



ADDENDUM

Project: **Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition**

Project No.: **3221**

Date: **August 16, 2023**

Addendum Number: **#003**

Each Bidder's proposal amount shall include the work described herein.

This Addendum is hereby made a part of the Contract Documents. Unless otherwise indicated, the work described herein shall comply with, and be equal in all respects to the original Specification and Drawings accompanying same. Include incidental work required to properly complete the work, whether stated herein or not.

ARCHITECTURAL DRAWING REVISIONS

TTL – Title Page

- ADD:** A0.06 Phase 1
- ADD:** A0.07 Phase 2 & 3
- ADD:** S2.01 Load Maps
- ADD:** S7.01 Sections and Details
- ADD:** M6.04 Mechanical Details
- ADD:** M6.05 Mechanical Details

A0.01 -Code Review Plan

- ADD:** Line of corridor fire resistance rating.

A0.06 - Phase 1

- ADD:** Sheet to drawing set.

A0.07 - Phase 2 & 3

- ADD:** Sheet to drawing set.

A1.11 – Removals Floor Plan (Area A)

- ADD:** Note R34 – “TSI materials – by owner’s separate vendor.”
- ADD:** Note R35 – “Carpet – by owner’s separate vendor.”
- ADD:** Note R36 – “VCT – by owner’s separate vendor.”
- ADD:** Note R37 – “Sink undercoating – by owner’s separate vendor.”
- ADD:** Note R38 – “Doorframe – by owner’s separate vendor.”
- ADD:** Note E15 – “Existing area to remain as is – no work to be done.”
- ADD:** Note tags to drawing sheet A1.11.

A1.12 – Removals Floor Plan (Area B)

- ADD:** Note R34 – “TSI materials – by owner’s separate vendor.”
ADD: Note R35 – “Carpet – by owner’s separate vendor.”
ADD: Note R36 – “VCT – by owner’s separate vendor.”
ADD: Note R37 – “Sink undercoating – by owner’s separate vendor.”
ADD: Note R38 – “Doorframe – by owner’s separate vendor.”
ADD: Note E15 – “Existing area to remain as is – no work to be done.”
ADD: Note tags to drawing sheet A1.12.

A2.10 – Composite Floor Plan

- REVISE:** Unit ventilator sizes in GSRP classrooms as indicated on sheet.

A2.12 – Floor Plan (Area B)

- REVISE:** Unit ventilator sizes in GSRP classrooms as indicated on sheet.

A3.00 – Exterior Elevations

- CHANGE:** Note 1
FROM: 4” brick veneer to match existing; color, texture, pattern, and coursing. (Install header course every 6 rows of brick - match bond coursing exactly).
TO: 4” brick veneer to match existing; color, texture, pattern, and coursing. (Install header course every 6 rows of brick - match bond coursing exactly). -- Color to be Belden Brick “Empire Gray”.
REVISE: Louvre location as indicated on sheet.

A3.01 – Exterior Elevations

- CHANGE:** Note 1
FROM: 4” brick veneer to match existing; color, texture, pattern, and coursing. (Install header course every 6 rows of brick - match bond coursing exactly).
TO: 4” brick veneer to match existing; color, texture, pattern, and coursing. (Install header course every 6 rows of brick - match bond coursing exactly). -- Color to be Belden Brick “Empire Gray”.
REVISE: Louvre location as indicated on sheet.

A3.02 – Exterior Elevations

- CHANGE:** Note 1
FROM: 4” brick veneer to match existing; color, texture, pattern, and coursing. (Install header course every 6 rows of brick - match bond coursing exactly).
TO: 4” brick veneer to match existing; color, texture, pattern, and coursing. (Install header course every 6 rows of brick - match bond coursing exactly). -- Color to be Belden Brick “Empire Gray”.

A3.03 – Exterior Elevations

- CHANGE:** Note 1
FROM: 4” brick veneer to match existing; color, texture, pattern, and coursing. (Install header course every 6 rows of brick - match bond coursing exactly).
TO: 4” brick veneer to match existing; color, texture, pattern, and coursing. (Install header course every 6 rows of brick - match bond coursing exactly). -- Color to be Belden Brick “Empire Gray”.

A6.10 – Composite RCP

- ADD:** Soffit above baptismal font (Alternate #1).
ADD: Note 4 to Board Room 110 (Alternate #1).
CHANGE: Note Tag(s) in Board Room 110 (Alternate #1).
FROM: E1
TO: 1
REVISE: Ceiling grid and lighting layout in Board Room 110 (Alternate #1).

A8.51 – Finish Schedule

- ADD:** PT-13, Sherwin Williams, Semi-Gloss, SW9170 Acier – Fireplace mantle surround and fire box paint
CHANGE: PT-10
FROM: SW9146 Faded Flaxflower
TO: TBD

STRUCTURAL DRAWING REVISIONSS2.01 – Load Maps

- ADD:** Sheet to drawing set.

S2.10 – Foundation Plan

- REVISE:** Refer to clouded areas for drawing revisions

S2.11 – Roof Framing Plan

- REVISE:** Refer to clouded areas for drawing revisions

S7.00 – Sections and Details

- REVISE:** Refer to clouded areas for drawing revisions

S7.01 – Sections and Details

- ADD:** Sheet to drawing set.

MECHANICAL DRAWING REVISIONSM2.11 Plumbing Plan (Part A)

- ADD:** Floor drains and tags.
REVISE: ACU locations and associated condensate drainage piping.

M2.12 Plumbing Plan (Part B)

- ADD:** Floor drains and tags.

M3.11 HVAC Piping Plan (Part A)

- ADD:** Space Temperature Sensor to serve ERU-1 Unoccupied Recirc Mode.

M4.11 Refrigerant Piping Plan (Part A)

- REVISE:** ACU and ACCU locations and ACCU numbering and associated piping.
DELETE: Previous ACCU-3

M4.12 Refrigerant Piping Plan (Part B)

- REVISE:** ACCU numbering.

M5.11 Sheet Metal Plan (Part A)**REVISE:** ERU-1 location and associated ductwork to coordinate with structure.**DELETE:** ACU-5, 6, 7, 8, 11, 12, 13, 14, 45, 46 from Base Bid sheet.M5.11-Alt Sheet Metal Plan (Part A) - Alternate**REVISE:** ERU-1 location and associated ductwork to coordinate with structure.M5.12 Sheet Metal Plan (Part B)**REVISE:** Return and transfer ductwork and grilles.M6.04 Mechanical Details**ADD:** Sheet to drawing set.M6.05 Mechanical Details**ADD:** Sheet to drawing set.M7.04 Mechanical Schedules**REVISE:** Gas Fired Boiler Schedule information.M7.05 Mechanical Schedules**REVISE:** Split System Air Conditioning Unit Schedule unit identification numbers and Air Cooled Condensing Unit Schedule information.M8.04 Temperature Controls**ADD:** ERU-1 Space Temperature Sensor control and sequence of operation for unoccupied mode.**ELECTRICAL DRAWING REVISIONS**ED1.11 Electrical Demolition Plan (Part A)**REVISE:** Lighting and controls for board room and AHU-1 demolition added to alternate No.1.**DELETE:** Ceiling fans in Board room.E2.11 Lighting Plan (Part A)**REVISE:** Lighting and controls for board room, added to alternate No.1.E3.11 Power Plan (Part A)**ADD:** Removal of ceiling fans.**REVISE:** Locations of ACCU's 1,2,3,4,5,6,7,8,11,12,13,14,45 and 46.**DELETE:** ACCU-5.E3.12 Power Plan (Part B)**ADD:** Changing station.**REVISE:** ACCU numberingE5.02 Panel Schedules**REVISE:** Panel schedules for PNL C and F.E7.01 Details and Diagrams**REVISE:** Lighting Fixture Schedule

SPECIFICATION REVISIONS

Table of Contents

ADD: Section 23 5216 Condensing Boilers

Section 00 0115 List of Drawings

ADD: A0.06 Phase 1
ADD: A0.07 Phase 2 & 3
ADD: S2.01 Load Maps
ADD: S7.01 Sections and Details
ADD: M6.04 Mechanical Details
ADD: M6.05 Mechanical Details

Section 01 2000 – Price and Payment Procedures

1.04 Applications for Progress Payments

ADD: K. At Substantial Completion provide the following:

1. Application for reduction of retainage (Reduced to maximum 5%).
 - a. AIA Document G707A-1994 "Consent of Surety to Reduction in or Partial Release of Retainage.

1.06 Application for Final Payment, C

ADD:

4. Application for reduction of retainage only, to close out the project to a zero balance.
 - a. AIA Document G707-1994 "Consent of Surety to Final Payment.
5. Proof that all subcontractors have been paid.
 - a. Provide full unconditional waivers of lien.

Section 01 2100 Allowances

1.05 Allowances Schedule

ADD: Alternate No. 1 - AV Systems Allowance: Include the stipulated sum/price of \$75,000 for the AV System, power, pathways, raceways, floor boxes, and other infrastructure to support the AV equipment.

Section 23 5216 – Condensing Boilers

ADD: New Specification Section.

GENERAL

RFI Questions and Answers

RFI Question 14: Provide a Brick Veneer color, type or an allowance.

RFI Answer 14: 4" brick veneer to match existing; color, texture, pattern, and coursing. (Install header course every 6 rows of brick - match bond coursing exactly). -- Color to be Belden Brick "Empire Gray".

RFI Question 15: We are a manufacturer of visual display boards with our recently opened Midwest office. We are requesting review and consideration to be listed as equal manufacturer to bid the above mentioned project and scope of work. Attached please find our substitution request form, product data and applicable color charts. Our warranty is 50 years on the porcelain steel face of the markerboards.

RFI Answer 15: No, the submitted product does not meet our specifications.



RFI Question 16: We are the Manufacturers' Representative for Riello Boilers here in Michigan. We are respectfully requesting that the Riello Array SE be considered as an acceptable additional Manufacturer. Please see the Request for Substitution attached to this email. Thank you for your time and consideration for reviewing Riello Boilers.

RFI Answer 16: The district has elected to maintain their district standard for parts and maintenance efficiency.

RFI Question 17: Is Automated Logic the only approved Temperature Controls Vendor for this project? Please confirm.

RFI Answer17: The district has elected to maintain their district standard for parts and maintenance efficiency.

Crestwood School District Cherry Hill Baptist Church

Administration Relocation and Addition

Crestwood School District
1045 North Gulley Rd. Dearborn, MI, 48127
Contact Name: Penny Morgan, CFO
Contact Phone: (313) 278-2349

ARCHITECT:



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803 W. Big Beaver Road, Suite 350, Troy, MI 48064 | 248.244.9710
ehresmanarchitects.com

LANDSCAPE ARCHITECT:

deak
143 CADYCENTRE #79
NORTHVILLE, MI 48168
248.444.7892
PLANNING + DESIGN

CIVIL ENGINEER:

SPALDING DeDECKER
Engineering and Surveying
Excellence Since 1954
493 South Main Street
Farmington Hills, MI 48334
Phone: (248) 464-4400
Fax: (248) 464-5654
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STRUCTURAL ENGINEER:

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FARMINGTON HILLS, MI 48334
PH: 248.344.2800
FAX: 248.344.1950
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48331

MECH. / ELECT. ENGINEER:

Peter Basso Associates Inc
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48068-3276
Tel: 248-879-5666
Fax: 248-879-0007
www.pbanet.com

TECHNOLOGY CONSULTANT:

W & H
WRIGHT HUNTER



LOCATION PLAN

NOT TO SCALE

APPLICABLE CODES:

MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS:	2015 EDITION
MICHIGAN BUILDING CODE:	2015 EDITION
MICHIGAN PLUMBING CODE:	2018 EDITION
MICHIGAN MECHANICAL CODE:	2015 EDITION
NATIONAL ELECTRIC CODE (WITH MICHIGAN PART 8 RULES):	2017 EDITION
MICHIGAN UNIFORM ENERGY CODE:	2015 EDITION
ASHRAE 90.1-2013:	
LIFE SAFETY CODE 101:	2012 EDITION
FEDERAL ADA LAW:	CURRENT ED.
ACCESSIBLE AND USABLE BUILDINGS & FACILITIES (ANSI A117.1):	2009 EDITION
LICENSING RULES FOR CHILD CARE CENTERS	2019 EDITION
REHABILITATION CODE	

USE GROUP:

EXISTING USE: A-3 RELIGIOUS & I-4 CHILDCARE
NEW USE: B BUSINESS & I-4 CHILDCARE

ZONING DISTRICT:

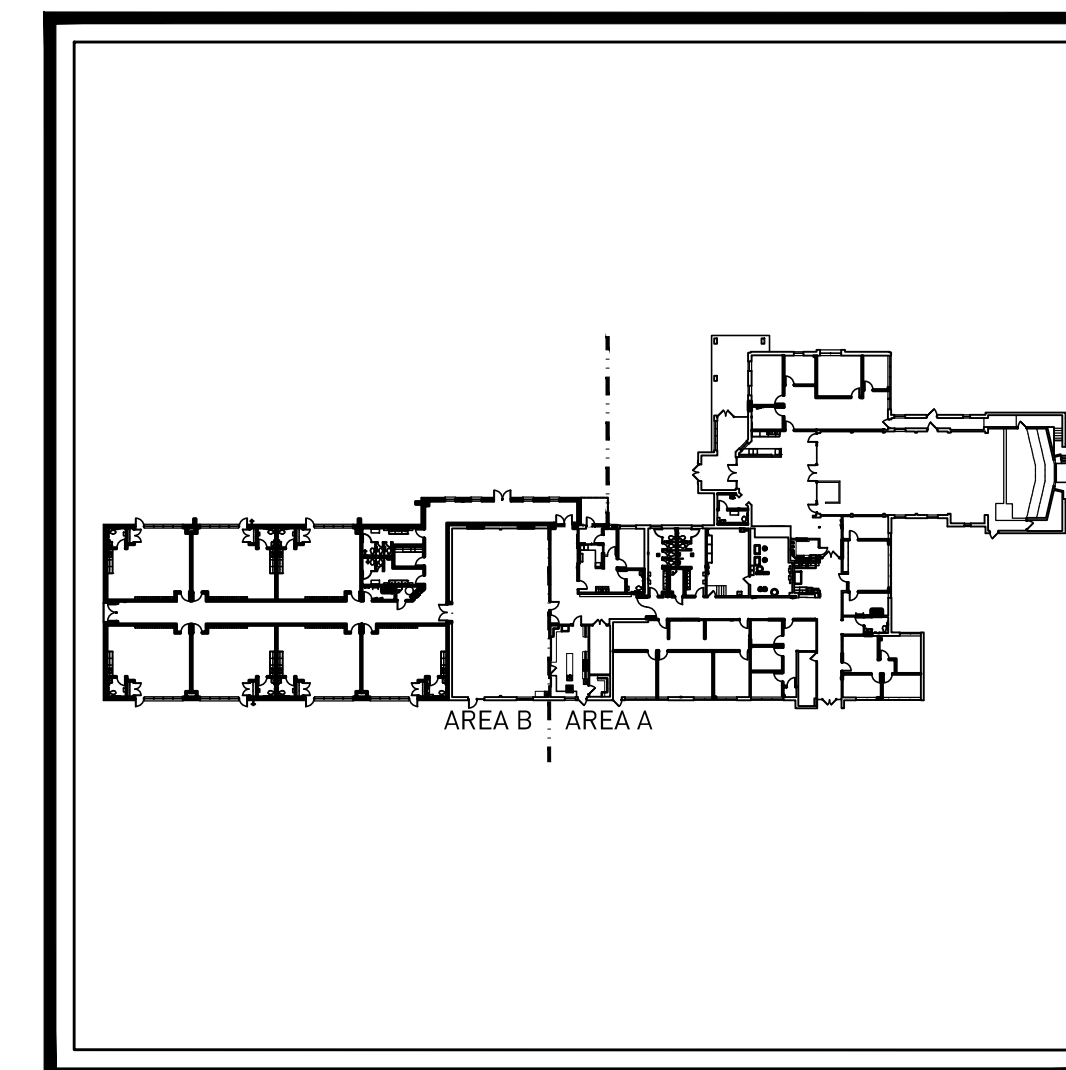
R-1 SINGLE FAMILY RESIDENTIAL

CONSTRUCTION TYPE:

III-B, NOT SPRINKLED

TOTAL FLOOR AREA:

EXISTING FLOOR AREA: 17,711 SF
ADDITION FLOOR AREA: 8,905 SF
TOTAL FLOOR AREA: 26,616 SF (GROSS FLOOR AREA)



BUILDING KEY PLAN

NOT TO SCALE

BUILDING HEIGHT:

EXISTING: ± 19'-3" TO MIDPOINT OF HIGHEST SLOPE
ADDITION: ± 15'-0" TO TOP OF PARAPET

DEFERRED SUBMITTALS:

PER SECTION 107.3.4.1, ANY REQUIRED SUBMITTALS WILL BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ASSUMING THE DUTIES OF CONSTRUCTION SUPERVISION AT THE APPROPRIATE TIME.

DEFERRED SUBMITTALS:
1. FIRE ALARM SYSTEMS

LIST OF ALTERNATES:

ALTERNATE #1: BOARD ROOM IMPROVEMENTS
THE PORTION OF WORK TO BE ADDED TO THE BASE PROPOSAL INCLUDES THE FOLLOWING. ALL FINISHES, MECHANICAL, ELECTRICAL, AND TECHNOLOGY WORK AS INDICATED ON THE DRAWINGS TO IMPROVE THE BOARD ROOM. CONTRACTOR TO REFER TO DRAWINGS AND / OR SPECIFICATIONS FOR FURTHER INFORMATION.

LIST OF DRAWINGS

MECHANICAL DRAWINGS:

M0.01	MECHANICAL STANDARDS AND DRAWING INDEX
MD2.11	PLUMBING DEMOLITION PLAN (PART A)
MD3.11	HVAC PIPING DEMOLITION PLAN (PART A)
MD3.12	HVAC PIPING DEMOLITION PLAN (PART B)
MD4.11	SHEET METAL DEMOLITION PLAN (PART A)
MD4.12	SHEET METAL DEMOLITION PLAN (PART B)
M2.01	UNDERGROUND PLUMBING PLAN (PART A)
M2.02	UNDERGROUND PLUMBING PLAN (PART B)
M2.11	PLUMBING PLAN (PART A)
M2.12	PLUMBING PLAN (PART B)
M3.11	HVAC PIPING PLAN (PART A)
M3.12	HVAC PIPING PLAN (PART B)
M4.11	REFRIGERANT PIPING PLAN (PART A)
M4.12	REFRIGERANT PIPING PLAN (PART B)
M5.11	SHEET METAL PLAN (PART A)
M5.11-ALT	SHEET METAL PLAN (PART A) - ALTERNATE
M5.12	SHEET METAL PLAN (PART B)
M6.01	MECHANICAL DETAILS
M6.02	MECHANICAL DETAILS
M6.03	MECHANICAL DETAILS
M6.04	MECHANICAL DETAILS
M6.05	MECHANICAL DETAILS
M7.01	MECHANICAL SCHEDULES
M7.02	MECHANICAL SCHEDULES
M7.03	MECHANICAL SCHEDULES
M7.04	MECHANICAL SCHEDULES
M7.05	MECHANICAL SCHEDULES
M8.01	TEMPERATURE CONTROL STANDARDS AND GENERAL NOTES
M8.02	TEMPERATURE CONTROLS
M8.03	TEMPERATURE CONTROLS
M8.04	TEMPERATURE CONTROLS
M8.05	TEMPERATURE CONTROLS

ELECTRICAL DRAWINGS:

E0.01	ELECTRICAL STANDARDS AND DRAWING INDEX
E0.02	ELECTRICAL STANDARD SCHEDULES
E00.03	ELECTRICAL SITE DEMOLITION PLAN
E0.03	ELECTRICAL SITE NEW WORK PLAN
E0.04	ELECTRICAL COMPOSITE PLAN
ED1.11	ELECTRICAL DEMOLITION PLAN (PART A)
ED1.12	ELECTRICAL DEMOLITION PLAN (PART B)
E2.11	LIGHTING PLAN (PART A)
E2.12	LIGHTING PLAN (PART B)
E3.11	POWER PLAN (PART A)
E3.12	POWER PLAN (PART B)
E5.01	ONE LINE DIAGRAM
E5.02	PANEL SCHEDULES
E5.03	PANEL SCHEDULES
E7.01	ELECTRICAL DETAILS AND DIAGRAMS
E7.02	ELECTRICAL DETAILS AND DIAGRAMS
E7.03	ELECTRICAL DETAILS AND DIAGRAMS
E7.04	ELECTRICAL DETAILS AND DIAGRAMS
E7.05	ELECTRICAL DETAILS AND DIAGRAMS

TECHNOLOGY DRAWINGS:

T2.10	STRUCTURED CABLING SYSTEM COMPOSITE FLOOR PLAN
T2.11	STRUCTURED CABLING SYSTEM FLOOR PLAN (PART A)
T2.12	STRUCTURED CABLING SYSTEM FLOOR PLAN (PART B)
TP2.10	PUBLIC ADDRESS SYSTEM COMPOSITE FLOOR PLAN
TP2.11	PUBLIC ADDRESS SYSTEM FLOOR PLAN (PART A)
TP2.12	PUBLIC ADDRESS SYSTEM FLOOR PLAN (PART B)
TY2.10	SECURITY SYSTEMS COMPOSITE FLOOR PLAN
TY2.11	SECURITY SYSTEMS FLOOR PLAN (PART A)
TY2.12	SECURITY SYSTEMS FLOOR PLAN (PART B)
TY7.01	SECURITY SYSTEMS DETAILS

LIST OF DRAWINGS

TTL	TITLE SHEET
A0.00	GENERAL INFORMATION
A0.01	CODE REVIEW PLAN
A0.05	COMPOSITE PHASING PLAN
A0.06	PHASE 1
A0.07	PHASE 2 & 3
A0.08	PROJECT IDENTIFICATION SIGN

SURVEY DRAWINGS:

C1 OF 2	TOPOGRAPHICAL SURVEY
C2 OF 2	TOPOGRAPHICAL SURVEY

CIVIL DRAWINGS:

C1.0	GENERAL PLAN
C2.1	DEMOLITION PLAN
C3.1	UTILITY PLAN
C4.1	PAVING AND LAYOUT PLAN
C5.1	GRADING PLAN
C6.1	SOIL EROSION AND SEDIMENTATION CONTROL PLAN

LANDSCAPE DRAWINGS:

L.101	SITE LANDSCAPE PLAN
L.102	SITE LANDSCAPE PLAN
L.301	SITE LANDSCAPE PLAN
L.302	SITE LANDSCAPE PLAN
L.601	SITE LANDSCAPE PLAN - SPECIFICATIONS
L.602	SITE LANDSCAPE PLAN - SPECIFICATIONS
L.603	SITE LANDSCAPE PLAN - SPECIFICATIONS

STRUCTURAL DRAWINGS:

S0.01	GENERAL STRUCTURAL NOTES
S0.02	GENERAL STRUCTURAL NOTES
S0.03	SPECIAL INSPECTION SCHEDULES
S2.01	LOAD MAPS
S2.10	FOUNDATION PLAN
S2.11	ROOF FRAMING PLAN
S3.00	TYPICAL CONCRETE SECTIONS
S4.00	TYPICAL MASONRY SECTIONS
S4.01	TYPICAL MASONRY SECTIONS
S6.00	TYPICAL STEEL DETAILS
S6.01	TYPICAL STEEL DETAILS
S7.00	SECTIONS AND DETAILS
S7.01	SECTIONS AND DETAILS

ARCHITECTURAL DRAWINGS:

A0.11	ARCHITECTURAL SITE PLAN
A0.12	DUMPSTER ENCLOSURE PLAN & DETAILS
A1.10	REMOVALS COMPOSITE PLAN
A1.11	REMOVALS FLOOR PLAN (AREA A)
A1.12	REMOVALS FLOOR PLAN (AREA B)
A1.13	REMOVALS CEILING PLAN (AREA A)
A1.14	REMOVALS CEILING PLAN (AREA B)
A1.15	REMOVALS ELEVATIONS
A1.16	REMOVALS ELEVATIONS

A2.10	COMPOSITE FLOOR PLAN
A2.11	FLOOR PLAN (AREA A)
A2.12	FLOOR PLAN (AREA B)
A2.13	DIMENSION PLAN (AREA A)
A2.14	DIMENSION PLAN (AREA B)
A2.50	COMPOSITE ROOF PLAN
A2.60	DOOR SCHEDULE
A2.61	DOOR SCHEDULE
A2.80	CABINET SCHEDULE/DETAILS
A3.00	EXTERIOR ELEVATIONS
A3.01	EXTERIOR ELEVATIONS
A3.02	EXTERIOR ELEVATIONS
A3.03	EXTERIOR ELEVATIONS

A3.50	BUILDING SECTIONS
A3.51	BUILDING SECTIONS
A3.52	BUILDING SECTIONS
A4.00	ENLARGED FLOOR PLANS (RESTROOMS)
A4.01	ENLARGED FLOOR PLANS
A5.00	INTERIOR ELEVATIONS
A5.01	INTERIOR ELEVATIONS
A5.02	INTERIOR ELEVATIONS
A5.03	INTERIOR ELEVATIONS

A6.10	COMPOSITE RCP
A8.10	COMPOSITE FINISH PLAN
A8.11	FINISH PLAN (AREA A)
A8.12	FINISH PLAN (AREA B)
A8.50	ROOM FINISH SCHEDULES
A8.51	MATERIAL SCHEDULE
A8.52	WALL AND FLOOR TILE DETAILS

A9.00	EXTERIOR WALL SECTIONS
A9.01	EXTERIOR WALL SECTIONS
A9.02	EXTERIOR WALL SECTIONS
A9.03	EXTERIOR WALL SECTIONS

A9.10	EXTERIOR DETAILS
A9.11	EXTERIOR DETAILS
A9.12	EXTERIOR DETAILS
A9.13	EXTERIOR DETAILS
A9.14	STANDARD EXTERIOR DETAILS

A9.50	INTERIOR WALL SECTIONS
A9.51	INTERIOR WALL SECTIONS
A9.52	INTERIOR WALL SECTIONS
A9.55	PORTAL WALL SECTIONS

A9.60	INTERIOR DETAILS
A9.61	INTERIOR DETAILS
A9.62	INTERIOR DETAILS

A9.65	PORTAL A DETAILS
A9.66	PORTAL B DETAILS

Addendum #3: 16 August 2023
Addendum #2: 15 August 2023
Bidding and Permits: 31 July 2023

Title Sheet

EHRESMAN ARCHITECTS
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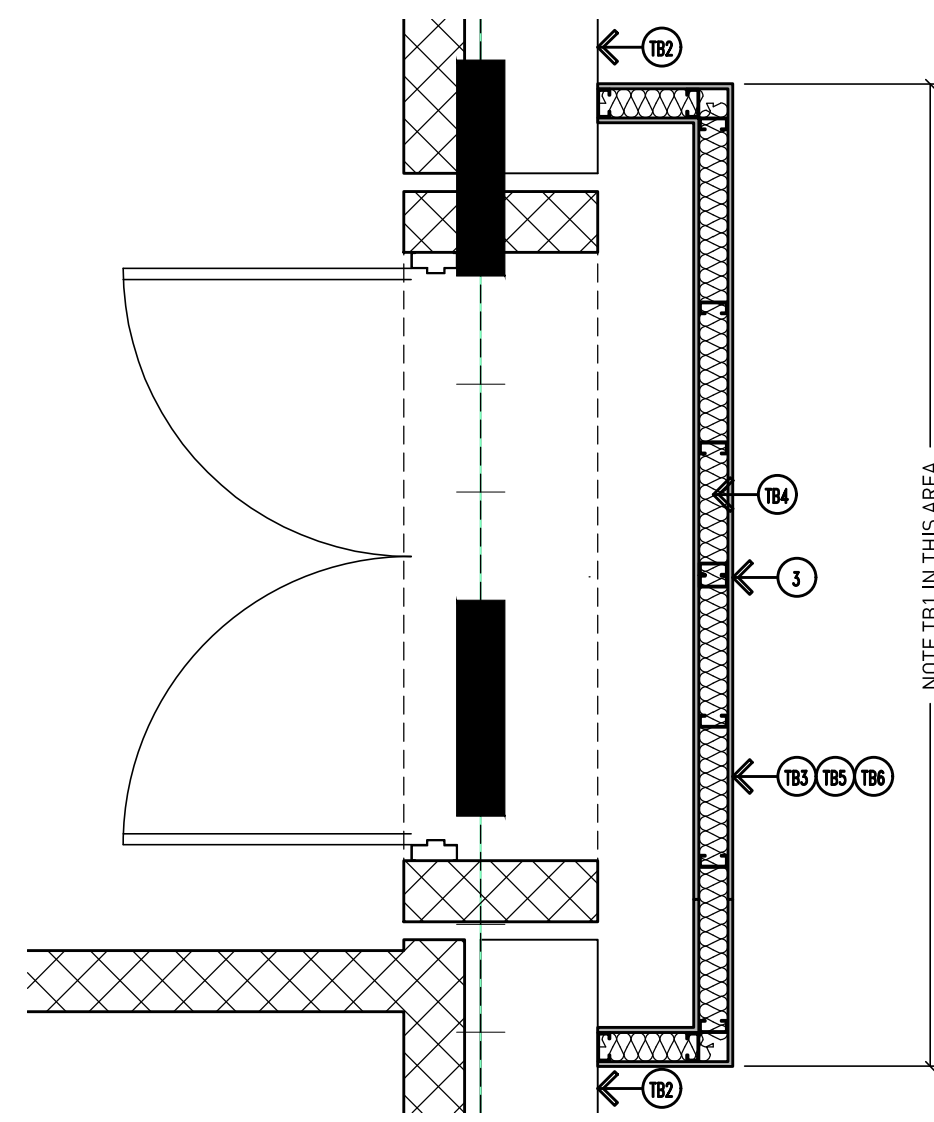
Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

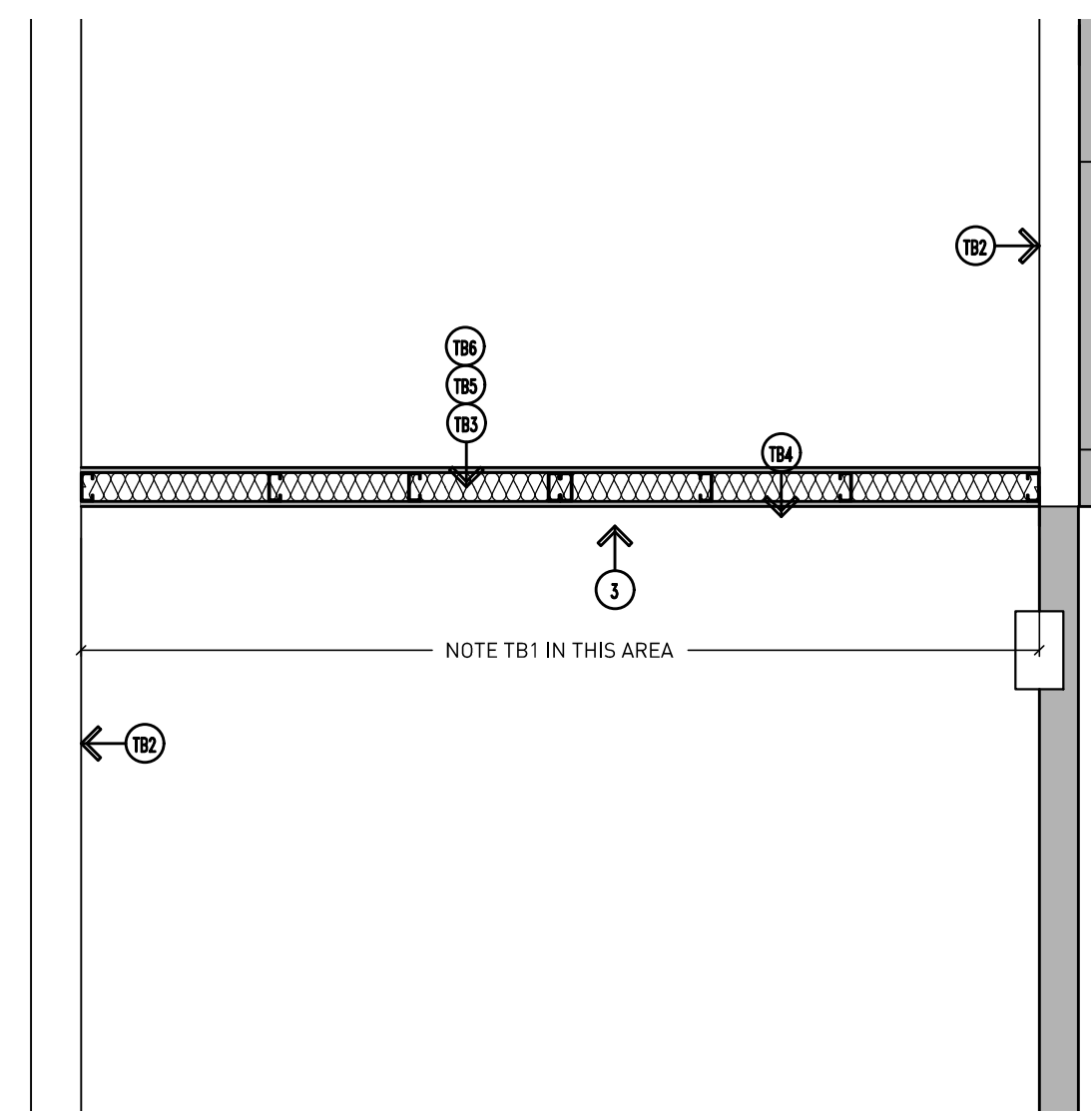
TTL

TEMPORARY BARRIER WALL NOTES:

- TB1. LOCATION OF ONE HOUR TEMPORARY CONSTRUCTION BARRIER-- CONTRACTOR TO COORDINATE EXACT SIZE AND LOCATION WITH CRESTWOOD SCHOOL DISTRICT ADMINISTRATION. PROVIDE ONE HOUR CONSTRUCTION BARRIER "LID/CEILING" AT +/- 9'-4" OR UNDERSIDE OF EXISTING CEILING. A.F.F. PAINT SIDE EXPOSED TO STUDENTS "FLAT BLACK".
- TB2. EXISTING WALL CONSTRUCTION TO REMAIN.
- TB3. GYPSUM BOARD 5/8" THICK, 4'-0" WIDE, ATTACHED TO STEEL STUDS, FLOOR AND CEILING TRACK WITH 1" LONG, TYPE "S" SELF-TAPPING STEEL SCREWS SPACED 8" O.C. ALONG EDGES OF BOARD AND 12" O.C. IN THE FIELD OF BOARD. JOINTS ORIENTED VERTICALLY AND STAGGERED ON OPPOSITE SIDES OF THE ASSEMBLY.
- TB4. BATTS AND BLANKETS: MINERAL WOOL OR GLASS FIBER BATTS COMPLETELY FILLING METAL STUD CAVITY.
- TB5. STEEL STUDS: CHANNEL SHAPED, 3/8" WIDE (MIN.), 1 1/4" LEGS, 3/8" FOLDED BACK RETURNS FORMED FROM NO. 25 MSQ (MIN.) GALVANIZED STEEL SPACED 24" O.C. MAXIMUM.
- TB6. JOINT TAPE AND COMPOUND: VINYL DRY OR PREMIXED JOINT COMPOUND, APPLIED IN TWO COATS TO JOINTS AND SCREW HEADS; PAPER TAPE, 2" WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.



2 Temporary Barrier
Scale: 1/2"=1'-0"



3 Temporary Barrier
Scale: 1/2"=1'-0"

GENERAL NOTES:

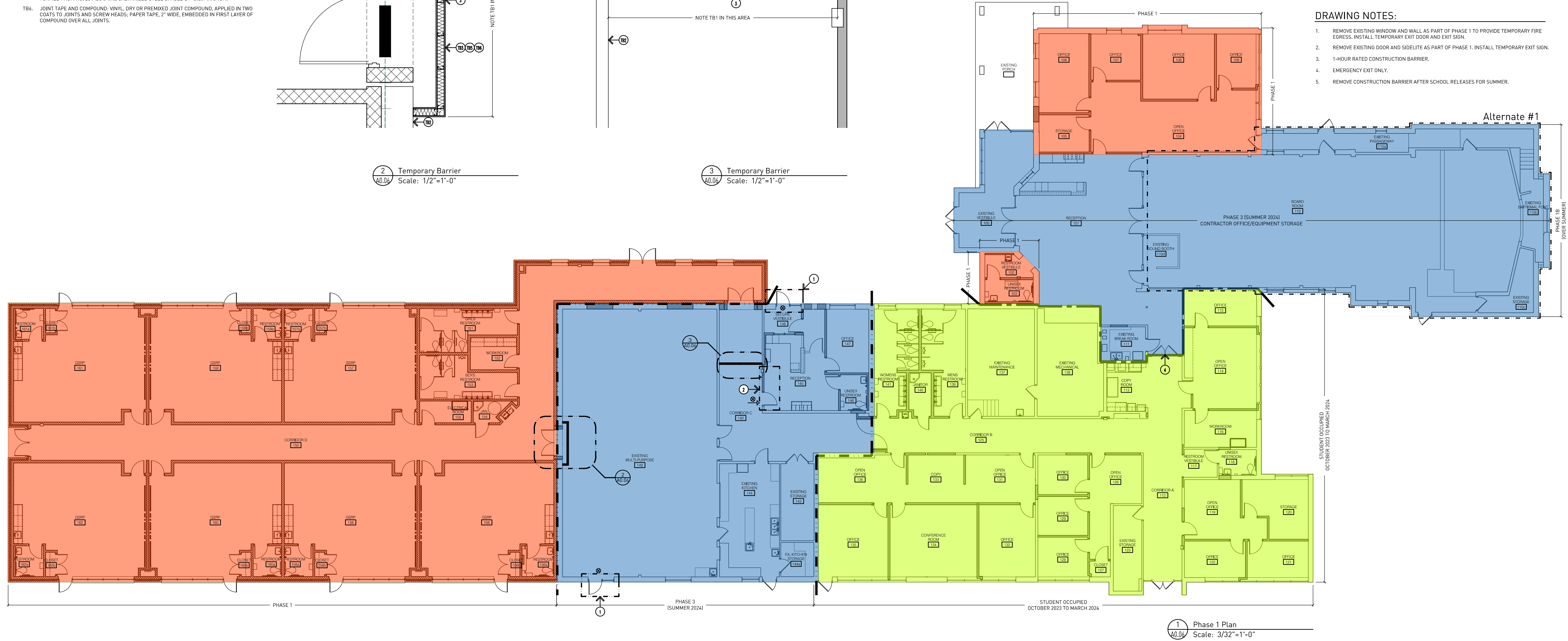
- G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.
- G2. PHASING PLAN ISSUED FOR REFERENCE ONLY.

LEGEND:

PHASE 1	ESTIMATED OCTOBER 2023 - MARCH 2024
PHASE 2	ESTIMATED APRIL 2024 - AUGUST 2024
PHASE 3	ESTIMATED JUNE 2024 - AUGUST 2024

DRAWING NOTES:

1. REMOVE EXISTING WINDOW AND WALL AS PART OF PHASE 1 TO PROVIDE TEMPORARY FIRE EGRESS. INSTALL TEMPORARY EXIT DOOR AND EXIT SIGN.
2. REMOVE EXISTING DOOR AND SIDELITE AS PART OF PHASE 1. INSTALL TEMPORARY EXIT SIGN.
3. 1-HOUR RATED CONSTRUCTION BARRIER.
4. EMERGENCY EXIT ONLY.
5. REMOVE CONSTRUCTION BARRIER AFTER SCHOOL RELEASES FOR SUMMER.



Addendum #3: 16 August 2023

Phase 1

EHRESMAN ARCHITECTS
ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

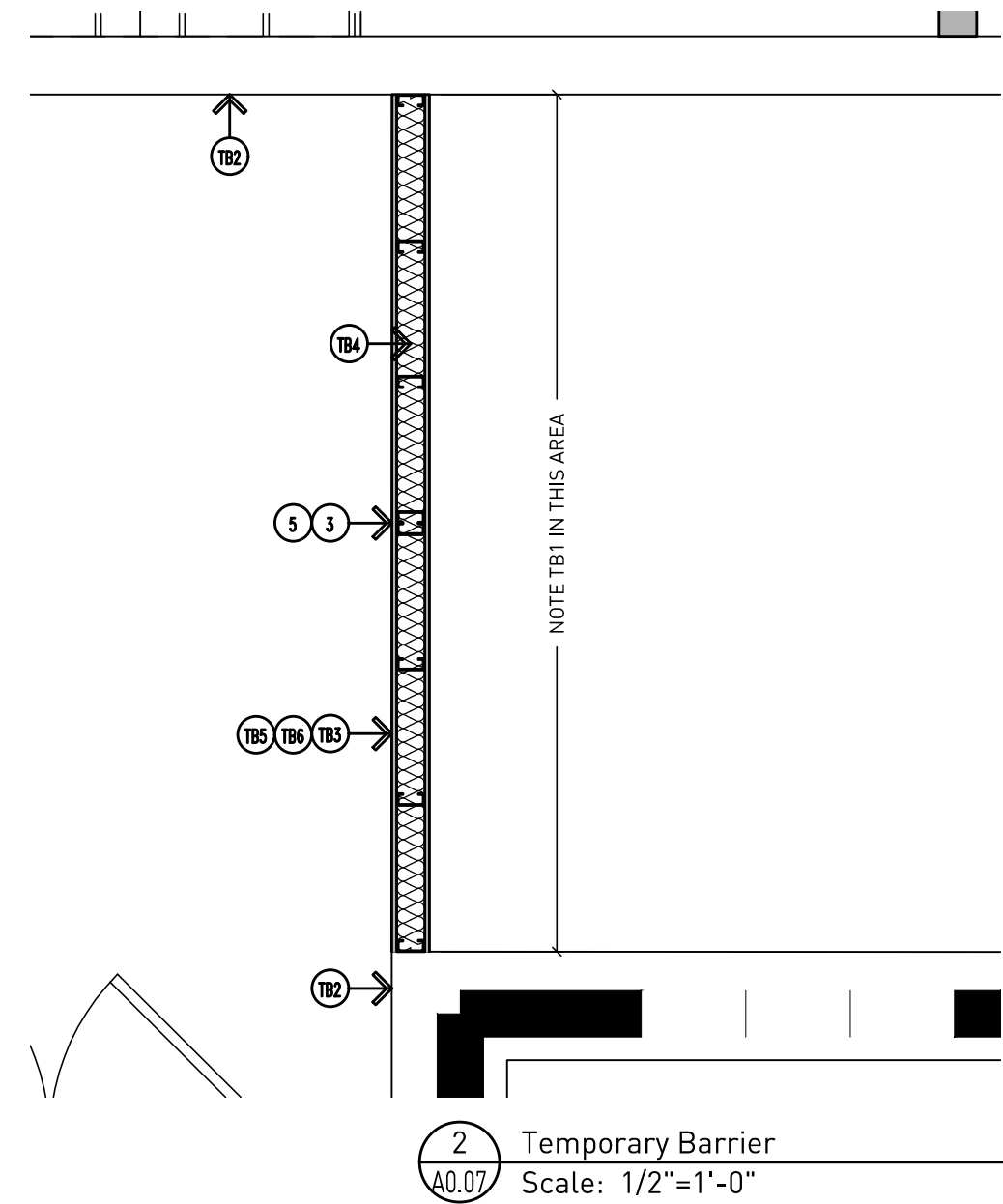
Project No. 3221

A0.06

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TEMPORARY BARRIER WALL NOTES:

- TB1. LOCATION OF ONE HOUR TEMPORARY CONSTRUCTION BARRIER-- CONTRACTOR TO COORDINATE EXACT SIZE AND LOCATION WITH CRESTWOOD SCHOOL DISTRICT ADMINISTRATION. PROVIDE ONE HOUR CONSTRUCTION BARRIER "LID/CEILING" AT +/-9'-6" OR UNDERSIDE OF EXISTING CEILING. A.F.F. PAINT SIDE EXPOSED TO STUDENTS "FLAT BLACK".
- TB2. EXISTING WALL CONSTRUCTION TO REMAIN.
- TB3. GYPSUM BOARD: 5/8" THICK, 4'-0" WIDE, ATTACHED TO STEEL STUDS, FLOOR AND CEILING TRACK WITH 1" LONG, TYPE "S" SELF-TAPPING STEEL SCREWS SPACED 8" O.C. ALONG EDGES OF BOARD AND 17" O.C. IN THE FIELD OF BOARD. JOINTS ORIENTED VERTICALLY AND STAGGERED ON OPPOSITE SIDES OF THE ASSEMBLY.
- TB4. BATTS AND BLANKETS: MINERAL WOOL OR GLASS FIBER BATTS COMPLETELY FILLING METAL STUD CAVITY.
- TB5. STEEL STUDS: CHANNEL SHAPED, 3 1/2" WIDE (MIN.), 1 1/2" LEGS, 2" FOLDED BACK RETURNS FORMED FROM NO. 25 MSG (MIN.) GALVANIZED STEEL SPACED 24" O.C. MAXIMUM.
- TB6. JOINT TAPE AND COMPOUND: VINYL DRY OR PREMIXED JOINT COMPOUND, APPLIED IN TWO COATS TO JOINTS AND SCREW HEADS; PAPER TAPE, 2" WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.



GENERAL NOTES:

- G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.
- G2. PHASING PLAN ISSUED FOR REFERENCE ONLY.

LEGEND:

PHASE 1	■	ESTIMATED OCTOBER 2023 - MARCH 2024
PHASE 2	■	ESTIMATED APRIL 2024 - AUGUST 2024
PHASE 3	■	ESTIMATED JUNE 2024 - AUGUST 2024

DRAWING NOTES:

1. REMOVE EXISTING WINDOW AND WALL AS PART OF PHASE 1 TO PROVIDE TEMPORARY FIRE EGRESS. INSTALL TEMPORARY EXIT DOOR AND EXIT SIGN.
2. REMOVE EXISTING DOOR AND SIDELITE AS PART OF PHASE 1. INSTALL TEMPORARY EXIT SIGN.
3. 1-HOUR RATED CONSTRUCTION BARRIER.
4. EMERGENCY EXIT ONLY.
5. REMOVE CONSTRUCTION BARRIER AFTER SCHOOL RELEASES FOR SUMMER.



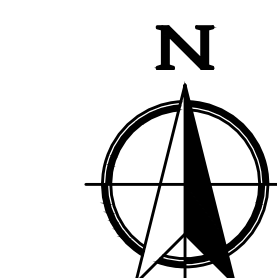
Addendum #3: 16 August 2023

Phase 2 & 3

EHRESMAN ARCHITECTS
ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221 A0.07



REMOVAL NOTES CONTINUED:

- R19. EXISTING CONCRETE SLAB.
- R20. EXISTING MIRROR.
- R21. EXISTING CHANGING TABLE.
- R22. EXISTING PAPER TOWEL DISPENSER.
- R23. EXISTING SOAP DISPENSER.
- R24. EXISTING SHELVING.
- R25. EXISTING HOOKS.
- R26. EXISTING HAND SANITIZER DISPENSER.
- R27. EXISTING CORK BOARD.
- R28. EXISTING ROOM SIGNS.
- R29. EXISTING FIRE EXTINGUISHER.
- R30. SAW CUT EXISTING CONCRETE FLOOR AS REQUIRED FOR NEW PLUMBING RUNS.
- R31. EXISTING WATER METER - REFER TO MECHANICAL.
- R32. EXISTING DOOR, FRAME AND SIDELITES, HARDWARE, ETC. COMPLETE.
- R33. MOVEABLE PARTITION WALL, TRACK, ETC. COMPLETE.
- R34. TSI MATERIALS - BY OWNER'S SEPARATE VENDOR
- R35. CARPET - BY OWNER'S SEPARATE VENDOR.
- R36. VCT - BY OWNER'S SEPARATE VENDOR.
- R37. SINK UNDERCOATING - BY OWNER'S SEPARATE VENDOR.
- R38. DOOR, FRAME - BY OWNER'S SEPARATE VENDOR.

GENERAL REMOVAL NOTES:

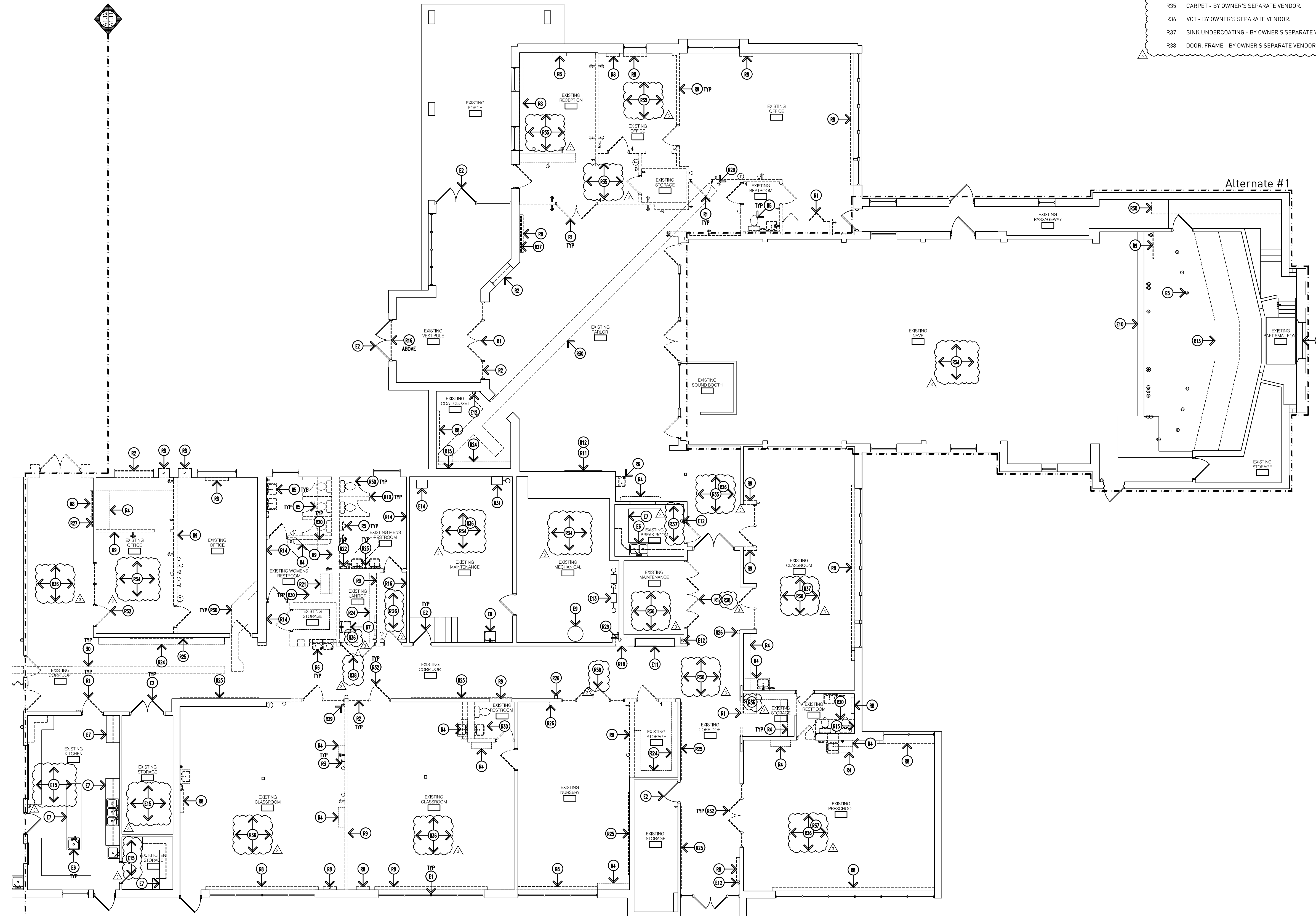
- G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.
- G2. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ON THE WORK.
- G3. PROTECT ALL EXISTING ITEMS TO REMAIN FROM CONSTRUCTION OPERATIONS SO AS TO NOT CAUSE DAMAGE.
- G4. ALL AREAS DISTURBED OR DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE PATCHED, REPAIRED AND FINISHED BACK TO EXISTING CONDITION.
- G5. CONTRACTOR TO COORDINATE BUILDING ACCESS, CONSTRUCTION ACCESS, ETC. WITH THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCING ON THE WORK.
- G6. CONFORM TO ALL MICHIGAN BARRIER FREE REQUIREMENTS.
- G7. CONTRACTOR TO RECONNECT ANY WIRING THAT IS NEEDED TO MAINTAIN OPERATION OF OUTLETS, LIGHTS, ETC. THAT ARE CONNECTED TO FIXTURES OR DEVICES TO BE REMOVED.
- G8. ELECTRICAL (OUTLETS, ETC.) TO REMAIN, UNLESS OTHERWISE NOTED. TERMINATE WIRES AS REQUIRED IN A CONCEALED LOCATION OR REMOVE BACK TO NEAREST JUNCTION BOX.
- G9. ALL WALLS, DOORS, WINDOWS, PLUMBING FIXTURES, PIPING, ETC. ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
- G10. DISPOSE OF ALL ITEMS REMOVED OFF SITE PER LOCAL BUILDING AND SAFETY ORDINANCES. ANY ITEM REQUESTED BY CRESTWOOD TO BE SALVAGED SHALL BE RETURNED TO OWNER.
- G11. DO NOT DISTURB EXISTING UTILITIES TO REMAIN. USE EVERY PRECAUTION TO ENSURE SAFE REMOVAL WORK. INSPECT EXISTING WORK FOR POSSIBLE UNUSUAL CONDITIONS.
- G12. COORDINATE ALL REMOVAL WORK (ARCHITECTURAL REMOVAL WORK, ELECTRICAL REMOVAL WORK, MECHANICAL REMOVAL WORK, ETC.)
- G13. RELOCATE, REMOVE AND REPLACE OR RE-SUPPORT ANY MECHANICAL OR ELECTRICAL ITEMS IN THE WAY OF NEW CONSTRUCTION OPERATIONS.
- G14. REMOVE ALL ELECTRICAL DEVICES ON WALLS TO BE DEMOLISHED (LIGHTING, POWER, FIRE ALARM, PIA, ETC.) INCLUDING CEILING MOUNTED LIGHTING. REMOVE LIGHT CONTROLS AND MAINTAIN BRANCH CIRCUIT SERVING LIGHTING FOR RECONNECTION TO NEW LIGHTING. ANY DEVICE LOCATED ON WALL NOT TO BE DEMOLISHED IS TO REMAIN (WALLS TO BE DEMOLISHED ARE SHOWN DASHED). REFER TO FLOOR PLANS FOR EXTENT OF WORK.
- G15. REMOVE LIGHT FIXTURES AND CONTROLS. MAINTAIN BRANCH CIRCUIT FOR REUSE.
- G16. REMOVE EXISTING FIRE ALARM SYSTEM COMPLETE (DEVICES AND WIRING). ALL FIRE ALARM DEVICES AND WIRING INDICATED OR NOT INDICATED TO BE REMOVED.
- G17. NOT ALL NOTES MAY APPLY TO THIS SHEET.

EXISTING TO REMAIN:

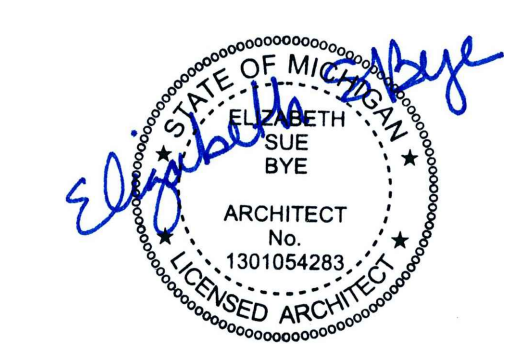
- E1. WINDOW SYSTEM.
- E2. DOOR.
- E3. FIRE ALARM.
- E4. SPEAKER.
- E5. ELECTRICAL DEVICES, CONDUIT, AND WIRING.
- E6. KITCHEN SINK.
- E7. CASEWORK.
- E8. JANITORS SINK.
- E9. HOT WATER TANK.
- E10. PLATFORM.
- E11. EXISTING DISPLAY CASE.
- E12. EXISTING FIRE EXTINGUISHER.
- E13. EXISTING GAS METER.
- E14. EXISTING WATER METER.
- E15. NO WORK THIS AREA, EXISTING FLOOR, SINK UNDERCOATING, AND TSI MATERIALS TO REMAIN.

REMOVAL NOTES:

- R1. EXISTING DOOR, FRAME, HARDWARE, ETC. COMPLETE.
- R2. EXISTING WINDOW SYSTEM, GLAZING, ETC. COMPLETE.
- R3. EXISTING ELECTRICAL EQUIPMENT -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- R4. EXISTING MILLWORK - COUNTER OR STORAGE CABINET.
- R5. EXISTING PLUMBING FIXTURES (TOILET, SINK, ETC.).
- R6. EXISTING DRINKING FOUNTAIN. LOCATION SHOWN FOR REFERENCE ONLY C.F.V.
- R7. EXISTING JANITORS SINK.
- R8. EXISTING HVAC -- REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
- R9. EXISTING WALL.
- R10. EXISTING TOILET PARTITION.
- R11. EXISTING MARBLE HEARTH AND SURROUND, MANTEL TO REMAIN.
- R12. EXISTING BRASS INSERT.
- R13. EXISTING RISERS.
- R14. REMOVE GYPSUM BOARD/PLASTER BELOW 6" AFF ON EXISTING WALLS TO REMAIN FOR INSTALLATION OF CEMENT BOARD.
- R15. REMOVE GYPSUM BOARD/PLASTER BELOW 6" AFF ON EXISTING WALLS TO REMAIN FOR INSTALLATION OF CEMENT BOARD.
- R16. REMOVE STAINED GLASS AND FRAME.
- R17. REMOVE STAINED GLASS AND REPLACE WITH CLEAR GLASS.
- R18. EXISTING PHONE SHELF.



1 Removals Floor Plan (Area A)
Scale: 1/8"=1'-0"



Addendum #3: 16 August 2023
Bidding and Permits: 31 July 2023

Removals Floor Plan (Area A)



Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A1.11



REMOVAL NOTES CONTINUED:

- R19. EXISTING CONCRETE SLAB.
- R20. EXISTING MIRROR.
- R21. EXISTING CHANGING TABLE.
- R22. EXISTING PAPER TOWEL DISPENSER.
- R23. EXISTING SOAP DISPENSER.
- R24. EXISTING SHELVING.
- R25. EXISTING HOOKS.
- R26. EXISTING HAND SANITIZER DISPENSER.
- R27. EXISTING CORK BOARD.
- R28. EXISTING ROOM SIGNS.
- R29. EXISTING FIRE EXTINGUISHER.
- R30. SAW CUT EXISTING CONCRETE FLOOR AS REQUIRED FOR NEW PLUMBING RUNS.
- R31. EXISTING WATER METER - REFER TO MECHANICAL.
- R32. EXISTING DOOR, FRAME AND SIDELITES, HARDWARE, ETC. COMPLETE.
- R33. MOVEABLE PARTITION WALL, TRACK, ETC. COMPLETE.
- R34. TSI MATERIALS - BY OWNER'S SEPARATE VENDOR.
- R35. CARPET - BY OWNER'S SEPARATE VENDOR.
- R36. VCT - BY OWNER'S SEPARATE VENDOR.
- R37. SINK UNDERCOATING - BY OWNER'S SEPARATE VENDOR.
- R38. DOOR, FRAME - BY OWNER'S SEPARATE VENDOR.

GENERAL REMOVAL NOTES:

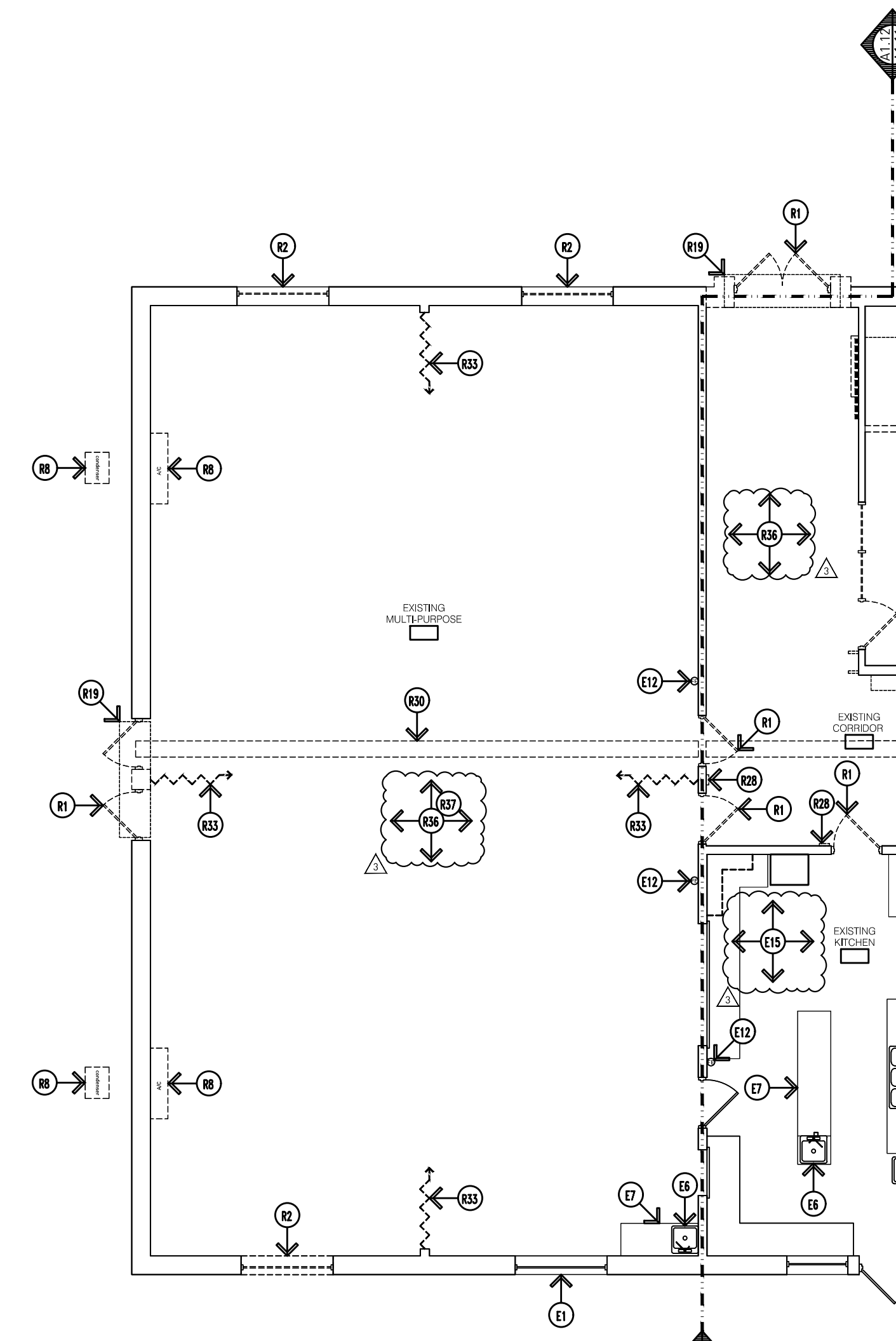
- G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.
- G2. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ON THE WORK.
- G3. PROTECT ALL EXISTING ITEMS TO REMAIN FROM CONSTRUCTION OPERATIONS SO AS TO NOT CAUSE DAMAGE.
- G4. ALL AREAS DISTURBED OR DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE PATCHED, REPAIRED AND FINISHED BACK TO EXISTING CONDITION.
- G5. CONTRACTOR TO COORDINATED BUILDING ACCESS, CONSTRUCTION ACCESS, ETC. WITH THE OWNERS REPRESENTATIVE PRIOR TO COMMENCING ON THE WORK.
- G6. CONFORM TO ALL MICHIGAN BARRIER FREE REQUIREMENTS.
- G7. CONTRACTOR TO RECONNECT ANY WIRING THAT IS NEEDED TO MAINTAIN OPERATION OF OUTLETS, LIGHTS, ETC. THAT ARE CONNECTED TO FIXTURES OR DEVICES TO BE REMOVED.
- G8. ELECTRICAL (OUTLETS, ETC.) TO REMAIN, UNLESS OTHERWISE NOTED. TERMINATE WIRES AS REQUIRED IN A CONCEALED LOCATION OR REMOVE BACK TO NEAREST JUNCTION BOX.
- G9. ALL WALLS, DOORS, WINDOWS, PLUMBING FIXTURES, PIPING, ETC. ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
- G10. DISPOSE OF ALL ITEMS REMOVED OFF SITE PER LOCAL BUILDING AND SAFETY ORDINANCES. ANY ITEM REQUESTED BY CRESTWOOD TO BE SALVAGED SHALL BE RETURNED TO OWNER.
- G11. DO NOT DISTURB EXISTING UTILITIES TO REMAIN. USE EVERY PRECAUTION TO ENSURE SAFE REMOVAL WORK. INSPECT EXISTING WORK FOR POSSIBLE UNUSUAL CONDITIONS.
- G12. COORDINATE ALL REMOVAL WORK (ARCHITECTURAL REMOVAL WORK, ELECTRICAL REMOVAL WORK, MECHANICAL REMOVAL WORK, ETC.)
- G13. RELOCATE, REMOVE AND REPLACE OR RE-SUPPORT ANY MECHANICAL OR ELECTRICAL ITEMS IN THE WAY OF NEW CONSTRUCTION OPERATIONS.
- G14. REMOVE ALL ELECTRICAL DEVICES ON WALLS TO BE DEMOLISHED LIGHTING, POWER, FIRE ALARM, P/A ETC.) INCLUDING CEILING MOUNTED LIGHTING. REMOVE LIGHT CONTROLS AND MAINTAIN BRANCH CIRCUIT SERVING LIGHTING FOR RECONNECTION TO NEW LIGHTING. ANY DEVICE LOCATED ON WALL NOT TO BE DEMOLISHED IS TO REMAIN (WALLS TO BE DEMOLISHED ARE SHOWN DASHED). REFER TO FLOOR PLANS FOR EXTENT OF WORK.
- G15. REMOVE LIGHT FIXTURES AND CONTROLS. MAINTAIN BRANCH CIRCUIT FOR REUSE.
- G16. REMOVE EXISTING FIRE ALARM SYSTEM COMPLETE (DEVICES AND WIRING). ALL FIRE ALARM DEVICES AND WIRING INDICATED OR NOT INDICATED TO BE REMOVED.
- G17. NOT ALL NOTES MAY APPLY TO THIS SHEET.

EXISTING TO REMAIN:

- E1. WINDOW SYSTEM.
- E2. DOOR.
- E3. FIRE ALARM.
- E4. SPEAKER.
- E5. ELECTRICAL DEVICES, CONDUIT, AND WIRING.
- E6. KITCHEN SINK.
- E7. CASEWORK.
- E8. JANITORS SINK.
- E9. HOT WATER TANK.
- E10. PLATFORM.
- E11. EXISTING DISPLAY CASE.
- E12. EXISTING FIRE EXTINGUISHER.
- E13. EXISTING GAS METER.
- E14. EXISTING WATER METER.
- E15. NO WORK THIS AREA, EXISTING FLOOR, SINK UNDERCOATING, AND TSI MATERIALS TO REMAIN.

REMOVAL NOTES:

- R1. EXISTING DOOR, FRAME, HARDWARE, ETC. COMPLETE.
- R2. EXISTING WINDOW SYSTEM, GLAZING, ETC. COMPLETE.
- R3. EXISTING ELECTRICAL EQUIPMENT -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.
- R4. EXISTING MILLWORK - COUNTER OR STORAGE CABINET.
- R5. EXISTING PLUMBING FIXTURES (TOILET, SINK, ETC.).
- R6. EXISTING DRINKING FOUNTAIN. LOCATION SHOWN FOR REFERENCE ONLY C.F.V.
- R7. EXISTING JANITORS SINK.
- R8. EXISTING HVAC -- REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
- R9. EXISTING WALL.
- R10. EXISTING TOILET PARTITION.
- R11. EXISTING MARBLE HEARTH AND SURROUND, MANTEL TO REMAIN.
- R12. EXISTING BRASS INSERT.
- R13. EXISTING RISERS.
- R14. REMOVE GYPSUM BOARD/PLASTER BELOW 6" AFF ON EXISTING WALLS TO REMAIN FOR INSTALLATION OF CEMENT BOARD.
- R15. REMOVE GYPSUM BOARD/PLASTER BELOW 6" AFF ON EXISTING WALLS TO REMAIN FOR INSTALLATION OF CEMENT BOARD.
- R16. REMOVE STAINED GLASS AND FRAME.
- R17. REMOVE STAINED GLASS AND REPLACE WITH CLEAR GLASS.
- R18. EXISTING PHONE SHELF.



1 Removals Floor Plan (Area B)
A1.12 Scale: 1/8"=1'-0"



Addendum #2: 16 August 2023
Bidding and Permits: 31 July 2023

Removals Floor Plan (Area B)



Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A1.12

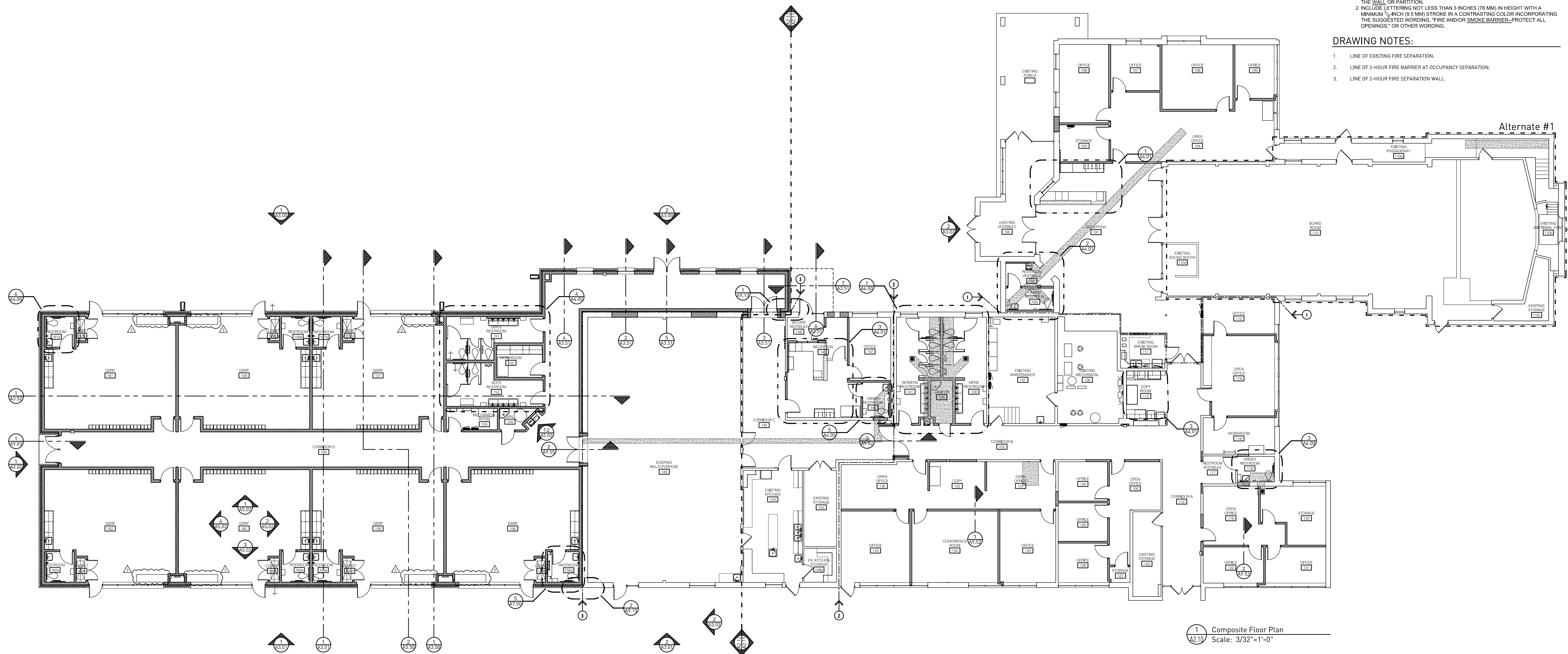


GENERAL NOTES:

- G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.
- G2. COMPOSITE PLAN ISSUED FOR REFERENCE ONLY.
- G3. REFER TO SHEETS A2.11 AND A2.12 FOR FURTHER INFORMATION.
- G3. PER SECTION 703.7 MARKING AND IDENTIFICATION OF THE 2015 MICHIGAN BUILDING CODE, WHERE THERE IS AN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR ATTIC SPACE, FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING IN THE CONCEALED SPACE. SUCH IDENTIFICATION SHALL:
 - 1. BE LOCATED WITHIN 15 FEET (4572 MM) OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30 FEET (9144 MM) MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION.
 - 2. INCLUDE LETTERING NOT LESS THAN 3 INCHES (76 MM) IN HEIGHT WITH A MINIMUM 1/8-INCH (3.18 MM) STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORDING: "FIRE AND/OR SMOKE BARRIER-PROTECT ALL OPENINGS," OR OTHER WORDING.

DRAWING NOTES:

- 1. LINE OF EXISTING FIRE SEPARATION.
- 2. LINE OF 2-HOUR FIRE BARRIER AT OCCUPANCY SEPARATION.
- 3. LINE OF 2-HOUR FIRE SEPARATION WALL.



▲ Addendum #3: 16 August 2023
Bidding and Permits: 31 July 2023

Composite Floor Plan
EHRESMAN ARCHITECTS
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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A2.10



INTERIOR WALL TAGS:

- IW1. METAL FURRING WALL IN RESTROOM
 - EXISTING WALL CONSTRUCTION OR 7 5/8" CMU.
 - 4" METAL STUD FRAMING AT 16" O.C. TO 4" ABOVE CEILING.
 - 5/8" CEMENTITIOUS BACKER BOARD.
 - WATERPROOF MEMBRANE (ANSI A118.10).
 - BOND COAT - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
 - CERAMIC WALL TILE
- REFER TO A8.52 FOR TILE HEIGHTS AND DETAILS.
- IW2. METAL FURRING WALL AT WATER COOLER
 - EXISTING WALL CONSTRUCTION
 - 3" Z CHANNEL AT 16" O.C. TO 4" ABOVE CEILING.
 - 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO 4" ABOVE CEILING.
- IW3. METAL STUD FIRE BARRIER, 2 HOUR FIRE-RATED CONSTRUCTION. UL DES U419 OR U491.
 - 3/4" SHEETROCK ULTRACODE CORE GYPSUM PANEL TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK OR ADJACENT CMU WALL.
 - 3-1/2" 25 GA. METAL STUD FRAMING AT 24" O.C. TO U/S OF ROOF DECK OR ADJACENT CMU WALL. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
 - MINIMUM 3" THERMAFIBER SAFB TO U/S OF ROOF DECK.
 - 3/4" SHEETROCK ULTRACODE CORE GYPSUM PANEL TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK OR ADJACENT CMU WALL.
- IW10. MASONRY WALL
 - 7 5/8" CMU WALL.
- IW11. MASONRY WALL
 - 5 5/8" CMU WALL.
- IW1. TYPICAL METAL STUD WALL CONSTRUCTION UNLESS NOTED OTHERWISE
 - 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
 - 3-5/8" METAL STUD FRAMING AT 16" O.C. TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
 - MINIMUM 5" SOUND ATTENUATION BATTIS TO U/S OF ROOF DECK.
 - 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
- IW2. METAL STUD SOUND ACOUSTIC WALL - TEST NUMBER RAL-TL-84-136
 - 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK. GYPSUM SCREWS ATTACHED TO STUDS.
 - 3-5/8" METAL STUD FRAMING AT 16" O.C. TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
 - MINIMUM 5" SOUND ATTENUATION BATTIS TO U/S OF ROOF DECK.
 - RC-1 CHANNEL INSTALLED ON ONE SIDE @ 24" O.C.
 - TWO (2) LAYERS 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO UNDERSIDE OF ROOF DECK. GYPSUM SCREWS ATTACHED TO RC-1 CHANNEL.
 - ACOUSTIC SEALANT AT TOP AND BOTTOM OF WALLS AND AT ALL PENETRATIONS.
- FOR WALLS LOCATED AT RESTROOMS, REFER TO ADJACENT WALL CONSTRUCTION TYPE FOR TILE WALL CONSTRUCTION.
- IW3. METAL STUD SECURE VESTIBULE WALL
 - 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
 - 3-5/8" METAL STUD FRAMING AT 16" O.C. TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
 - MINIMUM 5" SOUND ATTENUATION BATTIS TO U/S OF ROOF DECK.
 - 5/16" BULLET RESISTANT FIBERGLASS PANEL.
 - 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
- IW4. METAL STUD WET WALL WITH CERAMIC TILE ON BOTH SIDES
 - CERAMIC WALL TILE TO 6'-9" AFF - REFER TO A8.52
 - BOND COAT TO 6'-9" AFF - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
 - WATERPROOF MEMBRANE (ANSI A118.10) TO 6'-9" AFF
 - 5/8" CEMENTITIOUS BACKER BOARD TO 6'-8" AFF
 - 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS FROM 6'-8 1/2" AFF TO U/S OF ROOF DECK.
 - 6" METAL STUD FRAMING AT 16" O.C. TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
 - 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS FROM 6'-8 1/2" AFF TO U/S OF ROOF DECK.
 - 5/8" CEMENTITIOUS BACKER BOARD TO 6'-8" AFF
 - WATERPROOF MEMBRANE (ANSI A118.10) TO 6'-9" AFF
 - BOND COAT TO 6'-9" AFF - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
 - CERAMIC WALL TILE TO 6'-9" AFF - REFER TO A8.52
- IW5. METAL STUD COMMON WALL BETWEEN JANITOR CLOSET AND WET WALL WITH CERAMIC TILE
 - 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
 - 6" METAL STUD FRAMING AT 16" O.C. TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
 - 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS FROM 6'-8 1/2" AFF TO U/S OF ROOF DECK.
 - 5/8" CEMENTITIOUS BACKER BOARD TO 6'-8" AFF
 - WATERPROOF MEMBRANE (ANSI A118.10) TO 6'-9" AFF
 - BOND COAT TO 6'-9" AFF - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
 - CERAMIC WALL TILE TO 6'-9" AFF - REFER TO A8.52
- IW6. EXISTING WALL CONSTRUCTION WITH CERAMIC TILE
 - EXISTING WALL CONSTRUCTION
 - 5/8" CEMENTITIOUS BACKER BOARD
 - WATERPROOF MEMBRANE (ANSI A118.10)
 - BOND COAT - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
 - CERAMIC WALL TILE
- REFER TO A8.52 FOR TILE HEIGHTS AND DETAILS.

GENERAL NOTES:

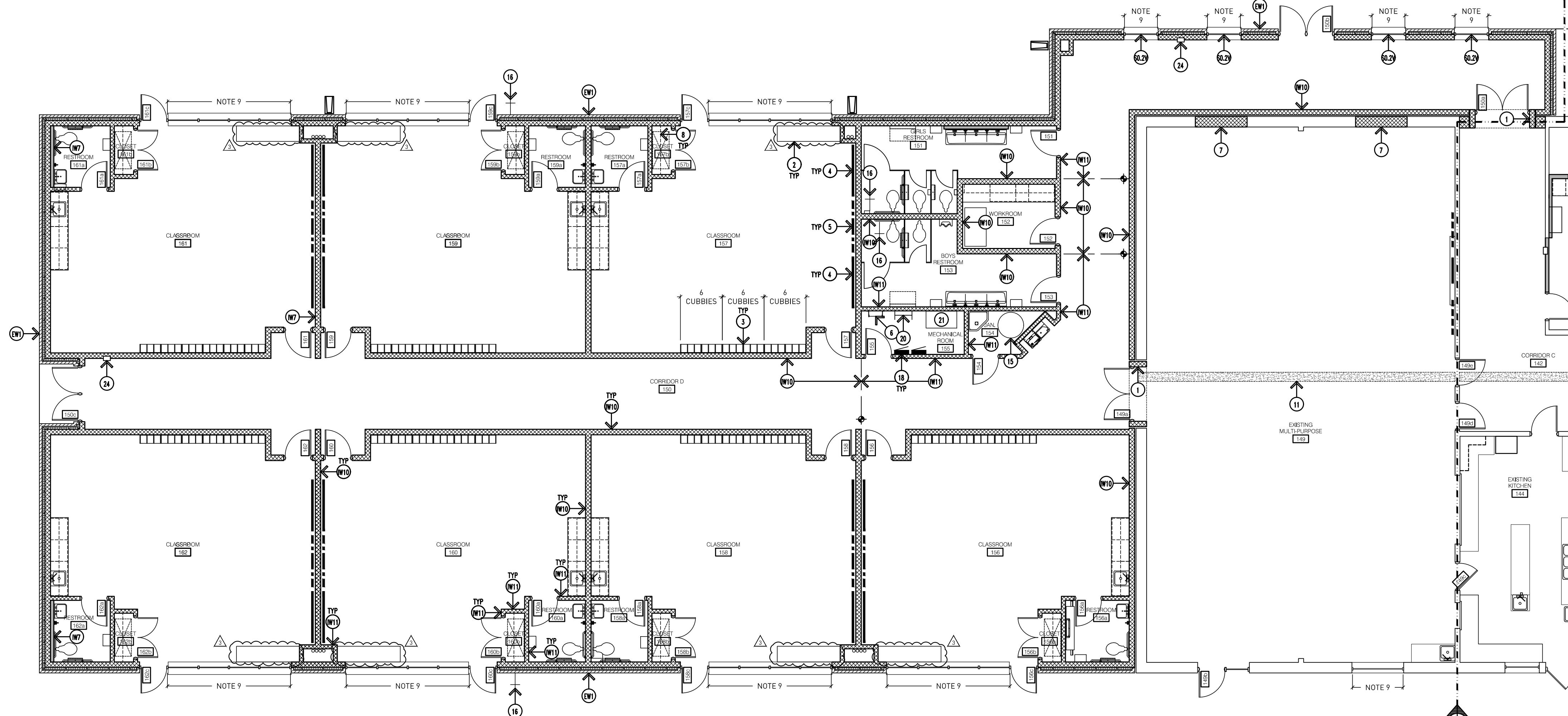
1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.
2. COORDINATE THE TIMING OF WORK TO AVOID CONFLICTS WITH NORMAL SCHOOL OPERATIONS AND ACTIVITIES.
3. CONTRACTOR TO KEEP ALL AREAS NOT AFFECTED BY CONSTRUCTION OPERATIONS OPEN, CLEAN, AND FREE FOR OWNER USE.
4. CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS IN FIELD PRIOR TO WORK COMMENCEMENT. IF ANY DISCREPANCIES EXIST BETWEEN PLAN DIMENSIONS AND ACTUAL FIELD CONDITIONS, NOTIFY THE ARCHITECT.
5. ALL MASONRY TO MATCH EXISTING COURSE EXACTLY. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS PRIOR TO WORK.
6. CONTRACTOR SHALL INSTALL HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.
7. CONTRACTOR TO INSTALL ADJUSTABLE BRICK VENEER ANCHORS @ 16" O.C. VERTICALLY AND HORIZONTALLY. FIELD VERIFY CAVITY SIZE TO PROVIDE CORRECT ANCHOR.
8. CONTRACTOR SHALL INSTALL A CONTINUOUS VAPOR BARRIER FROM FOUNDATION TO ROOFING. REFER TO SPECIFICATION FOR FURTHER INFORMATION.
9. ALL OUTSIDE CORNERS OF INTERIOR CMU MASONRY TO BE BULLNOSE.
10. ALL CORRIDOR WALLS TO BE CONSTRUCTED TO RESIST THE PASSAGE OF SMOKE.
11. FIRE STOP ANY PENETRATIONS THROUGH FIRE WALLS AND BARRIERS.
12. MASONRY CONTROL JOINTS SHOULD BE SPACED 25'-0" APART MAX. AND SHOULD NOT BE SPACED FURTHER THAN 15x THE WALL HEIGHT - REFER TO THE MASONRY INSTITUTE FOR FURTHER INFORMATION.
13. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO COMMENCING THE WORK.
14. ALL INTERIOR WALLS TO BE CONSTRUCTED TO UNDERSIDE OF ROOF DECK. PROVIDE COMPRESSIVE FIRE SAFE MATERIAL (FIRE-RATED TO MEET CODE, AS REQUIRED) AT TOP OF WALL TO ALLOW FOR MINIMUM 1" ROOF DEFLECTION.
15. PROVIDE NON-COM WOOD BLOCKING AS REQUIRED TO INSTALL MISC. ACCESSORIES, IFP'S, MARKER BOARDS ETC WHETHER INDICATED OR NOT. VERIFY ALL LOCATIONS WITH OWNER AT A PRE-CONSTRUCTION MEETING.
16. CONTRACTOR TO COORDINATE CONDUIT RUNS AND TERMINATIONS ASSOCIATED WITH LOW-VOLTAGE COMMUNICATIONS, FIRE ALARM, SECURITY, ETC. AT A PRE-CONSTRUCTION MEETING.
17. ALL WALLS TO BE PAINTED UNLESS NOTED OTHERWISE.
18. PATCH AND REPAIR ALL EXPOSED SURFACES, WHETHER NOTED OR NOT, AT REMOVED ITEMS, REMOVED EQUIPMENT, REMOVED WALLS, CONSTRUCTION DAMAGE, ETC.

DRAWING NOTES:

1. PORTAL WALL SYSTEM PROVIDE MINIMUM 1" GAP AT ALL SIDES.
2. UNIT VENTILATOR. REFER TO MECHANICAL DRAWINGS.
3. PLASTIC LAMINATE CUBBIES. REFER TO INTERIOR ELEVATIONS AND SPECIFICATIONS.
4. VISUAL DISPLAY BOARD. REFER TO SPECIFICATIONS.
5. INTERACTIVE FLAT PANEL. FURNISHED AND INSTALLED BY TECHNOLOGY VENDOR.
6. WALL MOUNTED ROOF LADDER.
7. INFILL EXISTING EXTERIOR WALL OPENING. TOOTH IN EXTERIOR MASONRY AS REQUIRED TO MATCH ADJACENT WALL EXACTLY. PROVIDE INTERIOR FINISH TO MATCH EXISTING.
8. INSTALL TWO FIXED AND PAINTED SHELVES IN CLOSET, 63"-6" AND 5'-0" AFF.
9. SINGLE ROLLER WINDOW SHADE, ROOM DARKENING. REFER TO MATERIAL SCHEDULE AND SPECIFICATIONS.
10. SINGLE ROLLER WINDOW SHADE, 5% OPEN - REFER TO MATERIAL SCHEDULE AND SPECIFICATIONS.
11. TRENCH INFILL, MIN 4" THICK CONCRETE FLOOR SLAB ON 15 ML VAPOR BARRIER. TOP OF NEW CONCRETE TO BE FLUSH WITH EXISTING ADJACENT SLAB EXACTLY.
12. BOILER - REFER TO MECHANICAL.
13. WATER METER - REFER TO MECHANICAL.
14. FLOOR DRAIN - REFER TO MECHANICAL.
15. HOT WATER TANK - REFER TO MECHANICAL.
16. LOCKABLE HOSE BIB - REFER TO MECHANICAL.
17. MSB - REFER TO ELECTRICAL.
18. ELECTRICAL PANEL - REFER TO ELECTRICAL.
19. TMBD - REFER TO ELECTRICAL AND TECHNOLOGY.
20. TGB - REFER TO ELECTRICAL AND TECHNOLOGY.
21. DATA RACK - REFER TO TECHNOLOGY.
22. FIRE ALARM PANEL - REFER TO ELECTRICAL.
23. GROUNDING BAR - REFER TO ELECTRICAL.
24. SEMI-RECESSED FIRE EXTINGUISHER CABINET WITH FIRE EXTINGUISHER.
25. EXISTING GAS METER.
26. INFILL INTERIOR WALL OPENING AS REQUIRED TO PROVIDE FLUSH APPEARANCE.
27. FIREPLACE DESIGN INTENT. PATCH AND REPAIR SURFACES AFTER REMOVAL OF MARBLE SURROUND AND BRASS INSERT. PAINT SURROUND AND FIREBOX FOR FINISHED APPEARANCE.
28. CLEAN, PATCH AND REPAIR LIMESTONE/BRICK AT REMOVED OR REPLACED EXTERIOR LIGHT FIXTURES.

EXTERIOR WALL TAGS:

- EW1.
 - 7 5/8" CMU MASONRY (PAINT ALL SURFACES EXPOSED TO VIEW).
 - 3" SPRAY FOAM BUILDING INSULATION OVER CONTINUOUS VAPOR BARRIER.
 - 1 1/4" SPACE.
 - 3 5/8" BRICK VENEER WITH ADJACENT BRICK TIES @ 16" O.C. VERTICALLY AND HORIZONTALLY (PROVIDE LENGTH AS REQUIRED DUE TO WALL CAVITY SIZE).



1 Floor Plan (Area B)
Scale: 1/8"=1'-0"



Addendum #3: 16 August 2023
Bidding and Permits: 31 July 2023

Floor Plan (Area B)

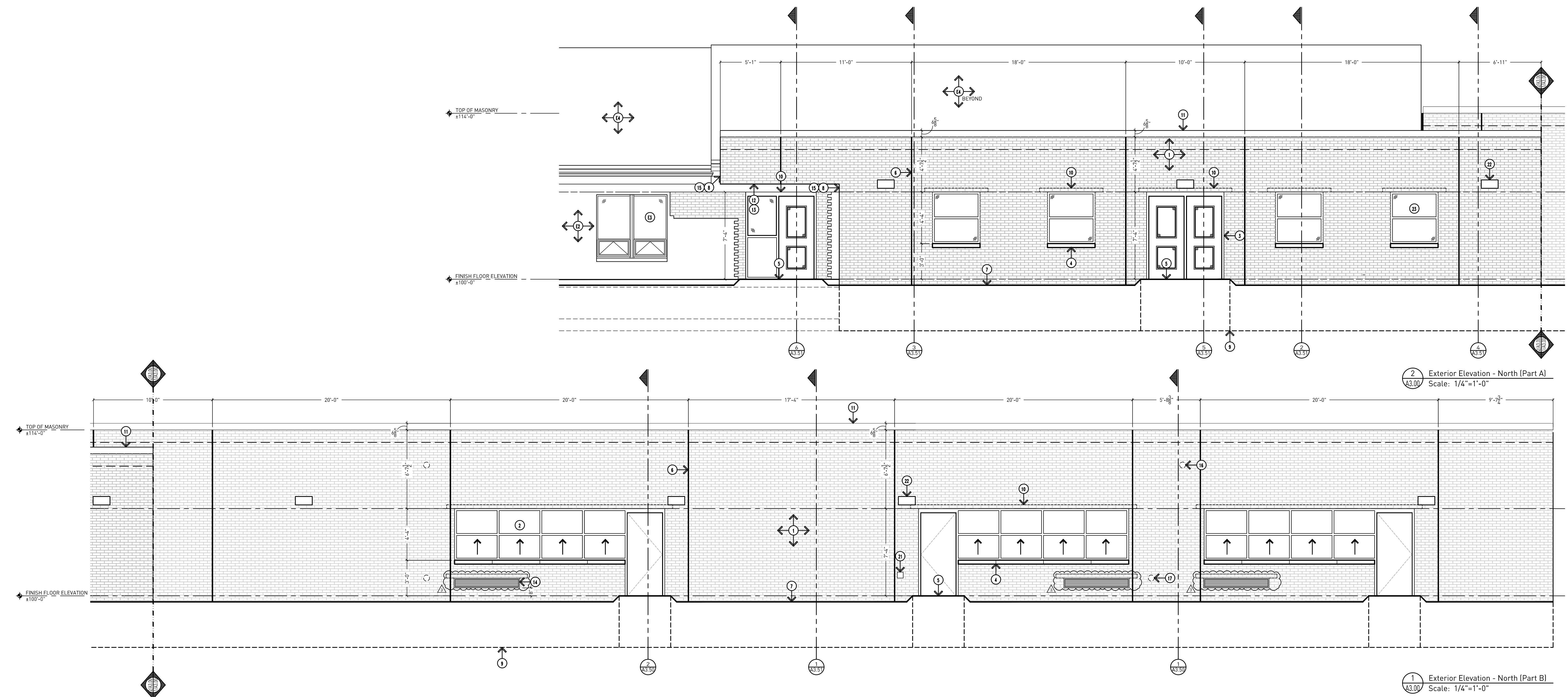


Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A2.12





2 Exterior Elevation - North (Part A)
Scale: 1/4"=1'-0"

1 Exterior Elevation - North (Part B)
Scale: 1/4"=1'-0"

DRAWING NOTES CONTINUED:

15. BUILDING JOINT COVER - REFER TO DETAILS.
16. ROOF OVERFLOW PIPING THROUGH WALL WITH "COW TONGUE".
17. RAIN CONDUCTOR PIPING THROUGH WALL WITH "COW TONGUE" AND CONCRETE SPLASH BLOCK.
18. CLEAR ANODIZED INSULATED METAL PANEL WITH SMOOTH FINISH. - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
19. FIXED INSULATED GLASS UNIT IN EXISTING FRAME. TYPE IG-1 - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
20. FIXED INSULATED GLASS UNITS (TYPE IG-1) IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
21. EXTERIOR WALL HYDRANT WITH LOCKING COVER - REFER TO MECHANICAL DRAWINGS FOR FURTHER INFORMATION.
22. WALL MOUNTED LED LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.
23. FIXED INSULATED GLASS UNITS (TYPE IG-1) IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO DOOR SCHEDULE AND SPECIFICATIONS.
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DRAWING NOTES:

1. 4" BRICK VENEER TO MATCH EXISTING, COLOR, TEXTURE, PATTERN, AND COURSING. INSTALL HEADER COURSE EVERY 6 ROWS OF BRICK - MATCH BOND COURSING EXACTLY. - COLOR TO BE BELDEN BRICK "EMPIRE GRAY".
2. VERTICAL LIFT INSULATED GLASS UNITS (TYPE IG-1) AND FRP DOOR IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO DOOR SCHEDULE AND SPECIFICATIONS.
3. DOOR, FRAME, HARDWARE, AND FINISH - REFER TO DOOR SCHEDULE AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. LIMESTONE SILL.
5. FROST SLAB.
6. BRICK EXPANSION JOINT - PROVIDE JOINTS PER MIN. RECOMMENDATIONS, MAX 20 FT O.C. TYP. CORNER JOINTS TO BE 20 FT APART MAX WITH ONE OF THE JOINTS AT LEAST 4" AND NOT MORE THAN 10 FT FROM THE CORNER.
7. APPROXIMATE LINE OF GRADE.
8. CONTROL JOINT BETWEEN BUILDINGS.
9. LINE OF FOUNDATION - REFER TO STRUCTURAL DRAWINGS.
10. BRICK LINTEL - REFER TO STRUCTURAL DRAWINGS.
11. PREFINISHED METAL PARAPET CAP FLASHING WITH CONTINUOUS CLEATS ON BOTH SIDES.
12. CEMENT PLASTER SOFFIT.
13. STEEL LINTEL - PAINTED. REFER TO STRUCTURAL DRAWINGS AND WALL SECTIONS.
14. LOUVER, WITH MASONRY LINTEL OVER OPENING - REFER TO MECHANICAL FOR LOUVER SIZE.

GENERAL NOTES:

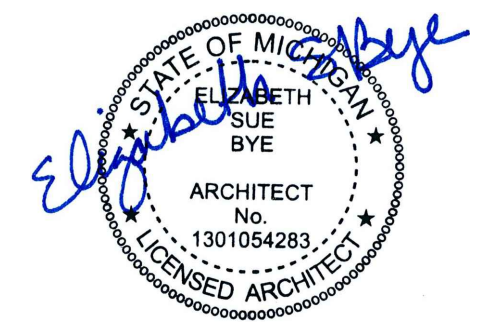
- G13. ALL FLEMBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH STAINLESS STEEL TERMINATION BAR AND SEALANT INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- G14. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL WINDOW AND DOOR OPENINGS. DRIP TO STOP AT WINDOW/DOOR OPENING (DO NOT EXTEND BEYOND).
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- G18. MATCH EXISTING MORTAR COLOR EXACTLY - C.F.V.

EXISTING TO REMAIN:

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- E2. BRICK VENEER.
- E3. PREFINISHED ALUMINUM WINDOW.
- E4. ASPHALT SINGLE ROOF.
- E5. ATTIC VENT.
- E6. DOWNSPOUT.
- E7. LINE OF EXISTING BUILDING.

GENERAL NOTES:

- G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.
- G2. ALL NOTES MAY NOT APPLY TO THIS SHEET.
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- G4. PROTECT ALL ITEMS TO REMAIN FROM CONSTRUCTION OPERATIONS SO AS TO NOT CAUSE DAMAGE.
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- G6. PROVIDE CONTINUOUS VAPOR AND AIR BARRIER PRIOR TO INSTALLATION OF RIGID AND/OR SPRAY INSULATION. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE BUILDING ENVELOPE AND INCLUDES ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.
- G7. PROVIDE BRICK EXPANSION JOINTS WITH SEALANT AND BACKER ROD PER MASONRY INSTITUTE RECOMMENDATIONS.
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- G9. REFER TO STRUCTURAL DRAWINGS FOR ANY STEPPED FOOTING LOCATION, ETC.
- G10. CONTRACTOR TO COORDINATE ALL DIMENSIONS WITH APPLICABLE MANUFACTURERS.
- G11. PROVIDE WEEP VENTS AT 32" O.C. AT BOTTOM AND TOP OF WALLS COMPLETE WITH 3/8" x 1 1/2" PLASTIC WEEP VENT. PROVIDE MEMBRANE FLASHING AT ALL BASE OF WALL DRAINAGE LOCATIONS, MIN 6" ABOVE FINISH GRADE.
- G12. PROVIDE ADJUSTABLE BRICK ANCHORS AT 16" O.C. VERTICALLY AND HORIZONTALLY.



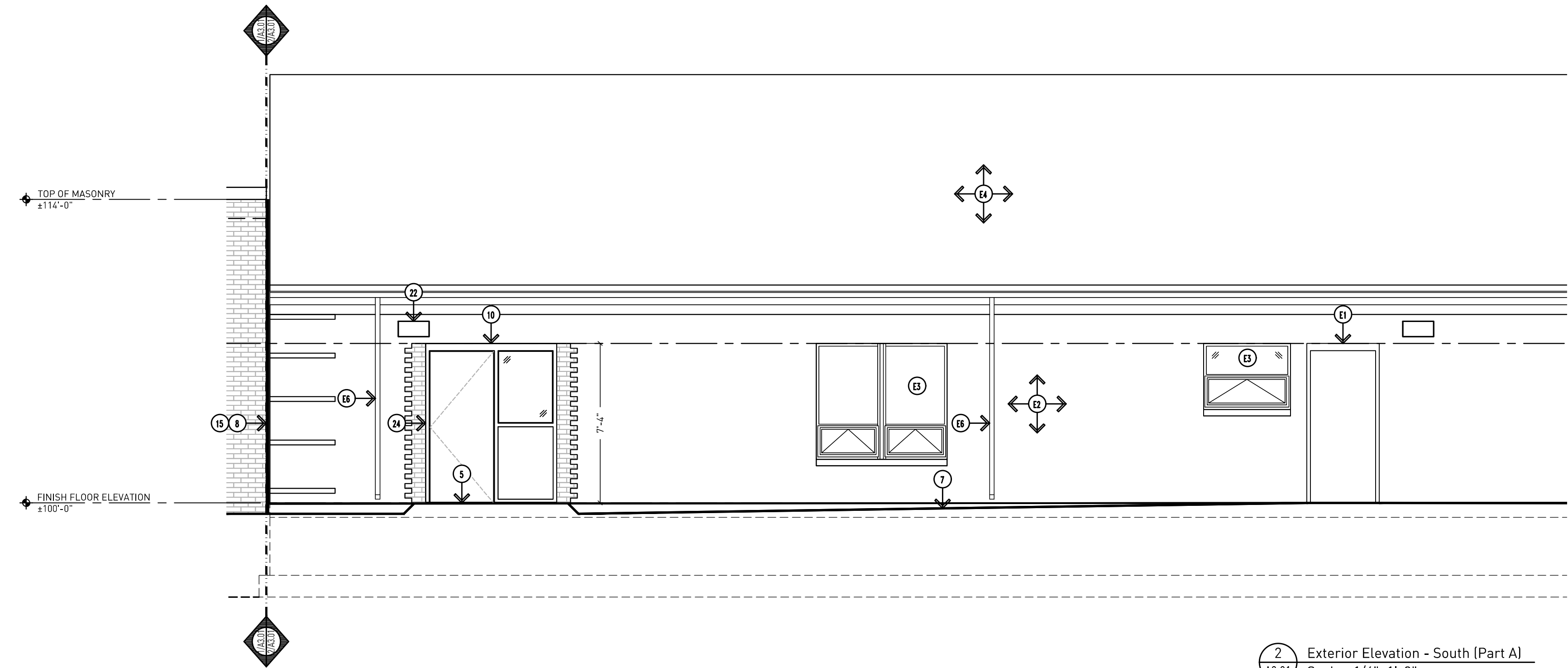
△ Addendum #3: 16 August 2023
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Exterior Elevations

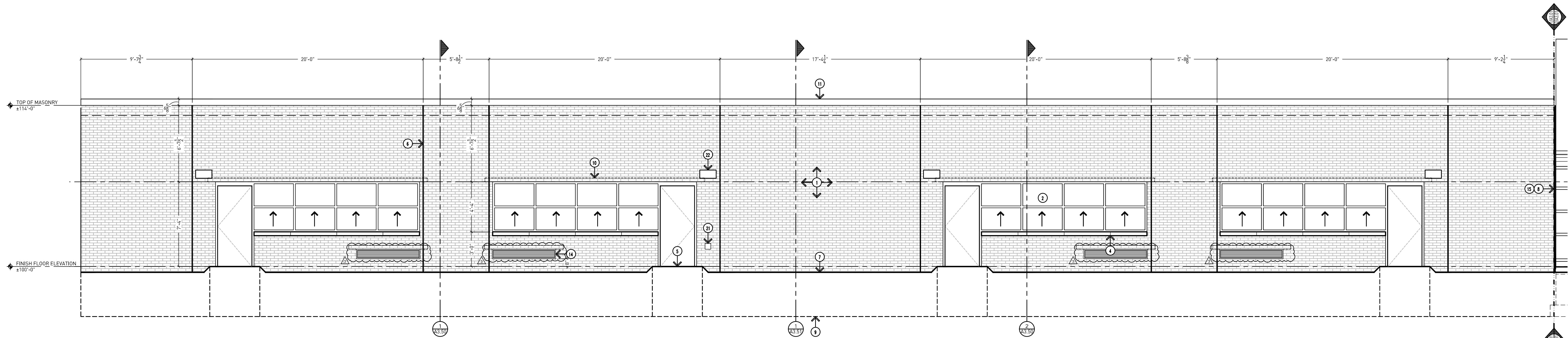
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Crestwood School District
 Cherry Hill Baptist Church
 Administration Relocation and Addition

Project No. 3221 A3.00



2 Exterior Elevation - South (Part A)
Scale: 1/4"=1'-0"



1 Exterior Elevation - South (Part B)
Scale: 1/4"=1'-0"

DRAWING NOTES CONTINUED:

15. BUILDING JOINT COVER - REFER TO DETAILS.
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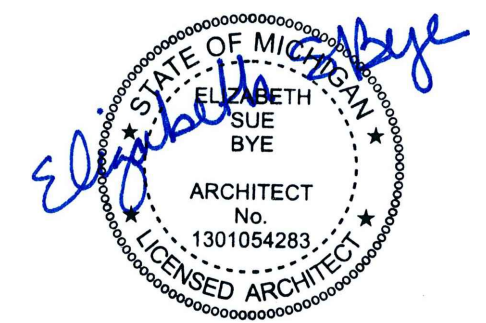
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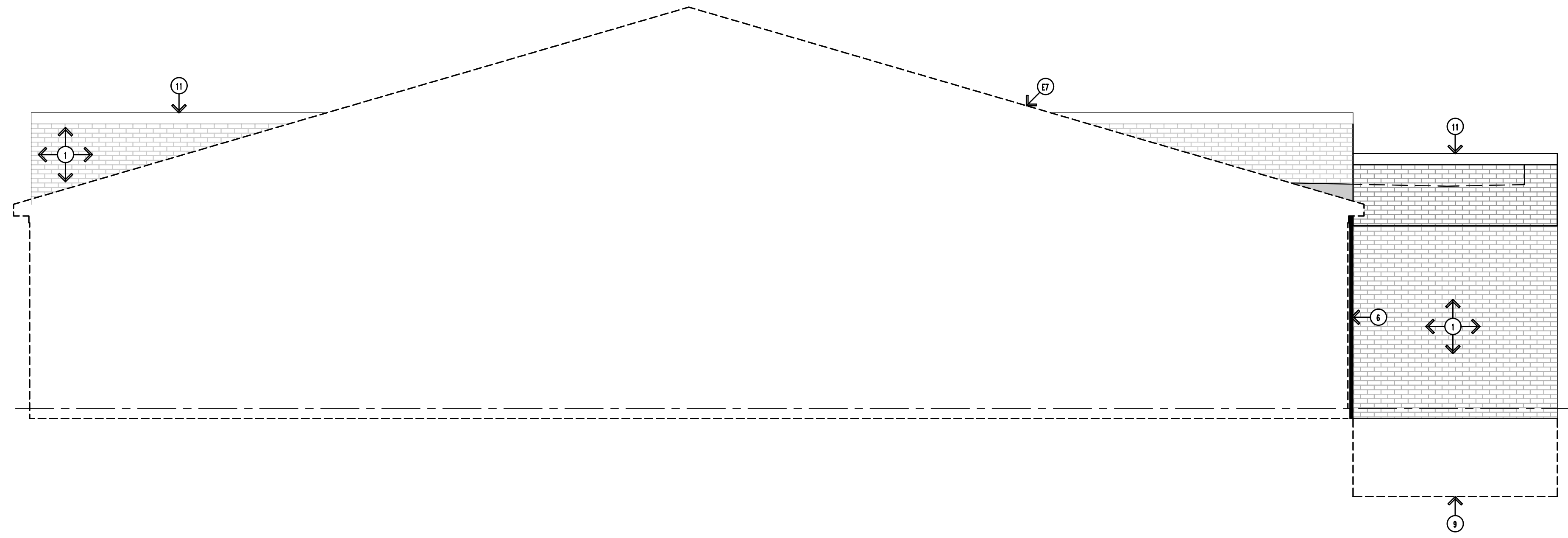
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Exterior Elevations

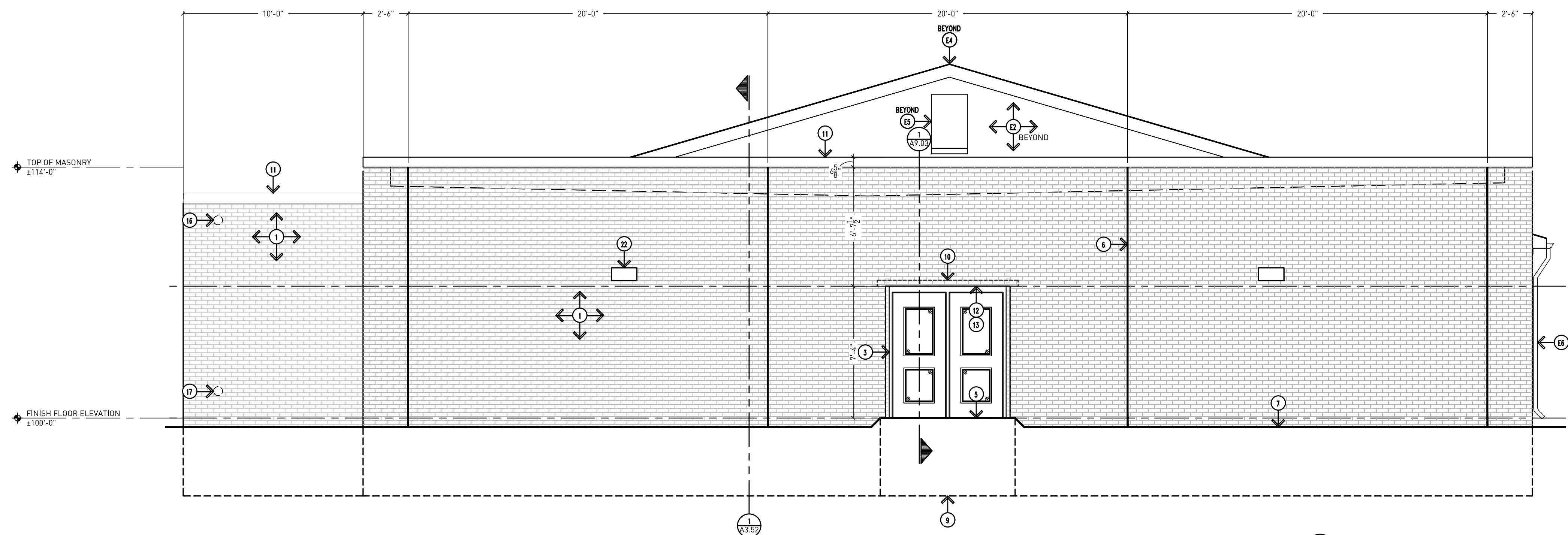
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Crestwood School District
 Cherry Hill Baptist Church
 Administration Relocation and Addition

Project No. 3221 A3.01



2 Exterior Elevation - East
Scale: 1/4"=1'-0"



1 Exterior Elevation - West
Scale: 1/4"=1'-0"

DRAWING NOTES CONTINUED:

15. BUILDING JOINT COVER - REFER TO DETAILS.
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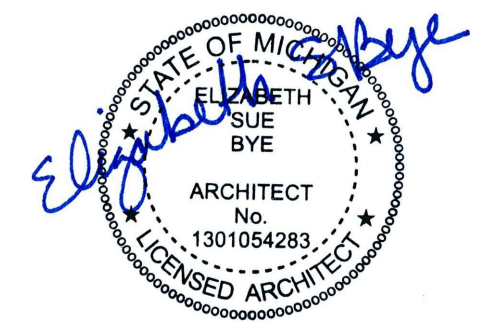
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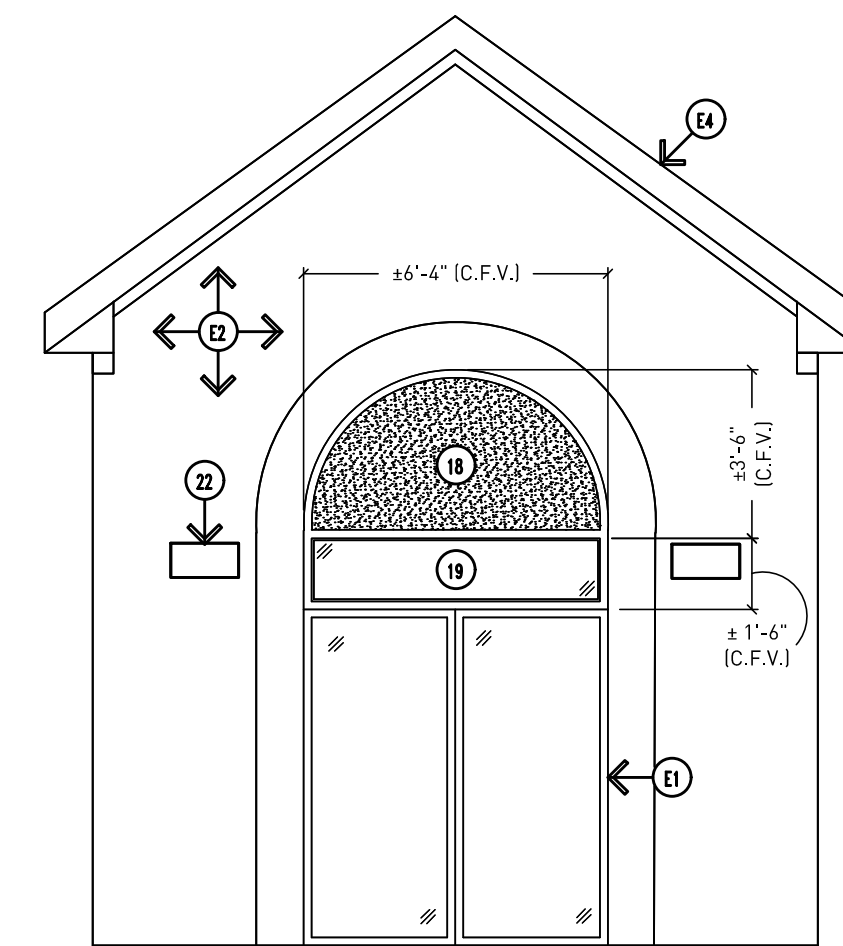
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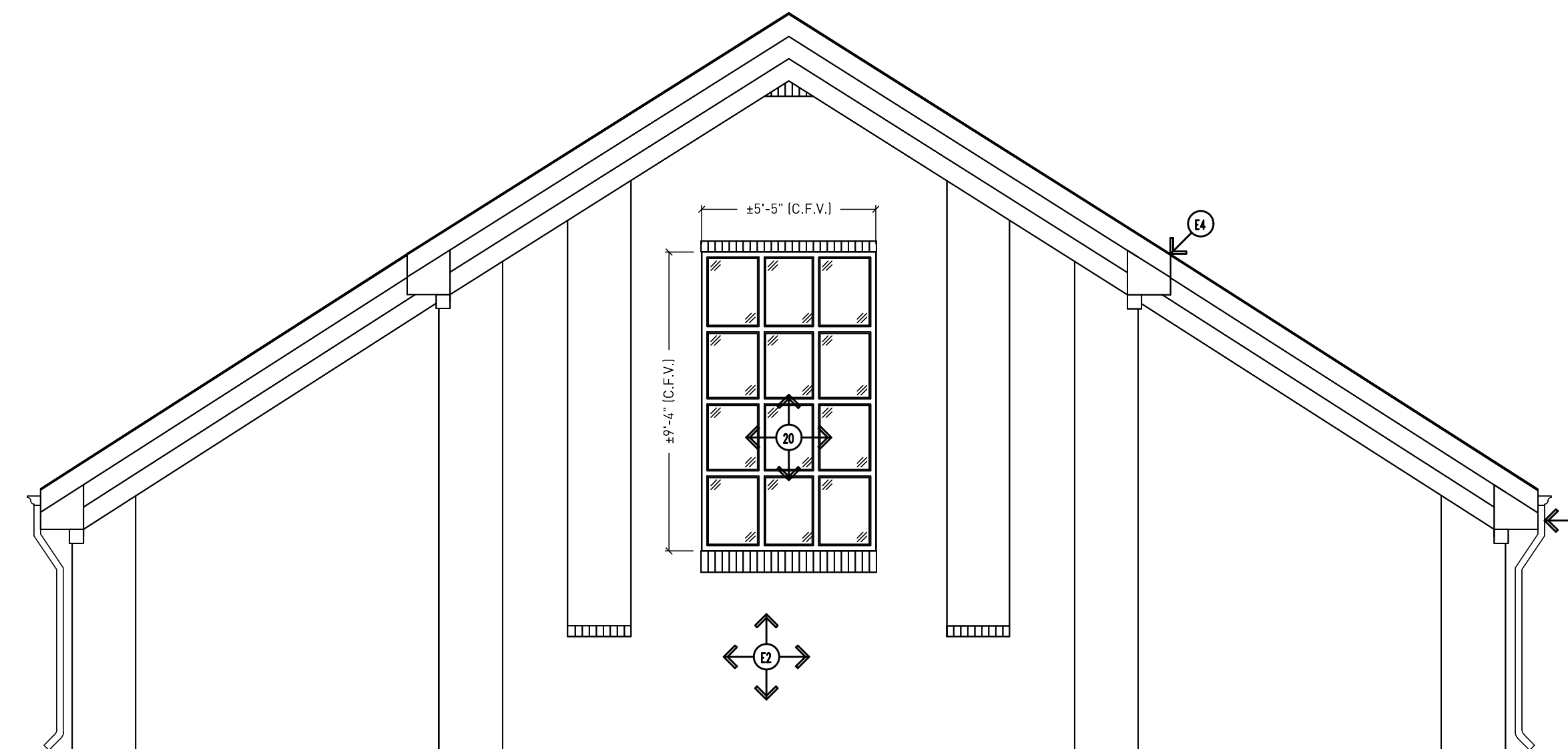
Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A3.02



2 Existing Exterior Elevation - West
Scale: 1/4"=1'-0"



1 Existing Exterior Elevation - East
Scale: 1/4"=1'-0"

DRAWING NOTES CONTINUED:

15. BUILDING JOINT COVER - REFER TO DETAILS.
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24. FIXED INSULATED GLASS UNITS (TYPE IG-1), FRP DOOR AND INSULATED METAL PANEL IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO DOOR SCHEDULE AND SPECIFICATIONS.

DRAWING NOTES:

1. 4" BRICK VENEER TO MATCH EXISTING, COLOR, TEXTURE, PATTERN, AND COURSING. INSTALL HEADER COURSE EVERY 6 ROWS OF BRICK - MATCH BOND COURSING EXACTLY. --COLOR TO BE BELDEN BRICK "EMPIRE GRAY".
2. VERTICAL LIFT INSULATED GLASS UNITS (TYPE IG-1) AND FRP DOOR IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO DOOR SCHEDULE AND SPECIFICATIONS.
3. DOOR, FRAME, HARDWARE, AND FINISH - REFER TO DOOR SCHEDULE AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. LIMESTONE SILL.
5. FROST SLAB.
6. BRICK EXPANSION JOINT - PROVIDE JOINTS PER MIN. RECOMMENDATIONS, MAX 20 FT O.C. TYP. CORNER JOINTS TO BE 20 FT APART MAX WITH ONE OF THE JOINTS AT LEAST 4" AND NOT MORE THAN 10 FT FROM THE CORNER.
7. APPROXIMATE LINE OF GRADE.
8. CONTROL JOINT BETWEEN BUILDINGS.
9. LINE OF FOUNDATION - REFER TO STRUCTURAL DRAWINGS.
10. BRICK LINTEL - REFER TO STRUCTURAL DRAWINGS
11. PREFINISHED METAL PARAPET CAP FLASHING WITH CONTINUOUS CLEATS ON BOTH SIDES.
12. CEMENT PLASTER SOFFIT.
13. STEEL LINTEL - PAINTED. REFER TO STRUCTURAL DRAWINGS AND WALL SECTIONS.
14. LOUVER, WITH MASONRY LINTEL OVER OPENING - REFER TO MECHANICAL FOR LOUVER SIZE.

GENERAL NOTES:

- G13. ALL FL EXIBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH STAINLESS STEEL TERMINATION BAR AND SEALANT INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- G14. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL WINDOW AND DOOR OPENINGS. DRIP TO STOP AT WINDOW/DOOR OPENING (DO NOT EXTEND BEYOND).
- G15. PROVIDE END DAMS AT ALL FLASHING ABOVE WINDOWS, DOORS, AND BELOW SILLS.
- G16. AT AREAS ADJACENT TO NEW BUILDING, INSTALL GRADE 6" BELOW FINISH FLOOR AND SLOPE AWAY FROM BUILDING TO MEET CODE REQUIREMENTS. MATCH ALL EXISTING SIDEWALK AND PARKING ELEVATIONS.
- G17. MATCH EXISTING COURSING EXACTLY - C.F.V.
- G18. MATCH EXISTING MORTAR COLOR EXACTLY - C.F.V.

EXISTING TO REMAIN:

- E1. DOOR, FRAME, AND HARDWARE.
- E2. BRICK VENEER.
- E3. PREFINISHED ALUMINUM WINDOW.
- E4. ASPHALT SHINGLE ROOF.
- E5. ATTIC VENT.
- E6. DOWNSPOUT.
- E7. LINE OF EXISTING BUILDING.

GENERAL NOTES:

- G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.
- G2. ALL NOTES MAY NOT APPLY TO THIS SHEET.
- G3. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ON THE WORK.
- G4. PROTECT ALL ITEMS TO REMAIN FROM CONSTRUCTION OPERATIONS SO AS TO NOT CAUSE DAMAGE.
- G5. ALL AREAS DISTURBED OR DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE PATCHED, REPAIRED, AND FINISHED BACK TO EXISTING CONDITION.
- G6. PROVIDE CONTINUOUS VAPOR AND AIR BARRIER PRIOR TO INSTALLATION OF RIGID AND/OR SPRAY INSULATION. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE BUILDING ENVELOPE AND INCLUDES ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.
- G7. PROVIDE BRICK EXPANSION JOINTS WITH SEALANT AND BACKER ROD PER MASONRY INSTITUTE RECOMMENDATIONS.
- G8. PROVIDE SEALANT AND FOAM BACKER ROD TO SUIT CONDITIONS AROUND ALL WINDOW AND DOOR OPENINGS/PERIMETER.
- G9. REFER TO STRUCTURAL DRAWINGS FOR ANY STEPPED FOOTING LOCATION, ETC.
- G10. CONTRACTOR TO COORDINATE ALL DIMENSIONS WITH APPLICABLE MANUFACTURERS.
- G11. PROVIDE WEEP VENTS AT 32" O.C. AT BOTTOM AND TOP OF WALLS COMPLETE WITH 3/8" x 1 1/2" PLASTIC WEEP VENT. PROVIDE MEMBRANE FLASHING AT ALL BASE OF WALL DRAINAGE LOCATIONS, MIN 6" ABOVE FINISH GRADE.
- G12. PROVIDE ADJUSTABLE BRICK ANCHORS AT 16" O.C. VERTICALLY AND HORIZONTALLY.



△ Addendum #3: 16 August 2023
Bidding and Permits: 31 July 2023

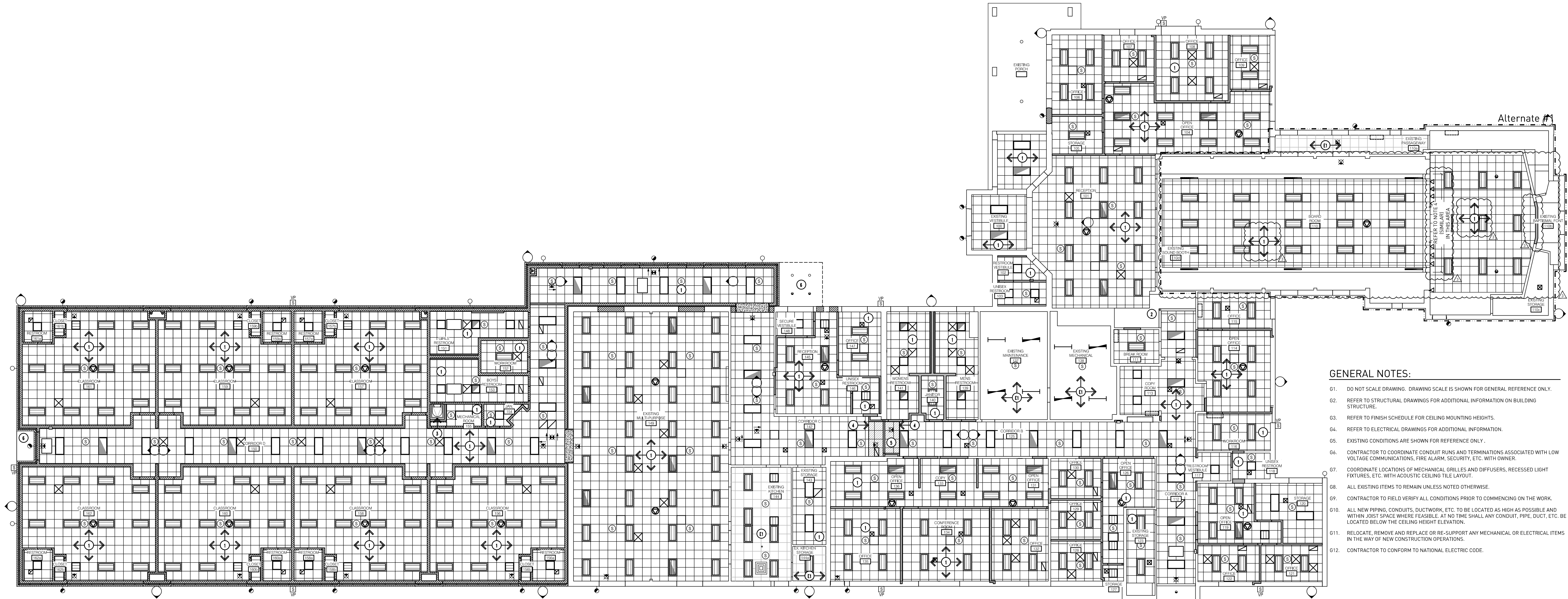
Exterior Elevations



Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A3.03



- GENERAL NOTES:**
- G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.
 - G2. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON BUILDING STRUCTURE.
 - G3. REFER TO FINISH SCHEDULE FOR CEILING MOUNTING HEIGHTS.
 - G4. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
 - G5. EXISTING CONDITIONS ARE SHOWN FOR REFERENCE ONLY.
 - G6. CONTRACTOR TO COORDINATE CONDUIT RUNS AND TERMINATIONS ASSOCIATED WITH LOW VOLTAGE COMMUNICATIONS, FIRE ALARM, SECURITY, ETC. WITH OWNER.
 - G7. COORDINATE LOCATIONS OF MECHANICAL GRILLES AND DIFFUSERS, RECESSED LIGHT FIXTURES, ETC. WITH ACOUSTIC CEILING TILE LAYOUT.
 - G8. ALL EXISTING ITEMS TO REMAIN UNLESS NOTED OTHERWISE.
 - G9. CONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCING ON THE WORK.
 - G10. ALL NEW PIPING, CONDUITS, DUCTWORK, ETC. TO BE LOCATED AS HIGH AS POSSIBLE AND WITHIN JOIST SPACE WHERE FEASIBLE. AT NO TIME SHALL ANY CONDUIT, PIPE, DUCT, ETC. BE LOCATED BELOW THE CEILING HEIGHT ELEVATION.
 - G11. RELOCATE, REMOVE AND REPLACE OR RE-SUPPORT ANY MECHANICAL OR ELECTRICAL ITEMS IN THE WAY OF NEW CONSTRUCTION OPERATIONS.
 - G12. CONTRACTOR TO CONFORM TO NATIONAL ELECTRIC CODE.

1 Composite RCP
 A6.10 Scale: 3/32"=1'-0"

LEGEND CONTINUED:

- CEILING MOUNTED ACU - REFER TO MECHANICAL DRAWINGS
- CAMERA - REFER TO TECHNOLOGY DRAWINGS
- WAP - REFER TO TECHNOLOGY DRAWINGS
- CEILING MOUNTED SPEAKER - REFER TO TECHNOLOGY DRAWINGS
- WALL MOUNTED SPEAKER - REFER TO TECHNOLOGY DRAWINGS
- WALL MOUNTED ACU. MOUNT HIGH ON THE WALL - REFER TO MECHANICAL DRAWINGS

LEGEND CONTINUED:

- SUPPLY AIR DIFFUSER - REFER TO MECHANICAL DRAWINGS
- RETURN AIR GRILLE - REFER TO MECHANICAL DRAWINGS
- EXISTING SUPPLY AIR DIFFUSER
- EXISTING RETURN AIR GRILLE
- EXISTING 1X1 LIGHT
- EXISTING RECESSED CAN LIGHT
- EXISTING TRACK LIGHT
- EXISTING CEILING FAN

LEGEND CONTINUED:

- LINEAR 4" LIGHT WITH EMERGENCY BACK UP - REFER TO ELECTRICAL DRAWINGS
- 8" ROUND RECESSED CAN LIGHT - REFER TO ELECTRICAL DRAWINGS
- 8" ROUND RECESSED CAN LIGHT WITH EMERGENCY BACK UP - REFER TO ELECTRICAL DRAWINGS
- SURFACE OR PENDANT MOUNTED LED EXIT LIGHT WITH BATTERY PACK AND DIRECTIONAL ARROWS AS INDICATED ON PLAN - REFER TO ELECTRICAL DRAWINGS
- EXTERIOR LIGHT - REFER TO ELECTRICAL DRAWINGS
- 3"x4" LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP - REFER TO ELECTRICAL DRAWINGS
- TRACK LIGHT - REFER TO ELECTRICAL DRAWINGS
- EXTERIOR LIGHT WITH EMERGENCY BATTERY BACKUP - REFER TO ELECTRICAL DRAWINGS
- ACOUSTIC CEILING TILE

LEGEND:

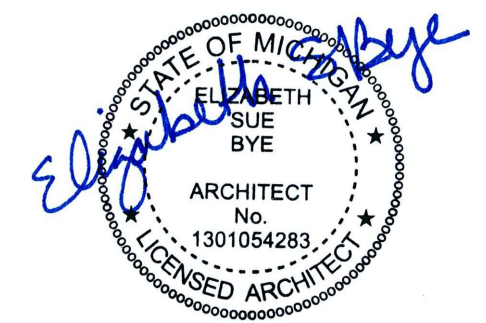
- 2X4 RECESSED LED LIGHT FIXTURE WITH CENTER BASKET - REFER TO ELECTRICAL DRAWINGS
- REPRESENTS LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP - REFER TO ELECTRICAL DRAWINGS
- 2X4 RECESSED FLAT PANEL LED LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- REPRESENTS LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP - REFER TO ELECTRICAL DRAWINGS
- 2X2 RECESSED LED LIGHT FIXTURE WITH CENTER BASKET - REFER TO ELECTRICAL DRAWINGS
- 2X2 RECESSED FLAT PANEL LED LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- REPRESENTS LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP - REFER TO ELECTRICAL DRAWINGS
- LINEAR 4" LIGHT - REFER TO ELECTRICAL DRAWINGS

DRAWING NOTES:

1. SUSPENDED ACOUSTICAL TILE AND METAL GRID SUSPENSION SYSTEM.
2. PATCH AND REPAIR EXISTING GYPSUM BOARD/PLASTER CEILING, FINISH 3 COATS (PT-12, FLAT).
3. 30" x 36" ROOF HATCH -- COORDINATE WITH ROOF STRUCTURE.
4. AXIOM TRIM PIECE AS REQUIRED TO SUIT CONDITIONS - REFER TO SECTION 3/A9.52 FOR MORE INFORMATION.
5. LOWER CEILING TO ALLOW ELECTRICAL CONDUIT AND DATA CABLING ABOVE DOOR - REFER TO SECTION 3/A9.52 FOR MORE INFORMATION.
6. EIFS CANOPY FINISH.

EXISTING TO REMAIN:

- E1. EXISTING CEILING SYSTEM TO REMAIN.



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Composite RCP
 Crestwood School District
 Cherry Hill Baptist Church
 Administration Relocation and Addition

Project No. 3221

A6.10

MATERIAL SCHEDULE							
	TAG	MANUFACTURER	STYLE	COLOR	DESCRIPTION	INSTALLATION / LOCATION NOTES	
FLOORING	CPT-6	MILLIKEN - OBEX CUTX	FIZZ	FZXS-27 GREY	ENTRY WALK OFF CARPET	QUARTER TURN INSTALLATION	
	CPT-7	MILLIKEN	CUSTOM		BROADLOOM CARPET- BOUND	ONE PER GRSP CLASSROOM (GRSP WING)	
	CPT-8	MILLIKEN - STEREOVISION	LIGHT WAVE	LWV79 AUGMENT	CARPET TILE	ASHLAR INSTALLATION (GRSP WING)	
	CPT-9	MILLIKEN - STEREOVISION	LIGHT WAVE	LWV72 -118 ELECTROPUNK	CARPET TILE	ASHLAR INSTALLATION (ADMINISTRATION WING)	
	LVT-1	MILLIKEN - LUMENOLOGY SERIES	LIGHT WASH	LLW257 LUSTERING	25 CM X 100 CM PLANK	FIELD TILE - ASHLAR INSTALLATION	
	LVT-8	MILLIKEN - LUMENOLOGY SERIES	LIGHT WASH	LLW265-195 OPALESCENT	25 CM X 100 CM PLANK	ACCENT TILE - ASHLAR INSTALLATION (GRSP WING)	
	LVT-9	MILLIKEN - LUMENOLOGY SERIES	LIGHT WASH	LLW191 SPARK	25 CM X 100 CM PLANK	ACCENT TILE - ASHLAR INSTALLATION (GRSP WING)	
	LVT-10	MILLIKEN - LUMENOLOGY SERIES	REFLECTIVE	LRF257-191 PARALLEL	25 CM X 100 CM PLANK	ACCENT TILE - ASHLAR INSTALLATION (GRSP WING)	
	LVT-11	MILLIKEN - CHANGE AGENT	RELIC	REL 152 ANTIQUITY	25 CM X 100 CM PLANK	ASHLAR OR BASKET WEAVE - REFER TO DRAWINGS (ADMIN. WING)	
	WALL BASE	CRB-3	JOHNSONITE		MINK WG	4" COVE BASE	(ADMINISTRATION WING)
		CT-16	CROSSVILLE	RETRO ACTIVE	LEADEN UPS	6" H	(GRSP WING)
FLOOR TRANSITIONS	SST-1	CERAMIC TOOLS COMPANY	CTC 316 REDUCER	ANODIZED ALUMINUM (CLEAR)		LVT TO CONCRETE	
	SST-3	SCHLUTER	RENO-TK AETK-60	SATIN ANODIZED ALUMINUM		CERAMIC TILE TO LVT	
	SST-4	CERAMIC TOOLS COMPANY	CTC ETR 38 EA	ETCHED ALUMINUM		WALK OFF CARPET TO LVT	
	SST-6	TARKETT	RCN-A	MINK WG		STAIR NOSING	
	SST-7	SCHLUTER	RENO-V #AEVT 80 B20	SATIN ANODIZED ALUMINUM		OFFICE CARPET TO LVT	
	SST-8	MM SYSTEMS	SERIES FHFXR-EH	SATIN ANODIZED ALUMINUM		FLOOR EXPANSION JOINT BETWEEN EXISTING & NEW BUILDINGS	
	SST-9	KUBERIT	KT-C-045-A1-C	ANODIZED ALUMINUM SILVER		LVT TO LVT	
	PAINTS	PT-1	SHERWIN WILLIAMS	EGGSHELL	SW7008 ALABASTER		DISTRICT STANDARD WALL PAINT
		PT-6	SHERWIN WILLIAMS	SEMI-GLOSS	SW7669 SUMMIT GRAY		RESTROOM WALL PAINT
PT-9		SHERWIN WILLIAMS	EGGSHELL	TBD		ACCENT PAINT (GRSP WING)	
PT-10		SHERWIN WILLIAMS	EGGSHELL	TBD		ACCENT PAINT (ADMINISTRATION WING)	
PT-11		SHERWIN WILLIAMS	SEMI-GLOSS	SW7505 MANDR HOUSE		DOOR FRAME PAINT	
PT-12		SHERWIN WILLIAMS	FLAT	SW7757 HIGH REFLECTIVE WHITE		CEILING PAINT (INTERIOR) / EXTERIOR SOFFIT PAINT	
PT-13		SHERWIN WILLIAMS	SEMI-GLOSS	SW9170 ACIER		FIREPLACE MANTLE SURROUND AND FIRE BOX PAINT	
CEILING TILE		ACT-2	ARMSTRONG	1774 - DUNE	WHITE	2' X 2' IN 15/16" METAL GRID (HEAVY DUTY)	CLASSROOMS/OFFICE/CORRIDORS
		ACT-5	ARMSTRONG	673 - KITCHEN ZONE	WHITE	2' X 2' IN 15/16" METAL GRID (HEAVY DUTY)	(RESTROOMS)

MATERIAL SCHEDULE						
	TAG	MANUFACTURER	STYLE	COLOR	DESCRIPTION	INSTALLATION / LOCATION NOTES
RESTROOMS	CT-1	AMERICAN OLEAN	COLOR STORY	ICE WHITE 0025	4" X 16"	FIELD TILE - WALLS (GRSP WING)
	CT-4	AMERICAN OLEAN	COLOR STORY	BALANCE 0014	4" X 16"	ACCENT TILE - WALLS (GRSP WING)
	CT-5	AMERICAN OLEAN	COLOR STORY	STORM GRAY 0040	4" X 16"	ACCENT TILE - WALLS (GRSP WING)
	CT-7	AMERICAN OLEAN	COLOR STORY	PASSION 0019	4" X 16"	ACCENT TILE - WALLS (GRSP WING)
	CT-8	AMERICAN OLEAN	COLOR STORY	SCARLET 0010	4" X 16"	ACCENT TILE - WALLS (GRSP WING)
	CT-12	CAESER CERAMICS USA	STYLE	PURE	12" X 24", 3" X 24" BULLNOSE	FIELD TILE - WALLS (ADMINISTRATION WING)
	CT-13	MARAZZI	ILLUSIONIST	IL51 MYSTIFYING	11" X 24"	ACCENT TILE - WALLS (ADMINISTRATION WING)
	CT-14	AMERICAN OLEAN	HISTORIC LIMESTONE	HS13 LEGACY	2' X 2" MOSAIC TILE	FLOOR TILE (GRSP WING)
	CT-15	MARAZZI	ILLUSIONIST	IL49 MYSTERIOUS	3" X 3" MOSAIC TILE	FLOOR TILE (ADMINISTRATION WING)
	WB-2	AMERICAN OLEAN	HISTORIC LIMESTONE	HS13 LEGACY	2' X 2" MOSAIC TILE	WRAP 2 ROWS UP WALL FOR BASE (GRSP WING)
	WB-3	MARAZZI	ILLUSIONIST	IL49 MYSTERIOUS	3" X 3" MOSAIC TILE	WRAP 2 ROWS UP WALL FOR BASE (ADMINISTRATION WING)
	GROUT	TEC		931 STANDARD WHITE		WALL TILE GROUT (GRSP WING)
	GROUT	TEC		908 DOVE GRAY		WALL TILE GROUT (ADMINISTRATION WING)
	GROUT	TEC		929 CHARCOAL GRAY		FLOOR TILE / WALL BASE GROUT
	MILLWORK	WF-1	EVERO QUARTZ	GEO SERIES	GLACIER BAY	
TP-1		SCRANTON PRODUCTS	TRADITIONAL COLOR COLLECTION	SHALE	ORANGE PEEL TEXTURE	TOILET PARTITIONS
DOOR HARDWARE	PL-5	NEVAMAR		SIENNA ESSENCE		COUNTERTOP (GRSP WING)
	PL-6	NEVAMAR		YUNNAN		CASEWORK LAMINATE (GRSP WING)
	PL-7	FORMICA		912-58 STORM		CASEWORK LAMINATE REVEAL (GRSP WING)
	PL-8	NEVAMAR		NAVY MATRIX II		COUNTERTOP (ADMINISTRATION WING)
	PL-9	WILSONART		BLACKBIRD		CASEWORK LAMINATE (ADMINISTRATION WING)
	PL-10	WILSONART		BLACK		CASEWORK LAMINATE REVEAL (ADMINISTRATION WING)
	WD-4	VT INDUSTRIES	WHITE BIRCH	CHOCOLATE, CH-18		
	FRP-4	SPECIAL - LITE (OR APPROVED EQUAL)	--	DESSERT SAND		
	DH-1	SCHLAGE		SATIN CHROMIUM - 426		DOOR HARDWARE
	MISCELLANEOUS	TB-3	CLARIDGE	VIEWPOINT	KV230 OYSTER	
WS-2		DRAPER	SHEER WEAVE	PW4550 - P10 GRANITE	5% OPEN	EXTERIOR WINDOWS (ADMIN WING)
WS-5		DRAPER	SUNBLOC SERIES	SB9040 GRAY		DOOR / SIDELITES & EXT. WINDOWS (GRSP WING)

GENERAL NOTES:

- THIS IS A MASTER FINISH SCHEDULE. NOT ALL FINISHES MAY BE USED FOR THIS PROJECT. REFER TO ROOM FINISH SCHEDULE, FLOOR FINISH PLAN, AND INTERIOR ELEVATIONS FOR FURTHER INFORMATION.
- COORDINATE THE TIMING OF WORK TO AVOID CONFLICTS WITH NORMAL SCHOOL OPERATIONS AND ACTIVITIES.
- ALL OUTSIDE CORNERS OF INTERIOR CMU MASONRY TO BE BULLNOSE.
- NEW FINISH FLOOR ELEVATION TO MATCH EXISTING EXACTLY.
- ALL WALLS TO BE PAINTED IN AREA IDENTIFIED FOR PAINT UNLESS NOTED OTHERWISE.
- ALL FINISHES ARE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
- PROVIDE METAL TRANSITION BETWEEN DISSIMILAR FLOORING MATERIALS.

GENERAL FLOORING NOTES:

- TRANSITION BETWEEN DISSIMILAR FLOORING TYPES / MATERIALS TO HAVE THE APPROPRIATE TRANSITION STRIP INSTALLED.
- CONTRACTOR TO INSTALL CONTROL JOINTS IN PORCELAIN / CERAMIC TILE FLOORING AT SPACING PER TCA RECOMMENDATIONS AND AT ALL CONTROL JOINTS IN CONCRETE FLOOR JOINTS BELOW. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS.
- ALIGN PORCELAIN / CERAMIC TILE FLOOR GROUT LINES WITH PORCELAIN / CERAMIC TILE WALL BASE GROUT LINES.
- MOISTURE TEST THE FLOOR SLAB PRIOR TO APPLYING ALL FLOOR FINISHES. COORDINATE WITH PROJECT MANAGER AS REQUIRED.
- CONTACT LOCAL MILLIKEN REPRESENTATIVE, JANNA JONES, AT (248) 804-5970 FOR FURTHER INFORMATION ABOUT THE CUSTOM CLASSROOM RUGS.

FLOORING NOTES:

- PROPERLY PREPARE NEW / EXISTING CONCRETE SUBSTRATE TO ACCEPT NEW FLOORING MATERIAL PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- PROPERLY PREPARE NEW CONCRETE SUBSTRATE FOR EXPOSED / SEALED CONCRETE FINISH PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- PROVIDE BOUND RUG - REFER TO MATERIAL SCHEDULE.
- PROVIDE 4" RUBBER BASE AT MILLWORK LOCATION ONLY.
- WOOD PLATFORM AND TRIM, STAINED TO MATCH EXISTING. SUBMIT SAMPLE OF CUSTOM MATCHED STAIN TO ARCHITECT FOR FINAL APPROVAL.

GENERAL WALL NOTES:

- ON ALL WALLS WITH TILE, INSTALL SEALANT (COLOR TO MATCH GROUT) IN ALL CORNERS IN LIEU OF GROUT.
- INTERIOR PAINT SHALL BE SHERWIN WILLIAMS PROMAR 200 INTERIOR LATEX, TWO (2) COATS MINIMUM.
- CONTACT ROBIN SPEER WITH VIRGINIA TILE AT (734) 765-6875 OR QUOTEDESIGNVINYLATILE.COM FOR ANY QUESTIONS REGARDING AMERICAN OLEAN TILE.
- ALL OUTSIDE CORNERS OF TILED WALLS TO HAVE TRIM PIECE SIMILAR TO SCHLUTER "RONDEC" SIZED APPROPRIATE FOR TILE THICKNESS (SATIN ANODIZED ALUMINUM FINISH). EXPOSED TOP EDGE TO BE FINISHED WITH COORDINATING TOP CAP.

WALL NOTES:

- REFER TO WALL AND FLOOR TILE DETAILS (SHEET A8.52) FOR WALL TILE PATTERN AND COLORS
- PAINT TO MATCH EXISTING

CEILING NOTES:

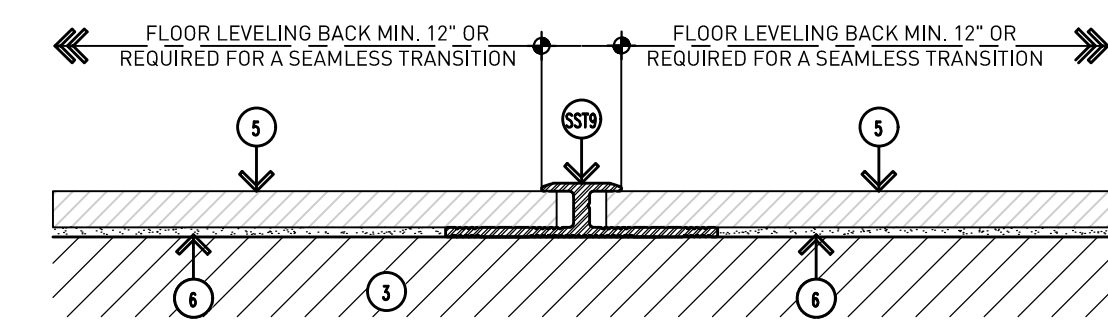
- COORDINATE CEILING HEIGHT WITH HARD TILE LAYOUT ON FULL HEIGHT TILE WALL IN RESTROOM.

LEGEND:

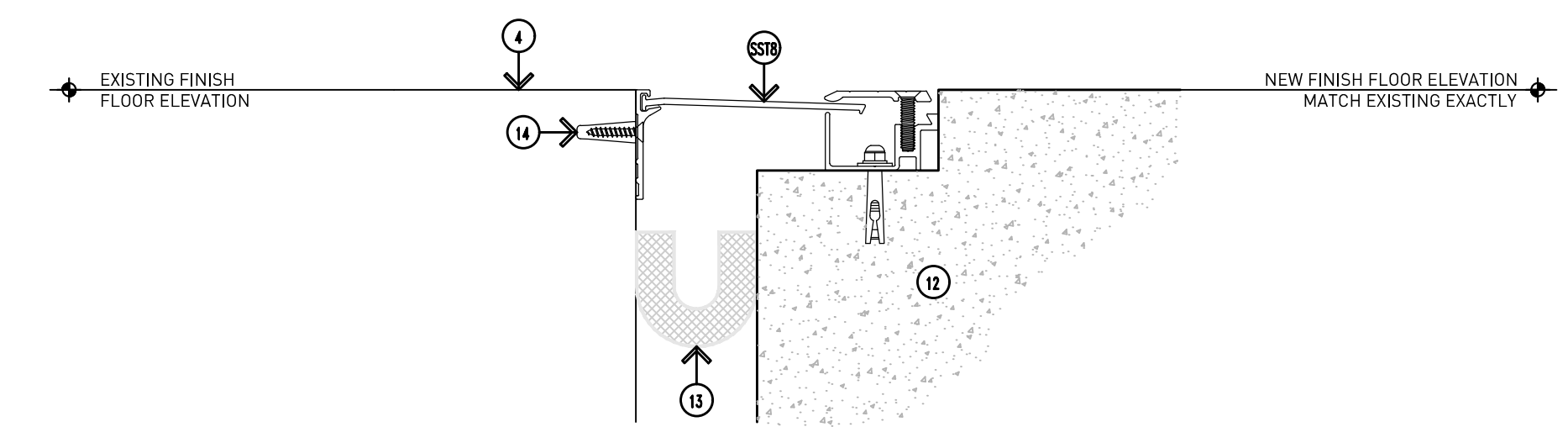
ACT- ACUSTICAL CEILING TILE	PL- PLASTIC LAMINATE
CMT BO- CEMENT BOARD	PT- PAINT
CONC- SEALED CONCRETE	SGT- STRUCTURAL GLAZED TILE (WALL BASE)
CPT- CARPET	SS- SOLID SURFACE
CRB- COVED RUBBER BASE	SST- FLOORING TRANSITION
CT- CERAMIC TILE / PORCELAIN TILE	TB- TACK BOARD
DH- DOOR HARDWARE	TP- TOILET PARTITION
FRP- FIBER REINFORCED POLYMER	WB- WALL BASE
HM- HOLLOW METAL	WD- WOOD BASE
LVT- LUXURY VINYL TILE	WF- WASH FOUNTAIN
	WS- WINDOW SHADE

DRAWING NOTES:

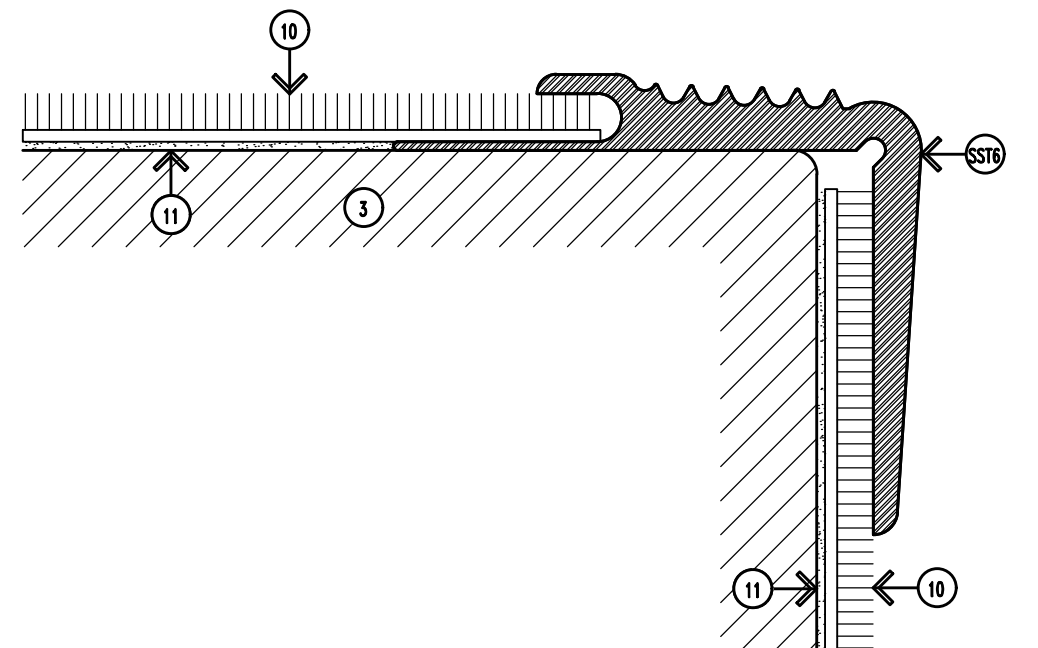
- PORCELAIN / CERAMIC TILE FLOORING
- TILE MORTAR / ADHESIVE.
- NEW CONCRETE FLOOR SLAB
- EXISTING CONCRETE FLOOR SLAB--E.C.U. (C.F.V.)
- LVT FLOORING--REFER TO SCHEDULE FOR FURTHER INFORMATION.
- LVT FLOORING ADHESIVE RECOMMENDED BY FLOORING MANUFACTURER.
- WALK OFF CARPET--REFER TO SCHEDULE FOR FURTHER INFORMATION.
- WALK OFF CARPET FLOORING ADHESIVE RECOMMENDED BY FLOORING MANUFACTURER.
- ALIGN TOP OF FLOORING.
- OFFICE CARPET FLOORING--REFER TO SCHEDULE FOR FURTHER INFORMATION.
- OFFICE CARPET FLOORING ADHESIVE RECOMMENDED BY FLOORING MANUFACTURER.
- CONCRETE FLOOR SLAB OVER 15MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER REQUIREMENTS.
- 2-HOUR FIRE BARRIER
- #10 X 1" FASTENER AND SLEEVE @ 24" O.C.



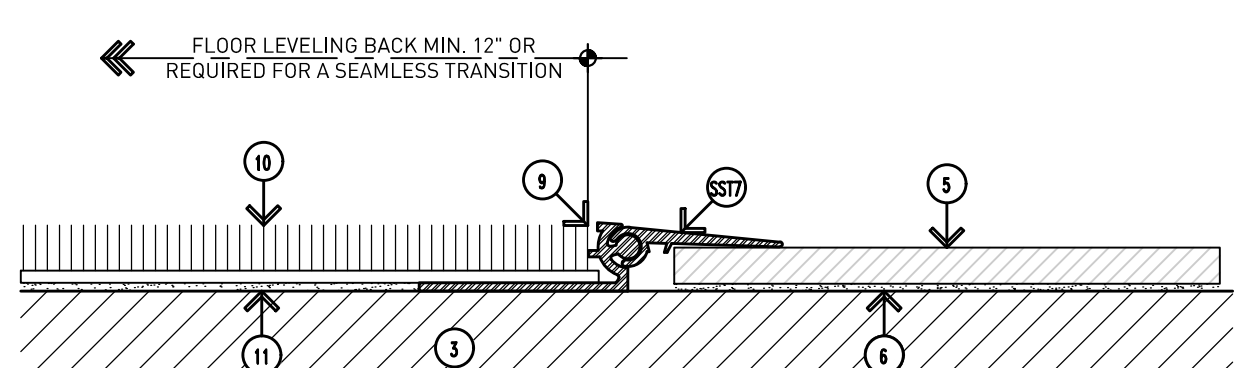
7 LVT to LVT [SST-9]
Scale: Full Scale



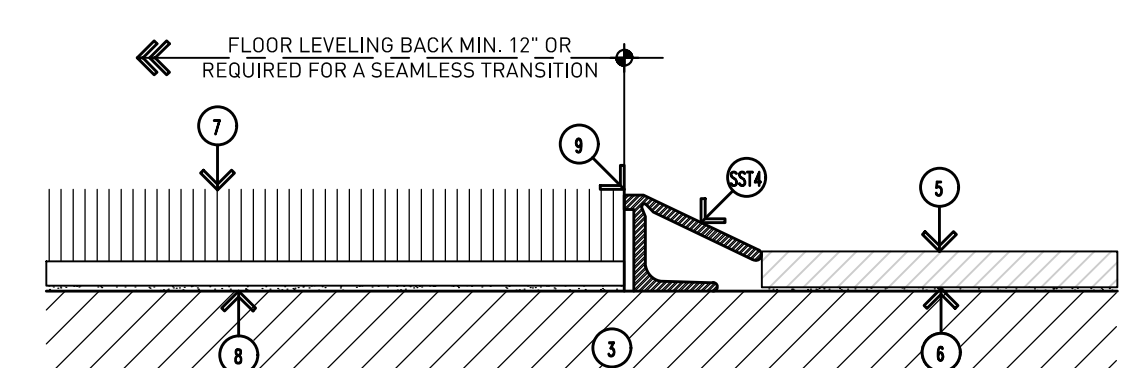
6 Floor Expansion Joint Detail (SST-8)
Scale: 6" = 1'-0"



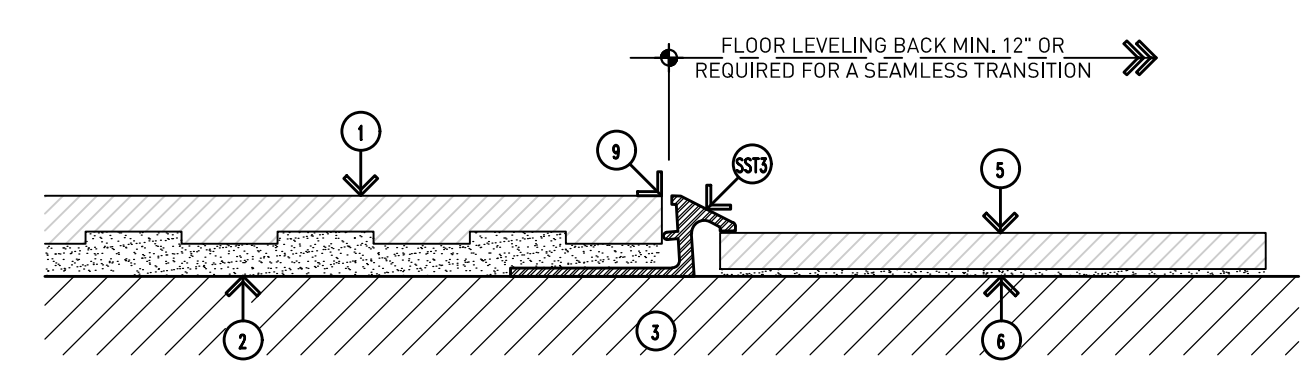
5 Stair Nosing (SST-6)
Scale: Full Scale



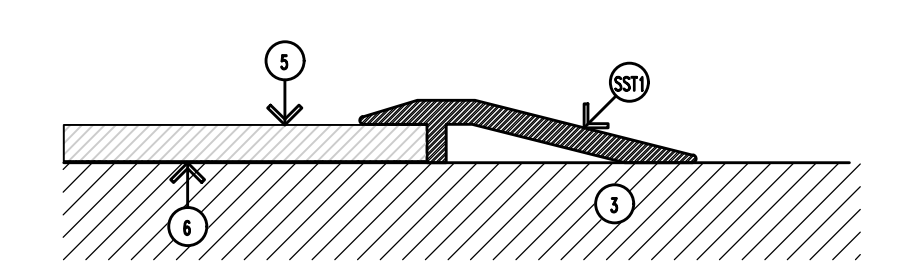
4 Office Carpet to LVT (SST-7)
Scale: Full Scale



3 Walk Off Carpet to LVT (SST-4)
Scale: Full Scale



2 Ceramic Tile to LVT (SST-3)
Scale: Full Scale



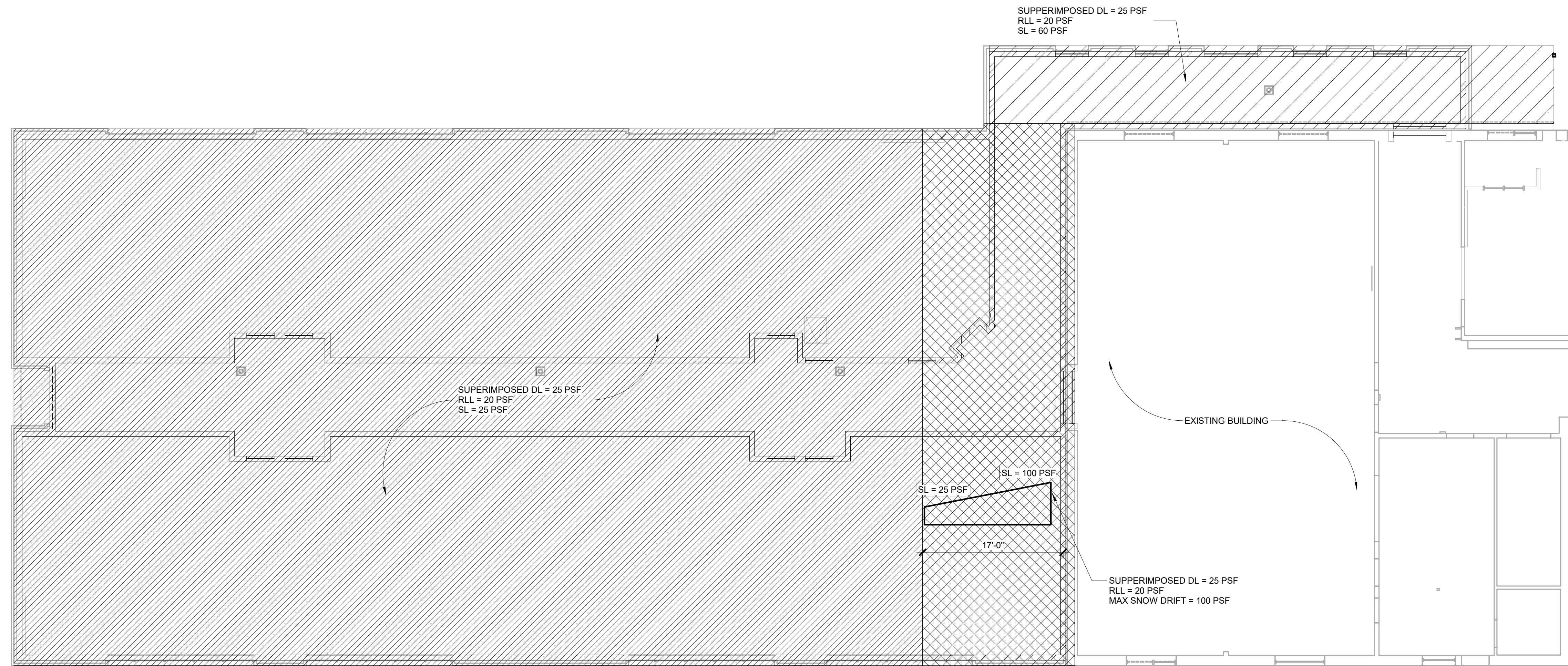
1 LVT to Concrete (SST-1)
Scale: Full Scale



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Bidding and Permits: 31 July 2023



Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition



1 ROOF LOAD MAP
1/8" = 1'-0"

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REF. SCALE IN INCHES PROJECT #22009942.00

Addendum #3 16 August 2023

LOAD MAPS

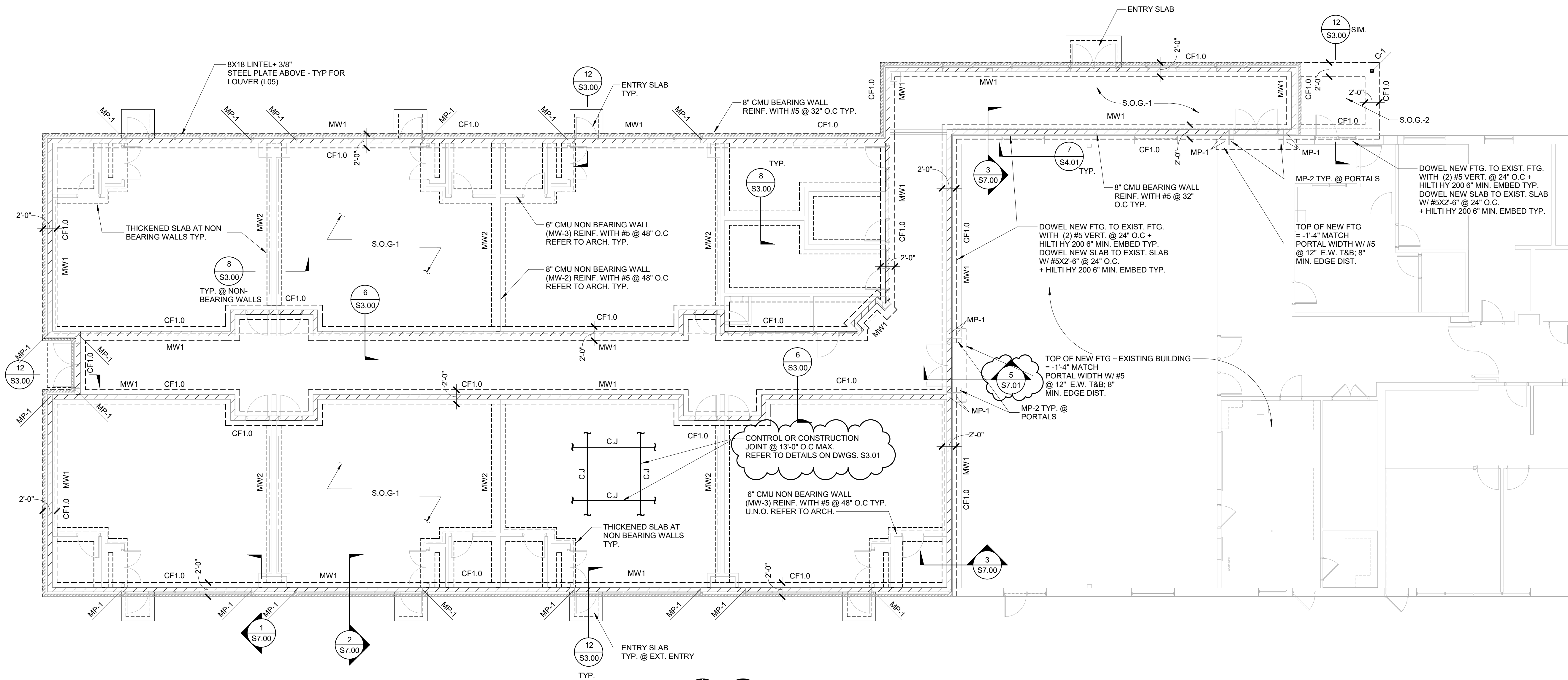


Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 4321

S2.01





1 FOUNDATION PLAN
1/8" = 1'-0"

FOUNDATION NOTES:

- REFERENCE FINISHED FLOOR ELEVATION = 100'-0"
- TOP OF FOOTING ELEVATION = -1'-4" UNLESS NOTED THUS [XX'-XX"]
- FOOTINGS ARE DESIGNED TO BEAR ON FIRM UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL WITH A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF. REFER TO GEOTECH. REPORT FOR SITE PREPARATION, OVEREXCAVATION OF EXIST. FILL REQ., AND REPLACEMENT WITH ENGINEERED FILL.
- CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
- REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
- REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS.
- VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- DESIGNATIONS:**
 - CF1.0: 2'-0" WIDE x 3'-6" (MIN.) DEPTH WALL FOOTING REINF. W/ (3) #5 CONT. TOP & BOTT.
 - C-1: HSS4X4X1/4 W/ 12"x12"x3/4 BASE PLATE AND (4) 3/4" ANCHORS 9" EMBED.; 5" MIN. PROJECTION
 - MW1: 8" CMU WALL WITH #5 @ 32" O.C. PROVIDE BOND BEAMS WITH (2)#5 HORIZONTAL BARS AT TOP OF WALL, BEAM/JOIST BEARING ELEV. AND BOTT. OF WINDOW OPENING, PROVIDE (3) #5 VERTICAL BARS, ONE PER CELL, AT CORNERS AND (2) #5 VERTICAL BARS, ONE PER CELL, AT OPENINGS IN WALLS, ENDS OF WALLS AND BELOW BEAM/JOIST POCKETS. PROVIDE 3/16" LADDER TYPE HORIZ. REINF. (HOHMANN & BARNARD INC. OR EQUIVALENT) AT 16" O.C. ABOVE GRADE AND 8" O.C. BELOW GRADE (TYP.)
 - MW2: 8" CMU WALL WITH #5 @ 48" O.C. PROVIDE BOND BEAMS WITH (2)#5 HORIZONTAL BARS AT TOP OF WALL AND BOTT. OF WINDOW OPENING. PROVIDE (3) #5 VERTICAL BARS, ONE PER CELL, AT CORNERS AND (2) #5 VERTICAL BARS, ONE PER CELL, AT OPENINGS IN WALLS, AND ENDS OF WALLS (TYP. FOR 8" NON-BEARING CMU WALLS, REFER TO ARCH.). PROVIDE 9 GA. LADDER TYPE HORIZ. REINF. (HOHMANN & BARNARD INC. OR EQUIVALENT) AT 16" O.C. ABOVE GRADE AND 8" O.C. BELOW GRADE (TYP.)
 - MW3: 6" CMU WALL WITH #5 @ 48" O.C. PROVIDE BOND BEAMS WITH (2)#5 HORIZONTAL BARS AT TOP OF WALL, PROVIDE (3) #5 VERTICAL BARS, ONE PER CELL, AT CORNERS AND (2) #5 VERTICAL BARS, ONE PER CELL, AT OPENINGS IN WALLS, AND ENDS OF WALLS (TYP. FOR 6" NON-BEARING CMU WALLS, REFER TO ARCH.) PROVIDE 9 GA. LADDER TYPE HORIZ. REINF. (HOHMANN & BARNARD INC. OR EQUIVALENT) AT 16" O.C. ABOVE GRADE AND 8" O.C. BELOW GRADE (TYP.)
 - MP-1: 8"x16" MASONRY PIER REINF. W/ (4) #5 FULL HEIGHT VERTICAL & #3 TIES @ 16" O.C.
 - MP-2: 8"x24" MASONRY PIER REINF. W/ (6) #5 FULL HEIGHT VERTICAL & #3 TIES @ 8" O.C.
 - S.O.G-1: 5" SLAB ON GRADE WITH 6x6-W2.9xW2.9 W.W.F. PLACED @ 2" FROM TOP OF SLAB ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-GRADE (TYP. UNO)
 - S.O.G-2: 6" SLAB ON GRADE WITH #5 @ 12" O.C. EACH WAY TOP AND BOTTOM. PLACED @ 2" FROM TOP AND BOTTOM OF SLAB ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-GRADE (TYP. UNO)

9. REFERENCE DRAWINGS:

- S0.01 & S0.02 GENERAL STRUCTURAL NOTES
- S0.03 SPECIAL INSPECTION SCHEDULES
- S3.00 TYPICAL CONCRETE DETAILS
- S4.00 TYPICAL MASONRY DETAILS
- S4.01 TYPICAL MASONRY DETAILS
- S6.00 TYPICAL STEEL DETAILS
- S7.00 SECTIONS & DETAILS
- S7.01 SECTIONS & DETAILS

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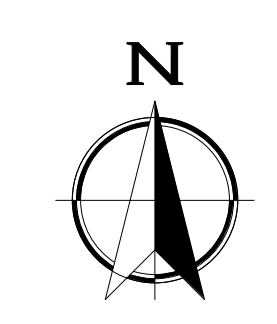
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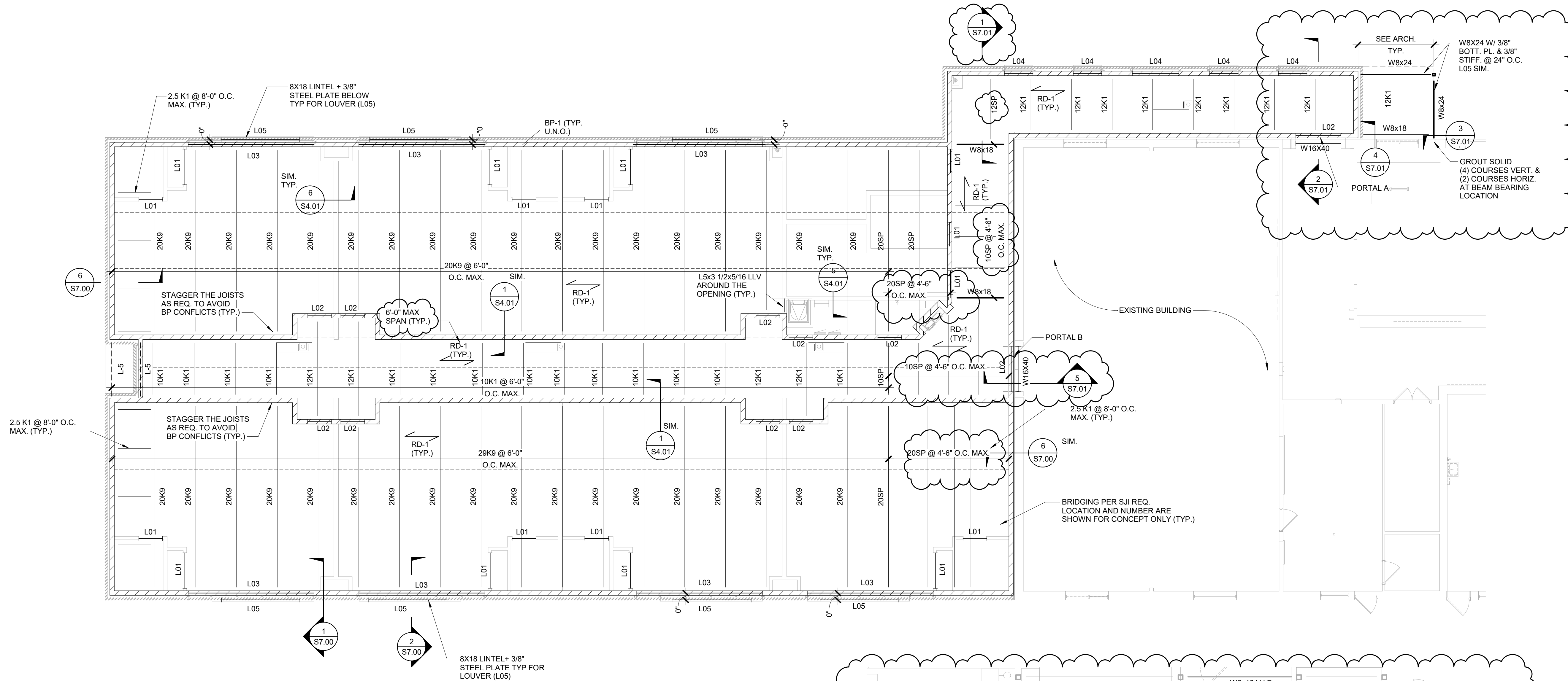
0 1 2 3
REF. SCALE IN INCHES PROJECT #22009942.00

Addendum #3	16 August 2023
Addendum #2	14 August 2023
Bidding and Permits	31 July 2023
Owner Review	17 July 2023
Design Development	08 May 2023

EHRESMAN ARCHITECTS
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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition



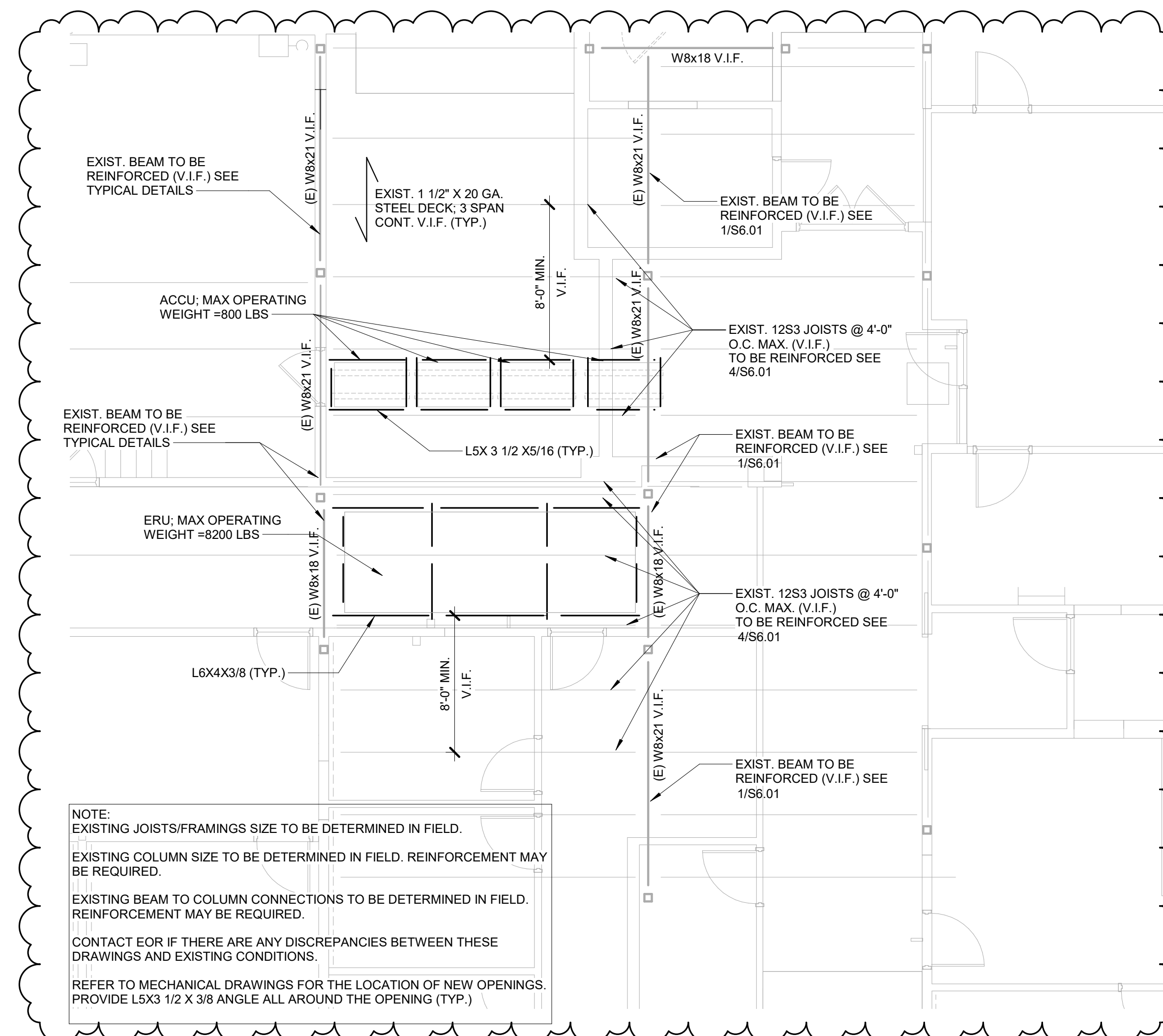


1 ROOF FRAMING PLAN

1/8" = 1'-0"

ROOF FRAMING NOTES:

- TOP OF STEEL REFERENCE ELEVATION (DECK BEARING ELEVATION) = REFER TO ARCH.
- DESIGNATIONS:
RD-1: 1 1/2" x 20 GAGE MIN. TYPE "B" WIDE RIB GALVANIZED STEEL ROOF DECK (MIN. 3 SPAN CONT.) REFER TO DRAWING S6.00 FOR ATTACHMENT DETAILS. 6'-0" MAX. SPAN. MINIMUM DECK SECTION PROPERTIES FOR DECK BASED ON F_y = 50 KSI (VULCRRAFT); DESIGN THICKNESS = 0.0358" (UNCOATED)
I (POSITIVE) = 0.201 IN²/FT.
I (NEGATIVE) = 0.222 IN²/FT.
S (POSITIVE) = 0.234 IN²/FT.
S (NEGATIVE) = 0.247 IN²/FT.
L-x: LINTEL, REFER TO SCHEDULE
BP-1: BEARING PLATE. 7x7x3/8" WITH (2) 1/2" DIA. x 6" LONG HEADED STUDS (TYP. FOR ALL JOISTS/BEAMS U.N.O.)
- ALL JOIST SEATS FOR K-SERIES JOISTS SHALL BE 2 1/2" DEEP, UNLESS NOTED OTHERWISE.
- ALL JOISTS SHALL BE DESIGNED FOR A NET UPLIFT OF 12 PSF (ASD), IN ADDITION TO OTHER LOAD CASES AND ANY OTHER NON-UNIFORM LOADS INDICATED ON THE DRAWINGS. ALL BRIDGING AND UPLIFT BRIDGING SHALL BE PER SJI REQUIREMENTS.
- COORDINATE SIZES AND LOCATION OF ALL ROOF OPENINGS WITH ARCHITECTURAL AND MEP DRAWINGS. PROVIDE L5x3 1/2 X 5/16 LLV ALL SIDES OF SUPPORTING EDGE. REFER TO TYPICAL DETAILS FOR JOIST REINF. AT CONCENTRATED LOAD (TYP.) 3'-0" X 3'-0" MAX. ASSUMED OPENING DIMENSIONS. 6'-0" MAX. ASSUMED SPAN. CONTACT EOR IF THERE ARE ANY DISCREPANCIES.
- FRAMING FOR ALL ROOF DRAINS AND OVERFLOW DRAINS SHALL BE L5x3 1/2x5/16 LLV TYPICAL ALL SIDES OF SUPPORTED EDGE, UNLESS NOTED OTHERWISE. REFER TO TYPICAL DETAILS FOR JOIST REINF. AT CONCENTRATED LOAD(TYP.)
- VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
- REFERENCE DRAWINGS:
S0.01 & S0.02 GENERAL STRUCTURAL NOTES
S0.03 SPECIAL INSPECTION SCHEDULES
S3.00 TYPICAL CONCRETE DETAILS
S4.00 TYPICAL MASONRY DETAILS
S4.01 TYPICAL MASONRY DETAILS
S6.00 TYPICAL STEEL DETAILS
S7.00 SECTIONS & DETAILS
S7.01 SECTIONS & DETAILS



3 PARTIAL ROOF PLAN

3/16" = 1'-0"

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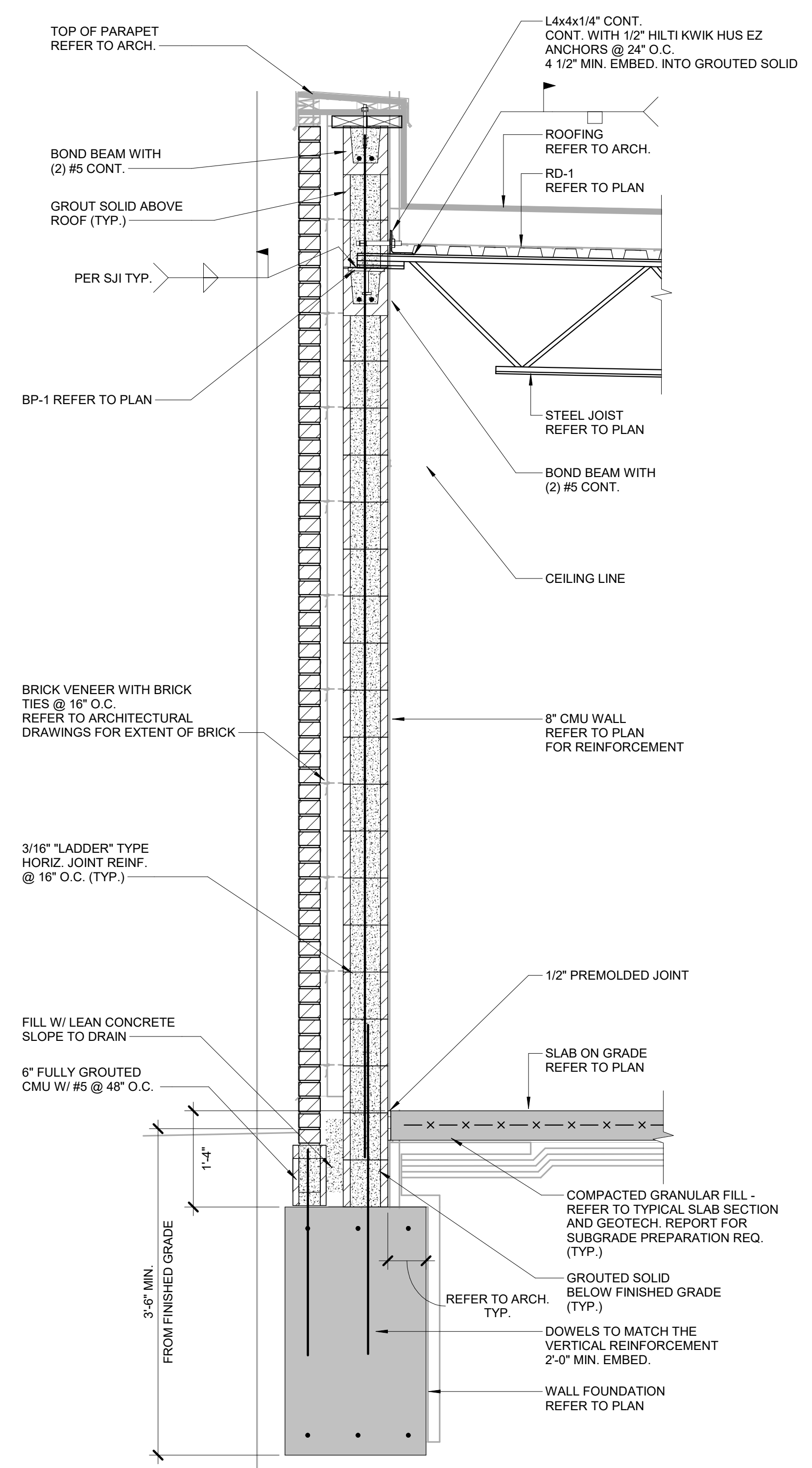
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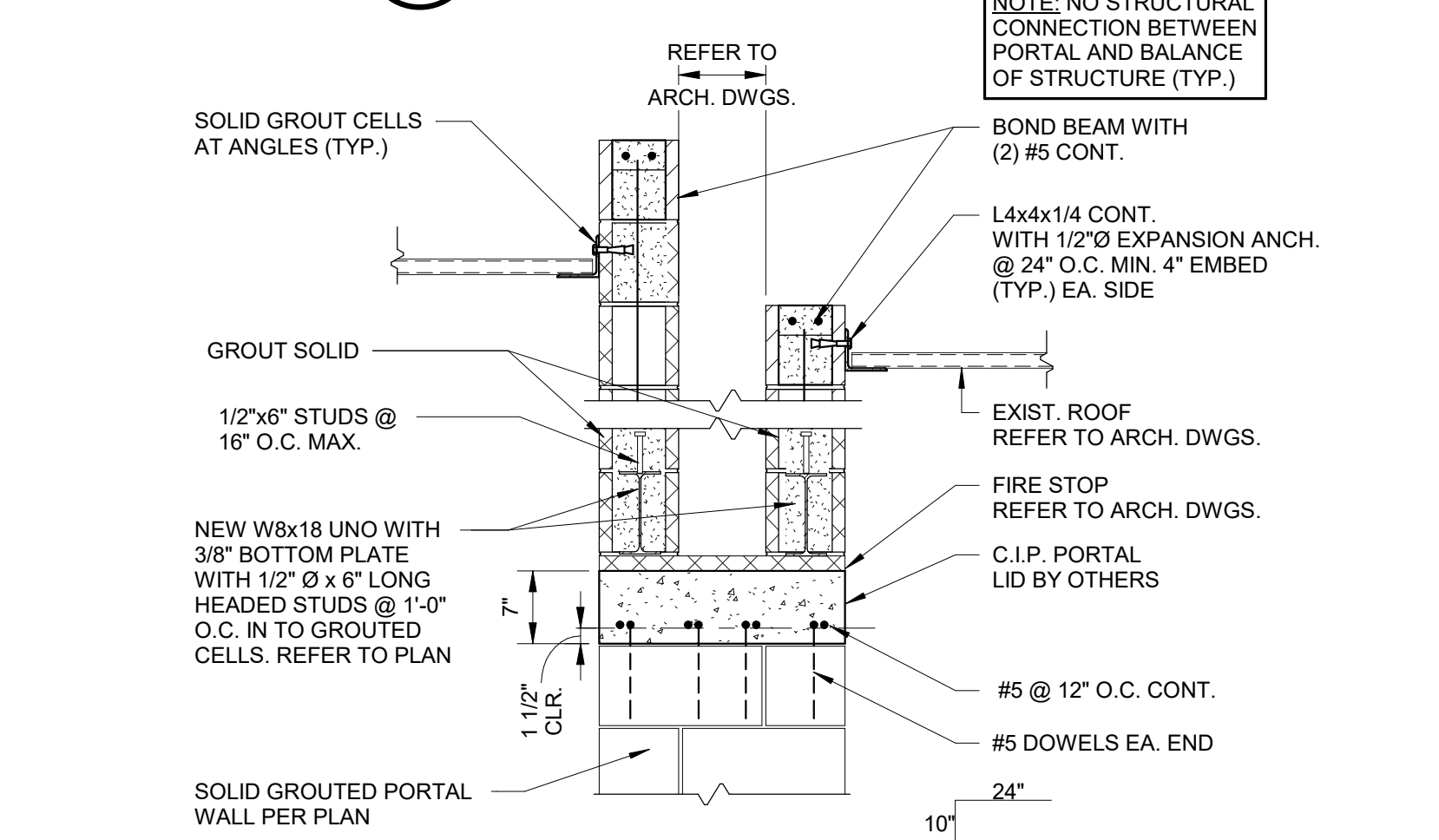
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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

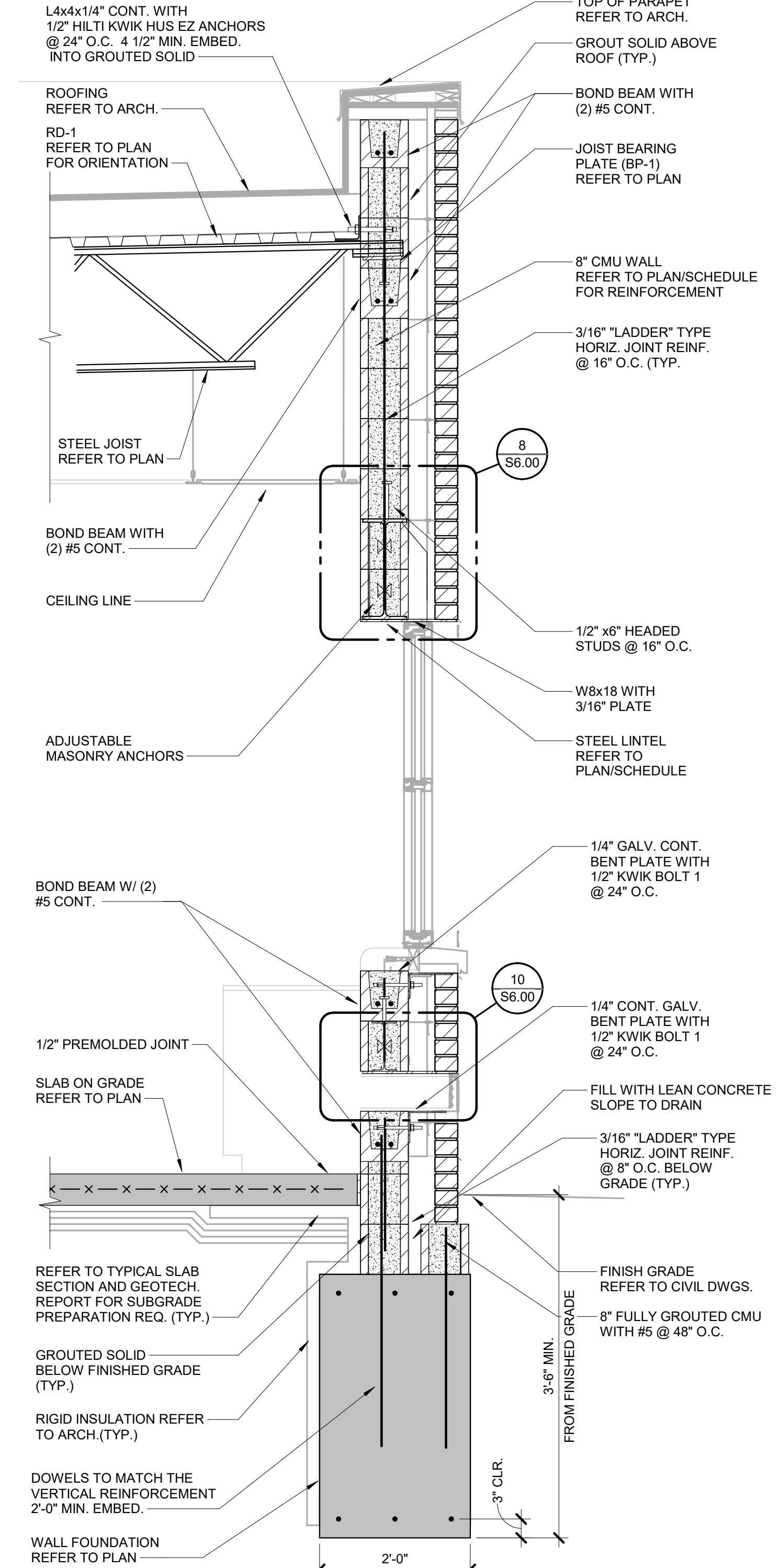


1 SECTION
3/4" = 1'-0"

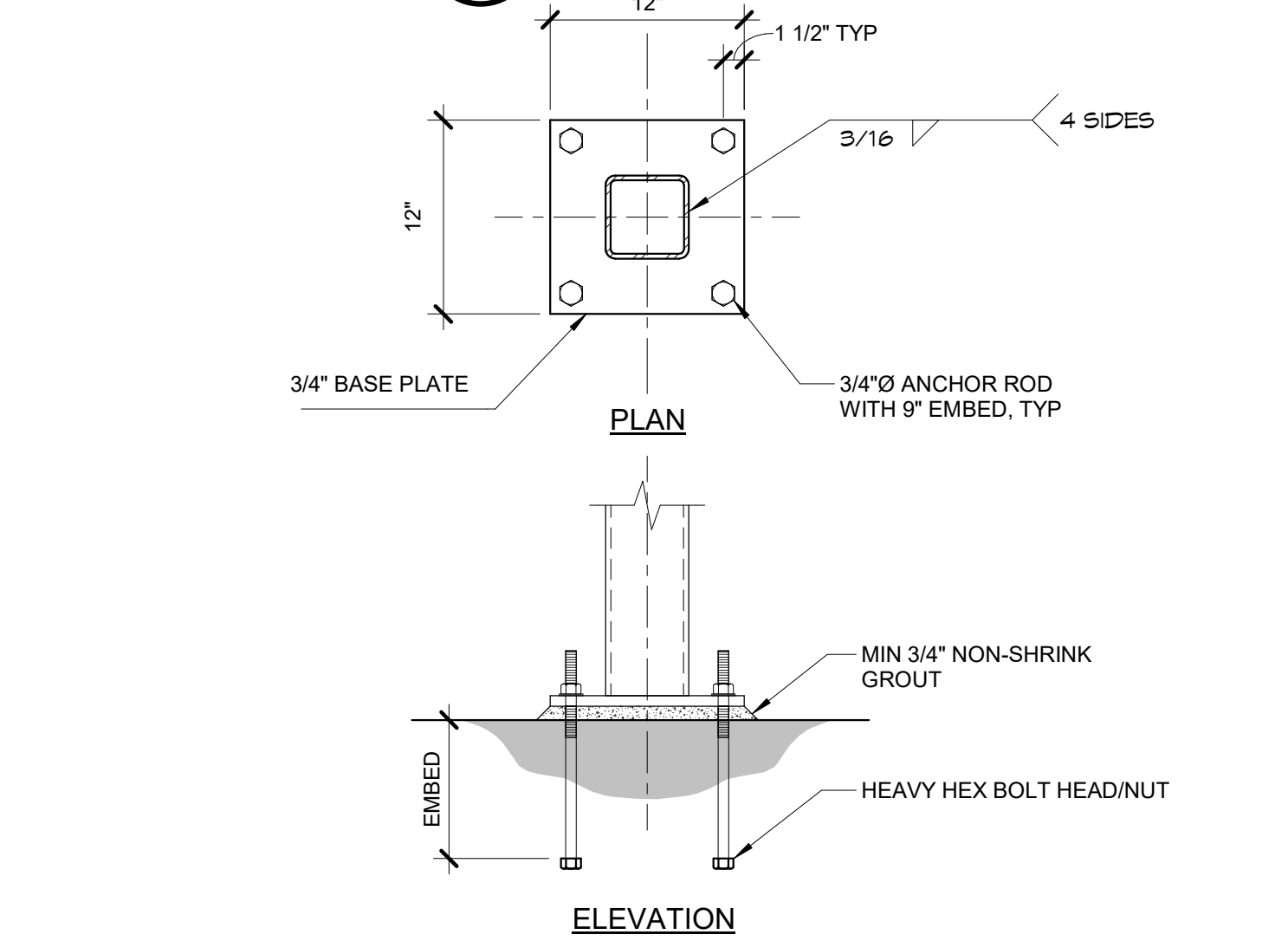


4 PORTAL SECTION
3/4" = 1'-0"

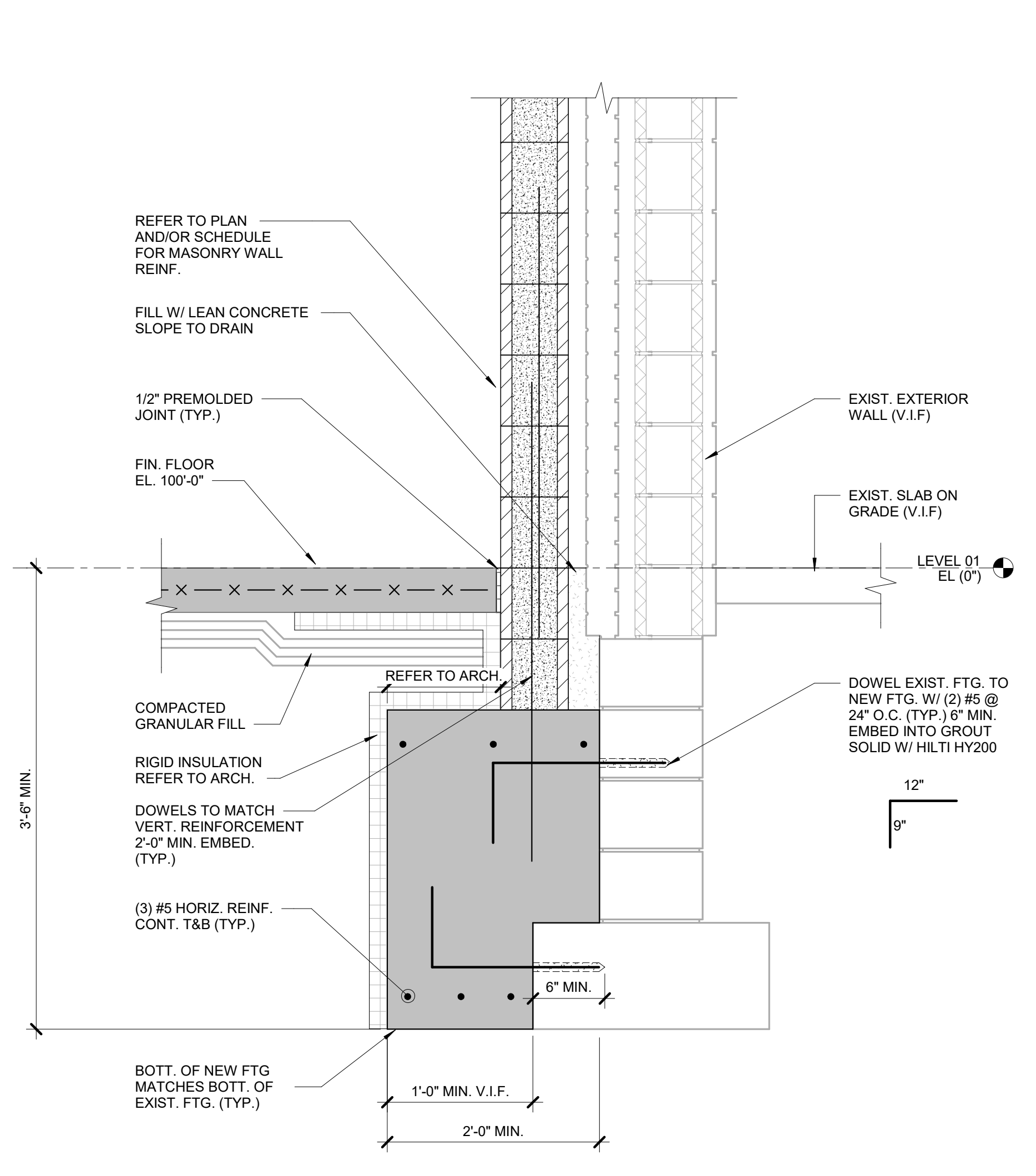
NOTE: PORTAL ASSEMBLY IS STRUCTURALLY INDEPENDENT OF FIRE WALLS ON EA. SIDE



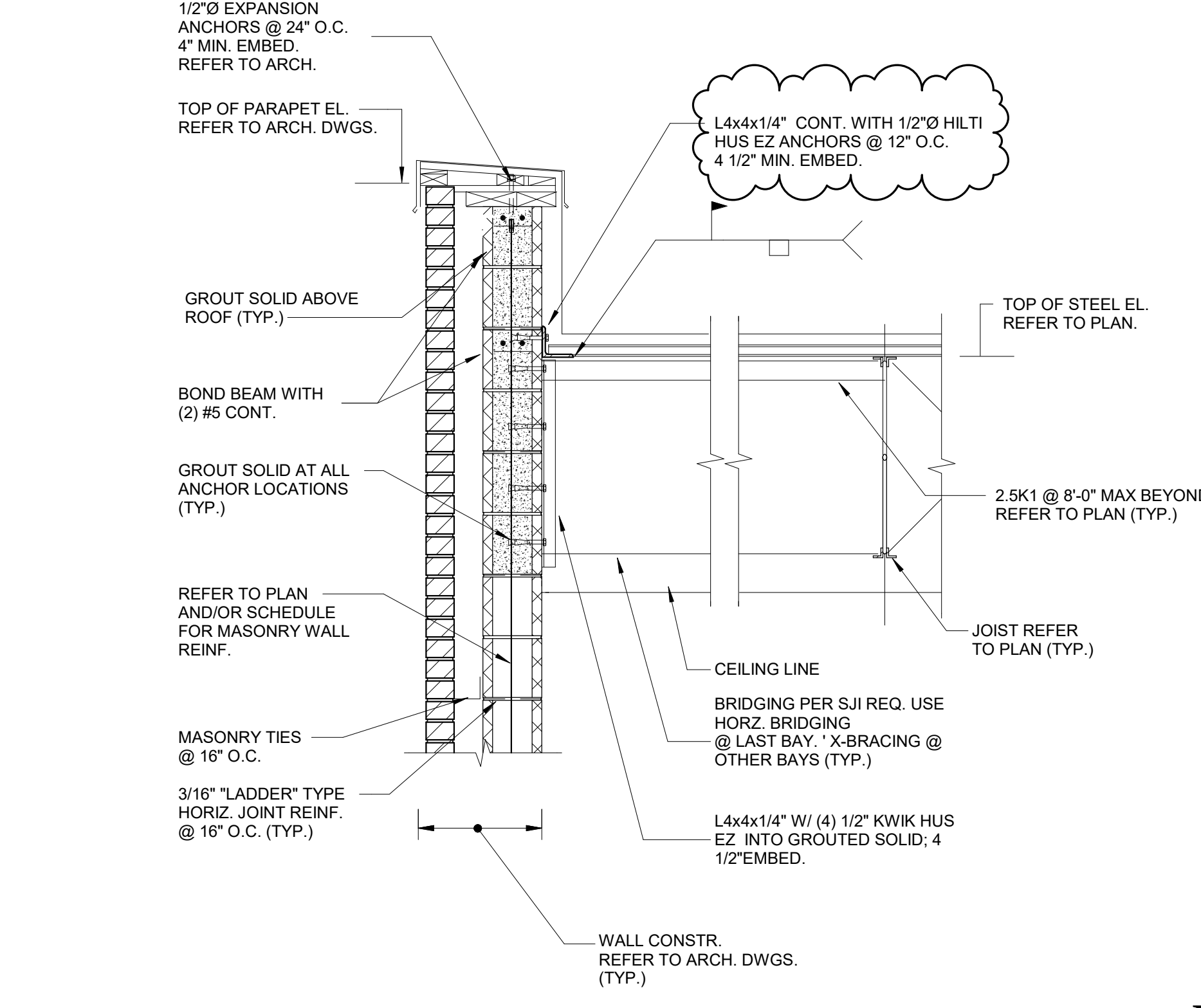
2 SECTION
3/4" = 1'-0"



5 HSS COLUMN BASE PLATE
1" = 1'-0"



3 SECTION
1" = 1'-0"



6 SECTION
3/4" = 1'-0"

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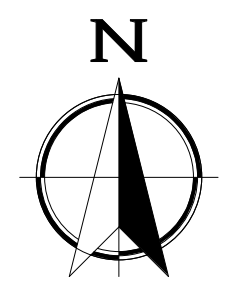
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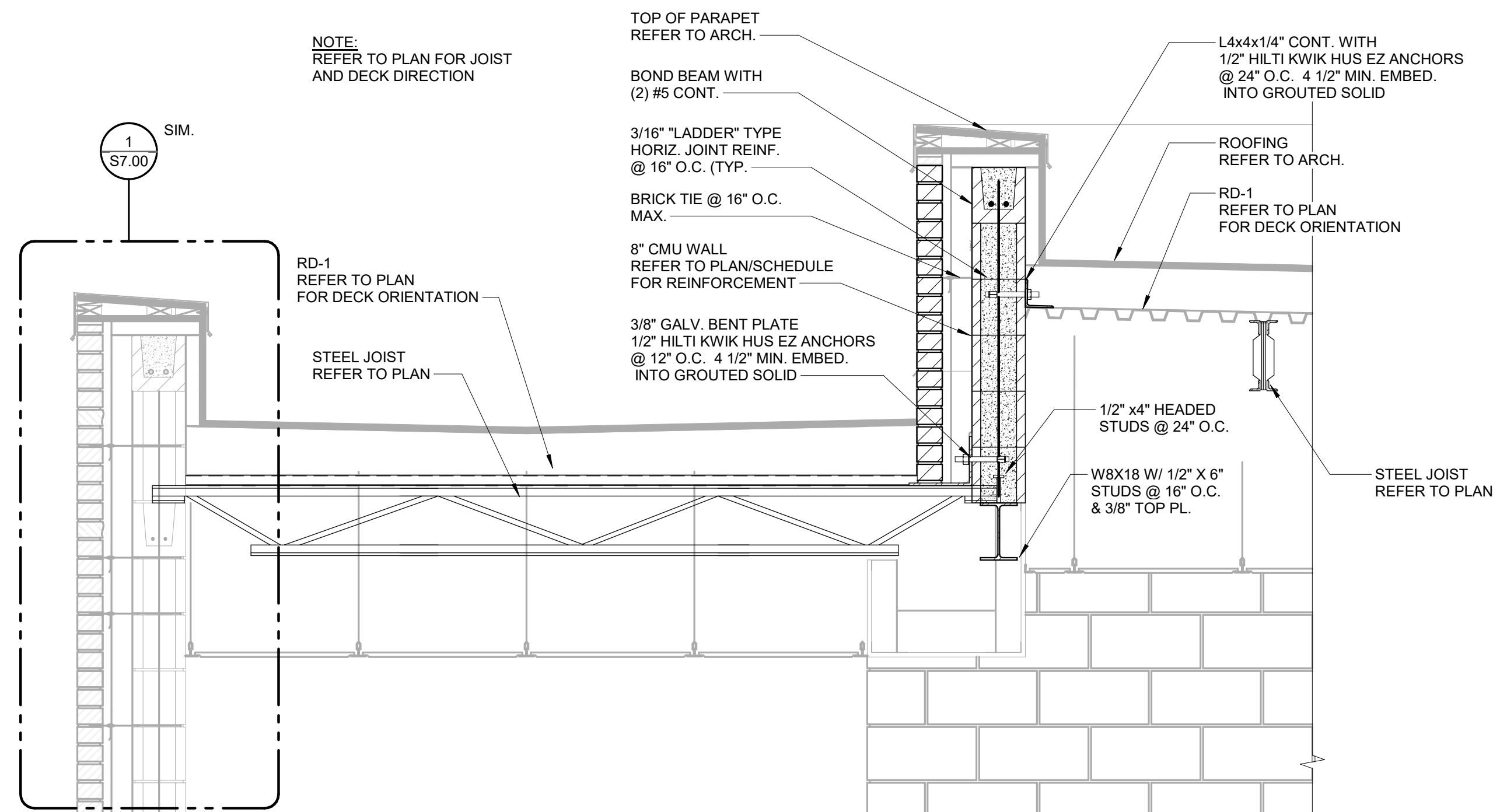
Addendum #3	16 August 2023
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SECTIONS AND DETAILS

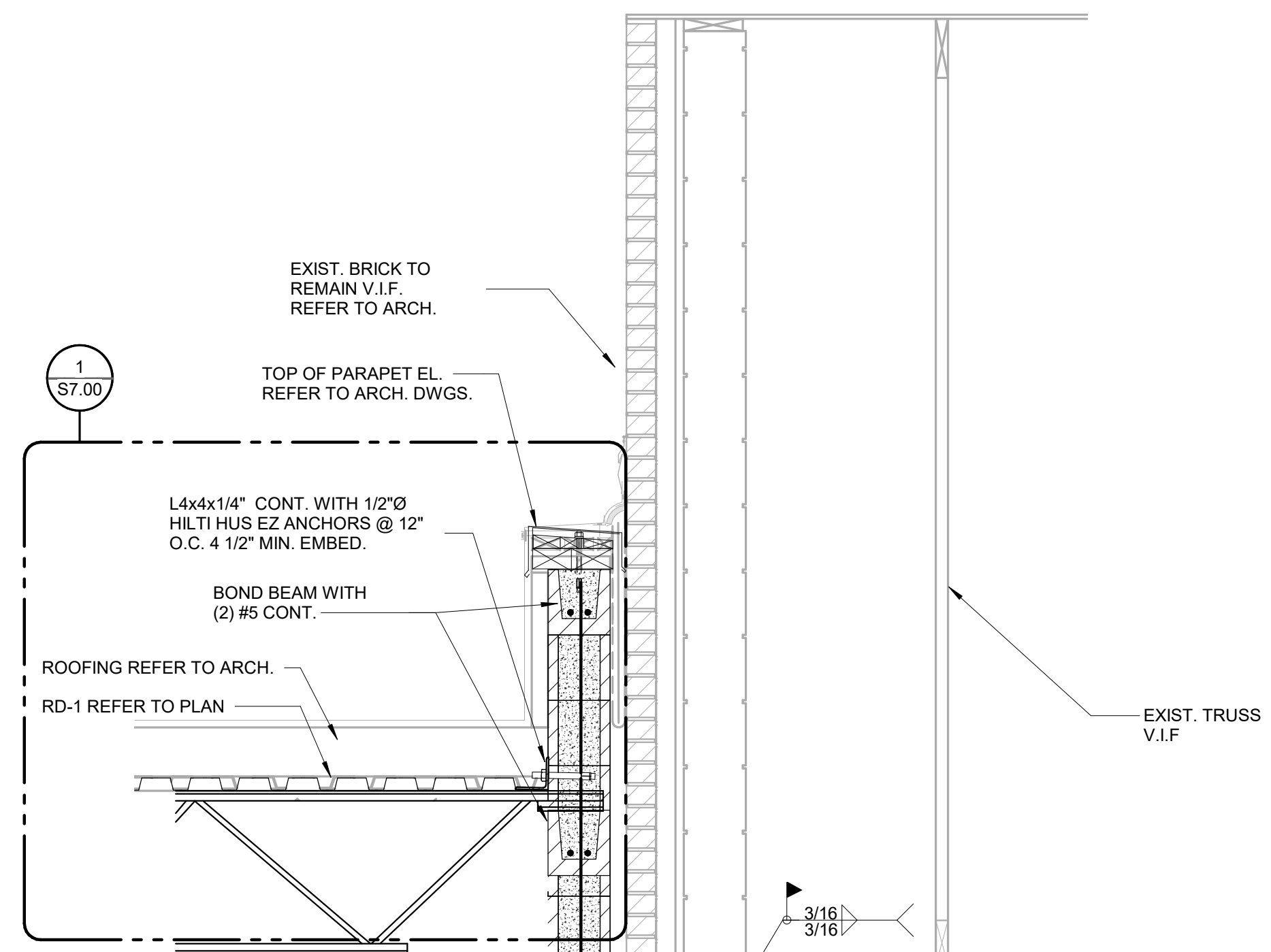


Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

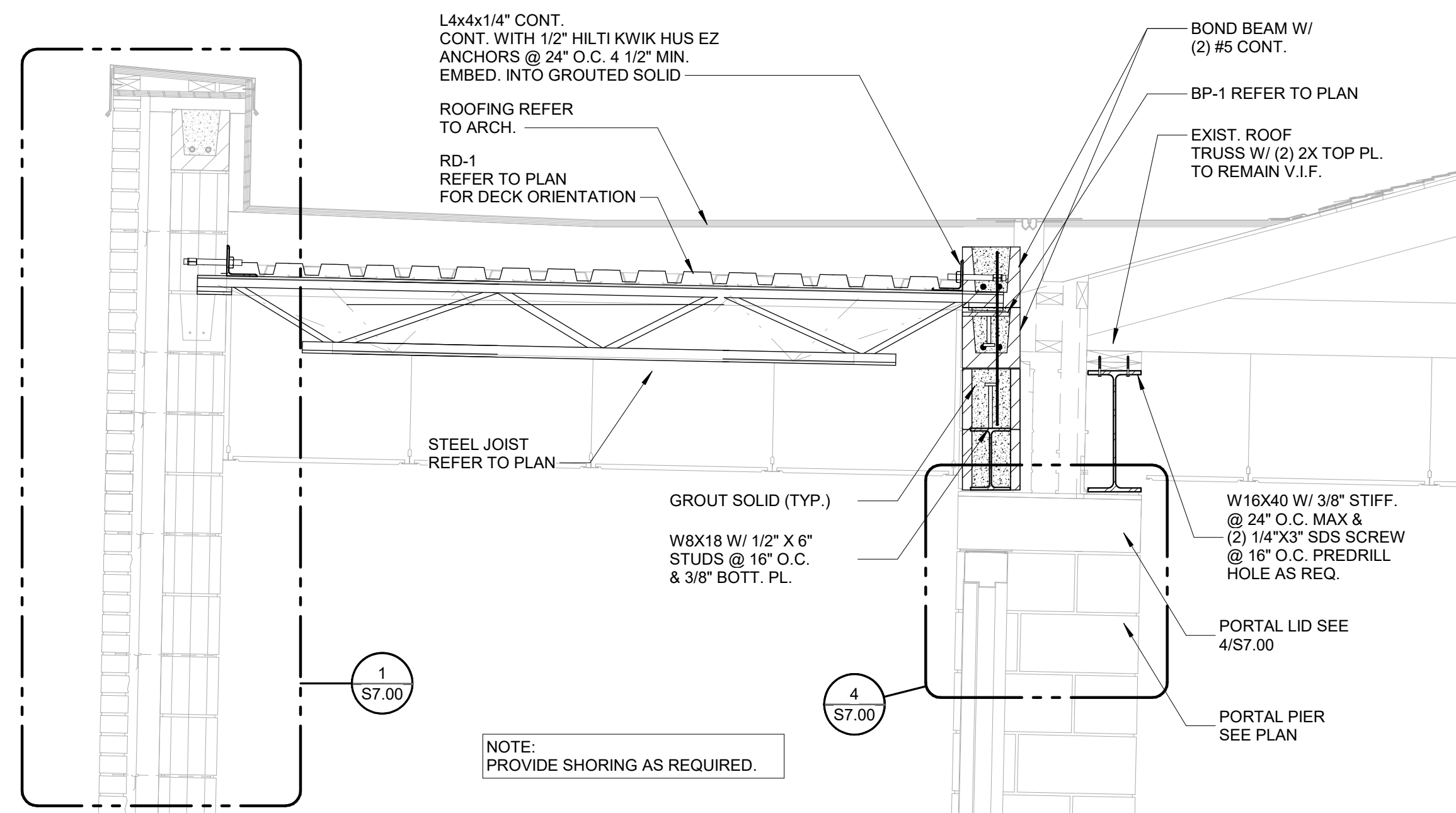




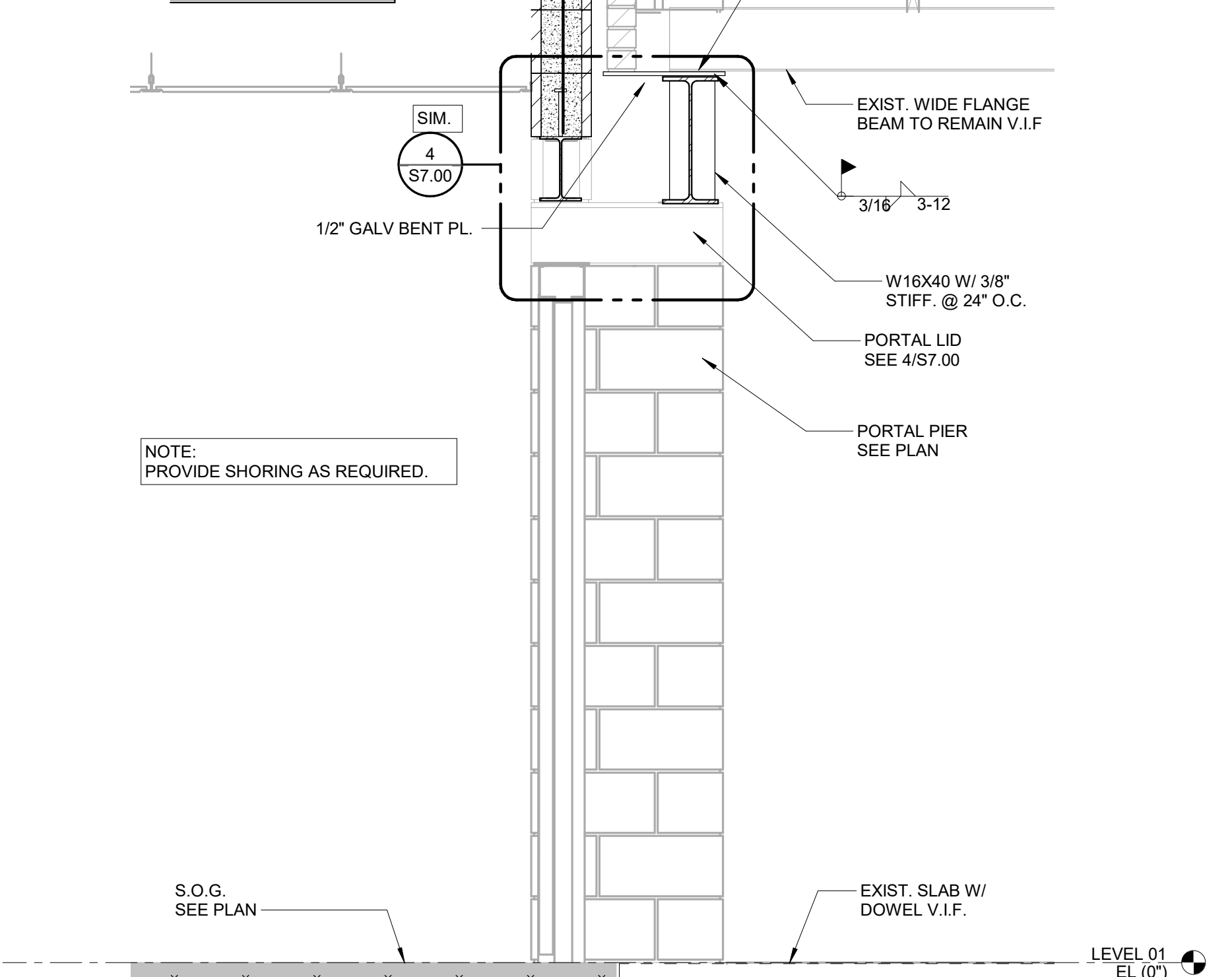
1 SECTION
3/4" = 1'-0"



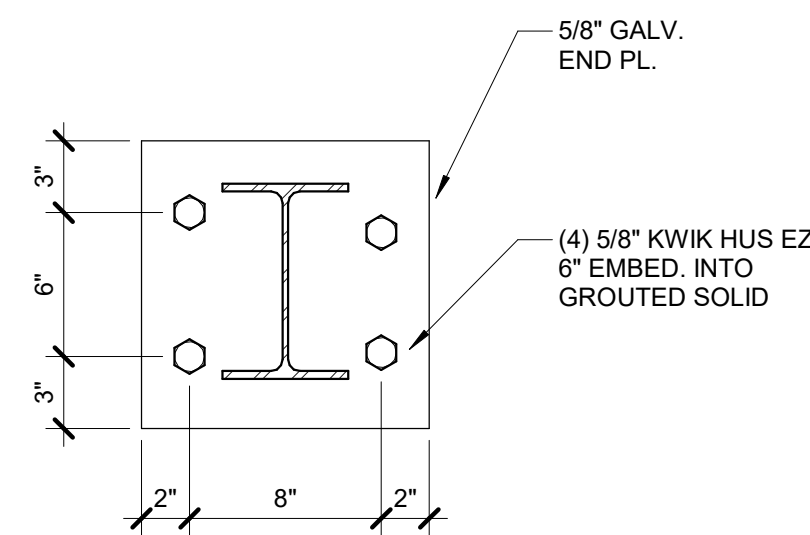
NOTE: PROVIDE SHORING AS REQUIRED.



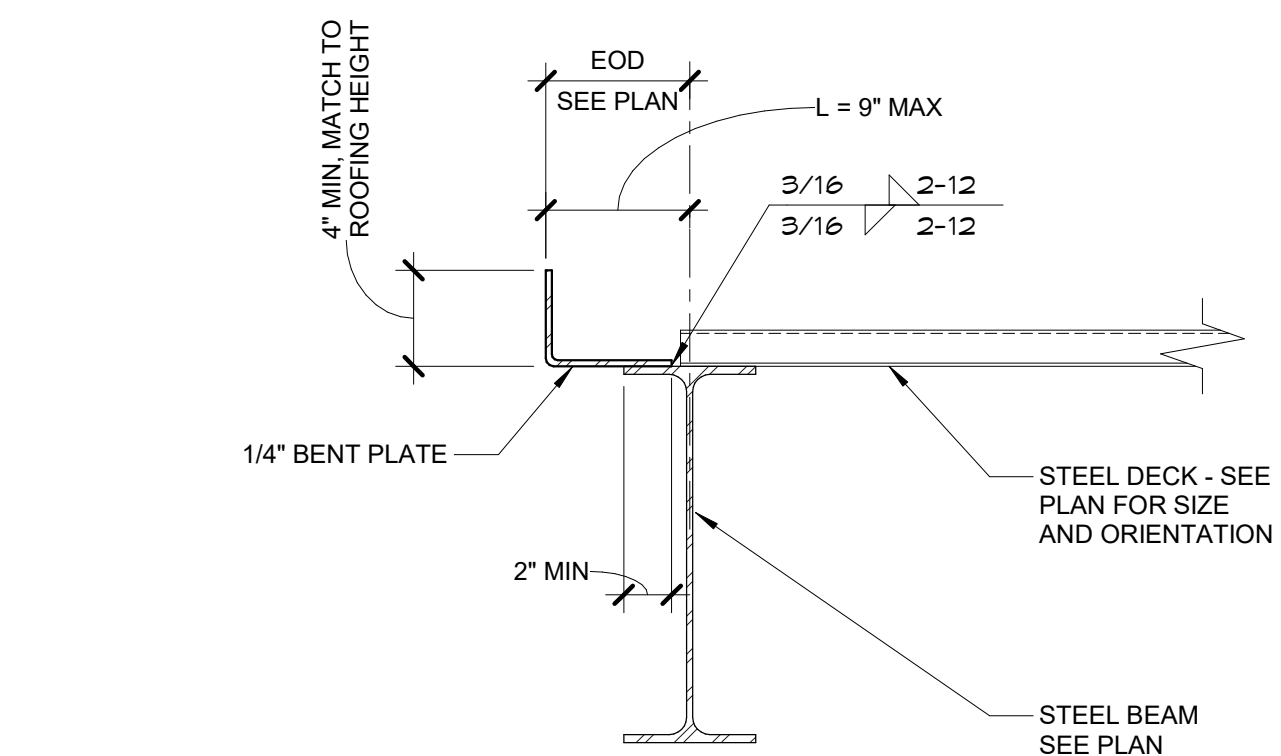
2 SECTION
3/4" = 1'-0"



5 SECTION
3/4" = 1'-0"



3 SECTION
1 1/2" = 1'-0"



4 TYPICAL ROOF DECK EDGE DETAIL
1 1/2" = 1'-0"
S_5-208

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Addendum #3 16 August 2023

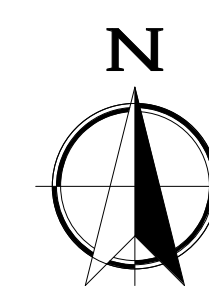
SECTIONS AND DETAILS



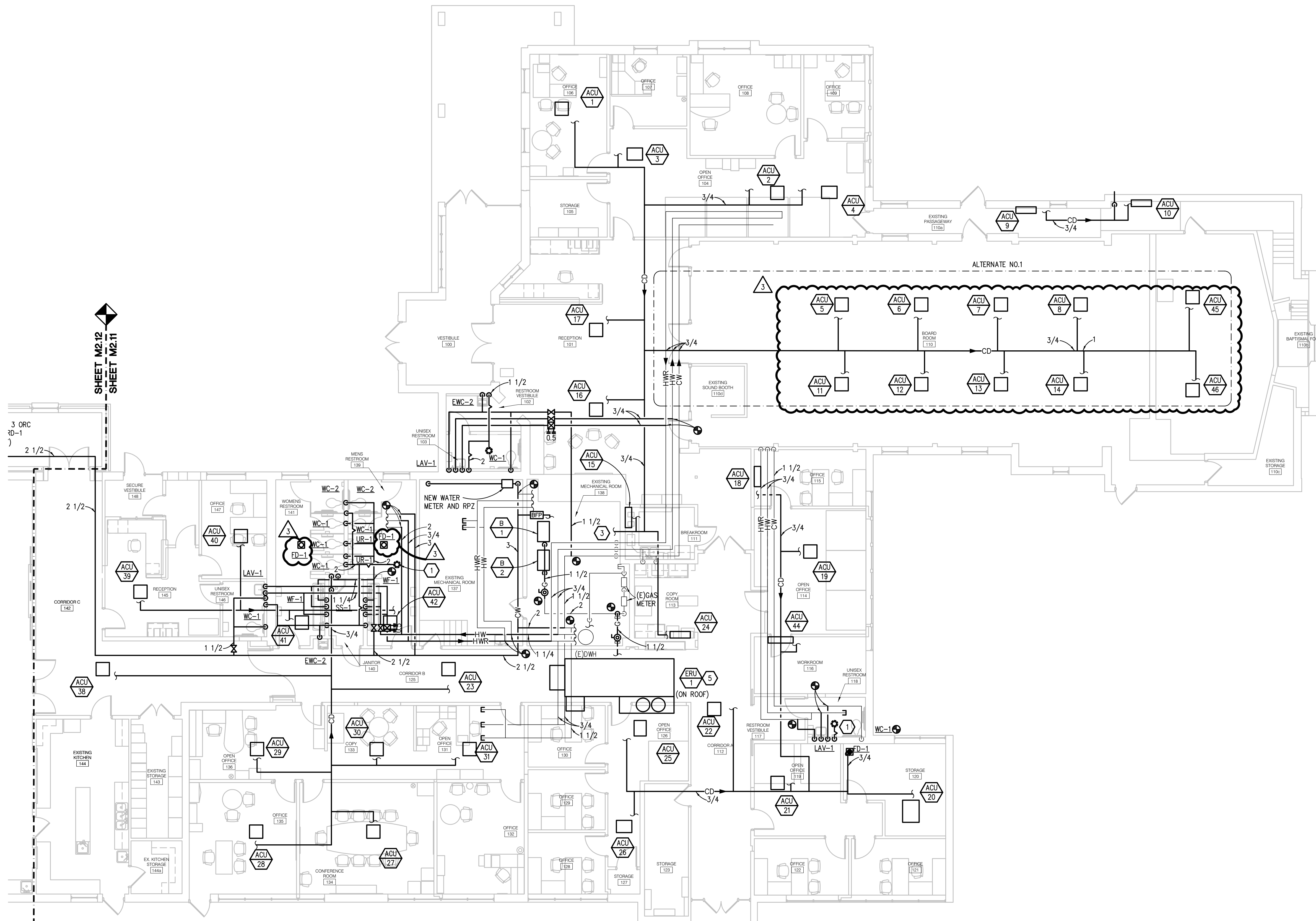
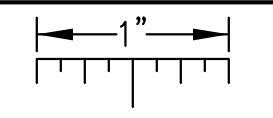
Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 4321

S7.01



THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



PLUMBING GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS, THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
4. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
6. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONED LOCATIONS OF PLUMBING FIXTURES.
7. HOT AND COLD WATER PIPING RUN-OUTS TO LAVATORIES AND SINKS SHALL BE 1/2" UNLESS OTHERWISE NOTED.
8. PLUMBING VENT PIPING THROUGH ROOF SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY FRESH AIR INTAKE LOCATION AND A MINIMUM OF 18" CLEAR FROM THE INSIDE FACE OF PARAPET.
9. PROVIDE CODE REQUIRED CLEARANCE FOR ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING.
10. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
11. WATER SERVICE ENTRANCE PIPING SHALL BE BURIED WITH DEPTH OF COVER OVER TOP OF PIPE OF AT LEAST 12" OR WITH TOP OF PIPE AT LEAST 12" BELOW LEVEL OF MAXIMUM FROST PENETRATION, OR AS REQUIRED BY AUTHORITIES HAVING JURISDICTION, WHICHEVER IS DEEPEST.

CONSTRUCTION KEY NOTES:

1. 2 V UP TO 3 VTR.
2. VERIFY ADEQUATE INVERT DEPTH FOR NEW SANITARY PRIOR TO SAWCUTTING AND INSTALLATION.
3. ROUTE CONDENSATE TO FLOOR DRAIN WITHIN BOILER ROOM.
4. TERMINATE OVERFLOW ROOF CONDUCTOR DOWNSPOUT NOZZLE HIGH ON EXTERIOR WALL AND TERMINATE ROOF CONDUCTOR DOWNSPOUT NOZZLE LOW ON EXTERIOR WALL. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS.
5. PROVIDE HEAT TRACE ON ERU CONDENSATE DRAINS. REFER TO DETAIL.
6. PROVIDE AND INSTALL SHEET METAL PIPING ENCLOSURE TO CONCEAL VERTICAL CONDENSATE PIPE. REFER TO DETAIL ON M6.03.

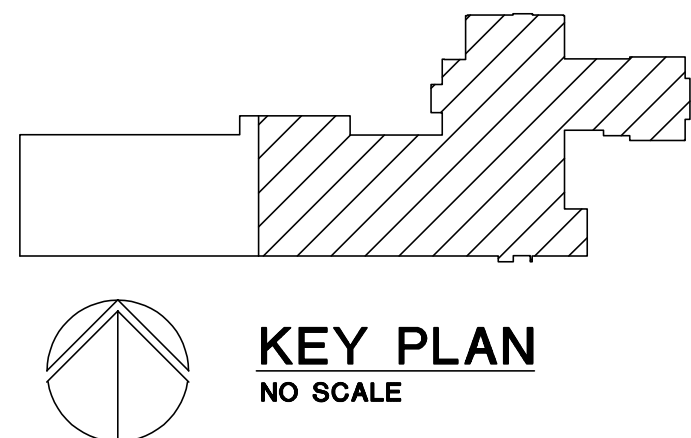
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SHEET M2.12
SHEET M2.11

SHEET M2.12
SHEET M2.11

Addendum #3: 16 August 2023
Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
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PLUMBING PLAN (PART A)
SCALE: 1/8" = 1'-0"



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Tel: 248-679-5666
Fax: 248-879-0007
www.PeterBassoAssociates.com
PBA Project No: 2022.0419

PLUMBING PLAN (PART A)

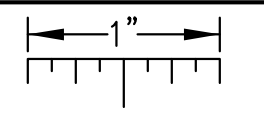


Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M2.11

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.

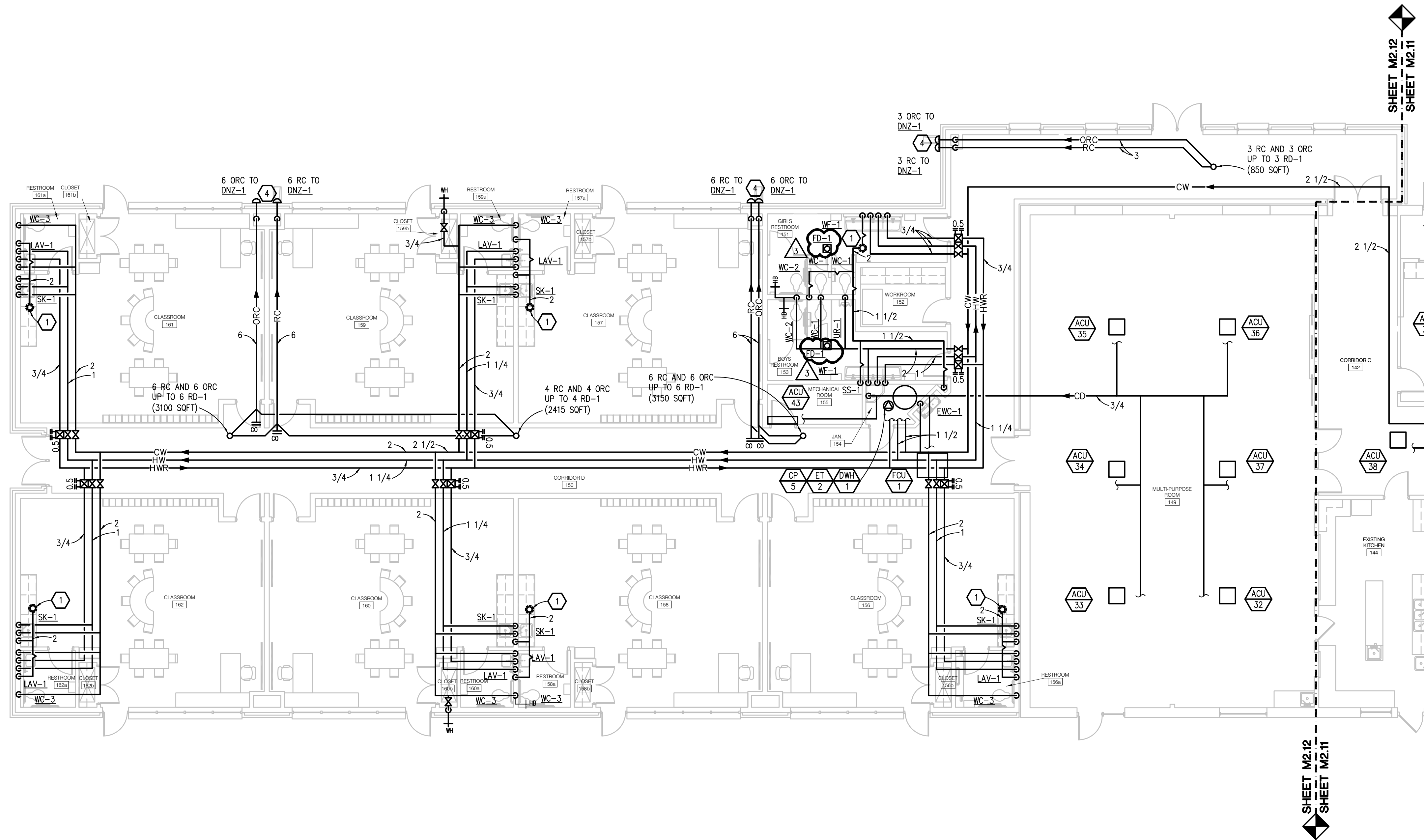


PLUMBING GENERAL NOTES:

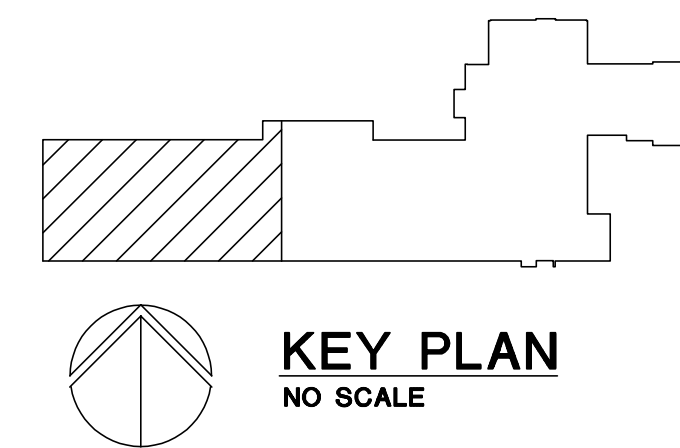
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9. PROVIDE CODE REQUIRED CLEARANCE FOR ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING.
10. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
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5. PROVIDE HEAT TRACE ON ERU CONDENSATE DRAINS. REFER TO DETAIL.
6. PROVIDE AND INSTALL SHEET METAL PIPING ENCLOSURE TO CONCEAL VERTICAL CONDENSATE PIPE. REFER TO DETAIL ON M6.03.



PLUMBING PLAN (PART B)
SCALE: 1/8" = 1'-0"



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PBA Project No: 2022.0419

PLUMBING PLAN (PART B)



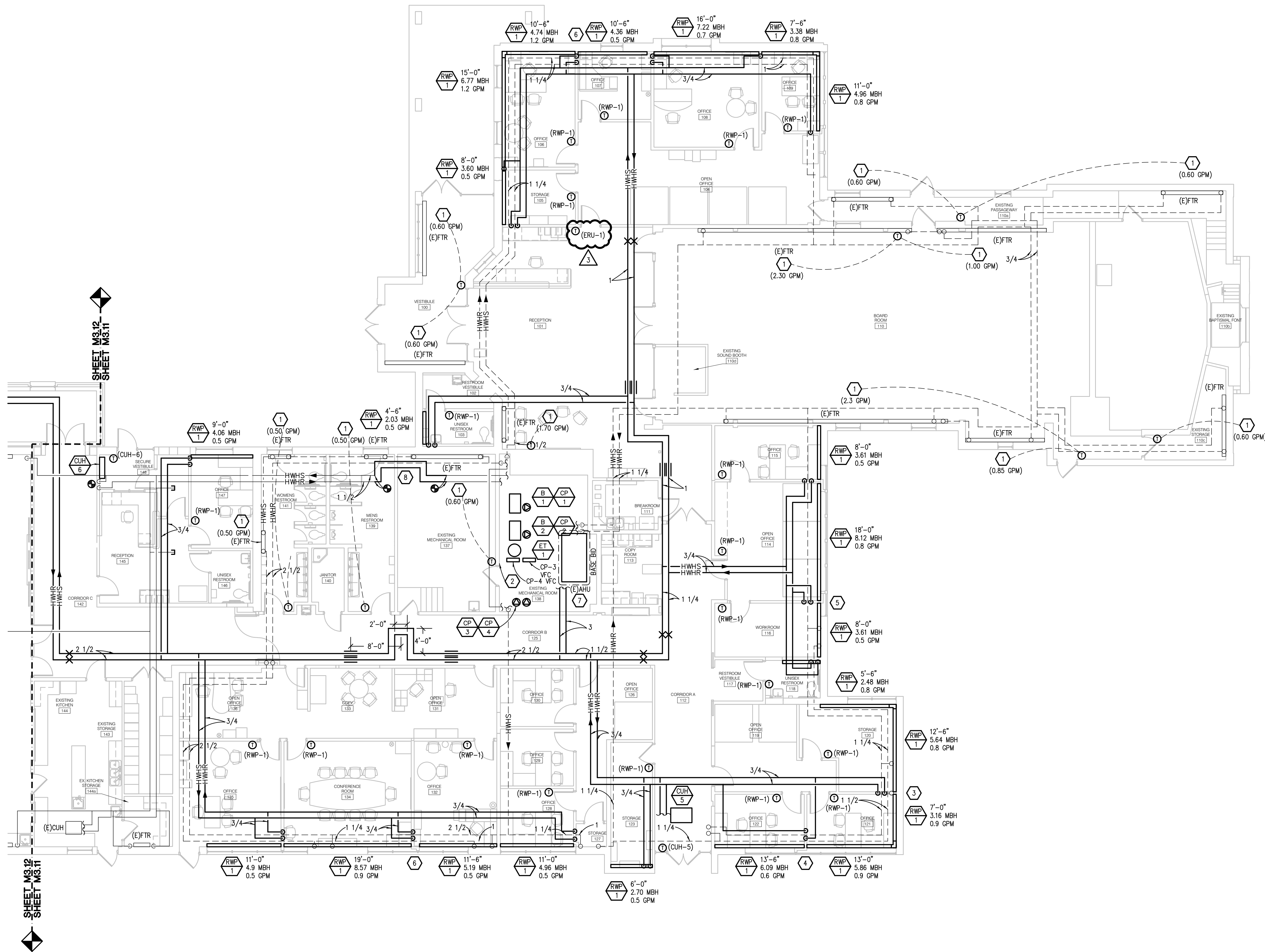
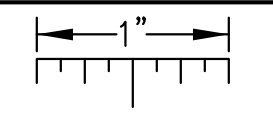
Crestwood School District
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Administration Relocation and Addition

Project No. 3221

M2.12

Addendum #3: 16 August 2023
Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



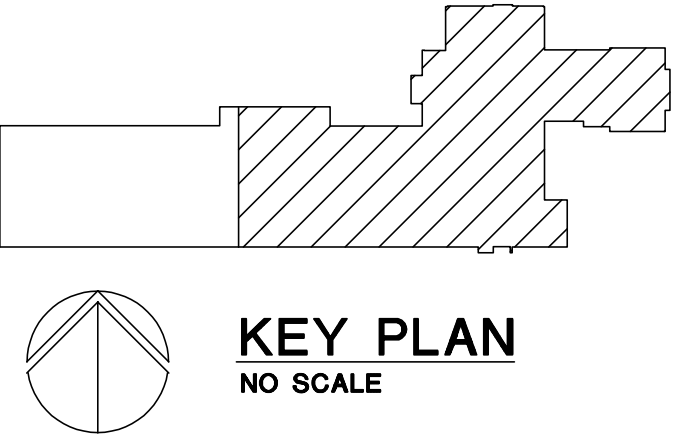
HVAC PIPING GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS, THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. PIPING AND DUCTWORK SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
4. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
6. SUBMIT PROPOSED METHODS OF ANCHORING AND GUIDING PIPING SYSTEMS TO STRUCTURAL ENGINEER FOR APPROVAL.
7. COORDINATE LOCATION OF DUCT-MOUNTED HYDRONIC DEVICES WITH SHEET METAL TRADES.
8. BRANCH PIPING SERVING TERMINAL UNIT HEATING COILS OR RADIANT CEILING PANELS SHALL BE 3/4" UNLESS OTHERWISE NOTED. BRANCH PIPING SERVING MORE THAN ONE TERMINAL UNIT HEATING COIL SHALL BE 1" UNLESS OTHERWISE NOTED. BRANCH PIPING SERVING HOT WATER UNIT HEATERS AND CABINET UNIT HEATERS SHALL BE 1" UNLESS OTHERWISE NOTED.
9. REFER TO TEMPERATURE CONTROLS STANDARD MOUNTING HEIGHTS DETAIL FOR ELEVATIONS OF WALL MOUNTED TEMPERATURE CONTROL DEVICES.

CONSTRUCTION KEY NOTES:

1. MECHANICAL CONTRACTOR TO REPLACE CONTROL VALVE. REFER TO TEMPERATURE CONTROLS DRAWINGS FOR ADDITIONAL INFORMATION.
2. EMERGENCY SHUTDOWN SWITCH.
3. ROUTE 3/4" HWHS LINE DOWN IN NEW WALL TO SERVE RADIANT WALL PANELS TO THE NORTH AND SOUTH.
4. ROUTE 3/4" HWHS LINE DOWN IN NEW WALL TO SERVE RADIANT WALL PANELS TO THE EAST AND WEST.
5. ROUTE 3/4" HWHS AND HWHR LINE DOWN IN NEW WALL TO SERVE RADIANT WALL PANELS TO THE NORTH AND SOUTH.
6. ROUTE 3/4" HWHS AND HWHR LINE DOWN IN NEW WALL TO SERVE RADIANT WALL PANELS TO THE EAST AND WEST.
7. REFER TO HOT WATER HEATING SYSTEM PIPING DIAGRAM FOR REQUIREMENTS.
8. REROUTE HWHS/R PIPING INTO CORNER, COORDINATE WITH ELECTRICAL PHASING. DO NOT ROUTE ABOVE ELECTRICAL EQUIPMENT.

HVAC PIPING PLAN (PART A)
SCALE: 1/8" = 1'-0"



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PBA Project No: 2022.0419

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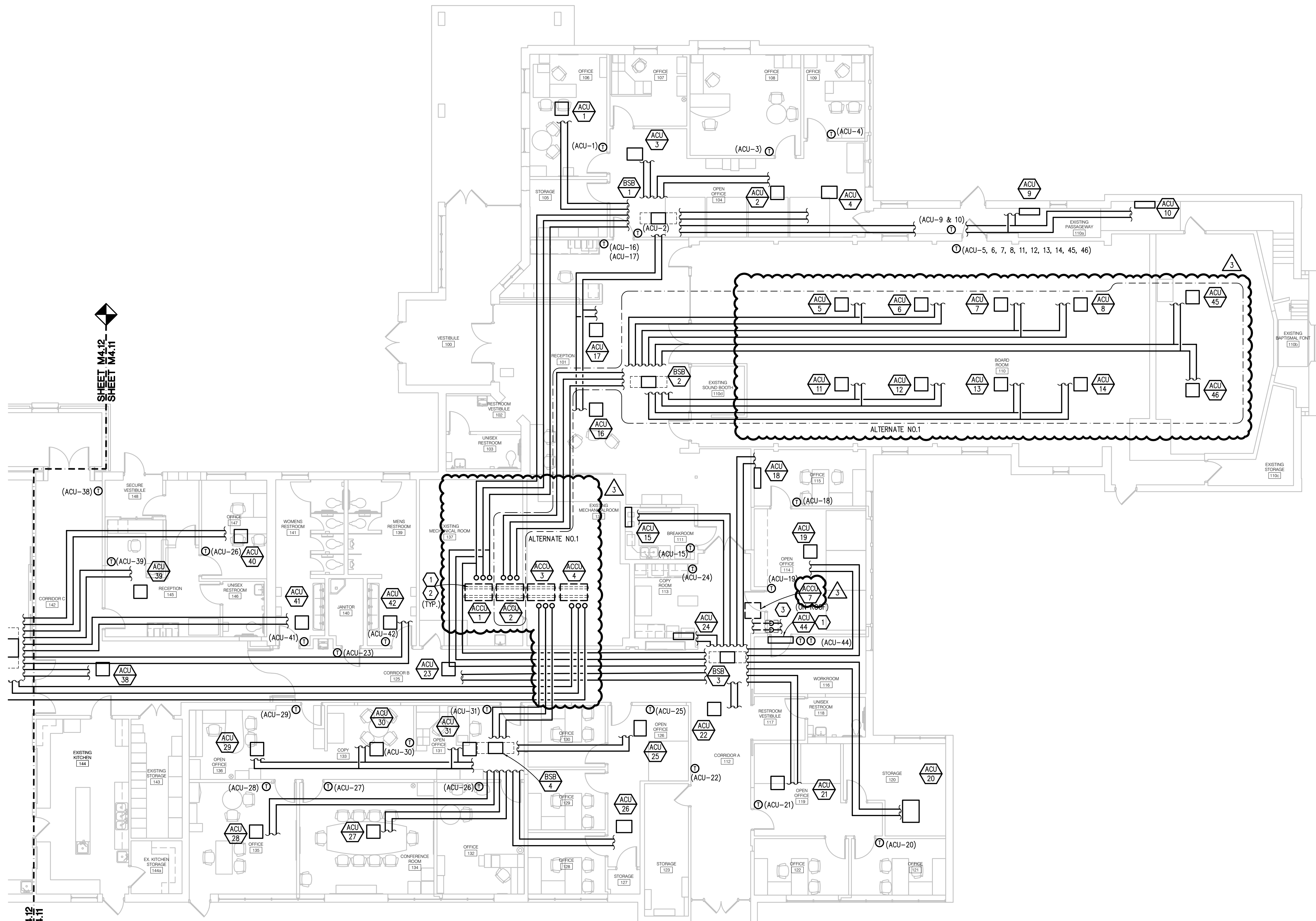
Project No. 3221

M3.11

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9. REFER TO TEMPERATURE CONTROLS STANDARD MOUNTING HEIGHTS DETAIL FOR ELEVATIONS OF WALL MOUNTED TEMPERATURE CONTROL DEVICES.

CONSTRUCTION KEY NOTES:

1. PROVIDE NEW ROOF MOUNTED EQUIPMENT RAILS FOR NEW CONDENSING UNITS.
2. ROUTE NEW REFRIGERANT PIPING UP TO CONDENSING UNITS ON ROOF. INSTALL DUAL MODULE REFRIGERANT NETWORK MANIFOLD KIT (PROVIDED BY VRV MANUFACTURER). REFER TO MANUFACTURER INSTALLATION REQUIREMENTS.
3. PROVIDE PIPE PORTAL TO CONNECT INDOOR UNIT TO OUTDOOR CONDENSING UNIT THRU ROOF.

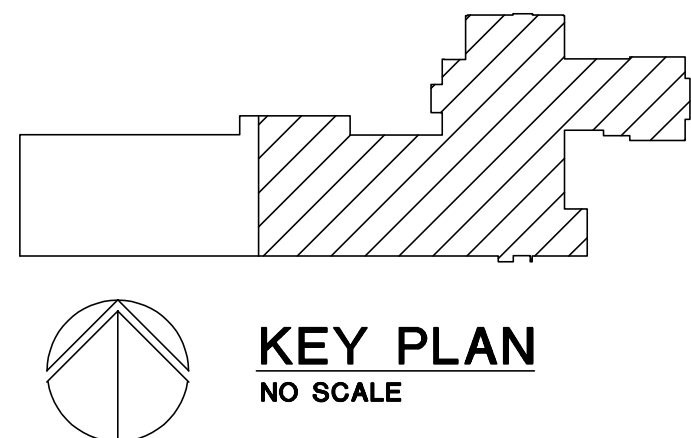
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SHEET M4.12
SHEET M4.11

SHEET M4.12
SHEET M4.11

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REFRIGERANT PIPING PLAN (PART A)
SCALE: 1/8" = 1' - 0"



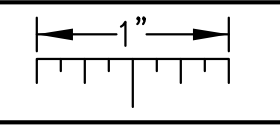
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Project No. 3221 M4.11

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.

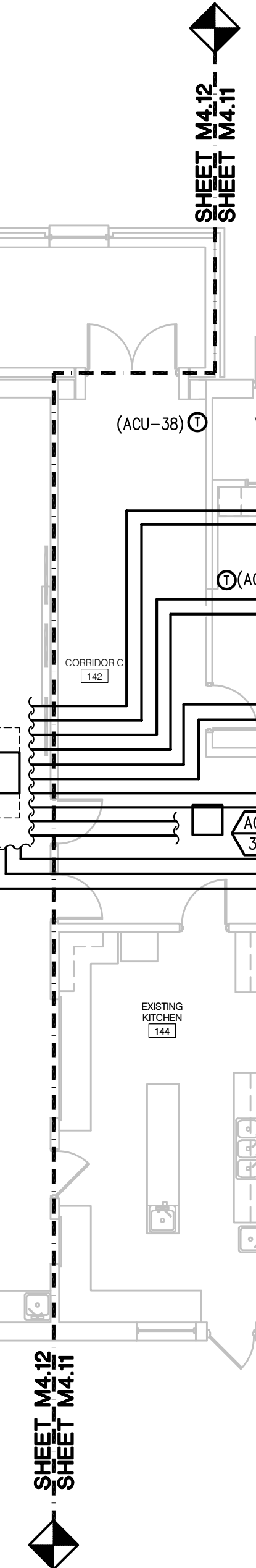
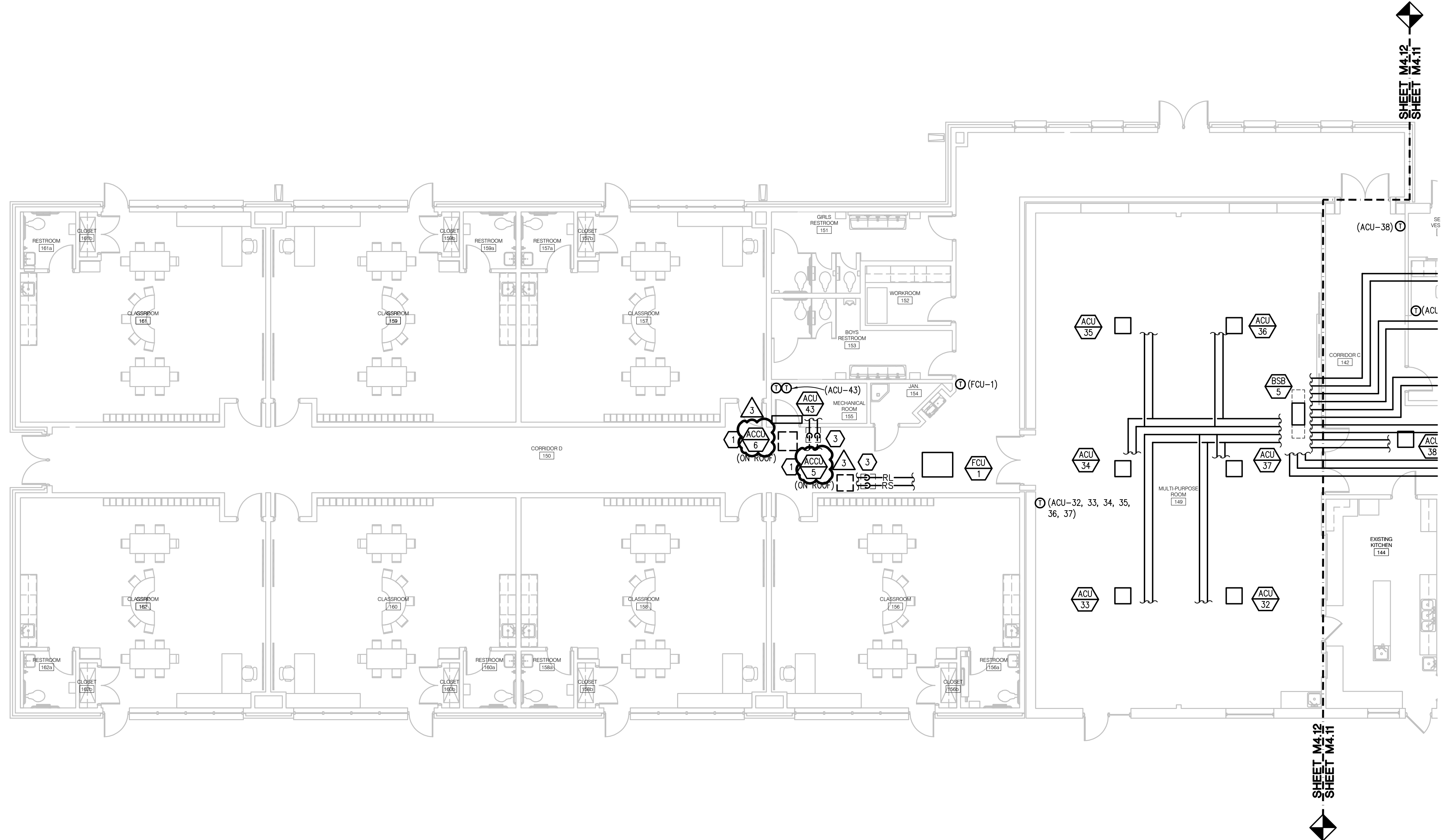


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9. REFER TO TEMPERATURE CONTROLS STANDARD MOUNTING HEIGHTS DETAIL FOR ELEVATIONS OF WALL MOUNTED TEMPERATURE CONTROL DEVICES.

CONSTRUCTION KEY NOTES:

1. PROVIDE NEW ROOF MOUNTED EQUIPMENT RAILS FOR NEW CONDENSING UNITS.
2. ROUTE NEW REFRIGERANT PIPING UP TO CONDENSING UNITS ON ROOF. INSTALL DUAL MODULE REFRIGERANT NETWORK MANIFOLD KIT (PROVIDED BY VRV MANUFACTURER). REFER TO MANUFACTURER INSTALLATION REQUIREMENTS.
3. PROVIDE PIPE PORTAL TO CONNECT INDOOR UNIT TO OUTDOOR CONDENSING UNIT THRU ROOF.



REFRIGERANT PIPING PLAN (PART B)
SCALE: 1/8" = 1' - 0"

KEY PLAN
NO SCALE

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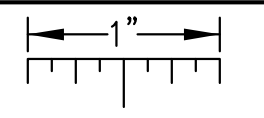
Project No. 3221

M4.12

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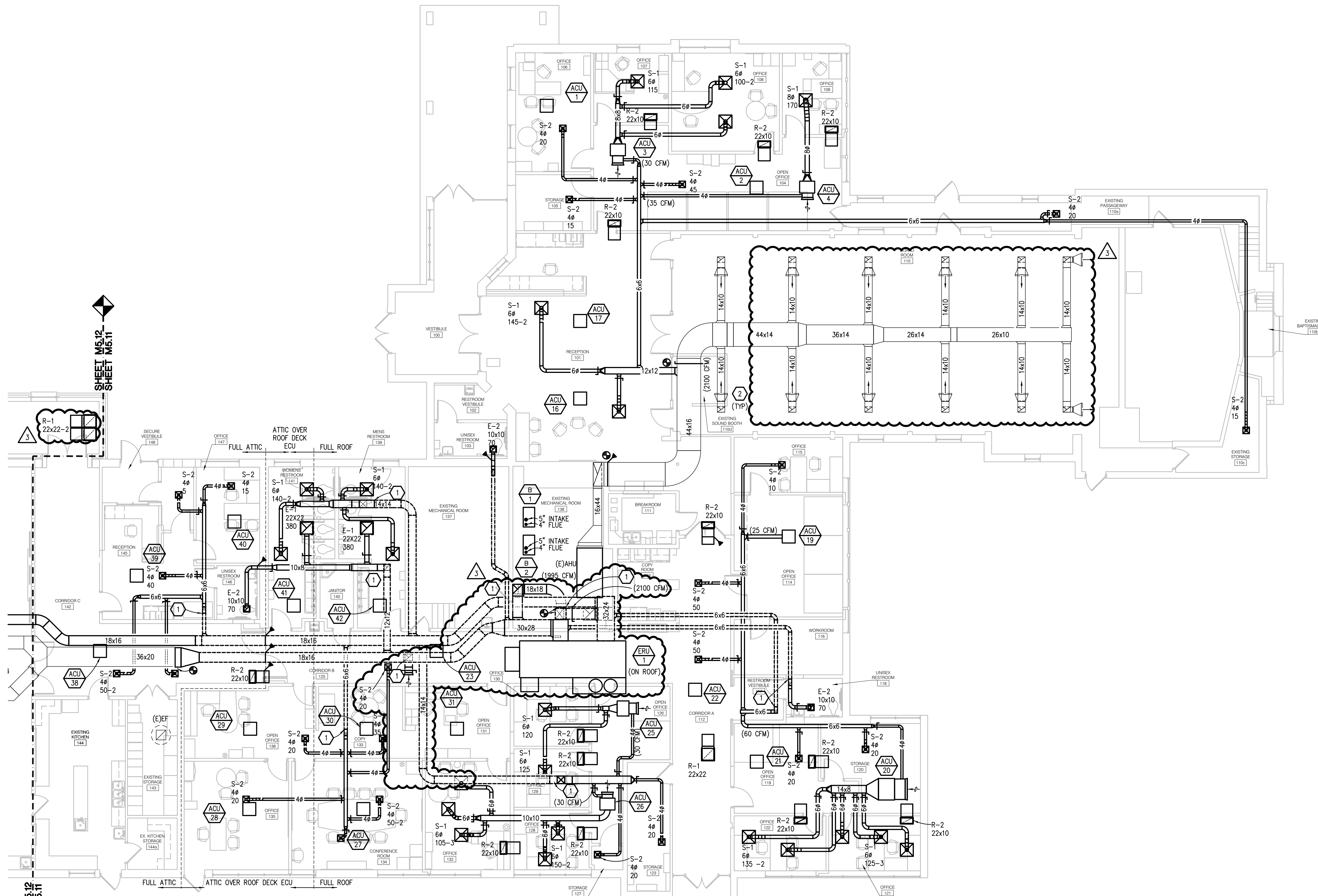


SHEET METAL GENERAL NOTES:

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7. REFER TO TEMPERATURE CONTROLS STANDARD MOUNTING HEIGHTS DETAIL FOR ELEVATIONS OF WALL MOUNTED TEMPERATURE CONTROL DEVICES.

CONSTRUCTION KEY NOTES:

1. PROVIDE ROOF CURB AT DUCT PENETRATION.
2. REBALANCE EXISTING DIFFUSERS AT 175 CFM.



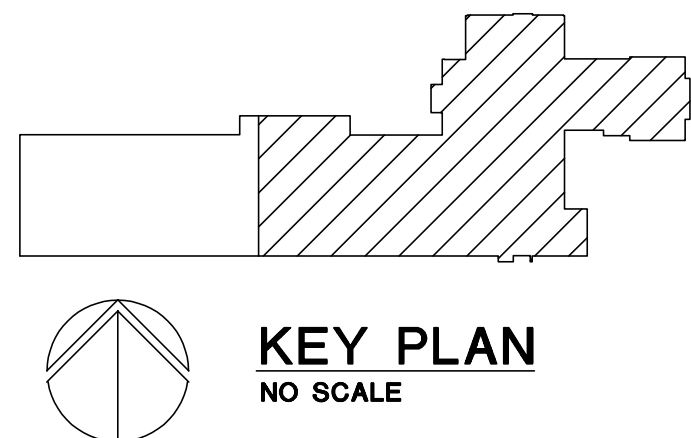
SHEET M5.12
SHEET M5.11

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SHEET M5.11

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SHEET METAL PLAN (PART A)
SCALE: 1/8" = 1' - 0"



SHEET METAL PLAN (PART A)

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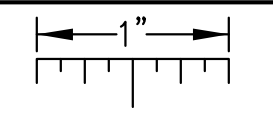


Crestwood School District
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Administration Relocation and Addition

Project No. 3221

M5.11

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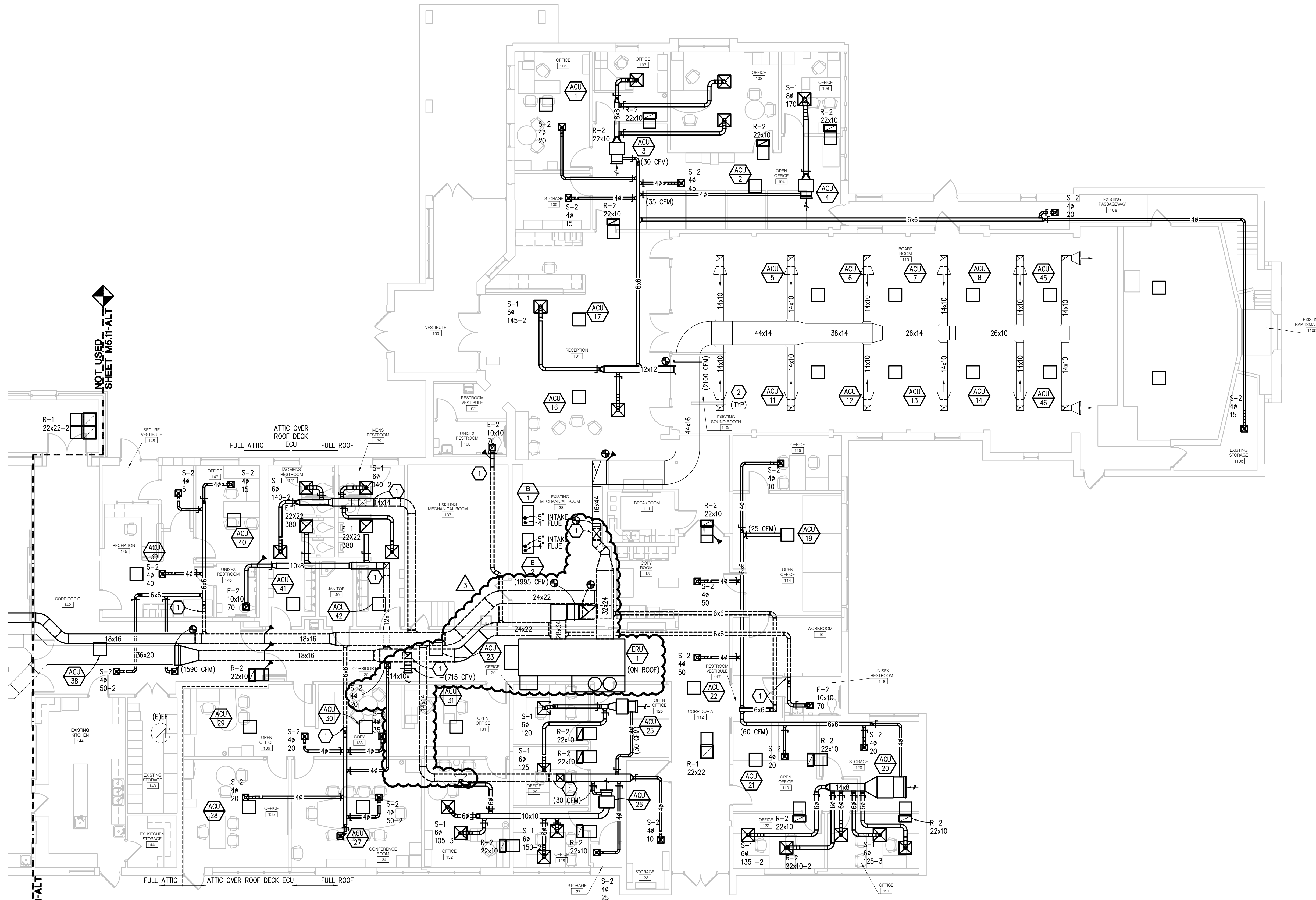


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7. REFER TO TEMPERATURE CONTROLS STANDARD MOUNTING HEIGHTS DETAIL FOR ELEVATIONS OF WALL MOUNTED TEMPERATURE CONTROL DEVICES.

CONSTRUCTION KEY NOTES:

1. PROVIDE ROOF CURB AT DUCT PENETRATION.
2. REBALANCE EXISTING DIFFUSERS AT 175 CFM.

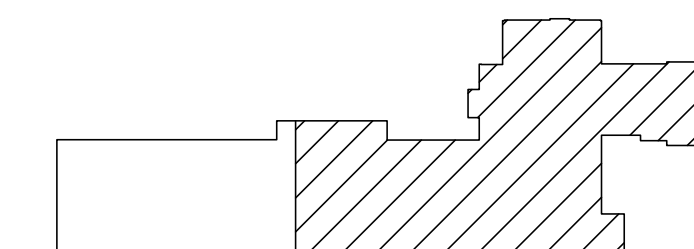


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SHEET METAL PLAN (PART A) - ALTERNATE
SCALE: 1/8" = 1' - 0"



KEY PLAN
NO SCALE

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SHEET METAL PLAN (PART A) - ALTERNATE



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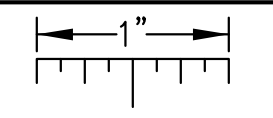
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M5.11-ALT

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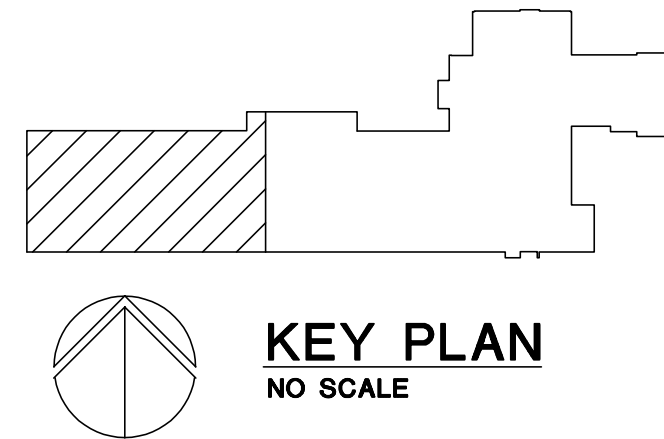
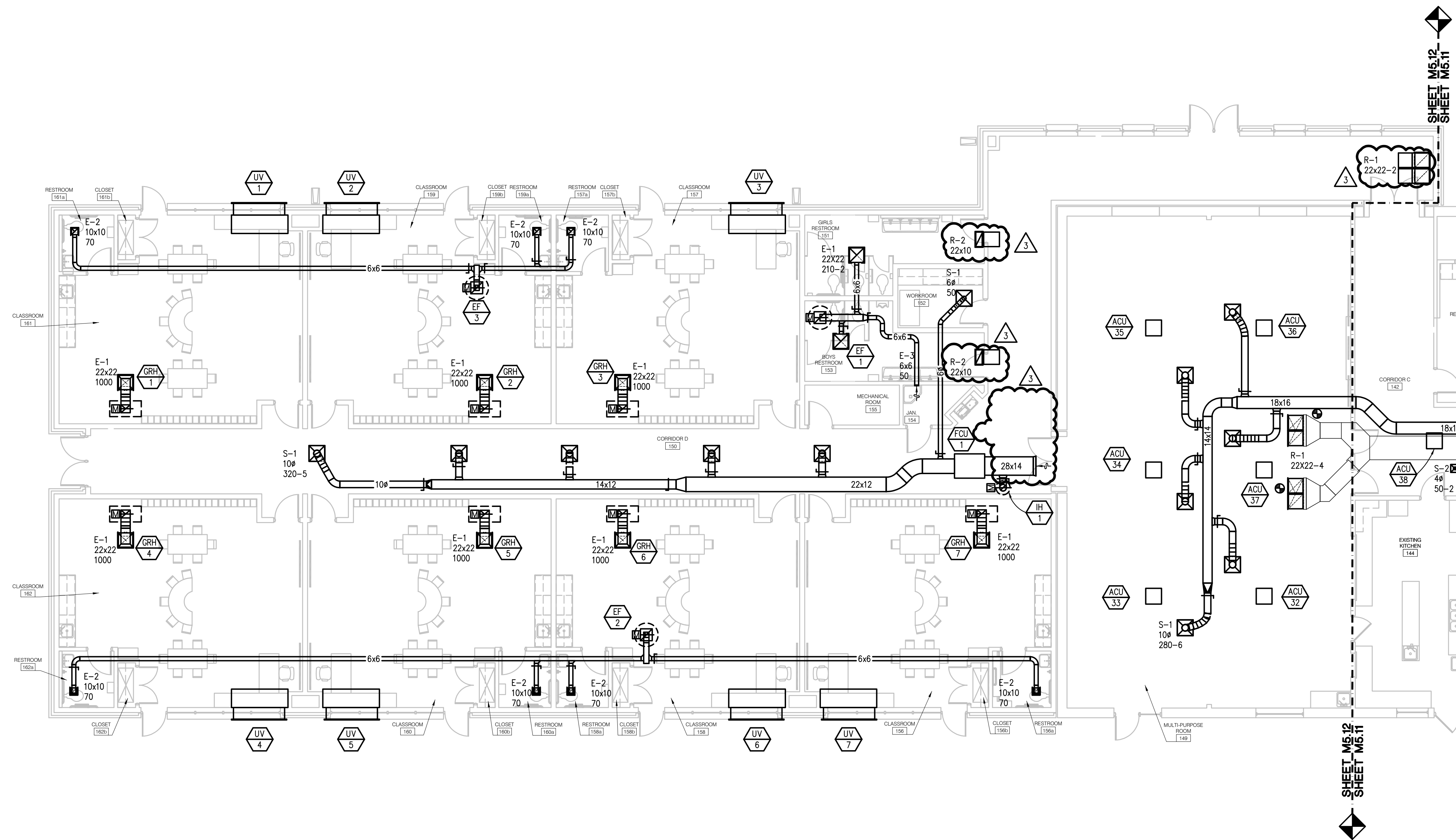


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SHEET METAL PLAN (PART B)
SCALE: 1/8" = 1' - 0"

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SHEET METAL PLAN (PART B)



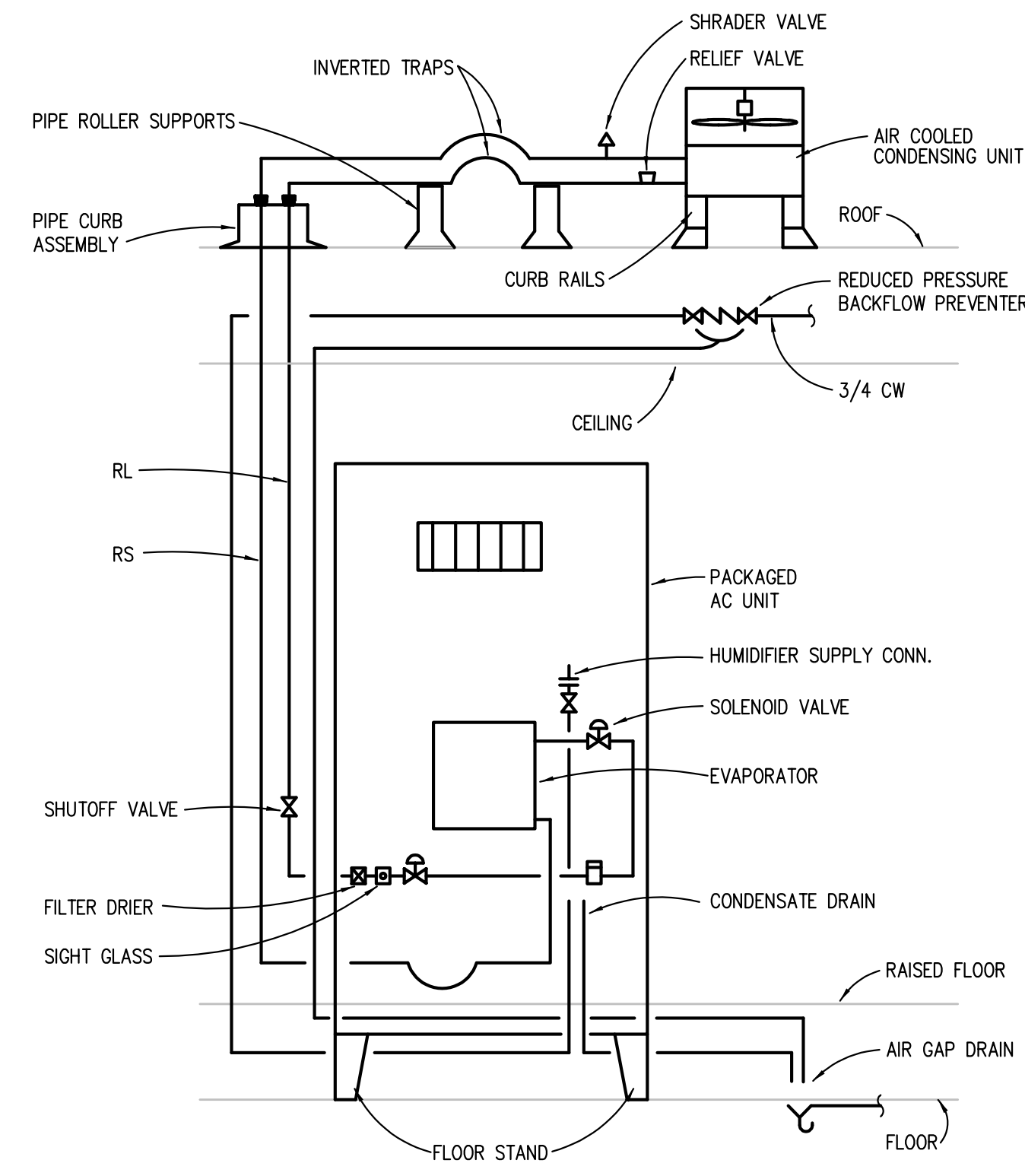
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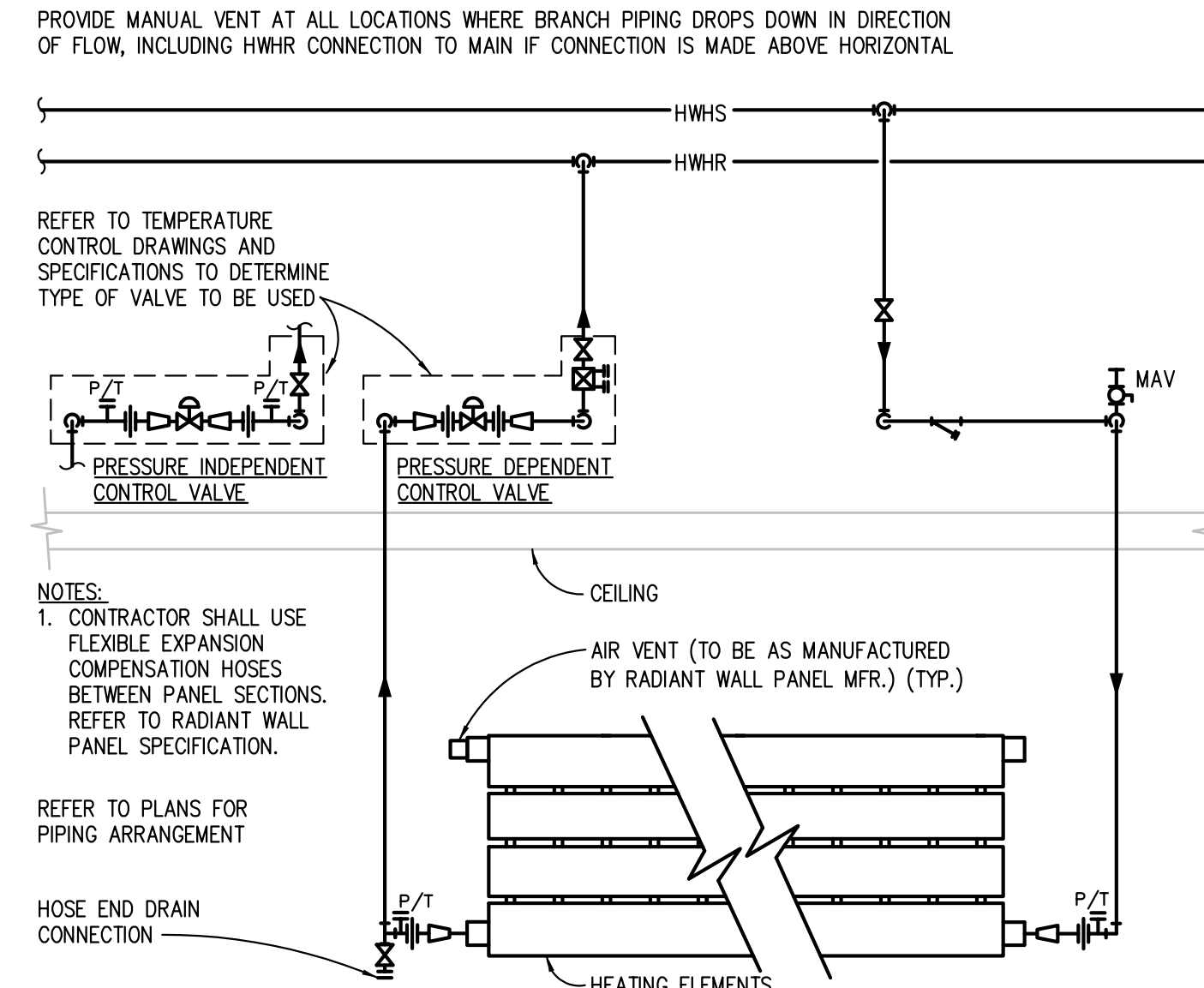
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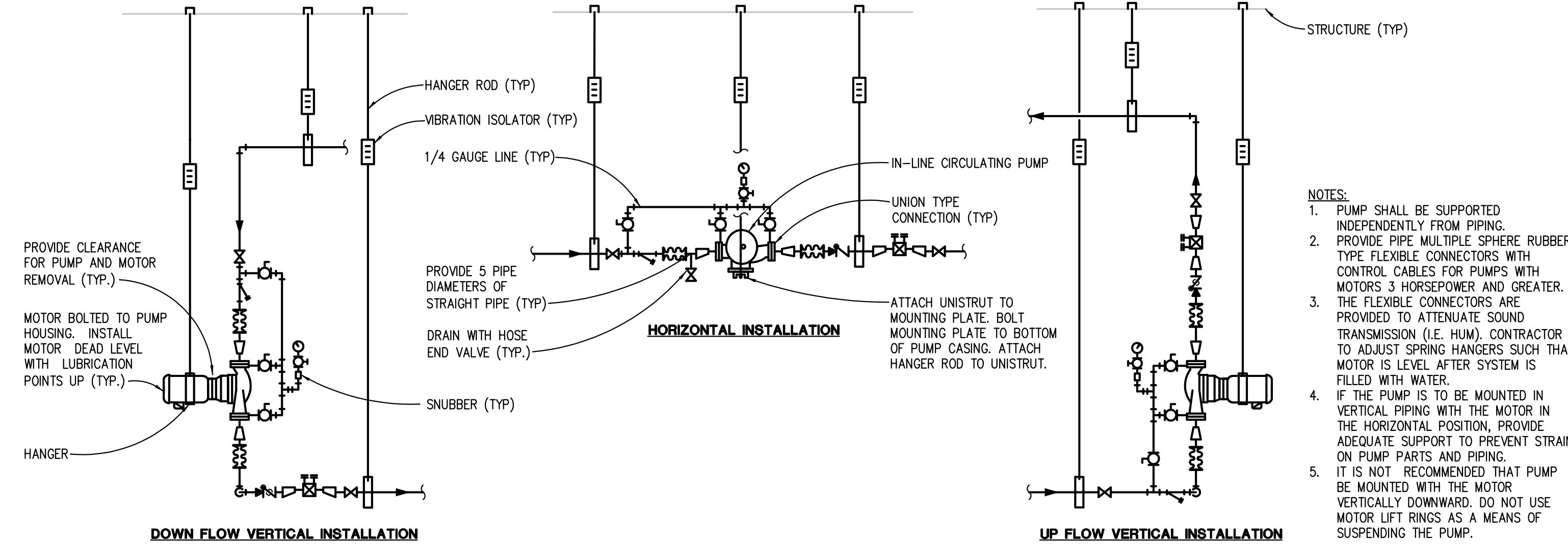


NOTE:
SIZE REFRIGERANT PIPING AND PROVIDE TRAPS AND ACCESSORIES PER UNIT MANUFACTURERS RECOMMENDATIONS.

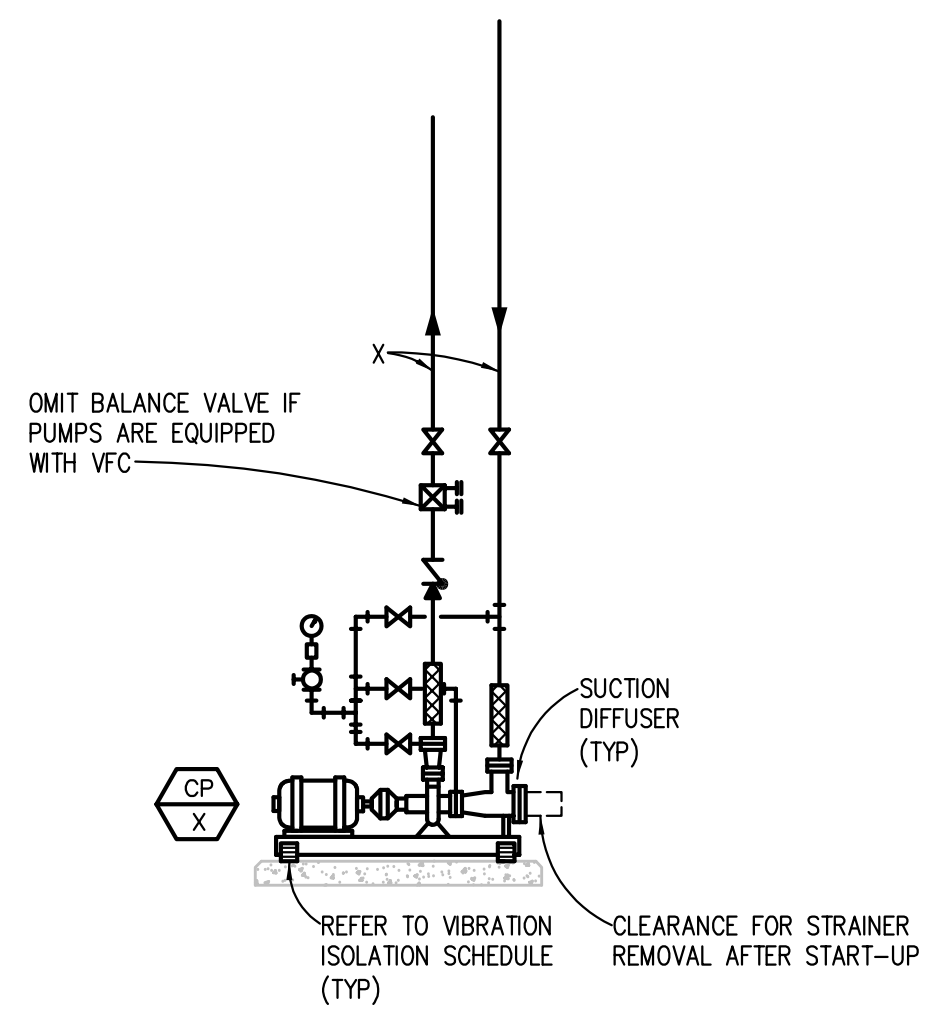
AIR-COOLED SPLIT SYSTEM PACKAGED AIR CONDITIONING UNIT (PAC-2) PIPING DIAGRAM
NO SCALE



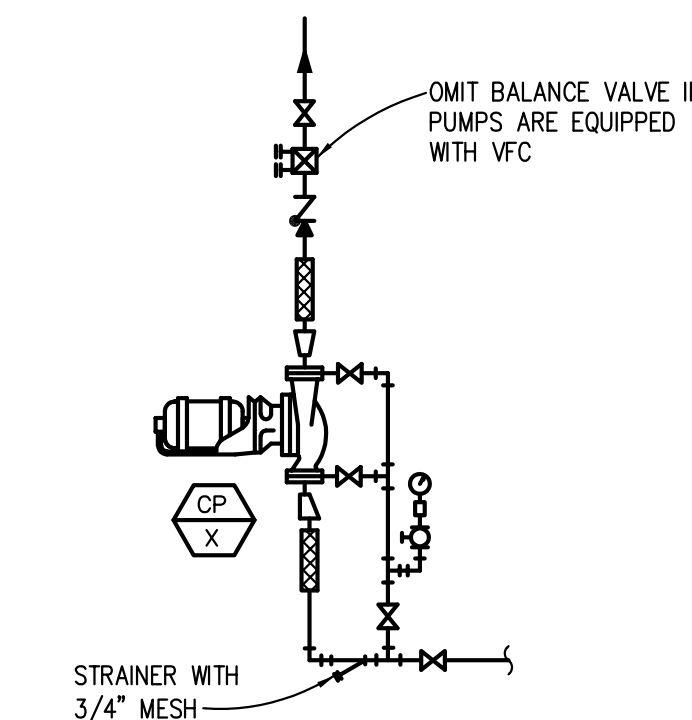
RADIANT WALL PANEL PIPING DIAGRAM
NO SCALE



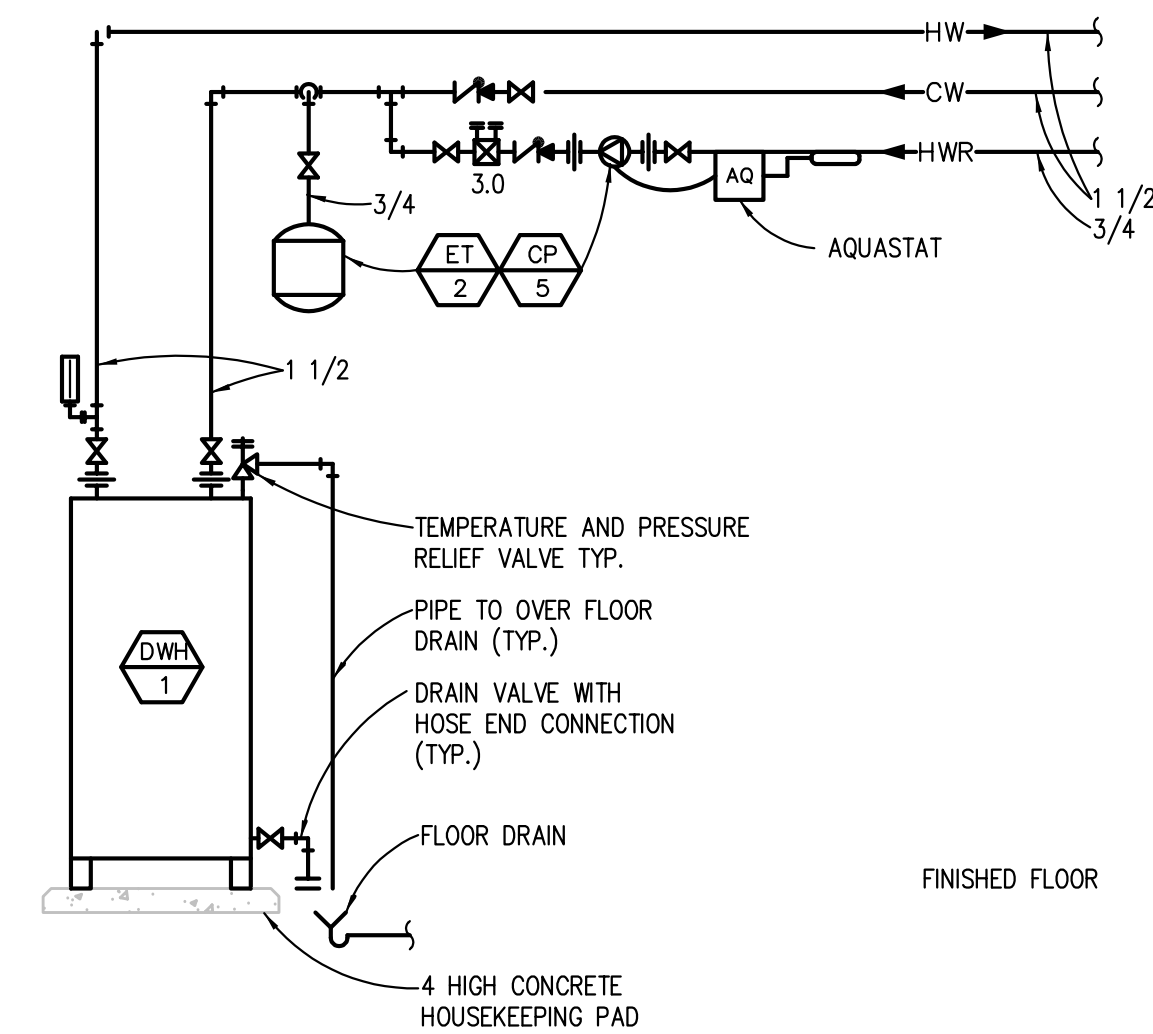
IN-LINE CLOSE COUPLED (BELL AND GOSSETT SERIES 80 AND 90) TYPE CIRCULATING PUMP PIPING DIAGRAM
NO SCALE



BASE MTD END SUCTION PUMP



VERTICAL INLINE PUMP



ELECTRIC WATER HEATER PIPING DIAGRAM
NO SCALE

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MECHANICAL DETAILS
EHRESMAN ARCHITECTS
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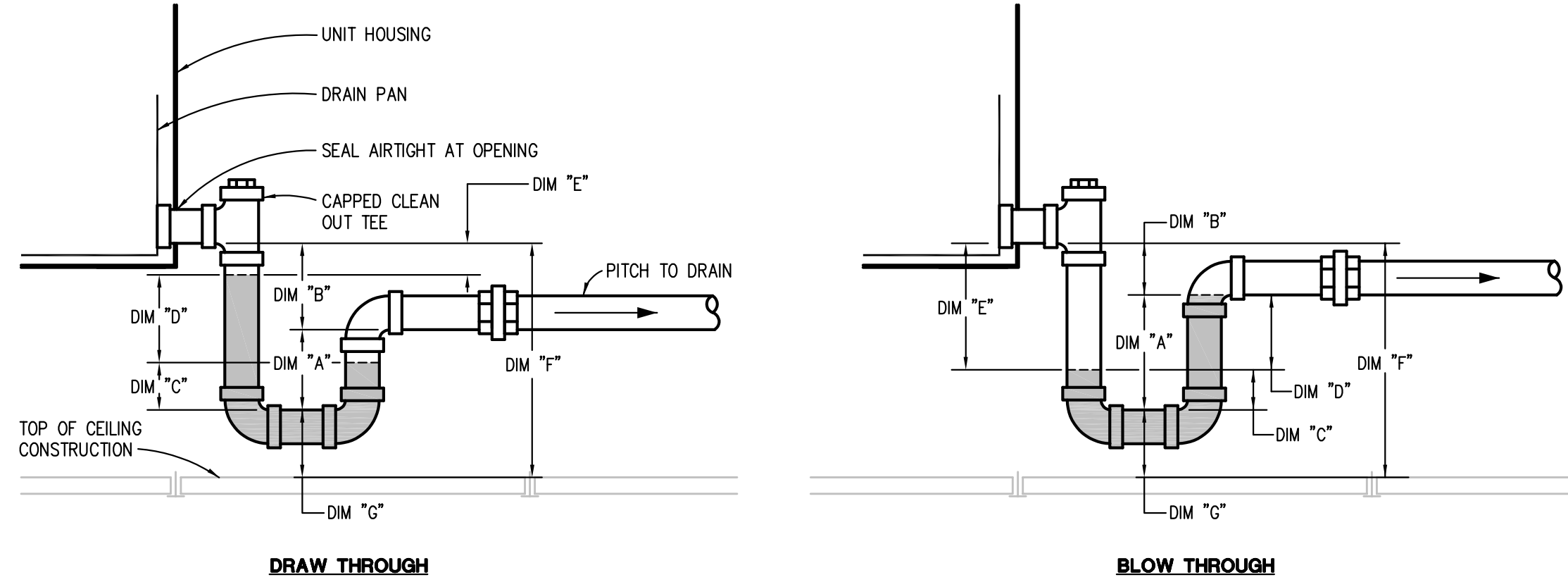
Project No. 3221

M6.04

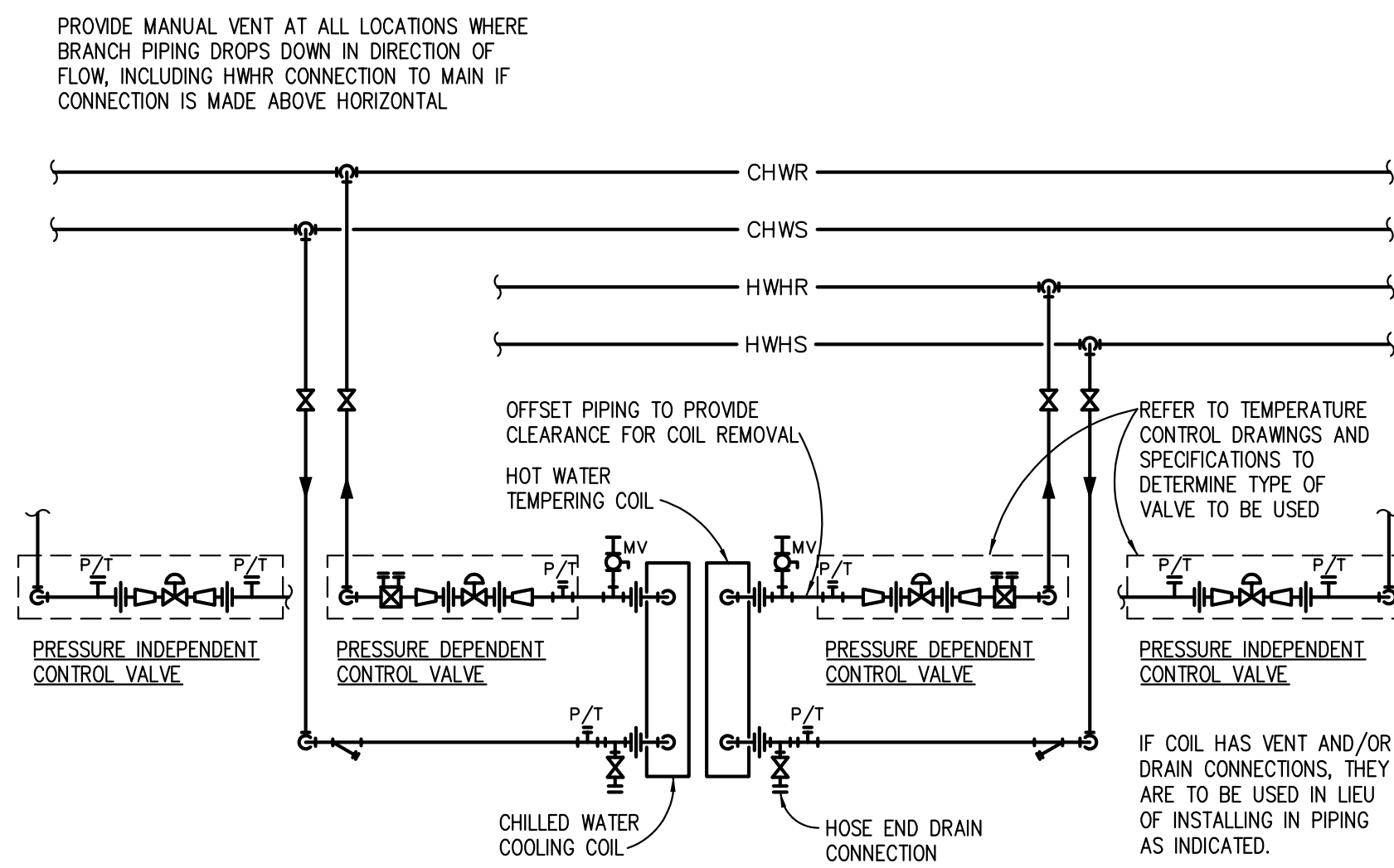
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TRAP DIMENSION TABLE										
TYPE OF SYSTEM	S.P. AT DRAIN PAN (IN.) (NOTE A)	DIMENSION "A" (INCHES) MIN.	DIMENSION "B" (INCHES)	DIMENSION "C" (INCHES) (TRAP SEAL)	DIMENSION "D" (INCHES)	DIMENSION "E" (INCHES)	DIMENSION "F" (INCHES)			
							DRAIN PIPE SIZE (INCHES)			
							1 1/2	2	2 1/2, 3	4
DRAW THROUGH	-2.1 TO -3	3.5	3.5	2	3	2	10.0	11.0	12.0	13.0
	UP TO -2	3.0	3.0	2	2	2	9.0	10.0	11.0	12.0
BLOW THROUGH	UP TO +2	4.0	2.0	2	2	4	9.0	10.0	11.0	12.0
	+2.1 TO +3	5.0	2.0	2	3	5	10.0	11.0	12.0	13.0

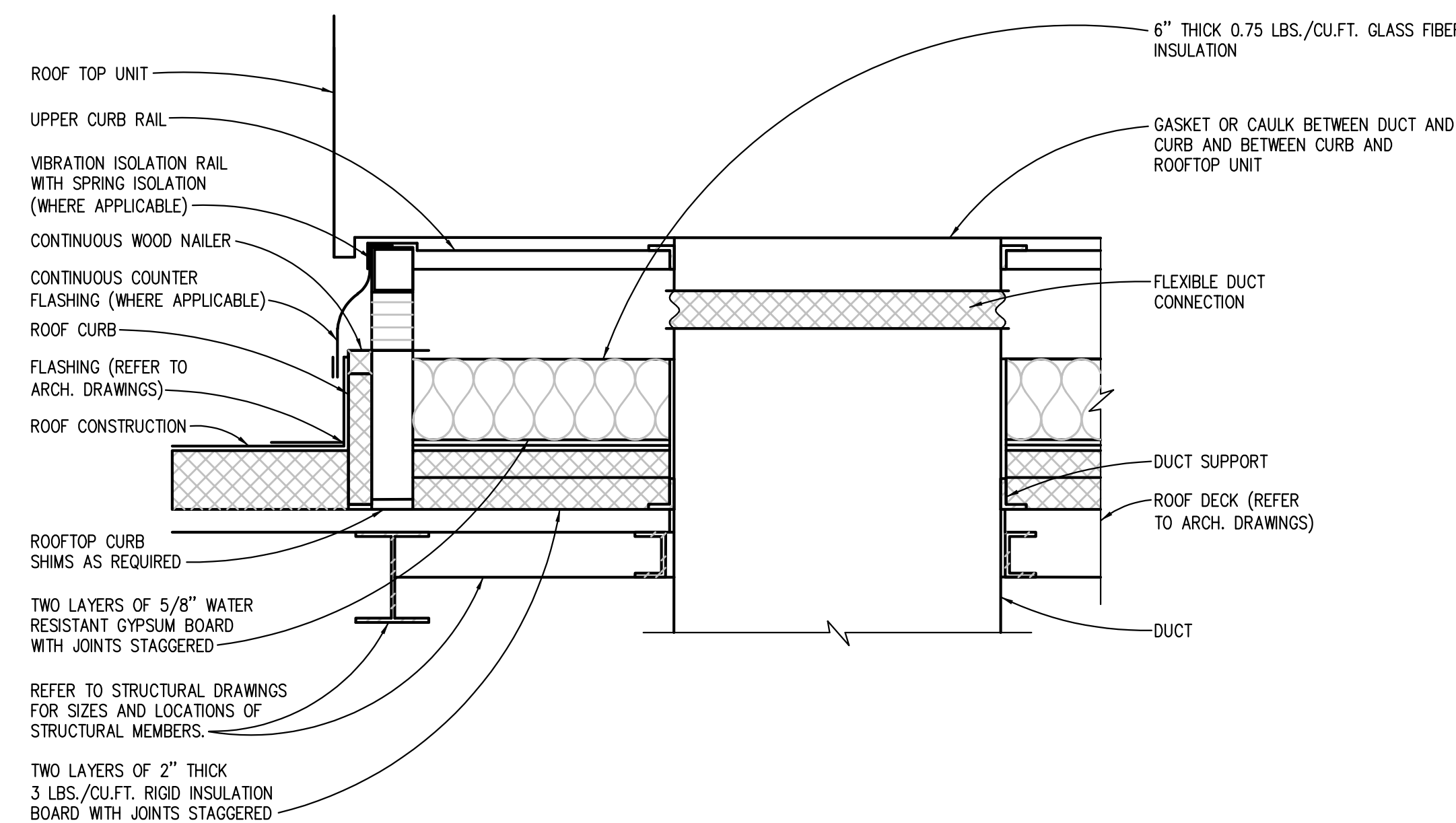
NOTES:
A. REFER TO EQUIPMENT SCHEDULES FOR (-) OR (+) STATIC PRESSURE AT DRAIN PAN.
A. BASE TRAP DIMENSIONS ON ____" S.P. FOR DRAW THROUGH UNITS AND ____" S.P. FOR BLOW THROUGH UNITS.
B. DRAIN PIPE SIZE SHALL BE SIZE OF DRAIN PAN OUTLET, MINIMUM 1".
C. DIMENSION "G" IS MIN: 3" FOR UP TO 1 1/2" DRAIN PIPE
4" FOR 2" DRAIN PIPE
5" FOR 2 1/2" OR 3" DRAIN PIPE
6" FOR 4" DRAIN PIPE



CONDENSATE DRAIN PAN TRAP DETAIL (UNITARY UNITS ABOVE CEILING)
NO SCALE

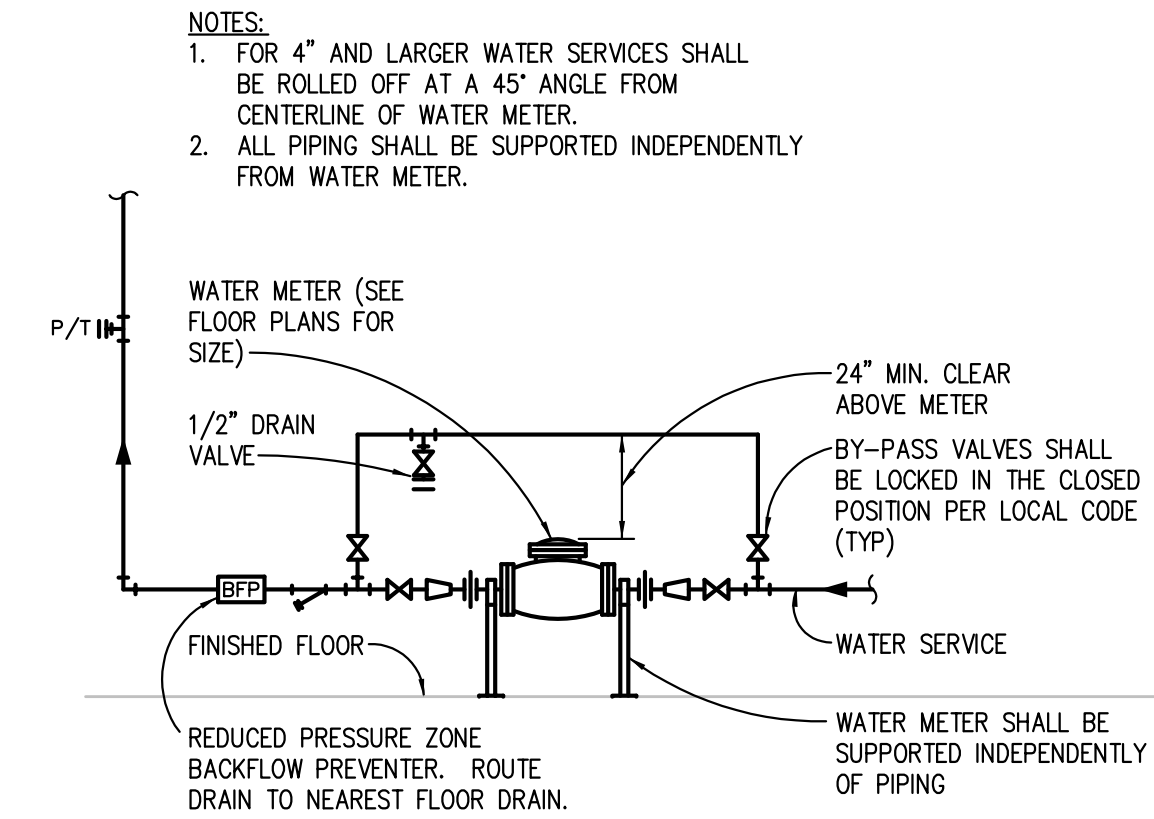


FAN COIL UNIT PIPING DIAGRAM
NO SCALE

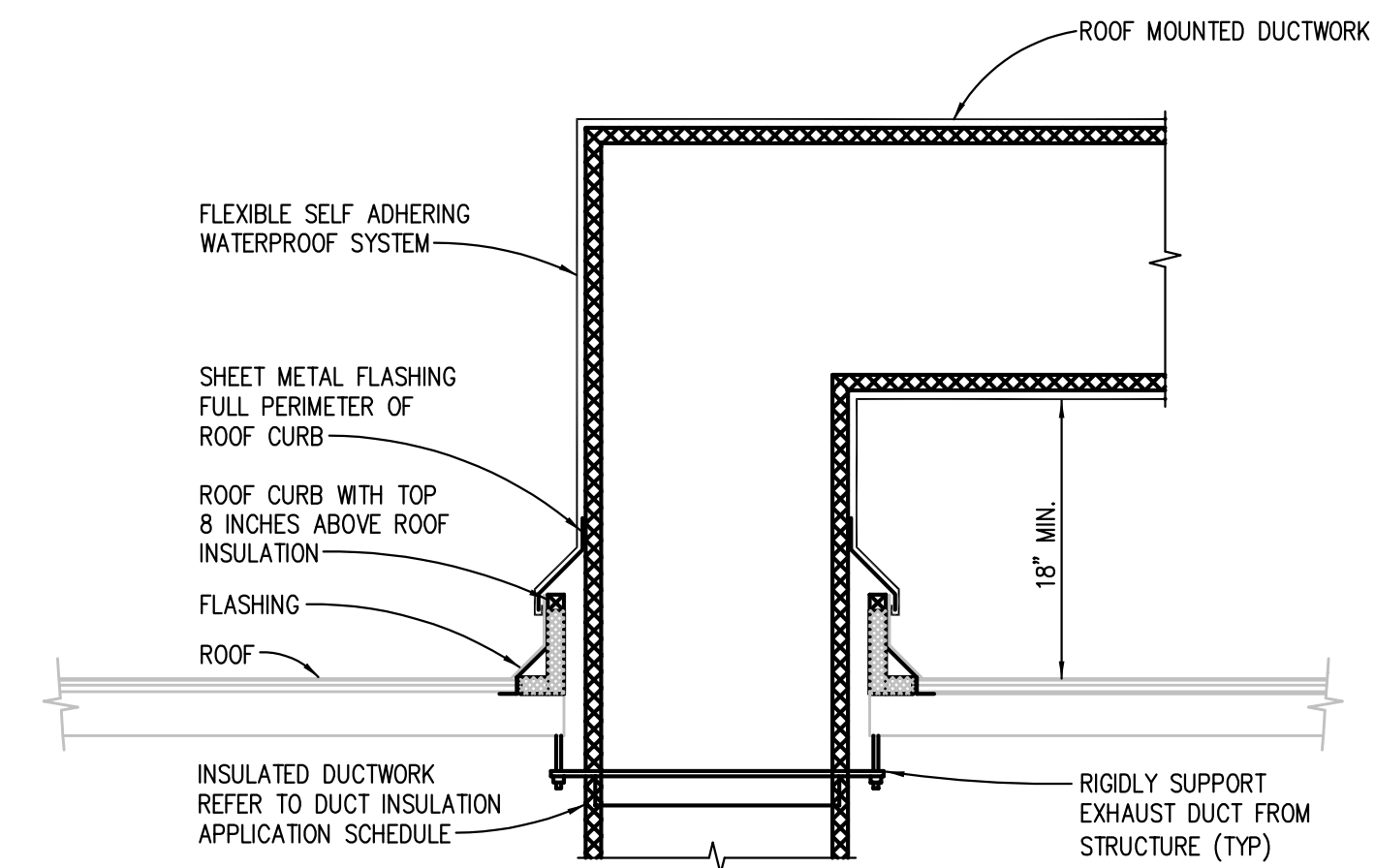


NOTE:
1. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPECIFIC FLASHING AND SUPPORT DETAILS.

ROOF TOP UNIT CURB SOUND ATTENUATION DETAIL
NO SCALE



DOMESTIC WATER METER PIPING DIAGRAM
NO SCALE



DUCT PENETRATION THROUGH ROOF DETAIL
NO SCALE

Addendum #3: 16 August 2023
Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

MECHANICAL DETAILS



Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M6.05

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PBA Project No: 2022.0419

ENERGY RECOVERY UNIT SCHEDULE (PRE-PURCHASED)

UNIT IDENTIFICATION	AREA/SYSTEM SERVED	SUPPLY FAN								EXHAUST FAN				HEAT EXCHANGER (SUMMER)			HEAT EXCHANGER (WINTER)			COOLING SECTION - DX								HEATING SECTION - GAS FIRED (NATURAL GAS)					OUTSIDE AIR FILTERS			RETURN FILTERS			ELECTRICAL							CURB		MODEL NUMBER	UNIT WEIGHT / CURB (LBS.)	SA/RA CONFIG.	EA/OA CONFIG.	KEYED NOTES												
		CFM	MIN. OA CFM/%	ESP*	TSP*	CONTROL TYPE	MOTOR		CFM	ESP*	TSP*	CONTROL TYPE	MOTOR		SUPPLY SIDE		EXHAUST SIDE		EFFIC. (%)	SUPPLY SIDE		EXHAUST SIDE		EFFIC. (%)	TOTAL CAPACITY MBH	E.D.B. °F	E.W.B. °F	L.D.B. °F	L.W.B. °F	TOTAL MBH	SENSIBLE MBH	REFRIG. TYPE	MAX A.P.D. IN. WG	TOTAL CAPACITY MBH	E.A.T. °F	L.A.T. °F	MIN/MAX MANUFACTURER REQUIRED INLET PRESSURE AT GAS TRAIN	MAXIMUM ALLOWABLE OUTPUT AT MINIMUM FIRING RATE (MBH)	MIN. NO. OF CAPACITY CONTROL STAGES	MERV.	AREA SQ. FT.	SP* TOTAL	MERV.	AREA SQ. FT.	SP* TOTAL	VOLTS	PHASE						FLA	MCA	MOP	SCCR KA	OPTIONS/ACCESSORIES	TYPE	HEIGHT					
							BHP	HP					BHP	HP	E.A.T. °F	L.A.T. °F	A.P.D. IN. WG.	E.A.T. °F		L.A.T. °F	A.P.D. IN. WG.	E.A.T. °F	L.A.T. °F																																					A.P.D. IN. WG.	E.A.T. °F	L.A.T. °F	A.P.D. IN. WG.	
ERU-1	EXISTING BUILDING	5500	5500	1.0	3.472	AUTO	4.78	7.5	5500	0.75	2.341	AUTO	3.69	5.0	91	80	0.79	75	85.8	0.79	67.6	-10	43.4	0.79	72	17.4	0.79	66.8	213.1	80	65.4	52.9	52.6	213.1	163.4	R-410A	0.302	400	43.4	97.3	6-14	8	MOD. 15:1	8	2.78	2	8	2.78	2	208	3	96.5	109.3	150	14	B	NO	YES	18	VXE-212-52 D-15I-M-01	8150	SIDE/END	SIDE/END	

GENERAL NOTES:
 1. REFER TO SCHEDULES GENERAL NOTES.
 2. MODEL NUMBERS ARE VALENT UNLESS OTHERWISE NOTED.
 3. FLUID TYPE: W = WATER, PGXX = PROPYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL, EGXX = ETHYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL.
 4. FOR UNITS LOCATED OUTDOORS, INSULATE AND PROVIDE ELECTRIC HEAT TRACE FOR HEAT EXCHANGER CABINET DRAIN PIPING.

GAS FIRED BOILER SCHEDULE

UNIT IDENTIFICATION	NUMBER OF CONTROL STAGES	FUEL		AGA INPUT MBH	AGA OUTPUT MBH	PRESSURE RATING PSIG	DIMENSIONS INCHES			WATER				MODULATION/CONTROL TYPE	ELECTRICAL					MODEL NUMBER	REMARKS
		TYPE	INLET PRESSURE AT GAS TRAIN (PSIG)				LENGTH	WIDTH	HEIGHT	E.W.T. °F	L.W.T. °F	FLOW GPM	W.P.D. FT		VOLTS	PHASE	FLA	MOP	OPTIONS/ACCESSORIES		
B-1	1	NATURAL GAS	3.5 - 14	399	371	80	36.5	21.25	47	130	150	45	7	AUTO	120	1	15	20	A	CM-399	MOUNTING RACK
B-2	1	NATURAL GAS	3.5 - 14	399	371	80	36.5	21.25	47	130	150	45	7	AUTO	120	1	15	20	A	CM-399	MOUNTING RACK

NOTE:
 1. REFER TO SCHEDULES GENERAL NOTES.
 2. MODEL NUMBERS ARE PATTERSON KELLEY UNLESS OTHERWISE NOTED.
 3. PROVIDE BOILER WITH CONDENSATE NEUTRALIZATION TANK ASSEMBLY.

POWER VENTILATOR SCHEDULE

UNIT IDENTIFICATION	SYSTEM SERVED	TYPE	AIRFLOW CFM	T.S.P. IN. W.G.	TIP SPEED FPM	FAN RPM	MOTOR				CURB HEIGHT INCHES	MODULATION/CONTROL TYPE	ELECTRICAL								MODEL NUMBER	KEYED NOTES				
							BHP	HP	RPM	DRIVE TYPE			UNIT INLET Lw BY OCTAVE BAND													
													VOLTS	PHASE	SCCR KA (NOTE 3)	OPTIONS/ACCESSORIES	63 HZ (DB)	125 HZ (DB)	250 HZ (DB)	500 HZ (DB)			1000 HZ (DB)	2000 HZ (DB)	4000 HZ (DB)	8000 HZ (DB)
EF-1	NEW BATHROOMS/JAN CLOSET	CENTRIFUGAL	470	0.05	4395	1544	0.04	1/10	1725	DIRECT	17	AUTO	115	1	5	A	61	68	70	60	59	58	54	47	G-080-VG	
EF-2	CLASSROOM TOILETS	CENTRIFUGAL	280	0.05	2674	1257	0.01	1/15	1725	DIRECT	17	AUTO	115	1	5	A	65	63	60	49	45	43	35	30	G-070-VG	
EF-3	CLASSROOM TOILETS	CENTRIFUGAL	210	0.05	4350	1528	0.05	1/10	1725	DIRECT	17	AUTO	115	1	5	A	71	74	68	61	59	57	50	46	G-080-VG	

GENERAL NOTES:
 1. REFER TO SCHEDULES GENERAL NOTES.
 2. MODEL NUMBERS ARE GREENHECK UNLESS OTHERWISE NOTED.
 3. CONTROLLER (E.G. VARIABLE FREQUENCY CONTROLLER, MOTOR STARTER) FOR SPECIFIED EQUIPMENT SHALL BE MANUFACTURED AND MARKED PER NEC WITH A MINIMUM SHORT CIRCUIT CURRENT RATING AS INDICATED.

PUMP SCHEDULE

UNIT IDENTIFICATION	SYSTEM SERVED	LOCATION	TYPE	COUPLING TYPE	WATERFLOW GPM	FLUID TYPE	COLDEST SYSTEM OPERATING TEMP. °F FOR PUMP SELECTION	PUMP HEAD FT.	OVERLOAD GPM	MINIMUM EFFICIENCY %	MOTOR			MODULATION/CONTROL TYPE	ELECTRICAL				MODEL NUMBER	KEYED NOTES
											BHP	HP	RPM		VOLTS	PHASE	SCCR KA (NOTE 4)	OPTIONS/ACCESSORIES		
CP-1	B-1	MECHANICAL ROOM 138	INLINE	CLOSE	45	W	90	25	NON-OVERLOADING	62	0.494	3/4	1725	AUTO	208	3	5	---	e-90 1.5AB	#
CP-2	B-2	MECHANICAL ROOM 138	INLINE	CLOSE	45	W	90	25	NON-OVERLOADING	62	0.494	3/4	1725	AUTO	208	3	5	---	e-90 1.5AB	#
CP-3	HWH	MECHANICAL ROOM 138	INLINE	CLOSE	85	W	90	45	NON-OVERLOADING	70.8	1.39	2	1725	VFC	208	3	5	---	e-90 2AB	#
CP-4	HWH	MECHANICAL ROOM 138	INLINE	CLOSE	85	W	90	45	NON-OVERLOADING	70.8	1.39	2	1725	VFC	208	3	5	---	e-90 2AB	#
CP-5	DWH-1	MECHANICAL ROOM 155	INLINE	CLOSE	5	W	40	20	NON-OVERLOADING	---	---	1/6	3300	AUTO	120	1		---	PL-36B	

GENERAL NOTES:
 1. REFER TO SCHEDULES GENERAL NOTES.
 2. MODEL NUMBER ARE BELL & GOSSETT UNLESS OTHERWISE NOTED.
 3. FLUID TYPE: W = WATER, PGXX = PROPYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL, EGXX = ETHYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL.
 4. CONTROLLER (E.G. VARIABLE FREQUENCY CONTROLLER, MOTOR STARTER) FOR SPECIFIED EQUIPMENT SHALL BE MANUFACTURED AND MARKED PER NEC WITH A MINIMUM SHORT CIRCUIT CURRENT RATING AS INDICATED.

HOT WATER CABINET UNIT HEATER SCHEDULE

UNIT IDENTIFICATION	CAPACITY MBH	AIR			FAN		WATER			CONTROL VALVE W.P.D. FT. HEAD	DIMENSIONS			RECESS DEPTH INCHES	FILTER		MODULATION/CONTROL TYPE	ELECTRICAL				MODEL NUMBER	KEYED NOTES		
		AIRFLOW CFM	E.D.B. °F	L.D.B. °F	HP	RPM	FLOW GPM	FLUID TYPE	E.W.T. °F		L.W.T. °F	MAXIMUM W.P.D. FT. HEAD	LENGTH INCHES		HEIGHT INCHES	DEPTH INCHES		TYPE	AREA SQ. FT.	VOLTS	PHASE			SCCR KA	OPTIONS/ACCESSORIES
CUH-1	27.4	420	60	90	1/4	925	2.9	WATER	150	130	2.3	11.5	50.2	24	10	10	MERV 8	2.3	AUTO	120	1	5	A	RRC-440-04	
CUH-2	17.2	300	60	90	1/4	925	2.1	WATER	150	130	1.1	11.5	44.2	24	10	10	MERV 8	1.9	AUTO	120	1	5	A	RRC-440-03	
CUH-3	17.2	300	60	90	1/4	925	2.1	WATER	150	130	1.1	11.5	44.2	24	10	10	MERV 8	1.9	AUTO	120	1	5	A	RRC-440-03	
CUH-4	19.2	300	60	90	1/4	925	2.1	WATER	150	130	1.1	11.5	44.2	24	10	10	MERV 8	1.9	AUTO	120	1	5	A	RRC-440-03	
CUH-5	19.7	300	60	90	1/4	925	2.1	WATER	150	130	1.1	11.5	44.2	24	10	10	MERV 8	1.9	AUTO	120	1	5	A	RRC-440-03	
CUH-6	17.2	300	60	90	1/4	925	2.1	WATER	150	130	1.1	11.5	44.2	24	10	10	MERV 8	1.9	AUTO	120	1	5	A	RW-440-03	
CUH-7	8.8	220	60	90	1/4	925	0.9	WATER	150	130	0.1	11.5	38.2	24	10	10	MERV 8	1.5	AUTO	120	1	5	A	RRC-440-02	

GENERAL NOTES:
 1. REFER TO SCHEDULES GENERAL NOTES.
 2. MODEL NUMBERS ARE RITTLING UNLESS OTHERWISE NOTED.
 3. FLUID TYPE: W = WATER, PGXX = PROPYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL, EGXX = ETHYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL.

AIR & DIRT SEPARATOR SCHEDULE

INLET/OUTLET PIPE SIZE (INCHES)	MAX SYSTEM FLOW (GPM)	MAX PRESSURE DROP CLEAN (FT HD)	BUNDLE REMOVAL CLEARANCE NOTE 3 (INCHES)	OPERATING WEIGHT (LBS)	TYPE	MODEL NUMBER	KEYED NOTES
2	35	0.70	12	115	STANDARD VELOCITY / AIR & DIRT	VDN 200 FA	
2 1/2	57	0.7	12	160	STANDARD VELOCITY / AIR & DIRT	VDN 250 FA	
3	110	0.85	16	210	STANDARD VELOCITY / AIR & DIRT	VDN 300 FA	
4	220	1.10	16	250	STANDARD VELOCITY / AIR & DIRT	VDN 400 FA	
6	540	1.30	25	400	STANDARD VELOCITY / AIR & DIRT	VDN 600 FA	
	650	3.75	43	400	HIGH VELOCITY / AIR & DIRT	VHN 600 FA	
8	940	1.40	33	775	STANDARD VELOCITY / AIR & DIRT	VDN 800 FA	
	1280	5.9	55	775	HIGH VELOCITY / AIR & DIRT	VHN 800 FA	
10	1470	1.60	44	1,165	STANDARD VELOCITY / AIR & DIRT	VDN 1000 FA	
	2280	8.5	68	1,165	HIGH VELOCITY / AIR & DIRT	VHN 1000 FA	
12	2090	2.00	54	1,785	STANDARD VELOCITY / AIR & DIRT	VDN 1200 FA	
	3500	11.50	80	1,785	HIGH VELOCITY / AIR & DIRT	VHN 1200 FA	

GENERAL NOTES:
 1. MODEL NUMBERS ARE SPIROTERM UNLESS OTHERWISE NOTED.
 2. SEPARATOR FLANGE CONNECTION MUST BE A MINIMUM OF THE PIPE DIAMETER SIZE OF WHICH THE SEPARATOR IS INSTALLED.
 3. MINIMUM BUNDLE REMOVAL CLEARANCE IS MEASURED FROM CENTERLINE OF INLET/OUTLET PIPING. PROVIDE CLEARANCE BELOW UNIT TO DIMENSION LISTED TO ALLOW REMOVAL OF HEAD AND ELEMENT BUNDLE.
 4. REFER TO PUMP SCHEDULE FOR SYSTEM FLOW.

HVAC SYSTEM EXPANSION TANK SCHEDULE

UNIT ID	SYSTEM SERVED	LOCATION	ESTIMATED TOTAL SYSTEM VOLUME GALLONS	TYPE	FLUID TYPE	SYSTEM FILL VALVE OR GLYCOL PUMP PRESSURE SETTING PSIG	OPERATING PRESSURES AT EXPANSION TANK		SYSTEM OPERATING TEMPERATURES		EXPANSION VOLUME GALLONS	ACCEPTANCE FACTOR	MINIMUM TANK VOLUME GALLONS	DIMENSIONS		MODEL NUMBER	KEYED NOTES
							PRE-CHARGE PSIG	MAX (OPERATING) PSIG	MINIMUM °F	MAXIMUM °F				DIAMETER INCHES	HEIGHT INCHES		
ET-1	HWH	MECH. ROOM 138	315	BLADDER	WATER	17	16.2	41.8	40	150	26	0.4	20	20	31	B100	#

GENERAL NOTES:
 1. MODEL NUMBERS ARE BELL & GOSSETT UNLESS OTHERWISE NOTED.
 2. THE CONTRACTOR SHALL PRE-CHARGE THE TANK TO THE VALUE INDICATED IN THE SCHEDULE. FOR TANKS THAT ARE SUPPLIED PRE-CHARGED BY THE MANUFACTURER, THE CONTRACTOR SHALL CONFIRM THE PRESSURE AND MAKE ADJUSTMENTS AS REQUIRED.
 3. FLUID TYPE: W = WATER, PGXX = PROPYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL, EGXX = ETHYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL.

Addendum #16: 16 August 2023
 Bidding and Permits: 31 July 2023
 Owner Review: 14 July 2023
 Design Development: 08 May 2023



SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE

INDOOR UNIT										OUTDOOR UNIT												
UNIT IDENTIFICATION	TOTAL CAPACITY MBH	EVAPORATOR FAN			COOLING COIL			MODEL NUMBER	UNIT IDENTIFICATION	CONDENSING SECTION					MODULATION/CONTROL TYPE	ELECTRICAL					MODEL NUMBER	KEYED NOTES
		AIRFLOW CFM	NUMBER FANS	WATTS EACH	E.D.B. °F	E.W.B. °F	MINIMUM FACE AREA SQ. FT.			NUMBER OF COMPRESSORS	NUMBER OF CONTROL STAGES	AMBIENT TEMPERATURE °F	AIRFLOW CFM	FAN WATTS		VOLTS	PHASE	FLA	MOP	SCOR KA		
ACU-43	10.9	430	1	1/12	80.0	67.0	R-410A	FTK12AXVJU	ACCU-6	1	1	95	1100	1/12	AUTO	208	1	7.8	15	5	RK12AXVJU	1,2,3
ACU-44	10.9	430	1	1/12	80.0	67.0	R-410A	FTK12AXVJU	ACCU-7	1	1	95	1100	1/12	AUTO	208	1	7.8	15	5	RK12AXVJU	1,2,3

GENERAL NOTES:
 1. REFER TO SCHEDULES GENERAL NOTES.
 2. MODEL NUMBERS DAIKIN UNLESS OTHERWISE NOTED.

KEYED NOTES:
 1. INDOOR UNIT POWER FEED THROUGH OUTDOOR UNIT.
 2. UNITS SHALL BE CAPABLE OF OPERATING DOWN TO 0 DEG. F.
 3. MANUFACTURER PROVIDED CONDENSATE PUMP.

BRANCH SELECTOR BOX SCHEDULE

UNIT TAG	BRANCH SELECTOR BOX - ELECTRICAL					MODEL	REMARKS
	VOLTS	PHASE	MOP	MCA	OPTIONS/ACCESSORIES		
BSB-1	208	1	15	0.6		BSF6054TVJ	
BSB-2	208	1	15	0.6		BSF6054TVJ	
BSB-3	208	1	15	0.8		BSF8054TVJ	
BSB-4	208	1	15	0.6		BSF8054TVJ	
BSB-5	208	1	15	0.8		BS12Q54TAVJ	

NOTE:
 1. REFER TO SCHEDULE GENERAL NOTES.
 2. MODEL NUMBERS ARE DAIKIN UNLESS OTHERWISE NOTED.

UNIT VENTILATOR APPLICATION SCHEDULE (PRE-PURCHASED)

UNIT IDENTIFICATION	UV TYPE	LOCATION / AREA SERVED	CONTROL VALVE TYPE	ELECTRICAL SCOR KA	KEYED NOTES
UV-1	A	161 - GSRP	2-WAY	5	
UV-2	A	162 - GSRP	2-WAY	5	
UV-3	A	163 - GSRP	2-WAY	5	
UV-4	A	164 - GSRP	2-WAY	5	
UV-5	A	165 - GSRP	2-WAY	5	
UV-6	A	166 - GSRP	2-WAY	5	
UV-7	A	167 - GSRP	2-WAY	5	

AIR COOLED CONDENSING UNIT SCHEDULE

UNIT ID	SYSTEM SERVED	NOMINAL COOLING TOTAL CAPACITY MBH	NOMINAL HEATING TOTAL CAPACITY MBH	REFRIG. TYPE	NUMBER OF CONTROL STAGES	COMPRESSOR		MODULATION/CONTROL TYPE	ELECTRICAL					MODEL NUMBER	REMARKS
						NUMBER	TYPE		VOLTS	PHASE	MCA	MOP	OPTIONS		
ACCU-1	BSB-1, BSB-3	144	84	R-410A	MODULATING	1	SCROLL	HEAT RECOVERY	208	3	58.3	70	B	REYQ144XATJB	HEATING CAPACITY @ -10°F COOLING CAPACITY @ 95°F
ACCU-2	BSB-2	164	89	R-410A	MODULATING	1	SCROLL	HEAT RECOVERY	208	3	61.9	70	B	REYQ168XAYDB	HEATING CAPACITY @ -10°F COOLING CAPACITY @ 95°F
ACCU-3	BSB-4	68	45	R-410A	MODULATING	1	SCROLL	HEAT RECOVERY	208	3	38.1	45	B	REYQ72XATJB	HEATING CAPACITY @ -10°F COOLING CAPACITY @ 95°F
ACCU-4	BSB-5	144	84	R-410A	MODULATING	1	SCROLL	HEAT RECOVERY	208	3	58.3	70	B	REYQ144XATJB	HEATING CAPACITY @ -10°F COOLING CAPACITY @ 95°F
ACCU-5	FCU-1	56.5	--	R-410A	1	1	SCROLL	AUTO	208	3	21.3	35	B	DX13SA0603	PRE-PURCHASED

NOTE:
 1. REFER TO SCHEDULES GENERAL NOTES.
 2. MODEL NUMBERS ARE DAIKIN UNLESS OTHERWISE NOTED.
 3. PROVIDE WITH LOW AMBIENT TEMPERATURE.

GRAVITY RELIEF HOOD SCHEDULE

UNIT IDENTIFICATION	SYSTEM SERVED	CFM	THROAT SIZE FT"2	THROAT VELOCITY FPM	STATIC PRESSURE DROP IN. W.G.	HOOD SIZE			CURB HEIGHT INCHES	HOOD CONSTRUCTION	MODEL NUMBER	KEYED NOTES
						WIDTH INCHES	LENGTH INCHES	HEIGHT INCHES				
GRH-1	161 - Classroom	1000	2.22	450	0.049	26	36	16	18	ALUMINUM	FGR-16X20	
GRH-2	159 - Classroom	1000	2.22	450	0.049	26	36	16	18	ALUMINUM	FGR-16X20	
GRH-3	157 - Classroom	1000	2.22	450	0.049	26	36	16	18	ALUMINUM	FGR-16X20	
GRH-4	162 - Classroom	1000	2.22	450	0.049	26	36	16	18	ALUMINUM	FGR-16X20	
GRH-5	160 - Classroom	1000	2.22	450	0.049	26	36	16	18	ALUMINUM	FGR-16X20	
GRH-6	158 - Classroom	1000	2.22	450	0.049	26	36	16	18	ALUMINUM	FGR-16X20	
GRH-7	156 - Classroom	1000	2.22	450	0.049	26	36	16	18	ALUMINUM	FGR-16X20	

GENERAL NOTES:
 1. MODEL NUMBERS ARE GREENHECK UNLESS OTHERWISE NOTED.
 2. PROVIDE WITH BIRD SCREEN.

DOMESTIC WATER HEATER SCHEDULE (ELECTRIC)

UNIT IDENTIFICATION	STORAGE CAPACITY GALLONS	KW INPUT	RECOVERY GPH	E.W.T. °F	L.W.T. °F	MODULATION/CONTROL TYPE	ELECTRICAL					MODEL NUMBER	KEYED NOTES	
							VOLTS	PHASE	FLA	MOP	SCOR KA			OPTIONS/ACCESSORIES
DWH-1	119	27	120	40	140	AUTO	208	3	75	100	10	---	CE119	

GENERAL NOTES:
 1. REFER TO SCHEDULES GENERAL NOTES.
 2. MODEL NUMBERS ARE BOCK (ELECTRITHERM) UNLESS OTHERWISE NOTED.

UNIT VENTILATOR SCHEDULE (PRE-PURCHASED)

UNIT TYPE	FAN					COOLING COIL					HEATING COIL					ARRANGEMENT	MODULATION/CONTROL TYPE	ELECTRICAL					MODEL NUMBER	KEYED NOTES					
						AIR		DIRECT EXPANSION			AIR		WATER					VOLTS	PHASE	MCA	MOP	OPTIONS/ACCESSORIES							
	MINIMUM TOTAL CAPACITY MBH	O.A. CFM	E.D.B. °F	L.D.B. °F	L.W.B. °F	MAX. FACE VEL. F.P.M.	REFRIG. TYPE	NO. OF STAGES	MINIMUM TOTAL CAPACITY MBH	E.D.B. °F	L.D.B. °F	FLOW GPM	E.W.T. °F	L.W.T. °F	MAXIMUM W.P.D. FT. HEAD										CONTROL VALVE W.P.D. FT. HEAD				
	CFM	MINIMUM O.A. CFM	E.S.P. IN. WG.	NUMBER FANS	H.P. EACH	E.D.B. °F	L.D.B. °F	L.W.B. °F	MAX. FACE VEL. F.P.M.	REFRIG. TYPE	NO. OF STAGES	MINIMUM TOTAL CAPACITY MBH	E.D.B. °F	L.D.B. °F	FLOW GPM			E.W.T. °F	L.W.T. °F	MAXIMUM W.P.D. FT. HEAD	CONTROL VALVE W.P.D. FT. HEAD								
UV-A	1000	255	0.5	3	0.25	20.7	80	65.4	60.8	500	R-410A	4	46.7	47	90.1	4	150	126.6	2.51	11.5	HORIZONTAL	AUTO	208	3	14.1	20	B	UAZU9024	

GENERAL NOTES:
 1. REFER TO SCHEDULES GENERAL NOTES.
 2. MANUFACTURER BASED ON DAIKIN (HORIZONTAL UNITS), AIREDALE (VERTICAL UNITS) UNLESS OTHERWISE INDICATED.

FAN COIL UNIT SCHEDULE (PRE-PURCHASED)

UNIT IDENTIFICATION	NOMINAL AIRFLOW CFM	MINIMUM O.A. CFM	FAN			COOLING COIL					HEATING COIL					MAXIMUM UNIT DIMENSIONS	FILTER TYPE	MODULATION/CONTROL TYPE	ELECTRICAL					MODEL NUMBER	KEYED NOTES										
			TYPE	MAXIMUM HP	RPM	AIR		DIRECT EXPANSION			AIR		WATER						VOLTS	PHASE	MCA	MOP	SCOR KA			OPTIONS/ACCESSORIES									
			SENSIBLE CAPACITY MBH	TOTAL CAPACITY MBH	E.D.B. °F	L.D.B. °F	REFRIG. TYPE	MIN. FACE AREA SQ. FT.	MAX. FACE VEL. F.P.M.	MINIMUM TOTAL CAPACITY MBH	E.D.B. °F	L.D.B. °F	FLOW GPM	FLUID TYPE	E.W.T. °F												L.W.T. °F	MAXIMUM W.P.D. FT. HEAD	CONTROL VALVE W.P.D. FT. HEAD						
			CFM	MINIMUM O.A. CFM	E.S.P. IN. WG.	NUMBER FANS	H.P. EACH	E.D.B. °F	L.D.B. °F	L.W.B. °F	MAX. FACE VEL. F.P.M.	REFRIG. TYPE	NO. OF STAGES	MINIMUM TOTAL CAPACITY MBH	E.D.B. °F				L.D.B. °F	FLOW GPM	E.W.T. °F	L.W.T. °F	MAXIMUM W.P.D. FT. HEAD			CONTROL VALVE W.P.D. FT. HEAD									
FCU-1	1650	105	DIRECT	(2)3/4	1280	44.2	63.9	80	55	R-410A	4.0	409.0	69.0	47	85.3	7	WATER	150	130	16.35	11.5	46.0	18.0	54.0	18.0	MERV 8	AUTO	120	1	19.8	25	10	B	BCH0181	

GENERAL NOTES:
 1. REFER TO SCHEDULES GENERAL NOTES.
 2. MODEL NUMBERS ARE DAIKIN UNLESS OTHERWISE NOTED.
 3. FLUID TYPE: W = WATER, PGXX = PROPYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL, EGXX = ETHYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL.
 4. CAPACITIES BASED ON HIGH SPEED SETTING.
 5. COOLING COIL CAPACITY BASED ON 75% FBD, 62.5°FWB EAT.

ACU APPLICATION SCHEDULE

UNIT ID	LOCATION/ AREA SERVED	SERVED BY	TAG	REMARKS
ACU-1	106 - OFFICE	BSB-1	D	CEILING
ACU-2	104 - OPEN OFFICE	BSB-1	D	CEILING
ACU-3	108 - OFFICE	BSB-1	J	CEILING
ACU-4	104 - OPEN OFFICE	BSB-1	L	CEILING
ACU-5	110 - BOARD ROOM	BSB-2	F	CEILING
ACU-6	110 - BOARD ROOM	BSB-2	F	CEILING
ACU-7	110 - BOARD ROOM	BSB-2	F	CEILING
ACU-8	110 - BOARD ROOM	BSB-2	F	CEILING
ACU-9	110A - EXISTING PASSAGEWAY	BSB-1	G	WALL
ACU-10	110A - EXISTING PASSAGEWAY	BSB-1	G	WALL
ACU-11	110 - BOARD ROOM	BSB-2	F	CEILING
ACU-12	110 - BOARD ROOM	BSB-2	F	CEILING
ACU-13	110 - BOARD ROOM	BSB-2	F	CEILING
ACU-14	110 - BOARD ROOM	BSB-2	F	CEILING
ACU-15	111 - BREAKROOM	BSB-3	G	WALL
ACU-16	101 - RECEPTION	BSB-1	D	CEILING
ACU-17	101 - RECEPTION	BSB-1	D	CEILING
ACU-18	115 - OFFICE	BSB-3	G	WALL
ACU-19	114 - OPEN OFFICE	BSB-3	H	CEILING
ACU-20	120 - STORAGE	BSB-3	K	CEILING
ACU-21	119 - OPEN OFFICE	BSB-3	A	CEILING
ACU-22	112 - CORRIDOR A	BSB-3	C	CEILING
ACU-23	125 - CORRIDOR B	BSB-3	C	CEILING
ACU-24	113 - COPY ROOM	BSB-3	G	WALL
ACU-25	126 - OPEN OFFICE	BSB-4	I	CEILING
ACU-26	132 - OFFICE	BSB-4	K	CEILING
ACU-27	134 - CONFERENCE ROOM	BSB-4	F	CEILING
ACU-28	135 - OFFICE	BSB-4	E	CEILING
ACU-29	136 - OPEN OFFICE	BSB-4	A	CEILING
ACU-30	133 - COPY ROOM	BSB-4	A	CEILING
ACU-31	131 - OPEN OFFICE	BSB-4	A	CEILING
ACU-32	149 - MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-33	149 - MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-34	149 - MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-35	149 - MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-36	149 - MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-37	149 - MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-38	142 - CORRIDOR C	BSB-5	B	CEILING
ACU-39	145 - RECEPTION	BSB-5	B	CEILING
ACU-40	147 - OFFICE	BSB-5	A	CEILING
ACU-41	141 - WOMEN'S RESTROOM	BSB-5	A	CEILING
ACU-42	139 - MEN'S RESTROOM	BSB-5	A	CEILING
ACU-45	110 - BOARD ROOM	BSB-2	F	CEILING
ACU-46	110 - BOARD ROOM	BSB-2	F	CEILING

UNIT I.D.	MAXIMUM SOUND POWER LEVELS							
	UNIT INLET Lw BY OCTAVE BAND							
	63 HZ (DB)	125 HZ (DB)	250 HZ (DB)	500 HZ (DB)	1000 HZ (DB)	2000 HZ (DB)	4000 HZ (DB)	8000 HZ (DB)
ERU-1	86	91	86	83	80	75	71	65

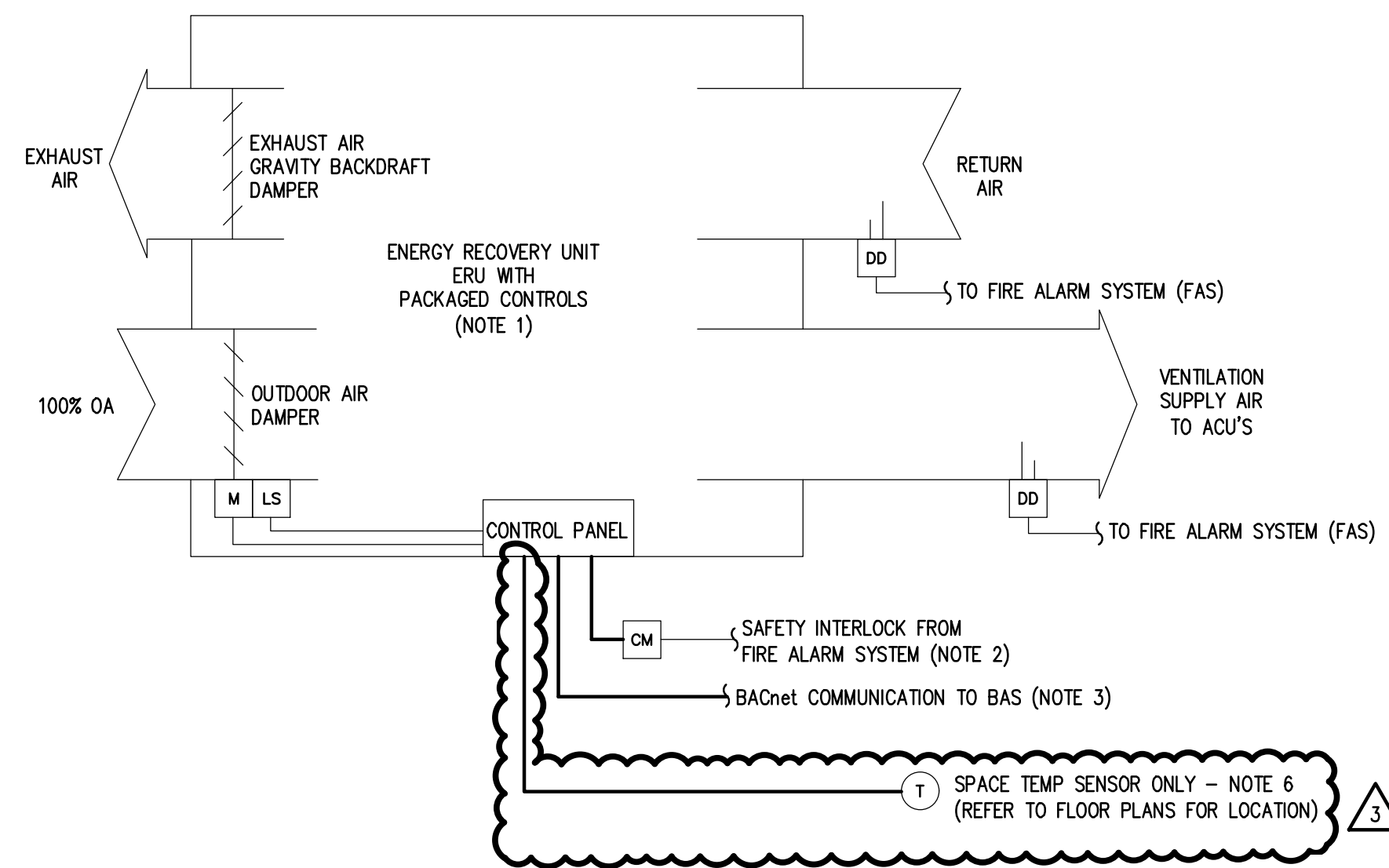
INTAKE HOOD SCHEDULE

UNIT I.D.	SYSTEM SERVED	CFM	THROAT SIZE FT"2	HOOD INTAKE VELOCITY FPM	THROAT VELOCITY FPM	STATIC PRESSURE DROP IN. W.G.	HOOD SIZE			CURB HEIGHT INCHES	HOOD CONSTRUCTION	MODEL NUMBER	KEYED NOTES
WIDTH INCHES	LENGTH INCHES	HEIGHT INCHES											
IH-1	FCU-1	470	0.82	600	573	0.055	22	---	11.75	18	ALUMINUM	GRSI	

GENERAL NOTES:
 1. MODEL NUMBERS ARE GREENHECK UNLESS OTHERWISE NOTED.
 2. PROVIDE WITH BIRD SCREEN.

DUCTLESS AIR CONDITIONING UNIT SCHEDULE

UNIT TAG	TOTAL CAPACITY MBH	EVAPORATOR FAN AIRFLOW CFM	COOLING COIL E.D.B. °F	HEATING COIL E.W.B. °F	TOTAL CAPACITY MBH	E.A.T. °F	REFRIG. TYPE	ELECTRICAL					MODEL NUMBER	REMARKS
								VOLTS	PHASE	FLA	MCA	MOP		
ACU-A	10.5	300	80	67	6.5	70	R-410A	208	1	0.2	0.3	15	FXZQ05TBVJU	0.5 TON CEILING
ACU-B	16.0	307	80	67	8.5	70	R-410A	208	1	0.2	0.3	15	FXZQ07TBVJU	0.6 TON CEILING
ACU-C	20.0	317	80	67	10.5	70	R-410A	208	1	0.2	0.3	15	FXZQ09TBVJU	0.75 TON CEILING
ACU-D	25.5	353	80	67	13.5	70	R-410A	208	1	0.3	0.4	15	FXZQ12TBVJU	1.0 TON CEILING
ACU-E	32	405	80	67	17	70	R-410A	208	1	0.3	0.4	15	FXZQ15TBVJU	1.25 TON CEILING
ACU-F	38	511	80	67	20	70	R-410A	208	1	0.5	0.6	15	FXZQ18TBVJU	1.5 TON CEILING
ACU-G	16.0	260	80	67	8.5	70	R-410A	208	1	0.3	0.4	15	FXAQ07PVJU	0.5 TON WALL
ACU-H	25.5	512	80	67	13.5	70	R-410A	208	1	0.2	0.3	15	FXFQ12TVJU	1.0 TON CEILING, ROUND
ACU-I	15.7	317	80	67	8.5	70	R-410A	208	1	0.5	0.6	15	FXMQ07PBVJU	0.6 TON CEILING, DUCTED
ACU-J	20	317	80	67	10.5</									



PACKAGED ERU-1 FIELD INSTALLATION & CONTROL

NOTES:

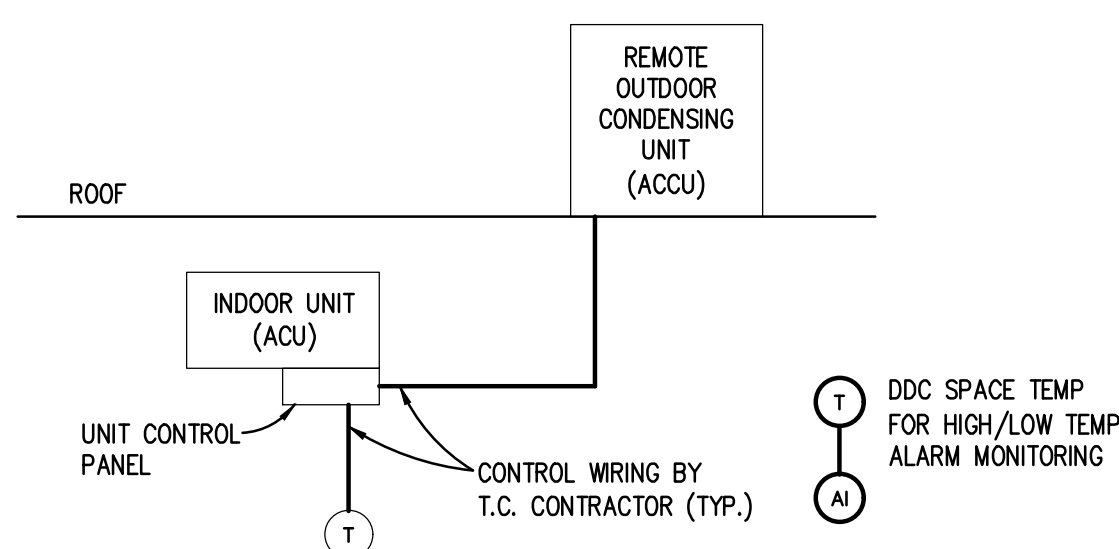
- SINGLE ZONE ENERGY RECOVERY UNIT WITH ENERGY RECOVERY WHEEL, PACKAGED DX COOLING, AND INDIRECT GAS HEATING SHALL BE SUPPLIED FOR PROJECT WITH COMPLETE PACKAGED CONTROLS INCLUDING ALL CONTROL DAMPERS AND BACnet COMMUNICATION INTERFACE FOR BAS SCHEDULING, MORNING WARM-UP, DISCHARGE AIR TEMP CONTROL, RETURN AIR DEHUMIDIFICATION CONTROL WITH HOT GAS REHEAT AND UNIT MONITORING. SINGLE POINT POWER SUPPLY CONNECTION SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR. TC CONTRACTOR SHALL PROVIDE CONTROL FIELD WIRING FOR UNIT PLUS ANY MISCELLANEOUS FIELD CONTROL WIRING THAT MAY BE REQUIRED FOR PACKAGED UNIT THAT IS NOT SHOWN.
- ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE ALARM SYSTEM COMPONENTS AND WIRING FROM FIRE ALARM PANEL TO CONTROL MODULE. TC CONTRACTOR SHALL PROVIDE WIRING FROM CONTROL MODULE TO ERU SAFETY CUTOFF CIRCUIT.
- TC CONTRACTOR SHALL PROVIDE BACnet COMMUNICATION INTERFACE WIRING FROM ERU CONTROL PANEL TO BAS NETWORK SUPERVISORY CONTROLLER, COMMUNICATING BUT NOT LIMITED TO THE FOLLOWING POINTS AS AVAILABLE:
 - OCCUPANCY MODE SCHEDULER (FROM BAS)
 - EFFECTIVE OCCUPANCY MODE (TO BAS)
 - SUPPLY FAN COMMAND STATUS (TO BAS)
 - SUPPLY FAN RUN STATUS (TO BAS)
 - EXHAUST FAN COMMAND STATUS (TO BAS)
 - EXHAUST FAN RUN STATUS (TO BAS)
 - OUTSIDE AIR TEMP (TO BAS)
 - DISCHARGE AIR TEMP (TO BAS)
 - RETURN AIR TEMP (TO BAS)
 - RETURN AIR HUMIDITY (TO BAS)
 - DISCHARGE AIR TEMP SETPOINT (FROM BAS)
 - RETURN AIR HUMIDITY SETPOINT (FROM BAS)
 - HEATING/COOLING MODE STATUS (TO BAS)
 - HEATING OUTPUT STATUS (TO BAS)
 - COOLING OUTPUT STATUS (TO BAS)
 - EXHAUST AIR DIRTY FILTER STATUS (TO BAS)
 - OUTSIDE AIR DIRTY FILTER STATUS (TO BAS)
 - MISC UNIT TEMPERATURE MONITORING (TO BAS)
 - TEMP SENSOR FAILURE ALARMS (TO BAS)
 - UNIT SAFETY CUTOFF ALARMS (TO BAS)
 - OTHER MISC ALARMS (TO BAS)

- TC CONTRACTOR SHALL OBTAIN EQUIPMENT SHOP DRAWINGS FROM SELECTED ERU SUPPLIER TO DEVELOP GRAPHICS THAT REPRESENT ACTUAL UNIT CONFIGURATION WITH COMPONENTS SHOWN IN CORRECT LOCATIONS.
- TC CONTRACTOR SHALL INCLUDE A MINIMUM OF 4 HOURS WITH BID (OR MORE AS DETERMINED BY TC CONTRACTOR THAT SHOULD BE DOCUMENTED IN THEIR SCOPE OF WORK SUMMARY) TO REVIEW UNIT SUBMITTAL TO DETERMINE FIELD INSTALLED COMPONENTS AND WIRING REQUIREMENTS AND INTEGRATION DATA AVAILABLE FROM UNIT'S PACKAGED CONTROLS FOR DEVELOPMENT OF SYSTEM GRAPHICS TO INCLUDE RELEVANT INFORMATION FOR OWNER'S CONTROL AND MONITORING OF UNIT. LABOR HOURS SHALL ALSO ACCOMMODATE TIME SPENT WITH UNIT MANUFACTURER'S TECHNICIAN TO COORDINATE ALL PACKAGED CONTROLLER POINTS TO BE INTEGRATED TO THE BAS. TC CONTRACTOR SHALL LOG ALL TIME SPENT ON EACH UNIT RELATIVE TO THIS SCOPE OF WORK TO ENSURE FAIR COMPENSATION FOR TC CONTRACTOR INVOLVEMENT TO PROPERLY CONTROL MODES OF UNIT OPERATION, SET UP DESIRED SETPOINT ADJUSTMENTS AND DIAGNOSTIC MONITOR OF UNIT.

6. SPACE TEMP SENSOR SHALL BE FURNISHED BY ERU SUPPLIER, SHIPPED LOOSE FOR FIELD INSTALLATION BY TC CONTRACTOR. TC CONTRACTOR SHALL COORDINATE WIRING WITH ERU SUPPLIER. SPACE TEMP SENSOR SHALL BE USED DURING UNOCCUPIED RECIRCULATION MODE ONLY. OCCUPIED MODE CONTROL OF ERU SHALL BE DISCHARGE AIR TEMP CONTROL.

SEQUENCE OF OPERATION:

- FOR OCCUPIED MODE, ERU WITH PACKAGED CONTROLS SHALL MAINTAIN A DISCHARGE AIR TEMP SETPOINT OF 70F (SETPPOINT ADJ. THRU BAS) WHILE SUPPLY AND EXHAUST FANS OPERATES CONTINUOUSLY.
- ERU SHALL INCLUDE DEHUMIDIFICATION MODE WHEN RETURN AIR HUMIDITY EXCEEDS HIGH LIMIT SETPOINT.
- FOR UNOCCUPIED MODE, ERU WITH PACKAGED CONTROLS SHALL CYCLE SUPPLY FAN TO MAINTAIN UNOCCUPIED SPACE TEMP HEATING SETPOINT OF 62F OR COOLING SETPOINT OF 82F. ERU RETURN AIR RECIRCULATION DAMPER SHALL OPEN AND OUTSIDE AIR DAMPER SHALL REMAIN CLOSED.
- BACnet OPEN PROTOCOL COMMUNICATIONS INTERFACE SHALL BE PROVIDED WITH PACKAGED CONTROLS AND CONNECTED TO OWNER'S BUILDING AUTOMATION SYSTEM THAT SHALL ALLOW UNIT SCHEDULING, FAN STATUSES, DISCHARGE AIR TEMP ADJUSTMENTS AND ADDITIONAL UNIT MONITORING AS AVAILABLE.
- DUCT SMOKE DETECTOR(S) SHALL DEACTIVATE UNIT THRU FIRE ALARM SYSTEM CONTROL MODULE WHEN PRODUCTS OF COMBUSTION ARE DETECTED.



SPLIT SYSTEM PACKAGED ACU FIELD WIRING & CONTROL

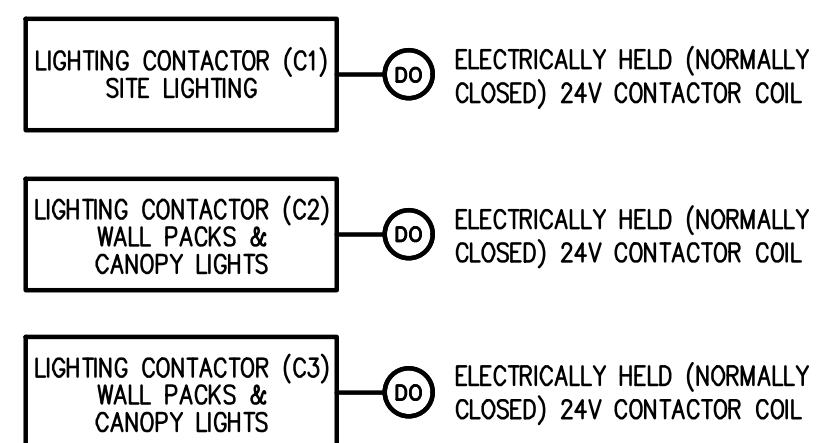
TYPICAL FOR ACU-43/ACCU-7 & ACU-44/ACCU-8

NOTES:

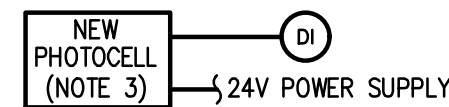
- REFER TO FLOOR PLANS FOR QUANTITY AND LOCATION OF UNITS.
- TC CONTRACTOR SHALL PROVIDE FIELD WIRING BETWEEN INDOOR UNIT CONTROLS AND THE REMOTE CONDENSER.
- TC CONTRACTOR SHALL INSTALL THERMOSTAT PROVIDED BY ACU SUPPLIER AND PROVIDE REQUIRED FIELD WIRING.
- TC CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR EXACT TERMINATIONS AND WIRING REQUIREMENTS.

SEQUENCE OF OPERATION:

- DDC SHALL MONITOR SPACE TEMP AND ACTIVATE ALARM IF HIGH OR LOW LIMIT SETPOINTS ARE REACHED.



KELE MODEL EM-24A2 PHOTOCELL OR EQUAL LOCATED ON ROOF FACING NORTH



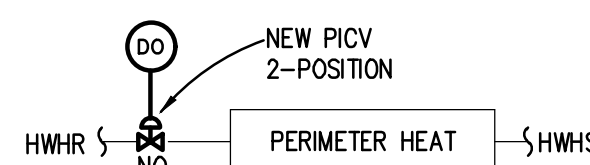
BUILDING EXTERIOR LIGHTING CONTROL

NOTES:

- REFER TO LIGHTING PLANS FOR LOCATION OF LIGHTING CONTROL CONTACTORS.
- COORDINATE WIRING REQUIREMENTS AND TERMINATIONS WITH ELECTRICAL CONTRACTOR.
- TC CONTRACTOR SHALL PROVIDE PHOTOCELL, 24 POWER SUPPLY AND ASSOCIATED WIRING FOR BAS FOR MONITORING AND OVERRIDE OFF CONTROL OF EXTERIOR LIGHTING SCHEDULES.

SEQUENCE OF OPERATION:

- DDC SHALL CONTROL OUTDOOR LIGHTING BASED ON EARLY MORNING AND NIGHT TIME SCHEDULES.
- DDC MONITORED PHOTOCELL SHALL BE USED FOR "OFF" OVERRIDE CONTROL OF SCHEDULED OPERATION IF DURING DAYLIGHT.



PERIMETER HEATING CONTROL - SPACES WITHOUT & WITH ACU CONTROL

TYPICAL RADIANT WALL PANEL & FINNED TUBE RADIATION

NOTES:

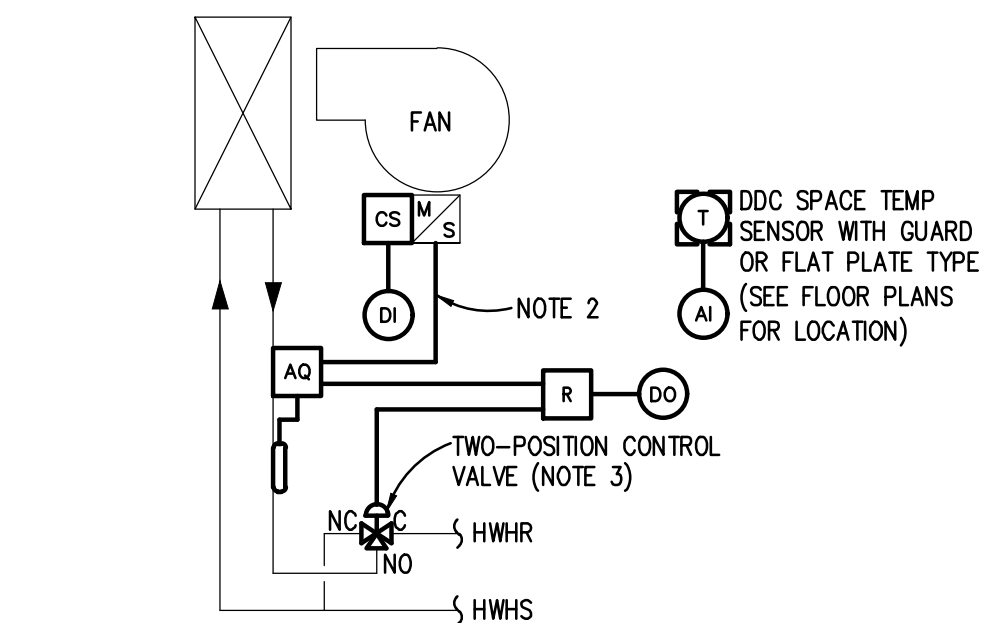
- REFER TO PIPING PLANS FOR QUANTITY AND LOCATION OF UNITS FOR BOTH TYPES OF CONTROL; PERIMETER HEATING CONTROL WITH ACU & WITHOUT ACU.
- FOR EXISTING FINNED TUBE RADIATION, REFER TO PIPING DRAWINGS FOR CONTROL VALVE SIZING PARAMETERS.
- CONTROL VALVES SHALL BE FURNISHED BY TC CONTRACTOR FOR INSTALLATION BY MECHANICAL CONTRACTOR.
- FOR SPACES WITH BOTH TYPES OF SENSORS, THE FLAT PLAT DDC SPACE TEMP SENSOR SHALL BE LOCATED JUST BELOW THE VRV SPACE TEMP SENSOR/CONTROLLER.

SEQUENCE OF OPERATION (FOR UNITS NOT SERVING SAME SPACE WITH ACU):

- ALL SETPOINTS AND DEADBANDS SHALL BE ADJUSTABLE THROUGH DDC SYSTEM.
- DDC SYSTEM SHALL OPEN/CLOSE PERIMETER HEATING CONTROL VALVE AS REQUIRED TO MAINTAIN SPACE TEMP SETPOINT OF 70F DURING BLDG OCCUPANCY AND 62F DURING BLDG UNOCCUPANCY.
- DDC SYSTEM SHALL PROVIDE A 2F DEADBAND AROUND SETPOINTS FOR CONTROL.

VRV/ACU SPACE TEMP SENSOR/CONTROLLER - NOTE 4 (SEE FLOOR PLANS FOR LOCATION)

DDC SPACE TEMP FLAT PLATE TYPE - NOTE 4 (SEE FLOOR PLANS FOR LOCATION)



HWH CABINET UNIT HEATER CONTROL

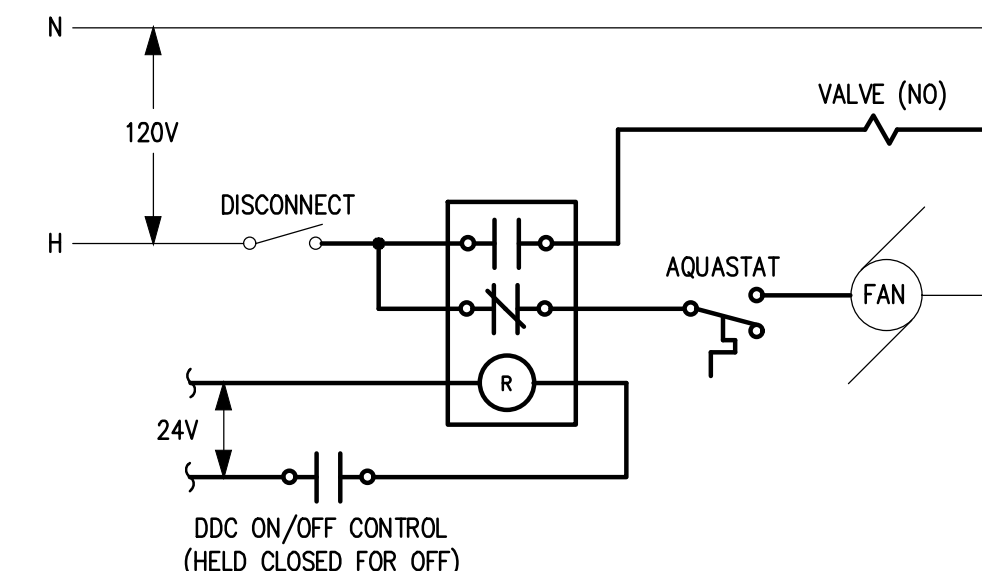
TYPICAL

NOTES:

- REFER TO FLOOR PLANS FOR QUANTITY AND LOCATION OF UNITS.
- AQUASTAT SHALL BE WIRED IN SERIES WITH FAN CONTROL WIRING CIRCUIT.
- TC CONTRACTOR SHALL FURNISH 3-WAY CONTROL VALVES FOR HEATING ELEMENTS PER MECHANICAL SCHEDULES FOR INSTALLATION BY MECHANICAL CONTRACTOR.

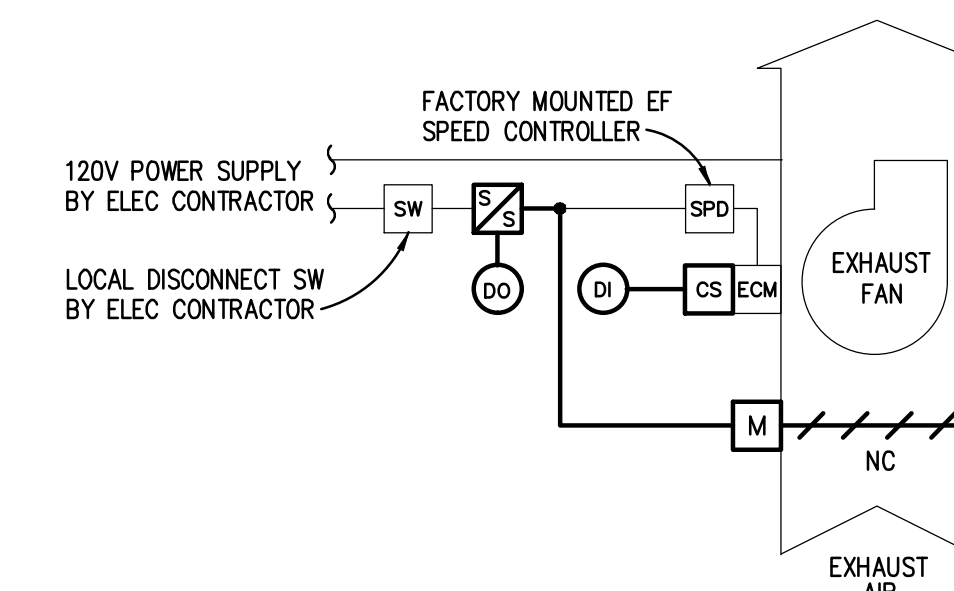
SEQUENCE OF OPERATION:

- ASHRAE 90.1-2013 FOR VESTIBULES ONLY:
 - DDC SHALL ENABLE/DISABLE CUH FAN CIRCUIT AND OPEN/CLOSE HEATING VALVE AS REQUIRED TO MAINTAIN SPACE TEMP SETPOINT OF 60F. FAN SHALL ACTIVATE UPON PROOF OF HWHR FLOW BY AQUASTAT. AQUASTAT SHALL PROVIDE 4F DEADBAND FOR CONTROL. DDC SHALL PROVIDE 2F DEADBAND FOR CONTROL.
 - WHEN OUTSIDE AIR TEMP INCREASES ABOVE 45F, DDC SHALL DISABLE CONTROL OF THE CUH.
- FOR ALL OTHER AREAS/ROOMS:
 - DDC SHALL ENABLE/DISABLE CUH FAN CIRCUIT AND OPEN/CLOSE HEATING VALVE AS REQUIRED TO MAINTAIN SPACE TEMP SETPOINT OF 68F DURING BUILDING OCCUPIED MODE AND 50F DURING BUILDING UNOCCUPIED MODE. CUH FAN SHALL ACTIVATE UPON PROOF OF HWHR FLOW BY AQUASTAT. AQUASTAT SHALL PROVIDE 4F DEADBAND FOR CONTROL. DDC SHALL PROVIDE 2F DEADBAND CONTROL AROUND SETPOINTS.
 - WHEN OUTSIDE AIR TEMP INCREASES ABOVE 60F, DDC SHALL DISABLE CONTROL OF THE CUH.



HWH CABINET UNIT HEATER WIRING

TYPICAL



EXHAUST FAN (EF-1, 2 & 3) CONTROL

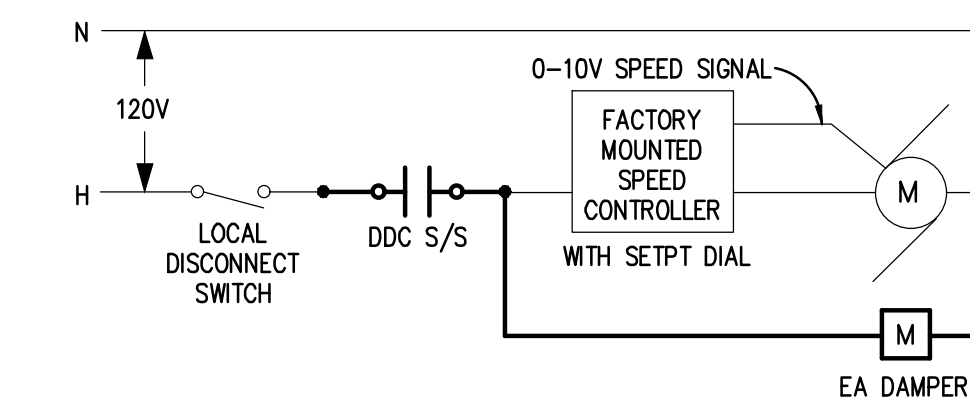
TYPICAL

NOTES:

- REFER TO FLOOR PLANS FOR LOCATION OF UNITS.
- TC CONTRACTOR SHALL FURNISH MOTORIZED DAMPER FOR INSTALLATION BY SHEETMETAL CONTRACTOR. REFER TO FLOOR PLANS FOR DAMPER SIZES AND VERIFY WITH SHEETMETAL CONTRACTOR.

SEQUENCE OF OPERATION:

- EXHAUST FAN SHALL BE STARTED AND STOPPED BY DDC BASED ON TIME SCHEDULE. WIRING INTERLOCK SHALL OPEN DAMPER.
- DDC SHALL MONITOR EF RUN STATUS THRU CURRENT SWITCH. ABNORMAL STATUS CONDITION SHALL ACTIVATE ALARM.
- EXHAUST FAN SPEED SHALL BE MANUALLY SET VIA ON BOARD POTENTIOMETER DIAL DURING SYSTEM BALANCING.



EF-1, 2 & 3 M/S WIRING

TYPICAL

Addendum #3: 16 August 2023
Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

TEMPERATURE CONTROLS



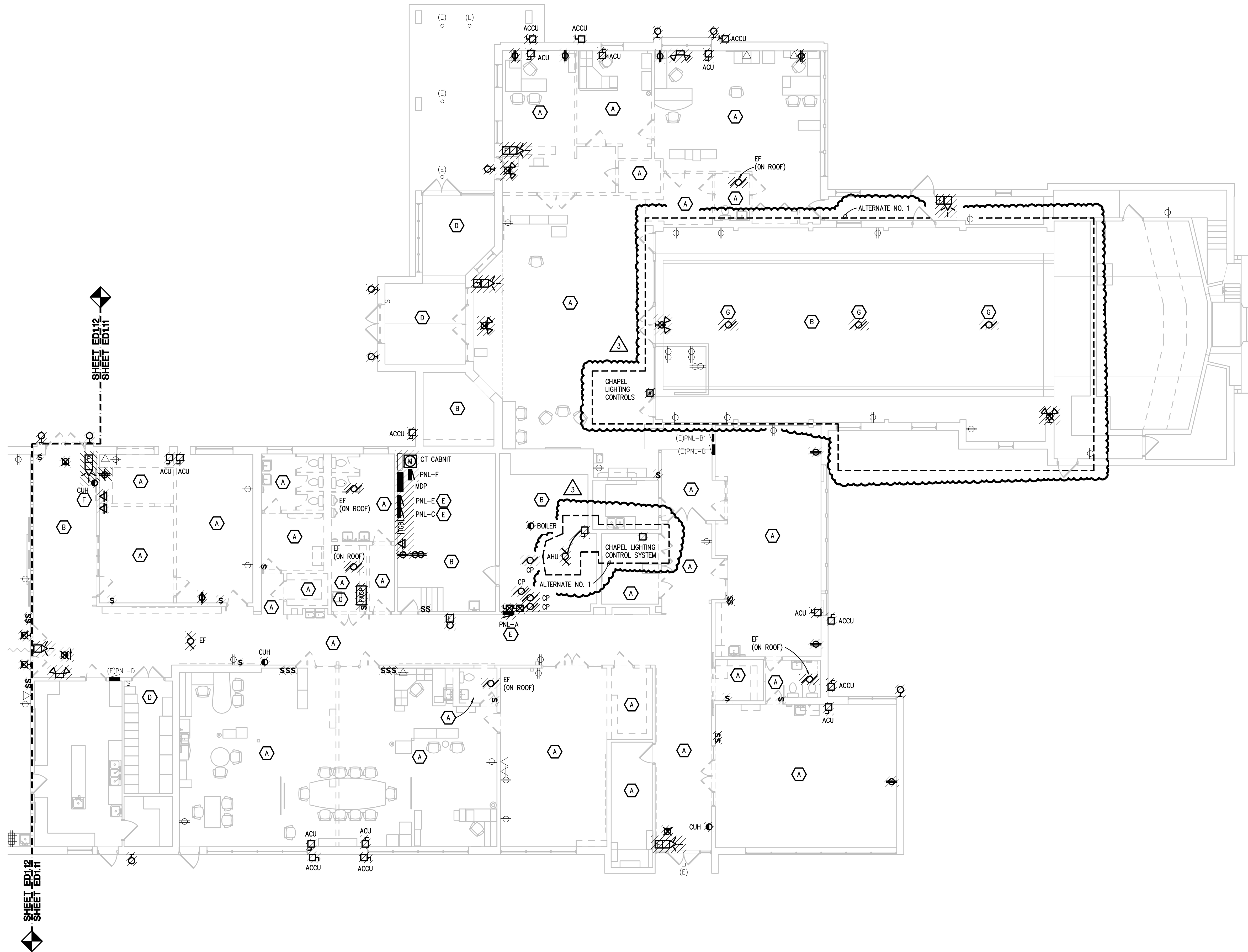
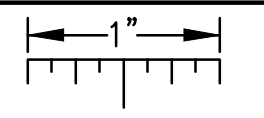
Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M8.04

Peter Basso Associates Inc.
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
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PBA Project No: 2022.0419

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



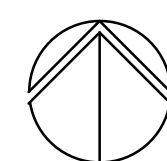
ELECTRICAL DEMOLITION GENERAL NOTES:

1. VISIT THE SITE PRIOR TO SUBMISSION OF BID TO EXAMINE THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK.
2. EXAMINE THE DRAWINGS OF OTHER TRADES AND BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES. PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES, WHETHER OR NOT SPECIFICALLY INDICATED.
3. REMOVE EQUIPMENT OR MATERIALS AS INDICATED ON PLAN WITH CROSS HATCHING. DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO, THOSE COMPONENTS SHOWN.
4. COORDINATE WITH NEW WORK PLANS, ONE LINE DIAGRAMS AND RISER DIAGRAMS FOR EXTENT OF DEMOLITION WORK.
5. PROVIDE PROPER SUPPORT FOR EXISTING TO REMAIN CONDUITS AND BOXES WHERE EXISTING SUPPORT IS TO BE REMOVED. RE-ROUTE BRANCH CIRCUIT CONDUITS AND RELOCATE JUNCTION BOXES AS REQUIRED TO FACILITATE INSTALLATION OF NEW EQUIPMENT AND SYSTEMS IN CEILING SPACES.
6. REMOVE ALL CONDUIT AND WIRE BACK TO THE SOURCE OR NEAREST UPSTREAM DEVICE REMAINING IN SERVICE.
7. MAINTAIN ELECTRICAL SERVICE TO ALL LIGHTING FIXTURES, DEVICES AND EQUIPMENT THAT ARE TO REMAIN. EXTEND CONDUIT AND WIRE AS REQUIRED WHERE DEMOLITION WORK AFFECTS ELECTRICAL SERVICE TO DOWNSTREAM LOADS THAT ARE TO REMAIN.
8. DISPOSE OF ALL MATERIALS OFF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BID. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, INCLUDING TOLP TESTING, PROPER DISPOSAL AND/OR RECYCLING OF FLUORESCENT LAMPS.
9. PROVIDE BLANK COVER PLATES WHERE SWITCHES AND DEVICES ARE REMOVED BUT EXISTING WALLS REMAIN INTACT.
10. RING OUT AND TAG ALL CIRCUITS AFFECTED BY THIS ALTERATION AT BOTH ENDS. MARK ALL UNUSED CIRCUIT BREAKERS "SPARE".
11. PROVIDE UPDATED TYPED-IN DIRECTORIES FOR ALL PANELS AFFECTED BY THIS ALTERATION.
12. VERIFY ALL UNDERGROUND AND IN SLAB UTILITY LOCATIONS PRIOR TO SAW-CUTTING OR PENETRATING ANY FLOOR SLAB.
13. COORDINATE ANY SHUT DOWN OF EXISTING SERVICES AND EQUIPMENT THAT ARE REMAINING IN USE WITH THE OWNER'S REPRESENTATIVE. WHERE EXISTING BUILDING SERVICE IS REQUIRED TO BE SHUT DOWN, INCLUDE ALL ASSOCIATED OVERTIME COSTS TO PERFORM THIS WORK DURING WEEKENDS AND EVENINGS INCLUDE ALL COSTS FOR PROVIDING TEMPORARY POWER WHERE SHUT DOWNS MUST OCCUR FOR PERIODS LONGER THAN THESE HOURS. COORDINATE ELECTRICAL SHUT DOWNS WITH THE OWNER 72 HOURS PRIOR TO SHUT DOWN.

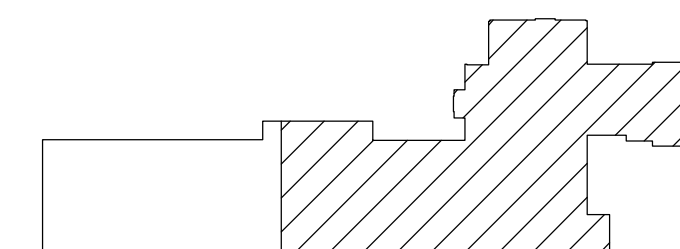
DEMOLITION KEY NOTES:

- A. REMOVE ALL ELECTRICAL DEVICES ON WALLS TO BE DEMOLISHED (LIGHTING, POWER, FIRE ALARM, P/A, ETC.) INCLUDING CEILING MOUNTED LIGHTING. REMOVE LIGHT CONTROLS AND MAINTAIN BRANCH CIRCUIT SERVING LIGHTING FOR RECONNECTION TO NEW LIGHTING. ANY DEVICE LOCATED ON WALL NOT TO BE DEMOLISHED IS TO REMAIN (WALLS TO BE DEMOLISHED ARE SHOWN DASHED). REFER TO NEW WORK PLAN FOR EXTENT OF WORK.
- B. REMOVE LIGHT FIXTURES AND CONTROLS. MAINTAIN BRANCH CIRCUIT FOR REUSE.
- C. REMOVE EXISTING FIRE ALARM SYSTEM COMPLETE (DEVICES AND WIRING). ALL FIRE ALARM DEVICES AND WIRING INDICATED OR NOT INDICATED TO BE REMOVED.
- D. REMOVE LIGHT FIXTURES. MAINTAIN CONTROLS AND BRANCH CIRCUIT FOR REUSE.
- E. REMOVE PANELBOARD FOR RELOCATION. EXISTING LOADS STILL IN USE SHALL BE RELOCATED.
- F. MECHANICAL EQUIPMENT BEING REPLACED. MAINTAIN BRANCH CIRCUIT FOR REUSE.
- G. DISCONNECT AND REMOVE CEILING FAN AND ASSOCIATED CONTROLS.

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ELECTRICAL DEMOLITION PLAN (PART A)
SCALE: 1/8" = 1'-0"



KEY PLAN
NO SCALE

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PBA Project No: 2022.0419

ELECTRICAL DEMOLITION PLAN (PART A)

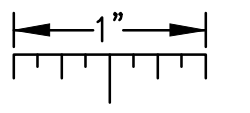


Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

ED1.11

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.

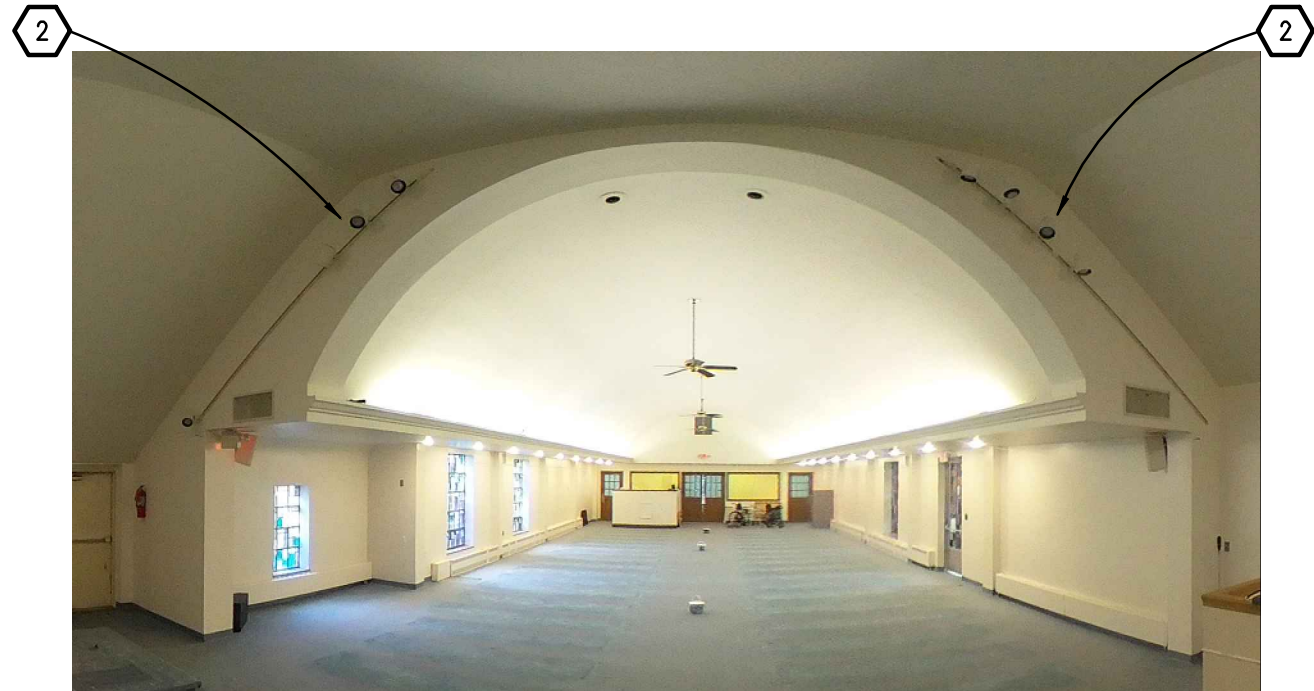
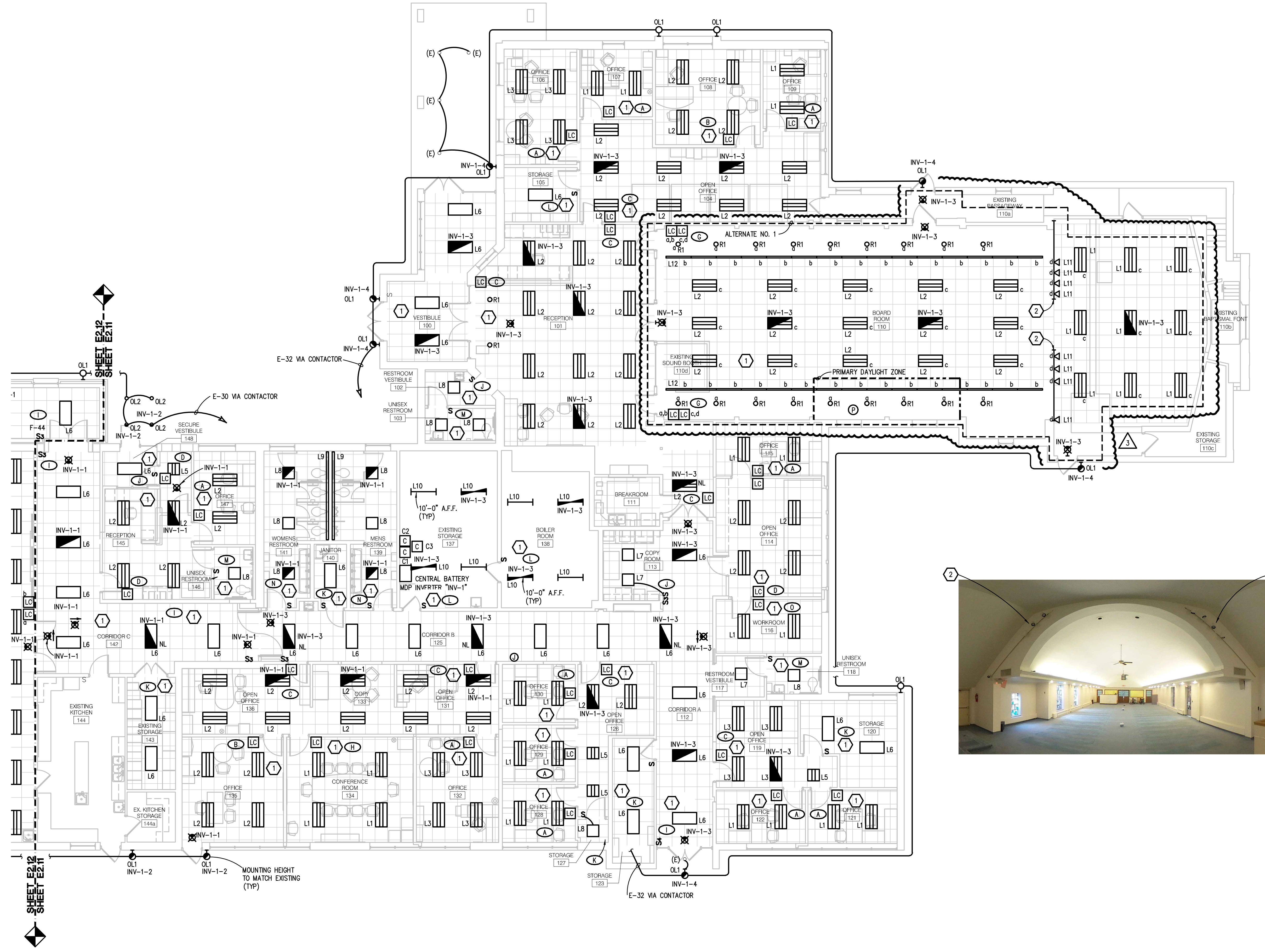


ELECTRICAL GENERAL NOTES:

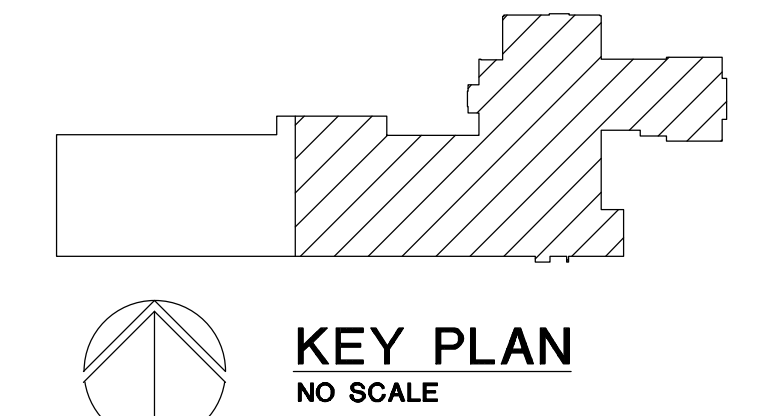
1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
7. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
8. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
9. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
10. WHERE CIRCUITS ARE EXTENDED PROVIDE GROUNDING PER THE N.E.C.

CONSTRUCTION KEY NOTES:

1. CIRCUIT LIGHTING TO MAINTAINED BRANCH CIRCUIT. MODIFY SWITCH LEG AS REQUIRED FOR WORK INDICATED.
2. MOUNT NEW TRACK LIGHTING IN SAME LOCATION AS REMOVED. PROVIDE TRACK LENGTH TO END 6" BELOW NEW CEILING.



LIGHTING PLAN (PART A)
SCALE: 1/8" = 1'-0"



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EHRESMAN ARCHITECTS
ehresmanarchitects.com

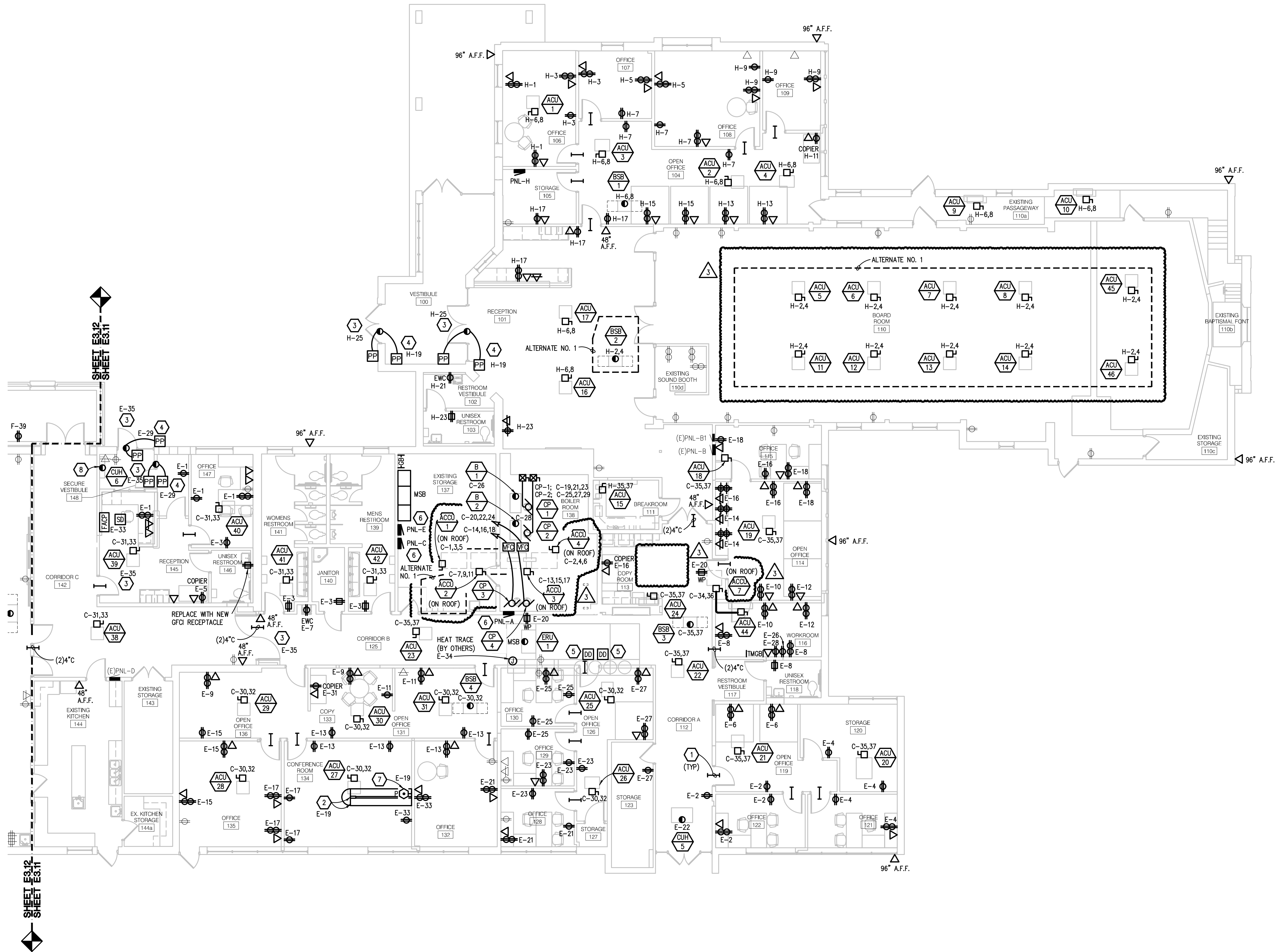
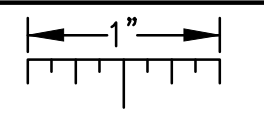
Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

E2.11

9:\2022\2022-0419-00\CAD\2022-0419-E2-LP1.dwg, E2.11, 8/16/2023 11:37:30 AM, Brett A. Galbraith, Peter Basso Associates Inc.

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



ELECTRICAL GENERAL NOTES:

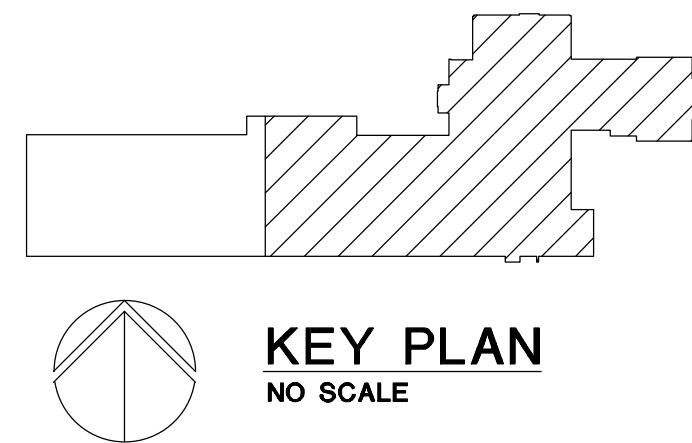
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CONSTRUCTION KEY NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE 2-2" U.O.N. CONDUITS FOR TECHNOLOGY AND AUXILIARY SYSTEM WIRE AS INDICATED. STUB CONDUITS FROM CEILING SPACE. PROVIDE PLASTIC BUSHINGS AT EACH END. PROVIDE REMOVABLE/RESEALABLE FIRE STOP PUTTY IN EACH CONDUIT AND FIRE STOP AROUND EACH CONDUIT. COORDINATE WITH TECHNOLOGY CONTRACTOR FOR EXACT LOCATION OF CONDUIT. PROVIDE MINIMUM OF 1" CONDUIT FOR ALL OTHER AREAS REQUIRING SLEEVES.
2. PROVIDE CONNECTRAC 2.7 UNDER-CARPET WIREWAY SYSTEM. PROVIDE (3) 48" WIREWAY SEGMENTS. FIELD VERIFY EXACT LOCATION AND FIELD OUT SEGMENTS AS REQUIRED. PROVIDE END COMPONENTS KIT. PROVIDE (2) DUPLEX RECEPTACLES AND (2) TELECOMMUNICATION FLOOR OUTLETS.
3. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DOOR DIAGRAM(S) ON E7 SERIES FOR RACEWAY AND BACK BOX REQUIREMENTS FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL RACEWAYS AND BACK BOXES REQUIRED. PRIOR TO ROUGH-IN, COORDINATE ALL REQUIRED DEVICES AND LOCATIONS WITH SECURE ENTRIES DETAILS ON SHEET TY7.01.
4. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BOX IS DOUBLE GANG.
5. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH THE MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR/RTU SUPPLY/ RETURN FAN MOTOR STARTER SO THAT UPON DETECTION OF SMOKE, THE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH THE TEMPERATURE CONTROL/FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
6. EXISTING LOADS STILL IN USE FROM REMOVED PANELBOARD SHALL BE RELOCATED. EXTEND CONDUIT AND WIRE AS REQUIRED.
7. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH-IN.
8. CIRCUIT MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.

Addendum #3: 16 August 2023
 Bidding and Permits: 31 July 2023
 Owner Review: 14 July 2023
 Design Development: 08 May 2023

POWER PLAN (PART A)
 SCALE: 1/8" = 1' - 0"



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 PBA Project No: 2022.0419

POWER PLAN (PART A)



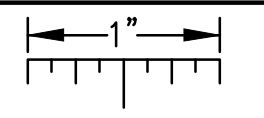
Crestwood School District
 Cherry Hill Baptist Church
 Administration Relocation and Addition

Project No. 3221

E3.11

g:\2022\2022-04-19-00\CAD\2022-04-19-E3-PP1.dwg, E3.11, 8/16/2023 11:38:02 AM, Brett A. Galbraith, Peter Basso Associates Inc.

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.

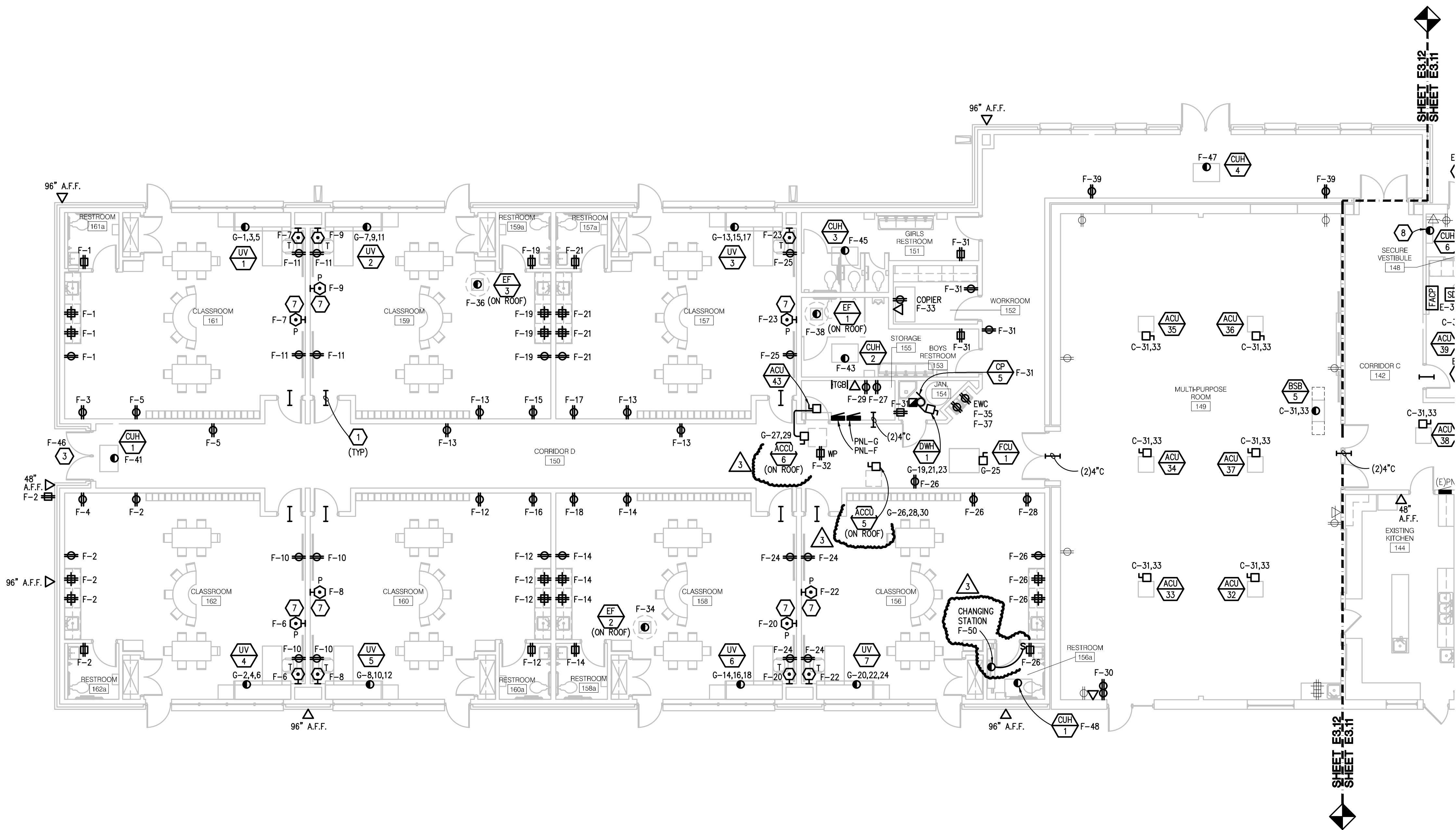


ELECTRICAL GENERAL NOTES:

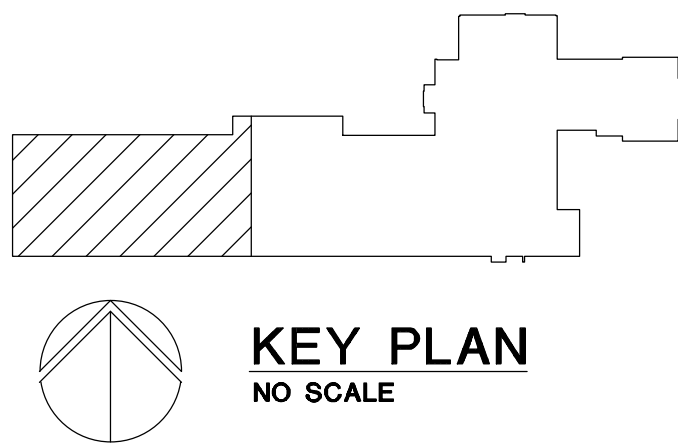
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10. WHERE CIRCUITS ARE EXTENDED PROVIDE GROUNDING PER THE N.E.C.

CONSTRUCTION KEY NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE 2-2" U.O.N. CONDUITS FOR TECHNOLOGY AND AUXILIARY SYSTEM WIRE AS INDICATED. STUB CONDUITS FROM CEILING SPACE. PROVIDE PLASTIC BUSHINGS AT EACH END. PROVIDE REMOVABLE/RESEALABLE FIRE STOP PUTTY IN EACH CONDUIT AND FIRE STOP AROUND EACH CONDUIT. COORDINATE WITH TECHNOLOGY CONTRACTOR FOR EXACT LOCATION OF CONDUIT. PROVIDE MINIMUM OF 1" CONDUIT FOR ALL OTHER AREAS REQUIRING SLEEVES.
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7. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH-IN.
8. CIRCUIT MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.



POWER PLAN (PART B)
SCALE: 1/8" = 1' - 0"



KEY PLAN
NO SCALE

Addendum #3: 16 August 2023
Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

POWER PLAN (PART B)



Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

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PBA Project No: 2022.0419

Project No. 3221

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#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB TYPE	DESCRIPTION	LOAD TYPE	#																																																																																																																																																																																																	
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7	NC		NEW		6690	6690				NEW	SPARE	NC	8																																																																																																																																																																																																	
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31	NC	BSB - 5, ACU	NEW	15	728	1097			369	NEW	BSB - 4, ACU - 25,26,27,28,29,30,31	NC	32																																																																																																																																																																																																	
33	NC	-32,33,34,35,36,37,38,39,40,41,42	NEW		728		1982		1254	NEW		NC	34																																																																																																																																																																																																	
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ALTERNATE NO.1



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1	NC	EXISTING LOAD	NEW	20	500	1000			500	20	NEW	EXISTING LOAD	NC	2																																																																																																																																																																																																
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#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB TYPE	DESCRIPTION	LOAD TYPE	#																																																																																																																																																																																																						
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#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB TYPE	DESCRIPTION	LOAD TYPE	#	
1	R	RECEPTACLE	NEW	20	1080	1980			900	20	NEW	RECEPTACLE	R	2
3	R	RECEPTACLE	NEW	20	720		1620		900	20	NEW	RECEPTACLE	R	4
5	NC	COPIER	NEW	20	1000			1720	720	20	NEW	RECEPTACLE	R	6
7	NC	EWC	GFCI	20	1000	1540								

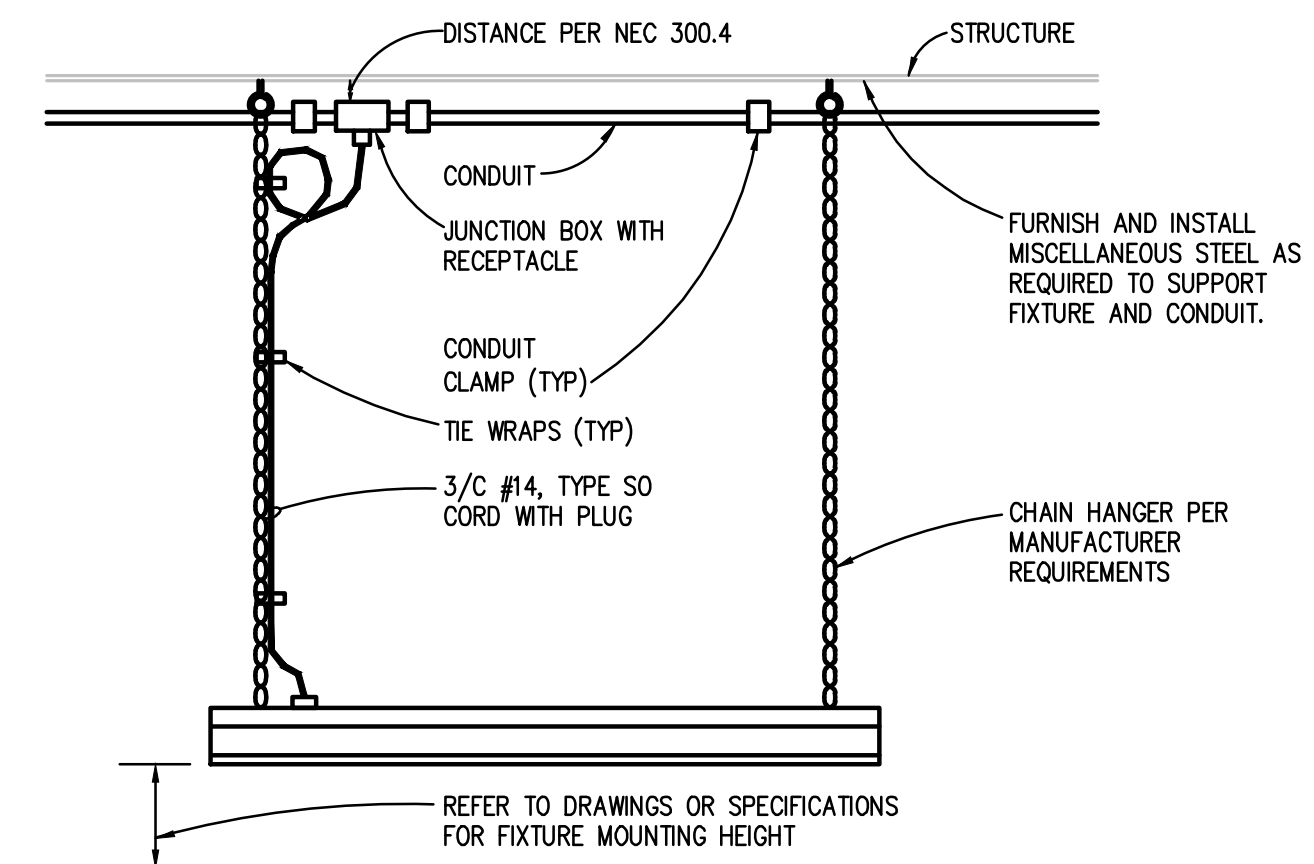
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INTERIOR LIGHTING FIXTURE SCHEDULE				
TYPE	DESCRIPTION	VOLTAGE	OUTPUT	MANUFACTURERS
L1	RECESSED 2'X4', LED TROFFER: ARCHITECTURAL STYLE CENTER BASKET, MAX 4" DEEP HOUSING WITH A POLYESTER POWDER COAT MATTE WHITE FINISH, ACRYLIC DIFFUSER WITH ROUND ACCENT STRIP, 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	4,800 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA BLT SERIES 2. METALUX CRUZE SERIES 3. COLUMBIA LCAT SERIES
L2	RECESSED 2'X4', LED TROFFER: ARCHITECTURAL STYLE CENTER BASKET, MAX 4" DEEP HOUSING WITH A POLYESTER POWDER COAT MATTE WHITE FINISH, ACRYLIC DIFFUSER WITH ROUND ACCENT STRIP, 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	4,000 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA BLT SERIES 2. METALUX CRUZE SERIES 3. COLUMBIA LCAT SERIES
L3	RECESSED 2'X4', LED TROFFER: ARCHITECTURAL STYLE CENTER BASKET, MAX 4" DEEP HOUSING WITH A POLYESTER POWDER COAT MATTE WHITE FINISH, ACRYLIC DIFFUSER WITH ROUND ACCENT STRIP, 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,000 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA BLT SERIES 2. METALUX CRUZE SERIES 3. COLUMBIA LCAT SERIES
L4	RECESSED 2'X2', LED TROFFER: ARCHITECTURAL STYLE CENTER BASKET, MAX 4" DEEP HOUSING WITH A POLYESTER POWDER COAT MATTE WHITE FINISH, ACRYLIC DIFFUSER WITH ROUND ACCENT STRIP, 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	4,000 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA BLT SERIES 2. METALUX CRUZE SERIES 3. COLUMBIA LCAT SERIES
L5	RECESSED 2'X2', LED TROFFER: ARCHITECTURAL STYLE CENTER BASKET, MAX 4" DEEP HOUSING WITH A POLYESTER POWDER COAT MATTE WHITE FINISH, ACRYLIC DIFFUSER WITH ROUND ACCENT STRIP, 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,300 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA BLT SERIES 2. METALUX CRUZE SERIES 3. COLUMBIA LCAT SERIES
L6	RECESSED 2'X4' LED TROFFER: ACRYLIC DIFFUSER WITH SATIN WHITE LENS. WHITE STEEL HOUSING. 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,000 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA GTL SERIES 2. METALUX GRLED SERIES 3. COLUMBIA LJT SERIES
L7	RECESSED 2'X2' LED TROFFER: ACRYLIC DIFFUSER WITH SATIN WHITE LENS. WHITE STEEL HOUSING. 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,300 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA GTL SERIES 2. METALUX GRLED SERIES 3. COLUMBIA LJT SERIES
L8	RECESSED 2'X2' LED TROFFER: ACRYLIC DIFFUSER WITH SATIN WHITE LENS. WHITE STEEL HOUSING. 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	2,000 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA GTL SERIES 2. METALUX GRLED SERIES 3. COLUMBIA LJT SERIES
L9	RECESSED CONTINUOUS ROW LINEAR LED FIXTURE: HIGH REFLECTANCE WITH POWDER COAT FINISH. 0-10 VOLT 10% DIMMING. FIXTURE LENGTHS AS INDICATED ON PLAN. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	375 MIN. LUMENS PER FOOT 4000K 80 CRI MINIMUM	1. NULITE REGOLO 4 SERIES 2. PRUDENTIAL BIONIC 4 SERIES 3. FINELITE HP4 SERIES
L10	LED 4'-0" CHAIN HUNG FIXTURE: FROSTED LENS WITH WIREGUARD. LOCATE FIXTURES TO AVOID MECHANICAL EQUIPMENT. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,000 LUMENS 4000K 80CRI	1. LITHONIA ZL1D LED SERIES 2. METALUX SMLD SERIES 3. COLUMBIA LCL LED SERIES
L11	LED TRACK FIXTURE: 60 DEG SEMI-SPECULAR REFLECTOR. ALUMINUM HOUSING. ALUMINUM DIE-CAST HEAT SINK, CLEAR LENS. LUMINAIRE ARM SHALL ALLOW FOR 90° ADJUSTMENT. TRACK SHALL BE SINGLE CIRCUIT AND 0-10V DIMMING. TRACK LENGTH AS INDICATED ON PLAN. BLACK FINISH.	120V	740 LUMENS 4000K 80CRI	1. BRUCK Z10 LED TRACK SERIES 2. INTENSE ITP16H TRACK SERIES 3. TECH FOKIS LED TRACK SERIES
L12	4'-0" LED COVE FIXTURE: INTEGRAL SELF-LOCKING BRACKET WITH 90° ROTATION. BUILT IN MALE/FEMALE CONNECTORS, WITH JUMPER CABLES. ALUMINUM HOUSING, 0-10 VOLT 1% DIMMING. LINK FIXTURES TOGETHER FOR A SINGLE RUN, REFER TO PLANS FOR RUN LENGTHS.	MULTI	300 LUMENS PER FOOT 4000K 80CRI	1. MODA LIGHT COVE SERIES 2. ECOSENSE SLIM COVE SERIES 3. ACCLAM AL COVE ECO SERIES

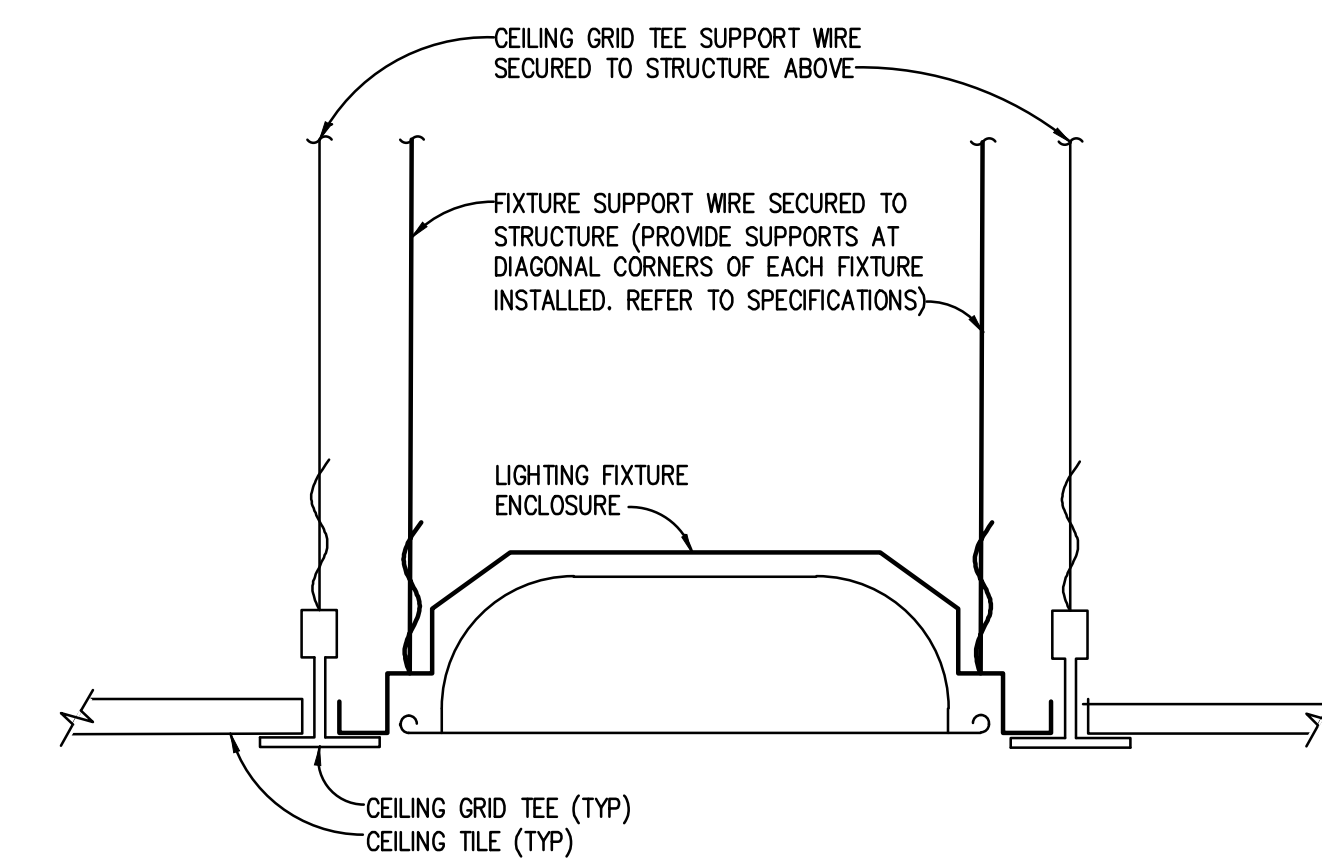
INTERIOR LIGHTING FIXTURE SCHEDULE				
TYPE	DESCRIPTION	VOLTAGE	OUTPUT	MANUFACTURERS
R1	LED RETROFIT DOWNLIGHT: SIZE TO MATCH EXISTING 6" DIAMETER DOWNLIGHTS IN CEILING (CONTRACTOR TO VERIFY). WIDE BEAM, SEMI-SPECULAR FINISH, WHITE FLANGE AND GOOF RING SIZED AS REQUIRED. CONTRACTOR TO PROVIDE MOCK OF ONE FIXTURE UP PRIOR TO ORDERING ALL FIXTURES. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	1,000 LUMENS LED 4000K 80 CRI MINIMUM	1. ELITE HHJ8 SERIES 2. COOPER HALO HC8R SERIES 3. SPECTRUM INFINUM OS SERIES
R2	NOT USED.			
OL1	LED ARCHITECTURAL WALL PACK LIGHT FIXTURE: FORWARD THROW, WEATHER RESISTANT ALUMINUM HOUSING WITH INTEGRAL WEATHER TIGHT LED DRIVER WITH HIGH PERFORMANCE ALUMINUM HEATSINKS. U.L. LISTED FOR WET LOCATIONS. FIXTURE SHALL BE COMPLETELY GASKETED. COLOR BY ARCHITECT. PROVIDE WITH MOTION SENSOR CONTROL. PROVIDE. FIXTURE SHALL DIM TO 50% OUTPUT WHEN NO MOTION IS DETECTED AFTER 15 MINUTES. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,000 LUMENS 4000K 80CRI	1. LITHONIA WST-LED SERIES 2. MCGRAW EDISON IST SERIES 3. SPAULDING TRP SERIES
OL2	6" ROUND RECESSED VANDAL RESISTANT LED ROUND DOWNLIGHT: LED WITH VENTILATED DIE CAST ALUMINUM HEAT SINK, DIE CAST ALUMINUM BEZEL, TAMPER RESISTANT TORX SCREWS, FULLY SEALED AND GASKETED, SELF FLANGED WHITE TRIM RING WITH CLEAR POLYCARBONATE LENS, WIDE DISTRIBUTION. IP 65 RATED. UL LISTED FOR WET LOCATIONS. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	LED 4000K WHITE 1000 MIN. LUMENS 80 CRI MINIMUM	1. NEW STAR MED 6 LED SERIES 2. PORTFOLIO FFLDGA SERIES 3. GOTHAM EVO VR SERIES
SL1	LED POLE MOUNTED SITE LIGHTING FIXTURE: POLE TOP CONFIGURATION AS SHOWN ON PLAN. TYPE (4TFT) DISTRIBUTION. FULLY GASKETED ALUMINUM HOUSING WITH INTEGRAL WEATHER TIGHT ELECTRONIC LED DRIVER THAT IS U.L. LISTED FOR WET LOCATIONS. FUSED AT HAND HOLE. FINISH BY ARCHITECT. POLE SHALL HAVE APPROPRIATE MOUNTING BRACKETS WITH CONFIGURATION AS SHOWN ON PLAN, 30'-0" TALL (4") SQUARE ALUMINUM, POWDER COAT FINISH WITH SQUARE BOLT COVER AND HAND HOLE. COLOR SHALL MATCH FIXTURE. POLE SHALL HAVE VIBRATION ISOLATION DAMPENER WITHIN POLE.	MULTI	LED 4000K WHITE 20,000 MIN. LUMENS 70 CRI MINIMUM	1. HUBBELL AIRO SERIES 2. COOPER GALLEON 2 SERIES 3. LITHONIA D SERIES
SL2	LED POLE MOUNTED SITE LIGHTING FIXTURE: POLE TOP CONFIGURATION AS SHOWN ON PLAN. TYPE (SL2) DISTRIBUTION. FULLY GASKETED ALUMINUM HOUSING WITH INTEGRAL WEATHER TIGHT ELECTRONIC LED DRIVER THAT IS U.L. LISTED FOR WET LOCATIONS. FUSED AT HAND HOLE. FINISH BY ARCHITECT. POLE SHALL HAVE APPROPRIATE MOUNTING BRACKETS WITH CONFIGURATION AS SHOWN ON PLAN, 30'-0" TALL (4") SQUARE ALUMINUM, POWDER COAT FINISH WITH SQUARE BOLT COVER AND HAND HOLE. COLOR SHALL MATCH FIXTURE. POLE SHALL HAVE VIBRATION ISOLATION DAMPENER WITHIN POLE.	MULTI	LED 4000K WHITE 20,000 MIN. LUMENS 70 CRI MINIMUM	1. HUBBELL AIRO SERIES 2. COOPER GALLEON 2 SERIES 3. LITHONIA D SERIES
SL3	LED POLE MOUNTED SITE LIGHTING FIXTURE: POLE TOP CONFIGURATION AS SHOWN ON PLAN. TYPE (SL4) DISTRIBUTION. FULLY GASKETED ALUMINUM HOUSING WITH INTEGRAL WEATHER TIGHT ELECTRONIC LED DRIVER THAT IS U.L. LISTED FOR WET LOCATIONS. FUSED AT HAND HOLE. FINISH DARK BRONZE. POLE SHALL HAVE APPROPRIATE MOUNTING BRACKETS WITH CONFIGURATION AS SHOWN ON PLAN, 30'-0" TALL (4") SQUARE ALUMINUM, POWDER COAT FINISH WITH SQUARE BOLT COVER AND HAND HOLE. COLOR SHALL MATCH FIXTURE. POLE SHALL HAVE VIBRATION ISOLATION DAMPENER WITHIN POLE.	MULTI	LED 4000K WHITE 20,000 MIN. LUMENS 70 CRI MINIMUM	1. HUBBELL AIRO SERIES 2. COOPER GALLEON 2 SERIES 3. LITHONIA D SERIES
EXIT SIGN	LED EXIT SIGN: THERMOPLASTIC BLACK HOUSING, RED LETTERS. MOUNTING AS INDICATED ON DRAWINGS. HIGH OUTPUT LED DIFFUSE LIGHT PANEL. SINGLE OR DOUBLE STENOCL FACE AS INDICATED ON DRAWING. REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.	MULTI	HIGH OUTPUT LED LIGHT PANEL	1. SURE-LITES LPX SERIES 2. LITHONIA QUANTUM LQM SERIES 3. DUAL-LITE LX SERIES

NOTES:
FOR FIXTURES INDICATED AS MULTI-VOLT ON SCHEDULE, ELECTRICAL CONTRACTOR SHALL FIELD VERIFY AND PROVIDE PROPER VOLTAGE.
COORDINATE WITH ARCHITECTURAL PLANS FOR CEILING TYPES.
COORDINATE WITH ARCHITECTURAL PLANS FOR EXTERIOR LIGHT FIXTURE MOUNTING HEIGHTS AT NEW ADDITIONS.

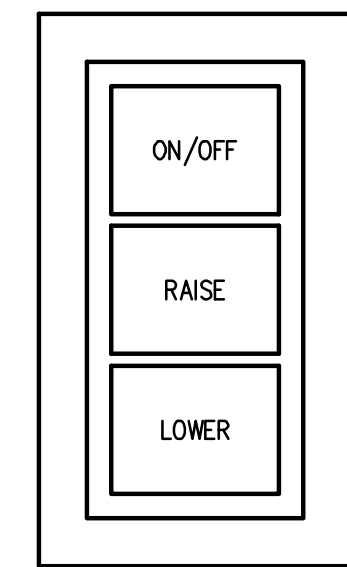
ALL LED FIXTURES SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
MULTI-VOLT ELECTRONIC DRIVER, MINIMUM OF 50,000 HOURS OPERATION WITH GREATER THAN 70% DELIVERED LUMEN OUTPUT.
LUMENS SHALL BE DELIVERED LUMENS.
INDOOR DRIVERS SHALL BE RATED FOR A MINIMUM 65°C.
OUTDOOR DRIVERS SHALL BE RATED FOR MINIMUM -20°C.
DRIVER SHALL BE LABELED TO COMPLY WITH NEMA SSL1, AND THD OF LESS THAN 20%.
DRIVER SHALL BE SERVICEABLE FROM BELOW CEILING.
LUMINAIRE SHALL COMPLY WITH IES STANDARDS LM-79 AND LM-80.



TYPICAL MOUNTING DETAIL FOR CHAIN HUNG LIGHTING FIXTURES
NO SCALE

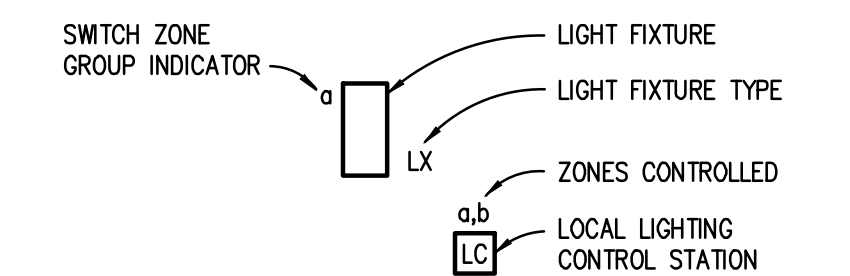


RECESSED LIGHTING FIXTURE INSTALLATION DETAIL
NO SCALE



TYPICAL DIMMING LIGHTING CONTROL STATION
NO SCALE

NOTES:
1. FOR LIGHTING CONTROL DEVICES IN REMOTE LOCATIONS DEVICES SHALL HAVE PILOT LIGHT AND LABELING FOR FIXTURES BEING CONTROLLED.



LIGHT FIXTURE CONTROLS KEY
NO SCALE

NOTES:
1. WHERE SWITCHING ZONES ARE NOT INDICATED, LOCAL LIGHTING CONTROL STATION SHALL CONTROL ALL LIGHT FIXTURES IN SPACE.
2. REFER TO LIGHTING CONTROL MATRIX FOR SWITCH TYPES REQUIRED AT LOCAL CONTROL STATION FOR EACH SPACE TYPE.

Addendum #3: 16 August 2023
Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

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PBA Project No: 2022.0419

ELECTRICAL DETAILS AND DIAGRAMS



Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

E7.01

**SECTION 00 0110
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- D. 20 0516 - Pipe Flexible Connectors, Expansion Fittings and Loops
- E. 20 0519 - Meters and Gages
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- G. 20 0533 - Electric Heat Tracing
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- K. 20 2923 - Variable Frequency Controllers

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- B. 22 1116 - Domestic Water Piping
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- E. 22 1316 - Sanitary Waste And Vent Piping
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- E. 23 2113 - Hydronic Piping
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- L. 23 3713 - Diffusers, Registers, and Grilles
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- O. 23 7200 - Air-To-Air Energy Recovery Equipment
- P. 23 8129 - Variable Refrigerant Flow HVAC Systems
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END OF SECTION

**SECTION 01 2000
PRICE AND PAYMENT PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

1.02 RELATED REQUIREMENTS

- A. AIA A101-2017 "Standard Form of Agreement Between Owner & Contractor"
- B. AIA A101-2017 Exhibit A "Insurance Bonds"
- C. AIA Document A201-2007 "General Conditions of the Contract for Construction"
- D. Section 01 2100 - Allowances: Payment procedures relating to allowances.
- E. Section 01 2200 - Unit Prices: Monetary values of unit prices; Payment and modification procedures relating to unit prices.
- F. Section 01 7800 - Closeout Submittals: Project record documents.

1.03 SCHEDULE OF VALUES

- A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
- B. Forms filled out by hand will not be accepted.
- C. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- D. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization and close out documents.
 - 1. Include at a minimum 2% of the contract sum, for close-out documents (as built documents, training and O&M manuals, attic stock materials, warranty and guarantee documents, and punch list completion).
- E. Include in each line item, the amount of Allowances specified in this section.
- F. Include separately from each line item, a direct proportional amount of Contractor's overhead and profit.
- G. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
- C. Forms filled out by hand will not be accepted.
- D. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed and Stored to Date of Application.

8. Percentage of Completion.
 9. Balance to Finish.
 10. Retainage.
- E. Execute certification by signature of authorized officer.
 - F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
 - G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
 - H. Submit one electronic copy of each Application for Payment. Hard copies to be provided on request.
 - I. Include the following with the application:
 1. Transmittal letter as specified for submittals in Section 01 3000.
 2. Construction progress schedule, revised and current as specified in Section 01 3000.
 3. Current construction photographs specified in Section 01 3000.
 4. Waivers of Lien shall be provided in the following forms:
 - a. Conditional Waiver on Progress Payment – Prime contractor to supply this waiver in the full amount requested on each application for payment.
 - b. Unconditional Waiver on Progress Payment – Prime Contractor and Subcontractors are to supply this waiver after receiving each progress payment.
 - c. Conditional Waiver on Final Payment – Prime contractor to supply this waiver in the full amount requested on the final application for payment.
 - d. Unconditional Waiver on Final Payment – Prime Contractor and Subcontractors are to supply this waiver after receiving final payment for the project.
 5. Waiver Checklist: Shall be submitted with each Application for Payment, to clearly identify the list of waivers required and the amount that each is to be for. Refer to the form at the end of this specification section for a sample.
 6. Affidavits attesting to off-site stored products.
 - J. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.
 - K. At Substantial Completion provide the following:
 1. Application for reduction of retainage (Reduced to maximum 5%).
 - a. AIA Document G707A-1994 "Consent of Surety to Reduction in or Partial Release of Retainage."

1.05 MODIFICATION PROCEDURES

- A. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's employ or subcontractors of changes to Contract Documents.
- B. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- C. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 2. Promptly execute the change.
- D. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within the length

of time specified based on the extent of the work.

- E. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation. Document any requested substitutions in accordance with Section 01 6000.
- F. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
 - 1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
 - 2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
 - 3. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.
 - 4. For change ordered by Architect without a quotation from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified for Time and Material work.
- G. Substantiation of Costs: Provide full information required for evaluation.
 - 1. On request, provide the following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.
 - e. Credit for deletions from Contract, similarly documented.
 - 2. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- H. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- I. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- J. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- K. Promptly enter changes in Project Record Documents.

1.06 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 - 1. All closeout procedures specified in Section 01 7000.
 - 2. AIA Document G706-1994 "Contractor's Affidavit of Payment of Debts and Claims".
 - 3. AIA Document G706A-1994 " Contractor's Affidavit of Release of Liens".
 - 4. Application for reduction of retainage only, to close out the project to a zero balance.
 - a. AIA Document G707-1994 "Consent of Surety to Final Payment.
 - 5. Proof that all subcontractors have been paid.
 - a. Provide full unconditional waivers of lien.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01 2100 ALLOWANCES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Contingency allowance.
- B. Inspecting and testing allowances.

1.02 RELATED REQUIREMENTS

- A. Section 01 2000 - Price and Payment Procedures: Additional payment and modification procedures.

1.03 CONTINGENCY ALLOWANCE

- A. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Contingency Allowance.
- B. Funds will be drawn from the Contingency Allowance only by Change Order.
- C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

1.04 ALLOWANCES SCHEDULE

- A. Electrical Contingency Allowance: Include the stipulated sum/price of \$40,000 for transformer revisions, verifications and upgrades with DTE.
- B. Electrical Contingency Allowance: Include the stipulated sum/price of ~~\$40,000~~ \$70,000 for temporary power equipment required to power Phase 1 work while Phase 2 and 3 are under construction.
- C. Winter Conditions Contingency Allowance: Include the stipulated sum/price of \$30,000 for temporary plywood exterior enclosures, insulation, temporary heating appliance, temporary heating fuel, etc.
- D. Alternate No. 1 - AV Systems Allowance: Include the stipulated sum/price of \$75,000 for the AV System, power, pathways, raceways, floor boxes, and other infrastructure to support the AV equipment.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 23 5216
CONDENSING BOILERS

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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. This Section includes packaged, factory-fabricated and -assembled, gas-fired, fire-tube modular aluminum stainless steel vertical fire-tube condensing boilers, trim, and accessories for generating hot water.

1.03 SUBMITTALS

- A. Product Data: Include performance data, operating characteristics, furnished specialties, and accessories.
- B. Shop Drawings: For boilers, boiler trim, and accessories. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Design calculations and vibration isolation base details.
 - a. Design Calculations: Calculate requirements for selecting vibration isolators for designing vibration isolation bases.
 - b. Vibration Isolation Base Details: Detail fabrication including anchorages and attachments to structure and to supported equipment. Include auxiliary motor slides and rails and equipment mounting frames.
 - 2. Wiring Diagrams: Power, signal, and control wiring.
- C. Source quality-control test reports.
- D. Full function factory fire test must be performed and documented on fire test label on boiler. A factory authorized start-up must be completed prior to final acceptance by Owner.
- E. Field quality-control test reports.
- F. Operation and Maintenance Data: For boilers to include in operation and maintenance manuals.
- G. Other Informational Submittals:

1. ASME Stamp Certification and Report: Submit "A," "S," or "PP" stamp certificate of authorization, as required by authorities having jurisdiction, and document hydrostatic testing of piping external to boiler.

1.04 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by an NRTL acceptable to authorities having jurisdiction, and marked for intended use.
- B. ASME Compliance: Fabricate and label boilers to comply with ASME Boiler and Pressure Vessel Code.
- C. ASHRAE/IESNA 90.1 Compliance: Boilers shall have minimum efficiency according to "Gas and Oil Fired Boilers - Minimum Efficiency Requirements."
- D. DOE Compliance: Minimum efficiency shall comply with 10 CFR 430, Subpart B, Appendix N, "Uniform Test Method for Measuring the Energy Consumption of Furnaces and Boilers."
- E. UL Compliance: Test boilers for compliance with UL 795, "Commercial-Industrial Gas Heating Equipment." Boilers shall be listed and labeled by a NRTL acceptable to authorities having jurisdiction.
- F. ASME CSD-1 Certification, in the form of completed data sheet.

1.05 COORDINATION

- A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Division 03.

1.06 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of boilers that fail in materials or workmanship within specified warranty period.
 1. Warranty Period for Condensing Boilers:
 - a. Leakage and Materials: 10 years from date of Substantial Completion.
 - b. Heat Exchanger Damaged by Thermal Stress and Corrosion: Non-prorated for five years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MODULAR CAST-ALUMINUM CONDENSING BOILERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Patterson-Kelley Co./a Harsco Co.; MACH Series.
- B. Description: Factory-fabricated, -assembled, and -tested, modular aluminum condensing boiler with heat exchanger sealed pressure tight, built on a steel base; including insulated jacket; flue-gas vent; combustion-air intake connections; water supply, return, and condensate drain connections; and controls. Water heating service only.
- C. Individual Heat Exchangers: Corrosion-resistant cast-aluminum alloy sections mounted in parallel. Water enters and exits through external headers. Water flow surrounds burner cavity.
- D. Burner: Cylindrical metal fiber mesh, natural gas, forced draft.
- E. Blower: Centrifugal fan to operate during each burner firing sequence and to pre-purge and post-purge the combustion chamber.
 1. Motors: Comply with requirements specified in Division 20 Section "Motors."
 - a. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.
- F. Gas Train: Shall include a minimum of one manual shut-off valve, two safety solenoid valves, venturi style gas valve, one low gas pressure switch, one high gas pressure switch and two test ports.

-
- G. Ignition: Spark ignition with 100 percent main-valve shutoff with electronic flame supervision.
 - H. Casing:
 - 1. Jacket: Sheet metal, with snap-in or interlocking closures.
 - 2. Control Compartment Enclosures: NEMA 250, Type 1A.
 - 3. Finish: Baked-enamel or powder-coated protective finish.
 - 4. Insulation: Minimum 2-inch- thick, mineral-fiber or polyurethane-foam insulation surrounding the heat exchanger.
 - 5. Combustion-Air Connections: Inlet and vent duct collars.
 - 6. Mounting base to secure boiler.
 - I. Characteristics and Capacities: Refer to Schedule on Drawings.

2.02 HOT-WATER BOILER TRIM

- A. Aquastat Controllers: Operating, firing rate, and high limit.
- B. Safety Relief Valve: ASME rated.
- C. Pressure and Temperature Gage: Minimum 3-1/2-inch- diameter, combination water-pressure and -temperature gage. Gages shall have operating-pressure and -temperature ranges so normal operating range is about 50 percent of full range.
- D. Boiler Air Vent: Automatic.
- E. Drain Valve: Minimum NPS 3/4 hose-end gate valve.
- F. Low water/flow cut off.
- G. High and low gas pressure switch.
- H. Flame rectification rod.

2.03 CONTROLS

- A. Boiler Control System:
 - 1. Each boiler shall be provided with all necessary controls, all necessary programming sequences, and all safety interlocks. Each boiler control system shall be properly interlocked with all safeties.
 - 2. Each boiler shall be provided with a "Full Modulating" firing control system whereby the firing rate is infinitely proportional at any firing rate between 20% and 100% as determined by the pulse width modulation input control signal. Both fuel input and air input must be sequenced in unison to the appropriate firing rate without the use of mechanical linkage.
 - 3. Control system shall provide the minimum capabilities:
 - a. Maintain single set point.
 - b. Reset the set point based on outdoor air temperature.
 - c. Boiler shutdown based on outdoor air temperature.
 - d. Internal dual set point program with an external point of closure.
 - e. Alarm relay for any manual reset alarm function.
 - f. Programmable Low Fire Delay to prevent short cycling based on a time and temperature factor for release to modulation.
 - g. LCD text display showing current supply and return temperatures, current set points as well as differential set points. It must also display any fault codes whether automatically reset or manually reset.
 - h. Local Manual Operation.
 - i. Cascade control for up to 8 boilers without the need for external control source.
 - j. Remote Control System (Building Management/Sequencer Control) - The boiler control shall be capable of accepting a 0 to 10vdc remote external analog signal or 4-20 Ma input to control the firing rate and temperature setpoint.

- k. On board Domestic Hot Water Priority capable of changing from the heating pump to the DHW pump as well as changing the boiler set point from a heating temperature to a higher set point temperature to satisfy the DHW system and then return to the heating mode.
- l. Domestic Hot Water may run concurrent with Comfort Heat mode.
- m. All equipment shall be provided with necessary communication capabilities and hardware to allow integration with Mod-Bus Communications with building Automation System (provided by others.)
- n. Provide BacNet® communication card.

2.04 ELECTRICAL POWER

- A. Controllers, Electrical Devices, and Wiring: Electrical devices and connections are specified in Division 26 Sections.
- B. Single-Point Field Power Connection: Factory-installed and -wired switches, motor controllers, transformers, and other electrical devices necessary shall provide a single-point field power connection to boiler.
 - 1. House in NEMA 250, Type 1 enclosure.
 - 2. Wiring shall be numbered and color-coded to match wiring diagram.
 - 3. Install factory wiring outside of an enclosure in a metal raceway.
 - 4. Field power interface shall be lockable, nonfused disconnect switch.
 - 5. Provide branch power circuit to each motor and to controls with a disconnect switch or circuit breaker.
 - 6. Provide each motor with overcurrent protection.

2.05 VENTING KITS

- A. Kit: Complete system, ASTM A 959, Type 29-4C stainless steel, pipe, vent terminal, thimble, indoor plate, vent adapter, condensate trap and dilution tank, and sealant.
- B. Combustion-Air Intake: Complete system, stainless steel, pipe, vent terminal with screen, inlet air coupling, and sealant.

2.06 ACCESSORIES

- A. Flue Side Condensate Neutralizer:
 - 1. Description: Designed to raise the PH level of flue side condensate to near neutral prior to condensate entering the sanitary drainage system.
 - 2. Materials: Neutralizer constructed of PVC pipe and fittings mounted on channel strut base with galvanized or stainless steel clamps and hardware; and charged with calcium carbonate.
 - 3. Manufacturers:
 - a. BKI Industries, Inc.; Acid Neutralizer Kits.
 - b. J.J.M. Boiler Works; JM Neutralizing Tubes.
 - c. Any of the approved boiler manufacturers.

2.07 SOURCE QUALITY CONTROL

- A. Burner and Hydrostatic Test: Factory adjust burner to eliminate excess oxygen, carbon dioxide, oxides of nitrogen emissions, and carbon monoxide in flue gas and to achieve combustion efficiency; perform hydrostatic test.
- B. Test and inspect factory-assembled boilers, before shipping, according to ASME Boiler and Pressure Vessel Code.
- C. Allow Owner access to source quality-control testing of boilers. Notify Architect 14 days in advance of testing.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Before boiler installation, examine roughing-in for concrete equipment bases, anchor-bolt sizes and locations, and piping and electrical connections to verify actual locations, sizes, and other conditions affecting boiler performance, maintenance, and operations.
 - 1. Final boiler locations indicated on Drawings are approximate. Determine exact locations before roughing-in for piping and electrical connections.
- B. Examine mechanical spaces for suitable conditions where boilers will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 BOILER INSTALLATION

- A. Install boilers level on concrete base. Concrete base is specified in Division 20 Section "Basic Mechanical Materials and Methods," and concrete materials and installation requirements are specified in Division 03.
- B. Vibration Isolation: Elastomeric isolation pads with a minimum static deflection of 0.25 inch. Vibration isolation devices and installation requirements are specified in Division 20 Section "Mechanical Vibration Controls."
- C. Install natural gas-fired boilers according to NFPA 54.
- D. Install propane-fired boilers according to NFPA 58.
- E. Assemble and install boiler trim.
- F. Install electrical devices furnished with boiler but not specified to be factory mounted.
- G. Install control wiring to field-mounted electrical devices.

3.03 CONNECTIONS

- A. Piping installation requirements are specified in other Division 20 and 23 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to boiler to allow service and maintenance.
- C. Install piping from equipment drain connection to nearest floor drain. Piping shall be at least full size of connection. Provide an isolation valve if required.
- D. Connect piping to boilers, except safety relief valve connections, with flexible connectors of materials suitable for service. Flexible connectors and their installation are specified in Division 20 Section "Pipe Flexible Connectors, Expansion Fittings and Loops."
- E. Connect gas piping to boiler gas-train inlet with union. Piping shall be at least full size of gas train connection. Provide a reducer if required.
- F. Connect hot-water piping to supply- and return-boiler tappings with shutoff valve and union or flange at each connection.
- G. Connect steam and condensate piping to supply-, return-, and blowdown-boiler tappings with shutoff valve and union or flange at each connection.
- H. Install piping from safety relief valves to nearest floor drain.
- I. Install piping from safety valves to drip-pan elbow and to nearest floor drain.
- J. Boiler Venting:
 - 1. Install flue venting kit and combustion-air intake.
 - 2. Connect full size to boiler connections.
- K. Ground equipment according to Division 26 Section "Grounding and Bonding."
- L. Connect wiring according to Division 26 Section "Conductors and Cables."

3.04 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- B. Tests and Inspections:
 - 1. Perform installation and startup checks according to manufacturer's written instructions.
 - 2. Leak Test: Hydrostatic test. Repair leaks and retest until no leaks exist.
 - 3. Operational Test: Start units to confirm proper motor rotation and unit operation. Adjust air-fuel ratio and combustion.
 - 4. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 - a. Check and adjust initial operating set points and high- and low-limit safety set points of fuel supply, water level and water temperature.
 - b. Set field-adjustable switches and circuit-breaker trip ranges as indicated.
- C. Remove and replace malfunctioning units and retest as specified above.
- D. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to two visits to Project during other than normal occupancy hours for this purpose.

3.05 DEMONSTRATION

- 1. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain boilers.

END OF SECTION