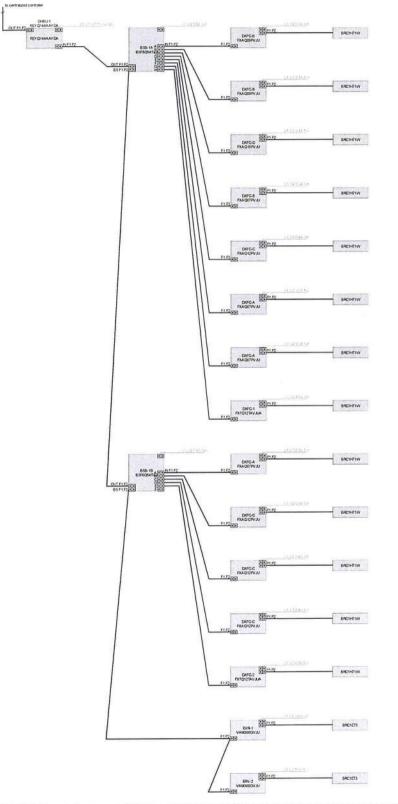
OHRU-3 REYQ144AAYDA



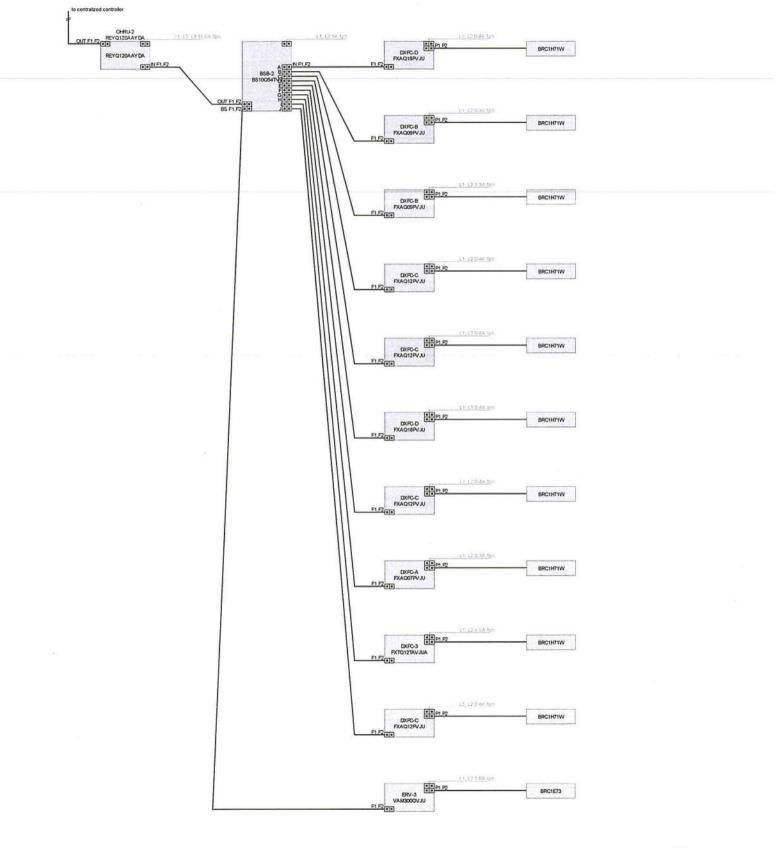


Wiring diagrams

Wiring OHRU-1

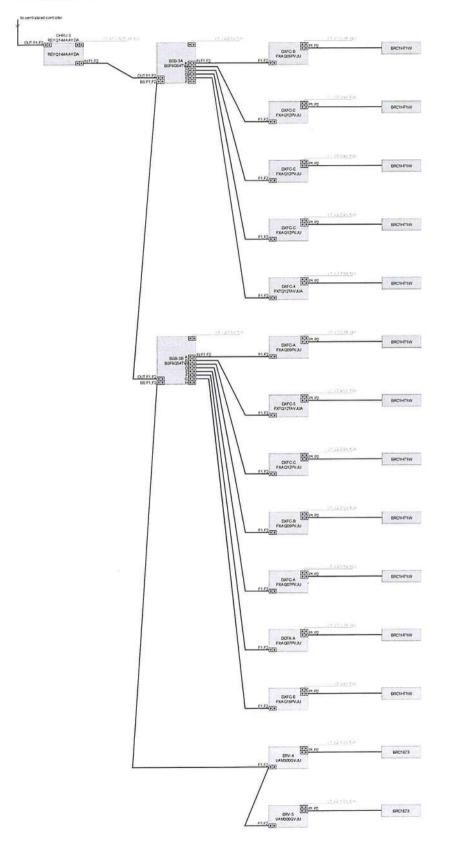








Wiring OHRU-3



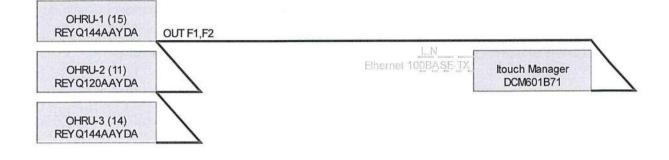


Concept

obal Controllers	Control Group # outdoors:3, # indoors:40, # addressed:40	
	Group Controllers Intelligent Touch Manager (# 1) Outdoor Units I OHRU-1 (15) I OHRU-2 (11) I OHRU-3 (14)	



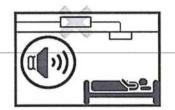
Control Group

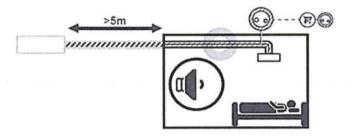




Multi BS-box

- Install the multi BS-box on a location where the refrigerant noise cannot disturb the room occupants
- To avoid that refrigerant noise disturbs the people in the room, keep at least 5m piping length between the occupied room and the multi BS unit (See figure)
- If there is no false ceiling in the occupied room, please add sound insulation around the piping between the multi BS-box and indoor unit, or keep much longer length between multi BS-box unit and occupied room (See figure)



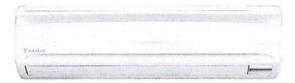




0.5-Ton Wall Mounted Unit FXAQ07PVJU

FEATURES

- Auto-swing mechanism ensures efficient air distribution via louvers that automatically close when the unit is turned off
- Easy to clean front panel with a flat smooth surface that can be removed for additional cleaning
- Five different airflow distribution angles programmable by the optional controller
- Condensate drain pipe can be installed on either the left or right side of the unit
- Wide air discharge outlet distributes a comfortable airflow throughout the entire space
- Standard Limited Warranty: 10-year warranty on compressor and all parts





Daikin City Generated Submittal Data

Daikin North America LLC, 5151 San Felipe, Suite 500, Houston, TX, 77056

www.daikinac.com www.daikincomfort.com



0.5-Ton Wall Mounted Unit

FXAQ07PVJU

PERFORMANCE			· · · · · · · · · · · · · · · · · · ·
Indoor Unit Model No.	FXAQ07PVJU	Indoor Unit Name:	0.5-Ton Wall Mounted Unit
Туре:	Wall Mounted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	7,500	Rated Heating Conditions:	Indoor (*F DB/WB): 70 / 60 Ambient (*F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	6,400	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.020	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	8,500		
Heating Input Power (kW):	0.03		er) stationer stöllt i brak ett til stöllt. Hun sena ska

INDOOR UNIT DETAILS

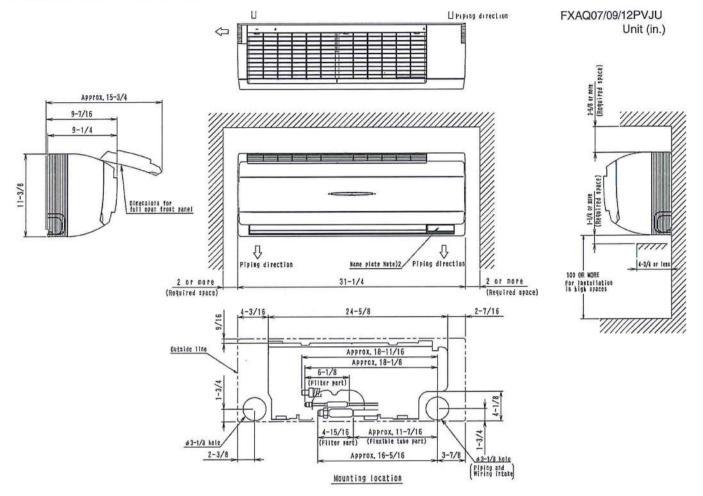
INDIGON ON THE PARTS			A STATE OF THE AREA TO AND
Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Ainflow Rate (H/L) (CFM):	260/160
Power Supply Connections:	L1, L2, Ground	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	0.4	Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	11-3/8 x 31-1/4 x 9-1/4	Condensate Connection (inch):	11/16
Net Weight (lb):	26	Sound Pressure (H/L) (dBA):	36/31
Ext. Static Pressure (Rated/Max) (inWg):	1	Sound Power Level (dBA):	

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0.5-Ton Wall Mounted Unit FXAQ07PVJU

DIMENSIONAL DRAWING



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Daikin City Generated Submittal Data



0.75-Ton Wall Mounted Unit FXAQ09PVJU

FEATURES

- Auto-swing mechanism ensures efficient air distribution via louvers that automatically close when the unit is turned off
- Easy to clean front panel with a flat smooth surface that can be removed for additional cleaning
- Five different airflow distribution angles programmable by the optional controller
- Condensate drain pipe can be installed on either the left or right side of the unit
- Wide air discharge outlet distributes a comfortable airflow throughout the entire space
- Standard Limited Warranty: 10-year warranty on compressor and all parts

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Daikin City Generated Submittal Data

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0.75-Ton Wall Mounted Unit FXAQ09PVJU

PERFORMANCE			
Indoor Unit Model No.	FXAQ09PVJU	Indoor Unit Name:	0.75-Ton Wall Mounted Unit
Туре:	Wall Mounted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	9,500	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	7,300	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.030	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	10,500		
Heating Input Power (kW):	0.03		

INDOOR UNIT DETAILS

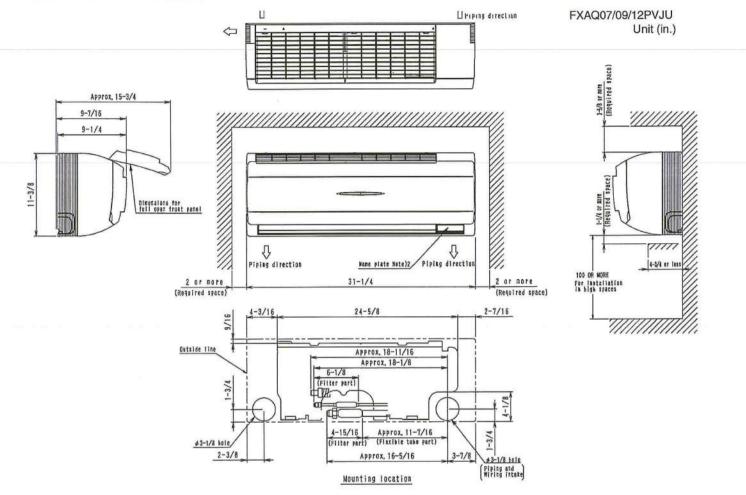
Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (H/L) (CFM):	280/175
Power Supply Connections:	L1, L2, Ground	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	0.4	Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	11-3/8 x 31-1/4 x 9-1/4	Condensate Connection (inch):	11/16
Net Weight (lb):	26	Sound Pressure (H/L) (dBA):	37/31
Ext. Static Pressure (Rated/Max) (inWg):	1	Sound Power Level (dBA):	

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0.75-Ton Wall Mounted Unit FXAQ09PVJU

DIMENSIONAL DRAWING



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Daikin City Generated Submittal Data



1.0-Ton Wall Mounted Unit FXAQ12PVJU

FEATURES

- Auto-swing mechanism ensures efficient air distribution via louvers that automatically close when the unit is turned off
- Easy to clean front panel with a flat smooth surface that can be removed for additional cleaning
- Five different airflow distribution angles programmable by the optional controller
- Condensate drain pipe can be installed on either the left or right side of the unit
- Wide air discharge outlet distributes a comfortable airflow throughout the entire space
- Standard Limited Warranty: 10-year warranty on compressor and all parts





Daikin City Generated Submittal Data

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1.0-Ton Wall Mounted Unit

FXAQ12PVJU

PERFORMANCE			ALL AND THE DESCRIPTION OF
Indoor Unit Model No.	FXAQ12PVJU	Indoor Unit Name:	1.0-Ton Wall Mounted Unit
Туре:	Wall Mounted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	12,000	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	8,900	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.030	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	13,500		
Heating Input Power (kW):	0.04		

INDOOR UNIT DETAILS

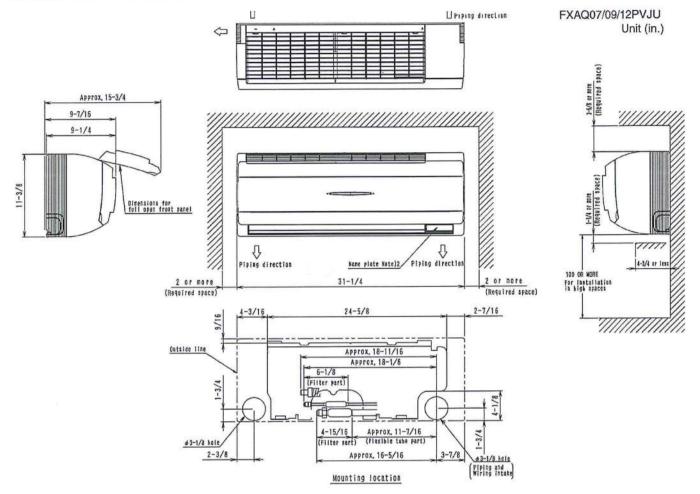
Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (H/L) (CFM):	290/180
Power Supply Connections:	L1, L2, Ground	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	0.4	Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	11-3/8 x 31-1/4 x 9-1/4	Condensate Connection (inch):	11/16
vet Weight (Ib):	26	Sound Pressure (H/L) (dBA):	38/31
Ext. Static Pressure (Rated/Max) (inWg):	1	Sound Power Level (dBA):	

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1.0-Ton Wall Mounted Unit FXAQ12PVJU

DIMENSIONAL DRAWING



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Daikin City Generated Submittal Data



1.5-Ton Wall Mounted Unit FXAQ18PVJU

FEATURES

- Auto-swing mechanism ensures efficient air distribution via louvers that automatically close when the unit is turned off
- Easy to clean front panel with a flat smooth surface that can be removed for additional cleaning
- Five different airflow distribution angles programmable by the optional controller
- Condensate drain pipe can be installed on either the left or right side of the unit
- Wide air discharge outlet distributes a comfortable airflow throughout the entire space
- Standard Limited Warranty: 10-year warranty on compressor and all parts

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1.5-Ton Wall Mounted Unit FXAQ18PVJU

			A THE REPORT OF A RECEIPTION OF A RECEIPTION OF A RECEIPTION
ndoor Unit Model No.	FXAQ18PVJU	Indoor Unit Name:	1.5-Ton Wall Mounted Unit
Туре:	Wall Mounted	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67
ype.	Wai Mounted	rated cooming contantonol	Ambient (°F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	18,000	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60
tated booling oupdoily (blann).		the second se	Ambient (°F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	13,700	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.030	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	20,000		
Heating Input Power (kW):	0.04		

INDOOR UNIT DETAILS

Mbood own de naco			
Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (H/L) (CFM):	500/400
Power Supply Connections:	L1, L2, Ground	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	0.5	Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	11-3/8 x 41-3/8 x 9-1/4	Condensate Connection (inch):	11/16
Net Weight (lb):	31	Sound Pressure (H/L) (dBA):	43/37
Ext. Static Pressure (Rated/Max) (inWg):	1	Sound Power Level (dBA):	

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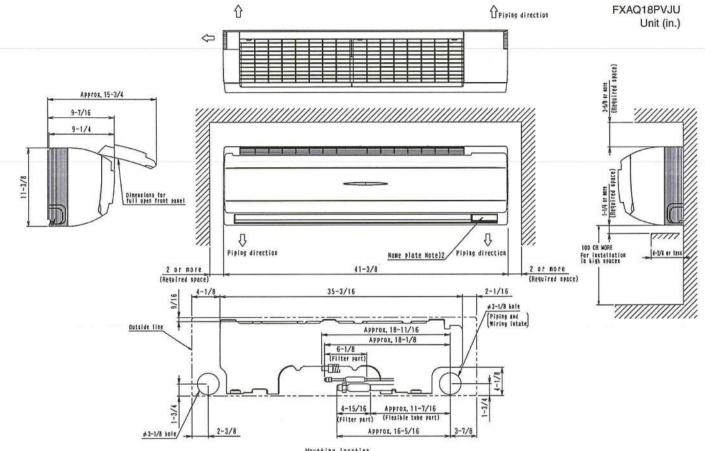
Daikin City Generated Submittal Data



Submittal Data Sheet 1.5-Ton Wall Mounted Unit

FXAQ18PVJU

DIMENSIONAL DRAWING



Mounting location

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FEATURES

- Superior performance with a high efficiency fan and the capability for use in a wide range of climates (5°F DB ~ 122°F DB and 80% RH or less) *
- Interlocked simultaneous operation with VRV indoor units
- Pre-cooling/heating control function to delay the start of ventilation during air conditioner start-up for higher energy savings
- Unique functions such as independent operation, interlock with other HVAC systems and automatic night purge to reduce cooling loads and increase energy savings
- Standard Limited Warranty: 10-year warranty on compressor and all parts





* Performance characteristics certified to AHRI Standard 1060 are only applicable to the cooling and heating operating conditions specified in the performance table of this document.

- The cooling effectiveness shall be based on 95°F DB / 78°F WB for the entering supply air and 75°F DB / 63°F WB for the entering exhaust air, at a leaving supply airflow of both 100% and 75% of the rated airflow.

- The heating effectiveness shall be based on 35°F DB / 33°F WB for the entering supply air and 70°F DB / 58°F WB for the entering exhaust air, at a leaving supply airflow of both 100% and 75% of the rated airflow.

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PERFORMANCE				
Indoor Unit Model No.	VAM300GVJU	Indoor Unit Name	Energy Recovery Ventilato 300	
Cooling Input Power (KW):	0.307	Heating Input Power (KW):	0.307	
Rated Cooling Supply Air Condition (°F DB / WB):	95 / 78	Rated Heating Supply Air Condition (°F DB / WB):	35 / 33	
Rated Cooling Exhaust Air Condition (°F DB / WB):	75 / 63	Rated Heating Exhaust Air Condition (°F DB / WB):	70 / 58	
Rated Cooling Sensible Effectiveness (100% Airflow):	60.6	Rated Heating Sensible Effectiveness (100% Airflow):	60	
Rated Cooling Latent Effectiveness (100% Airflow):	29	Rated Heating Latent Effectiveness (100% Airflow):	46	
Rated Cooling Sensible Effectiveness (75% Airflow):	63.9	Rated Heating Sensible Effectiveness (75% Airflow):	63	
Rated Cooling Latent Effectiveness (75% Airflow):	40	Rated Heating Latent Effectiveness (75% Airflow):	53	

* Certified in accordance with the AHRI ERV Certification Program, which is based on AHRI Standard 1060. Certified units may be found in the AHRI Directory at www.ahridirectory.org.



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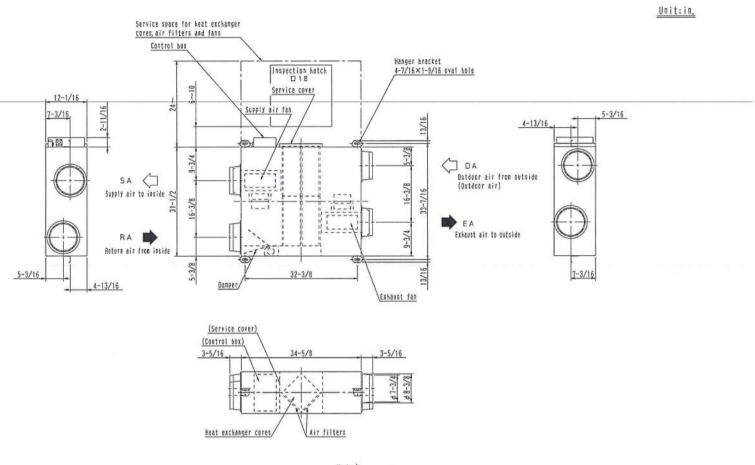


INDOOR UNIT DETAILS				
Power Supply (V/Hz/Ph):	208-230/60/1	Airflow Rate (HH/H/L) (CFM):	305/300/170	
Power Supply Connections:	L1, L2, Ground	Connection Duct Diameter (in):	8	
Min Circuit Amps MCA (A):	1.6	Gas Pipe Connection (in):	NA	
Max Overcurrent Protection MOP (A):	15	Liquid Pipe Connection (in):	NA	
Dimensions (HxWxD) (in):	12-1/16 x 34-5/8 x 31- 1/2	Condensate Pipe Connection (in):	NA	
Net Weight (Ib):	71	Sound Pressure @ 208V (HH/H/L) (dBA):	34.5/31.5/21.5	
Ext Static Pressure (HH/H/L) (in W.C.)	0.64/0.26/0.16	Sound Power @ 208V (HH/H/L) (dB):	54/50.9/42.8	

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DIMENSIONAL DRAWING



Note) 1. Be sure to provide an inspection hatch (18×18 in.) to inspect air filters, heat exchanger cores and fans.

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BRC1E73 – Navigation Remote Controller

Project Name:	
Location:	Approval:
Engineer:	Date:
Submitted to:	Construction:
Submitted by:	Unit #:
Reference:	Drawing #:

MODEL COMPATIBILITY:

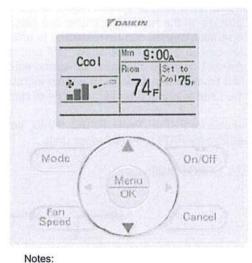
Compatible with VRV and VRV Life[™] indoor unit models: FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, VAM, CXTQ

Compatible with SkyAir indoor unit models: FAQ, FBQ, FCQ, FHQ, FTQ Compatible with Single and Multi-zone system indoor unit model: FFQ, FDMQ

SPECIFICATIONS:

Model	BRC1E73	
Description	Navigation Remote Controller	
Maximum Connections	16 indoor units	
Communication Wire	18AWG-2, No polarity Stranded, Non-shielded	
Total Wiring Length	1,640 ft. (500 m)	
Communication Protocol	Daikin proprietary P1P2 protocol	
Power	16VDC supplied by indoor unit (1.58VA maximum)	
Comfort Setpoint Range	60 to 90 °F (16 to 32 °C)	
Setback Setpoint Range	40 to 95 °F (5 to 35°C)	
Operating Temp Range	14 to 122°F (-10 to 50°C)	
Operating Humidity Range	75% or less (RH) (without condensation)	
Dimensions (WxHxD)	4.72x4.72x0.75 inch (120x120x19 mm)	
Weight (Mass)	0.42 lbs. (0.19 kg)	

PRODUCT IMAGE:



 (1) 1 of 3 display options – Detailed display shown

FEATURES:

- 1. Up to 16 indoor units are controllable within one group
- 2. Within one group, up to 2 Navigation Remote Controllers can be used, one as a main and one as a sub
- 3. Backlit LCD displays in English, Spanish or French
- 4. Temperature sensor built-in with configurable offset
- 5. Display of Temperature and Setpoint in 1°F / °C increments
- 6. Three configurable display options: Detailed, Standard and Simple
- 7. Dual setpoints (independent cooling and heating setpoints) with configurable minimum setpoint differential or Single Setpoint (occupied period)
- 8. Setpoint range limit for cooling and heating modes

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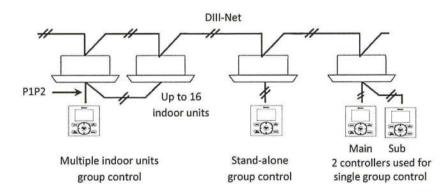


BRC1E73 – Navigation Remote Controller

Approval:	
Date:	
Construction:	
Unit #:	
Drawing #:	
	Date: Construction: Unit #:

- 9. Independent cooling and heating setback setpoints (unoccupied period)
- 10. Auto changeover control with configurable primary and secondary changeover dead bands and guard timer
- 11. Airflow Individual air flow direction, dual airflow and auto draft prevention (prevents air blowing directly on occupants)*
- 12. Built-in 7 days, weekdays+weekend, weekdays+Sat+Sun, and Everyday schedules with up to 5 actions per day with independent cooling and heating or setback setpoints
- 13. Automatic Setback by occupancy sensor*
- 14. Automatic Off by occupancy sensor*
- 15. Configuration for Self-cleaning filter panel**
- 16. Automatic adjustment for Daylight Savings Time (DST)
- 17. 48 hour clock/calendar battery backup (protects schedule timing in cases of short term power loss from indoor unit)
- 18. Real-time monitoring of system malfunctions with immediate display of unit in error and error code
- 19. The buttons on the remote controller are selectable by locking out the unwanted buttons
- 20. The operation modes can be restricted to provide only the desired mode(s) of operation
- 21. Display can be configured to show "Off" and room temperature only when indoor unit is turned off
- 22. To prevent unwanted changes, fan speed selection and display may be hidden
- 23. Auto off timer configurable in 10 minute increments (range 30-180 minutes)
- 24. Can be used to replace earlier versions of remote controllers
 - * Available for FXFQ_TVJU, FXUQ_PVJU, and FXZQ_TA indoor units **Available for FXFQ_TVJU indoor units

SYSTEM DIAGRAM:



FACE DECAL OPTIONS:

Face decal options are used to hide unnecessary buttons:

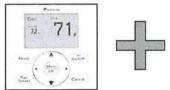
- 1. The face decal is designed to adhere to the faceplate
- 2. Hidden buttons can be accessed by service personnel without removing the face decal due to its flexibility

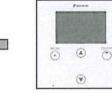
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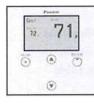
BRC1E73 – Navigation Remote Controller

Project Name: Location: Approval: Engineer: Date: Submitted to: Construction: Submitted by: Unit #: Reference: Drawing #:



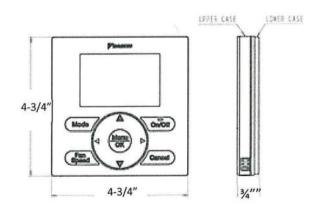






Used with		Single Setpoint mode		Dual Setpoint mode			
	BRC1E72RM BRC1E72RF		BRC1E72RMF	BRC1E72RM2	BRC1E72RF2	BRC1E72RMF2	
	Paccin	Frees	Faces	P	Passa	Franc	
Model	 	۵ ک ک ای ک	i⊙ i⊙ i⊛	©. ●. Ŭ . ●		© ⊗	
On/Off	x	x	x	X	x	x	
Mode	х		x	X		x	
Fan		x	x		Х	х	
Up, Down	x	x	x	х	X	х	
Left, Right	14			x	x	x	
Menu/Ok							
Cancel							

DIMENSIONS:



DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

- Installation Manual
- Operation Manual

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BRC1E73 – Navigation Remote Controller

Approval:	
Date:	
Construction:	
Unit #:	
Drawing #:	
	Date: Construction: Unit #:

- Submittal
- Guide Specifications
- Quick User Guide
- Field Setting Table

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1.0-Ton Multi Position Air Handling Unit - FXTQ12TAVJUA

Project: Schmitt Elementary

Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024

Submitted to: No Engineer Name Specified

Tags: DXFC-1, DXFC-2, DXFC-3, DXFC-4, DXFC-5

FEATURES

- Capable of upflow, horizontal-right, horizontal-left, and downflow installation. Downflow installation requires the use of a field installed downflow accessory kit.
- Variable speed ECM motor produces nominal CFM up to 0.9" external static pressure
- Improved auxiliary heat logic
- Designed with less than 2% air leakage when tested in accordance with ASHRAE 193
- All-aluminum coil
- Precise refrigerant modulation from a 2000 pulse electric expansion valve
- · Cool, Dry, Auto, Heat, and Fan operation modes
- Auto Fan Speed automatically adjusts fan speed in relation to space temperature and set point
- Configurable Dry mode
- Optional slide-in electric heat available up to 6 kW
- Standard Limted Warranty: 10-year warrantly on compressor and all parts

BENEFITS

- Optimized fan speed from Auto Fan Speed logic
- Reduced auxiliary heat dead band
- Configurable electric heat on/off temperature settings
- Compact footprint fits tight spaces





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Page 1 of 3



1.0-Ton Multi Position Air Handling Unit - FXTQ12TAVJUA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: DXFC-1, DXFC-2, DXFC-3, DXFC-4, DXFC-5

PERFORMANCE

FXTQ12TAVJUA	Indoor Unit Name:	1.0-Ton Multi Position Air Handling Unit	
Type: Ducted Rated Cooling Capacity (Btu/hr): 12,000		Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75	
		Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43	
9,900	Rated Piping Length(ft):		
0.150	Rated Height Separation (ft):		
13,500			
0.15			
	Ducted 12,000 9,900 0.150 13,500	Ducted Rated Cooling Conditions: 12,000 Rated Heating Conditions: 9,900 Rated Piping Length(ft): 0.150 Rated Height Separation (ft): 13,500	

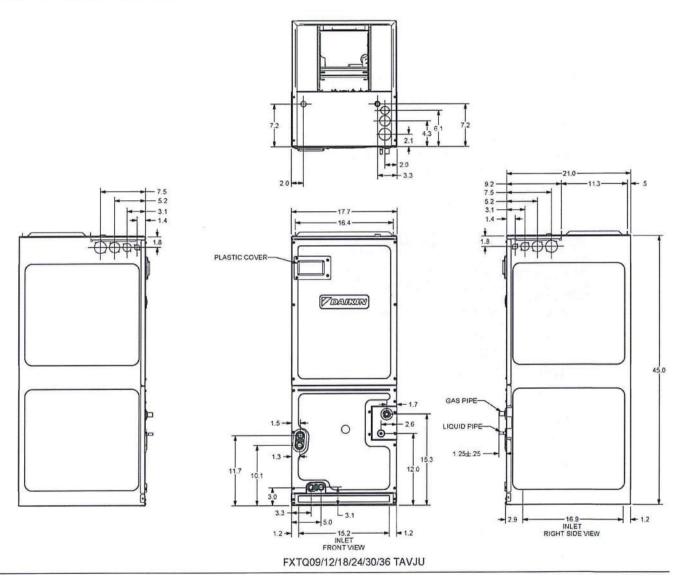
INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208/230 / 60 / 1	Airflow Rate (H/M/L) (CFM):	400/340/280
Power Supply Connections:		Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	4.9/4.9	Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	45 x 17.5 x 21	Condensate Connection (inch):	3/4
Net Weight (lb):	115	Sound Pressure () (dBA):	
Ext. Static Pressure (Rated/Max) (inWg):	/ 0.9"	Sound Power Level (dBA):	



1.0-Ton Multi Position Air Handling Unit - FXTQ12TAVJUA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: DXFC-1, DXFC-2, DXFC-3, DXFC-4, DXFC-5

DIMENSIONAL DRAWING



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www.darkinac.com www.darkincomfart.com



Submittal Data Sheet Electric Heat Kit for FXTQ HKS(X)C03/05/06/08/10/15/19/20/25

DESCRIPTION

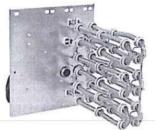
The electrical heat kit mounts directly inside FXTQ to provide auxiliary heating or to be used as alternate heat.

FEATURES

- · Allows for easy addition axillary heat to supplement heating capabilities without any major equipment changes
- Sequencers for better temperature control
- Multiple branch circuit capability
- Completely assembled and tested
- · Control circuitry arranged to readily permit staging
- Factory-installed circuit breakers available on specific models
- · Fuse link secondary high-temperature limit control
- Plug-in wiring harness for ease of installation into air handler
- Rust-resistant nickel chromium heat elements

Specification			the State Barrier State									and a series	
Heater	Heater		With	- NUMBER				Contraction of the owner	npatilbil		1 - E.S.		A ANIA
Model No.	Capacity	Voltage	Circuit	FXTQ_TAVJUA / FXTQ_TAVJUD									
	copacity		Breaker?	9	12	112	24	- 3(0	36	4/2	-48	514	510
HKSX03XC	3 kW	208/240V	no	1	1	1	1	1	1	-	-	-	-
HKSC05XC	5 kW	208/240V	yes	1	1	1	1	1	1	1	1	1	1
HKSX05XC	5 kW	208/240V	no	1	1	✓	✓	1	1	1	1	1	1
HKSX06XC	6 kW	208/240V	no	-	1	1	1	1	1	1	1	1	1
HKSX08XC	8 kW	208/240V	no		1	1	1	1	1	1	1	1	1
HKSX10XC	10 kW	208/240V	no	-	1	1	1	1	1	1	1	1	1
HKSC15XA	15 kW	208V	yes	-	-	-	-	-	-	1	1	1	1
HKSC15XB	15 kW	240V	yes	-	-	-	-	-	-	1	1	1	1
HKSC19CA	19 kW	208V	yes	-	-	-	-	-	-	1	~	-	-
HKSC19CB	19 kW	240V	yes	-	-	-	-	-	-	1	1	-	-
HKSC20DA	20 kW	208V	yes	-	-	-	-	-	-	-	-	1	1
HKSC20DB	20 kW	240V	yes	-	-	-	-	-	-	-	-	1	1
HKSC25DC	25 kW	208/240V	yes	-	-	-	-	-	-	-	-	1	1

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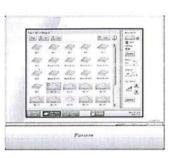
DCM601B71 – intelligent Touch Manager

Project Name:		
Location:	Approval:	_
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

SPECIFICATIONS:

Model	DCM601B71	DCM601A72
Description	intelligent Touch Manager (iTM)	iTM Plus Adaptor
Maximum Indoor Unit Groups	64	64
Max Indoor Units	128	128
Max Outdoor Units	10	10
Max BACnet Servers	50	· · · · · · · · · · · · · · · · · · ·
System Total	512 Indoor Unit Groups	(1024 Indoor Units)
Power Supply	24 VAC, 60 Hz	24 VAC, 60 Hz
Power Consumption	23 Watts	23 Watts
Operating Temp Range	32-104°F	14 - 122°F
Operating Humidity Range	85% or less (w/o condensation)	85% or less (w/o condensation)
Dimensions (W x H x D)	11.42 x 9.57 x 1.97 in.	6.30 x 5.87 x 2.41 in.
Weight (Mass)	5.3 lbs. (2.4 kg)	1.1 lbs. (0.5 kg)
Certifications	FCC Part 15	Class B
DIII-NET Systems	1	1
RJ-45 (Ethernet) 100Base-TX or 10Base-T	2	N/A
USB Port-USB2.0 (2GB to 32GB)	1	N/A
RS485 (19 - 22 AWG)	1	1
Digital Input forced shutdown of all indoor unit systems	1	N/A
Digital Input and/or Pulse Input Terminals	tal Input and/or 3 x 10 mA @ 16 VDC/ 4 x 10 m/	

PRODUCT IMAGE:



iTM



iTM Plus Adaptor (Optional)

OPTIONS:

- Software Options:
 - Power Proportional Distribution (PPD) Option (DCM002A71)⁽¹⁾
 - Web (HTTP) Interface Software (DCM007A51)
 - BACnet Client Option Software (DCM009A51)
 - BACnet/IP Server Gateway Option (DCM014A51)⁽²⁾⁽³⁾
- Hardware Options:
 - iTM Plus Adapter (DCM601A72) for expanding indoor unit groups up to 512 groups (1024 indoor units)
 - WAGO I/O basic kit (60359653) and I/O modules for controlling/ monitoring of external equipment via Di, Do, Ai, Ao and Pi
- Spare Parts:
 - o iTM Sliding Door (Part# B72A930)
 - o SD Card (Part# 2336767)

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Rev.1022



DCM601B71 – intelligent Touch Manager

Project Name:	Approval	
Location:	Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

Notes:

- (1) The Power Proportional Distribution (PPD) option supplies the user with a reasonably calculated apportionment of the total power consumption by the Daikin air-conditioning system to individual units on the system. Because input to the PPD includes measured pulses in the refrigerant system and because the air-conditioning system includes number of variables, to include operating temperatures and pressures, piping lengths, heat exchange rates and others, no meter-type apportionment of individual user's consumption can be made. However, the PPD feature provides an apportionment methodology that uses highly advanced technology as applied to the many variables in the air-conditioning system.
- (2) The BACnet Server Gateway option cannot use together with the BACnet Client software option.
- (3) BACnet/IP Server Gateway option is not compatible with the VAM unit or the Low Temp Hydrobox.

MODEL COMPATIBILITY:

The following indoor units are compatible with the iTM:

System	Model
VRV and VRV Life™	FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, CXTQ, VAM*, Low Temperature Hydrobox (HXY48TAVJ)*
SkyAir	FAQ, FBQ, FCQ, FHQ, FTQ
Single Zone/Multi Zone/SkyAir	 FDMQ, FFQ_Q FFQ_LVJU with the use of the Interface Adaptor DTA112BA51 FTXS, CTXS, CTXG, FTXG, FDXS, CDXS, FVXS with the use of the DIII-Net Adapter KRP928BB2S FTK_N, FTX_N, FTX_U, FTXN, and FTKN with the use of the DIII-Net Adapter KRP928BB2S and an Interface adaptor KRP067A41E/KRP980B1/KRP980B2E

*iTM BACnet Server Gateway Option is not compatible with VAM unit and LT Hydrobox

The outdoor operational data is available for the following outdoor unit models:

VRV Family	Model
VRV III S	RXYMQ_PVJU
VRV IV S	RXTQ_TAVJU
VRV LIFE	RXSQ_TAVJU
VRV III	RXYQ_PBTJ, RXYQ_PBYD, REYQ_PATJ, REYQ_PBTJ, REYQ_PBYD, REYQ_PCTJ, REYQ_PCYD, RWEYQ_PTJU and RWEYQ_PYDN
VRV AURORA	RXLQ_TATJU, RXLQ_TAYDU, RXLQ_TAYCU, RELQ_TATJU, RELQ_TAYDU and RELQ TAYCU
VRV IV X	REYQ_XATJU, REYQ_XAYDU, REYQ_XAYCU, RXYQ_XATJA, RXYQ_XAYDA, REYQ_XATJA, REYQ_XAYDA, REYQ_XAYCA
VRV T	RWEQ_TATJU, RWEQ_TAYDU, RWEQ_TAYCU
VRV IV RXYQ_TTJU, RXYQ_TATJU, RXYQ_TAYDU, REYQ_TATJU, REYQ_TAYDU, RXYQ_TAYCU, RXYQ_TYDN, REYQ_TAYCU, REYQ_TTJU, REYQ_TYDN, RWEYQ_PCTJ and RWEYQ_PCYD	
VRV Emerion	REYQ_AATJA, REYQ_AAYDA, RXYQ_AATJA, RXYQ_AAYDA

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DCM601B71 – intelligent Touch Manager

	2 2
Approval:	
Date:	
Construction:	
Unit #:	
Drawing #:	
-	Date: Construction: Unit #:

FEATURES:

- 1. Management size up to 512 indoor unit groups (1024 indoor units).
 - a. The iTM can manage one (1) DIII-Net system which can have up to 64 indoor unit groups (128 indoor units).
 - b. The iTM can manage up to eight (8) DIII-Net systems with the addition of the iTM Plus Adapter which can manage one (1) DIII-Net system each. This means up to seven (7) iTM adapters can be daisy chained to the iTM.

1

2. Control / Monitoring

- a. Independent Cool and Heat setpoints
 - i. Setpoint tracking for full range of setpoint differentials
- b. Independent Cool and Heat Setback setpoints (unoccupied)
 - i. Adjustable timed override
- c. Room temperature displayed in 0.1°F
- d. Scheduling: 7, 5+2, 5+1+1, 1 (Everyday) weekly patterns
 - i. Optimum Start
 - ii. Schedule the capacity demand limit of the outdoor unit's compressor by 0%, 40%, 70% or 100%
 - iii. Schedule the outdoor unit low noise operation
- e. Auto-changeover: Fixed, Individual, Average, and Vote
 - i. Weighted demand (0-3) configurable for Average and Vote methods
 - ii. Adjustable (1-4°F) Primary and Secondary changeover bands

3. Web Accessibility

- a. Web and Alert Email function standard with iTM
- b. All iTM configuration/setup can be done through Web Option or touch screen

4. Visual Navigation Screen

- a. Floor plan layout view is available
- b. Graphical User Interface (GUI) for BACnet IP Client management points
- 5. Easy installation
 - a. Wall mount and flush mount installation.
 - b. Automatic indoor unit registration and indoor unit model detection.

6. Easy Engineering

- a. iTM can be configured off site via Pre-setting Tool.
- b. All data can be uploaded and downloaded by USB flash drive.

7. Building facilities management

- a. The iTM is equipped with 3 digital/pulse inputs and the iTM Plus Adapter comes equipped with 4 digital/pulse inputs.
- b. Building ancillary equipment can be connected by using the WAGO I/O system (optional).
 i. I/O configuration for Digital Input, Digital Output, Analog Input, Analog Output and Pulse Input.
- c. BACnet IP Client management points with BACnet Client option (optional).
 - i. AI, AO, AV, BI, BO, BV, MI, MO and MV

8. Power Proportional Distribution (PPD) (Optional)

- a. Provide function to distribute the energy consumption of the Outdoor units to the selected indoor unit group address, based on indoor unit operation duration, electronic expansion valve opening ration, indoor size.... etc.
- b. Up to 512 indoor unit group address
- c. PPD data can be downloaded in CSV format to a PC or USB flash drive

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DCM601B71 – intelligent Touch Manager

Approval:
Date:
Construction:
Unit #:
Drawing #:

9. Web (HTTP) Interface Software (Optional)

- a. Provide function to monitor and control up to 512 indoor unit group addresses by a BMS via HTTP protocol.
- b. The following data points are available: Fan Speed Louver Direction Ventilation Mode Ventilation Amount -
 - Normal/Error monitor On/Off Operation Mode Setpoint Room Temp

10. BACnet Client (Optional)

- a. Monitor and control equipment and sensors connected to a BACnet server via BACnet IP.
 - i. Up to 50 BACnet IP servers can be connected

11. BACnet Server Gateway (Optional)

- a. Provide function to monitor outdoor units and control indoor units by BMS via BACnet IP.
 - i. Up to 128 BACnet Device IDs (including indoor unit groups and outdoor units)
 - ii. Up to 4000 BACnet objects
 - iii. Virtual BACnet router function embedded
 - i. Individual and configurable Device ID for each indoor unit group and/or outdoor unit system.

12. History

- a. All errors, operations, automatic controls and status changes are stored in history (up to 500,000 items).
- 13. D-Net compatible (Service option)
 - a. Remote monitoring of VRV equipment status and reporting

14. Operation Data

- a. Operation data are stored in the iTM every minute for the last 5 days.
 - i. Indoor and outdoor unit operation data.
 - ii. BACnet Client management data points (AI, AO, AV, BI, BO, BV, MI, MO and MV).
 - iii. WAGO IO system data points (External DI, DIO, PI, AI and AO).
- b. The operation data can be exported through the iTM web browser or a USB drive based on a specified period. (See iTM BACnet Server points list below for IDU/ODU operational data list)

15. Demand Limiting

- a. Interlock the digital input signals to provide the following automatic demand control functions
 - i. Indoor unit set-point shift control
 - ii. Indoor unit forced thermo-off
 - iii. Indoor unit on/off control
 - iv. Outdoor unit's capacity demand limit control

WIRING SPECIFICATION:

	Specifications of Communication Cabling	
DIII-Net		
Туре	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket	
Size	AWG 18-2	
Total Length	Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft.	
	iTM Plus Adapter	
Туре	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket	
Size	AWG 18-2	
RS485 Length	Maximum distance between iTM and furthest iTM Plus Adapter 150 ft.	
Total Length	Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft.	

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DCM601B71 - intelligent Touch Manager

Approval:	
Date:	
Construction:	
Unit #:	
Drawing #:	
	Date: Construction: Unit #:

WAGO	
Туре	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket (CPEV or FCPEV)
Size	2 Wire AWG 24 - 18 stranded
Total Length	Maximum wiring distance between iTM and Bus Coupler 1640 ft.

BACNET CLIENT OPTION MANAGEMENT POINTS:

The following BACnet object types can be monitored and controlled by iTM through BACnet Client Option (DCM009A51) via the BACnet/IP protocol:

Object Type #	Object Name	Description	
0	Analog Input	Analog input value such as a temperature and measurement value.	
1	Analog Output	Analog output value such as a setting value (For example, can be used as the analog input value of a setting value).	
2	Analog Value	Analog input value such as a temperature and measurement value or analog output value such as a setting value.	
3	Binary Input	Digital input value such as an On/Off status and error status.	
4	Binary Output	Digital output value such as an On/Off operation (For example, can be used as the digital input value of an On/Off operation).	
5	Binary Value	Digital input value such as an On/Off status and error status or digital output value such as an On/Off operation.	
13	Multi-state Input	Digital input value such as an operation mode	
14	Multi-state Output	put Digital output value such as an operation mode (For example, can be used as the digital inp value of an operation mode).	
19	Multi-state Value	Digital input value such as an operation mode or digital output value such as an operation mode.	

BACNET/IP SERVER GATEWAY OPTION POINTS LIST:

System configuration points linked to iTM control logic (one set of points per iTM):

Point Name	Point Description	
Enable ITM Schedule Operation	Enable or Disable iTM Schedule operation	
Enable ITM Auto Changeover Operation	Enable or disable iTM Auto changeover logic.	
Timed Override Minutes	Set override time in minutes	
System Forced Off	The Forced System Stop command will force the indoor unit to stop running. Remote controllers will be locked out from restarting indoor units during the forced system stop event.	

Indoor unit monitoring points (one set of points per indoor unit group):

Point Name	Point Description	
Unit On_Off Status	Monitors if the indoor unit fan is On or Off	

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DCM601B71 - intelligent Touch Manager

Approval:	
Date:	
Construction:	
Unit #:	
Drawing #:	
	Date: Construction: Unit #:

Alarm Status	Monitors whether or not the indoor unit is operating normally, and issues an alarm if the indoo unit has a malfunction. Error Code is shown in the description.
Room Temperature	Monitors and displays the room temperature.
Unit On Details	Indoor unit details operation Off - Normal (ON) - Override - Setback
Filter Sign Status	Monitors filter run time and provides service alert.
Indoor Fan Status	Monitors if the indoor unit fan is On or Off
Communication Status	Monitor if the communication is Normal or in Alarm
Thermo-on Status	Monitors whether or not the indoor unit is actively cooling or heating.
Compressor Status	Monitors if the compressor of the outdoor unit is On/Off/Defrost
Aux Heater Status	Monitors if the external heater controlled by the indoor unit is operating.
Changeover Option	Monitor if iTM changeover logic is Active.
Return Air Temperature	Monitors and displays the return air temperature.
Discharge Air Temperature	Monitors and displays the discharge air temperature of the FXMQ_PB indoor unit only.
Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature.
Gas Pipe Temperature	Monitors and displays the gas pipe temperature.
EV Position	Monitors and displays the expansion valve position.
Freeze Protection	Monitors if the freeze protection is active (For FXEQ_P, FXFQ_T, FXTQ_TA, FXUQ_P, FXZQ_TA, FXSQ_TA, CXTQ_TA indoor unit only).

Indoor unit monitoring and control points (one set of points per indoor unit group):

Point Name	Point Description
Occupancy Mode	Set the occupancy of the indoor unit Occupied , Unoccupied or Standby
Operation mode	Set Cool - Heat -Fan -Dry operation mode. for the indoor unit and monitors the latest mode
Occ Cooling Setpoint	Sets the occupied cooling setpoint of the indoor unit and monitors the latest setpoint value.
Occ Heating Setpoint	Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.
Unocc Cooling Setpoint	Sets the unoccupied cooling setpoint of the indoor unit and monitors the latest setpoint value
Unocc Heating Setpoint	Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.
Max Cooling Setpoint	Sets the maximum cooling setpoint of the indoor unit and monitors the latest setpoint value.
Min Cooling Setpoint	Sets the minimum cooling setpoint of the indoor unit and monitors the latest setpoint value.
Max Heating Setpoint	Sets the maximum Heating setpoint of the indoor unit and monitors the latest setpoint value.
Min Heating Setpoint	Sets the minimum heating setpoint of the indoor unit and monitors the latest setpoint value.
Min Setpoint Differential (Cooling & Heating)	Set the minimum differential value between cooling and heating setpoint and monitor the latest differential value.
Cooling & Heating Setpoint Tracking Mode	Enable or disable iTM setpoint tracking mode.
Fan speed	Sets the indoor unit fan speed and monitors the latest setting

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DCM601B71 - intelligent Touch Manager

Approval:
Date:
Construction:
Unit #:
Drawing #:

Timed Override Operation	Enable or disable iTM override timer
Remote Controller Prohibit (On Off)	Permits or prohibits the remote controller to control the indoor unit's On/Off.
Remote Controller Prohibit (Operation Mode)	Permits or prohibits the remote controller to control the indoor unit's Operation mode.
Remote Controller Prohibit (Setpoint)	Permits or prohibits the remote controller to control the indoor unit's Setpoint.
Filter Sign Reset	Clears the filter sign status.
Forced Thermo-off	Force the indoor unit to stop actively cooling or heating.

Outdoor unit monitoring points*:

Point Name	Point Description	
Communication Status	Monitors and displays the communication status (General)	
Operation Mode	Monitors and displays the operation mode (Cool, Heat, Fan or Heat &Cool) (General,	
Outdoor Unit Alarm Status	Monitors whether or not the outdoor unit is operating normally. (General)	
Defrost Mode	Monitors if the defrost mode is active. (General)	
Oil Return Mode	Monitors whether or not the outdoor unit is in oil return operation. (General)	
Electric Power	Monitors and displays the electric power (calculated). (General)	
Electric Current	Monitors and displays the electric current (calculated). (General)	
System Capacity Code	Monitors and displays the system capacity code. (General)	
Outdoor Air Temperature	Monitors and displays the outdoor air temperature. (General)	
M_Condensing Pressure	Monitors and displays the condensing pressure (Master Module)	
M_Evaporating Pressure	Monitors and displays the evaporating pressure (Master Module)	
M_Condensing Temperature	Monitors and displays the condensing temperature (Master Module)	
M_Evaporating Temperature	Monitors and displays the evaporating temperature (Master Module)	
M_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 (Master Module)	
M_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 (Master Module)	
M_Fan Step	Monitors and displays the fan step (Master Module)	
M_EV Position 1	Monitors and displays the position of the expansion valve1 (Master Module)	
M_EV position 2	Monitors and displays the position of the expansion valve2 (Master Module)	
M_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 (Master Module)	
M_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 (Master Module)	
M_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature (Master Module)	
M_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX (Master Module)	
M_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX (Master Module)	
M_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer (Master Module)	

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Rev.1022



DCM601B71 - intelligent Touch Manager

Project Name:		
Location:	Approval:	· · · · · · · · · · · · · · · · · · ·
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

M_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX (Master Module)
M_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX (Master Module)
M_Suction Temperature	Monitors and displays the suction temperature (Master Module)
M_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature (Master Module)
M_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature (Master Module)
M_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature (Master Module)
M_Subcool EV Position	Monitors and displays the subcool expansion valve position (Master Module)
S1_Condensing Pressure	Monitors and displays the condensing pressure (Sub Module1)
S1_Evaporating Pressure	Monitors and displays the evaporating pressure (Sub Module1)
S1_Condensing Temperature	Monitors and displays the condensing temperature (Sub Module1)
S1_Evaporating Temperature	Monitors and displays the evaporating temperature (Sub Module1)
S1_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 (Sub Module1)
S1_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 (Sub Module1)
S1_Fan Step	Monitors and displays the fan step (Sub Module1)
S1_EV Position 1	Monitors and displays the position of the expansion valve1 (Sub Module1)
S1_EV position 2	Monitors and displays the position of the expansion valve2 (Sub Module1)
S1_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 (Sub Module1)
S1_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 (Sub Module1)
S1_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature (Sub Module1)
S1_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX (Sub Module1)
S1_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX (Sub Module1)
S1_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer (Sub Module1)
S1_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX (Sub Module1)
S1_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX(Sub Module1)
S1_Suction Temperature	Monitors and displays the suction temperature (Sub Module1)
S1_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature (Sub Module1)
S1_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature (Sub Module1)
S1_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature (Sub Module1)
S1_Subcool EV Position	Monitors and displays the subcool expansion valve position (Sub Module1)
S2_Condensing Pressure	Monitors and displays the condensing pressure (Sub Module2)
S2_Evaporating Pressure	Monitors and displays the evaporating pressure (Sub Module2)
S2_Condensing Temperature	Monitors and displays the condensing temperature (Sub Module2)
S2_Evaporating Temperature	Monitors and displays the evaporating temperature (Sub Module2)
S2 Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 (Sub Module2)

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Rev.1022



DCM601B71 - intelligent Touch Manager

Project Name:	
Location:	Approval:
Engineer:	Date:
Submitted to:	Construction:
Submitted by:	Unit #:
Reference:	Drawing #:

S2_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 (Sub Module2)
S2_Fan Step	Monitors and displays the fan step (Sub Module2)
S2_EV Position 1	Monitors and displays the position of the expansion valve1 (Sub Module2)
S2_EV position 2	Monitors and displays the position of the expansion valve2 (Sub Module2)
S2_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 (Sub Module2)
S2_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 (Sub Module2)
S2_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature (Sub Module2)
S2_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX (Sub Module2)
S2_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX (Sub Module2)
S2_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer (Sub Module2)
S2_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX (Sub Module2)
S2_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX(Sub Module2)
S2_Suction Temperature	Monitors and displays the suction temperature (Sub Module2)
S2_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature (Sub Module2)
S2_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature (Sub Module2)
S2_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature (Sub Module2)
S2_Subcool EV Position	Monitors and displays the subcool expansion valve position (Sub Module2)

DIMENSIONS:

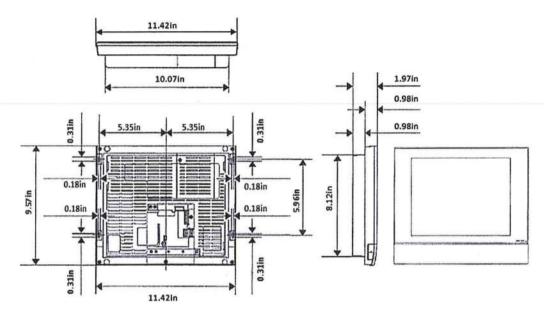
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Rev.1022

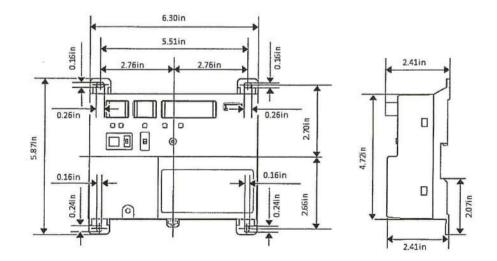


DCM601B71 - intelligent Touch Manager

Project Name:	
Location:	Approval:
Engineer:	Date:
Submitted to:	Construction:
Submitted by:	Unit #:
Reference:	Drawing #:



iTM Plus Adaptor:



DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

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Rev.1022



DCM601B71 - intelligent Touch Manager

Project Name:		
Location:	Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

- Submittal 0
- Sales Brochure •
- Guide Specs

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- Installation Manual
- Operation Manual
- iTM D3 Operation Data Analysis Tool
 - iTM BACnet Server Gateway
 - o Design Guide
 - o Sales Flyer
 - o Quick User Guide
- iTM BACnet Client
- Sales Flyer
 iTM BACnet Client macro tools
 - WAGO I/O Basic Kit and Modules
 - o Submittal
 - Installation Manual
 - o Sales Flyer

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Rev.1022



Submittal Data Sheet 3 PIPE REFNET JOINT KHRP25M72TU9

DESCRIPTION

REFNET Joints provide a factory designed option for the branching within the refrigerant piping network.

FEATURES

- Engineered for uniform refrigerant flow and refrigerant distribution.
- Designed to help smoother oil return.
- Flexible installation; vertical or ± 30° from horizontal.
- Designed with tube diameters (I.D. and O.D.) required for VRV system installations.
- Pre-formed clamshell style insulation^{1,2} for cleaner and reliable application.
- Accounts for 1.5 ft equivalent pipe length calculation.

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No.	Picture for REFERENCE ONLY

VRV



SPECIFICATIONS			
Piping Material:		ACR Copper Alloy C12200	
Ports / Branches:		2	
		1 pcs. – Suction Gas Side	
Included in Branch Kit		1 pcs. – Discharge Gas Side	
		1 pcs Liquid Side	
Kit Name:	SUCTION GAS SIDE	DISCHARGE GAS SIDE	LIQUID SIDE
Reducer Fittings:	1 pcs – I.D. Ø 5/8 2 pcs – I.D. Ø 7/8 1 pcs – I.D. Ø 1-1/8	1 pcs – I.D. Ø 3/8 1 pcs – I.D. Ø 1/2	1 pcs – I.D. Ø 5/8 1 pcs – I.D. Ø 3/4
Insulation Material:	Polypr	opylene	Expandable Polystyrene (EPS)
Insulation Quantity (per Joint):	1 pcs.	1 pcs.	1 pcs.
Indoor Unit Capacity Index:		111 ≤ x < 246	
Pipe Connection Size:	Refer to Dime	ensional Drawing and VRV Expres	s Calculations
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Notes:

1) In applications where the REFNET kits are installed in an environment requiring fire-rated materials to be used, it is necessary for the installer to obtain from a third party supplier and to utilize, for insulation, fire-rated materials that meet all applicable building codes and other requirements. The Factory-provided insulation that is supplied with the REFNET kit should be discarded in a manner meeting all applicable laws.

2) The insulation of the refrigerant piping must be reinforced based on the environment of the installation. Otherwise dew may condensate on the surface of insulation.

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Submittal Data Sheet 3 PIPE REFNET JOINT KHRP25M72TU9 DIMENSIONAL DRAWING

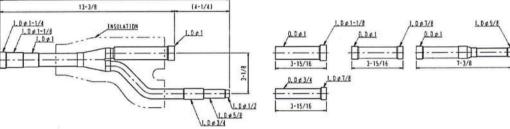
17-5/8

KHRP25M72TU9

Unit: in.

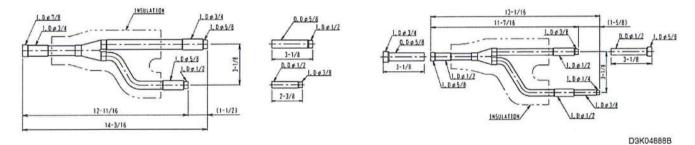
ACCESSORIES REDUCER:4 pcs.(FOR SUCTION GAS SIDE) :2 pcs.(FOR DISCHARGE GAS SIDE) :2 pcs.(FOR LIQUID SIDE) INSULATION:3 pcs. INSTALLATION MANUAL:1 sheet



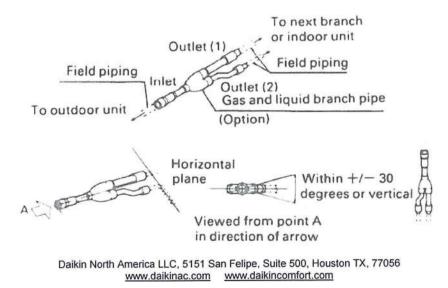


DISCHARGE GAS SIDE

LIQUID SIDE



TYPICAL INSTALLATION DRAWING





Closed Pipe Kit for Branch Selector Box KHFP26A100CA

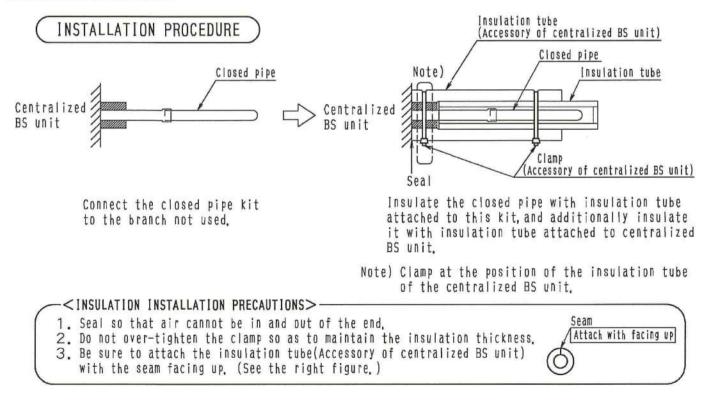
DESCRIPTION

Each Branch Selector boxes comes with 1 set of closed pipe kit to seal off unused piping on the indoor unit side of the branch selector box. The KHFP26A100CA is an additional set of closed pipe kit if more than 1 set of close pipe kit is required.

Components Included:

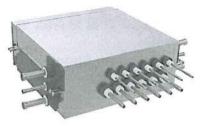
Name	Closed pipe of Gas pipe side	Closed pipe of Liquid pipe side	Insulation tube (Gas pipe side)	Insulation tube (Liquid pipe side)
Quantity	1 pc,	1 pc.	1 pc,	1 pc,
Shape	ø15.9mm (ø5/8 inch)	∮9,5mm (∮3/8 inch)	0	0

Installation Instruction:





Submittal Data Sheet Branch Selector Box, Flex-Series BSF6Q54TVJ



DESCRIPTION

Daikin's new Flex series Branch selector boxes are engineered to be compact and provide flexibility in design, installation, maintenance, and service. Packed with Daikin technology, the new Flex series branch selector boxes fit in tight ceiling spaces. The versatile piping configurations, and the ease of maintenance and service makes the Flex series an ideal choice for commercial buildings.

FEATURES and BENEFITS

- Engineered for flexibility in design with left, right and pass through piping configuration
- Ideal for tight spaces with 9-1/2" height and no service clearance requirement on top
- · Series connectible up to 12 ports with up to 230 MBH downstream capacity
- Low ambient technical cooling capability down to -4F°
- Pass through configuration allows reduction in required REFNETs
- · Ease of maintenance with access to EEV heads from side access panels
- · Ability to mix and match standard and flex series branch selector units
- Same piping flexibility as standard series branch selector units
- Compatible with M, P and T series indoor units and all T series VRV 3 phase heat recovery systems

SPECIFICATIONS				
Model No:				BSF6Q54TVJ
Туре			Multi-Port	
Power Supply				Single phase 208/230V 60Hz
MCA / MOP	140 H 44 K			0.6 / 15
Number of Branches				6
Max Capacity Index o	f Connectable Indoo	or Units Per BS Box / Co	onnected in Series	216 / 162
Maximum connection	n index per port			54
Max Capacity Index o in Series	f Total Connectable	Indoor Units Under BS	5 Units Connected	230
	Indoor Unit	Liquid	in.	3/8 (1/4) Brazing
		Gas	in.	5/8 (1/2) Brazing
Piping connections		Liquid	in.	5/8 Brazing
	Outdoor unit	Suction Gas	in.	1-1/8 Brazing
		HP/LP Gas	in.	1-1/8 Brazing
Weight			lbs (kg)	73 (33)
		Height	in. (mm)	9 -1/2 (241)
Dimensions		Width in. (mm)		23-3/8 (593)
and where a second s		Depth	in. (mm)	23-3/4 (603)
Sound Level	Operating Sound /	Max Sound	dB(A)	40.5 / 50
Refrigerant				R410A
Optional Accessory		Pipe Reducer Kit	Part Number	KHFP26A200T

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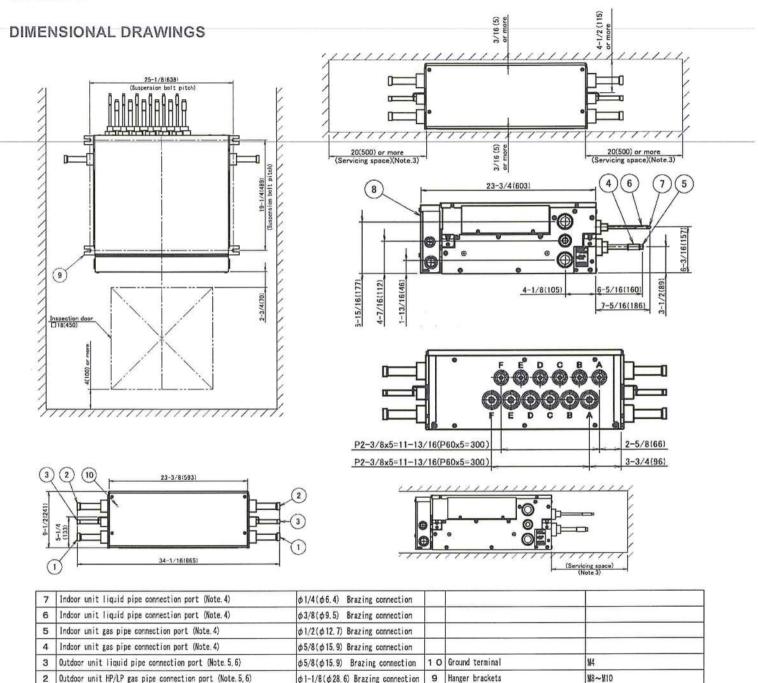
Outdoor unit suction gas pipe connection port (Note. 5, 6)

Part name

1

No.

Submittal Data Sheet Branch Selector Box, Flex-Series BSF6Q54TVJ



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φ1-1/8(φ28.6) Brazing connection

Renark

Control box (Note. 1)

Part name

8

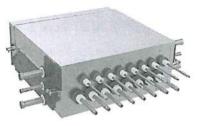
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Remark



Submittal Data Sheet Branch Selector Box, Flex-Series BSF8Q54TVJ



DESCRIPTION

Daikin's new Flex series Branch selector boxes are engineered to be compact and provide flexibility in design, installation, maintenance, and service. Packed with Daikin technology, the new Flex series branch selector boxes fit in tight ceiling spaces. The versatile piping configurations, and the ease of maintenance and service makes the Flex series an ideal choice for commercial buildings.

FEATURES and BENEFITS

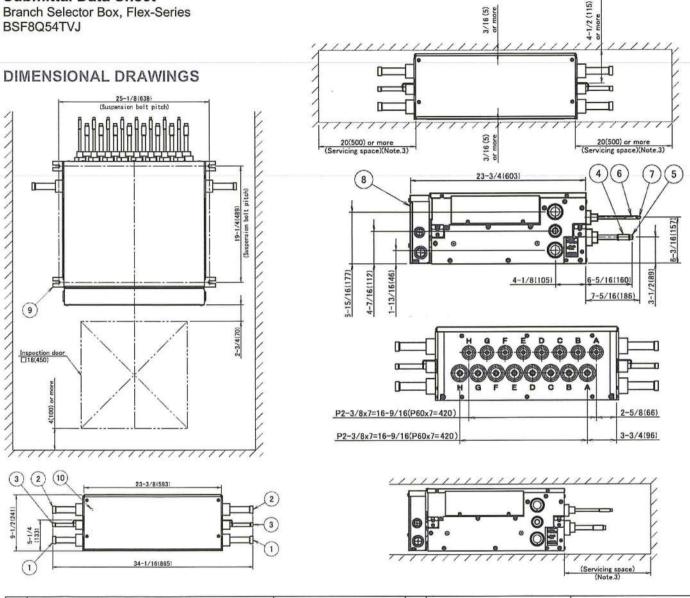
- Engineered for flexibility in design with left, right and pass through piping configuration
- Ideal for tight spaces with 9-1/2" height and no service clearance requirement on top
- Series connectible up to 12 ports with up to 230 MBH downstream capacity
- Low ambient technical cooling capability down to -4F°
- Pass through configuration allows reduction in required REFNETs
- · Ease of maintenance with access to EEV heads from side access panels
- Ability to mix and match standard and flex series branch selector units
- · Same piping flexibility as standard series branch selector units
- Compatible with M, P and T series indoor units and all T series VRV 3 phase heat recovery systems

SPECIFICATIONS			States of the second states	
Model No:		Ka-in		BSF8Q54TVJ
Туре			Multi-Port	
Power Supply	10 a			Single phase 208/230V 60Hz
MCA / MOP	1		Contraction of the second	0.8 / 15
Number of Branches		- Andrew Martin		8
Max Capacity Index of	Connectable Indoor L	Jnits Per BS Box / Cor	nnected in Series	290 / 162
Maximum connection i	ndex per port			54
Max Capacity Index of in Series	Fotal Connectable Ind	door Units Under BS I	Units Connected	230
- A		Liquid	in.	3/8 (1/4) Brazing
	Indoor Unit	Gas	in.	5/8 (1/2) Brazing
Piping connections		Liquid	in.	5/8 Brazing
	Outdoor unit	Suction Gas	in.	1-1/8 Brazing
		HP/LP Gas	in.	1-1/8 Brazing
Weight			lbs (kg)	81 (37)
		Height	in. (mm)	9 -1/2 (241)
Dimensions		Width	in. (mm)	23-3/8 (593)
		Depth	in. (mm)	23-3/4 (603)
Sound Level	Operating Sound	/ Max Sound	dB(A)	40.5 / 50
Refrigerant	• • • / *** • • • • • • • • • • • • • •	Silling and sealer		R410A
Optional Accessory		Pipe Reducer Kit	Part Number	KHFP26A200T

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Submittal Data Sheet Branch Selector Box, Flex-Series BSF8Q54TVJ



No.	Part name	Remark	No.	Part name	Remark
1	Outdoor unit suction gas pipe connection port (Note.5,6)	ϕ 1-1/8(ϕ 28.6) Brazing connection	8	Control box (Note.1)	
2	Outdoor unit HP/LP gas pipe connection port (Note 5,6)	ϕ 1-1/8(ϕ 28.6) Brazing connection	9	Hanger brackets	M3~M10
3	Outdoor unit liquid pipe connection port (Note.5,6)	φ5/8(φ15.9) Brazing connection	10	Ground terminal	¥4
4	Indoor unit gas pipe connection port (Note,4)	ϕ 5/8(ϕ 15.9) Brazing connection			
5	Indoor unit gas pipe connection port (Note.4)	$\phi 1/2 (\phi 12.7)$ Brazing connection			
6	Indoor unit liquid pipe connection port (Note.4)	ϕ 3/8(ϕ 9.5) Brazing connection			
7	Indoor unit liquid pipe connection port (Note.4)	φ1/4(φ6.4) Brazing connection			

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BRC1H71W – Madoka Remote Controller

Project Name:	
Location:	Approval:
Engineer:	Date:
Submitted to:	Construction:
Submitted by:	Unit #:
Reference:	Drawing #:

MODEL COMPATIBILITY:

Compatible with VRV and VRV Life[™] indoor unit models: FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, VAM, CXTQ Compatible with SkyAir indoor unit models: FAQ, FBQ, FCQ, FHQ, FTQ Compatible with Single and Multi-zone system indoor unit model: FFQ, FDMQ

SPECIFICATIONS:

Model	BRC1H71W
Description	Madoka Remote Controller
Maximum Connections	16 indoor units
Communication Wire	18AWG-2, No polarity Stranded, Non-shielded
Total Wiring Length	1,640 ft. (500 m)
Communication Protocol	Daikin proprietary P1P2 protocol
Power	16VDC supplied by indoor unit (1.58VA maximum)
Comfort Setpoint Range	60 to 90 °F (16 to 32 °C)
Setback Setpoint Range	40 to 95 °F (5 to 35°C)
Operating Humidity Range	75% or less (RH) (without condensation)
Dimensions	3.35 x 3.35 x 0.98 (inches) 85 x 85 x 25 (mm)
Weight	0.42 lbs. (0.19 kg)

PRODUCT IMAGE:



Text Display Mode



Icon Display Mode



Scale (Text) Display Mode



Scale (Icon) Display Mode

FEATURES:

- Compact and stylish design
 - Configurable LED light ring (Dimmable/Off) and LCD brightness
 - Simple and Intuitive touch buttons and a physical On/Off button 0
 - Selective Display Mode: Text display, Icon display, Scale (Text) display, and Scale (Icon) display 0
 - Display of Temperature and Setpoint in 1°F / °C increments 0
 - Customizable display to show selected information only 0
- Connectivity
 - Up to 16 indoor units can be controlled together within one remote controller group 0
 - Within one remote controller group, up to 2 Madoka Remote Controllers can be used, one as a main and one as 0 a sub
- Leveled user authority
 - 3 levels at the controller: user, administrator/owner, and installer

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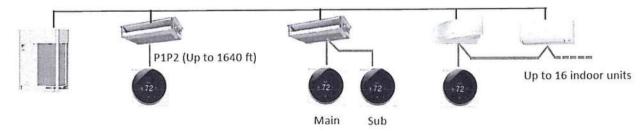
BRC1H71W – Madoka Remote Controller

Approval:	
Date:	
Construction:	
Unit #:	
Drawing #:	
	Date: Construction: Unit #:

- o Configurable passwords to access administrator/owner and installer menu in the controller
- 2 levels at the App: administrator/owner and installer
- Bluetooth quick configuration app available for both Administrator and Installer
 - o Can manually set multiple settings at the same time
 - Can create and save pre-configuration files
- Advanced indoor unit control:
 - o Temperature sensor built-in with configurable offset
 - Dual setpoints (independent cooling and heating setpoints) with configurable minimum setpoint differential or Single Setpoint (occupied period)
 - o Setpoint range limit for cooling and heating modes
 - o Independent cooling and heating setback setpoints (unoccupied period)
 - o Auto changeover control with configurable primary and secondary changeover dead bands and guard timer
 - Airflow Individual air flow direction, dual airflow and auto draft prevention (prevents air blowing directly on occupants) *
 - Automatic Setback by occupancy sensor*
 - Automatic Off by occupancy sensor*
 - Configuration for Self-cleaning filter panel**
 - o Real-time monitoring of system malfunctions with immediate display of unit in error and error code
 - o Remote controller function prohibition: mode (or prohibit specific modes), fan speed, setpoint
- Advanced features
 - o Supported language: English, Spanish or French
 - Automatic adjustment for Daylight Savings Time (DST)
 - o 48-hour clock/calendar battery backup
- Mounting
 - Can mount to a drywall or an electrical component box
 - o Mounting plates and screws are included

* Available for FXFQ_TVJU, FXUQ_PVJU, and FXZQ_TA indoor units **Available for FXFQ_TVJU indoor units

SYSTEM DIAGRAM:



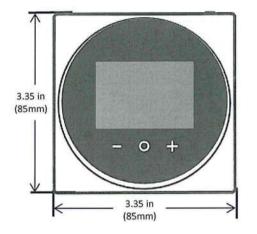
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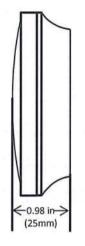


BRC1H71W – Madoka Remote Controller

Approval:
Date:
Construction:
Unit #:
Drawing #:

DIMENSIONS:





DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

- Installation Manual
- Operation Manual
- App User Manual
- Submittal
- Written Guide Specs
- Quick User Guide
- Field Setting Table



10 ton, 460V, VRV EMERION HR - REYQ120AAYDA

Project: Schmitt Elementary

Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified

Tags: OHRU-2

FEATURES

- New Simple and Stylish design with expanded line up with singlemodule units from 6 - 20T and dual-modules up to 40 T
- Space-saving 16 20 T single module units provide up to 34% footprint and up to 500 lbs./unit weight reduction compared to previous series
- High energy efficiency with IEERs up to 30.0 delivers up to 30% efficiency increase
- Year-round comfort and energy savings with Daikin's Variable Refrigerant Temperature technology (VRT)
- Heating down to -13°F as standard and high heating capacities at 17°F make it an ideal choice for all-electric heat pump solutions
- Continuous heating during defrost capability with single module (16 T - 20 T) and all dual module systems
- · Hot gas defrost circuit allows for installation without base pan heater
- High dust and moisture protection with an IP55 rated sealed E-box
- Dual-fuel ready with connectivity to Daikin communicating gas furnace or all-electric heat pump heating for optimized operational costs based on utility rates
- Increased piping lengths of up to 361 ft. vertical separation between ODU and IDU provide additional application flexibility compared to previous VRV systems
- Design flexibility to enlarge system from single to a dual-module without changes to installed main pipe sizes for phased installation or tenant fit-out buildings
- Local code compliance-ready from factory via alignment with compliance needs, such as OSHPD Seismic, Miami Dade Wind, and Chicago pressure relief codes
- Reduced wiring costs with up to 34% reduction in MCA values compared to previous series
- Engineered for ease of installation and service with three-segment panel design
- Factory ships with increased space for easy field piping connections to service valves.
- Built-in data recorder to store up to 40 minutes of operational data
- Integrates with new Daikin HERO ecosystem, an IoT-based remote monitoring and diagnostics platform.



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10 ton, 460V, VRV EMERION HR - REYQ120AAYDA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: OHRU-2

PERFORMANCE

Outdoor Unit Model No.	REYQ120AAYDA	Outdoor Unit Name:	10 ton, 460V, VRV EMERION HR
Туре:	Heat Recovery	Unit Combination:	
Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	114,000	Rated Heating Capacity (Btu/hr):	129,000
Nom Cooling Capacity (Btu/hr):	120,000	Nom Heating Capacity (Btu/hr):	135,000
Cooling Input Power (kW):		Heating Input Power (kW):	
EER (Non-Ducted/Ducted):	13.20 / 12.40	Heating COP (Non-Ducted/Ducted):	4.0 / 3.5
IEER (Non-Ducted/Ducted):	27.50 / 23.50	Heating COP 17F (Non- Ducted/Ducted):	2.4 / 2.3
		SCHE (Non-Ducted/Ducted):	26.10/22.20

OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	460 / 60 / 3	Compressor Stage:	
Power Supply Connections:		Capacity Control Range (%):	3 - 100
Min. Circuit Amps MCA (A):	16.6	Capacity Index Limit:	-
Max Overcurrent Protection (MOP) (A):	20	Airflow Rate (H) (CFM):	8965
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	1-1/8
Rated Load Amps RLA(A):	4.8 + 4.8	Liquid Pipe Connection (inch):	1/2
Dimensions (Height) (in):	65-3/8	H/L Pressure Connection (inch)	3/4
Dimensions (Width) (in):	48-13/16	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-1/8	Sound Pressure (H) (dBA):	61
Net Weight (lb):	728	Sound Power Level (dBA):	
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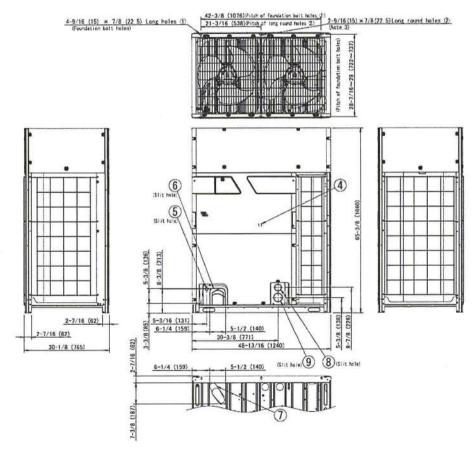


10 ton, 460V, VRV EMERION HR - REYQ120AAYDA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: OHRU-2

SYSTEM DETAILS

Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 122
Holding Refrigerant Charge (lbs):	25.8	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (Ib/ft):		Max. Pipe Length (Vertical) (ft):	361
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max, Pipe Length (Total) (ft):	540		
Max. Pipe Length (Total) (ft): Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING



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12 ton, 460V, VRV EMERION HR - REYQ144AAYDA

Project: Schmitt Elementary

Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified

Tags: OHRU-1, OHRU-3

FEATURES

- New Simple and Stylish design with expanded line up with singlemodule units from 6 - 20T and dual-modules up to 40 T
- Space-saving 16 20 T single module units provide up to 34% footprint and up to 500 lbs./unit weight reduction compared to previous series
- High energy efficiency with IEERs up to 30.0 delivers up to 30% efficiency increase
- Year-round comfort and energy savings with Daikin's Variable Refrigerant Temperature technology (VRT)
- Heating down to -13°F as standard and high heating capacities at 17°F make it an ideal choice for all-electric heat pump solutions
- Continuous heating during defrost capability with single module (16 T - 20 T) and all dual module systems
- Hot gas defrost circuit allows for installation without base pan heater
- High dust and moisture protection with an IP55 rated sealed E-box
- Dual-fuel ready with connectivity to Daikin communicating gas furnace or all-electric heat pump heating for optimized operational costs based on utility rates
- Increased piping lengths of up to 361 ft. vertical separation between ODU and IDU provide additional application flexibility compared to previous VRV systems
- Design flexibility to enlarge system from single to a dual-module without changes to installed main pipe sizes for phased installation or tenant fit-out buildings
- Local code compliance-ready from factory via alignment with compliance needs, such as OSHPD Seismic, Miami Dade Wind, and Chicago pressure relief codes
- Reduced wiring costs with up to 34% reduction in MCA values compared to previous series
- Engineered for ease of installation and service with three-segment panel design
- Factory ships with increased space for easy field piping connections to service valves.
- · Built-in data recorder to store up to 40 minutes of operational data
- Integrates with new Daikin HERO ecosystem, an IoT-based remote monitoring and diagnostics platform.



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Page 1 of 3



12 ton, 460V, VRV EMERION HR - REYQ144AAYDA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: OHRU-1, OHRU-3

PERFORMANCE

		the second s	and the second s
Outdoor Unit Model No.	REYQ144AAYDA	Outdoor Unit Name:	12 ton, 460V, VRV EMERION HR
Туре:	Heat Recovery	Unit Combination:	
Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / 60 Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	138,000	Rated Heating Capacity (Btu/hr):	154,000
Nom Cooling Capacity (Btu/hr):	144,000	Nom Heating Capacity (Btu/hr):	162,000
Cooling Input Power (kW):		Heating Input Power (kW):	
EER (Non-Ducted/Ducted):	12.50 / 12.00	Heating COP (Non-Ducted/Ducted):	3.8 / 3.4
IEER (Non-Ducted/Ducted):	26.50 / 22.50	Heating COP 17F (Non- Ducted/Ducted):	2.2/2.1
		SCHE (Non-Ducted/Ducted):	25.60 / 22.10

OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	460 / 60 / 3	Compressor Stage:		
Power Supply Connections:		Capacity Control Range (%):	3 - 100	
Min. Circuit Amps MCA (A):	21.3	Capacity Index Limit:	-	
Max Overcurrent Protection (MOP) (A):	25	Airflow Rate (H) (CFM):	9680	
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	1-1/8	
Rated Load Amps RLA(A):	4.5 + 7.2	Liquid Pipe Connection (inch):	1/2	
Dimensions (Height) (in):	65-3/8	H/L Pressure Connection (inch)	7/8	
Dimensions (Width) (in):	48-13/16	H/L Equalizing Connection (inch)		
Dimensions (Depth) (in):	30-1/8	Sound Pressure (H) (dBA):	65	
Net Weight (lb):	800	Sound Power Level (dBA):		

Daikin City Generated Submittal Data

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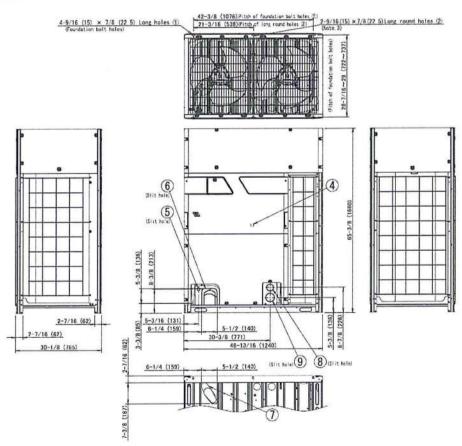


12 ton, 460V, VRV EMERION HR - REYQ144AAYDA Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified Tags: OHRU-1, OHRU-3

SYSTEM DETAILS

Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 122
Holding Refrigerant Charge (lbs):	25.8	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (lb/ft):		Max. Pipe Length (Vertical) (ft):	361
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	
Max, Pipe Length (Total) (ft):	540		
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING



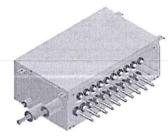
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10 Port Branch Selector Unit - BS10Q54TAVJ Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified



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10 Port Branch Selector Unit - BS10Q54TAVJ Project: Schmitt Elementary Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified

PERFORMANCE

Indoor Unit Model No.	BS10Q54TAVJ	Indoor Unit Name:	10 Port Branch Selector Unit
Туре:		Rated Cooling Conditions:	Indoor (°F DB/WB): / Ambient (°F DB/WB): /
Rated Cooling Capacity (Btu/hr):	290,000	Rated Heating Conditions:	Indoor (°F DB/WB): / Ambient (°F DB/WB): /
Sensible Capacity (Btu/hr):		Rated Piping Length(ft):	
Cooling Input Power (kW):	0.107	Rated Height Separation (ft):	

INDOOR UNIT DETAILS			
Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (H) (CFM):	
Power Supply Connections:		Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	1.00	Gas Pipe Connection (inch):	1-1/8
Max Overcurrent Protection (MOP) (A):	15.00	Liquid Pipe Connection (inch):	5/8
Dimensions (HxWxD) (in):	11-3/4 x 32-5/16 x 18-15/16	Condensate Connection (inch):	
Net Weight (Ib):	101	Sound Pressure (H) (dBA):	40
Ext. Static Pressure (Rated/Max) (inWg):	1	Sound Power Level (dBA):	

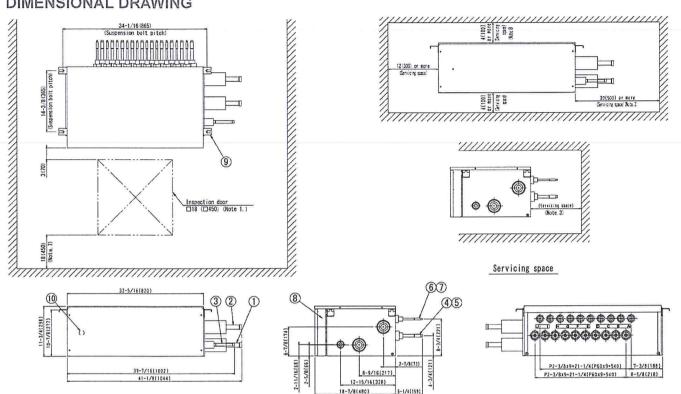


10 Port Branch Selector Unit - BS10Q54TAVJ

Project: Schmitt Elementary

Submitted by: Justin Holcomb of INDIANA THERMAL SOLUTIONS LLC on 2/19/2024 Submitted to: No Engineer Name Specified

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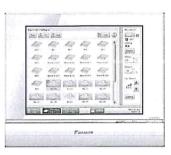
DCM601B71 – intelligent Touch Manager

Location:	Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	_
Reference:	Drawing #:	

SPECIFICATIONS:

Model	DCM601B71	DCM601A72
Description	intelligent Touch Manager (iTM)	iTM Plus Adaptor
Maximum Indoor Unit Groups	64	64
Max Indoor Units	128	128
Max Outdoor Units	10	10
Max BACnet Servers	50	-
System Total	512 Indoor Unit Groups	(1024 Indoor Units)
Power Supply	24 VAC, 60 Hz	24 VAC, 60 Hz
Power Consumption	23 Watts	23 Watts
Operating Temp Range	32-104°F	14 - 122°F
Operating Humidity Range	85% or less (w/o condensation)	85% or less (w/o condensation)
Dimensions (W x H x D)	11.42 x 9.57 x 1.97 in.	6.30 x 5.87 x 2.41 in.
Weight (Mass)	5.3 lbs. (2.4 kg)	1.1 lbs. (0.5 kg)
Certifications	FCC Part 15 Class B	
DIII-NET Systems	1	1
RJ-45 (Ethernet) 100Base-TX or 10Base-T	2	N/A
USB Port-USB2.0 (2GB to 32GB)	1	N/A
RS485 (19 - 22 AWG)	1	1
Digital Input forced shutdown of all indoor unit systems	1	N/A
Digital Input and/or Pulse Input Terminals	3 x 10 mA @ 16 VDC/ 3 x 1 pulse at 1 or 10 kWh at 100 ms interval	4 x 10 mA @ 16 VDC/ 4 x 1 pulse at 1 or 10 kWh at 100 ms interval

PRODUCT IMAGE:



iТМ



iTM Plus Adaptor (Optional)

OPTIONS:

- Software Options:
 - Power Proportional Distribution (PPD) Option (DCM002A71)⁽¹⁾
 - Web (HTTP) Interface Software (DCM007A51)
 - BACnet Client Option Software (DCM009A51)
 - BACnet/IP Server Gateway Option (DCM014A51)⁽²⁾⁽³⁾
- Hardware Options:
 - o iTM Plus Adapter (DCM601A72) for expanding indoor unit groups up to 512 groups (1024 indoor units)
 - WAGO I/O basic kit (60359653) and I/O modules for controlling/ monitoring of external equipment via Di, Do, Ai, Ao and Pi
- Spare Parts:
 - iTM Sliding Door (Part# B72A930)
 - o SD Card (Part# 2336767)

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Notes:

- (1) The Power Proportional Distribution (PPD) option supplies the user with a reasonably calculated apportionment of the total power consumption by the Daikin air-conditioning system to individual units on the system. Because input to the PPD includes measured pulses in the refrigerant system and because the air-conditioning system includes number of variables, to include operating temperatures and pressures, piping lengths, heat exchange rates and others, no meter-type apportionment of individual user's consumption can be made. However, the PPD feature provides an apportionment methodology that uses highly advanced technology as applied to the many variables in the air-conditioning system.
- (2) The BACnet Server Gateway option cannot use together with the BACnet Client software option.
- (3) BACnet/IP Server Gateway option is not compatible with the VAM unit or the Low Temp Hydrobox.

MODEL COMPATIBILITY:

The following indoor units are compatible with the iTM:

System	Model
VRV and VRV Life [™]	FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, CXTQ, VAM*, Low Temperature Hydrobox (HXY48TAVJ)*
SkyAir	FAQ, FBQ, FCQ, FHQ, FTQ
Single Zone/Multi Zone/SkyAir	 FDMQ, FFQ_Q FFQ_LVJU with the use of the Interface Adaptor DTA112BA51 FTXS, CTXS, CTXG, FTXG, FDXS, CDXS, FVXS with the use of the DIII-Net Adapter KRP928BB2S FTK_N, FTX_N, FTX_U, FTXN, and FTKN with the use of the DIII-Net Adapter KRP928BB2S and an Interface adaptor KRP067A41E/KRP980B1/KRP980B2E

*iTM BACnet Server Gateway Option is not compatible with VAM unit and LT Hydrobox

The outdoor operational data is available for the following outdoor unit models:

VRV Family	Model
VRV III S	RXYMQ_PVJU
VRV IV S	RXTQ_TAVJU
VRV LIFE	RXSQ_TAVJU
VRV III	RXYQ_PBTJ, RXYQ_PBYD, REYQ_PATJ, REYQ_PBTJ, REYQ_PBYD, REYQ_PCTJ, REYQ_PCYD, RWEYQ_PTJU and RWEYQ_PYDN
VRV AURORA	RXLQ_TATJU, RXLQ_TAYDU, RXLQ_TAYCU, RELQ_TATJU, RELQ_TAYDU and RELQ_TAYCU
VRV IV X	REYQ_XATJU, REYQ_XAYDU, REYQ_XAYCU, RXYQ_XATJA, RXYQ_XAYDA, REYQ_XATJA, REYQ_XAYDA, REYQ_XAYCA
VRV T	RWEQ_TATJU, RWEQ_TAYDU, RWEQ_TAYCU
VRV IV	RXYQ_TTJU, RXYQ_TATJU, RXYQ_TAYDU, REYQ_TATJU, REYQ_TAYDU, RXYQ_TAYCU, RXYQ_TYDN, REYQ_TAYCU, REYQ_TTJU, REYQ_TYDN, RWEYQ_PCTJ and RWEYQ_PCYD
VRV Emerion	REYQ_AATJA, REYQ_AAYDA, RXYQ_AATJA, RXYQ_AAYDA

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DCM601B71 – intelligent Touch Manager

Project Name: Location:	Approval:	
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Submitted by:	Unit #:	
Reference:	Drawing #:	

FEATURES:

- 1. Management size up to 512 indoor unit groups (1024 indoor units).
 - a. The iTM can manage one (1) DIII-Net system which can have up to 64 indoor unit groups (128 indoor units).
 - b. The iTM can manage up to eight (8) DIII-Net systems with the addition of the iTM Plus Adapter which can manage one (1) DIII-Net system each. This means up to seven (7) iTM adapters can be daisy chained to the iTM.

2. Control / Monitoring

- a. Independent Cool and Heat setpoints
 - i. Setpoint tracking for full range of setpoint differentials
- b. Independent Cool and Heat Setback setpoints (unoccupied)
 - i. Adjustable timed override
- c. Room temperature displayed in 0.1°F
- d. Scheduling: 7, 5+2, 5+1+1, 1 (Everyday) weekly patterns
 - i. Optimum Start
 - ii. Schedule the capacity demand limit of the outdoor unit's compressor by 0%, 40%, 70% or 100%
 - iii. Schedule the outdoor unit low noise operation
- e. Auto-changeover: Fixed, Individual, Average, and Vote
 - i. Weighted demand (0-3) configurable for Average and Vote methods
 - ii. Adjustable (1-4°F) Primary and Secondary changeover bands

3. Web Accessibility

- a. Web and Alert Email function standard with iTM
- b. All iTM configuration/setup can be done through Web Option or touch screen

4. Visual Navigation Screen

- a. Floor plan layout view is available
- b. Graphical User Interface (GUI) for BACnet IP Client management points
- 5. Easy installation
 - a. Wall mount and flush mount installation.
 - b. Automatic indoor unit registration and indoor unit model detection.

6. Easy Engineering

- a. iTM can be configured off site via Pre-setting Tool.
- b. All data can be uploaded and downloaded by USB flash drive.

7. Building facilities management

- a. The iTM is equipped with 3 digital/pulse inputs and the iTM Plus Adapter comes equipped with 4 digital/pulse inputs.
- b. Building ancillary equipment can be connected by using the WAGO I/O system (optional).
 i. I/O configuration for Digital Input, Digital Output, Analog Input, Analog Output and Pulse Input.
- c. BACnet IP Client management points with BACnet Client option (optional).
 - i. AI. AO, AV, BI, BO, BV, MI, MO and MV

8. Power Proportional Distribution (PPD) (Optional)

- a. Provide function to distribute the energy consumption of the Outdoor units to the selected indoor unit group address, based on indoor unit operation duration, electronic expansion valve opening ration, indoor size.... etc.
- b. Up to 512 indoor unit group address
- c. PPD data can be downloaded in CSV format to a PC or USB flash drive

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DCM601B71 – intelligent Touch Manager

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9. Web (HTTP) Interface Software (Optional)

- a. Provide function to monitor and control up to 512 indoor unit group addresses by a BMS via HTTP protocol.
- b. The following data points are available: Fan Speed Louver Direction Ventilation Mode Ventilation Amount -Normal/Error monitor - On/Off - Operation Mode - Setpoint - Room Temp

10. BACnet Client (Optional)

- a. Monitor and control equipment and sensors connected to a BACnet server via BACnet IP.
 - i. Up to 50 BACnet IP servers can be connected

11. BACnet Server Gateway (Optional)

- a. Provide function to monitor outdoor units and control indoor units by BMS via BACnet IP.
 - i. Up to 128 BACnet Device IDs (including indoor unit groups and outdoor units)
 - ii. Up to 4000 BACnet objects
 - iii. Virtual BACnet router function embedded
 - i. Individual and configurable Device ID for each indoor unit group and/or outdoor unit system.

12. History

- a. All errors, operations, automatic controls and status changes are stored in history (up to 500,000 items).
- 13. D-Net compatible (Service option)
 - a. Remote monitoring of VRV equipment status and reporting

14. Operation Data

- a. Operation data are stored in the iTM every minute for the last 5 days.
 - i. Indoor and outdoor unit operation data.
 - ii. BACnet Client management data points (AI, AO, AV, BI, BO, BV, MI, MO and MV).
 - iii. WAGO IO system data points (External DI, DIO, PI, AI and AO).
- b. The operation data can be exported through the iTM web browser or a USB drive based on a specified period. (See iTM BACnet Server points list below for IDU/ODU operational data list)

15. Demand Limiting

- a. Interlock the digital input signals to provide the following automatic demand control functions
 - i. Indoor unit set-point shift control
 - ii. Indoor unit forced thermo-off
 - iii. Indoor unit on/off control
 - iv. Outdoor unit's capacity demand limit control

WIRING SPECIFICATION:

Specifications of Communication Cabling			
	DIII-Net		
Туре	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket		
Size	AWG 18-2		
Total Length	Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft.		
	iTM Plus Adapter		
Туре	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket		
Size	AWG 18-2		
RS485 Length	Maximum distance between iTM and furthest iTM Plus Adapter 150 ft.		
Total Length	Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft.		

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Submitted by:	Unit #:	_
Reference:	Drawing #:	

WAGO		
Type 2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket (CPEV or FCPEV)		
Size	Size 2 Wire AWG 24 - 18 stranded	
Total Length	Maximum wiring distance between iTM and Bus Coupler 1640 ft.	

BACNET CLIENT OPTION MANAGEMENT POINTS:

The following BACnet object types can be monitored and controlled by iTM through BACnet Client Option (DCM009A51) via the BACnet/IP protocol:

Object Type #	Object Name	Description
0	Analog Input	Analog input value such as a temperature and measurement value.
1	Analog Output	Analog output value such as a setting value (For example, can be used as the analog input value of a setting value).
2	Analog Value	Analog input value such as a temperature and measurement value or analog output value such as a setting value.
3	Binary Input	Digital input value such as an On/Off status and error status.
4	Binary Output	Digital output value such as an On/Off operation (For example, can be used as the digital input value of an On/Off operation).
5	Binary Value	Digital input value such as an On/Off status and error status or digital output value such as an On/Off operation.
13	Multi-state Input	Digital input value such as an operation mode
14	Multi-state Output	Digital output value such as an operation mode (For example, can be used as the digital input value of an operation mode).
19	Multi-state Value	Digital input value such as an operation mode or digital output value such as an operation mode.

BACNET/IP SERVER GATEWAY OPTION POINTS LIST:

• System configuration points linked to iTM control logic (one set of points per iTM):

Point Name	Point Description
Enable ITM Schedule Operation	Enable or Disable iTM Schedule operation
Enable ITM Auto Changeover Operation	Enable or disable iTM Auto changeover logic.
Timed Override Minutes	Set override time in minutes
System Forced Off	The Forced System Stop command will force the indoor unit to stop running. Remote controllers will be locked out from restarting indoor units during the forced system stop event.

Indoor unit monitoring points (one set of points per indoor unit group):

Point Name	Point Description	
Unit On_Off Status	Monitors if the indoor unit fan is On or Off	

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Reference:	Drawing #:

Alarm Status	Monitors whether or not the indoor unit is operating normally, and issues an alarm if the indoor unit has a malfunction. Error Code is shown in the description.
Room Temperature	Monitors and displays the room temperature.
Unit On Details	Indoor unit details operation Off - Normal (ON) - Override - Setback
Filter Sign Status	Monitors filter run time and provides service alert.
Indoor Fan Status	Monitors if the indoor unit fan is On or Off
Communication Status	Monitor if the communication is Normal or in Alarm
Thermo-on Status	Monitors whether or not the indoor unit is actively cooling or heating.
Compressor Status	Monitors if the compressor of the outdoor unit is On/Off/Defrost
Aux Heater Status	Monitors if the external heater controlled by the indoor unit is operating.
Changeover Option	Monitor if iTM changeover logic is Active.
Return Air Temperature	Monitors and displays the return air temperature.
Discharge Air Temperature	Monitors and displays the discharge air temperature of the FXMQ_PB indoor unit only.
Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature.
Gas Pipe Temperature	Monitors and displays the gas pipe temperature.
EV Position	Monitors and displays the expansion valve position.
Freeze Protection	Monitors if the freeze protection is active (For FXEQ_P, FXFQ_T, FXTQ_TA, FXUQ_P, FXZQ_TA, FXSQ_TA, CXTQ_TA indoor unit only).

• Indoor unit monitoring and control points (one set of points per indoor unit group):

Point Name	Point Description
Occupancy Mode	Set the occupancy of the indoor unit Occupied , Unoccupied or Standby
Operation mode	Set Cool - Heat -Fan -Dry operation mode. for the indoor unit and monitors the latest mode
Occ Cooling Setpoint	Sets the occupied cooling setpoint of the indoor unit and monitors the latest setpoint value.
Occ Heating Setpoint	Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.
Unocc Cooling Setpoint	Sets the unoccupied cooling setpoint of the indoor unit and monitors the latest setpoint value.
Unocc Heating Setpoint	Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.
Max Cooling Setpoint	Sets the maximum cooling setpoint of the indoor unit and monitors the latest setpoint value.
Min Cooling Setpoint	Sets the minimum cooling setpoint of the indoor unit and monitors the latest setpoint value.
Max Heating Setpoint	Sets the maximum Heating setpoint of the indoor unit and monitors the latest setpoint value.
Min Heating Setpoint	Sets the minimum heating setpoint of the indoor unit and monitors the latest setpoint value.
Min Setpoint Differential (Cooling & Heating)	Set the minimum differential value between cooling and heating setpoint and monitor the latest differential value.
Cooling & Heating Setpoint Tracking Mode	Enable or disable iTM setpoint tracking mode.
Fan speed	Sets the indoor unit fan speed and monitors the latest setting

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Timed Override Operation	Enable or disable iTM override timer
Remote Controller Prohibit (On_Off)	Permits or prohibits the remote controller to control the indoor unit's On/Off.
Remote Controller Prohibit (Operation Mode)	Permits or prohibits the remote controller to control the indoor unit's Operation mode.
Remote Controller Prohibit (Setpoint)	Permits or prohibits the remote controller to control the indoor unit's Setpoint.
Filter Sign Reset	Clears the filter sign status.
Forced Thermo-off	Force the indoor unit to stop actively cooling or heating.

• Outdoor unit monitoring points*:

Point Name	Point Description
Communication Status	Monitors and displays the communication status (General)
Operation Mode	Monitors and displays the operation mode (Cool, Heat, Fan or Heat & Cool) (General)
Outdoor Unit Alarm Status	Monitors whether or not the outdoor unit is operating normally. (General)
Defrost Mode	Monitors if the defrost mode is active. (General)
Oil Return Mode	Monitors whether or not the outdoor unit is in oil return operation. (General)
Electric Power	Monitors and displays the electric power (calculated). (General)
Electric Current	Monitors and displays the electric current (calculated). (General)
System Capacity Code	Monitors and displays the system capacity code. (General)
Outdoor Air Temperature	Monitors and displays the outdoor air temperature. (General)
M_Condensing Pressure	Monitors and displays the condensing pressure (Master Module)
M_Evaporating Pressure	Monitors and displays the evaporating pressure (Master Module)
M_Condensing Temperature	Monitors and displays the condensing temperature (Master Module)
M_Evaporating Temperature	Monitors and displays the evaporating temperature (Master Module)
M_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 (Master Module)
M_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 (Master Module)
M_Fan Step	Monitors and displays the fan step (Master Module)
M_EV Position 1	Monitors and displays the position of the expansion valve1 (Master Module)
M_EV position 2	Monitors and displays the position of the expansion valve2 (Master Module)
M_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 (Master Module)
M_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 (Master Module)
M_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature (Master Module)
M_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX (Master Module)
M_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX (Master Module)
M_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer (Master Module)

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M_Gas Pipe Temperature (HX Upper) Monitors and displays the gas pipe temperature for the upper HX (<i>Master Module</i>) M_Gas Pipe Temperature (HX Lower) Monitors and displays the succion temperature (<i>Master Module</i>) M_Compressor Suction Temperature Monitors and displays the subcool intert temperature (<i>Master Module</i>) M_Subcool Inlet Temperature Monitors and displays the subcool intert temperature (<i>Master Module</i>) M_Subcool Inlet Temperature Monitors and displays the subcool intert temperature (<i>Master Module</i>) M_Subcool Inlet Temperature Monitors and displays the subcool expansion valve position (<i>Master Module</i>) Subcool Pressure Monitors and displays the condensing pressure (<i>Sub Modulet</i>) S1_Condensing Pressure Monitors and displays the evaporating pressure (<i>Sub Modulet</i>) S1_Evaporating Pressure Monitors and displays the evaporating temperature (<i>Sub Modulet</i>) S1_Evaporating Temperature Monitors and displays the speed of the inverter compressor1 (<i>Sub Modulet</i>) S1_Inverter Compressor 1 Speed Monitors and displays the position of the expansion valve2 (<i>Sub Modulet</i>) S1_Fan Step Monitors and displays the position of the expansion valve2 (<i>Sub Modulet</i>) S1_Lev Position 1 Monitors and displays the hot gas temperature of the compressor1 (<i>Sub Modulet</i>) S1_Lev Dosition 2 Monitors and displays the li		
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M_Compressor Suction Temperature Monitors and displays the compressor's suction temperature (Master Module) M_Subcool Outlet temperature Monitors and displays the subcool outlet temperature (Master Module) M_Subcool Outlet temperature Monitors and displays the subcool expansion valve position (Master Module) Subcool EV Position Monitors and displays the subcool expansion valve position (Master Module) S1_Condensing Pressure Monitors and displays the condensing pressure (Sub Module1) S1_Evaporating Pressure Monitors and displays the condensing temperature (Sub Module1) S1_Condensing Temperature Monitors and displays the evaporating temperature (Sub Module1) S1_Evaporating Temperature Monitors and displays the speed of the inverter compressor1 (Sub Module1) S1_Inverter Compressor 1 Speed Monitors and displays the position of the expansion valve1 (Sub Module1) S1_EV Position 1 Monitors and displays the position of the expansion valve1 (Sub Module1) S1_EV Position 2 Monitors and displays the hot gas temperature of the compressor1 (Sub Module1) S1_EV Position 2 Monitors and displays the hot gas temperature of the compressor2 (Sub Module1) S1_EV position 2 Monitors and displays the hot gas temperature of the compressor2 (Sub Module1) S1_Liquid Pipe Temperature (Compressor 2) Monitors and displays the l	M_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX (Master Module)
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S2_Evaporating Temperature Monitors and displays the evaporating temperature (Sub Module2)	S2_Evaporating Pressure	Monitors and displays the evaporating pressure (Sub Module2)
	S2_Condensing Temperature	Monitors and displays the condensing temperature (Sub Module2)
S2_Inverter Compressor 1 Speed Monitors and displays the speed of the inverter compressor1 (Sub Module2)	S2_Evaporating Temperature	Monitors and displays the evaporating temperature (Sub Module2)
	S2_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 (Sub Module2)

DAIKIN COMFORT TECHNOLOGIES NORTH AMERICA, INC.

19001 Kermier Road • Waller, TX 77484 www.daikinac.com www.daikincity.com Rev.1022



DCM601B71 - intelligent Touch Manager

Project Name:		
Location:	Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

S2_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 (Sub Module2)
S2_Fan Step	Monitors and displays the fan step (Sub Module2)
S2_EV Position 1	Monitors and displays the position of the expansion valve1 (Sub Module2)
S2_EV position 2	Monitors and displays the position of the expansion valve2 (Sub Module2)
S2_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 (Sub Module2)
S2_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 (Sub Module2)
S2_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature (Sub Module2)
S2_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX (Sub Module2)
S2_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX (Sub Module2)
S2_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer (Sub Module2)
S2_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX (Sub Module2)
S2_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX(Sub Module2)
S2_Suction Temperature	Monitors and displays the suction temperature (Sub Module2)
S2_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature (Sub Module2)
S2_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature (Sub Module2)
S2_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature (Sub Module2)
S2_Subcool EV Position	Monitors and displays the subcool expansion valve position (Sub Module2)

DIMENSIONS:

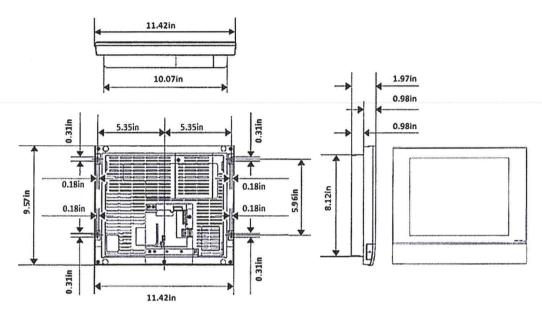
iTM:

Rev.1022

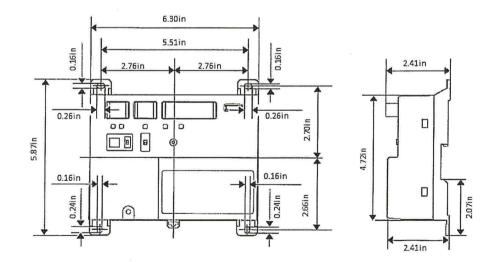


DCM601B71 - intelligent Touch Manager

Project Name:	
Location:	Approval:
Engineer:	Date:
Submitted to:	Construction:
Submitted by:	Unit #:
Reference:	Drawing #:



iTM Plus Adaptor:



DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

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DCM601B71 - intelligent Touch Manager

Project Name: Location:	Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

Submittal •

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- Sales Brochure •
- Guide Specs •
- Installation Manual •
- **Operation Manual** •
- iTM D3 Operation Data Analysis Tool 0
 - iTM BACnet Server Gateway
 - o Design Guide
 - o Sales Flyer
 - o Quick User Guide
- **iTM BACnet Client** •

 - Sales Flyer
 iTM BACnet Client macro tools
- WAGO I/O Basic Kit and Modules .
 - o Submittal
 - o Installation Manual
 - o Sales Flyer

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Rev.1022

INDIANA THERMAL SOLUTIONS



Submittal Data

Project: L.C. Schmitt Elementary School

Date: 2/16/2024

Engineer: R.E. Dimond

Customer: Bartholomew Consolidated School Corporation

Qty	Tag	Description	
31	VUV A - C	Temspec Vertical Unit Ventilators	
	56).		
Submi	tted by:	Drawings in this submittal package describe the	

Submitted by: Brian Rockey Indiana Thermal Solutions Drawings in this submittal package describe the equipment we propose to furnish for this project and are submitted for approval to manufacture.

6872 Hillsdale Court, Indianapolis, IN 46250 Phone: (317) 570-5400 / Fax: (317) 570-5414 www.ITS-Indiana.com



Unit Ventilator Submittals

Inter Salar	Submittals Issued	Submittals Released For Production
	Feb 16, 2024	NOT RELEASED
Rev No.	Revision Date	Submittal Pages Revised

Temspec Inc. - PRELIMINARY SUBMITTAL

Project: SCHMITT E.S. Location: COLUMBUS, IN

Please Return APPROVED Copy To:

Temspec, Inc. 2360 Millrace Court Mississauga, Ontario

Canada, L5N 1W2



PROJECT INFORMATION

Company:	INDIANA THERMAL SOLUTIONS	Job Number:	PRELIMINARY SUBMITTAL
Rep. Contact:	BRIAN ROCKEY	Job Name:	SCHMITT E.S.
Fax:	1(317) 570-5414	Email:	BRIANR@ITS-INDIANA.COM
Phone:	1(317) 570-5400		

Title Page	
Contents	1
Outstanding Issues & Questions	2 to 3
Construction Data	4
Specialties & Exceptions	5
Control Strategy Advisory	6
Commissioning Advisory for Chilled Water Units	7
Controls Schedule	8 to 12
Electrical Schematic	13
Electrical Data	14 to 15
Hot Water Piping Schematic	16
Chilled Water Piping Schematic	17
Coil Performance - Hot / Chilled Water	18 to 19
Warranty Statement	20
Duct Attenuation for "Draw-Through" units	21
Accessories Summary	22 to 25
Top Acoustical Plenum Installation	26
Rear Plenum Assembly Installation	27 to 28
Side Pipe Cover Installation	29
Wall Trim	30
Unit Layout - VUD 1200D	31
Unit Layout - VUD 1600D	32
Application Layout - VUD 1200D	33
Application Layout - VUD 1600D	34
ECM	35 to 36
Mixed Air Damper Actuator	37 to 38
Face & Bypass Damper Actuator	39 to 41
Low Limit Temperature Control	42

Total pages submitted 43

Submitted by: Jeff

Jeff McDonald jmcdonald@temspec.com



The following information is to be provided or verified by the Engineer or Contractor as soon as possible. At the time of compilation of these shop drawing submittals, the data was unavailable or unclear.

Issue No.	Questions & Notes	Response
1	IMPORTANT NOTE: These submittals represent what Temspec intends to build and ship. Any revision to these submittals require a written approval of the desired changes.	
2	Contractor to select a color from the metal color samples provided, that is to be used for the CABINET. Note: "Light Grey" is the default finish.	(response required)
3	Contractor to provide the following information for VUV-B & C units: Height of the Top Acoustical Plenum (Htap) and Discharge Side (Front, RH or LH). NOTE: Min Htap = 13". Available in 1" increments. Max H of std plenum = 42"H.	(response required)
4	Contractor to provide the following information for units with top extensions. The height of the top extension (Hte).	(response required)
5	Contractor to provide rear plenum depth (Drp). Refer to 'Application Layout' page in these submittals. Minimum recommended depth = 8".	(response required)
6	Contractor to provide side pipe cover width (Wspc). Refer to 'Application Layout' page in these submittals. Min $W = 5$ ". Widths available in 1" increments.	(response required)
7	Temspec has been contracted to supply a 'DDC Ready' Unit. Engineer or controls contractor to confirm sensor requirements.	(response required)
8	Contractor to confirm the access panel hinge location (when facing unit). Refer to 'Specialties & Exception' and 'Unit Layout' pages in these submittals. NOTE: Left hand selected as default.	(response required)
9	Piping outlets will be from the top of the units as submitted. Contractor to NOTE these connections. See 'Unit Layout' page(s) for reference. Please note that it may be possible to provide alternate connection locations but this needs to be co-ordinated with Temspec as alternate piping locations may not be available for all unit layouts.	(response required)
10	Contractor to provide the anticipated requirement date of the equipment, for scheduling purposes. This information must be provided when releasing for Production.	(response required)

11	Engineer/contractor to provide external static pressure (ESP, "W.C.) for ductwork. This information is important for proper selection and programming of motors.	(response required)
12	Contractor to confirm the supply voltage shown on the electrical data page in these submittals.	(response required)



Temspec Model	VUD 1200D	VUD 1600D			
Mark No.	VUV-A	VUV-B & C			
Quantity of Units	9	22			
CABINET	A Real Provide State				
Air Flow Configuration	Upflow	Upflow			
Air Discharge	Ducted	Ducted			
Supply Fan Position	Draw Through	Draw Through			
Cabinet Size (WxDxH)	28"x21.5"x 84"	33"x23"x93"			
Approximate Weight	300 lbs	750 lbs			
Cabinet Material	18ga Steel	14ga Steel			
Finish	Powder Coat	Powder Coat			
Color	LIGHT GREY	LIGHT GREY			
Insulation Type	Closed Cell	Closed Cell			
Insulation Thickness	1/2"	1"			
MIXED AIR FILTERS					
Mixed Air Nominal Size	20" × 20"	12" x 24"			
Thickness	2"	2"			
Quantity per Unit	1	2			
Construction	PLEATED	PLEATED			
MERV Rating	MERV10	MERV10			
OUTDOOR AIR / RETU	RN AIR DAMPE	RS	port and a part		
Manufacturer	Tamco	Tamco			
Model	1400 series	1400 series			
Туре	Inline	L-type			
Blade Operation	Parallel	Parallel			
FACE & BYPASS DAM	PER(S)				A CARLES AND A C
Manufacturer	Tamco	Tamco			
Model	1400 series	1400 series			
Blade Operation	Parallel	Parallel			
RETURN AIR GRILLE		A AL AND AND AND	20 20 20 20 20 20 20 20 20 20 20 20 20 2		
Manufacturer	EH Price	EH Price			
Material	Steel, painted	Steel, painted			
Nominal Size	21" x 11"	24" x 18"			
WATER COIL				and the second second	
Configuration	4 Pipe - Preheat	4 Pipe - Preheat			
Tubes	1/2" copper	1/2" copper			
Fins	aluminum	aluminum			
Pressure Tested	350 p.s.i.	350 p.s.i.			
DRAIN PAN		STATISTICS IN THE STATISTICS			
Material	Stainless Steel	Stainless Steel			
Coating	n/a	n/a			
Insulation on Underside	Closed Cell	Closed Cell			
CONDENSATE LINE	Closed Cell				
Material	5/8" Vinyl	5/8" Vinyl			
P-trap	Not Included	Not Included			



Specialties & Exceptions

SPEC	HALTY ITEMS PROVIDED BY TEMSPEC	
	DESCRIPTION	PLAN REFERENCE
1	Electrical / Control enclosure with unfused disconnect and up to 75VA control transformer.	All Units
2	Variable speed (analog 0-10Vdc) supply air ECM. Max 50% turndown.	All Units
3	Top acoustical plenum for ducted applications, 42"H. Discharge location = TBA	VUV-B & C
4	Top extension/Duct shroud.	VUV-C
5	Stainless steel drain pan.	All Units
6	84" H cabinet	VUV-A
7	Left hand access panel hinges.	All Units
8	Closed cell insulation cabinet liner.	All Units
9	Two year PARTS ONLY warranty.	All Units
10	DDC ready units with damper actuators, freeze stat (low limit temperature controller), discharge, mixed air temperature sensors & supply motor current sensor. NOTE: Factory controls wired to terminal strip.	All Units
11	Three spare sets of filters.	All Units

EXCEPTIONS - ITEMS NOT PROVIDED BY TEMSPEC

	DESCRIPTION	PLAN REFERENCE
A	Supply of unit controller/thermostat, space/zone sensor, humidistat, CO2 sensor, occupancy sensor.	All Units
в	Control valves, balancing valves, strainer.	All Units
с	Cam locks, insulated damper assemblies, powered exhaust/relief dampers.	All Units
D	Condensate pump, drain pan overflow switch	All Units
Е	Louvers, wall sleeves, block-off panels, top extensions (duct shrouds)	All Units
F	Start-up and commissioning, warranty labor, owner training.	All Units



Temperature inside the cabinet during unoccupied mode

During unoccupied mode the outdoor air damper is closed. On a call for space heating the supply air fan runs and the control valve or face damper opens to provide heat. If H.W. is wild and water flow continues through the coil when the call for heating ends, there is a risk that the maximum allowable temperature inside the cabinet will be exceeded. All electrical devices have maximum rated temperatures which are stated by the manufacturer. Temspec uses devices from internationally recognized manufacturers to ensure component reliability at high ambient temperatures. These components are UL or CSA approved.

THE MAXIMUM ALLOWABLE TEMPERATURE WITHIN THE CABINET IS 120°F (50°C). Electrical devices can be damaged or have reduced operating life if this upper limit is compromised.

The control strategy employed by the controller must limit the temperature inside the unit so that this maximum is not exceeded.



Commissioning Advisory for Chilled Water Units

Unit Ventilators are designed to function inside conditioned interior rooms. Should the chilled water be running before the units are commissioned (controls, ventilation rates, hydronic and air balancing), excessive condensation may occur. Under these conditions it is possible for condensation to form in areas not protected by drain pans and on components not designed for condensing environment.

Contractor is advised not to run chilled water through the unit ventilators prior to commissioning. The responsibility for damage to components subject to the conditions detailed above will remain with the contractor.

TEMSPEC~						<u>ls Sch</u>	
Plan Reference	VUV-A	VUV-A	VUV-A	VUV-A	VUV-A	VUV-A	VUV-A
Room#	103	104	107	108	114	116	117
Temspec Production Number	T-01	T-02	T-03	T-04	T-05	T-06	T-07
Temspec Model	VUD 1200D	VUD 1200D	VUD 1200D	VUD 1200D	VUD 1200D	VUD 1200D	VUD 1200D
THERMOSTAT / CONTROLLER						/	
Provided By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
SENSORS Provided & Installed by Temspec							
Mixed Air Sensor Mfg. Part ID	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-P
Discharge Air Sensor Mfg. Part ID	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4
SA Fan Current Sensor Mfg. Part ID	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF
OW LIMIT TEMPERATURE CONTROL							
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Manuafacturer		1.00.000.000.00	JOHNSON CONTROLS		JOHNSON CONTROLS		
Reset Mode	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET
Manufacturer Part ID	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C
MIXED AIR	- A COATC	Arocarc	AUCATE	AVOATE	Artonic	Artonic	- Aroonic
DAMPER ACTUATOR							
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Manuafacturer	JCI	JCI	JCI	JCI	JCI	JCI	JCI
Type of Operation	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING
Spring or Non-Spring Return					SPRING RETURN	SPRING RETURN	SPRING RETURN
Manufacturer Part ID	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN			
ACE & BYPASS	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2
DAMPER ACTUATOR							
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Manuafacturer	JCI	JCI	JCI	JCI	JCI	JCI	JCI
Type of Operation	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING
Spring or Non-Spring Return	NON-SPRING RETURN			NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETUR
Manufacturer Part ID	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-25
CONTROL VALVE & ACTUATOR CHILLED WATER							
Provided By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
HOT WATER		The second standard		The second second	Station and State	A STATE AND A STATE AND	All and the surgers
Provided By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
HUT-OFF BALL VALVES							
Manufacturer	NEXUS	NEXUS	NEXUS	NEXUS	NEXUS	NEXUS	NEXUS
Manufacturer Part ID - CWS	NX-075S-075S-MS	NX-0755-0755-MS		NX-075S-075S-MS	NX-0755-0755-MS	NX-075S-075S-MS	NX-0755-0755-M
Manufacturer Part ID - CWR	NX-075S-075S-MS	NX-0755-0755-MS	NX-075S-075S-MS	NX-075S-075S-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-075S-075S-M
Manufacturer Part ID - HWS	NX-075S-075S-MS	NX-0755-0755-MS	NX-075S-075S-MS	NX-075S-075S-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-M
	CW-CC/0-CC/0-Art	110-01 33-01 33-M3					

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					Contro		
Plan Reference	VUV-A	VUV-A	VUV-B	VUV-B	VUV-B	VUV-B	VUV-B
Room#	119	123	125	135	136	137	143
Temspec Production Number	T-08	T-09	T-10	T-11	T-12	T-13	T-14
Temspec Model	VUD 1200D	VUD 1200D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D
THERMOSTAT /							
CONTROLLER					O RUISSO	OTUERS	OTUFAC
Provided By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
SENSORS Provided &							
Installed by Temspec				. /		. /00% Dt 10" DD	1 /00K D1 10" DD
Mixed Air Sensor Mfg. Part ID	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB
Discharge Air Sensor Mfg. Part ID	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4
SA Fan Current Sensor Mfg. Part ID	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF
LOW LIMIT							
TEMPERATURE CONTROL							TELEPEC
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Manuafacturer	JOHNSON CONTROLS		JOHNSON CONTROLS		JOHNSON CONTROLS		
Reset Mode	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET
Manufacturer Part ID	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C
MIXED AIR							
DAMPER ACTUATOR							
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Manuafacturer	JCI	JCI	JCI	JCI	JCI	JCI	JCI
Type of Operation	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING
Spring or Non-Spring Return	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN
Manufacturer Part ID	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2
FACE & BYPASS							
DAMPER ACTUATOR						ويستحل فيساله	
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Manuafacturer	JCI	JCI	JCI	JCI	JCI	JCI	JCI
Type of Operation	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING
Spring or Non-Spring Return	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN
Manufacturer Part ID	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-25	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-2S
CONTROL VALVE & ACTUATOR CHILLED WATER							
Provided By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
HOT WATER	The same and the				and some state	An of side in the interest	
Provided By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
SHUT-OFF BALL VALVES				1977 - Alf Indonesia (Maria Indonesia (Maria)) 1977 - Alf Indonesia (Maria Indonesia (Maria))			
Manufacturer	NEXUS	NEXUS	NEXUS	NEXUS	NEXUS	NEXUS	NEXUS
Manufacturer Part ID - CWS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-M
Manufacturer Part ID - CWR	NX-0755-0755-MS		NX-0755-0755-MS	NX-075S-075S-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-M
Manufacturer Part ID - HWS	NX-075S-075S-MS		NX-0755-0755-MS	NX-075S-075S-MS		NX-0755-0755-MS	NX-0755-0755-MS
		NX-0755-0755-MS		NX-0755-0755-MS	NX-075S-075S-MS	NX-075S-075S-MS	NX-0755-0755-MS

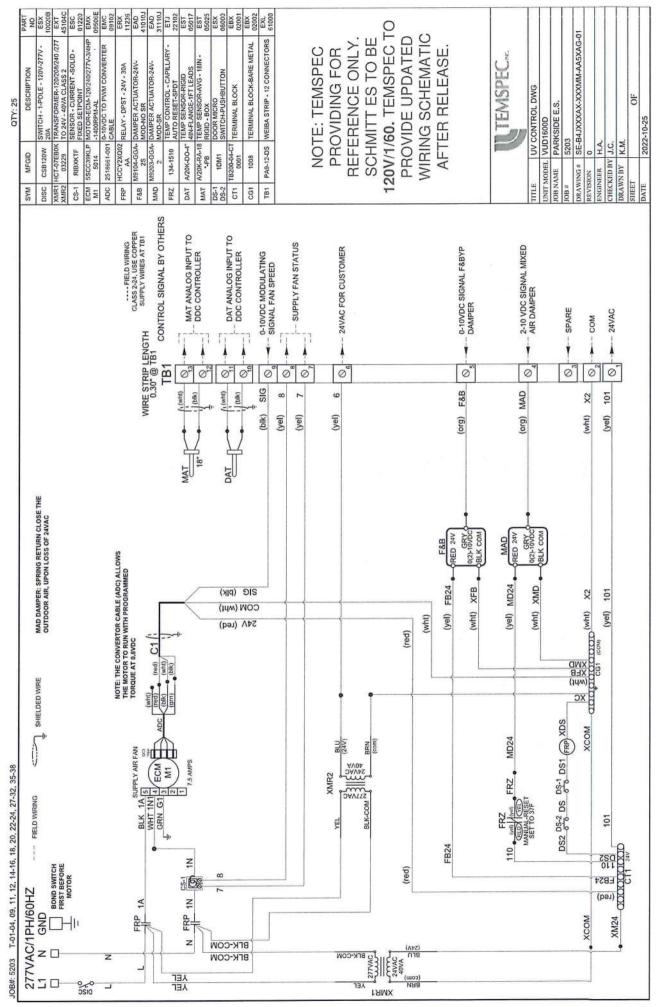
	10000		MIRAN			ls Sch	
Plan Reference	VUV-B	VUV-B	VUV-B	VUV-B	VUV-C	VUV-C	VUV-C
Room#	144	145	146	147	150 T-19	152 T-20	157 T-21
Temspec Production Number	T-15	T-16 VUD 1600D	T-17	T-18 VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D
Temspec Model	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1800D	V00 10000
THERMOSTAT /							
CONTROLLER	OTUERC	OTUERC	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Provided By Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
SENSORS Provided &	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed by Temspec Mixed Air Sensor Mfg. Part ID		1/00/ 01 107 00	1/00% D4 107 DD	1/00% D4 10" DD	4 /00K DA 10" DB	A/20K-RA-18"-PB	A/20K-RA-18"-PE
	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB A/20K-DO-4	A/20K-RA-18"-PB A/20K-DO-4	A/20K-DO-4	A/20K-DO-4
Discharge Air Sensor Mfg. Part ID SA Fan Current Sensor Mfg. Part ID	A/20K-DO-4	A/20K-DO-4 RIBXKTF	A/20K-DO-4 RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF
LOW LIMIT	RIBXKTF	KIDANIF	RIDANIF	RIDANI	KIDAKTI	RIDARII	KIDAKII
TEMPERATURE CONTROL	TEMEDEC	TEMEDEC	TEMSDEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	JOHNSON CONTROLS		JOHNSON CONTROLS	JOHNSON CONTROL
Manuafacturer	JOHNSON CONTROLS	JOHNSON CONTROLS	JOHNSON CONTROLS				AUTO RESET
Reset Mode	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	
Manufacturer Part ID	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C
MIXED AIR							
DAMPER ACTUATOR							
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Manuafacturer	JCI	JCI	JCI	JCI	JCI	JCI	JCI
Type of Operation	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING
Spring or Non-Spring Return	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN
Manufacturer Part ID	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2
FACE & BYPASS							
DAMPER ACTUATOR							
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Manuafacturer	JCI	JCI	JCI	JCI	JCI	JCI	JCI
Type of Operation	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING
Spring or Non-Spring Return	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETUR
Manufacturer Part ID	M9104-GGA-2S	M9104-GGA-25	M9104-GGA-25	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-25	M9104-GGA-25
CONTROL VALVE & ACTUATOR							
CHILLED WATER	A STATE OF A			and the second second	THE REAL PROPERTY.		C. C. States
Provided By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
HOT WATER	A REAL PROPERTY.	THE REAL PROPERTY OF	Service States (1)			State State	and the second sec
Provided By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
SHUT-OFF BALL VALVES							
Manufacturer	NEXUS	NEXUS	NEXUS	NEXUS	M.A. STEWART	M.A. STEWART	M.A. STEWART
Manufacturer Part ID - CWS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS	B4-1	B4-1	B4-1
Manufacturer Part ID - CWR	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS	B4-1	B4-1	B4-1
Manufacturer Part ID - CWK	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-075S-MS	NX-0755-0755-MS	NX-075S-075S-MS	NX-0755-0755-MS	NX-0755-0755-M

Disc. Buttering	MINC	VUV-C	VUV-C	VUV-C	Contro	VUV-B	VUV-B
Plan Reference Room#	VUV-C 159	183	185	186	225	235	236
Temspec Production Number	T-22	T-23	T-24	T-25	T-26	I-27	T-28
Temspec Model	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D
THERMOSTAT /	100 10000	100 10000	10010000	100 10000			
CONTROLLER							
Provided By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
SENSORS Provided &							
Installed by Temspec							
Mixed Air Sensor Mfg. Part ID	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB
Discharge Air Sensor Mfg. Part ID	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4
SA Fan Current Sensor Mfg. Part ID	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF	RIBXKTF
LOW LIMIT							
TEMPERATURE CONTROL							
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Manuafacturer	JOHNSON CONTROLS	JOHNSON CONTROLS	JOHNSON CONTROLS	JOHNSON CONTROLS	JOHNSON CONTROLS		
Reset Mode	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET	AUTO RESET
Manufacturer Part ID	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C	A70GA-1C
MIXED AIR DAMPER ACTUATOR							
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Manuafacturer	JCI	JCI	JCI	JCI	JCI	JCI	JCI
Type of Operation	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING
Spring or Non-Spring Return	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN	SPRING RETURN
Manufacturer Part ID	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2
FACE & BYPASS							
DAMPER ACTUATOR							
Provided By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Installed By	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC	TEMSPEC
Manuafacturer	JCI	JCI	JCI	JCI	JCI	JCI	JCI
Type of Operation	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING
Spring or Non-Spring Return	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN	NON-SPRING RETURN		NON-SPRING RETURN	
Manufacturer Part ID	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-25	M9104-GGA-2S	M9104-GGA-2S	M9104-GGA-2S
CONTROL VALVE & ACTUATOR CHILLED WATER		and the second second			No. of Concession, Name		
Provided By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
HOT WATER							
Provided By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
Installed By	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS	OTHERS
SHUT-OFF BALL VALVES							
Manufacturer	M.A. STEWART	M.A. STEWART	M.A. STEWART	M.A. STEWART	NEXUS	NEXUS	NEXUS
Manufacturer Part ID - CWS	B4-1	B4-1	B4-1	B4-1	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS
Manufacturer Part ID - CWR	B4-1	B4-1	B4-1	B4-1	NX-0755-0755-MS		NX-0755-0755-MS
Manufacturer Part ID - HWS	NX-075S-075S-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS		NX-0755-0755-MS
Manufacturer Part ID - HWR	NX-0755-0755-MS		NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS	NX-0755-0755-MS



Controls Schedule

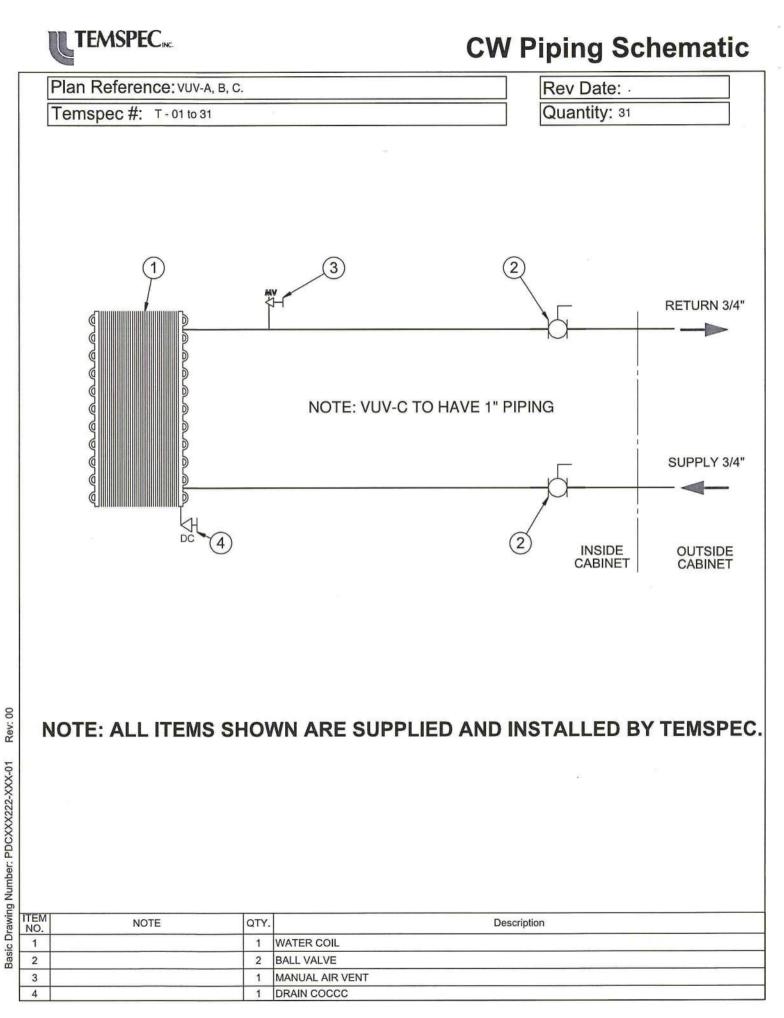
Plan Reference	VUV-B	VUV-B	VUV-B		that the state		
Room#	237	242	243		Same 2	and restand	Carl Stranger
Temspec Production Number	T-29	T-30	T-31		1	The second second	Later Adda to
Temspec Model	VUD 1600D	VUD 1600D	VUD 1600D		and stores		
THERMOSTAT /							
CONTROLLER							
Provided By	OTHERS	OTHERS	OTHERS				
Installed By	OTHERS	OTHERS	OTHERS				
SENSORS Provided &							
Installed by Temspec							
Mixed Air Sensor Mfg. Part ID	A/20K-RA-18"-PB	A/20K-RA-18"-PB	A/20K-RA-18"-PB				
Discharge Air Sensor Mfg. Part ID	A/20K-DO-4	A/20K-DO-4	A/20K-DO-4				
SA Fan Current Sensor Mfg. Part ID	RIBXKTF	RIBXKTF	RIBXKTF				
OW LIMIT							
TEMPERATURE CONTROL							
Provided By	TEMSPEC	TEMSPEC	TEMSPEC				
Installed By	TEMSPEC	TEMSPEC	TEMSPEC				
Manuafacturer		JOHNSON CONTROLS					
Reset Mode	AUTO RESET	AUTO RESET	AUTO RESET				
Manufacturer Part ID		and the second sec	A70GA-1C				
	A70GA-1C	A70GA-1C	A/UGA-IC				
MIXED AIR							
DAMPER ACTUATOR							1
Provided By	TEMSPEC	TEMSPEC	TEMSPEC				
Installed By	TEMSPEC	TEMSPEC	TEMSPEC				
Manuafacturer	JCI	JCI	JCI				
Type of Operation	MODULATING	MODULATING	MODULATING				
Spring or Non-Spring Return	SPRING RETURN	SPRING RETURN	SPRING RETURN				
Manufacturer Part ID	M9203-GGA-2	M9203-GGA-2	M9203-GGA-2				
FACE & BYPASS							
DAMPER ACTUATOR							
Provided By	TEMSPEC	TEMSPEC	TEMSPEC				
Installed By	TEMSPEC	TEMSPEC	TEMSPEC				
Manuafacturer	JCI	JCI	JCI				
Type of Operation	MODULATING	MODULATING	MODULATING				
Spring or Non-Spring Return		NON-SPRING RETURN					
Manufacturer Part ID	M9104-GGA-25	M9104-GGA-25	M9104-GGA-25				
CONTROL	M7104-00A-20	M7104-00A-10	111104-001-10				
VALVE & ACTUATOR							
GHILLED WATER	Course and the second second	With Line Party Street		State of the second			
Provided By	OTHERS	OTHERS	OTHERS	and the second se	and the second second second	and the second second second second	and the second se
Installed By	OTHERS	OTHERS	OTHERS			-	
HOT WATER	OTTICKO	GITIERO	C III LINO	THE REAL PROPERTY OF	Contraction of the	Rept. Contraction	
Provided By	OTHERS	OTHERS	OTHERS	and and the second second	100000000000000000000000000000000000000	and the second s	
Installed By	OTHERS	OTHERS	OTHERS				
SHUT-OFF	OTTERS	OTTERO	U UNICAS				
BALL VALVES							
Manufacturer	NEXUS	NEXUS	NEXUS			1	1
						-	
Manufacturer Part ID - CWS	NX-0755-0755-MS	NX-075S-075S-MS					
Manufacturer Part ID - CWR		NX-075S-075S-MS					
Manufacturer Part ID - HWS	NX-075S-075S-MS	NX-075S-075S-MS	NX-075S-075S-MS				
Manufacturer Part ID - HWR	NX-075S-075S-MS	NX-075S-075S-MS	NX-075S-075S-MS				

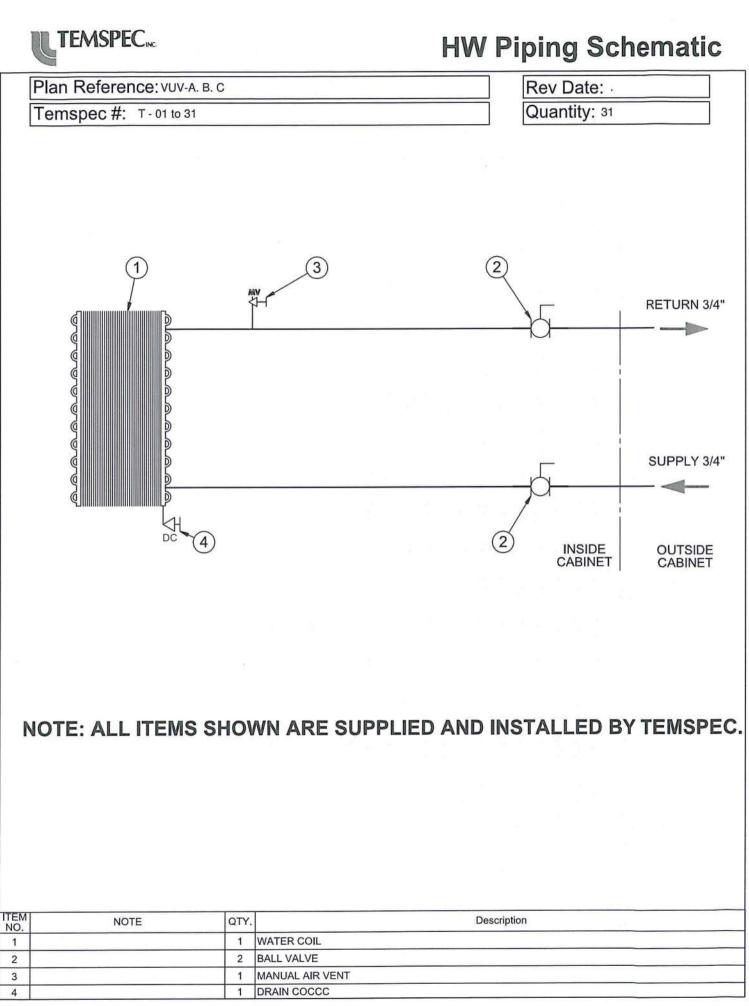


Cont they		VOL	VOLTAGE	and a second and	adlus	JLY AIR	SUPPLY AIR MOTOR		CONTRACTOR OF	
Plan Ref. Mfg	Mfg No. Temspec Model	Supply	S.A. Fan Motor	Nom. CFM	ESP "W.C.	₽	RPM / Speeds	AMPS	Qty	MCA
1-	T-01 VUD 1200D	115V / 1ph	115V / 1ph	1200	0.25"	1/2	1400/VAR	8.4A	-	11A
Ŧ	T-02 VUD 1200D	115V / 1ph	115V / 1ph	1200	0.25"	1/2	1400/VAR	8.4A	-	11A
1-1	T-03 VUD 1200D	115V / 1ph	115V / 1ph	1200	0.25"	1/2	1400/VAR	8.4A	1	11A
Ŧ	T-04 VUD 1200D	115V / 1ph	115V / 1ph	1200	0.25"	1/2	1400/VAR	8.4A	1	11A
Ĩ	T-05 VUD 1200D	115V / 1ph	115V / 1ph	1200	0.25"	1/2	1400/VAR	8.4A	-	11A
1-1	T-06 VUD 1200D	115V / 1ph	115V / 1ph	1200	0.25"	1/2	1400/VAR	8.4A	-	11A
1-1	T-07 VUD 1200D	115V / 1ph	115V / 1ph	1200	0.25"	1/2	1400/VAR	8.4A	-	11A
-L	T-08 VUD 1200D	115V / 1ph	115V / 1ph	1200	0.25"	1/2	1400/VAR	8.4A	-	11A
1-1	T-09 VUD 1200D	115V / 1ph	115V / 1ph	1200	0.25"	1/2	1400/VAR	8.4A	-	11A
Ļ	T-10 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	-	14A
Ļ	T-11 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	-	14A
Ļ	T-12 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	L	14A
Ļ	T-13 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-B T-	T-14 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	-	14A
Ļ	T-15 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	-	14A
Ļ	T-16 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	-	14A
Ļ	T-17 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	1	14A
Ļ	T-18 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-C T-	T-19 VUD 1600D	115V / 1ph	115V / 1ph	1600	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-C T-:	T-20 VUD 1600D	115V / 1ph	115V / 1ph	1600	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-C 1-:	T-21 VUD 1600D	115V / 1ph	115V / 1ph	1600	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-C 1-:	T-22 VUD 1600D	115V / 1ph	115V / 1ph	1600	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-C 1-:	T-23 VUD 1600D	115V / 1ph	115V / 1ph	1600	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-C T-:	T-24 VUD 1600D	115V / 1ph	115V / 1ph	1600	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-C T-	T-25 VUD 1600D	115V / 1ph	115V / 1ph	1600	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-B T-:	T-26 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-B T-:	T-27 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-B T-:	T-28 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	-	14A
VUV-B T-	T-29 VUD 1600D	115V / 1ph	115V / 1ph	1400	0.25"	3/4	1400/VAR	11.2A	-	14A

Electrical Data

TEM	SPEC	NC.										E	le	ct	ri	Ca	al	D	ata
	MCA	14A	14A																
	Qty	-	-																
	AMPS	11.2A	11.2A																
SUPPLY AIR MOTOR	RPM / Speeds	1400/VAR	1400/VAR																
Y AIR	£	3/4	3/4																
Iddins	ESP "W.C.	0.25"	0.25"																
	Nom. CFM	1400	1400																
AGE	S.A. Fan Motor	115V / 1ph	115V / 1ph										0						
VOLTAGE	Unit Supply	115V / 1ph	115V / 1ph																
	Temspec Model	VUD 1600D	VUD 1 600D																
	Mfg No.	T-30	T-31																
	Plan Ref.	VUV-B	VUV-B																





Basic Drawing Number: PDCXXX222-XXX-01 Rev: 00

J	TEN	ASPEC.	c.			(C	oi	1	Pe	er	fc	or	m	a	n	ce	<u>-</u>	F	H	ot	/	C	h	il	le	d	V	Va	ate	er
	1. H. H.	WPD ft.	6.6	9.9	9.9	6.9	9.9	9.9	9.9	9.9	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	12.5	12.5	12.5	12.5	12.5	12.5	12.5	10.3	10.3	10.3	10.3
		LAT wb	56	56	56	56	56	56	56	56	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
~		LAT db	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	55	55	55	55	55	55	55	56	56	56	56
R ONLY	~	LWT	53	53	53	53	53	53	53	53	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
WATER	WATTER	Sens. MBH	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	35.7	35.7	35.7	35.7	35.7	35.7	35.7	35.7	35.7	35.7	41.6	41.6	41.6	41.6	41.6	41.6	41.6	35.7	35.7	35.7	35.7
JRE	CHILLED WATER	Total MBH	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	49.0	49.0	49.0	49.0
NIXTU	CHI	EWT	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
CW / GLYCOL MIXTURE		EAT wb E	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
/ GLY	The second	EAT E db	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6	78.8 6
CW		gpm E	11.0 7	11.0 78	11.0 71	11.0 7	0	0.	11.0 7	11.0 7	11.0 7	11.0 7	0.	o.	11.0 7	11.0 7	11.0 7	0.	0	11.0 7	3.0 7	3.0 7	3.0 7	3.0 7	3.0 7	3.0 7	3.0 7	11.0 7	11.0 7	0	0
7		0	-				9 11.	6 11	-	-			6 11	6 11				6 11	6 11		-	-	-	4 15	4 13	-	-	-		9 11	6 11
		1.00	55 3.9	55 3.9	155 3.9	155 3.9	55 3.9	55 3.9	155 3.9	155 3.9	155 3.9	149 4.9	149 4.9	149 4.9	149 4.9	149 4.9	149 4.9	149 4.9	149 4.9	149 4.9	53 7.4	53 7.4	53 7.4	53 7.	53 7.	53 7.4	53 7.4	49 4.9	49 4.9	49 4.9	49 4.9
		T LWT	-	-			-	-													-	-	96 15	96 15	96 15	96 15	96 15	-	-	-	-
13	ATTER	H LAT	4 97	4 97	4 97	4 97	4 97	4 97	4 97	4 97	4 97	4 97	4 97	4 97	4 97	.4 97	.4 97	.4 97	4 97	4 97	5 96	5 96						.4 97	.4 97	.4 97	.4 97
ANO	HOT WATER	Heating MBH	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	81.4	81.4	81.4	81.4	81	81	81	81.4	81.4	90.5	90.5	90.5	90.5	90.5	90.5	90.5	81	81	81	81
WATER O	H	EWT	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
W		EAT	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
URE		dbm	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	5.5	5.5	5.5	5.5
T MIXT	CFM	SA Nominal	1200	1200	1200	1200	1200	1200	1200	1200	1200	1400	1400	1400	1400	1400	1400	1400	1400	1400	1600	1600	1600	1600	1600	1600	1600	1400	1400	1400	1400
HW / GLYCOL MIXTURE		Temspec Model	VUD 1 200D	VUD 1200D	VUD 1 200D	VUD 1600D	VUD 1 600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1 600D	VUD 1 600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D															
HW		No.	10-1	T-02	T-03	T-04	T-05	T-06	1-07	T-08	1-09	I-10	11-1	T-12	T-13 \	T-14	T-15	r-16	T-17	T-18	T-19	T-20	T-21	r-22	T-23	T-24	T-25	T-26	1-27	T-28	T-29
		ROWS I (ewited)	5/1 T	5/1 1	5/1 1	5/1 T			5/1 T	5/1 T	5/1 T	5/1 1		5/1 1	5/1 1	5/1 1	5/1 1			5/1 1	5/1 T	5/1 1	5/1 1	5/1 1	5/1 1	5/1 1	5/1 1	5/1 T	5/1 1	5/1 1	5/1 1
		Plan Ref.	A-VUV	A-VUV	A-VUV	VUV-B	VUV-C	VUV-C	VUV-C	VUV-C	VUV-C	VUV-C	VUV-C	VUV-B	VUV-B	VUV-B	VUV-B														

]]	TEN	ISPEC	c		Сс	oil [Pe	rfo	rn	nai	nc	e -	E	lot	:/	Cł	il	lec	V E	Wa	ater
		WPD ft.	10.3	10.3																	
		LAT wb	55	55																	
		LAT db	56	56																	
	er.	LWT	54	54																	
	WATE	Sens. MBH	35.7	35.7																	
JRE	CHILLED WATER	Total MBH	49.0	49.0															1		
NIXTL	CHI	EWT	44	44							-								T		
MER		EAT wb E	65.3	65.3		-													1		
CHILLED WATER MIXTURE		db EAT	78.8 6	78.8 6															1		
HILLE		mqg	11.0 7	11.0 7															1		
S		WPD ft.	4.9 1	4.9 1																	
		LWT	149	149															1		
	<u>n</u>	LAT	67	67												1					
7	OT WATER	Heating MBH	81.4	81.4																	
R ONLY	HOT	EWT	180	180																	
WATER		EAT	43	43																	
ШШ		mdg	5.5	5.5																	
MIXTU	CIAM	SA nom. cfm	1400	1400																	
HOT WATER MIXTURE		Model	VUD 1600D	4000 1 600D																	
	Miz.	No.	T-30	T-31																	
	ROW	(CW/H	5/1	5/1																	
		Plan Ref.	VUV-B	VUV-B																	



Temspec Inc. warrants that its equipment will be free from factory defects in material or workmanship for a period of **twenty-four (24)** months from the date of shipment. The shipment date is the date on which the final consignment of HVAC units leaves the factory. All units must be shipped within three months of initial shipment. The shipment date for accessory items has no bearing on the warranty of the goods in general. Accessory items include but are not limited to thermostats, grills, filters and sheet metal covers.

This warranty applies only when the equipment is installed and used in accordance with our printed instructions and does not apply to any equipment which has been subject to misuse, abuse or alteration. This warranty is in lieu of all other warranties, express or implied.

Should any approved replacement part be required within the warranty period, they will be supplied at no charge, freight prepaid to the jobsite. The cost of service labor or incidental expenses incurred in the repair or replacement of parts does not form part of this warranty.

Temspec Inc. cannot consider any charge without being given reasonable opportunity to assess the cause or nature of the defect and/or to make arrangements for correction. In no event, be it due to breach of warranty or any other cause arising out of performance or nonperformance of the contract shall Temspec Inc. be liable for any loss, injury or damages including consequential or indirect damages.



Duct Attenuation

FOR DRAW-THROUGH CLASSROOM FAN COIL UNITS

Attenuation of air noise from HVAC equipment in the classroom is critically important. The Temspec classroom fan coil units are constructed to minimize sound breakout from the cabinet by the use of heavy gauge steel and duct liner.

For units with a "Draw-Through" configuration (supply air fan at the top of the unit), air noise from the return air grille is negligible since the supply air blower is typically 7ft. distance from the return air opening. Supply air blower noise at the discharge must be adequately attenuated.

DUCTWORK INSTALLATION RECOMMENDATIONS

The following method is recommended for duct work associated with the classroom fan coil units. **Note:** This recommendation only applies to the Draw-Though units that do not utilize Temspec's top acoustical plenum.

Fabricate the discharge elbow using heavy gauge steel, a minimum of 20ga. Line the elbow and first 8 ft. of duct with 1" duct liner. Line the remainder of the duct with 1/2" duct liner. Pay particular attention to ensuring that there is no air leakage at the joint at the discharge from the unit. Do not use a flexible joint at the discharge as the blower and motor have vibration isolation mountings. Avoid locating supply air grilles / diffusers closer than 8ft. from the fan discharge.

External cladding of the elbow with a high density material will assist in reducing low frequency sound breakout.



Plan Reference	VUV-A	VUV-A	VUV-A	VUV-A	VUV-A	VUV-A	VUV-A	VUV-A	VUV-A	VUV-B
Ceiling Height	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA
Temspec Production Number	T-01	T-02	T-03	T-04	T-05	T-06	T-07	T-08	T-09	T-10
Temspec Model Number	VUD 1200D	VUD 1200D	VUD 1200D	VUD 1200D	VUD 1200D	VUD 1200D	VUD 1200D	VUD 1200D	VUD 1200D	VUD 1600D
TOP CABINET EXTENSION	1940 A. C	INSULATIO	ON TYPE	NONE					1.11	
Duct Shroud - H=? W= 33" D= 23"	1					-				
TOP ACOUSTICAL PLENUM	States 1	INSULATIO	ON TYPE	Glassfibe	er (stuffed a	round the S	A elbow)	1.1.1.1.1.1.1.1		
LEFT Supply Air Opening - Ho=? H= 42"	1									1
REAR PLENUM	No. Contraction	INSULATIO	ON TYPE	1 inch th	ick Closed (Cell	asm da	and and	12 ISN	1000 81
Side Panel - L= 93" D= 8"										2
Back Panel - L= 93" W=33"										1
Back Extension - L= "? W=33"										1
Right Side Extension - L= "? D= 8"										1
Left Side Extension - L= "? D= 8"										1
Top/Middle/Bottom Panel- D= 8" W=33"										2
SIDE PIPE COVER	A STATISTICS	INSULATIO	ON THE	NONE					(independent)	
Side Pipe Cover - W=5" L= 93" D= 21.5"	1	1	1	1	1	1	1	1	1	
Right Extension - W=5" L= ? D= 21.5"	1	1	1	1	1	1	1	1	1	
Left Extension - W=5" L= ? D= 21.5"	1	1	1	1	1	1	1	1	1	
Wall Bracket - L= 84"	1	1	1	1	1	1	1	1	1	
Cover Support - L= 84" H=	1	1	1	1	1	1	1	1	1	
SPARE FILTERS				1.1.	Ket Biggets	2 51 20	1			
Filter Type: MERV10										
VUD 1200D (1 per unit) - 20" x 20" x 2"	3	3	3	3	3	3	3	3	3	_
VUD 1600D (2 per unit) - 12" x 24" x 2"										6
MISCELLANEOUS ITEMS	1-	State Parks			Selver.			MEN PER	VE ALL PAR	The second
Wall Trim (2" x 1" x ?")	2	2	2	2	2	2	2	2	2	2
CABINET touch-up paint (quart)	3									



Plan Reference	VUV-B	VUV-B	VUV-B	VUV-B	VUV-B	VUV-B	VUV-B	VUV-B	VUV-C	VUV-C
Ceiling Height	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA
Temspec Production Number	T-11	T-12	T-13	T-14	T-15	T-16	T-17	T-18	T-19	T-20
Temspec Model Number	VUD 16000	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 16000
TOP CABINET EXTENSION	and Residentials	INSULATION TYPE		NONE						
Duct Shroud - H= ? W= 33" D= 23	"]								1	1
TOP ACOUSTICAL PLENUM	an sugar	INSULATIO	ON TYPE	Glassfib	er (stuffed a	round the S	A elbow)	A DEAL	Les the Ba	L.C. Status
LEFT Supply Air Opening - Ho=? H= 42	"] 1	1	1	1	1	1	1	1	1	1
REAR PLENUM	and the states of	INSULATIO	ON TYPE	1 inch th	ick Closed (Cell	and the second	ner and	a montal	1.4.11 E
Side Panel - L= 93" D= 8"	2	2	2	2	2	2	2	2	2	2
Back Panel - L= 93" W=33	" 1	1	1	1	1	1	1	1	1	1
Back Extension - L= "? W=33	" 1	1	1	1	1	1	1	1	1	1
Right Side Extension - L= "? D= 8"	1	1	1	1	1	1	1	1	1	1
Left Side Extension - L= "? D= 8"	1	1	1	1	1	1	1	1	1	1
Top/Middle/Bottom Panel- D= 8" W=33	" 2	2	2	2	2	2	2	2	2	2
SIDE PIPE COVER		INSULATIO	ON TYPE	NONE	一般で	M. R.		1000	15-16-16-	
Side Pipe Cover - W=5" L= 93" D= 21	.5"									
Right Extension - W=5" L= ? D= 21	.5"									
Left Extension - W=5" L= ? D= 21	.5"									
Wall Bracket - L= 84"										
Cover Support - L= 84" H=										
SPARE FILTERS								·《西南市10月	1000	AL PRODUCTION
Filter Type: MERV10										
VUD 1200D (1 per unit) - 20" x 20" x 2"										
VUD 1600D (2 per unit) - 12" x 24" x 2"	6	6	6	6	6	6	6	6	6	6
MISCELLANEOUS ITEMS			CIDINE LA				100 A. 1929	BARRIE		
Wall Trim (2" x 1" x ?")	2	2	2	2	2	2	2	2	2	2
CABINET touch-up paint (quart)										



Plan Reference	VUV-C	VUV-C	VUV-C	VUV-C	VUV-C	VUV-B	VUV-B	VUV-B	VUV-B	VUV-B
Ceiling Height	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA
Temspec Production Number	T-21	T-22	T-23	T-24	T-25	T-26	T-27	T-28	T-29	T-30
Temspec Model Number	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D	VUD 1600D
TOP CABINET EXTENSION	Six Site	INSULATIO	ON TYPE:	NONE	USGP!	10	Contraction of the	where are	Signation and	Deg 1
Duct Shroud - H=? W= 33" D= 23"	1	1	1	1	1					
TOP AGOUSTICAL PLENUM	Contraction of	INSULATIO	ON TYPE	Glassfib	er (stuffed a	round the S	A elbow)	100		S.C.a.L.
LEFT Supply Air Opening - Ho=? H= 42"	1	1	1	1	1	1	1	1	1	1
REAR PLENUM		INSULATIO	ON TYPE	1 inch th	ick Closed (Cell	AGENT A	1.200	S. O.	A PARTY A
Side Panel - L= 93" D= 8"	2	2	2	2	2	2	2	2	2	2
Back Panel - L= 93" W=33"	1	1	1	1	1	1	1	1	1	1
Back Extension - L= "? W=33"	1	1	1	1	1	1	1	1	1	1
Right Side Extension - L= "? D= 8"	1	1	1	1	1	1	1	1	1	1
Left Side Extension - L= "? D= 8"	1	1	1	1	1	1	1	1	1	1
Top/Middle/Bottom Panel- D= 8" W=33"	2	2	2	2	2	2	2	2	2	2
SIDE PIPE COVER	Contraction of	INSULATIO	ON TYPE	NONE	1.1.1					
Side Pipe Cover - W= 5" L= 93" D= 21.5"										
Right Extension - W= 5" L= ? D= 21.5"										
Left Extension - W= 5" L= ? D= 21.5"										
Wall Bracket - L= 84"										
Cover Support - L= 84" H=										
SPARE FILTERS										
Filter Type: MERV10										
VUD 1200D (1 per unit) - 20" x 20" x 2"										
VUD 1600D (2 per unit) - 12" x 24" x 2"	6	6	6	6	6	6	6	6	6	6
MISCELLANEOUS ITEMS			12 34		132				- Intern	No. 17
Wall Trim (2" x 1" x ?")	2	2	2	2	2	2	2	2	2	2
CABINET touch-up paint (quart)										



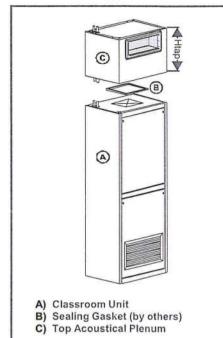
Plan Reference	VUV-B							
Ceiling Height	TBA	Carlos States						
Temspec Production Number	T-31	and the second	Concern States and a state of the state of t					
Temspec Model Number	VUD 1600D							
TOP CABINET EXTENSION	Elli Falantas	INSULATION TYPE	NONE					
Duct Shroud - H=? W= 33" D= 23"								
TOP ACOUSTICAL PLENUM	172222.50	INSULATION TYPE	Glassfiber (stuffed around the SA elbow)					
LEFT Supply Air Opening - Ho=? H= 42"	1							
REAR PLENUM	ANT CAME	INSULATION TYPE	1 inch thick Closed Cell					
Side Panel - L= 93" D= 8"	2							
Back Panel - L= 93" W=33"	1							
Back Extension - L= "? W=33"	1							
Right Side Extension - L= "? D= 8"	1							
Left Side Extension - L= "? D= 8"	1							
Top/Middle/Bottom Panel- D= 8" W=33"	2							
SIDE PIPE COVER	The Gallerian	INSULATION TYPE:	NONE					
Side Pipe Cover - W=5" L= 93" D= 21.5"								
Right Extension - W=5" L= ? D= 21.5"								
Left Extension - W=5" L= ? D= 21.5"								
Wall Bracket - L= 84"								
Cover Support - L= 84" H=								
SPARE FILTERS								
Filter Type: MERV10								
VUD 1200D (1 per unit) - 20" x 20" x 2"								
VUD 1600D (2 per unit) - 12" x 24" x 2"	6							
MISCELLANEOUS ITEMS								
Wall Trim (2" x 1" x ?")	2	2						
CABINET touch-up paint (quart)								

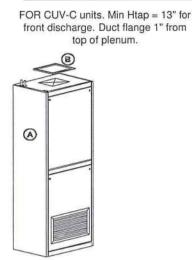


Top Acoustical Plenum Installation

Drawings are conceptual. Please refer to the 'Unit Lavout' and 'Application Layout' pages in these submittals for precise pipe & duct connection locations and

NOTE: Installation screws, washers and sealing gasket NOT PROVIDED.





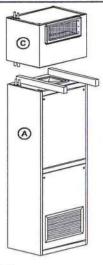
NOTE:

additional accessories.

STEP 1:

Fit a suitable compressible SEALING GASKET (B) around the suppy air fan discharge to prevent air leakage at the interface of the unit and the TOP ACOUSTICAL PLENUM (C).

33

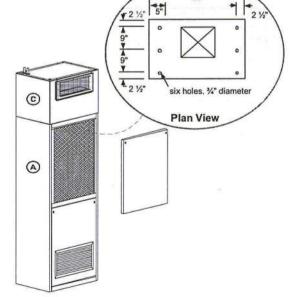


STEP 2: Stand the TOP ACOUSTICAL PLENUM (C) onto two pieces of 2"x4" wood on top of the CLASSROOM UNIT (A).



STEP 3:

Within the 4" gap, make soldered connections between the CLASSROOM UNIT (A) stub-outs and the bottom end of the pipe extensions in the TOP ACOUSTICAL PLENUM (C). Remove the 2"x4" wood and allow the TOP ACOUSTICAL PLENUM to rest on the CLASSROOM UNIT squarely.



STEP 5:

0

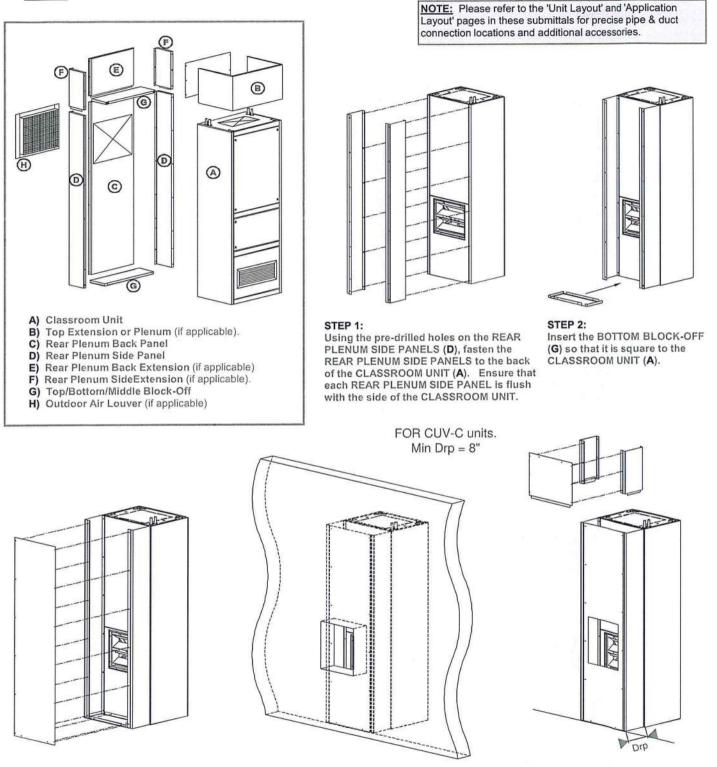
()

Feed the power cable down through the 1" conduit, pre-installed within the TOP ACOUSTICAL PLENUM (C) and down into the CLASSROOM UNIT (A) to the terminal block within the electrical enclosure. Attach the duct to the pre-installed supply air collar on the TOP ACOUSTICAL PLENUM (C).

STEP 4:

Remove the top access panel of the CLASSROOM UNIT (C). Locate the six 3/4" clearance holes in the top horizontal panel of the CLASSROOM UNIT. The holes are beneath the insulation. Using six 1/4" x 20 t.p.l. Screws and 1 1/4" O.D. flat washers under the screw heads, secure the top of the CLASSROOM UNIT to the TOP ACOUSTICAL PLENUM (A). The TOP ACOUSTICAL PLENUM has weld nuts (flush mounted) on the bottom surface.

NOTE: Installation screws NOT PROVIDED.



STEP 3:

Fasten the BOTTOM BLOCK-OFF PANEL (G) to the back of the CLASSROOM UNIT (A). Using the pre-drilled holes, align and fasten the REAR PLENUM BACK PANEL (C) to the REAR PLENUM SIDE PANELS (D).

STEP 4:

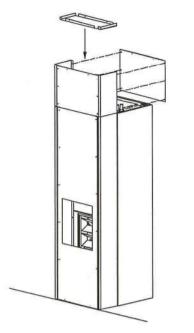
Center the CLASSROOM UNIT (A) to the wall opening. Cut the outdoor air intake opening in the REAR PLENUM BACK PANEL (C) to suit the wall opening.

STEP 5:

Using the pre-drilled holes, fasten the REAR PLENUM BACK EXTENSIONS (E) to the two REAR PLENUM SIDE EXTENSIONS (F). Insert the extension assembly into the top of the rear plenum.

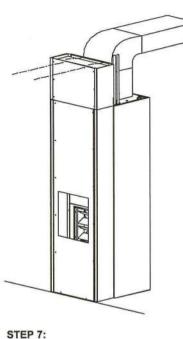


Rear Plenum Installation



STEP 6:

Fasten the back piece of the TOP EXTENSION (B) to the REAR PLENUM SIDE EXTENSIONS (F). Insert the REAR PLENUM TOP BLOCK-OFF PANEL (G) into the top of the extension assembly.



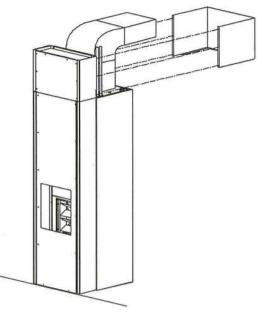
Using the pre-drilled holes, fasten the

REAR PLENUM TOP BLOCK-OFF PANEL (G) to the CLASSROOM UNIT

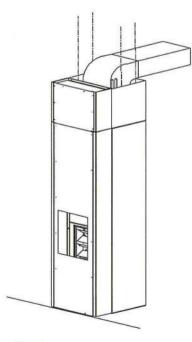
(A) and to the REAR PLENUM BACK

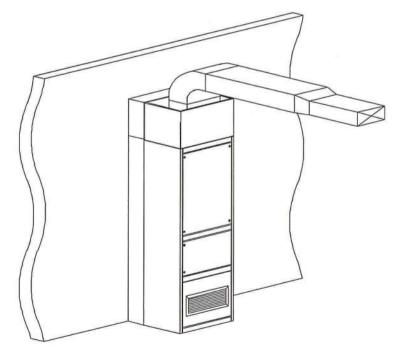
EXTENSION (E). Where required, make duct and pipe connections to

the CLASSROOM UNIT (A).



STEP 8: If applicable, slide the TOP EXTENSION (B) into place and fasten to the top extension back panel.



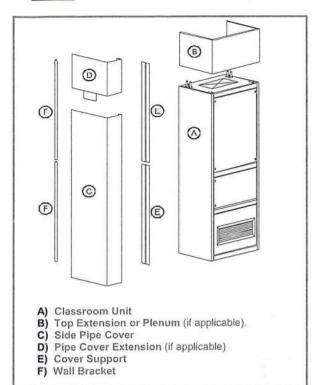


STEP 9: Secure the TOP EXTENSION (B) to the top of the CLASSROOM UNIT (A) (if applicable).

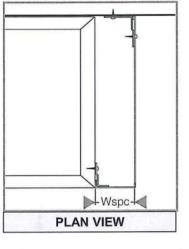


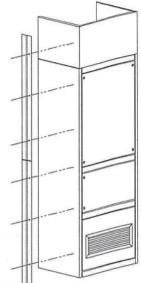
Side Pipe Cover Installation

NOTE: Installation screws NOT PROVIDED.



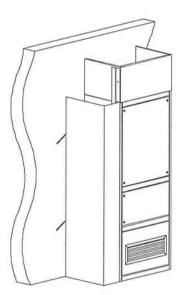
NOTE: Please refer to the 'Unit Layout' and 'Application Layout' pages in these submittals for precise pipe & duct connection locations and additional accessories.





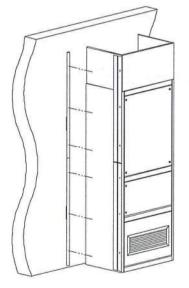
STEP 1:

If applicable, install the top extension or plenum onto the CLASSROOM UNIT (**A**). Fasten the COVER SUPPORT (**E**) to the CLASSROOM UNIT. This bracket should be installed 1 inch off of the finished floor level.



STEP 2:

Put SIDE PIPE COVER (C) into place. Mark off where the edge of the SIDE PIPE COVER meets the wall.





Wspc

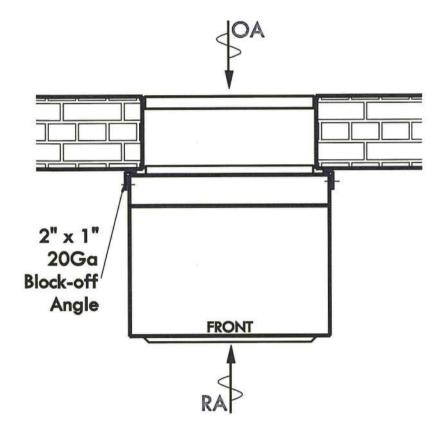


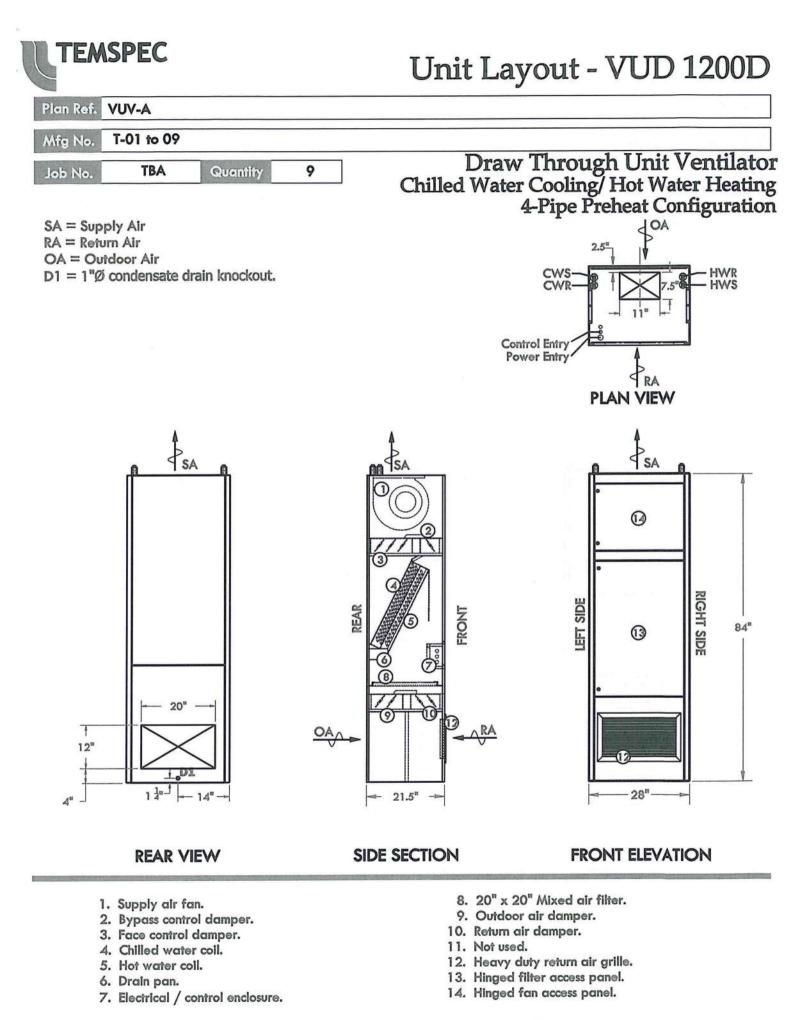
Put the SIDE PIPE COVER (C) back into place and fasten to the WALL BRACKETS (F) using flat head type screws. Install PIPE COVER EXTENSION (D) in the same fashion. Using the cabinet touch-up paint provided, touch up the screw heads to match the cabinet.



2" x 1" block-off angles, color matched, painted on both sides.

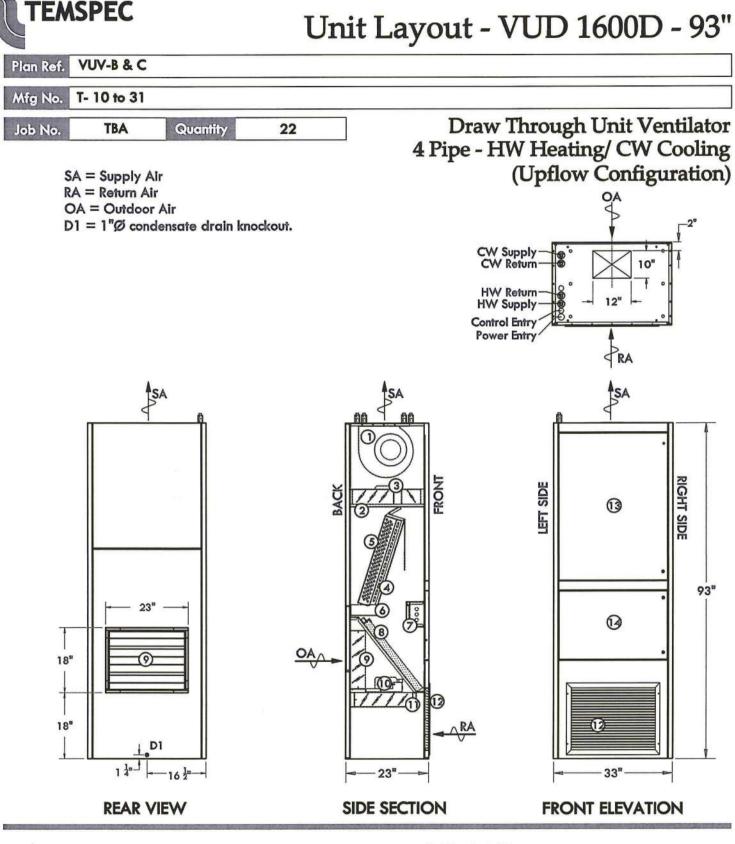
Note: Drawing show for reference only. Actual installation may vary.





Temspec Preliminary Submittal - Schmitt E.S. -CONFIDENTIAL-

Page 31

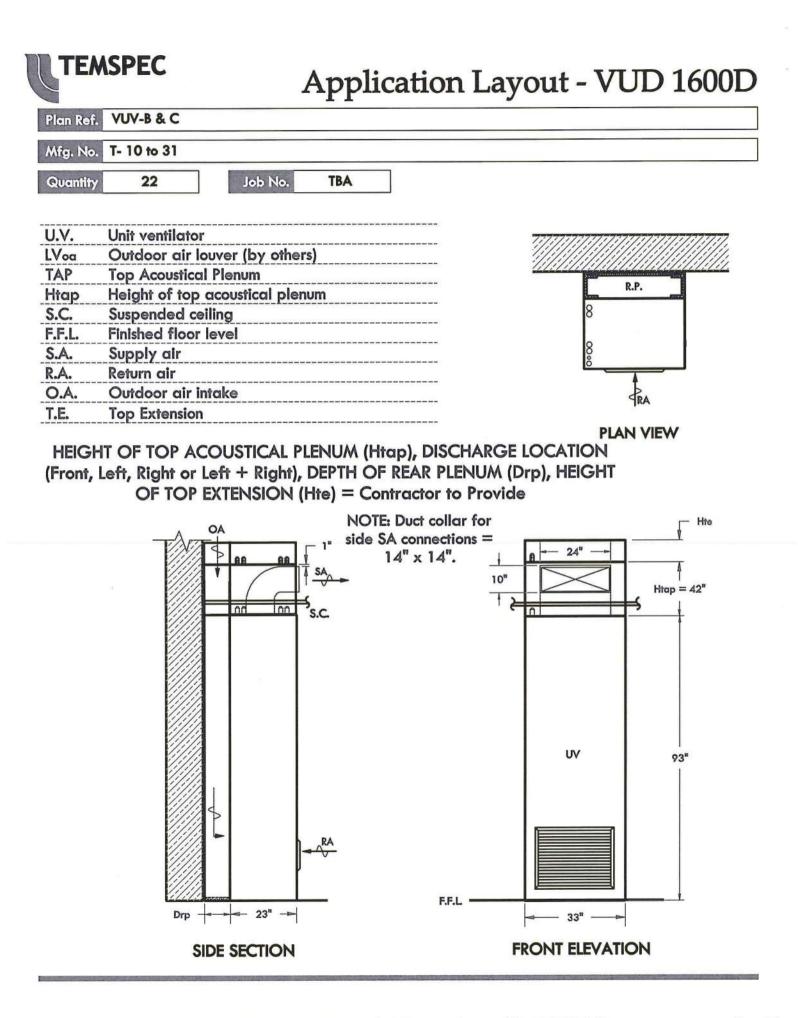


- 1. Supply air fan.
- 2. Face & bypass control dampers.
- 3. Face & bypass damper actuator.
- 4. Hot water coil.
- 5. Chilled water coil.
- 6. Drain pan.
- 7. Electrical / control enclodure.

- 8. Mixed air filters.
- 9. Outdoor air damper.
- 10. Mix air damepr actuator.
- 11. Return air damper.
- 12. Heavy duty steel return air grille, painted.
- 13. Coil access panel, hinged.
- 14. Filter access panel, hinged.

Application Layout - VUD 1200D

	± ±	-
Plan Ref.	VUV - A	
Mfg. No.	T- 01 to 09	
Job No.	TBA Quantity 9	
U.V.	Unit ventilator	
TE	Top extension (duct shroud)	
RP	Rear Plenum Assembly	
S.C.	Suspended ceiling	
F.F.L.	Finished floor level	
S.A.	Supply air	8 2 8
R.A.	Return air	Dspc S.A.
O.A.	Outdoor air intake	0
S.P.C.	Side Pipe Cover	.
		SPC
		NOTE: Default side pipe $\ensuremath{\P}^{RA}$
SIDE PI	PE COVER WIDTH (Wspc) & DEPTH	cover depth (Dspc) to match unit depth. PLAN VIEW
		match unit depth. PLAN VIEW
(Dspc)	and LOCATION (RIGHT or LEFT) =	
	Contractor to Provide	Duct by
	٨	others
	SA	
		TE TE
	s.c.	
		UV 84"
	AO NO	
	RA	
	- 21.5" - F.F.L.	Wspc _= 28"
	SIDE SECTION	FRONT ELEVATION



EON

TARGETED APPLICATIONS

- O Residential HVAC furnace and air handler
- O Commercial variable air volume (VAV)
- O Fan filter units (FFU)

SPECIFICATIONS

- Variable speed, constant torque/constant airflow, ECM
- 120/240/277 and 120/240 VAC single-phase input, 50/60Hz
- Designed for direct-drive blower applications in systems
- O Available in 1/3, 1/2, 3/4 and 1HP ratings
- O Operating speed range of 200-1300 rpm (1/3 HP rating will be 200-1800 rpm)
- O NEMA 48-frame
- O UL and cUL recognized component, CE to follow
- **O RoHS Compliant**

AVAILABILITY

In Production

FEATURES

- Variable speed operation from 200-1300 rpm (1/3 HP rating will be 200-1800 rpm)
- O 6kV surge protection

- O Backward compatible with ECM 2.3
- O Reduced overall length and weight compared to ECM 2.3

- O Similar input connections to original ECM 2.3
- O ECM Toolbox[™] based programming software
- O BlakBox enabled

BENEFITS

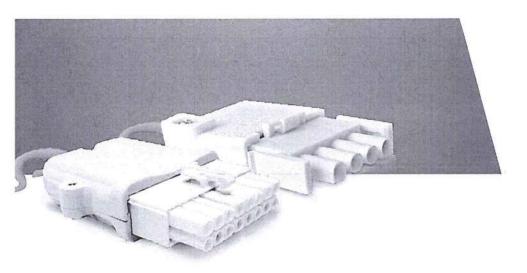
- O Full Load Efficiencies of minimum 75% with 2.3 replacement
- O Full Load Efficiencies of minimum 80% with high efficiency design to follow
- O Reliability improvement with fully potted single control board and mechanical magnet retention
- Drop-in replacement for original ECM 2.3 with airflow and software solutions to minimize application engineering work
- O Fully integrated connector ensures better protection against moisture and contaminants
- O Using the latest version of ECM Toolbox[™], OEM customers can easily create EON programs from existing ECM 2.3 motor programs
- O Improved starting characteristics over ECM 2.3

REFERENCES

www.theDealerToolbox.com

BLAK BRX Sented 1946 WEST COOK ROAD : FORT WAYNE, IN 46818 : the dealer toolbox.com PH : 260 416 5400 FX : 260 416 5499 ©2011 Regal Beloit Corporation

Temspec to program motors for a maximum turndown of 50% of scheduled cfm.



⇒genteq°

0 to 10 Vdc/4 to 20 mA Convertor Cables For EON or ECM 3.0

TARGETED APPLICATIONS

North American HVAC market Commercial ECM Motor market

SPECIFICATIONS

0 to 10 Vdc control signal or 4 to 20 mA control signal (EON only) 12 to 24 Vdc or 16 to 28 Vac power input 36" Cable and plug length

FEATURES

Linear voltage or current to speed control curve 0 to 10 Vdc control signal for EON or ECM 3.0 4 to 20 mA control signal input for EON Wide range power input 12 to 24 Vdc or 16 to 28 Vac

BENEFITS

Allows 0 to 10 Vdc or 4 to 20 mA control input without external converter required No tool installation Works on EON or ECM 3.0 through a PWM control signal

Plugs directly into motor control connector No drilling holes or mounting a PWA

REFERENCES

genteqmotors.com Available for purchase on thedealertoolbox.com

1946 West Cook Rd Fort Wayne, IN 46818 PH: 260-416-5400 FAX: 260-416-5499

www.thedealertoolbox.com

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www.regalbeloit.com

2024-02-16

Temspec Preliminary Submittal - Schmitt E.S.

-CONFIDENTIAL-

Issued September 2017

34-1791-16. Rev. D

M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators Part No. 34-1791-16, Rev. D

Installation Instructions

M9203-GGA-2, M9203-GGB-2, M9203-GGA-2Z, M9203-GGB-2Z

Refer to the QuickLIT website for the most up-to-date version of this document.

Applications

The M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators are direct-mount actuators that operate on AC/DC 24 V power. These bidirectional actuators do not require a damper linkage, and are easily installed on round shafts from 1/4 to 1/2 in. (6 to 12 mm) or square shafts from 1/4 to 5/16 in. (6 to 8 mm) using the standard shaft clamp included with the actuator.

A single M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuator provides 27 lb·in. (3 N·m) running and spring return torque. An integral line voltage auxiliary switch, available only on the M9203-xxB-2(Z) models, indicates end-stop position, or performs switching functions within the selected rotation range.

M9203-GGA-2 and M9203-GGA-2Z actuators include plenum-rated cables and are specially configured for installation in spaces used for environmental air-handling purposes other than ducts and plenums as specified in National Fire Protection Association (NFPA) 70: National Electrical Code section 300.22(C), Other Space Used for Environmental Air. The space over a hung ceiling used for environmental air handling purposes is an example of the type of space for which these actuators are configured. **IMPORTANT:** Use this M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuator only to control equipment under normal operating conditions. Where failure or malfunction of the actuator could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the control system. Incorporate and maintain other devices, such as supervisory or alarm systems or safety or limit controls, intended to warn of or protect against failure or malfunction of the actuator.

IMPORTANT : Utiliser ce M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuator uniquement pour commander des équipements dans des conditions normales de fonctionnement. Lorsqu'une défaillance ou un dysfonctionnement du actuator risque de provoquer des blessures ou d'endommager l'équipement contrôlé ou un autre équipement, la conception du système de contrôle doit intégrer des dispositifs de protection supplémentaires. Veiller dans ce cas à intégrer de façon permanente d'autres dispositifs, tels que des systèmes de supervision ou d'alarme, ou des dispositifs de sécurité ou de limitation, ayant une fonction d'avertissement ou de protection en cas de défaillance ou de dysfonctionnement du actuator.

Installation

The M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators mount directly to the surface in any convenient orientation using two No. M3.5 x 9.5 mm self-drilling sheet metal screws and the antirotation bracket (parts included with the actuator). No additional linkages or couplers are required. Electrical connections are color-coded and identified with numbers permanently marked on the actuator cable. A tag on the actuator cable identifies the electrical connections and wiring details are included on the actuator housing.



M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators 1 Installation Instructions

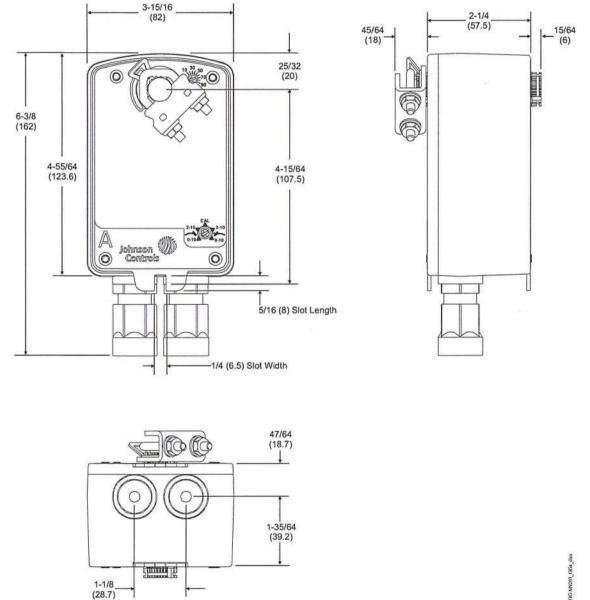
IMPORTANT: Do not install or use this M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators in or near environments where corrosive substances or vapors could be present. Exposure of the electric actuator to corrosive environments may damage the internal components of the device, and will void the warranty.

Parts Included

- M9203-GGx-2(Z) actuator
- M9203-603 adjustable stop kit
- M9000-604 anti-rotation bracket with two No. M3.5 x 9.5 mm, pan-head, cross-recessed (Phillips), self-drilling and self-tapping screws

Special Tools Needed

- 10 mm wrench/socket
- drill with Phillips bit, driver size 1





2 M9203-GGx-2(Z) Series Proportional Electric Spring Return Actuators Installation Instructions

Dimensions

Johnson M

M9102-AGA-2S, -3S and M9104-xxA-2S, -3S Series Electric Non-Spring Return Actuators

Description

The M9102 and M9104 Series Actuators are direct-mount, non-spring return electric actuators that operate on AC 24 V or 100 to 240 VAC power. These motor-driven actuators provide floating control (AGA), floating control with automatic shutoff (IGA), proportional control with selectable 0-10 or 2-10 VDC (GGA), and line voltage power supply (IUA). The -2S models are equipped with plenum cables, and the -3S models are equipped with terminal blocks.

All models are compact in size and are easily installed on VAV boxes, Variable Air Volume and Temperature (VVT) two-position zone applications, or small- to medium-sized dampers with a round shaft up to 1/2 in. (13 mm) in diameter or a 3/8 in. (10 mm) square shaft.

The M9102 Series Electric Non-Spring Return Actuators provide a running torque of 18 lb-in (2 N·m), and the nominal travel time is 30 seconds at 60 Hz (36 seconds at 50 Hz) for 90° of rotation. The M9104 Series Electric Non-Spring Return Actuators provide a running torque of 35 lb-in (4 N·m), and the nominal travel time is 60 seconds at 60 Hz for 90° of rotation.

Refer to the M9102-AGA-2S, -3S and M9104-xGA-2S, -3S Series Electric Non-Spring-Return Actuators Product Bulletin (LIT-1201742) for important product application information.

Features

- Two Torques Available: 18 and 35 lb-in (2 and 4 N·m)
- Short 30-Second Travel Time Available
- 35 dBA Maximum Audible Noise Rating at 1 Meter
- Synchronous Drive (AGA, IGA, GGA models)
- 100,000 Cycle Rating
- Direct Shaft Mounting with Single-Screw Coupler
- Magnetic Clutch
- Manual Gear Release
- Plenum Cable or Screw Terminal Electric Connections
- Floating, Floating with Timeout, and Proportional 0(4) to 10 VDC Control Inputs Available
- Small, Compact Design

Applications

The M9102 and M9104 Series Electric Non-Spring Return Actuators are designed to position balancing, control, round, and zone dampers in HVAC systems. These electric actuators are also designed to position blades in a VAV box, or they can be used in VVT two-position zone applications.

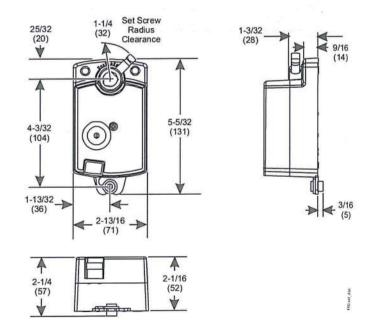
Each actuator mounts directly to the surface in any convenient orientation using a single No. 10 standard sheet metal screw (included with the actuator). No additional linkages or couplers are required. Electrical connections on the actuator are clearly labeled to simplify installation.

Repair Information

If the M9102 or M9104 Series Electric Non-Spring Return Actuator fails to operate within its specifications, replace the unit. For a replacement electric actuator, contact the nearest Johnson Controls® representative.



M9102 Series Electric Non-Spring Return Actuator



M9102/M9104 Series Electric Non-Spring Return Actuator Dimensions, in. (mm)

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products. © 2015 Johnson Controls, Inc. www.johnsoncontrols.com

M9102-AGA-2S, -3S and M9104-xxA-2S, -3S Series Electric Non-Spring Return Actuators (Continued)

Selection Chart

Code Number	Control Type	Running Torque	Travel Time	Power Supply (VA rating)	Electrical Connections
M9102-AGA-2S	Floating	18 lb∙in (2 N∙m)	30 Seconds at 60 Hz 36 Seconds at 50 Hz	2.5	48 in. (1.2 m) UL 444 Type CMP Plenum Rated cable with 19 AWG (0.75 mm ²) conductors and .25 in. (6 mm) ferrule ends
M9102-AGA-3S	Floating	18 lb∙in (2 N∙m)	30 Seconds at 60 Hz 36 Seconds at 50 Hz	2.5	M3 Screw Terminals
M9104-AGA-2S	Floating	35 lb∙in (4 N∙m)	60 Seconds at 60 Hz 72 Seconds at 50 Hz	2.1	48 in. (1.2 m) UL 444 Type CMP Plenum Rated cable with 19 AWG (0.75 mm ²) conductors and .25 in. (6 mm) ferrule ends
M9104-AGA-3S	Floating	35 lb∙in (4 N∙m)	60 Seconds at 60 Hz 72 Seconds at 50 Hz	2.1	M3 Screw Terminals
M9104-IGA-2S	Floating or On/Off	35 lb∙in (4 N∙m)	60 Seconds at 60 Hz 72 Seconds at 50 Hz	3.0	48 in. (1.2 m) UL 444 Type CMP Plenum Rated cable with 19 AWG (0.75 mm ²) conductors and .25 in. (6 mm) ferrule ends
M9104-IGA-3S	Floating or On/Off	35 lb∙in (4 N∙m)	60 Seconds at 60 Hz 72 Seconds at 50 Hz	3.0	M3 Screw Terminals
M9104-GGA-2S	Proportional	35 lb•in (4 N•m)	60 Seconds at 60 Hz 72 Seconds at 50 Hz	2.9	48 in. (1.2 m) UL 444 Type CMP Plenum Rated cable with 19 AWG (0.75 mm ²) conductors and .25 in. (6 mm) ferrule ends
M9104-GGA-3S	Proportional	35 lb•in (4 N•m)	60 Seconds at 60 Hz 72 Seconds at 50 Hz	2.9	M3 Screw Terminals
M9104-IUA-2S	Floating or On/Off	35 lb∙in (4 N∙m)	60 Seconds at 50/60 Hz	7.5 (0.07A)	48 in. (1.2 m) UL 444 Type CMP Plenum Rated cable with 18 AWG (1.02 mm ²) conductors for 3/8 in. (10 mm) flexible metal conduit

Accessories

Code Number	Description
DMPR-KC0031	7 in. (178 mm) blade pin extension without bracket for Johnson Controls direct-mount damper applications
DMPR-KR0031	Sleeve pin kit for Johnson Controls round dampers with a 5/16 in. (8 mm) diameter shaft
M9000-200	Commissioning tool that provides a control signal to drive 24 V on/off, floating, proportional, and/or resistive electric actuators
M9104-100	Connector for 3/8 in. (10 mm) flexible metal conduit

1. Furnished with the damper and may be ordered separately.

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Johnson Controls

M9102-AGA-2S, -3S and M9104-xxA-2S, -3S Series Electric Non-Spring Return Actuators (Continued)

Technical Specifications

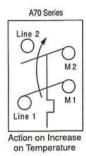
Power Requirements	M910x-AGA-xS	AC 24 V +25%/-20% at 50/60 Hz, 2.1 VA, Class 2, Safety Extra-Low Voltage (SELV)					
	M9104-IGA-xS	AC 24 V +25%/-20% at 50/60 Hz, 3.0 VA, Class 2, SELV					
	M9104-GGA-xS	AC 24 V +25%/-20% at 50/60 Hz, 2.9 VA, Class 2, SELV					
	M9104-IUA-2S	AC 100 to 240 V (-15%+10%) at 60 Hz, 0.07A, and 7.5 VA Supply					
Control Type	M910x-AGA-xS	Floating Control without Timeout					
	M9104-IGA-xS	Floating or On/Off Control with Timeout					
	M9104-GGA-xS	Proportional Control					
	M9104-IUA-2S	Floating or On/Off Control with Timeout					
Input Signal	M910x-AGA-xS	AC 24 V +25%/-20% at 50/60 Hz, Class 2, SELV without Timeout					
	M9104-IGA-xS	AC 24 V +25%/-20% at 50/60 Hz, Class 2, SELV with Timeout					
	M9104-GGA-xS	0(2) to 10 VDC or 0(4) to 20 mA with Field-furnished 500 ohm Resistor					
	M9104-IUA-2S	AC 100 to 240 V (-15%+10%) at 50/60 Hz, and 7.5 VA Supply					
Feedback Signal	M9104-GGA-2S	0 to 10 VDC or 2 to 10 VDC for 90° (10 VDC at 1 mA) Corresponds to Input Signal Span Selection					
Motor Input Impedance		200 ohms Nominal					
Running Torque	M9102 Series	18 lb·in (2 N·m)					
	M9104 Series	35 lb·in (4 N·m)					
Travel Time	M9102 Series	30 Seconds at 60 Hz (36 Seconds at 50 Hz) for 90° of Rotation					
	M9104 Series	60 Seconds at 60 Hz (72 Seconds at 50 Hz) for 90° of Rotation					
	M9104 (IUA)	60 Seconds at 50/60 Hz for 90° of Rotation					
Rotation Range		93° ±3°, CW or CCW					
Cycles		100,000 Full Stroke Cycles; 2,500,00 Repositions at Rated Running Torque					
Audible Noise Rating		35 dBA at 39-13/32 in. (1 m) Maximum					
Electrical Connections	M9102-AGA-2S M9104-xxA-2S	48 in. (1.02 m) UL 444 Type CMP Plenum Rated Cable with 18 AWG (1.02 mm) Conductors and 1/4 in. (6 mm) Ferrule Ends					
	M9102-AGA-3S M9104-xGA-3S	M3 Screw Terminals					
	M9104-IUA-2S	48 in. (1.2 mm) with 18 AWG (1.02 mm ²) Conductors and Connector for 3/8 in. (10 m Flexible Metal Conduit					
Mechanical Connections		Up to 1/2 in. (13 mm) Diameter Round Damper Shaft or 3/8 in. (10 mm) Square Damper Shaft					
Enclosure	M9102-AGA-2S M9104-xxA-2S	NEMA 1, IP42					
	M9102-AGA-3S M9104-xxA-3S	NEMA 1, IP40					
Ambient Conditions	Operating	-4 to 140°F (-20 to 60°C); 90% RH Maximum, Noncondensing					
	Storage	-20 to 150°F (-29 to 66°C); 90% RH Maximum, Noncondensing					
Compliance	United States	UL Listed, CCN XAPX, File 27734 Plenum rated, UL2043, suitable for use in other environmental spaces (plenums) in accordance with section 300.22.(c) of the National Electrical Code					
	Canada	cUL Listed, CCN XAPX7, File 27734 Plenum Rated Per CSA 22.2 No. 236/UL 1995, Heating and Cooling Equipment					
	Europe	Johnson Controls, Inc. declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC and the Low Voltage Directive 2006/95/EC.					
	Australia and New Zealand	C-Tick Mark, Australia/NZ Emissions Compliant					
Shipping Weight		1.0 lb (0.5 kg)					

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CONTRELS

Controls Group 507 E. Michigan Street P.O. Box 423, Milwaukee, WI 53202 Code No. LIT-1927140

A70 Series Four-Wire, Two-Circuit Temperature Control





A70GA-1

Description

The A70 Series temperature control incorporates a vapor-charged sensing element. The A70G, A70H, and A70K have a 4-wire, 2-circuit contact block that contains two isolated sets of contacts.

The contacts are designed so that when the main contact opens, the auxiliary contact closes.

Features

- · long-life, snap-acting contacts
- · automatic or manual reset models

Applications

Typical applications include energizing an indicator light after a low temperature cutout on a ventilating system.

Replacement Covers

Code Number	Description				
CVR17A-620R	Automatic reset				
CVR17A-621R	Manual reset				

To Order

Specify the code number from the following selection chart.

Selection Chart

Code	Swite	ch Action	Range	Diff F°	Bulb and	Max Bulb	Range
Number	Main Contacts	Auxiliary Contacts	°F (°C)	(C°)	Capillary	Temp °F (°C)	Adjuster
A70GA-1C ^(a)		Close Low	15 to 55 (-9.4 to 12.8)	5 (2.8)	20 ft of 1/8 in. O.D. Tubing	400 (204.4)	Screwdriver slot
A70GA-2C	Open Low		35 to 80 (1.7 to 26.7)	3 to 30 (-16.1 to -1.1), factory set at 12 (-11.1)	3/8 in. x 3 in. 6 ft Cap.	250 (121)	Screwdriver slot
A70HA-1C ^(a)	-		15 to 55 (-9.4 to 12.8)	Manual reset	20 ft. of 1/8 in. O.D. Tubing	400 (204.4)	Screwdriver slo
A70HA-2C			35 to 80 (1.7 to 26.7)	Manual reset	3/8 in. x 3 in. 6 ft cap.	250 (121)	Screwdriver slot
A70KA-1C	Open High	Close High	100 to 170 (37.8 to 76.7)	Manual reset	3/8 in. x 10 in. 6 ft cap.	240 (116)	Screwdriver slot

(a) The low cutout stop is set and sealed at 35°F (1.6°C). The control responds only to the lowest temperature along any one ft. of the entire 20 ft. element or bellows CUD.

Electrical Ratings

Pole Number Motor Ratings VAC	LINE-M2 (Main)						LINE-M1 (Auxiliary)			
	120	208	240	277	480 ^(a)	600 ^(a)	120	208	240	277
AC Full Load Amp	16.0	9.2	8.0		5.0	4.8	6.0	3.4	3.0	-
AC Locked Rotor Amp	96.0	55.2	48.0	-	30.0	28.8	36.0	20.4	18.0	-
AC Non-Inductive Amp	16.0	9.2	8.0	7.2	-	-	6.0	6.0	6.0	6.0
Pilot Duty - Both Poles	125 VA, 120 to 600 VAC and 57.5 VA, 120 to 300 VDC									

(a) Not compressor motor loads.

Page

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