



Grove City Area School District High School Renovations

Project No: 23-S43-01

Grove City Area School District
511 Highland Avenue, Grove City, PA 16127

ADDENDUM 4

3/21/2024

This Addendum forms part of the Contract Documents and modifies the original bidding documents dated 02/19/2024. Acknowledge receipt of this Addendum by inserting its number and date in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

This addendum consists of nine (9) pages and the listed attachments (4 Sections and 47 Drawings):

CHANGES TO PRIOR ADDENDA

Item 4.1 None

CHANGES TO PROJECT MANUAL

Item 4.2 SECTION 01 1000 SUMMARY

ADD Item 1.8 B. 5. Work during the school year within occupied areas of the building needs to be done second shift or off hours. Work within Phases 2, 3 and 4 which occur during the school year can be on first shift since these areas are isolated from the students.

Item 4.3 SECTION 01 1200 MULTIPLE CONTRACT SUMMARY

ADD

1.5 GENERAL CONSTRUCTION CONTRACT NO. 23-S43-01-01

C. 4. GC is responsible for cutting and patching new louver openings for the HVAC equipment. Once the opening has been established the GC needs to temporarily secure the openings until the HC can install the ductwork and the louver.

C. 5. GC is responsible for infilling existing unit ventilator openings as identified on the Contract Document details (reference Detail 7/A310). GC is also responsible to paint the interior walls where the patches occur.

HIGH SCHOOL RENOVATIONS

GROVE CITY AREA SCHOOL DISTRICT
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C. 6. GC is responsible for structural roof reinforcement for new mechanical units. HC is responsible for roof curbs, cutting of new roof openings, roof patching, removal of existing roof items, patching of existing roof decking and roof patching where items are removed.

1.6 HVAC CONSTRUCTION CONTROLS NO. 23-S243-01-02

B. 3. g. Division 09 – Finishes

Section 09 9123 Painting (HC owns painting of new ductwork in all areas where the ceiling is exposed (i.e. Gymnasium, Tech Ed., etc.)

B. 4. d. Structural (Catwalks and Equipment Hanger Notes) All Drawings

F. 6. HC is responsible for removing the exiting louvers for the unit vents that are being removed and temporarily patching the opening until the GC can install the masonry infill.

F. 7. HC is responsible for design and installation of catwalks.

F. 8. HC is responsible for all roof curbs, cutting of new roof openings, roof patching, removal of existing roof items, patching of existing roof decking and roof patching where items are removed.

CHANGE

1.5 GENERAL CONSTRUCTION CONTRACT NO. 23-S43-01-01

B. 4 b. Structural (all work except where identified for HC) All Drawings

Item 4.4 SECTION 01 5000 TEMPORARY FACILITIES AND CONTROLS

DELETE Item 2.2 C. 6. – Cleaning of the CM trailer is not required.

ADD Item 2.2 C. 6. – HC is to provide CM trailer for this project.

DELETE Item 3.4 B. – Project Identification sign is not required on this project.

CHANGE “Lead Contractor” to “General Contractor” where identified in Item 3.7 G & H. GC is responsible for the site fencing around the laydown area.

DELETE 3.6 C. 1. in it’s entirety.

Item 4.5 SECTION 233300 AIR DUCT ACCESSORIES

Add the following section:

"2.14 DUCT SILENCERS

A. General: Furnish and install rectangular, elbow and tubular type silencers of the types and sizes shown on the drawings and/or listed in the schedule on the Drawings. Silencers shall be installed on the supply and return air systems serving the Auditorium. Silencers shall have a pressure rating no less than that specified for the connecting ductwork.

B. Galvanized Steel Silencers with Acoustic Fill:

1. Unless specified otherwise elsewhere, outer casings of rectangular silencers shall be made of no less than 22-gauge G90 lock forming quality galvanized steel meeting ASTM A 653.
2. Outer casings of tubular silencers shall be made of G90 lock forming quality galvanized steel in the following gauges:
 1. OUTSIDE DIA. METAL GAUGE
 2. 12 -36 in. 22 ga.
 3. 38-60 in. 18 ga.
4. High Transmission Loss (HTL) Casings: Outer casing shall be no less than 14 gauge galvanized steel.
5. Interior partitions for rectangular silencers shall be not less than 26-gauge G90 galvanized lock forming quality perforated steel meeting ASTM A 653. Interior construction of tubular silencers shall be compatible with the respective outside casing.
6. Joints and seams shall be mastic-filled.
7. Filler material shall be inorganic glass fiber of a proper density to obtain the specified acoustic performance and be packed under not less than 5% compression to eliminate voids due to vibration and settling. Material shall be inert, vermin and moistureproof.
8. Fiberglass absorptive media shall be protected by Mylar® or Tedlar®, woven fiberglass cloth, or Vibar™ encapsulation. Encapsulation material shall have a flame spread index of 25 or less, and a smoke developed index of 50 or less, when tested in accordance with ASTM E 84, NFPA 255, or UL 723.
 - a. Provide 1/2" thick stand-offs between the encapsulation layer and inner sheet metal partitions of the silencer to ensure acoustical performance.
9. The silencer manufacturer shall provide a written test report demonstrating that the silencer assemblies, including the media fill, have a flame spread index not greater than 25 and a smoke developed index not greater than 50 when tested to ASTM E 84, NFPA 255, or UL 723.
10. Construction:
 - a. Units shall be constructed in accordance with the ASHRAE Guide recommendations for high pressure ductwork. Seams shall be lock formed and mastic filled. Rectangular casing seams shall be in the corners of the silencer shell to provide maximum unit strength and rigidity. Interior partitions (e.g. baffles, splitters) shall be fabricated from single piece, margin perforated sheets and shall have die-formed entrance and exit shapes so as to provide the maximum aerodynamic efficiency and minimum self-noise characteristics in the sound attenuator. Blunt noses or squared-off partitions will not be accepted.
 - b. Attachment of the interior partitions to the casing shall be by means of an interlocking track assembly. Tracks shall be solid galvanized steel and shall be welded to the outer casing. Attachment of the interior partitions to the tracks shall be such that a minimum of 4 thicknesses of metal exist at this location. The track assembly shall stiffen the exterior casing, provide a reinforced attachment detail for the interior partitions, and shall maintain a uniform airspace width along the length of the silencer for consistent aerodynamic and acoustic performance. Interior partitions shall be additionally secured to the outer casing with welded nose clips at both ends of the sound attenuator.

- c. Interior partitions for tubular silencers shall be secured with galvanized steel radial mounting brackets welded to the partition and the outer casing. The radial brackets shall be installed full length and at 120 degree angles to each other to assure uniform spacing for consistent aerodynamic and acoustic performance.
 - d. Interior partitions (i.e. splitters) in straight silencers installed less than 4 equivalent duct diameters downstream of a duct elbow duct shall be oriented so that the partition surface that runs parallel with the airflow direction is located in the plane of direction change of the upstream elbow.
 - e. Sound attenuating units shall not fail structurally when subjected to a differential air pressure of 8 inches water gauge, positive or negative, from inside to outside the casing. Airtight construction shall be provided by use of a duct sealing compound on the job site material and labor furnished by the Contractor.
- C. Additional Requirements for Elbow Silencers: Comply with the provisions provided above for galvanized silencers with acoustic fill, with the additional requirements also met:
- 1. All acoustical splitters (baffles) shall be internally radiused and aerodynamically designed for efficient turning of the air. Half and full splitters shall be provided as necessary to achieve the scheduled insertion loss. All elbow silencers with a turning cross-section dimension greater than 48" shall have at least two half splitters and one full splitter.
- D. Additional Requirements for Transition Silencers: Comply with the provisions provided above for galvanized silencers with acoustic fill, with the additional requirements also met:
- 1. Transitioning shall occur internal to the silencer such that the height of the gap or air passage is uniformly changing with the length of the splitters.
- E. Acoustic Performance:
- 1. All silencer ratings shall be determined in a duct-to-reverberant room test facility which provides for airflow in both directions through the test silencer in accordance with ASTM Specification E-477, latest revision. The test facility shall be NVLAP accredited for the ASTM E-477 or ISO 7235 test standard, latest revisions. Data from a non-accredited laboratory will not be acceptable. The test setup and procedure shall be such that all effects due to end reflection, directivity, flanking transmission, standing waves and test chamber sound absorption are eliminated.
 - 2. Test data for silencers with film liner media protection shall be rated with the film and stand-offs in place.
 - 3. Acoustic ratings shall include Dynamic Insertion Loss (DIL) and Self-Noise (SN) Power Levels both for "forward flow" (air and noise in same direction) and "reverse flow" (air and noise in opposite directions) with airflow of at least 2000 fpm entering face velocity. Data for rectangular and tubular type silencers shall be presented for tests conducted using silencers no smaller than the following cross-sections:
 - 4. Rectangular, in. - 24 x 24, 24 x 30, or 24 x 36
 - 5. Tubular, in. - 12, 24, 36, and 48
- F. Aerodynamic Performance: Static pressure loss of silencers shall not exceed those listed in the silencer schedule as the airflow indicates. Airflow measurements shall be made in accordance with ASTM

Specification E-477, latest revision, and applicable portions of ASME, AMCA, and ADC airflow test codes. Tests shall be reported on the identical units for which acoustic data is presented.

- G. Certification: With submittals, the manufacturer shall supply certified test data on Dynamic Insertion Loss, Self-Noise Power Levels, and Aerodynamic Performance for Reverse and Forward Flow test conditions. Test data shall be for a standard product. All rating tests shall be conducted in the same facility, shall utilize the same silencer, and shall be open to inspection upon request from the Architect/Engineer.
- H. Duct Transitions and Installation: When transitions are required to adapt silencer dimensions to connecting ductwork, they shall be furnished by the Contractor. Connect to silencers to ducts rigidly (do not use flexible connectors). Silencers shall be provided with external thermal insulation as specified for the connecting ductwork. If the connecting ductwork is provided with duct liner, provide 1" thick, 3 PCF fiberglass board insulation with a FSK vapor barrier facing on the outside of the silencer.
- I. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. BRD Noise and Vibration Control Inc.
 - 2. Kinetics Noise Control
 - 3. IAC Acoustics; a Div. of Sound Seal
 - 4. Pottorff
 - 5. Price Industries
 - 6. Ruskin
 - 7. Semco
 - 8. United McGill
 - 9. VAW Systems Ltd."

Item 4.6 SECTION 233819 SPECIALTY EXHAUST AND VENTILATION SYSTEMS

Add the following to this section:

2.9 DUST SWITCH FOR SAW DUCT COLLECTION SYSTEM

- J. A. Electrically interlock each woodworking machine with the dust collector so that, when a machine is turned on, the dust collector comes on automatically.
- K. B. Include manual override, to permit use of floor sweeps, without having any equipment energized.
- L. C. Provide a push button station with start, E-stop and 2-position selector switch (automatic/ manual). Include an adjustable delay timer that will keep the dust collector on for 15-120 seconds after the last machine is switched off, to minimize dust collector cycling and allow the dust in the duct system to be evacuated.
- M. D. All wiring shall be centralized at the circuit breaker panel, for ease of installation and expansion for future machines. The interlock shall not require hard wiring at the machines, modification of the motor starters or special auxiliary contacts.

N. E. Furnish the Sternvent Dust Switch or an approved equal. UL or ETL labeled.

Item 4.7 SECTION 236427 AIR-COOLED ROTARY SCREW WATER CHILLER

Delete Paragraph 2.2 S and all sub paragraphs. There is not water side economizer for this chiller.

Item 4.8 The specification sections listed below are attached to and part of this addendum. They replace previously issued specifications in the Contract Documents. Where they had not been previously issued, they are now added to the Contract Documents. The descriptive information is informational only and is not intended to further modify the Contract Documents.

Section	Paragraph	Comments
00 4116G – General Conditions Bid Form		None
00 4116H – HVAC Construction Bid Form		None
00 4116P – Plumbing Construction Bid Form		None
00 4116E – Electrical Construction Bid Form		None

CHANGES TO DRAWINGS

Item 4.9: DRAWINGS E206 FIRST FLOOR PLAN - AREA 'F' - POWER & SIGNAL

Classroom 163 - delete the connections to the new CAH-163 in this room. Existing Unit Ventilator shall be disconnected to allow new UV to be installed. Reconnect to existing circuit.

Tech Ed 308 - Furnish and install a new combination starter/disconnect (30A-3P-480V, NEMA 1 Starter, Fused at 10A) adjacent to Panel "AB" this will be for the new Exhaust Fan (EF-F01).

Visual Arts 167 - Change the (5) five data symbols with a "D" next to them to "RC" and "2" to match the symbol on drawing E001. These data drops are a retractable reel type.

Item 4.10: DRAWING E211 OVERALL ROOF PLAN - POWER & SIGNAL

Add new Exhaust Fan (EF-F01) on roof above Tech Ed 308, provide a 30A-3P-480V weatherproof service disconnect.

Add new Power Roof Ventilator (PRV-B07) on the roof.

Item 4.11: DRAWING E602 PARTIAL MAIN DISTRIBUTION RISER DIAGRAM - NEW WORK

Delete the word "Emergency" out of the title under the riser diagram.

Change the note between Manhole #3 and Manhole #4 to read the following "New 3 #350 (5KV) & 1 #350 (600V)-4"C

Change the note between Manhole #4 and Manhole #5 to read the following "New 3 #350 (5KV) & 1 #350 (600V)-4"C

Add the note between Manhole #5 and New Transformer to read the following "New 3 #350 (5KV) & 1 #350 (600V)-4"C

Item 4.12: DRAWING E606 AUDITORIUM DIMMING SYSTEM WIRING DIAGRAM

Attached to this addendum is the original PDF for the Dimming System for clarity purposes.

Item 4.13: DRAWING E702 EQUIPMENT CONNECTION SCHEDULES

Add New Exhaust Fan EF-F01 to schedule - Delete CAH-163 from schedule,

Add New Power Roof Ventilator (PRV-B07) to schedule.

Revised connections schedules to indicate where existing wiring can be re-used..

Item 4.14: DRAWING E801 PANEL SCHEDULES

Panel "N" - Circuit N-15,17 shall become a "Spare",

Revised "Existing Panelboard Note" to indicate quantity of breakers at 120/208V and 277/480V.

Item 4.15: DRAWING E804 PANEL SCHEDULES

Panel "BA" - This panel and all work associated with this panel will be part of the base bid.

Added a 20-1P circuit breaker in Panel BC for new PRV-B07.

Item 4.16: DRAWINGS MD101 to MD106, MD108, MD109, MD111 to MD116, MD118, & MD119 MECHANICAL PIPING DEMOLITION

Added note to general notes "All fin tube being removing from classrooms and other rooms, the HC shall patch and paint the wall to match the existing walls."

Item 4.17: The drawings listed below are attached to this addendum and replace previously issued drawings in the Contract Documents. The descriptive information is informational only and is not intended to further modify the Contract Documents.

Sheet	Detail	Comments
A001	Legends, Abbreviations, General Notes, and Partition Types	Added wall type M6
A101	First Floor Plan – Area ‘A’	Refined Receiving concrete slab design
A102	First Floor Plan – Area ‘B’	Added sliding PVC curtain to opening between Receiving 101 and Kitchen 109. Added chase to Cafeteria 111
A106	First Floor Plan - Area ‘F’	Added pipe chases to Classroom 163 and Planning 310 Removed unit ventilator from Classroom 163 Changed unit ventilator notes in Classroom 163 to coordinate with new units per mechanical design.
A311	Wall Sections and Details	Modified Section 1 to incorporate linear diffuser. Added Section 2A – Window Closure Section
A601	Door Schedules, Door and Frame Types, Frame Details	Corrected materials in Door Schedule Added masonry return note to new OH doors Modified View Window dimensions
A602	Door and Window Frame Details	Added masonry return detail
A702	First Floor Reflected Ceiling Plan – Area ‘B’	Added bulkhead between Receiving 101 and Kitchen 109

P002	Plumbing Schedules	Revised sink S-4
P106	Area B 1st Flr - Plumb New Work	Added water connection for dust collector spark extinguishing system. Clarified plumbing scope to sink S-4 in Printing 171.
M001	Symbols & General Notes	Updated notes
MD101	Area A 1st Flr - Ductwork Demo	GRV backdraft replacement notes.
MD102	Area B 1st Flr - Ductwork Demo	GRV backdraft replacement notes.
MD103	Area C 1st Flr - Ductwork Demo	GRV backdraft replacement notes.
MD104	Area D 1st Flr - Ductwork Demo	GRV backdraft replacement notes.
MD105	Area E 1st Flr - Ductwork Demo	GRV backdraft replacement notes.
MD106	Area F 1st Flr - Ductwork Demo	GRV backdraft replacement notes.
MD108	Area B 2nd Flr - Ductwork Demo	GRV backdraft replacement notes.
MD109	Area E 2nd Flr - Ductwork Demo	GRV backdraft replacement notes.
MD110	Area G 2nd Flr - Ductwork Demo	GRV backdraft replacement notes.
MD120	Area G 2nd Flr - Piping Demo	Added exhaust fan demolition
M100	Area B Basement - New Work	Added refrigerant detection system, refrigerant vent, and refrigerant exhaust system.
M101	Area A 1st Flr - Ductwork New Work	Added GRV backdraft damper replacement notes.
M102	Area B 1st Flr - Ductwork New Work	Added GRV backdraft damper replacement notes and refrigerant vent pipe and refrigerant exhaust ducting.
M103	Area C 1st Flr - Ductwork New Work	Added GRV backdraft damper replacement notes.
M104	Area D 1st Flr - Ductwork New Work	Added GRV backdraft damper replacement notes.
M105	Area E 1st Flr - Ductwork New Work	Added GRV backdraft damper replacement notes.
M106	Area F 1st Flr - Ductwork New Work	Added GRV backdraft damper replacement notes, kiln ventilation systems, and Tech Ed lab exhaust systems.
M108	Area B 2nd Flr - Ductwork New Work	Added GRV backdraft damper replacement notes.
M109	Area E 2nd Flr - Ductwork New Work	Added GRV backdraft damper replacement notes.
M110	Area G 2nd Flr - Ductwork New Work	Added GRV backdraft damper replacement notes.
M112	Area B 1st Flr - Piping New Work	Added refrigerant vent piping up to roof.
M113	Area C 1st Flr - Piping New Work	Reconfigured piping in Rm 185.
M114	Area D 1st Flr - Piping New Work	Reconfigured piping in Rm 185.
M116	Area F 1st Flr - Piping New Work	Reconfigured pipe drop orientation for UV-07
M121	Base Bid Plans	Added kiln vent exhaust systems.
M301	Roof Plan - New Work	Added new PRV-B07 and refrigerant roof vent.
M405	Enlarged Plans	Added booster pump and piping connection for duct spray assembly.
M501	Details	Modified roof curb responsibility notes.
M502	Details	Modified roof curb responsibility notes.
M503	Details	Modified roof curb responsibility notes and added kiln vent and refrigerant vent details.
M602	Schedules	Added PRV-B07 to schedule and added additional info to kiln vent system.
M702	Diagrams	Added Chiller isolation valves.
E206	Area F Power & Signal	Revised HVAC connections in Classroom 163, Added starter location for EF-F01 in Tech Ed 308
E211	Roof Plan	Added EF-F01
E702	Equipment Connection Schedules	Updated Schedule - Added EF-F01, Deleted CAH-163
E801	Panel Schedules	Revised Panel "N" - Updated existing panelboard note

SUPPLEMENTAL INFORMATION

The following are provided for bidders' information and are not considered changes to the Contract Documents.

- Construction Manager's RFI report dated 3/21/24
- Construction Manager's Pre-bid Substitution Request Report dated 3/20/24
- Consultant's Original Auditorium Dimming System Drawing dated 11/9/23 – For Clarity

END OF ADDENDUM 4

PRE-BID RFI REPORT

PROJECT: HIGH SCHOOL RENOVATIONS - GROVE CITY AREA
 ARCHITECT: DRAW COLLECTIVE
 23-S43-01
 DATE: 3/21/24 10:52 AM

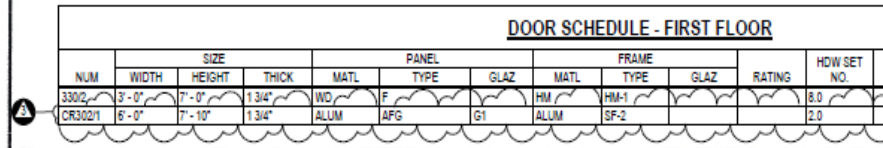
BID DATE: 3/25/24 2PM

ID	Sender ID	Discipline	Received	Last Action	Question	Issued to Bidders	Date Issued to Bidders	Answer
BN-01	Blackhawk Neff	EC	3/6/2024	answered	Spec page 260519 - 2 says "Metal-Clad Cable (Type MC) may be installed in concealed locations for branch circuits of 30 amperes or less." Spec page 260519 - 4 says "Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN/THWN-2, in raceway." Is MC Cable permitted for concealed branch wiring as long as there are no horizontal runs within walls or partitions?	Add 2	3/7/2024	Concealed MC is acceptable vertically in walls and above ceilings. MC above ceilings must be neatly installed and properly supported.
BN-02	Blackhawk Neff	EC	3/6/2024	answered	ED106, ED206, E106, E206, spec 012300 - 7 On the area F electrical demo, lighting, and power drawings there is a reference to alternate bid EC-03a in printing 171. The specs only reference EC-03 but say printing 171 is under EC-03. I presume the specs are correct and EC-03a was removed from the bid package?	Add 3	3/14/2024	All work noted to be done under EC-03a shall be done under EC-03
BN-03	Blackhawk Neff	EC	3/6/2024	answered	Demo & Power Drawings The power & signal demolition drawings say the existing clock system is to be removed in its entirety. The power & signal new plan drawings show existing to remain clocks all over the place. Which is correct?	Add 3	3/14/2024	Remove reference to removing existing clock system in key note E3. Existing clock system shall remain.
BN-04	Blackhawk Neff	EC	3/8/2024	answered	Drawing E202 shows the generator tap box and associated double throw disconnect switch on the side of the building near the new transformer. Should this instead be near the new/existing generator location?	Add 3	3/14/2024	The exact final location of the tap box and associated double throw disconnect switch will be determined at the site. The approximate location will be near to the location shown on the drawings. We do not want to have this equipment located next to the generator location. The location of the generator is within a courtyard and the only access to install a temp generator would be a crane over the school or through a double set of doors in a connecting corridor.
BN-05	Blackhawk Neff	EC	3/8/2024	answered	ELECTRICAL unit prices Are the circuit breaker unit prices to be in addition to the necessary circuit breakers as per the new loads shown on the panel schedules, or are these unit prices meant to cover all required new circuit breakers?	Add 3	3/14/2024	These unit prices are meant to cover replacement of existing breakers that are found to be non-functioning or in poor condition during construction. These are in addition to the new breakers shown as added for new loads. Note that the cost of the unit prices shall not be included in the alternate for panel replacements since that alternate would include all new breakers.
BN-06	Blackhawk Neff	EC	3/8/2024	answered	ELECTRICAL unit prices The electrical unit prices call out a number of circuit breakers but do not mention manufacturer, type, voltage, AIC rating, etc... What should we figure?	Add 3	3/14/2024	The existing panel manufacturer is General Electric - "A" Series. We have both 120/208v panels and 277/480v panels. Most 120/208v panels have an AIC rating of 10,000. Most of the 277/480v panels have an AIC rating of 14,000. The E.C. shall field verify the existing panels AIC rating prior to installing any new circuit breakers. Exact breaker requirements will need to be coordinated as specific breakers are determined to require replacement during construction.
BN-07	Blackhawk Neff	EC	3/13/2024	answered	E201, E202, E505 What are the requirements for racking and grounding for the two new manholes?	Add 4	3/21/2024	The new cabling shall pass through New Manhole #4 and New Manhole #5. No cable racking required. The manhole shall be grounded as indicated and specified.
BN-08	Blackhawk Neff	EC	3/13/2024	answered	E602, E505 Drawing E602 calls out the 5kV feed as (3) #350 5kV w/ (1) #350 5kV in 4"C. The detail on drawing E505 only shows a multi point junction for each of the three phases, no multi point junction shown for the neutral. Is this a 3-wire 5kV system or a 4-wire? Is the fourth #350 a 600V ground, or do we need a fourth multi point junction for the neutral conductors?	Add 4	3/21/2024	Change the cabling to read the following: (3 #350 (5KV) & 1 #350 (600V)-4"C. This is a 3 wire system. No neutral cable.
BN-09	Blackhawk Neff	EC	3/14/2024	answered	E702 Note No. 1 on drawing E702 calls out a non-fused weatherproof disconnect switch next to the fan on the roof. For the 3 times this note is called out on the schedule, NEMA 1 rating is called out and a fuse size is provided. I assume the non-fused, weatherproof description is correct?	Add 4	3/21/2024	Correct - Provide a non-fused weatherproof disconnect switch next to fan on roof This is a service disconnect for the unit. A combination disconnect/starter will be provided by the EC inside the building in the location indicated.
BN-10	Blackhawk Neff	EC	3/14/2024	answered	ED100, E100, E601, E602, E804 On drawings ED100, E100, and E601, panel BA is shown as an existing panel to be replaced with new under alternate bid EC-08. On drawings E602 and E804, panel BA is shown as a new panel. Is this panel intended to be a replacement panel, but the panel is to be now fed from new MDPE?	Add 4	3/21/2024	Panel BA - is located in the basement boiler room. The existing Panel BA that is fed from 'MDPB' will be disconnect and removed. A new Panel BA will be installed and fed from New MDPE. Panel BA will be part of the base bid - Delete any reference to Alternate Bid EC-08.
BN-11	Blackhawk Neff	EC	3/18/2024	answered	E211, E702 Drawings E211 and E702 contradict with regard to re-usage of existing circuits. Drawing E702 only shows two PRVs (PRV-D05 and PRV-D06) as "Connect to Existing" for conduit and wire; however, drawing E211 shows the majority (30+) reconnecting to existing circuiting as per note 1. Which is correct?	Add 4	3/21/2024	The Equipment Connection Schedule on E702 will be updated to match E211 "Connect to Existing"
BN-12	Blackhawk Neff	EC	3/18/2024	answered	E211, E702 Drawing E702 notes 2 and 3 call out connections to motorized dampers associated with the PRVs. Are these motorized dampers in addition to the motorized dampers shown on drawing E211?	Add 4	3/21/2024	At each PRV location (1) one Motorized Damper gets installed as per the notes on E702. The Motorized Dampers shown on E211 are associated with the GRV. At each GRV location (1) one Motorized Damper will be installed.
BN-13	Blackhawk Neff	EC	3/18/2024	answered	E606 Drawing E606 depicts the theatrical lighting wiring/dimming diagram. However the symbols are not legible and there is no legend for the wiring symbols. Please provide a usable riser for this work. Thank you.	Add 4	3/21/2024	Attached to the next addendum will be the original PDF of the Auditorium Dimming System for clearly purposes.
BN-14	Blackhawk Neff	EC	3/18/2024	answered	E107, E110, spec 01 2300 - 8 Alternate EC-07 is worded on the drawings as "All work associated with the auditorium theatre lighting & dimming system (add alternate bid EC-07)". Is there any lighting within the auditorium that is to be included in the base bid or is everything in the auditorium considered "theatrical lighting"?	Add 4	3/21/2024	Correct all lighting within the Auditorium will be part of the EC-07. No lighting will be done under base bid.
BN-15	Blackhawk Neff	EC	3/18/2024	answered	ED201, E201, several others Can we get clarification on what is to be demo'd and what is not for tele/data? For example, ED201 Room A-2 shows one location to be demo'd and no other locations showing existing to remain, but drawing E201 Room A-2 shows one new triplex location and two existing to remain locations. Is the new triplex to replace the demolished drop in cases like this?	Add 4	3/21/2024	Correct the intent is to replace the outlet(s) shown on the demo plan with the new outlets indicated on the new work plans. In some rooms, like these offices, some existing telecom outlets shall remain. This is the reason you see some telecom outlets with the "EX" existing to remain next to them.

PRE-BID RFI REPORT

PROJECT: HIGH SCHOOL RENOVATIONS - GROVE CITY AREA
 ARCHITECT: DRAW COLLECTIVE
 23-S43-01
 DATE: 3/21/24 10:52 AM

BID DATE: 3/25/24 2PM

ID	Sender ID	Discipline	Received	Last Action	Question	Issued to Bidders	Date Issued to Bidders	Answer
BN-16	Blackhawk Neff	EC	3/19/2024	answered	E001, E206, E303, E504, etc. The terms drop cord and reel cord appear to be used interchangeably on this project. For example, on drawing E001 there is a symbol for a TL, DC, receptacle and the description says reel cord instead of drop cord. Also, the detail on drawing E504 refers to the reel cord as a "drop cord reel". Are the terms drop cord and reel cord intended to be used interchangeably?	Add 4	3/21/2024	Yes, these terms are referring to the same thing.
BN-17	Blackhawk Neff	EC	3/19/2024	answered	E001, E206, ETC. Drawing E001 references some symbols (PR)H and (PH)L for teachers stations and says to refer to details. I was unable to find a detail for a teachers station. Is this symbol just to designate that there is a receptacle and a data outlet in that location? Will any projectors and teachers equipment associated with this symbol be furnished by the owner? We were unable to find any specs on these.	Add 4	3/21/2024	Treat the teachers station (PR)H and (PR)L the same way as the "Typical A/V Conference Room Connection To Flat Screen" detail on Drawing E502. Any projector / flat screen or teachers equipment will be by the owner.
BN-18	Blackhawk Neff	EC	3/19/2024	answered	E206 On drawing E206 in room 167, there are data outlet symbols with a D beside them designating drop cord. What exactly is required for this installation?	Add 4	3/21/2024	The "D" stands for reel cord drop type. We will change the symbols with to match the data drop with the "RC" next to it as indicated on the symbols (Drawing E001)
BN-19	Blackhawk Neff	EC	3/20/2024	answered	E001, E502, E603 Drawing E001 Telecom outlet schedule references (1) Cat 6 cable per not filled in triangle. Drawing E502 detail references (1) Cat 6 cable per not filled in triangle. E603 references (2) Cat 6 cables per not filled in triangle. Could we please have clarification on the quantity of Cat 6 cables per not filled in triangle if there is no number next to the triangle calling out the number of cables?	Add 4	3/21/2024	Provide (2) Cat 6 Cables for each open (not filled) triangles as per Drawing E603.
BN-20	Blackhawk Neff	EC	3/20/2024	answered	E603 The specs (271300-18 2.18) call out one UPS for each new rack/cabinet as shown on drawings. The drawing (E603) shows three of the five new racks/cabinets having the UPS existing or relocated by owner and the other two of the five new racks/cabinets do not show a UPS in them. Can we get clarification on this please?	Add 4	3/21/2024	Any work associated with the UPS will be done by the owner.
CC-01	Caliber Contracting	GC	3/20/2024	answered	A106 *Door Mark 316/3 is an exterior door scheduled as Aluminum AFG with a hollow metal frame. Please clarify this frame is to be hollow metal or aluminum.	Add 4	3/21/2024	Door 316/3 should have an aluminum frame. Glazing for door 316/3 should be type G1 - Exterior Double Glazed, Insulated 1"
CC-02	Caliber Contracting	GC	3/20/2024	answered	S102 & 1/S001 *Sheet S102 calls out section 1/S001 to replace 2-foot sections of pipe on the exterior due to rust. Please clarify the location and size of the existing pipe to be replaced.	Add 4	3/21/2024	The locations of these repairs are the locations indicated with "NOTE A" on S102. The columns are Pipe 5 STD.
CC-03	Caliber Contracting	GC	3/20/2024	answered	E504 Please confirm that the electrical contractor is responsible for the Emergency Generator concrete base detailed on E504	Add 4	3/21/2024	Confirmed, work associated with the emergency generator base is in the scope of the EC, as outlined on E202.
CC-04	Caliber Contracting	GC	3/20/2024	answered	S001 & A106 Please confirm if it is required to install 15mil Stego vapor barrier on top of the GeoFoam in the LGI room. Please confirm that the dust collector pad and piers are with the GC package. If so, please provide details for the piers.	Add 4	3/21/2024	The 15 mil Stego vapor barrier is not required in the area of the GeoFoam infill in the LGI. The dust collector pad and piers are in the GC's scope of work. Specifications for the piers are provided in detail 37 on drawing M503.
CC-05	Caliber Contracting	GC	3/20/2024	answered	A701-A707 Please confirm the extent of ceiling removal and re-installation required required in the rooms noted with keynote 3.2 on pages A701 through A707.	Add 4	3/21/2024	The 15 mil Stego vapor barrier is not required in the area of the GeoFoam infill in the LGI. The dust collector pad and piers are in the GC's scope of work. Specifications for the piers are provided in detail 37 on drawing M503.
CC-06	Caliber Contracting	GC	3/20/2024	answered	7/A310 & A101-A107 Please confirm if detail 7/A310 is applicable to keynote 4.5 (infill for removed mechanical/fin tube unit) and 6/A310 is applicable to keynote 7.2 (wall duct penetration) on A101 through A107.	Add 4	3/21/2024	Confirmed, Detail 7/A310 applies to locations where keynote 4.5 is used in conjunction with the locations of existing unit ventilators slated for removal. Coordinate with mechanical drawings. Confirmed, Detail 6/A310 applies to locations where keynote 7.2 is used in conjunction with the installation of new unit ventilators. Coordinate with mechanical drawings.
CC-07	Caliber Contracting	GC	3/20/2024	answered	Section 06 4000 Can the AWI QCP certification be waived?	Add 4	3/21/2024	No.
CC-08	Caliber Contracting	GC	3/20/2024	answered	Section 08 4116 Door 101/1 is scheduled to be a FRP door with a HM2 hollow metal frame. Spec section 08 41 16 calls out aluminum framed FRP doors. Please confirm if Door 101/1's frame is to be aluminum or hollow metal.	Add 4	3/21/2024	Specification Section 08 1416 is correct and supersedes the door schedule. The frame(s) for FRP doors shall be aluminum.
FA-01	First American	PC	3/13/2024	answered	P402 Drawing P402 shows a water softener on the floor plan. Is this equipment new or existing? Is there a specification showing what is needed?	Add 3	3/14/2024	Water softener shown on floor plan is for potential system to be added during construction (pending further water testing results). For bidding purposes, contractor can ignore this system.
MI-01	Milcam, Inc.	GC	3/6/2024	answered	A601 Door CR 302/1 is not listed in door schedule	Add 3	3/14/2024	Door CR302/1 should have appeared as follows: 
MI-02	Milcam, Inc.	GC	3/6/2024	answered	A311 is concrete decking and railing on mezzanine part of the base bid or alternate?	Add 3	3/14/2024	THE CONCRETE DECKING, RAILING, AND ASSOCIATED DETAILS SHOWN IN SECTIONS 1 AND 2 ON A311 ARE PART OF THE SPATIAL REORGANIZATION THAT OCCURS AS PART OF ALTERNATE GC-04.

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MI-03	Milcam, Inc.	GC	3/6/2024	answered	A106 Is the floor leveling in Corridor CR702 in base bid or alternate?	Add 3	3/14/2024	THE FLOOR LEVELING SHOWN ON A106 IS PART OF THE SPATIAL REORGANIZATION THAT OCCURS AS PART OF ALTERNATE GC-04.
MI-04	Milcam, Inc.	GC	3/6/2024	answered	A106 Do the new C3a walls go to the deck or the bottom of the mezzanine?	Add 3	3/14/2024	THE NEW C3a WALLS THAT OCCUR BENEATH THE EXISTING MEZZANINE AND BOUND CORRIDOR CR302 EXTEND TO THE UNDERSIDE OF THE EXISTING MEZZANINE STEEL AND/OR THE NEW CONCRETE DECKING. SEE DETAIL 1/A311.
MI-05	Milcam, Inc.	GC	3/6/2024	answered	Alternate GC-04 What are the select spaces for new flooring?	Add 3	3/14/2024	PLEASE REFER TO A621: "FINISH SCHEDULE - ALTERNATES - SPATIAL REORGANIZATION" FOR FLOOR FINISHES IN SPACES INCLUDED IN SPATIAL REORGANIZATION ALTERNATES.
MI-06	Milcam, Inc.	GC	3/14/2024	answered	Drawing M501 shows curbs furnished by HC, installed by GC. Which contract will be responsible for cutting the roof opening and roof patch?	Add 4	3/21/2024	H.C. is responsible to cut roof opening and patch roof. Details will be updated under Addendum 4.
RB-01	Renick Bros.	HVAC	2/28/2024	answered	Gravity roof vents (detail 9 on M501) does not show any motorized damper. Corridors and Unit Vents..... 9 sets @ existing GRV's. New Air Handlers19 sets @ existing GRV's. Control Sequences refer to controlling the dampers (AHU operations) or via space static (Corridors and Unit Vents). 1. Are dampers existing or are New Dampers to be installed?	Add 3	3/14/2024	New motor operated dampers are to be installed. Revised drawings will be issued by addendum clarifying this.
RB-02	Renick Bros.	HVAC	2/28/2024	answered	Hot water piping detail on M701 does not show New Boiler circulating pumps. 1. Provide new piping layout for pumps. 2. Control sequence refers to boiler isolation valves - none shown on M701 piping. 3. Will 3-way system valve be required with new boiler sequencing? 4. Provide locations for remote HWS/HWR differential pressure sensors.	Add 2	3/7/2024	1. New layout will be provided in Addendum 2. 2. Boiler isolation valves in sequences will be deleted by addendum. 3. 3-way valve added for secondary loop temperature reset. 4. Locations for HWS&R differential pressure sensors have been provided under Addendum 1 on sheets M113, M119, & M120.
RB-03	Renick Bros.	HVAC	2/28/2024	answered	Chilled water piping detail on M701 does not show chiller isolation valve. 1. Provide new piping layout for isolation valves. 2. Provide locations for remote CHWS/CHWR differential pressure sensors.	Add 3	3/14/2024	Chiller isolation valves will be added by addendum. Differential pressure sensor locations were identified on Addendum 1 revised drawings.
RB-04	Renick Bros.	HVAC	2/28/2024	answered	Please provide an explanation of alternate HC-04 as it relates to drawings M106, M116, MD106, MD116, M121, M122. It is confusing what is in the base bid versus the alternate as "base bid" drawings M121 and M122 have the same area clouded as alternate HC-04. Maybe a written explanation would work. I think maybe all the work outlined on M121 and M122 as alternate HC-04 might actually be in the base bid? I think the actual alternate is comparing the M121/M122 drawings to M106/M116 and the difference might be the alternate? The difference in these drawings would be adding HUH-01, adding HUV-08, deleting KVS-01/01 along with various demolition of EF-8 and fin tube radiation.	Add 3	3/14/2024	Drawings M106, M116, MD106, MD116 indicate work that occurs under alternates HC-03 and HC-04 (in the respective highlighted areas). Drawings M121 and M122 show the work that is to occur under base bid in these areas. Note that some work is identical, so the Add Alternate HC-03 and HC-4 prices shall just reflect the additional work compared to the Base Bid.
RB-05	Renick Bros.	HVAC	2/28/2024	answered	Is the project laydown fence as identified on PH100 to be by HC per the general note or by the GC per project specific note #2?	Add 1 / Add 4	2/29/2024/ 3/21/24	Temporary laydown area fencing, stone pad and reclamation after construction is to be by GC.
RB-06	Renick Bros.	HVAC	2/28/2024	answered	Can you explain the purpose of the flush of the HVAC system twice per project specific note 7 on PH100?	Add 1	2/29/2024	The intent is to flush the system after major sections of piping is replaced to remove dirt and debris from the piping before the systems are turned back on so as to not damage the existing equipment until it gets replaced and new equipment as it gets installed. These can occur before the systems are put back into operation and do not need to specifically occur in August.
RB-07	Renick Bros.	HVAC	2/28/2024	answered	Please confirm the GC owns the new chiller fence and concrete pad as the note on M102 makes it sound like it is by HVAC where the architectural drawings clearly state by GC.	Add 2	3/7/2024	Notes shall be clarified in Addendum 2. The GC shall own work on new chiller fence and concrete pad.
RB-08	Renick Bros.	HVAC	2/28/2024	answered	Drawing MD106, planning room 310 has a note to patch the exterior wall after the UV louver is removed. Please confirm all exterior louver patching and cutting is by the GC and NOT the HC.	Add 2	3/7/2024	Note regarding the exterior wall louver is incorrect. The louver opening shall be modified as necessary to accommodate the new Unit Ventilator to be installed. Note will be updated in Addendum. It is confirmed that all exterior louver patching and cutting is by the GC.
RB-09	Renick Bros.	HVAC	2/28/2024	answered	M100 drawing clearly shows the chilled water risers being 10" and 4". M112 shows the same risers as 8" and 4"?	Add 2	3/7/2024	M112 8" riser note will be corrected in Addendum 2.
RB-10	Renick Bros.	HVAC	2/28/2024	answered	M114 is missing chilled water pipe to UV-09? Are the drops to UV-09 to be run exposed or enclosed in painted sheet metal chase or in a drywall chase? Pipe drops happen in several other locations (M112 cafeteria as another example) - exposed versus painted sheet metal enclosure versus drywall chase? If a chase is required, who owns the chase (GC or HVAC)? If pipe drop is exposed and no chase does the pipe require a PVC jacket?	Add 3	3/14/2024	Chilled water piping to UV-09 will be added by addendum. GC to provide chase to enclose piping. Revised drawings to be issued by addendum.
RB-11	Renick Bros.	HVAC	2/28/2024	answered	Please update M702 (chilled water schematic) to match the plan view drawing on M100. Please also confirm buffer tanks are not required. Please update M701 (hot water schematic) to match the plan view drawing M100 – connections around air sep, etc.	Add 2	3/7/2024	Drawings M701 and M702 were updated in Addendum 1.
RB-12	Renick Bros.	HVAC	2/28/2024	answered	Please confirm the PC owns reconnecting all HC equipment ac drains as I see some of the ac drains showing up on the plumbing drawings (P112)...both HVAC and PC drawings are missing AC drain pipe in many locations.	Add 1	2/29/2024	YES THE PLUMBING CONTRACTOR OWNS THE FINAL CONNECTIONS AND CONDENSATE LINES. MISSING AC DRAIN PIPE WILL BE ADDED BY FUTURE ADDENDUM.
RB-13	Renick Bros.	HVAC	2/28/2024	answered	Please confirm who owns the sanitary tank for construction manager trailer as well as servicing this tank during construction.	Add 1	2/29/2024	HC owns the sanitary tank and servicing of the tank.
RB-14	Renick Bros.	HVAC	2/28/2024	answered	Please confirm who is responsible for the rental cost of the construction managers trailer. 01 5000-5 states the GC cleans, maintains and services the trailer.	Add 1	2/29/2024	HC is responsible for the rental of the CM trailer. 01 5000-5 will be removed by addendum. Cleaning of the CM trailer is not required.

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RB-15	Renick Bros.	HVAC	2/28/2024	answered	Please confirm who owns project signs for this project as well as exit signs.	Add 2	3/7/2024	Project sign is not required. Please confirm what you mean by "exit signs".
RB-16	Renick Bros.	HVAC	2/28/2024	answered	Please confirm who owns temporary job toilets.	Add 1	2/29/2024	HC owns temporary job toilets for all Contractors on site.
RB-17	Renick Bros.	HVAC	2/28/2024	answered	Please confirm who owns the project sign.	Add 2	3/7/2024	Project sign is not needed. Will clarify by addendum.
RB-18	Renick Bros.	HVAC	2/28/2024	answered	Please confirm who owns the garbage dumpsters.	Add 1	2/29/2024	The HC will own dumpsters for the entire project.
RB-19	Renick Bros.	HVAC	2/28/2024	answered	Please confirm who owns final building cleaning and what is required. Broom clean only?	Add 3	3/14/2024	For all of the areas where comprehensive renovations are to occur (ie. toilet rooms, kitchen, LGI, wrestling, weight training, tech-ed), the GC shall be responsible for final cleaning. For all areas where MEP work is to occur, outside of the comprehensive renovation areas, the HC is responsible for final cleaning. See specification 01 7700, section 3.1 for final cleaning requirements.
RB-20	Renick Bros.	HVAC	2/28/2024	answered	Please address the phasing which states working the project during (2) Summers. Is working during the school year on second shift allowed?	Add 1	2/29/2024	Yes, working during the school year on second shift is allowed. Work within Phases 2, 3 and 4 which occur during the school year can be on first shift since they are isolated from the students.
RB-21	Renick Bros.	HVAC	2/28/2024	answered	Can WAE balancing be used? Specification allows only Air Balancing Engineers.	Add 1	2/29/2024	Yes, Kahoe, WAE and Northstar Environmental have been added by Addendum 1.
RB-22	Renick Bros.	HVAC	2/28/2024	answered	Please confirm if bypass bag filters are required per spec section 232113 par 2.8. If yes, please show these on the mechanical room schematic M701/M702.	Add 1	2/29/2024	Bypass bag filters are not required and have been deleted by Addendum 1.
RB-23	Renick Bros.	HVAC	2/28/2024	answered	Please confirm ALL existing duct to remain is to get third party cleaned? Spec section 233113 par 3.14 mentions duct cleaning of existing.	Add 1	2/29/2024	That is confirmed.
RB-24	Renick Bros.	HVAC	2/28/2024	answered	Schedule drawing M601 requires UV-06 based upon drawing M122 requiring (2), HUV-02 based upon drawing M122, CUH-FO1 based upon drawing M122. Please update as its states not required.	Add 2	3/7/2024	These units will be included in Addendum 2.
RB-25	Renick Bros.	HVAC	2/28/2024	answered	Keynotes 1 and 2 on new pipe drawings (ex M111,112,113 ect) call for new ATC actuators on existing equipment (CUH,Conv, FTR,ect). Please confirm if this means an entire new ATC valve or just an actuator on the existing ATC valve. Are the control valves in the boiler plant also to get replaced (off the boilers and three way mixing). Do the existing cabinet heaters and prop heaters have control valves or just aquastats? There are discrepancies between the new pipe drawings and demolition drawings. One drawing might say a unit is a convector and then another says it is a cabinet heater. Maybe provide a detailed listing of the quantity of control valves that are required to be replaced on existing to remain equipment. JCI should have the existing valve schedule.	Add 4	3/21/2024	Keynotes were changed to require entire control valve replacement. Individual boiler control valves are not required. 3-way mixing valve in boiler room gets replaced. We are not 100% certain if existing unit heaters have control valves. Bid as if they are to be replaced and a credit can be obtained if they do not exist. On any discrepancy between demolition and new work piping drawings assume that it is a cabinet unit heater.
RB-26	Renick Bros.	HVAC	2/28/2024	answered	General note 3 on new duct drawings (ex M101,102,103, ect) call for existing cabinet heaters and fin tube to be cleaned. Can you elaborate on what you are looking for in more detail? What about the existing convectors to remain?	Add 2	3/7/2024	Existing fins and tubing, intake grilles, outlet grills, and supply fans shall be cleaned of dust and debris, and wiped down exteriors. Existing convectors shall be included as well.
RB-27	Renick Bros.	HVAC	2/28/2024	answered	Please confirm the refrigerant pipe to the 280 ton chillers is to be buried. Can this be run above grade? Chiller manufacturers are recommending we don't bury this pipe. If this pipe can be run above grade, can we also abandon the existing buried refrigerant pipe rather than demo and cut up existing concrete pad? Can the Engineer also confirm whether the interior barrel requires vent lines run to the exterior? If yes, how many and what size? The new chiller pad extension and fence are by the GC. HVAC drawing M404 has a general note stating the existing pad is to be removed. Please confirm the existing pad remains and maybe the existing buried refrigerant lines can be abandoned in place? If existing refrigerant pipe is to be removed and the new refrigerant pipe to be installed below grade, who takes care of cutting and patching the existing concrete slab? Hence, maybe run new pipe above grade and abandon the existing?	Add 4	3/21/2024	Drawings have been revised to run minimal refrigerant piping below grade. Existing refrigerant piping can be abandoned in place. Chiller barrel vents shall be run to exterior (added in addendum 4). Existing pad may remain and buried refrigerant lines can be abandoned in place.
RB-28	Renick Bros.	HVAC	2/28/2024	answered	Please identify the existing roof type and if the roof has an existing warranty.	Add 1	2/29/2024	The School District contracted with David Maines and Associates this past year and the entire roof was replaced and restored with a Tremco roof system with the exception of the area over the kitchen. The roofing over the kitchen will be completed by David Maines and Associates once all of the new Contract work is completed. All roof work necessary under this contract (patching, curb flashings, etc.) that is not within the old roof area over the kitchen, must be completed by David Maines and Associates. Contact: Eric Weaver 717-437-5677 ; eweaver@davidmaines.com for pricing. Tremco Roofing Contact: Jim Burichin 804-229-2791 ; jburichin@tremco.com or Richard Kosuda 724-612-3011 ; rkosuda@tremcoinc.com.
RB-29	Renick Bros.	HVAC	2/28/2024	answered	General note 2 on drawing M111 (as well as others) states "isolation valves should be installed at each pipe branch". Does this mean a branch in which we are only feeding say one terminal device or do you mean where feeding more than one terminal device as each terminal device would have shutoff valves at the unit. Maybe they want them at the corridor in addition to at the unit when only feeding one device? It would be cleaner if shutoff valves were clearly shown on the drawings. Drawing M122 has numerous major branch and sub branch lines as the pipes leave the boiler room below. I don't think the contractor should interpret where to put the shut off valves based upon a simple note on the drawing. Would it be possible to show them on the drawings where they are desired rather than the note? What if the branch pipe is existing to remain? Are we to assume a branch valve exists in these cases?	Add 2	3/7/2024	Under Addendum 1, isolation valves were located on the plans. Under Addendum 3, this general note will be modified to state the following, "ISOLATION VALVES SHALL BE INSTALLED WHERE SHOWN ON PLANS."
RB-30	Renick Bros.	HVAC	2/28/2024	answered	Please address flexible pipe connectors. Spec section 230500-18 leads one to believe that flexible connectors are required on all rotating equipment. Please identify the equipment you want flexible connectors on as your pipe details on M502 do not show flexible connectors. Please address AHUs, Tall UVs, regular UVs, cabinet heaters, prop heaters, ect. Also, the plan drawing M100 shows new 3 HP in line pumps to each boiler. Do we need flexible connectors on these pumps? Please show these pumps on drawing M701.	Add 3	3/14/2024	Flexible pipe connectors shall be used on AHUs as specified under section 237313. Flexible connectors are not required for tall UVs, regular UVs, or unit heaters. Flex connectors shall be provided for boiler in line pumps. Pumps have been added to drawing M701.
RB-31	Renick Bros.	HVAC	2/28/2024	answered	Please reference drawings M100 and M112. M112 shows (2) new 3" hot water lines from the boiler room shaft to the cafeteria. These lines need updated and shown on drawing M100. M100 and MD100 drawings for boiler room shows existing 2.5" hot water to remain. I feel the 2.5" needs removed all the way back to the boiler room and a new 3" tee cut in. Please show this work on M100 detail.	Add 2	3/7/2024	This shall be corrected under Addendum 2 to show the correct piping connections.
RB-32	Renick Bros.	HVAC	2/28/2024	answered	Please identify locations where expansion loops are required.	Add 4	3/21/2024	Based on lengths of new runs of hot water piping, new expansion loops are not anticipated to be needed.

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RB-33	Renick Bros.	HVAC	2/28/2024	answered	230716.3.9.A requires "custom fitted sound covers" on "packaged air-cooled air conditioners" over the compressors (compressor blankets). What items are these custom compressor blankets required to be provided for? The split air cooled chiller? the split DX condenser associated with the split DX/HW admin air handler? Please confirm they are not required for the minisplits. Are these compressor blankets to be provided by the manufacturer or are they field fabricated by the insulator?	Add 1	2/29/2024	The split air cooled chiller. These are not required for the split DX condensing units. If the manufacturer has a sound reduction package, that would be the preferred means, however if not it would be field fabricated.
RB-34	Renick Bros.	HVAC	2/28/2024	answered	230716.3.11.A (custom blankets) contradicts with 3.11.B (insulate per piping spec) which overlaps/contradicts with 3.11.D. please clarify for which systems and which valves/specialties the custom removable valve blankets are required.	Add 1	2/29/2024	For components identified in Specification 230719, utilize that section for the types of insulation. Anything not indicated in that section shall be insulated as specified in 230716.
RB-35	Renick Bros.	HVAC	2/28/2024	answered	Please provide a specification for what is required for jacketing for exterior exposed refrigerant piping (split chiller piping outdoors, admin AHU exterior condenser piping, minisplit exterior piping)	Add 1	2/29/2024	Utilize the jacketing specified in Specification Section 230719 - HVAC PIPING INSULATION, Paragraph 2.4
RB-36	Renick Bros.	HVAC	2/28/2024	answered	Are pre-insulated linesets with 1" thick insulation and UV resistant ez-pull coating acceptable for minisplit piping? They are named in the split fan coil spec 238126, but 230719 calls for 1-1/2" thick insulation for refrigerant piping	Add 1	2/29/2024	The pre-insulated linesets that have 1" insulation are acceptable. Should the insulation be needed to be field installed, the 1-1/2" should be used.
RB-37	Renick Bros.	HVAC	2/28/2024	answered	Typically for standard split systems it is preferable for the liquid line to be uninsulated to allow it to sub-cool as much as possible. Is the liquid line required to be insulated indoors for the split chillers, and for the split admin air handler/condenser? Is the liquid line required to be insulated outdoors for the split chillers, and for the split admin air handler/condenser?	Add 4	3/21/2024	Bid with insulation as specified. If mfg recommends not insulating liquid lines this can be resolved during construction.
RB-38	Renick Bros.	HVAC	2/28/2024	answered	Reference A702,A703,A704,A705,A706 in relation to showing the ceiling mounted UVs. These drawings show a note saying location of ceiling mounted UV location. Does this note indicate the GC is adjusting ceilings for the UV or HVAC? Confused why this shows up on an architectural drawing if by HVAC.	Add 2	3/7/2024	The HC is responsible for adjusting, removal, and replacement of ceiling tiles for the ceiling-mounted UV locations and other HVAC work. A note clarifying this was included with Addendum 1 revisions.
RB-39	Renick Bros.	HVAC	2/28/2024	answered	Drawing S125 and S126 has a note 2 indicating service catwalks for the air handlers in the gym and aux gym to be by the HVAC contractor. This does not show on the HVAC drawings. Are we sure these would not be better served by the GC seeing he owns all other structural steel? Otherwise, put a note on the HVAC drawings.	Add 2	3/7/2024	The HC is responsible for all service catwalk adjustments/modifications for the AHUs in the main gym and aux gym. A note regarding such was included with Addendum 1 revisions.
RB-40	Renick Bros.	HVAC	2/28/2024	answered	Roof drawings M301 and MD301 indicate the majority of the roof fans to be replaced in kind with a PRV (power roof ventilator fan). To avoid roofing and patching in 30 plus locations, can curb adaptors be used in this application rather than new curbs? If new curbs are required are the details shown on dwg. M501 & M502 correct that the GC will own install of curbs, rails and pipe portals?	Add 2	3/7/2024	Curb adapters shall be used in lieu of installing new curbs where possible. Under Addendum 1 revisions, the details on M501 and M502 were updated to place the responsibility of new roof curb work onto the HC. The details on M501 and M502 shall be edited to reflect the use of curb adapters in lieu of installing new roof curbs.
RB-41	Renick Bros.	HVAC	2/28/2024	answered	Does the GC own all duct openings/lintels for interior walls as applicable per detail 6 on A310?	Add 2	3/7/2024	Per Addendum 1, the HC is responsible for all duct openings and lintels for interior walls.
RB-42	Renick Bros.	HVAC	2/28/2024	answered	Can the existing chiller water system be down for the duration of this project? If it can't be down for the duration, what months can the chiller system be down?	Add 4	3/21/2024	Exact allowed down time will be coordinated during construction. For bidding purposes assume the chilled water system needs to be available from mid-April thru last day of school and from mid-August through end of September.
RB-43	Renick Bros.	HVAC	2/28/2024	answered	Can Nibco LD-2000 (lugged) or GD-4765 (grooved) valves be used for this project? They meet the specifications in all areas except the disc is aluminum bronze in lieu of stainless steel.	Add 1	2/29/2024	Please provide the specified materials for the purpose of bidding.
RB-44	Renick Bros.	HVAC	2/28/2024	answered	Drawing PH100, project specific note 4 states the HVAC owns ¼" Masonite for corridor floor protection for the project duration. Once this is installed in Summer of 24, can the existing floor protection remain during the school year or will it be removed and reinstalled for the Summer of 25? ¼" Masonite is difficult to find, can .115" Masonite be used as this is more readily available? If .115" Masonite is unacceptable, can ¼" OSB be used?	Add 3	3/14/2024	All floor protection needs to be removed when school is in session. To clarify, floor protection is required in areas where active work is occurring. It is acceptable to use 0.115 Masonite or similar material that lays flat and is not slippery.
RB-45	Renick Bros.	HVAC	2/28/2024	answered	Add Alternate PC-03A shows up on drawing P106, but not on the bid form – Please clarify?	Add 1	2/29/2024	Revised to Add Alternate PC-03 on Drawing P106 under Addendum 1.
RB-46	Renick Bros.	HVAC	2/28/2024	answered	No CD piping is shown on drawing P106 for Alternates PC-03 & PC-03A? Please confirm if CD is by HC or PC and if by PC please provide piping for these alternates.	Add 1	2/29/2024	PLUMBING CONTRACTOR SHALL OWN THE CONDENSATE LINES AND THE FINAL CONNECTION TO THE HVAC UNIT. PIPING WILL BE PROVIDED UNDER FUTURE ADDENDUM.
RB-47	Renick Bros.	HVAC	2/28/2024	answered	Please confirm all work for Add Alternate PC-04 is located in the District Garage E104?	Add 3	3/14/2024	Plumbing work added under Add Alternate PC-04 shall consist of the air compressor relocation to District Garage E104 (and associated piping), the rerouting of the 4" RWC piping adjacent to Planning 310, and the sprinkler work indicated on drawing F106 (except for above cloud sprinklers which are added under Alternate PC-04A). All other work in the Tech Ed area shown on drawing P106 shall be included in the base bid.
RB-48	Renick Bros.	HVAC	2/28/2024	answered	On drawing M106 there are (2) duct silencers called out for TV Studio rm 167A please provide a schedule for requirements.	Add 4	3/21/2024	Provide 3' long 12" x 10" duct silencers. Dynamic insertion loss (dB) at the following octave bands at 500 FPM: 63 Hz - 6, 125 Hz - 12, 250 Hz - 21, 500 Hz - 39, 1000 Hz - 42, 2000 Hz - 39, 4000 Hz - 29, 8000 Hz - 20.
RB-49	Renick Bros.	HVAC	2/29/2024	answered	Could we get as-built sprinkler drawings?	Add 2	3/7/2024	In the "Available Project Information" folder that Printscape has made available is a portion of the 1997 drawing set containing the sprinkler drawings from that project. It will be the best that we can do. Neither we or the district have the actual shop drawings.
RB-50	Renick Bros.	HVAC	2/29/2024	answered	What is the scope of work for deluge system located in the Auditorium? States to be relocated, where to?	Add 2	3/7/2024	It is being relocated into a new closet on the Auditorium Stage. Refer to drawings FD107 and F107.
RB-51	Renick Bros.	HVAC	2/29/2024	answered	Please show or describe the scope of work for Alternates PC-04 and PC-04A.	Add 3	3/14/2024	Plumbing work added under Add Alternate PC-04 shall consist of the air compressor relocation to District Garage E104 (and associated piping), the rerouting of the 4" RWC piping adjacent to Planning 310, and the sprinkler work indicated on drawing F106 (except for above cloud sprinklers which are added under Alternate PC-04A). All other work in the Tech Ed area shown on drawing P106 shall be included in the base bid.
RB-52	Renick Bros.	HC	3/8/2024	answered	Will the PC own any condensate drains off of HVAC units in Area 'D'?	Add 3	3/14/2024	Yes, see revised drawings issued with Addendum 3.
RB-53	Renick Bros.	HC	3/8/2024	answered	Will the PC own any condensate drains off of HVAC units in Area 'E'?	Add 3	3/14/2024	Yes, see revised drawings issued with Addendum 3.

PRE-BID RFI REPORT

PROJECT: HIGH SCHOOL RENOVATIONS - GROVE CITY AREA
 ARCHITECT: DRAW COLLECTIVE
 23-S43-01
 DATE: 3/21/24 10:52 AM

BID DATE: 3/25/24 2PM

ID	Sender ID	Discipline	Received	Last Action	Question	Issued to Bidders	Date Issued to Bidders	Answer
RB-54	Renick Bros.	HC	3/8/2024	answered	Will the PC own any condensate drains off of HVAC units in Area 'F'?	Add 3	3/14/2024	Yes, see revised drawings issued with Addendum 3.
RB-55	Renick Bros.	HC	3/8/2024	answered	Will the PC own any condensate drain off of new unit in Data 212?	Add 3	3/14/2024	Yes, see revised drawings issued with Addendum 3.
RB-56	Renick Bros.	HC	3/11/2024	answered	Refrigerant Exhaust System Is a refrigerant monitor and / or a refrigerant exhaust system to be provided in the chiller barrel / pump room? If so, please show where on the plans the monitor(s) and exhaust fan / duct is to be located and provide a schedule for the fan etc.	Add 4	3/21/2024	Yes, these have been added to addendum 4 revised drawings.
RB-57	Renick Bros.	HC	3/11/2024	answered	M701 / M701 Min. Flow Bypasses Please provide locations on the plan view piping drawings as to where the minimum flow bypasses shown on the M701/M702 schematic are to be located. Are they to be provided in new pipe or cut into existing pipe?	Add 4	3/21/2024	Bypasses shall be installed in new 6" hot and chilled water piping above ceiling in the corridor just outside Band / Choral 313.
RB-58	Renick Bros.	HC	3/11/2024	answered	M702 Chiller Barrel Isolation Valves DDC specifications reference chiller barrel isolation valves, but none are shown on plan view or on the M702 schematic. Are these chiller isolation valves required? If so, please show them on the plan view drawings / M702 schematic. additionally, the specification refers to free cooling minimum flow isolation valves that modulate flow through the barrel in a free cooling mode. Is there any 2-way or 3-way minimum flow valves required on the return/supply piping to the chiller barrel (and associated tees between the return and supply piping at the barrel)? If so, please show these valves/piping on the plan view drawings and the M702 schematic.	Add 4	3/21/2024	Chiller isolation valves are required and have been added to drawing M702. Free cooling is not required on these chillers and has been eliminated by addendum. References to these free-cooling minimum flow isolation valves can be deleted.
RB-59	Renick Bros.	HC	3/12/2024	answered	There isn't an Explosion Isolation valve before the inlet of the Collector	Add 4	3/21/2024	We (H.F. Lenz and our Basis of Design dust collector representative) are not aware of any codes or standards requiring an explosion isolation valve before the inlet of the collector. The design does incorporate spark detection and an abort gate as required by NFPA 664.
RB-60	Renick Bros.	HC	3/12/2024	answered	There is only Spark Detection on the inlet and nothing on the outlet	Add 4	3/21/2024	NFPA 664 (9.3.5.4.2) gives the option of having spark detection upstream of the dust collector or on the exhaust side of the collector. It does not appear to require spark detection in both locations.
RB-61	Renick Bros.	HC	3/12/2024	answered	The size of your trunkline is at 17" which would take your dust stream under 4000ft/m – (approximately 3750ft/m) we would propose to shrink that Trunkline down to 16" to keep above that 4000ft/m	Add 4	3/21/2024	Main trunkline has been revised to 16" under addendum 4.
RB-62	Renick Bros.	HC	3/12/2024	answered	I calculated static pressure of the system and we are seeing closer to 15"wg	Add 4	3/21/2024	A detailed calculation was completed using US-Duct that shows 10.23", thus the fan selection at 12".
RB-63	Renick Bros.	HC	3/15/2024	answered	RFI responses in Addendum 3 indicates flex connectors are required on AHU piping connections. If the fans of the air handler are internally isolated, are these flexible pipe connectors still required?	Add 4	3/21/2024	No, if air handler fans are internally isolated flexible pipe connectors are not required.
RB-64	Renick Bros.	HC	3/15/2024	answered	Please provide a revised detail on the refrigeration piping penetrations / chase / area well for the piping between the chiller barrel and outdoor chiller, now that this piping is not buried underground to the Chillers and is above grade. It was discussed at the pre-bid that this might change to an area well with a cap on top. Who is responsible for cutting the opening through the foundation wall, GC or HC? Who is responsible for excavating down & providing this area well for the refrigeration pipe? GC or HC? Who is responsible for the cap on top of the area well, GC or HC?	Add 4	3/21/2024	Intent is to penetrate mechanical room wall with PVC conduits and elbow up inside chiller fence enclosure to minimize below grade piping. Refrigerant lines shall run inside PVC conduits that are sealed at each end. All work required shall be by HC.
RB-65	Renick Bros.	HC	3/15/2024	answered	New concrete design / details are provided on A106 for the dust collector (piers and slab location / size / layout). Please confirm this work detailed on the addendum is the responsibility of the general contractor complete.	Add 4	3/21/2024	Correct. Dust collector foundation support and pad is the responsibility of the general contractor.
RB-66	Renick Bros.	HC	3/19/2024	answered	Amount of work involved for Duct Work How is contractor supposed to quantify amount of work required for General Note #4 on drawings stating "Contractor shall verify condition of existing duct insulation to remain. Contractor shall patch, repair, and replace as necessary. There is no way to know how much work is involved without a detailed inspection of said duct work.	Add 4	3/21/2024	For bidding purposes, contractor shall assume 750 sf of ductwork insulation will need to be replaced.
RB-67	Renick Bros.	HC	3/19/2024	answered	On M001, general notes #14 and #20 states that all piping and duct work shall be concealed. On M105 there is exposed duct work in gym and on M106 there is exposed duct related to Add Alt HC-04 230713, 3.6, B and 3.7, E call for exposed duct in finished spaces to be insulated. 233113, 3.12 indicates from application that un-insulated duct is to be prepped and painted. Looking for clarification on insulation requirements for exposed duct work in finished spaces.	Add 4	3/21/2024	Ductwork in Main Gymnasium 321 and Auxiliary Gym 314: Insulate and paint any new outside air duct required to connect to existing. Supply and return can be uninsulated and shall be painted to match existing. Tech Ed area (both Base Bid and Alternate HC-04): All new exposed outside air and supply air ductwork shall be insulated and painted as specified.

PRE-BID SUBSTITUTION REQUEST REPORT

PROJECT: HIGH SCHOOL RENOVATIONS - GROVE CITY

ARCHITECT: DRAW COLLECTIVE

DATE: 3/20/24 11:52 AM

ID	Sender ID	Reference	Received	Status	Substitution Request	Issued to Bidders	Date Issued to Bidders
Renick Bros	RB SR-01	23 3819	3/1/2024	NOT APPROVED	Donaldson Torit UMA-750 Shaker Type in lieu of Sternvent DKPL-72020 Shaker Type This collector is not approved at this time due to concerns with blower motor location (in air stream), fan construction (steel), and filter spacing. If contractor can offer significant cost savings to the owner via a credit during construction using this collector it will be reconsidered at that time.	Add 4	3/20/2024
Renick Bros	RB SR-02	23 3300	3/1/2024	APPROVED	Control Dampers - Nailor Models 1020, 1370, 1370CB Fire dampers - Nailor models D0120, D1250	Add 3	3/14/2024
		23 3600	3/1/2024	APPROVED	VAV Terminal Units - Nailor Model D30RE	Add 3	3/14/2024
		23 3713	3/1/2024	APPROVED	Diffusers, registers, grilles - Nailor, Cross referenced various models	Add 3	3/14/2024
Connor Sports	CS SR-01	09 6452	3/5/2024	notapproved	Connor Sports - stage panel in lieu of Harlequin RockSure		
Oeler industries	OI SR-01	09 8433	3/15/2024	APPROVED	OELEX OX-420 Tuned Absorber/Diffuser panel in lieu of RPG BAD Panel (APF-1/APF-2) OELEX Soundscape Pro Diffuser panel in lieu of RPG HARMONIX T (APC-3)	Add 4	3/20/2024

DOCUMENT 00 4116G – GENERAL CONSTRUCTION BID FORM

CONTRACT NO. 23-S43-01-01

on

PROJECT NO. 23-S43-01

HIGH SCHOOL RENOVATIONS

for

GROVE CITY AREA SCHOOL DISTRICT
511 Highland Avenue, Grove City, PA 16127

DRAW Collective
470 Washington Road
Pittsburgh, PA 15228

BID OF _____ (Date) _____
(Name) (Date)

_____ (Telephone Number) _____
(Address) (Telephone Number)

_____ (City, State, Zip)

TO: Dr. Jeffrey Finch, Superintendent
Grove City Area School District
511 Highland Avenue
Grove City, PA 16127

Ladies and Gentlemen:

The undersigned submits this Bid in conformity with the Drawings and Specifications prepared by DRAW Collective, 470 Washington Road, Pittsburgh, PA 15228-2811, and on file at the above named office; and after examination of the site of the Work, the Bidding Requirements (including the Advertisement for Bids, Instructions to Bidders, and Contractors' Qualification Statement), and the proposed Contract Documents (including the General Conditions, and any addenda issued during the bidding period changing any part of the Contract Documents).

For the price hereinafter stated, it is proposed to provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, transportation, and other facilities and services, and to do and perform all superintendence of the construction, and to secure and pay for all permits and licenses, and to do all incidental work in order to execute and complete the Work in an expeditious and workmanlike manner to the satisfaction and acceptance of the Owner, and the Architect, all in accordance with the Contract Documents.

Enclosed herewith as bid security is a Bid Bond or certified check drawn to the order of the Owner in the amount stated in the Advertisement for Bids. The undersigned agrees not to withdraw this Bid for a period of 60 days after the designated time for receipt of Bids; and that if this Bid is accepted by the Owner, to execute the Contract and furnish the required bonds and insurance coverages. It is agreed that upon the request of the Owner, that date of award will be extended by 30 days. It is agreed that the bid security will be forfeited as liquidated damages, not as a penalty, if the undersigned fails to furnish the required bonds and insurance coverages within 10 days after receipt of written

notice of award of Contract, or fails to execute and deliver the Agreement for the Work within 10 days after receipt of it.

The Bidder hereby certifies that he is the only person(s) interested in this Bid as principal; and has not entered into collusion with any person, firm, or corporation in respect to this Bid or the submitting of Bids for this Contract.

The Bidder hereby agrees to comply with and to be bound by all applicable governmental regulations, laws, codes, ordinances and legal requirements affecting the work, including, but not limited to, Sections 752, 755, and 757 of the "Public School Code of 1949" of the Commonwealth of Pennsylvania, as amended, and the "Pennsylvania Human Relations Act," as amended.

The Bidder hereby acknowledges that Act 114 of 2006, Act 34 of 1985, and Act 151 of 1994 requires that all of the Contractor's employees and all lower tier contractors' employees produce an FBI Federal Criminal History Record, reports of criminal history record information from the Pennsylvania State Police, or a statement from the State Police that the State Police central repository contains no such information relating to each such person, and an "Official Clearance Statement" (OCS) from the Department of Public Welfare before said person may begin working on School District Projects. (See Division 01 Section, "Regulatory Requirements" for additional information.)

The Bidder hereby agrees to comply with and to be bound by all applicable governmental regulations, laws, codes, ordinances and legal requirements affecting the work, including, but not limited to, Compliance required with the Pennsylvania Prevailing Wage Act of 1961, P.L. 987, No. 442; Title VI and other applicable provisions of the Civil Rights Act of 1964; the Department of Labor Equal Opportunity Clause (41 CFR 60 -1.4); Executive Order 11625 (Utilization of Minority Business Enterprise); Executive Order 12138 (Utilization of Female Business Enterprise); in compliance with Section 504 of Rehabilitation Act of 1973 and Americans with Disabilities Act of 1990.

The Bidder hereby agrees to progress with the Work in accordance with the predetermined schedule, and to achieve Substantial Completion within the Contract Time in accordance with the dates established in the Agreement.

The Bidder hereby agrees that the right is reserved to the Owner to reject any or all Bids and to waive any informality or irregularity in any Bid received. It is further understood that the competency and responsibility of Bidders is a consideration in the award of the Contract.

The Base Bid, price quotations, and other information are submitted in the spaces provided on the Bid Form or attached to the Bid Form. Omission of price quotations or other information requested will be sufficient reason for rejection of this Bid.

In submitting this Bid, the Bidder hereby acknowledges the issuance, receipt, and acceptance of Addenda as indicated below:

Addenda issued: YES / NO [<i>cross out one</i>]; if YES list below:			
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated

**CONTRACT NO. 23-S43-01-01
BASE BID**

For all Work, the total sum of:

_____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE PRICE SCHEDULE

Costs listed for each Alternate include costs of related coordination, modification, and adjustment.

ALTERNATE NO. GC-01: Custodial Receiving

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. GC-02: Library Area

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. GC-03: Visual Arts – Spatial Reorganization

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. GC-03A: Visual Arts – Finishes and Millwork

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. GC-04: Art, Ceramics, Tech Ed – Spatial Reorganization

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. GC-04A: Art, Ceramics, Tech Ed – Finishes and Millwork

ADD _____ Dollars (\$) _____
 (Written) (Figures)

ALTERNATE NO. GC-05: Weight Training

ADD _____ Dollars (\$) _____
 (Written) (Figures)

ALTERNATE NO. GC-06: LGI

ADD _____ Dollars (\$) _____
 (Written) (Figures)

ALTERNATE NO. GC-07: Auditorium

ADD _____ Dollars (\$) _____
 (Written) (Figures)

UNIT PRICE SCHEDULE

NO.	SCHEDULED ITEM	BASE-BID QUANTITY	UNIT	UNIT PRICE ADD/ DEDUCT
UG-1	Steel Canopy Post Repair	As designated on structural drawings	Each Post	\$ _____.
UG-2	Floor Leveling	200 sf at 1" thick	100 sf at 1" thick	\$ _____.

SIGNATURES

When the Bidder is an Individual:

_____(SEAL)

When the Bidder is a Partnership:

Name of Partnership

By _____(SEAL)
Partner

_____(SEAL)
Partner

_____(SEAL)
Partner

When the Bidder is a Corporation:

Name of Corporation

By _____
President

Corporate
Seal

ATTEST: _____
Secretary

The _____ is a corporation

organized and existing under the laws of _____ and (has) (has not) been granted a certificate of authority to do business in Pennsylvania, as required by the Business Corporation Law, approved May 5, 1933, P. S. 364, as amended.

When the Bidder is trading under a fictitious name:

The _____ is an individual, partnership, or corporation trading under a fictitious or assumed name and has (has not) registered under the Fictitious Name Act of Pennsylvania – namely, the Act of May 24, 1945, P. S. 967.

END OF DOCUMENT 00 4116G

DOCUMENT 00 4116H – HVAC CONSTRUCTION BID FORM

CONTRACT NO. 23-S43-01-02

on

PROJECT NO. 23-S43-01

HIGH SCHOOL RENOVATIONS

for

GROVE CITY AREA SCHOOL DISTRICT
511 Highland Avenue, Grove City, PA 16127

DRAW Collective
470 Washington Road
Pittsburgh, PA 15228

BID OF _____ (Date) _____
(Name) (Date)

_____ (Telephone Number) _____
(Address) (Telephone Number)

_____ (City, State, Zip)

TO: Dr. Jeffrey Finch, Superintendent
Grove City Area School District
511 Highland Avenue
Grove City, PA 16127

Ladies and Gentlemen:

The undersigned submits this Bid in conformity with the Drawings and Specifications prepared by DRAW Collective, 470 Washington Road, Pittsburgh, PA 15228-2811, and on file at the above named office; and after examination of the site of the Work, the Bidding Requirements (including the Advertisement for Bids, Instructions to Bidders, and Contractors' Qualification Statement), and the proposed Contract Documents (including the General Conditions, and any addenda issued during the bidding period changing any part of the Contract Documents).

For the price hereinafter stated, it is proposed to provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, transportation, and other facilities and services, and to do and perform all superintendence of the construction, and to secure and pay for all permits and licenses, and to do all incidental work in order to execute and complete the Work in an expeditious and workmanlike manner to the satisfaction and acceptance of the Owner, and the Architect, all in accordance with the Contract Documents.

Enclosed herewith as bid security is a Bid Bond or certified check drawn to the order of the Owner in the amount stated in the Advertisement for Bids. The undersigned agrees not to withdraw this Bid for a period of 60 days after the designated time for receipt of Bids; and that if this Bid is accepted by the Owner, to execute the Contract and furnish the required bonds and insurance coverages. It is agreed that upon the request of the Owner, that date of award will be extended by 30 days. It is agreed that the bid security will be forfeited as liquidated damages, not as a penalty, if the undersigned fails to furnish the required bonds and insurance coverages within 10 days after receipt of written

notice of award of Contract, or fails to execute and deliver the Agreement for the Work within 10 days after receipt of it.

The Bidder hereby certifies that he is the only person(s) interested in this Bid as principal; and has not entered into collusion with any person, firm, or corporation in respect to this Bid or the submitting of Bids for this Contract.

The Bidder hereby agrees to comply with and to be bound by all applicable governmental regulations, laws, codes, ordinances and legal requirements affecting the work, including, but not limited to, Sections 752, 755, and 757 of the "Public School Code of 1949" of the Commonwealth of Pennsylvania, as amended, and the "Pennsylvania Human Relations Act," as amended.

The Bidder hereby acknowledges that Act 114 of 2006, Act 34 of 1985, and Act 151 of 1994 requires that all of the Contractor's employees and all lower tier contractors' employees produce an FBI Federal Criminal History Record, reports of criminal history record information from the Pennsylvania State Police, or a statement from the State Police that the State Police central repository contains no such information relating to each such person, and an "Official Clearance Statement" (OCS) from the Department of Public Welfare before said person may begin working on School District Projects. (See Division 01 Section, "Regulatory Requirements" for additional information.)

The Bidder hereby agrees to comply with and to be bound by all applicable governmental regulations, laws, codes, ordinances and legal requirements affecting the work, including, but not limited to, Compliance required with the Pennsylvania Prevailing Wage Act of 1961, P.L. 987, No. 442; Title VI and other applicable provisions of the Civil Rights Act of 1964; the Department of Labor Equal Opportunity Clause (41 CFR 60 -1.4); Executive Order 11625 (Utilization of Minority Business Enterprise); Executive Order 12138 (Utilization of Female Business Enterprise); in compliance with Section 504 of Rehabilitation Act of 1973 and Americans with Disabilities Act of 1990.

The Bidder hereby agrees to progress with the Work in accordance with the predetermined schedule, and to achieve Substantial Completion within the Contract Time in accordance with the dates established in the Agreement.

The Bidder hereby agrees that the right is reserved to the Owner to reject any or all Bids and to waive any informality or irregularity in any Bid received. It is further understood that the competency and responsibility of Bidders is a consideration in the award of the Contract.

The Base Bid, price quotations, and other information are submitted in the spaces provided on the Bid Form or attached to the Bid Form. Omission of price quotations or other information requested will be sufficient reason for rejection of this Bid.

In submitting this Bid, the Bidder hereby acknowledges the issuance, receipt, and acceptance of Addenda as indicated below:

Addenda issued: YES / NO [<i>cross out one</i>]; if YES list below:			
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated

**CONTRACT NO. 23-S43-01-02
BASE BID**

For all Work, the total sum of:

_____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE PRICE SCHEDULE

Costs listed for each Alternate include costs of related coordination, modification, and adjustment.

ALTERNATE NO. HC-03: Visual Arts – Spatial Reorganization

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. HC-04: Art, Ceramics, Tech Ed – Spatial Reorganization

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. HC-08: Open Protocol Building Automation System

ADD _____ Dollars (\$) _____)
(Written) (Figures)

UNIT PRICE SCHEDULE

NO.	SCHEDULED ITEM	BASE-BID QUANTITY	UNIT	UNIT PRICE ADD/ DEDUCT
HC-1a	8" Victaulic Coupling	20 Victaulic Couplings	Each Coupling	\$ _____ . _____
HC-1b	6" Victaulic Coupling	50 Victaulic Couplings	Each Coupling	\$ _____ . _____
HC-1c	4" Victaulic Coupling	50 Victaulic Couplings	Each Coupling	\$ _____ . _____
HC-1d	3" Victaulic Coupling	50 Victaulic Couplings	Each Coupling	\$ _____ . _____
HC-1e	2-1/2" Victaulic Coupling	50 Victaulic Couplings	Each Coupling	\$ _____ . _____

SIGNATURES

When the Bidder is an Individual:

_____(SEAL)

When the Bidder is a Partnership:

Name of Partnership

By _____(SEAL)
Partner

_____(SEAL)
Partner

_____(SEAL)
Partner

When the Bidder is a Corporation:

Name of Corporation

By _____
President

Corporate
Seal

ATTEST: _____
Secretary

The _____ is a corporation

organized and existing under the laws of _____ and (has) (has not) been granted a certificate of authority to do business in Pennsylvania, as required by the Business Corporation Law, approved May 5, 1933, P. S. 364, as amended.

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END OF DOCUMENT 00 4116H

DOCUMENT 00 4116P – PLUMBING CONSTRUCTION BID FORM

CONTRACT NO. 23-S43-01-03

on

PROJECT NO. 23-S43-01

HIGH SCHOOL RENOVATIONS

for

GROVE CITY AREA SCHOOL DISTRICT
511 Highland Avenue, Grove City, PA 16127

DRAW Collective
470 Washington Road
Pittsburgh, PA 15228

BID OF _____ (Date) _____

(Name) (Date)

_____ (Telephone Number) _____

(Address) (Telephone Number)

_____ (City, State, Zip)

TO: Dr. Jeffrey Finch, Superintendent
Grove City Area School District
511 Highland Avenue
Grove City, PA 16127

Ladies and Gentlemen:

The undersigned submits this Bid in conformity with the Drawings and Specifications prepared by DRAW Collective, 470 Washington Road, Pittsburgh, PA 15228-2811, and on file at the above named office; and after examination of the site of the Work, the Bidding Requirements (including the Advertisement for Bids, Instructions to Bidders, and Contractors' Qualification Statement), and the proposed Contract Documents (including the General Conditions, and any addenda issued during the bidding period changing any part of the Contract Documents).

For the price hereinafter stated, it is proposed to provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, transportation, and other facilities and services, and to do and perform all superintendence of the construction, and to secure and pay for all permits and licenses, and to do all incidental work in order to execute and complete the Work in an expeditious and workmanlike manner to the satisfaction and acceptance of the Owner, and the Architect, all in accordance with the Contract Documents.

Enclosed herewith as bid security is a Bid Bond or certified check drawn to the order of the Owner in the amount stated in the Advertisement for Bids. The undersigned agrees not to withdraw this Bid for a period of 60 days after the designated time for receipt of Bids; and that if this Bid is accepted by the Owner, to execute the Contract and furnish the required bonds and insurance coverages. It is agreed that upon the request of the Owner, that date of award will be extended by 30 days. It is agreed that the bid security will be forfeited as liquidated damages, not as a penalty, if the undersigned fails to furnish the required bonds and insurance coverages within 10 days after receipt of written

notice of award of Contract, or fails to execute and deliver the Agreement for the Work within 10 days after receipt of it.

The Bidder hereby certifies that he is the only person(s) interested in this Bid as principal; and has not entered into collusion with any person, firm, or corporation in respect to this Bid or the submitting of Bids for this Contract.

The Bidder hereby agrees to comply with and to be bound by all applicable governmental regulations, laws, codes, ordinances and legal requirements affecting the work, including, but not limited to, Sections 752, 755, and 757 of the "Public School Code of 1949" of the Commonwealth of Pennsylvania, as amended, and the "Pennsylvania Human Relations Act," as amended.

The Bidder hereby acknowledges that Act 114 of 2006, Act 34 of 1985, and Act 151 of 1994 requires that all of the Contractor's employees and all lower tier contractors' employees produce an FBI Federal Criminal History Record, reports of criminal history record information from the Pennsylvania State Police, or a statement from the State Police that the State Police central repository contains no such information relating to each such person, and an "Official Clearance Statement" (OCS) from the Department of Public Welfare before said person may begin working on School District Projects. (See Division 01 Section, "Regulatory Requirements" for additional information.)

The Bidder hereby agrees to comply with and to be bound by all applicable governmental regulations, laws, codes, ordinances and legal requirements affecting the work, including, but not limited to, Compliance required with the Pennsylvania Prevailing Wage Act of 1961, P.L. 987, No. 442; Title VI and other applicable provisions of the Civil Rights Act of 1964; the Department of Labor Equal Opportunity Clause (41 CFR 60 -1.4); Executive Order 11625 (Utilization of Minority Business Enterprise); Executive Order 12138 (Utilization of Female Business Enterprise); in compliance with Section 504 of Rehabilitation Act of 1973 and Americans with Disabilities Act of 1990.

The Bidder hereby agrees to progress with the Work in accordance with the predetermined schedule, and to achieve Substantial Completion within the Contract Time in accordance with the dates established in the Agreement.

The Bidder hereby agrees that the right is reserved to the Owner to reject any or all Bids and to waive any informality or irregularity in any Bid received. It is further understood that the competency and responsibility of Bidders is a consideration in the award of the Contract.

The Base Bid, price quotations, and other information are submitted in the spaces provided on the Bid Form or attached to the Bid Form. Omission of price quotations or other information requested will be sufficient reason for rejection of this Bid.

In submitting this Bid, the Bidder hereby acknowledges the issuance, receipt, and acceptance of Addenda as indicated below:

Addenda issued: YES / NO [<i>cross out one</i>]; if YES list below:			
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated

**CONTRACT NO. 23-S43-01-03
BASE BID**

For all Work, the total sum of:

_____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE PRICE SCHEDULE

Costs listed for each Alternate include costs of related coordination, modification, and adjustment.

ALTERNATE NO. PC-02: Library Area

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. PC-03: Visual Arts – Spatial Reorganization

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. PC-04: Art, Ceramics, Tech Ed – Spatial Reorganization

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. PC-04A: Art, Ceramics, Tech Ed – Finishes and Millwork

ADD _____ Dollars (\$) _____)
(Written) (Figures)

UNIT PRICE SCHEDULE

NO.	SCHEDULED ITEM	BASE-BID QUANTITY	UNIT	UNIT PRICE ADD/ DEDUCT
PC-1a	4" Copper Pipe Repair	5 Copper Pipe Repairs	Each Repair	\$ _____.
PC-1b	3" Copper Pipe Repair	10 Copper Pipe Repairs	Each Repair	\$ _____.
PC-1c	2-1/2" Copper Pipe Repair	10 Copper Pipe Repairs	Each Repair	\$ _____.
PC-1d	2" Copper Pipe Repair	15 Copper Pipe Repairs	Each Repair	\$ _____.
PC-1e	1-1/2" Copper Pipe Repair	15 Copper Pipe Repairs	Each Repair	\$ _____.
PC-1f	1-1/4" Copper Pipe Repair	20 Copper Pipe Repairs	Each Repair	\$ _____.
PC-1g	1" Copper Pipe Repair	25 Copper Pipe Repairs	Each Repair	\$ _____.
PC-1h	3/4" Copper Pipe Repair	30 Copper Pipe Repairs	Each Repair	\$ _____.
PC-2	Sprinkler Head Replacement	50 Sprinkler Head Replacements	Each Sprinkler Head Replacement	\$ _____.

SIGNATURES

When the Bidder is an Individual:

_____(SEAL)

When the Bidder is a Partnership:

Name of Partnership

By _____(SEAL)
Partner

_____(SEAL)
Partner

_____(SEAL)
Partner

When the Bidder is a Corporation:

Name of Corporation

By _____
President

Corporate
Seal

ATTEST: _____
Secretary

The _____ is a corporation

organized and existing under the laws of _____ and (has) (has not) been granted a certificate of authority to do business in Pennsylvania, as required by the Business Corporation Law, approved May 5, 1933, P. S. 364, as amended.

When the Bidder is trading under a fictitious name:

The _____ is an individual, partnership, or corporation trading under a fictitious or assumed name and has (has not) registered under the Fictitious Name Act of Pennsylvania – namely, the Act of May 24, 1945, P. S. 967.

END OF DOCUMENT 00 4116P

DOCUMENT 00 4116E – ELECTRICAL CONSTRUCTION BID FORM

CONTRACT NO. 23-S43-01-04

on

PROJECT NO. 23-S43-01

HIGH SCHOOL RENOVATIONS

for

GROVE CITY AREA SCHOOL DISTRICT
511 Highland Avenue, Grove City, PA 16127

DRAW Collective
470 Washington Road
Pittsburgh, PA 15228

BID OF _____ (Date) _____
(Name) (Date)

_____ (Telephone Number) _____
(Address) (Telephone Number)

_____ (City, State, Zip)

TO: Dr. Jeffrey Finch, Superintendent
Grove City Area School District
511 Highland Avenue
Grove City, PA 16127

Ladies and Gentlemen:

The undersigned submits this Bid in conformity with the Drawings and Specifications prepared by DRAW Collective, 470 Washington Road, Pittsburgh, PA 15228-2811, and on file at the above named office; and after examination of the site of the Work, the Bidding Requirements (including the Advertisement for Bids, Instructions to Bidders, and Contractors' Qualification Statement), and the proposed Contract Documents (including the General Conditions, and any addenda issued during the bidding period changing any part of the Contract Documents).

For the price hereinafter stated, it is proposed to provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, transportation, and other facilities and services, and to do and perform all superintendence of the construction, and to secure and pay for all permits and licenses, and to do all incidental work in order to execute and complete the Work in an expeditious and workmanlike manner to the satisfaction and acceptance of the Owner, and the Architect, all in accordance with the Contract Documents.

Enclosed herewith as bid security is a Bid Bond or certified check drawn to the order of the Owner in the amount stated in the Advertisement for Bids. The undersigned agrees not to withdraw this Bid for a period of 60 days after the designated time for receipt of Bids; and that if this Bid is accepted by the Owner, to execute the Contract and furnish the required bonds and insurance coverages. It is agreed that upon the request of the Owner, that date of award will be extended by 30 days. It is agreed that the bid security will be forfeited as liquidated damages, not as a penalty, if the undersigned fails to furnish the required bonds and insurance coverages within 10 days after receipt of written

notice of award of Contract, or fails to execute and deliver the Agreement for the Work within 10 days after receipt of it.

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The Bidder hereby acknowledges that Act 114 of 2006, Act 34 of 1985, and Act 151 of 1994 requires that all of the Contractor's employees and all lower tier contractors' employees produce an FBI Federal Criminal History Record, reports of criminal history record information from the Pennsylvania State Police, or a statement from the State Police that the State Police central repository contains no such information relating to each such person, and an "Official Clearance Statement" (OCS) from the Department of Public Welfare before said person may begin working on School District Projects. (See Division 01 Section, "Regulatory Requirements" for additional information.)

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In submitting this Bid, the Bidder hereby acknowledges the issuance, receipt, and acceptance of Addenda as indicated below:

Addenda issued: YES / NO [<i>cross out one</i>]; if YES list below:			
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated
Addendum:	dated	Addendum:	dated

**CONTRACT NO. 23-S43-01-04
BASE BID**

For all Work, the total sum of:

_____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE PRICE SCHEDULE

Costs listed for each Alternate include costs of related coordination, modification, and adjustment.

ALTERNATE NO. EC-01: Custodial Receiving

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. EC-02: Library Area

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. EC-03: Visual Arts – Spatial Reorganization

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. EC-04: Art, Ceramics, Tech Ed – Spatial Reorganization

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. EC-04A: Art, Ceramics, Tech Ed – Finishes and Millwork

ADD _____ Dollars (\$) _____)
(Written) (Figures)

ALTERNATE NO. EC-07: Auditorium

ADD _____ Dollars (\$) _____
 (Written) (Figures)

ALTERNATE NO. EC-08: Electrical Panels

ADD _____ Dollars (\$) _____
 (Written) (Figures)

ALTERNATE NO. EC-09: Generator Replacement

ADD _____ Dollars (\$) _____
 (Written) (Figures)

UNIT PRICE SCHEDULE

NO.	SCHEDULED ITEM	BASE-BID QUANTITY	UNIT	UNIT PRICE ADD/ DEDUCT
EC-1a	20A-1P Circuit Breaker Replacement	100	Each	\$ _____.
EC-1b	30A-1P Circuit Breaker Replacement	10	Each	\$ _____.
EC-1c	15A-1P Circuit Breaker Replacement	20	Each	\$ _____.
EC-1d	20A-3P Circuit Breaker Replacement	20	Each	\$ _____.
EC-1e	30A-3P Circuit Breaker Replacement	20	Each	\$ _____.
EC-1f	30A-2P Circuit Breaker Replacement	10	Each	\$ _____.
EC-1g	40A-3P Circuit Breaker Replacement	10	Each	\$ _____.
EC-1h	50A-3P Circuit Breaker Replacement	10	Each	\$ _____.
EC-1i	20A-1P(GFI) Circuit Breaker Replacement	20	Each	\$ _____.
EC-1j	60A-3P Circuit Breaker Replacement	10	Each	\$ _____.
EC-1k	70A-3P Circuit Breaker Replacement	5	Each	\$ _____.
EC-1l	100A-3P Circuit Breaker Replacement	1	Each	\$ _____.

SIGNATURES

When the Bidder is an Individual:

_____(SEAL)

When the Bidder is a Partnership:

Name of Partnership

By _____(SEAL)
Partner

_____(SEAL)
Partner

_____(SEAL)
Partner

When the Bidder is a Corporation:

Name of Corporation

By _____
President

Corporate
Seal

ATTEST: _____
Secretary

The _____ is a corporation

organized and existing under the laws of _____ and (has) (has not) been granted a certificate of authority to do business in Pennsylvania, as required by the Business Corporation Law, approved May 5, 1933, P. S. 364, as amended.

When the Bidder is trading under a fictitious name:

The _____ is an individual, partnership, or corporation trading under a fictitious or assumed name and has (has not) registered under the Fictitious Name Act of Pennsylvania – namely, the Act of May 24, 1945, P. S. 967.

END OF DOCUMENT 00 4116E

DRAWING ABBREVIATION LIST

A	ANGLE
AC	AIR CONDITIONING
AB	ANCHOR BOLT
ACM	ASBESTOS CONTAINING MATERIALS
ACOUS	ACOUSTIC
AD	AREA DRAIN
ADJ	ADJUSTABLE
AED	AUTOMATED EXTERNAL DEFIBRILLATOR
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
APC	ACOUSTICAL PANEL CEILINGS
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT OR ARCHITECTURAL
ASPH	ASPHALT
ASST	ASSISTANT
AUTO	AUTOMATIC
AVG	AVERAGE
B	
BI	BOTTOM OF
BC	BOTTOM OF CURB
BC	BASE CABINET
BD	BOARD
BET	BETWEEN
BEV	BEVELED
BIT	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BMK	BENCH MARK
BTM	BOTTOM
BR	BRICK
BRG	BEARING
BRKT	BRACKET
BSMT	BASEMENT
BUR	BURLED UP ROOF
C	
CH	CHANNEL
CAB	CABINET
CB	CATCH BASIN
CC	CENTER TO CENTER
CEM PL	CEMENT PLASTER
CF	COMPOSITION FLOORING, OR CUBIC FOOT
CG	CORNER GUARD
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLG HT	CEILING HEIGHT
CLO	CLOSET
CLR	CLEAR
CLM	CLASSROOM
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
CP	COPIER
CPT	CARPET
CRSE	COURSE
CS	CONCRETE W/SEALER
CT	CERAMIC TILE
CTB	CERAMIC TILE BASE
CTR	COUNTER
CUH	CABINET UNIT HEATER
CW	CURTAIN WALL
CY	CUBIC YARD
D	
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DIR	DIRECTOR
DN	DOWN
DR	DOOR
DW	DISHWASHER

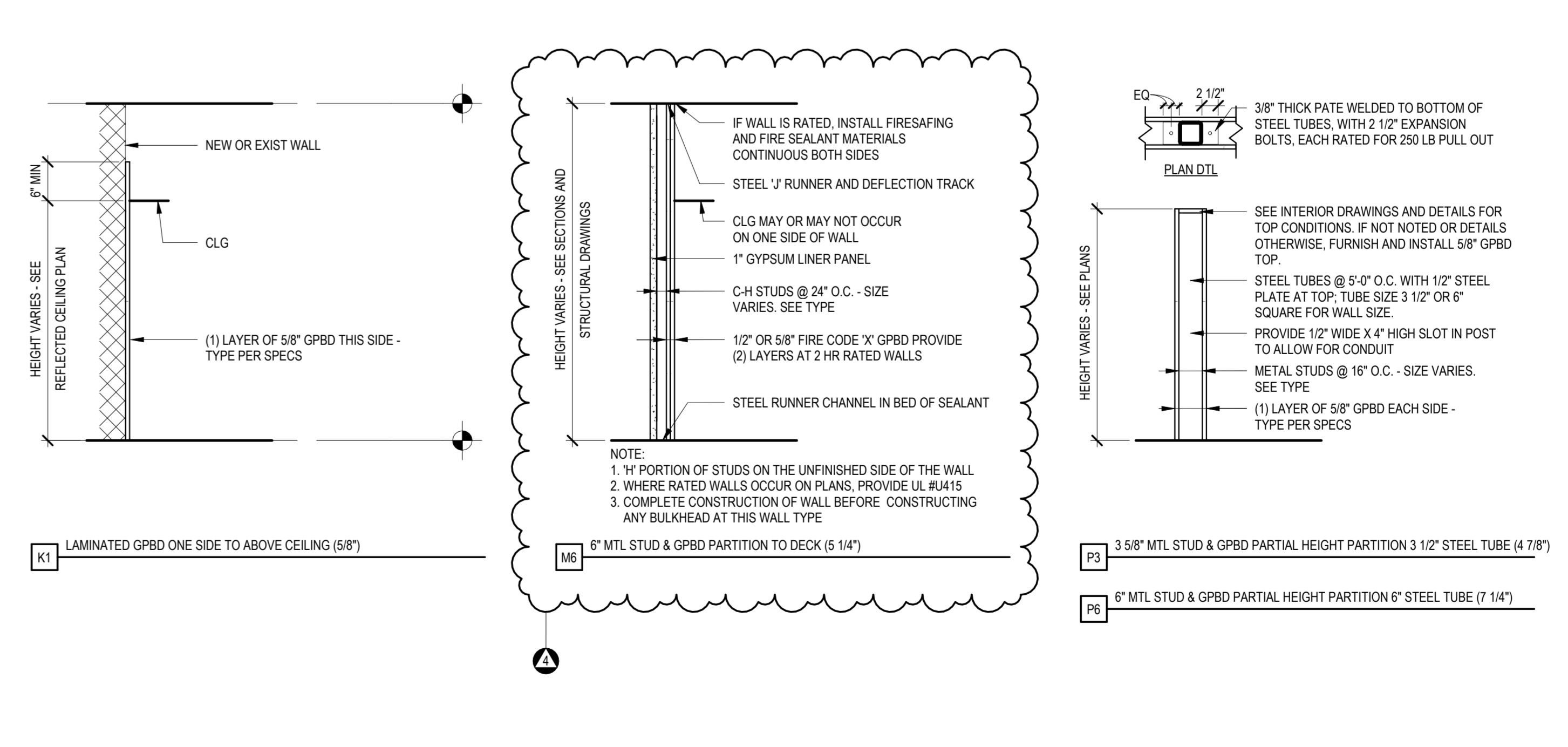
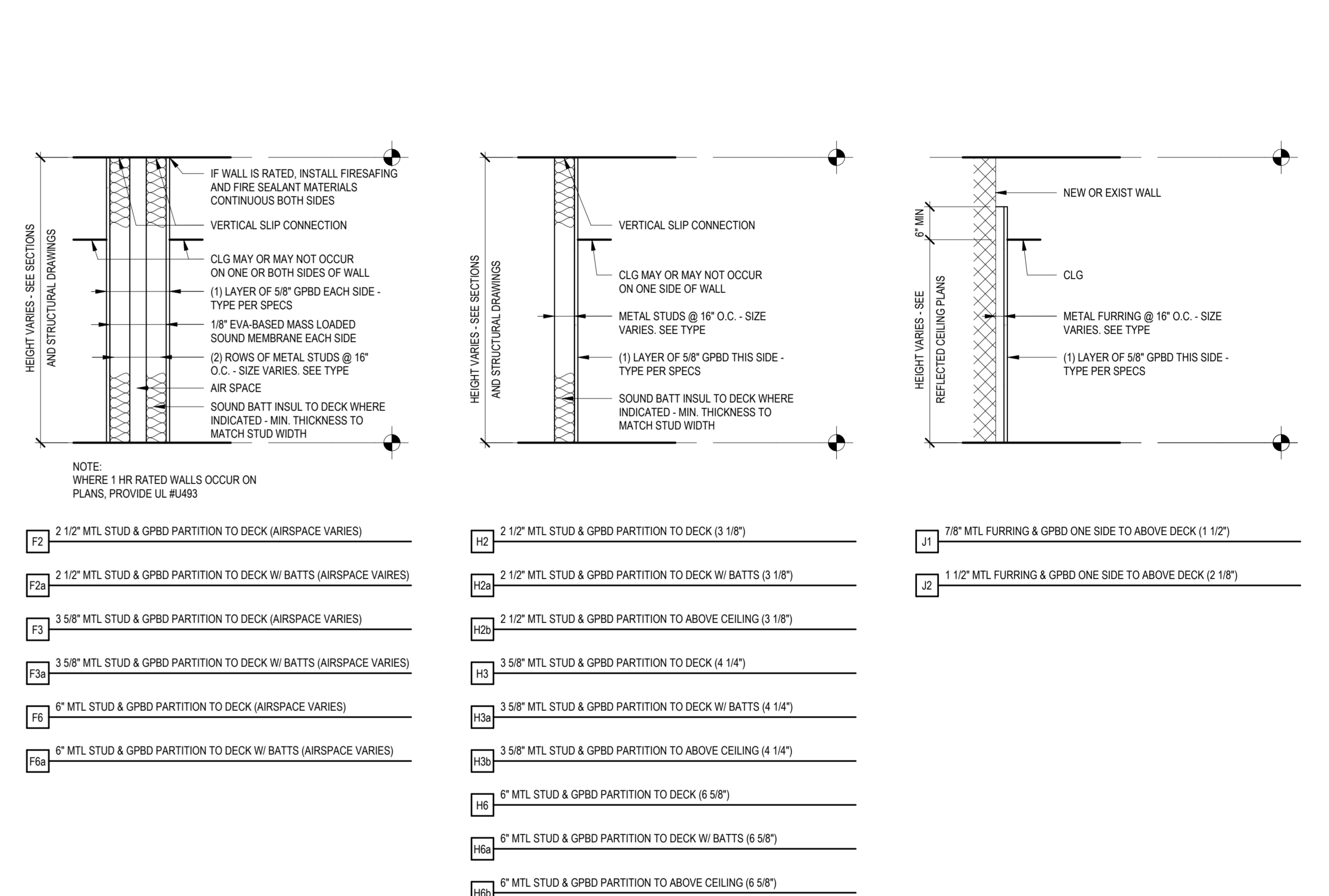
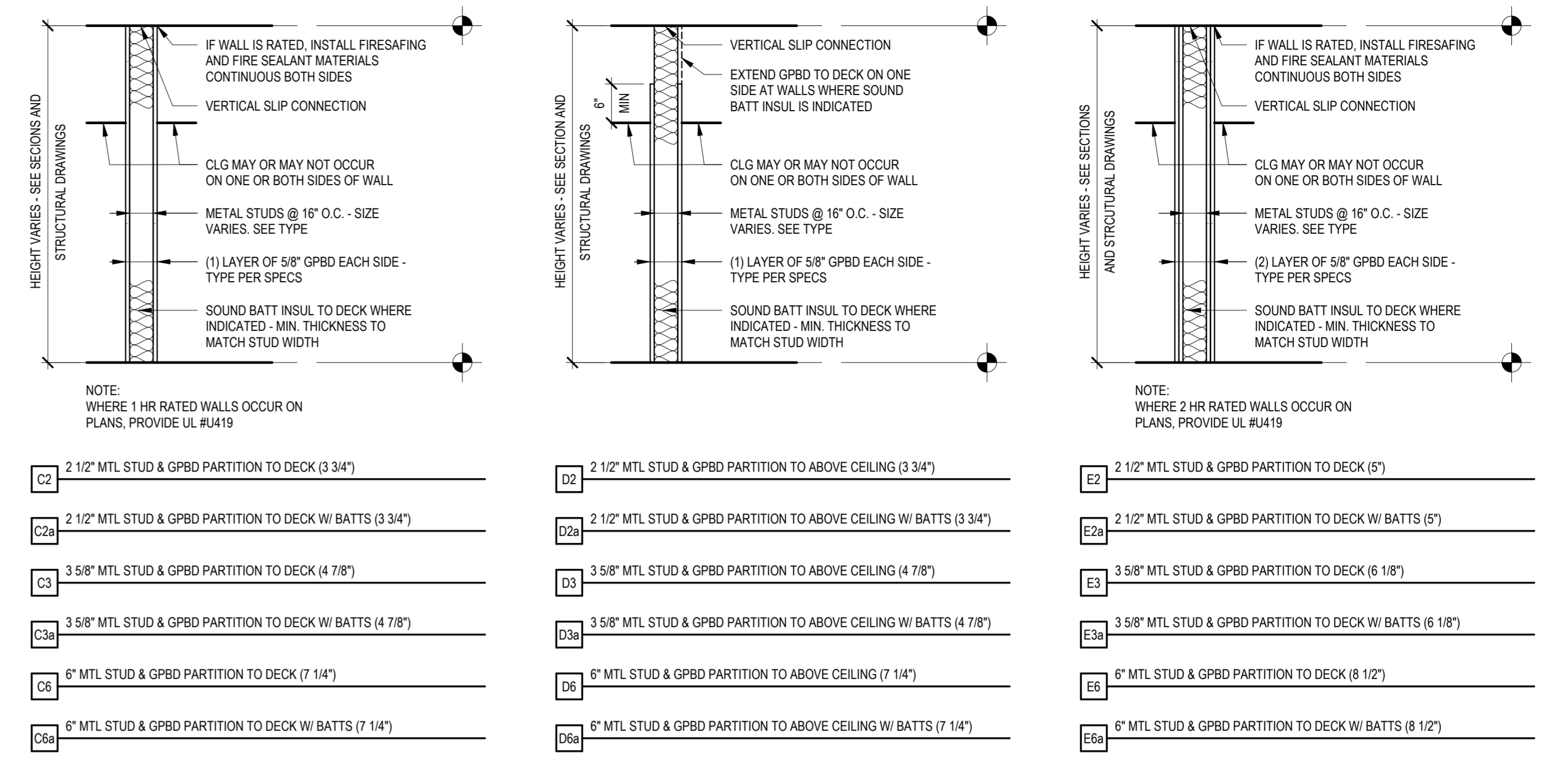
EWG	DRAWING
E	EAST
EA	EACH
EB	EDGE BANDING
EFM	ENTRANCE FLOOR MAT
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
EL SHT	ELASTIC SHEET
ELE	ELEVATOR
ELEC	ELECTRICAL
ELEV	ELEVATION
EMER	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
ENT	ENTRANCE
EP	ELECTRICAL PANEL/ EPOXY PAINT
EQU	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXC	EXCAVATE
EXCL	EXCLUDE(ING)
EXIST	EXISTING
EXP BOLT	EXPANSION BOLT
EXT	EXTERIOR
F	
F	FABRIC
FF	FACE TO FACE
FAX	FACSIMILE
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
PEC	FIRE EXTINGUISHER CABINET W/ FIRE EXTINGUISHER
FHC	FIRE HOSE CABINET
FIN	FINISH OR FINISHED
FL	FLOOR
FL CO	FLOOR CLEAN OUT
FLSH	FLASH OR FLASHING
FP	FIRE PROTECTION
PPRF	FIREPROOF OR FIREPROOFING
FR	FIRE RATED OR FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FRSG	FIRE RATED SAFETY GLAZING
FRT	FIRE RETARDANT - TREATED WOOD
FT	FOOT / FEET
FTG	FOOTING
FURN	FURNISH
G	
GA	GAUGE
GALV	GALVANIZED
GCT	GLAZED CERAMIC TILE
GCTB	GLAZED CERAMIC TILE BASE
GO	GRADE(ING)
GL	GLASS OR GLAZING
GPBD	GYPSUM DRYWALL BOARD
GRAN	GRANITE
GRAV	GRAVEL
GRD	GROUND
GRT	GROUT
H	
HB	HOSE BIBB
HC	HANDICAPPED
HCWD	HOLLOW-CORE WOOD
HD	HEAD
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR OR HANDRAIL
HT	HEIGHT
HTR	HEATER
HVAC	HEATING/VENTILATION/AIR CONDITIONING
HWC	HOT WATER CONNECTOR
I	
ICRA	INFECTION CONTROL RISK ASSESSMENT
ID	INSIDE DIAMETER
IN	INCH, INCHES, INVERT
INCL	INCLUDE, INCLUDED, OR INCLUDING
INSUL	INSULATION
INT	INTERIOR
J	
JAN	JANITOR
JMB	JAMB
JOIST	JOIST
JT	JOINT

K	KITCHEN
LAM	LAMINATE OR LAMINATED
LAN	LOCAL AREA NETWORK CONNECTION
LAV	LAVATORY
LB	POUND
LF	LINAL FLOOR
LEG	LEG
LIN	LINOLEUM
LINB	LINOLEUM SHEET FLOORING - COVERED
LKR	LOCKER
LL	LEAD LINED
LLM	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LT	LIGHT
LTL	LINTEL
LOUVER	LOUVER
LWOD	LESS WIDTH OF DOOR
M	
MAS	MASONRY
MAX	MAXIMUM
MBL	MARBLE
MCT	MOSAIC CERAMIC TILE
MDF	MEDIUM DENSITY FIBREBOARD
MECH	MECHANICAL
MEMB	MEMBRANE
MEZ	MEZZANINE
MFC	MICROFICHE
MFR	MANUFACTURE OR MANUFACTURED
MH	MANHOLE
MICRO	MICROWAVE
MIM	MIMIMUM
MISC	MISCELLANEOUS
MLDG	MOULDING
MLTP	MULTIPLE
MO	MASONRY OPENING
MOW	MOUNTED WOOD
MOUNTED EL	MOUNTED ELEMENT
MTL	METAL
N	
N	NORTH
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NM	NORMAL
NOM	NOMINAL
NTS	NOT TO SCALE
NUM	NUMBER
O	
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFF	OFFICE
OPNG	OPENING
OPP	OPPOSITE
OZ	OUNCE
P	
P	PAINT
PART	PARTITION
PC	PERSONAL COMPUTER
PED	PEDESTAL
PERF	PERFORATED
PERM	PERIMETER
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLAST	PLASTIC
PLB	PLUMBING
PL YWD	PLYWOOD
PNL	PANEL
POS	POINT OF SALE
PR	PAIR
PRECAST	PRECAST
PREFAB	PREFABRICATED
PREMID	PREMIDDED
PRI	PRINTER
PROP	PROPERTY
PROT	PROTECT, PROTECTED, OR PROTECTION
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	POINT
PTD	PAINTED
PVC	POLY VINYL CHLORIDE
Q	

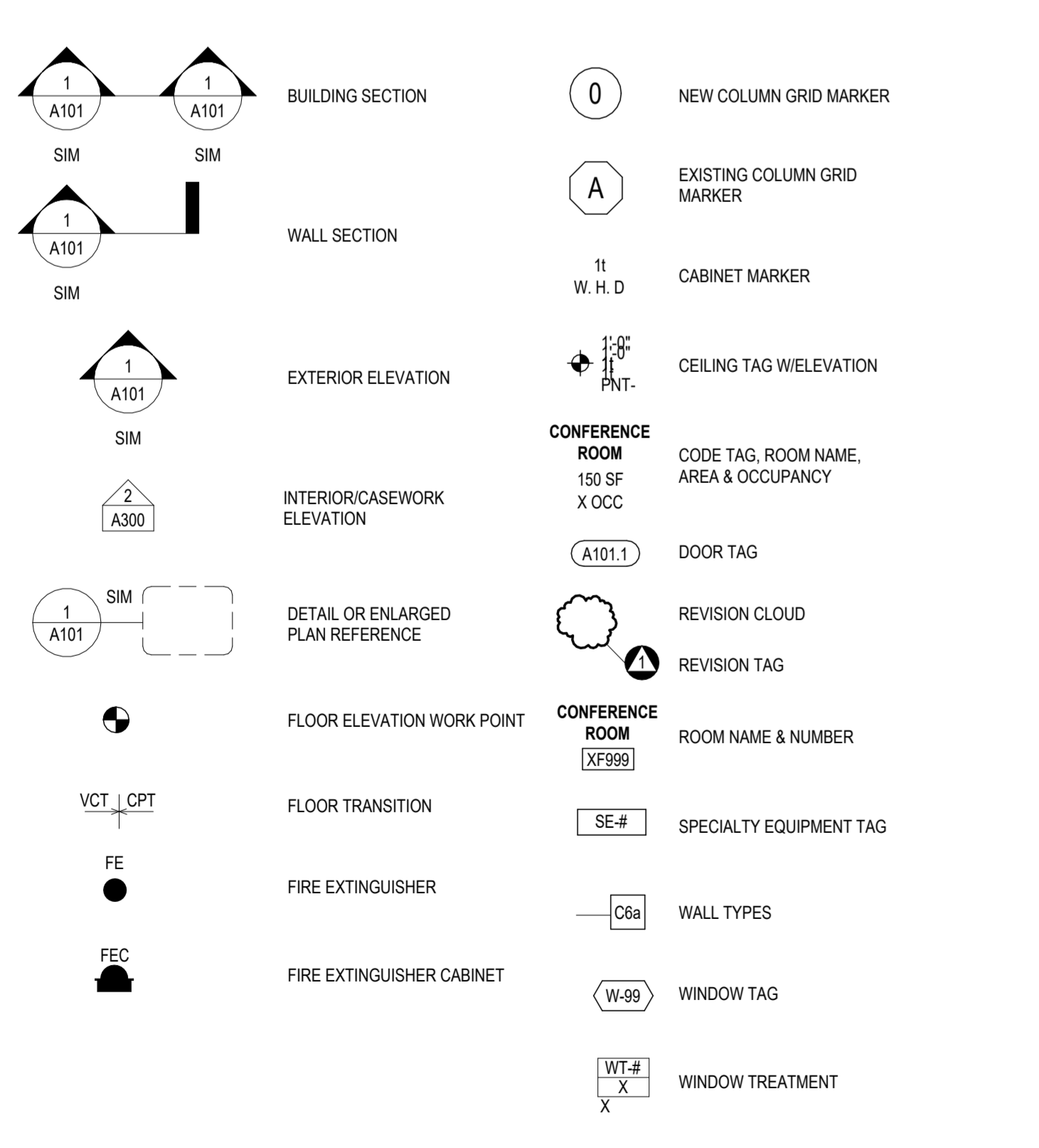
QT	QUARRY TILE
QTB	QUARRY TILE BASE
QUAL	QUALITY
R	
R	RISER OR RODS
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RECD	REQUIRED
REF	REFER / REFERENCE
REFL	REFLECTED
REG	REGISTER
REIN	REINFORCING
REQD	REQUIRED
RES	RESILIENT
RF	ROOF
RFG	REFRIGERATOR
RFT	RUBBERIZED FABRIC TILE
RNG	RANGE
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
RSP	RUBBER SHEET FLOORING
RT	RIGHT
RTAR	RUBBER STAIR TREAD & RISER
RTS	RUBBER TRANSITION STRIP
RWC	RAIN WATER CONDUCTOR
S	
S	SOUTH
SAN	SANITARY
SC	SPECIAL COATING
SCHD	SCHEDULE
SCVC	SOLID-CORE VINYL CLAD
SCWD	SOLID-CORE WOOD
SEC	SECTION
SERV	SERVICE
SF	SQUARE FOOT / STOREFRONT
SFC	STORE FIXTURE CONTRACTOR
SH	STEEL HEAT BARRIER
SHT	SHEET
SHTH	SHEATHING
SI	SQUARE INCH
SM	SMILAR
SMD	SOLID
SPEC	SPECIFY, SPECIFIED OR SPECIFICATIONS
SPKLR	SPRINKLER
SQ	SQUARE
SS	STAINLESS STEEL
DSM	SOLID SURFACE MATERIAL
ST	STREET
STD	STANDARD
STL	STEEL
STN	STONE
STOR	STORAGE
STRUC	STRUCTURAL
SUPPT	SUPPORT(ING)
SURF	SURFACE
SUSP	SUSPENDING, SUSPENDED, OR SUSPENSION
SY	SQUARE YARD
PC	PERSONAL COMPUTER
PED	PEDESTAL
PERF	PERFORATED
PERM	PERIMETER
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLAST	PLASTIC
PLB	PLUMBING
PL YWD	PLYWOOD
PNL	PANEL
POS	POINT OF SALE
PR	PAIR
PRECAST	PRECAST
PREFAB	PREFABRICATED
PREMID	PREMIDDED
PRI	PRINTER
PROP	PROPERTY
PROT	PROTECT, PROTECTED, OR PROTECTION
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	POINT
PTD	PAINTED
PVC	POLY VINYL CHLORIDE
Q	

UL	UNDERWRITER'S LABORATORY
UMCT	UNGLAZED MOSAIC CERAMIC TILE
UNO	UNLESS NOTED OTHERWISE
V	
VASF	VINYL ATHLETIC SHEET FLOORING
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VWB	VENTED VINYL BASE
VWC	VINYL WALLCOVERING
W	
W	WEST
WI	WITH
WC	WATER CLOSET OR WALL CABINET
WCM	WALL COVERING MATERIAL
WCS	WOOD GRAIN STEEL
WD	WOOD / WOOD PANEL MILLWORK
WDAF	WOOD ATHLETIC FLOORING
WF	WOOD FLOORING
WFP	WOOD FIBER PANEL
WN	WINDOW
WP	WATERPROOFING
WS	WORKSTATION
WVCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YR	YEAR
Z	
Z	ZEE

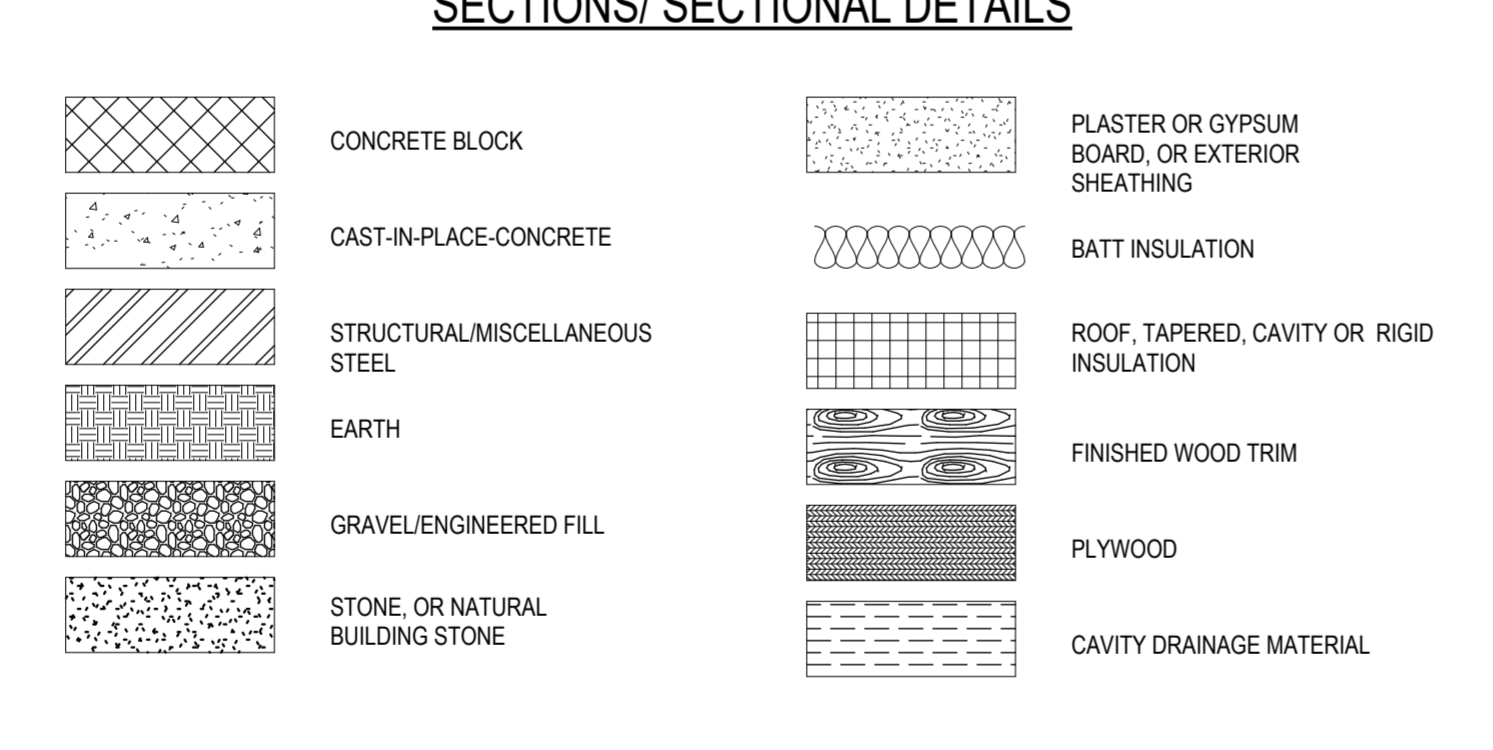
WALL TYPES LEGEND



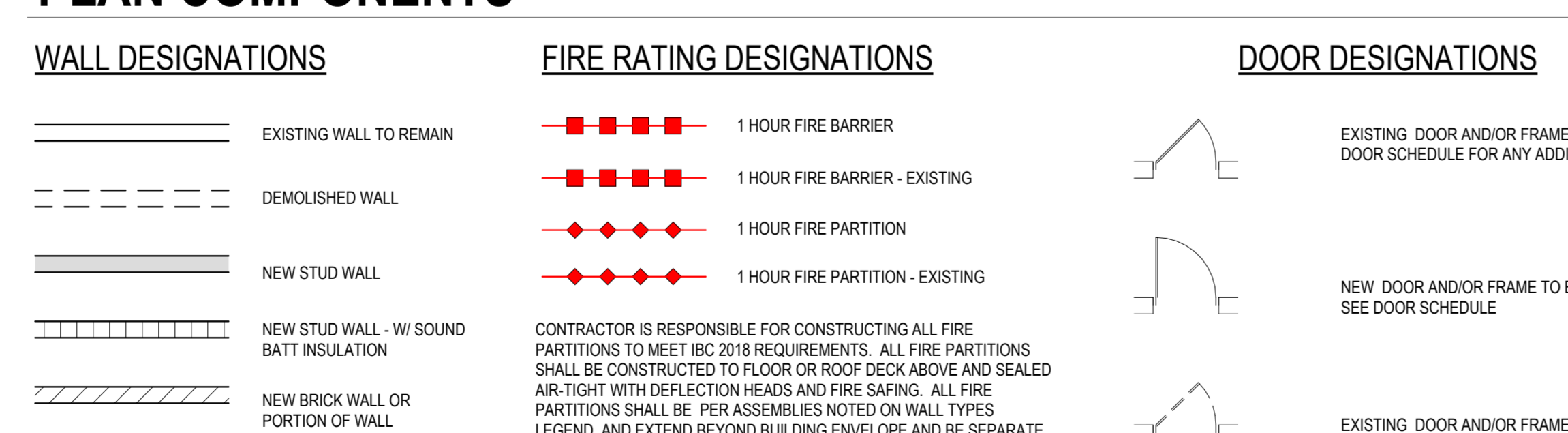
GRAPHIC SYMBOLS LEGEND



GRAPHICS CONVENTIONS



PLAN COMPONENTS



REVISIONS
4 3/21/2024

ADDENDUM 4

BID SET 02/19/2024

HIGH SCHOOL RENOVATIONS

511 HIGHLAND AVENUE, GROVE CITY, PA 16127

GROVE CITY AREA SCHOOL DISTRICT

LEGENDS, ABBREVIATIONS, GENERAL NOTES, AND PARTITION TYPES

Proj No. 23-S43-01

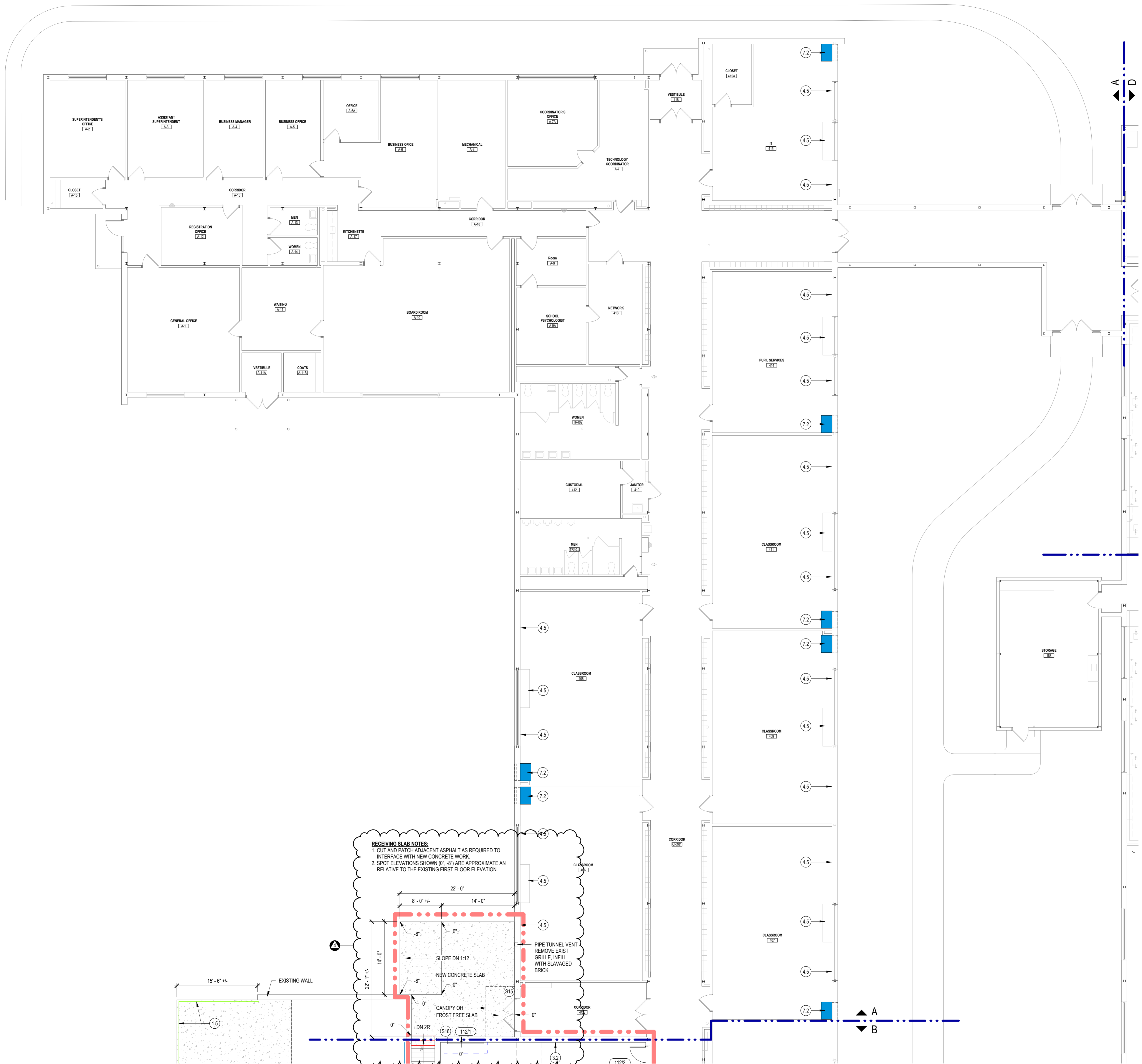
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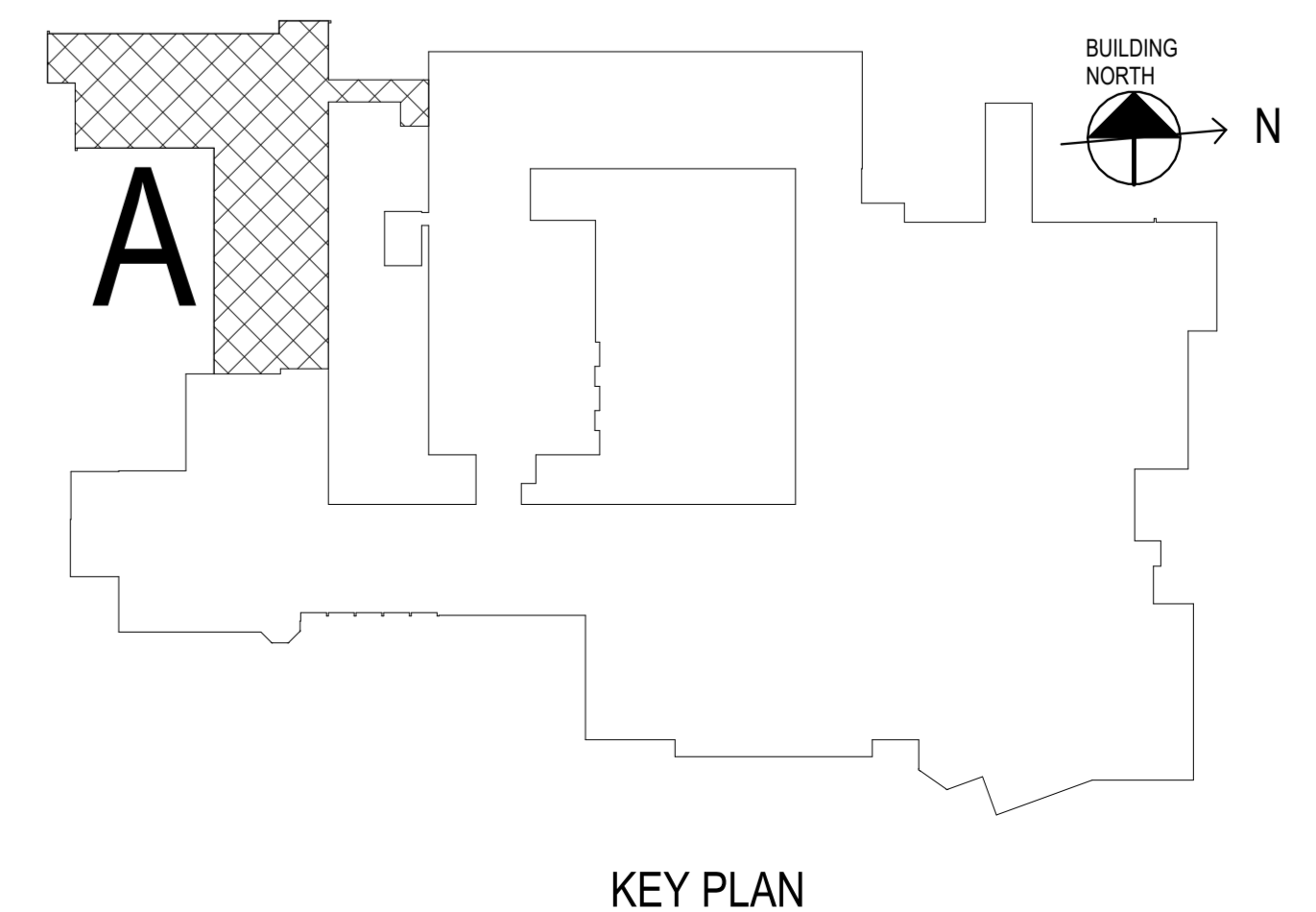
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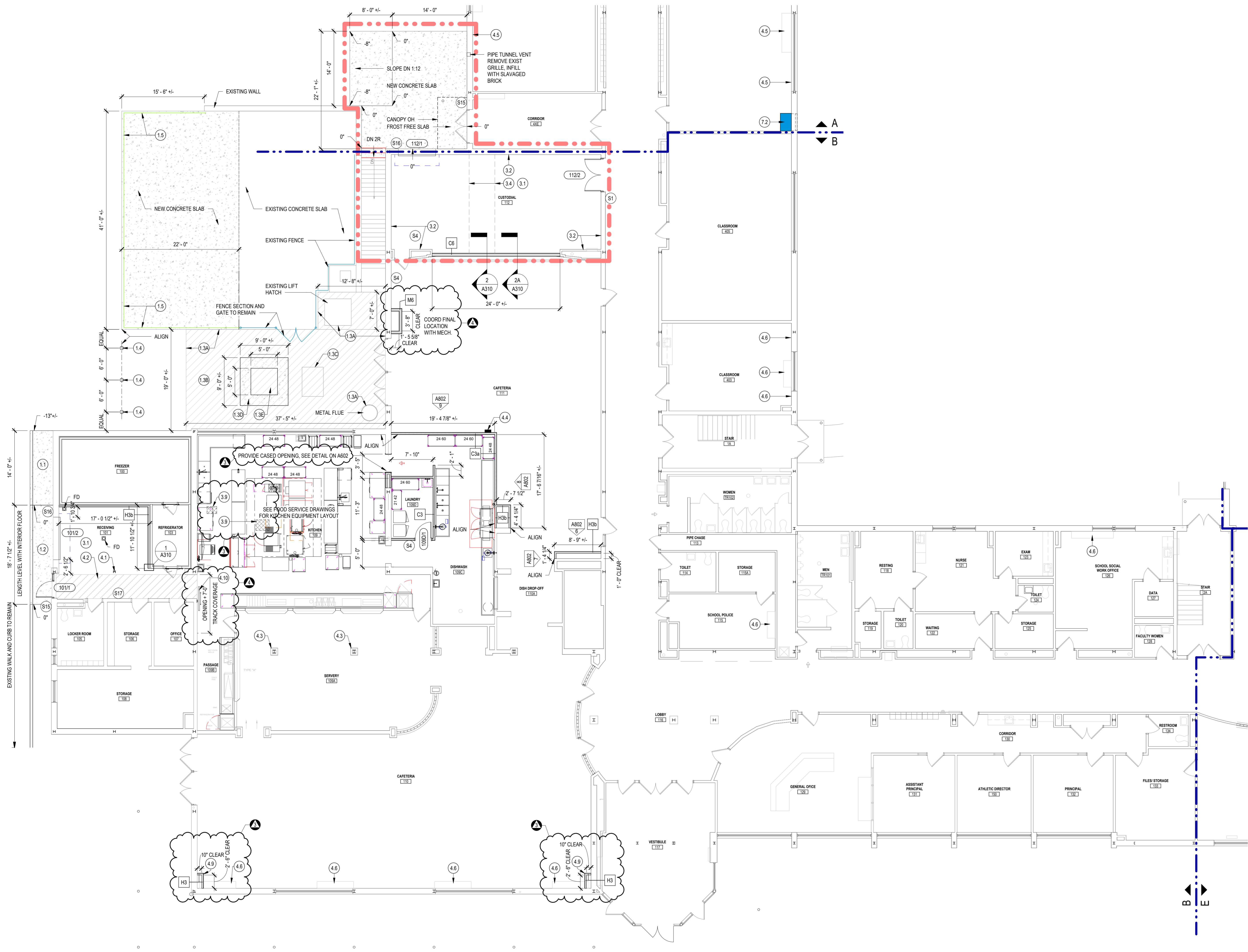
1 FIRST FLOOR PLAN - AREA 'A'
A101 1/8" = 1'-0"



CONSTRUCTION NOTES	
NUM	DESCRIPTION
1.1	NEW CONCRETE CURB AND SIDEWALK TO MATCH EXISTING ADJACENT CONCRETE WITH TYPE AND FINISH. THIS SECTION SHALL SLOPE FROM EXISTING PARKING LOT GRADE TO NEW ADJACENT SECTION AT 1" PER 12' MAX.
1.2	NEW CONCRETE CURB AND SIDEWALK TO MATCH EXISTING ADJACENT CONCRETE WITH TYPE AND FINISH. THIS SECTION SHALL BE LEVEL WITH INTERIOR FLOOR SURFACE OF RECEIVING 10' AND SHALL SLOPE AWAY FROM THE BUILDING FOR DRAINAGE PURPOSES.
1.3A	CLEAR JOINTS AND INTERFACES BETWEEN SLAB AND ADJACENT MATERIALS TO A MINIMUM DEPTH OF 4". FILL VOIDS WITH SEALANT AS SPECIFIED.
1.3B	ROUTE EXISTING CRACKS, NEW AND PREVIOUSLY TREATED, TO A MIN 3/8" WIDE X 3/4" DEEP SEAL WITH EXTERIOR TRAFFICABLE SEALANT. COORDINATE SEALANT COMPATIBILITY WITH DECK WATERPROOFING.
1.3C	ROUTE AND CLEAN EXISTING JOINTS BETWEEN CONCRETE SLAB SECTIONS TO A MIN 3/8" WIDE X 3/4" DEEP SEAL WITH EXTERIOR TRAFFICABLE SEALANT. COORDINATE SEALANT COMPATIBILITY WITH DECK WATERPROOFING.
1.3D	PATCH OPENING IN CONCRETE SLAB. COORD WITH NEW WORK ASSOCIATED WITH NEW IN-FLOOR ACCESS HATCH AND WATERPROOFING. SEE STRUCTURAL DRAWINGS.
1.3E	PROVIDE NEW IN-FLOOR HATCH AS SPECIFIED. COORDINATE WITH CONCRETE PATCH AND WATERPROOFING WORK. SEE PLUMBING DRAWINGS FOR DRAIN CONNECTION.
1.4	NEW STEEL BOLLARD, SEE STRUCT DWGS.
1.5	NEW CHAIN LINK FENCE. HEIGHT TO MATCH EXISTING. SEE DRAWING ASSOC FOR DETAILS AND COORDINATE WITH SLAB DETAILS AS OUTLINED ON STRUCTURAL DRAWINGS.
3.1	PATCH AND LEVEL FLOOR IN THIS AREA AS REQUIRED FOR NEW FLOOR FINISH. SEE SPECIFICATIONS FOR LEVELING MATERIAL OPTIONS.
3.2	PATCH AND REPAIR WALL AS NECESSARY AFTER RAISED SLAB DEMOLITION AND PREPARE FOR NEW FINISHES AS SCHEDULED.
3.3	BUILD WALL ATOP EXISTING WALL CONSTRUCTION TO EXTEND GWB TO DECK ABOVE.
3.4	EXTENTS OF EXISTING PIPE TUNNEL CAP BELOW EXISTING STAGE CONSTRUCTION. SEE STRUCTURAL DRAWINGS FOR INFORMATION REGARDING NEW CONCRETE SLABS BEING INSTALLED ADJACENT TO THIS SLAB.
3.5	EXTENTS OF GEORAM AND CONCRETE SLAB INFILL.
3.6	AREA OF STAGE FLOORING APPLICATION (2,400 S.F.). SEE SPECIFICATIONS FOR MANUFACTURER'S INSTALLATION REQUIREMENTS.
3.7	RELOCATE EXISTING LADDER TO THIS LOCATION. MODIFY EXISTING LADDER AND MEZZANINE PLATFORM AS REQ'D. SEE DETAILS ON A311 FOR PROPOSED ALTERATIONS.
3.8	MODIFY EXISTING STAGE EDGE TO ELIMINATE VERTICAL LIP. SEE DETAILS ON A310.
3.9	PC SHALL REMOVE EXISTING TROUGH ASSEMBLY AND CUT AND CAP EXISTING DRAIN AS SPECIFIED ON PLUMBING DRAWINGS. GC SHALL INFILL VOID WITH CONCRETE AND PREPARE FOR NEW QUARRY TILE FINISH. PROVIDE QUARRY TILE TO MATCH EXISTING ADJACENT MATERIAL.
4.1	PAINT COLUMN TO MATCH NEW WALL PAINT.
4.2	AREA SHALL RECEIVE QT-1 AND QT-2 IN A CHECKERED PATTERN TO DISCERN THE PATH OF EGRESS. SEE A832.
4.3	PATCH TOP OF GWB COLUMN SURROUND AS REQUIRED AFTER SOFFIT DEMOLITION. PREPARE TO RECEIVE NEW BLACK CERAMIC TILE TO MATCH EXISTING. TILING SHALL OCCUR ON ALL FOUR SIDES OF THE COLUMN SURROUND FROM THE POINT OF EXISTING SOFFIT INTERFACE TO AN ELEVATION ABOVE THE EXISTING CEILING PLANE (APPROX 24 VERT INCHES).
4.4	RELOCATED FIRE EXTINGUISHER CABINET.
4.5	LOCATION OF EXISTING FLOOR MOUNTED MECHANICAL UNIT OR FIN TUBE TO BE REMOVED. INFILL INTERIOR AND EXTERIOR WALL VOIDS PER DETAILS. PATCH FLOOR AS REQUIRED WITH MATERIAL OUTLINED IN THE FINISH SCHEDULE. PAINT ENTIRE WALL WITH PROJECT'S ROOMS ACCENT COLOR AS NOTED ON FINISH SCHEDULE.
4.6	LOCATION OF EXISTING FLOOR MOUNTED MECHANICAL UNIT TO BE REPLACED. PATCH FLOOR AS REQUIRED WITH MATERIAL AS OUTLINED IN FINISH SCHEDULE. PAINT ENTIRE WALL WITH PROJECT'S ROOMS ACCENT COLOR AS NOTED ON FINISH SCHEDULE.
4.7	RELOCATED WOOD PLANK (BUTCHER BLOCK) COUNTERTOP ON NEW CABINETS. SEE DEMOLITION PLAN FOR ORIGINAL LOCATION. PROVIDE NEW 1" X 4" WOOD BACKSLASH TO MATCH WOOD SPECIES OF COUNTERTOP. COUNTERTOPS SHALL RECEIVE AN EPOXY TREATMENT TO FILL ANY GAPS BETWEEN THE EXISTING PLANKS. THE COUNTERTOPS SHALL THEN BE PLANED AND SANDED A MINIMUM AMOUNT TO PRODUCE A FLAT, FLUSH, UNFINISHED SURFACE.
4.8	PATCH VCT AS REQUIRED WITH MATERIAL OUTLINED IN THE FINISH SCHEDULE. SEE PLUMBING DRAWINGS. VERIFY EXTENTS IN FIELD.
4.9	NEW GWB PIPE ENCLOSURE. EXTEND HEIGHT TO 6' ABOVE CEILING. MODIFY EXIST. CEILING AS REQUIRED. PAINT AND PROVIDE BASE FINISH TO MATCH EXISTING ADJACENT MATERIALS.
4.10	PROVIDE SLIDING PVC STRIP CURTAIN (BY AKON CURTAINS OR SIMILAR) TO BE MOUNTED TO THE FACE OF NEW BULKHEAD AND EXISTING WALL. CUTRAIN SHALL BE 4'-6" WIDE (V.I.F.) TO PROVIDE FULL COVERAGE OF EXISTING OPENING. TRACK SHALL BE OF LENGTH AS SHOWN ON PLAN.
7.2	NEW VERTICAL LINT VENTILATOR LOCATION. SEE MECH DRAWINGS. SEE ARCH DETAILS PERTAINING TO WALL PENETRATIONS.

CLASSIFICATION OF WORK	
	EXISTING BUILDING - LIMITED WORK EXTENTS OF BUILDING FIRST FLOOR. LIMITED WORK AS NOTED
	BASE BID INCLUDES ADDITIONS AND RENOVATIONS
	ALTERNATE BID GC-01 - CUSTODIAL RECEIVING
	ALTERNATE BID GC-02 - LIBRARY AREA
	ALTERNATE BID GC-03, GC-03A - VISUAL ARTS
	ALTERNATE BID GC-04, GC-04A - ART, CERAMICS, TECH ED
	ALTERNATE BID GC-05 - WEIGHT TRAINING
	ALTERNATE BID GC-06 - LGI
	ALTERNATE BID GC-07 - AUDITORIUM



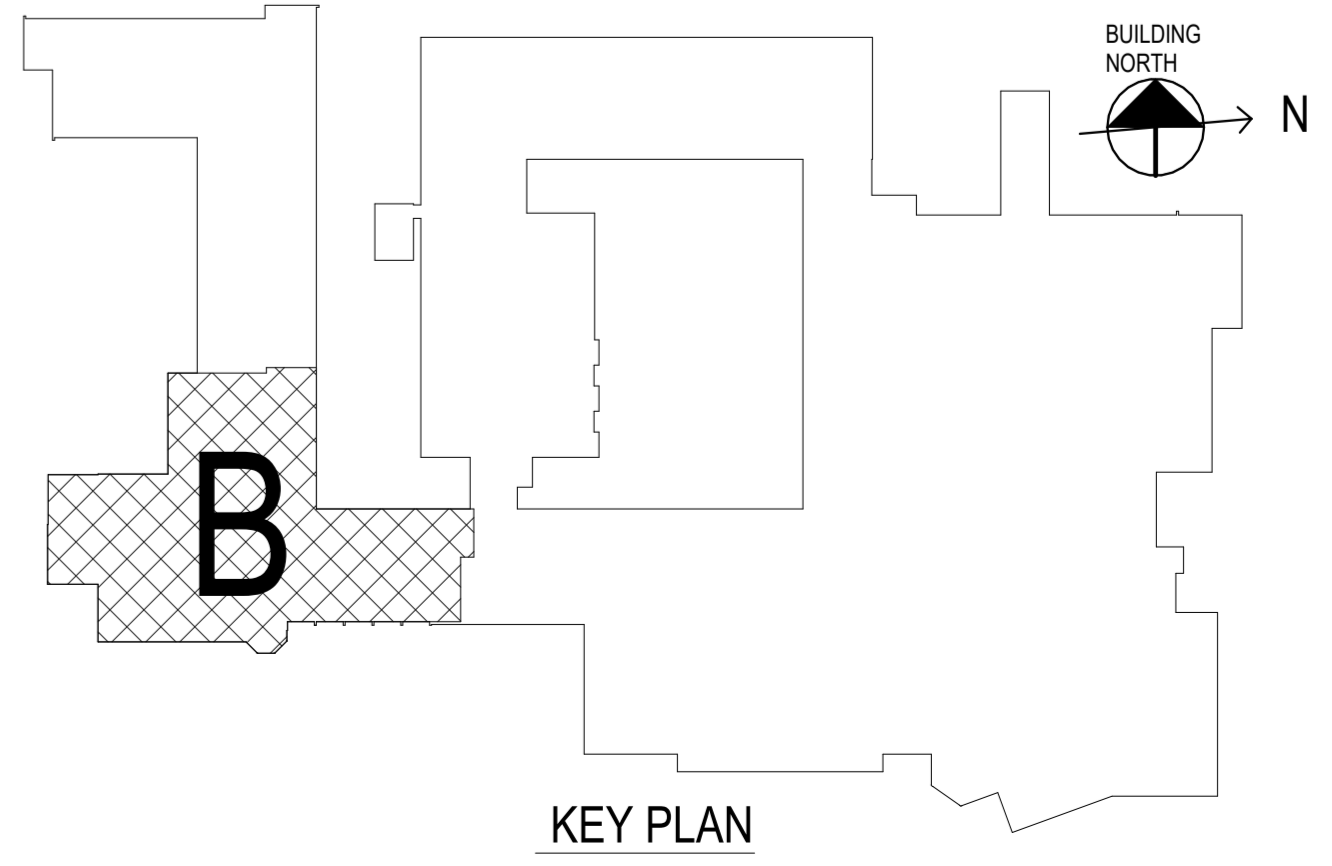


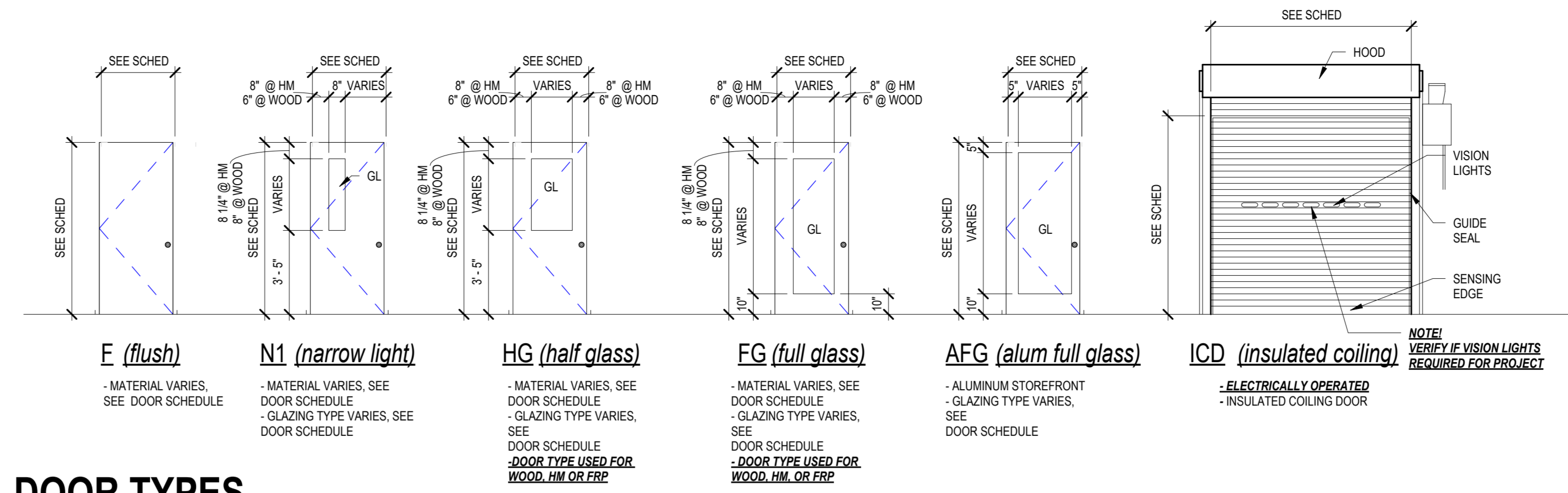
1 FIRST FLOOR PLAN - AREA B
A102 1/8" = 1'-0"

NUM	DESCRIPTION
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1.2	NEW CONCRETE CURB AND SIDEWALK TO MATCH EXISTING ADJACENT CONCRETE WITH TYPE AND FINISH. THIS SECTION SHALL BE LEVEL WITH INTERIOR FLOOR SURFACE OF RECEIVING 101 AND SHALL SLOPE AWAY FROM THE BUILDING FOR DRAINAGE PURPOSES.
1.3A	CLEAR JOINTS AND INTERFACES BETWEEN SLAB AND ADJACENT MATERIALS TO A MINIMUM DEPTH OF 4". FILL VOIDS WITH SEALANT AS SPECIFIED.
1.3B	ROUTE EXISTING CRACKS, NEW AND PREVIOUSLY TREATED, TO A MIN 3/8" WIDE X 3/4" DEEP SEAL WITH EXTERIOR TRAFFICABLE SEALANT. COORDINATE SEALANT COMPATIBILITY WITH DECK WATERPROOFING.
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4.1	PRINT OPENING TO MATCH NEW WALL.
4.2	AREA SHALL RECEIVE Q1 AND Q2 IN A CHECKERED PATTERN TO DISCERN THE PATH OF EGRESS. SEE A832.
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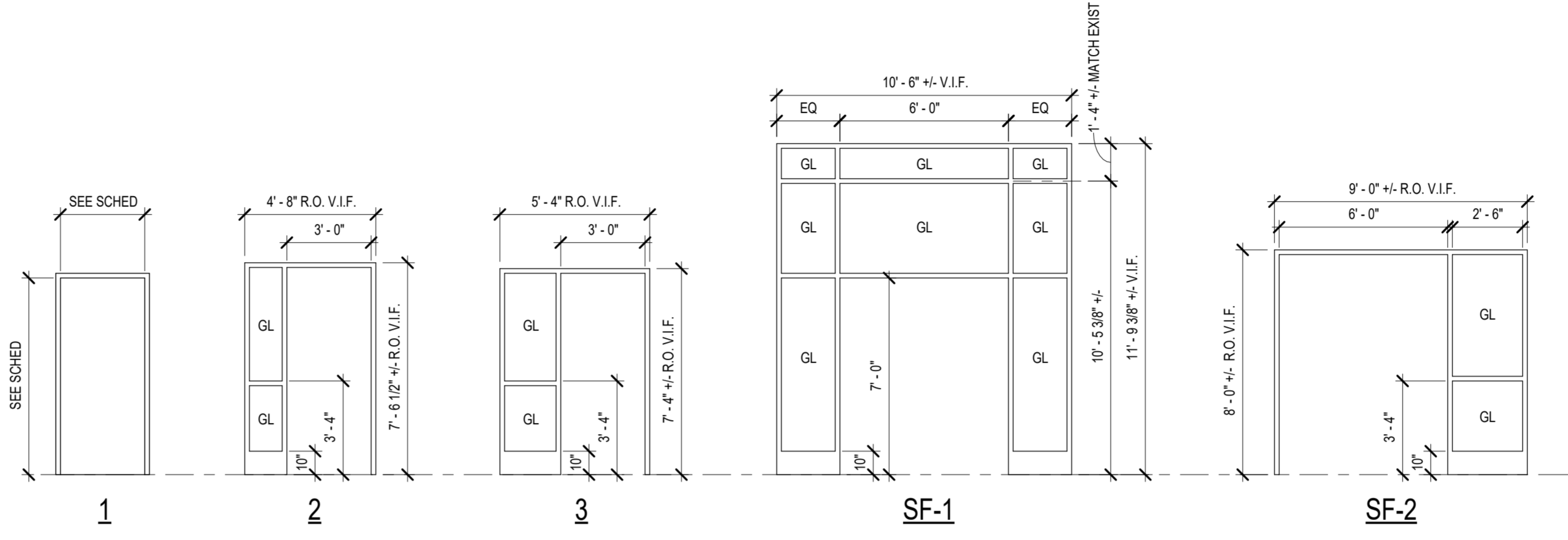
CLASSIFICATION OF WORK

- EXISTING BUILDING - LIMITED WORK
EXTENTS OF BUILDING FIRST FLOOR.
LIMITED WORK AS NOTED
- BASE BID
INCLUDES ADDITIONS AND RENOVATIONS
- ALTERNATE BID
GC-01 - CUSTODIAL RECEIVING
- ALTERNATE BID
GC-02 - LIBRARY AREA
- ALTERNATE BID
GC-03, GC-04A - VISUAL ARTS
- ALTERNATE BID
GC-04, GC-04A - ART, CERAMICS, TECH ED
- ALTERNATE BID
GC-05 - WEIGHT TRAINING
- ALTERNATE BID
GC-06 - LGI
- ALTERNATE BID
GC-07 - AUDITORIUM





DOOR TYPES



FRAME TYPES

DOOR SCHEDULE - FIRST FLOOR													
NUM	WIDTH	HEIGHT	GLAZING	MATL	PANEL	FRAME	GLAZ	RTG	HTG	HTG SET	REMARKS	COMMENTS	
1011	3'-0"	7'-4"	1/34"	FRP	F	ALUM	AL-2	G1		4.0			
1012	3'-0"	7'-4"	1/34"	FRP	F	ALUM	AL-2	G1		4.0			
1121	7'-0"	7'-2"	1/34"	WD	HG	G4	HM	HM-1		15.0		BASIS OF DESIGN: OVERHEAD DOOR CO MODEL 627. PROVIDE MASONRY RETURNS AT JAMBS	
1122	7'-0"	7'-2"	1/34"	WD	HG	G4	HM	HM-1		15.0		BASIS OF DESIGN: OVERHEAD DOOR CO MODEL 627. PROVIDE MASONRY RETURNS AT JAMBS	
167A1	6'-0"	7'-2"	1/34"	WD	HG	G5	HM	HM-1		12.0			
1711	6'-0"	7'-2"	1/34"	WD	HG	G4	HM	HM-1		15.0			
1712	6'-0"	7'-2"	1/34"	WD	HG	G4	HM	HM-1		9.0			
1911	6'-0"	7'-0"	1/34"	ALUM	AFG	G1	ALUM	SF-1		3.0			
193A1	3'-0"	7'-0"	1/34"	WD	F		HM	HM-1		8.0			
3001	5'-0"	7'-2"	1/34"	WD	N1	G4	HM	HM-1		16.0			
3002	3'-0"	7'-0"	1/34"	EXIST	EXIST		EXIST	EXIST				EXISTING DOOR AND FRAME TO REMAIN	
3041	3'-0"	7'-0"	1/34"	EXIST	EXIST		EXIST	EXIST				EXISTING DOOR AND FRAME TO REMAIN	
3042	3'-0"	7'-2"	1/34"	WD	HG	G4	HM	HM-1		10.0			
3043	6'-0"	7'-0"	1/34"	EXIST	EXIST		EXIST	EXIST				EXISTING DOOR AND FRAME TO REMAIN	
3081	6'-0"	7'-2"	1/34"	WD	N1	G4	HM	HM-1		17.0			
3082	10'-0"	12'-0"	1/34"	EXIST	EXIST		EXIST	EXIST		1.0		BASIS OF DESIGN: OVERHEAD DOOR CO MODEL 627	
3083	6'-0"	7'-0"	1/34"	EXIST	EXIST		EXIST	EXIST				EXISTING DOOR AND FRAME TO REMAIN	
3091	6'-0"	7'-2"	1/34"	WD	N1	G4	HM	HM-1		15.0			
3092	6'-0"	6'-0"	1/12"									EXISTING DOOR AND FRAME TO REMAIN	
3122	5'-0"	7'-2"	1/34"	HM	F		HM	HM-1		4.1			
3132A1	3'-0"	7'-0"	1/34"	WD	HG	G5	HM	HM-1		14.0		ACOUSTIC TRIM AND AUTO DOOR BOTTOM	
313E1	3'-0"	7'-0"	1/34"	WD	HG	G5	HM	HM-1		18.0		ACOUSTIC TRIM AND AUTO DOOR BOTTOM	
313F1	3'-0"	7'-0"	1/34"	WD	HG	G5	HM	HM-1		18.0		ACOUSTIC TRIM AND AUTO DOOR BOTTOM	
313G1	3'-0"	7'-0"	1/34"	WD	HG	G5	HM	HM-1		18.0		ACOUSTIC TRIM AND AUTO DOOR BOTTOM	
313H1	3'-0"	7'-0"	1/34"	WD	F		HM	HM-1		13.0			
3151	3'-0"	7'-2"	1/34"	WD	FG	G4	HM	HM-3	G4	6.0			
3152	3'-0"	7'-2"	1/34"	WD	FG	G4	HM	HM-3	G4	6.0			
3153	3'-0"	7'-2"	1/34"	WD	FG	G4	HM	HM-3	G4	6.0			
3154	3'-0"	7'-2"	1/34"	WD	FG	G4	HM	HM-3	G4	6.0			
315A1	3'-0"	7'-0"	1/34"	WD	F		HM	HM-1		13.0			
315B1	3'-0"	7'-0"	1/34"	WD	F		HM	HM-1		13.0			
3161	6'-0"	7'-2"	1/34"	WD	HG	G4	HM	HM-1		5.0			
3162	6'-0"	7'-2"	1/34"	WD	HG	G4	HM	HM-1		5.0			
3163	6'-0"	7'-2"	1/34"	ALUM	AFG	G1	ALUM	AL-1		2.0			
322A1	6'-0"	7'-0"	1/34"	WD	F		HM	HM-1		11.0			
3301	6'-0"	7'-0"	1/34"	HM	F		HM	HM-1		19.0			
3302	6'-0"	7'-0"	1/34"	WD	F		HM	HM-1		8.0			
CR3021	6'-0"	7'-10"	1/34"	ALUM	AFG	G1	ALUM	SF-2		2.0			

VIEW WINDOW SCHEDULE - FIRST FLOOR									
NUM	WIDTH	HEIGHT	SILL HEIGHT	TYPE	GLAZ	DEPTH	RATING	REMARKS	COMMENTS
167A2	3'-0"	4'-0"	3'-4"	HMA	G5	5 7/8			
1713	5'-4"	5'-7"	3'-5"	HMA	G4	5 3/4			
1714	3'-4"	3'-7"	3'-3"	HMA	G4	5 3/4			
1892	3'-0"	4'-0"	3'-4"	HMA	G4	7			
1893	3'-0"	4'-0"	3'-4"	HMA	G4	7			
1894	5'-0"	4'-0"	3'-4"	HMA	G4	7			
3084	13'-4"	4'-0"	3'-4"	HM-J	G4	5 7/8			
309A1	6'-0"	4'-0"	3'-4"	HMA	G4	5 7/8			
309A2	6'-0"	4'-0"	3'-4"	HMA	G8	5 7/8			
3103	8'-0"	4'-0"	3'-4"	HMA-E	G5	9			
3104	4'-8"	4'-0"	3'-4"	HMA	G5	9			
3105	4'-8"	4'-0"	3'-4"	HMA	G5	9			
3123	4'-8"	4'-0"	3'-4"	HMA	G5	5 3/4			
3124	4'-8"	4'-0"	3'-4"	HMA	G5	5 3/4			
3164	4'-8"	4'-0"	3'-4"	HMA	G1	5 3/4			
3165	4'-8"	4'-0"	3'-4"	HMA	G4	5 3/4			
3166	4'-8"	4'-0"	3'-4"	HMA	G4	5 3/4			

GENERAL DOOR NOTES

- INSTALL BACKER ROD AND SEALANT IN COLOR AS SELECTED BY ARCHITECT FULL PERIMETER OF FRAME BOTH SIDES.
 - ALL WOOD BLOCKING, NAILERS, PLYWOOD, ETC AT EXTERIOR FRAMES SHALL BE FRT LUMBER.
 - ALL OPENING VOIDS AT EXTERIOR FRAMES SHALL BE FILLED w/BATT INSULATION.
 - INSTALL HINGE SIDE OF ALL DOOR FRAMES MINIMUM 4" FROM ADJACENT OR PERPENDICULAR WALL UNLESS NOTED OR DIMENSIONED OTHERWISE.
 - MAINTAIN CLEARANCES AT LATCH EDGE OF ALL DOORS IN OCCUPIED SPACES AS FOLLOWS:
 - PULL SIDE MINIMUM 18" CLEAR
 - PUSH SIDE MINIMUM 12" CLEAR
 REPORT CONDITIONS WHICH DO NOT MEET THESE REQUIREMENTS TO ARCHITECT.
 - ALL HOLLOW METAL FRAMES REQUIRING FACE ANCHORS SHALL BE FILED, SANDED, AND PRIMED IN FIELD PRIOR TO FINAL PAINTING.
 - ALL HOLLOW METAL WINDOWS AND DOOR FRAMES SHALL BE FULLY WELDED CONSTRUCTION. ALL HOLLOW METAL FRAME WELDS SHALL BE GROUND SMOOTH, PRIMED, AND READY FOR FINAL PAINT IN FIELD UNLESS NOTED OTHERWISE.
 - APPLIED STOPS SHALL BE ON INTERIOR/LOCKED (ROOM OR BUILDING) SIDE OF HOLLOW METAL FRAME - TYPICAL.
 - ALL EXTERIOR HOLLOW METAL DOORS AND FRAMES SHALL BE GALVANIZED AND FACTORY PRIME PAINTED. BAKED ON PRIMER READY FOR FINAL PAINT IN FIELD.
 - GROUT ALL HM DOOR FRAMES FULL IN MASONRY WALLS. REINFORCE FRAMES IN STUD WALLS IN ACCORDANCE WITH TYPICAL STEEL STUD JAMB DETAILS ELEVATIONS".
 - ALL RATED OPENINGS SHALL HAVE MATCHING RATED FRAMES, AND HAVE UL LISTED DOOR HARDWARE. LABELED TAGS SHALL NOT BE PAINTED.
 - WHERE ALUMINUM FRAMING IS ABUTTING DISSIMILAR METALS, APPLY BITUMINOUS PAINT TO SURFACES OF BOTH ADJOINING METALS.
- Existing construction door notes*
- GENERAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
 - REPAIR EXISTING HOLLOW METAL FRAMES TO REMAIN WHERE HINGES, DEADLOCKS, OR OTHER HARDWARE IS REMOVED WITH STEEL PLATES. PREP, GRIND SMOOTH, THEN SAND AREAS TO RECEIVE FIELD PAINTING.
 - AT NEW DOOR OPENINGS CUT INTO SGFT, CMU, OR BRICK, TOOTH IN AROUND THE DOOR OPENING. USE SALVAGED BRICK OR SGFT WHEREVER POSSIBLE.

DOOR REMARKS

- PROVIDE EQUAL PAIR OF DOORS TO FIT OPENING
- PROVIDE 3'-0" PASSAGE LEAF AND 2'-0" INACTIVE LEAF
- PROVIDE HORIZONTAL MINI-BLIND ON INTERIOR SIDE OF DOOR
- ACCORDIAN FIRE DOOR ASSEMBLY, PROVIDE FLUSH WOOD POCKET DOOR - SEE DTLS
- PROVIDE 1" UNDERCLUT
- PROVIDE "x" "x" LOUVER
- PAINT STAGE SIDE OF DOOR AND FRAME BLACK
- INSTALL TO PERMIT 180 DEGREE SWING OPEN

FRAME REMARKS

- OFFSET HINGED FRAME
- DOUBLE EGRESS FRAME
- SLIDING POCKET DOOR FRAME - SEE DTLS
- PROVIDE CORNER MULLION (OR MULLION COVER)
- PROVIDE CASED OPENING
- PROVIDE HORIZONTAL MINI-BLIND ON INTERIOR SIDE OF FRAME
- GLAZING TYPE VARIES - SEE FRAME TYPES FOR GLAZING
- PROVIDE HOSPITAL JAMBS

GLAZING TYPES

- G1 - EXTERIOR DOUBLE GLAZED, INSULATED, 1"**
- 1/4" CLEAR TEMPERED, SOLARBAN 60 ON SURFACE #2
 - ARGON FILLED SPACER
 - 1/2" CLEAR TEMPERED
- G4 - INTERIOR TEMPERED**
- 1/2" CLEAR TEMPERED
- G5 - INTERIOR LAMINATED - SOUND ATTENUATING**
- SOUND ATTENUATING
 - STC 36 MINIMUM

DOOR/FRAME MATERIAL ABBREV

- CW CURTAINWALL
- FRP FIBER REINFORCED PLASTIC
- GL GLASS
- HM HOLLOW METAL
- MFL METAL (SEE SPECS)
- SF STOREFRONT
- SHB STEEL HEAT BARRIER
- WCS WOOD GRAIN STEEL



REVISIONS
3 03/14/2024 ADDENDUM 3
4 3/27/2024 ADDENDUM 4

BID SET 02/19/2024

HIGH SCHOOL RENOVATIONS
511 HIGHLAND AVENUE, GROVE CITY, PA 16127
GROVE CITY AREA SCHOOL DISTRICT

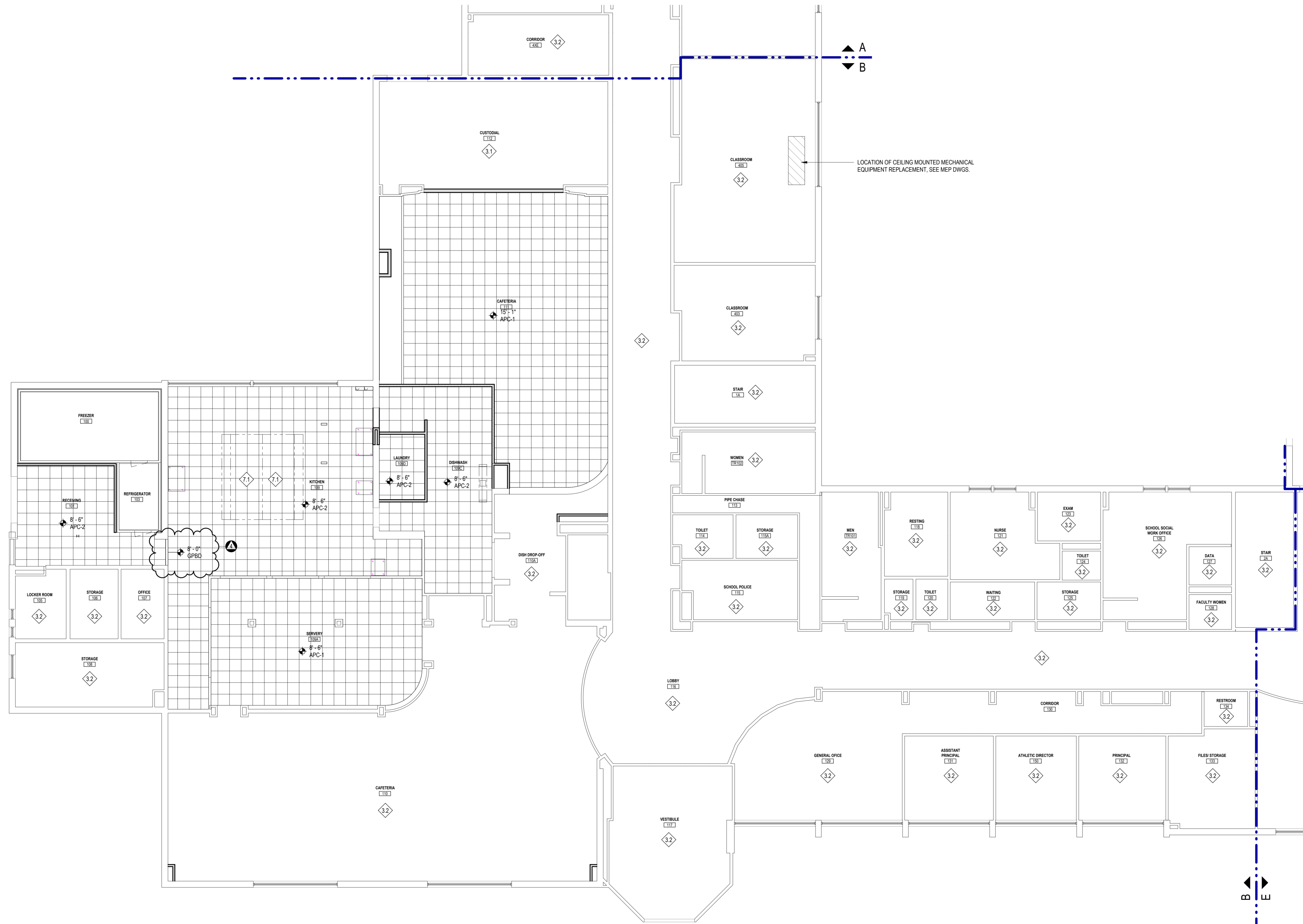
DOOR SCHEDULES, DOOR AND FRAME TYPES, FRAME DETAILS

Proj No. 23-S43-01
Issue Date 02/19/2024

A601

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1 FIRST FLOOR REFLECTED CEILING PLAN - AREA 'B'
1/8" = 1'-0"



CEILING TYPES						
TYPE MARK	DESCRIPTION	EDGE	PANEL SIZE	MODEL	GRID	GRID COLOR
GPBD	GPBD CEILING	-	-	-	-	-
APC-1	USG - "F" FISSURED	SHADOWLINE (S)	2x2	132	CENTRICITEE DXT	WHITE
APC-2	USG - VINYL FACED GYPSUM PANELS	SQUARE	2x2	3260	DXLA	WHITE
APC-3	RFG - HARMONY 1	-	2x2	-	15/16" HD T-GRID	WHITE
APC-4	ARMSTRONG - TECTUM SHAPES - ACOUSTICAL CLOUDS	-	48" D	-	-	TWH - WHITE
APC-5	ARMSTRONG - TECTUM SHAPES - ACOUSTICAL CLOUDS	-	60" D	-	-	TWH - WHITE
APC-6	ARMSTRONG - TECTUM SHAPES - ACOUSTICAL CLOUDS	-	72" D	-	-	TWH - WHITE

GENERAL RCP NOTES

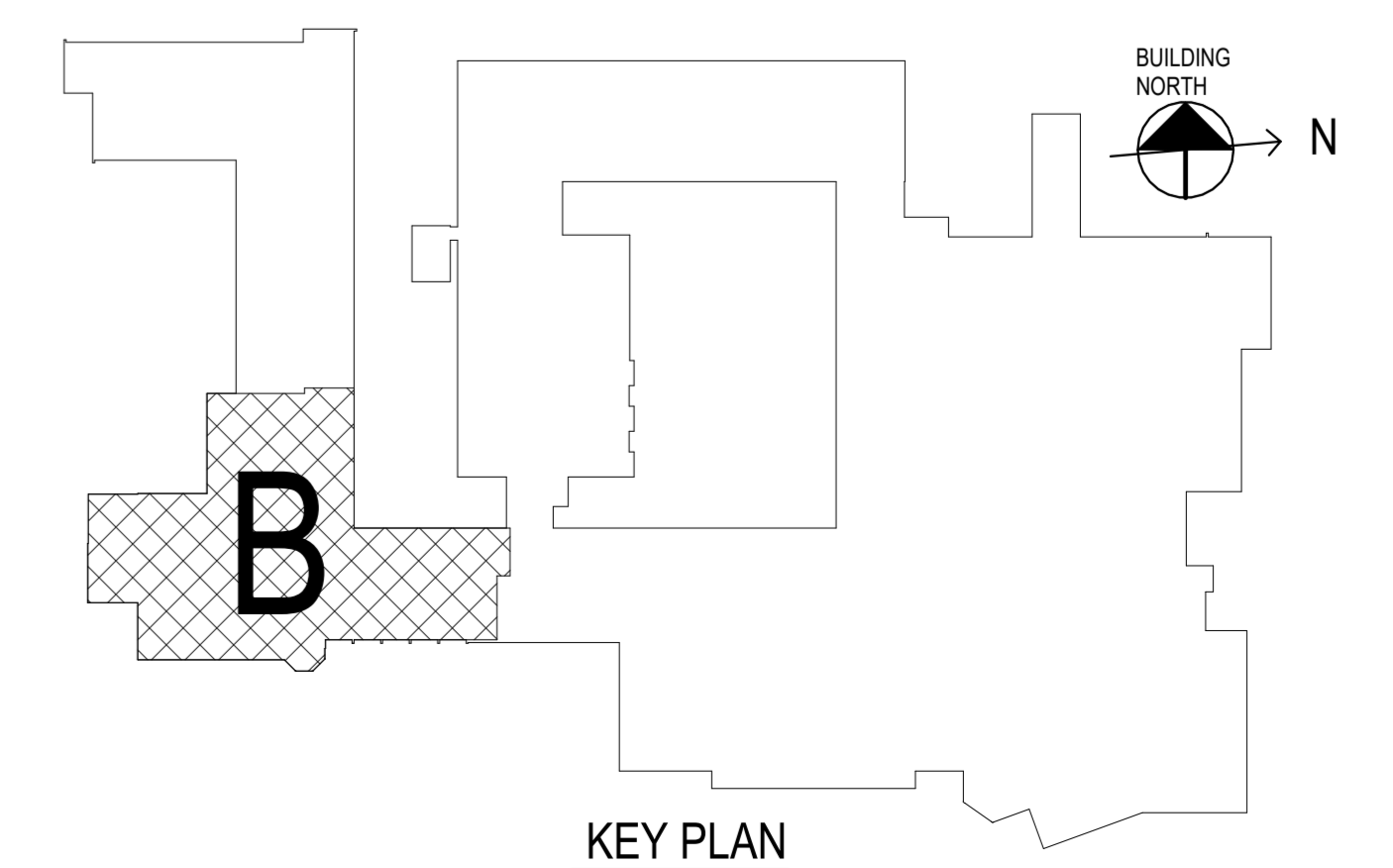
- EXISTING CEILINGS ARE TO BE UNINSTALLED OR MODIFIED AS NECESSARY TO COMPLETE ALL MEP WORK. GRID AND TILE SHALL BE SET ASIDE FOR MODIFICATION AND REINSTALLATION AS REQUIRED. DAMAGED TILE AND GRID SHALL BE REPLACED WITH SALVAGED MATERIAL. GPBD CEILINGS SHALL BE PATCHED AND PAINTED TO BLEND SEAMLESSLY WITH EXISTING ADJACENT MATERIAL.
- ALL TILE AND GRID REMOVED FROM SPACES THAT ARE RECEIVING NEW TILE AND GRID SHALL BE SALVAGED FOR REUSE THROUGHOUT THE PROJECT. UPON PROJECT COMPLETION, REMAINING DONOR MATERIAL SHALL BE DISCARDED OR PROVIDED TO OWNER FOR ATTIC STOCK.
- GRILLES, DIFFUSERS, & SPRINKLER CAPS IN GPBD BULKHEADS SHALL BE PAINTED TO MATCH BULKHEAD COLOR TYPE, EXCEPT WHERE BULKHEAD IS WHITE.
- FIELD CUT REVEAL EDGES IN CEILING ACOUSTIC TILE TO MATCH FACTORY EDGE REVEAL WHERE PANELS HAVE BEEN CUT TO NON STANDARD DIMENSIONS.
- AT ROOMS WITH PARALLEL AND PERPENDICULAR WALLS, CENTER THE GRID IN THE ROOM.
- AT GPBD BULKHEADS THAT TRANSITION TO HIGHER ADJACENT CEILINGS, PROVIDE GRID ON METAL FRAMING AT EXPOSED VERTICAL FACES OF BULKHEADS, TYPICAL, UNO.

REFLECTED CEILING PLAN SYMBOLS LEGEND

- EXISTING / NEW SUSPENDED ACOUSTIC PANEL CEILING (APC-X)
- EXISTING / NEW SUSPENDED GPBD CEILING, SOFFIT, OR BULKHEAD (GPBD)
- DEFPS SYNTHETIC STUCCO CEILING, SOFFIT, OR BULKHEAD (STUC-X)
- SPORTS NETTING
- 2 x 4 RECESSED LIGHT FIXTURE (BY ELECTRICAL CONTRACTOR)
- 2 x 2 RECESSED LIGHT FIXTURE (BY ELECTRICAL CONTRACTOR)
- SUSPENDED PENDANT LIGHT (BY ELECTRICAL CONTRACTOR)
- HVAC AIR DIFFUSER
- HVAC AIR GRILLE

REFLECTED CEILING NOTES

NUM	DESCRIPTION
1.1	PAINT UNDERSIDE OF GPBD BULKHEAD PNT-5. PAINT FACE OF BULKHEAD PNT-3. PROVIDE CONTROL JOINT (CJ) CONTINUOUS @FACE AND UNDERSIDE OF BLKHD TYP.
1.2	PAINT FACE & UNDERSIDE OF GPBD BULKHEAD PNT-1. PROVIDE CONTROL JOINT (CJ) CONTINUOUS @ FACE & UNDERSIDE OF BLKHD TYP.
1.3	PAINT FACE & UNDERSIDE OF GPBD BULKHEAD PNT-3. PROVIDE CONTROL JOINT (CJ) CONTINUOUS @ FACE & UNDERSIDE OF BLKHD TYP AS INDICATED.
1.4	PAINT STRUCTURE, MECHANICAL AND PLUMBING SYSTEMS, AND ELECTRICAL PIPING AND CABLE RAILS WITH PNT-3. PAINT WALL EXTEND DOWN WALLS 3'-0" FROM DECK.
3.1	OPEN TO STRUCTURE ABOVE - NO CEILING
3.2	EXIST CEILING TILE TO BE REMOVED AS REQUIRED BY HC & SAVED FOR REINSTALLATION. HC SHALL PROTECT AS NECESSARY.
3.3	NEW CEILING TILE TO BE INSTALLED TO MATCH EXISTING CORRIDOR MOUNTING HEIGHT.
3.4	HATCH PATTERN INDICATES METAL FRAMED GPBD CEILING ABOVE APC. SEE SECTION FOR ADDTL INFO
7.1	KITCHEN HOOD - SEE FSE DRAWINGS
7.2	MILN VENT HOOD - SEE MEP DRAWINGS FOR SCOPE
7.3	DUST COLLECTION - SEE MEP DRAWINGS FOR SCOPE



LAVATORIES AND SINKS					
FIXTURE IDENTIFICATION	DESCRIPTION	MOUNTING REQUIREMENTS	FIXTURE MANUFACTURER AND MODEL NUMBER (OR APPROVED EQUAL)	FIXTURE ACCESSORIES MAKE AND MODEL NUMBER (OR APPROVED EQUAL)	FOOTNOTES AND REMARKS
L-1	LAVATORY 21" x 18" VITREOUS CHINA (EXISTING TO REMAIN)	WALL MTD STANDARD HT	EXISTING	SLOAN ETF-600 W/TRANSFORMER	1, 3, 6, 7
L-2	LAVATORY 21" x 18" VITREOUS CHINA (EXISTING TO REMAIN)	WALL MTD ADA HT	EXISTING	SLOAN ETF-600 W/TRANSFORMER	1, 3, 6, 7
L-4	CUSTOM DECK (3 BOWL TO REPLACE EX WASH FOUNTAINS)	WALL MOUNTED	BRADLEY-MODEL EXPRESS LAVATORY SYSTEM GLX-3 SERIES	SLOAN ETF-600 W/TRANSFORMER	1, 3, 6, 7
S-1	SINK 25" x 21-1/4" x 8-1/2" SINGLE BOWL STAINLESS	COUNTER DROP IN	ELKAY LUSTERTONE CLASSIC LRAD252165PD	ELKAY-PERFECT DRAIN FITTING TYPE 304 STAINLESS STEEL BODY AND STRAINER MODEL LKPD1 CHICAGO FAUCET-MODEL786-ABCP	1, 2
S-2	SINK 14-1/2" X 11-3/4" X 7" SINGLE BOWL STAINLESS	COUNTER UNDERMOUNT	ELKAY LUSTERTONE CLASSIC MODEL: ELUH129	ELKAY 4" CENTERSET EXPOSED DECK MOUNT FAUCET WITH ARC SPOUT AND 4" LEVER HANDLES MODEL: LK24898BH4C	1, 2
S-3	SINK 19-1/2" X 19" X 1 1/2" SINGLE BOWL STAINLESS	COUNTER DROP IN	ELKAY LUSTERTONE CLASSIC MODEL: ER1919PD	ELKAY 8" CENTERSET WITH CONCEALED DECK FAUCET WITH 4" GOOSENECK SPOUT 6" WRISTBLADE HANDLES CHROME. MODEL: LK95GN8L2T	1, 2
S-4	SINK 39" x 27 1/2" x 14" SINGLE COMPARTMENT STAINLESS STEEL	FLOOR MOUNTED	ELKAY STURDIBILT® STAINLESS STEEL FLOOR MOUNT SINGLE COMPARTMENT SCULLERY SINK MODEL(S) SS81362	ELKAY® FOODSERVICE 3-8" ADJUSTABLE CENTERS WALL MOUNT FAUCET W/8" GOOSENECK SPOUT 2" LEVER HANDLES 2" INLET CHROME MODEL(S) LK945GN8L2T	1, 2
UT-1	SINK 31" X 19 1/2" X 10-1/2" SINGLE BOWL STAINLESS STEEL	WALL HUNG	ELKAY STAINLESS STEEL 31" X 19 1/2" X 10-1/2" WALL HUNG SINGLE BOWL HAND WASH SINK MODEL: EWS31202	ELKAY® FOODSERVICE 3-8" ADJUSTABLE CENTERS WALL MOUNT FAUCET W/8" GOOSENECK SPOUT 2" LEVER HANDLES 2" INLET CHROME MODEL(S) LK945GN8L2T	1, 2
LT-2	SINK 20" x 19" x 23-3/11/16" MOLDED FINE GELLED TWIN COMPACT STRUCTURAL PLASTIC POLYMER	FLOOR MOUNTED	FIAT PRODUCTS: MOLDED-STONE® SERV-A-SINK® TWIN COMPACT LAUNDRY TUB FLT D II 40"x24"x13 7/8" AT SAME LOCATION OF EX UTILITY SINK	INCLUDES A1 CHROME PLATED FAUCET W/4" CENTERSET, 4" BLADE HANDLES, 6-3/4" SWING SPOUT, AERATOR AND HOSE ADAPTOR, LAUNDRY TUB W/ LEGS, 1 P-TRAP AND 2 SUPPLY LINES	1, 2
KS-1	THREE COMPARTMENT SINK BY GENERAL CONTRACTOR	FLOOR MTD	REFER TO ARCHITECTURAL DRAWINGS	T&S BRASS - MODEL: S-0231 STAINLESS STEEL DOUBLE PANTRY FAUCET WALL MOUNT, 8" CENTERS, 12" SWING NOZZLE, SPRING CHECK VALVES	1, 2
SS-1	CORNER TERRAZZO MOP RECEPTOR, 32" X 32" X 12" DEEP, 6" DROP FRONT	FLOOR MTD	FIAT TSBC1611 32" X 32" STOCKTON TERRAZZO NEO MOP BASIN	T&S BRASS B-0667-WW-POL	1, 2, 5

LAVATORIES AND SINK FOOTNOTES:

- REFER TO SPECIFICATIONS FOR REQUIREMENTS OF MATERIALS, COLOR, FINISHES, INSTALLATION, APPROVED EQUAL MANUFACTURERS, ETC.
- PROVIDE COMPLETE WITH SUPPLY AND WASTE ROUGH-IN ASSEMBLIES IN ACCORDANCE WITH SPECIFICATIONS.
- PROVIDE COMPLETE WITH CARRIER, SUPPLY AND WASTE ROUGH-IN ASSEMBLIES IN ACCORDANCE WITH SPECIFICATIONS.
- PROVIDE SINK WITH 4 HOLE PUNCH FOR HOSE SPRAY.
- PROVIDE WATER HAMMER ARRESTER SIZE 'A' ON HOT & COLD WATER SUPPLY TO FIXTURE.
- PROVIDE SUPPLY AND DRAIN INSULATION KIT ON UNDER COUNTER PIPING, TRUEBRO LAV GUARD 2, OR APPROVED EQUAL.
- PROVIDE WITH ASSE 1070 APPROVED MIXING VALVE BELOW LAVATORY/SINK AS SPECIFIED.

WATER CLOSETS AND URINALS					
FIXTURE IDENTIFICATION	DESCRIPTION	MOUNTING REQUIREMENTS	FIXTURE MANUFACTURER AND MODEL NUMBER (OR APPROVED EQUAL)	FIXTURE ACCESSORIES MAKE AND MODEL NUMBER (OR APPROVED EQUAL)	FOOTNOTES AND REMARKS
W-1	EXISTING WATER CLOSET (EXISTING TO REMAIN)	WALL MOUNTED STD HEIGHT	(EXISTING TO REMAIN)	SLOAN SENSOR OPERATED FLUSH VALVE ECOS 111-1.6/1.1-HW	1, 2
W-2	EXISTING WATER CLOSET (EXISTING TO REMAIN)	WALL MOUNTED ADA HEIGHT	(EXISTING TO REMAIN)	SLOAN SENSOR OPERATED FLUSH VALVE ECOS 111-1.6/1.1-TP-HW	1, 2
W-3	EXISTING WATER CLOSET (EXISTING TO REMAIN)	FLOOR MOUNTED STD HEIGHT	(EXISTING TO REMAIN)	SLOAN MANUAL FLUSH VALVE ROYAL STANDARD ROYAL 111-1.6/1.1	1, 2
U-1	EXISTING URINAL (EXISTING TO REMAIN)	WALL MOUNTED STD HEIGHT	(EXISTING TO REMAIN)	SLOAN SENSOR OPERATED FLUSH VALVE ECOS 186-HW-0.5	1, 3
U-2	EXISTING URINAL (EXISTING TO REMAIN)	WALL MOUNTED ADA HEIGHT	(EXISTING TO REMAIN)	SLOAN SENSOR OPERATED FLUSH VALVE ECOS 186-HW-0.5	1, 3

WATER CLOSETS AND URINAL FOOTNOTES:

- REFER TO SPECIFICATIONS FOR REQUIREMENTS OF MATERIALS, COLOR, FINISHES, INSTALLATION, APPROVED EQUAL MANUFACTURERS, ETC.
- N/A.
- N/A.

WATER COOLERS/DRINKING FOUNTAINS/BOTTLE FILLERS SCHEDULE					
FIXTURE IDENTIFICATION	DESCRIPTION	MOUNTING REQUIREMENTS	FIXTURE MANUFACTURER AND MODEL NUMBER (OR APPROVED EQUAL)	FIXTURE ACCESSORIES MAKE AND MODEL NUMBER (OR APPROVED EQUAL)	FOOTNOTES AND REMARKS
DF-1	BOTTLE FILLING STATION & ELECTRIC WATER COOLER	WALL MTD STANDARD HEIGHT	HALSEY TAYLOR MODEL: HTHB-HACG8SS-WF	WATER COOLER: CLR-BHACG8SSWF, FILTER: BOTTLE FILLER HTHB-HAC	1, 2, 3
DF-2	BOTTLE FILLING STATION & ELECTRIC WATER COOLER	WALL MTD ADA ACCESSIBLE	HALSEY TAYLOR MODEL: HTHB-HACG8SS-WF	WATER COOLER: CLR-BHACG8SSWF, FILTER: BOTTLE FILLER HTHB-HAC CANE APRON, MODEL: 98324C	1, 2, 3
DF-3	ELECTRIC WATER COOLER	WALL MTD ADA ACCESSIBLE	HALSEY TAYLOR WALL MOUNT FULL RECESSED COOLER NON-FILTERED 8 GPH STAINLESS MODEL: RC8A	WATER COOLER: CLR-BHACG8SSWF, FILTER: BOTTLE FILLER HTHB-HAC	1, 2, 3

WATER COOLER FOOTNOTES

- REFER TO SPECIFICATIONS FOR REQUIREMENTS OF MATERIALS, COLOR, FINISHES, INSTALLATION, APPROVED EQUAL MANUFACTURERS, ETC.
- PROVIDE WITH SUPPLY AND WASTE ROUGH-IN ASSEMBLIES IN ACCORDANCE WITH SPECIFICATIONS.
- CONTRACTOR TO ENSURE THAT INSTALLATION MEETS OR EXCEEDS ALL ADA GUIDELINES.

FLOOR DRAIN, FLOOR SINK, AND ROOF DRAIN SCHEDULE				
FIXTURE IDENTIFICATION	APPLICATION AND LOCATION	DESCRIPTION	FIXTURE MANUFACTURER AND MODEL NUMBER (OR APPROVED EQUAL)	FOOTNOTES AND REMARKS
FD-1	TOILET AND SHOWER FACILITIES GENERAL FINISHED AREAS	COATED CAST IRON BODY WITH ADJUSTABLE POLISHED NICKEL- BRONZE 6" STRAINER TOP W/ SEDIMENT BUCKET AND CLAMPING COLLAR	ZURN MODEL #ZN-415-6B-Y W/ TYPE 'B' STRAINER JR SMITH #200SLANB-8	1, 2, 3
FD-2	MECHANICAL EQUIPMENT ROOM AREAS (FLOOR DRAIN W/ FUNNEL) SLAB ON GRADE	MEDIUM DUTY COATED CAST IRON BODY WITH 9" DIAMETER FLAT SLOTTED GRATE TOP AND FRAME, REMOVABLE SEDIMENT BUCKET AND 4" ROUND FUNNEL CONVERTING ASSEMBLY	ZURN MODEL #Z2551-Y W/ Z-328-4 JR SMITH #2270-B, 3580	1, 2, 3
FD-3	MECHANICAL EQUIPMENT ROOM AREAS ABOVE FINISHED GRADE	MEDIUM DUTY COATED CAST IRON BODY WITH 9" DIAMETER FLAT SLOTTED GRATE TOP AND FRAME WITH REMOVABLE SEDIMENT BUCKET, SEEPAGE PAN AND FLASHING CLAMP	ZURN MODEL #Z-650-Y JR SMITH #2110-B	1, 2, 3

FLOOR DRAIN, FLOOR SINK AND ROOF DRAIN SCHEDULE FOOTNOTES

- REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS, MATERIALS, COLOR, FINISHES, INSTALLATION AND APPROVED EQUAL MANUFACTURERS.
- PROVIDE COMPLETE WITH INDIVIDUAL FIXTURE TRAP FOR ALL FLOOR DRAINS & FLOOR SINKS UNLESS OTHERWISE INDICATED.
- PROVIDE FLOOR DRAIN WITH TRAP GUARD.

PLUMBING FIXTURE CONNECTION SCHEDULE									
SYMBOL	FIXTURE	COLD WATER	HOT WATER	TRAP	DRAIN	VENT	MOUNTING	RIM HEIGHT	FOOTNOTES AND REMARKS
W-1	WATER CLOSET (STANDARD)	1"	---	---	4"	2"	WALL HUNG	REFER TO ARCHITECTURAL DRAWINGS	1
W-2	WATER CLOSET (HANDICAP)	1"	---	---	4"	2"	WALL HUNG	REFER TO ARCHITECTURAL DRAWINGS	1
W-3	WATER CLOSET (STANDARD)	1"	---	---	4"	2"	FLOOR	REFER TO ARCHITECTURAL DRAWINGS	1
U-1	URINAL (STANDARD)	3/4"	---	---	2"	2"	WALL HUNG	REFER TO ARCHITECTURAL DRAWINGS	1
U-2	URINAL (HANDICAP)	3/4"	---	---	2"	2"	WALL HUNG	REFER TO ARCHITECTURAL DRAWINGS	1
L-1	LAVATORY (STANDARD)	1/2"	1/2"	1 1/2" x 1 1/4"	1 1/2"	1 1/2"	WALL HUNG	REFER TO ARCHITECTURAL DRAWINGS	1, 2
L-2	LAVATORY (HANDICAP)	1/2"	1/2"	1 1/2" x 1 1/4"	1 1/2"	1 1/2"	UNDER MOUNT	REFER TO ARCHITECTURAL DRAWINGS	1, 2
L-3	LAVATORY (THREE BOWL)	1/2"	1/2"	1 1/2" x 1 1/4"	1 1/2"	1 1/2"	UNDER MOUNT	REFER TO ARCHITECTURAL DRAWINGS	1
LT-1	LAUNDRY TUB	1/2"	1/2"	1 1/2" x 1 1/4"	1 1/2"	1 1/2"	FLOOR	REFER TO ARCHITECTURAL DRAWINGS	1
SS-1	SERVICE SINK	3/4"	3/4"	3"	3"	2"	FLOOR	REFER TO ARCHITECTURAL DRAWINGS	1
S-1	SINK (HANDICAP)	1/2"	1/2"	1 1/2"	1 1/2"	1 1/2"	DROP-IN	REFER TO ARCHITECTURAL DRAWINGS	1, 2
S-2	HAND SINK (HANDICAP)	1/2"	1/2"	1 1/2"	1 1/2"	1 1/2"	UNDER MOUNT	REFER TO ARCHITECTURAL DRAWINGS	1, 2
KS-1	DOUBLE BOWL SCULLERY SINK	1/2"	1/2"	1 1/2"	1 1/2"	1 1/2"	UNDER MOUNT	REFER TO ARCHITECTURAL DRAWINGS	1, 2
D-1	BOTTLE FILLING STATION (ADA)	1/2"	---	1 1/2" x 1 1/4"	1 1/2"	1 1/2"	WALL	REFER TO ARCHITECTURAL DRAWINGS	1, 4, 5, 6
HB-1	HOSE BIBB	3/4"	---	---	---	---	WALL	---	1
HB-2	HOSE BIBB	---	3/4"	---	---	---	WALL	---	1
WH-1	WALL HYDRANT	3/4"	---	---	---	---	WALL	---	1

FOOTNOTES AND REMARKS

- COORDINATE INSTALLATION OF ALL FIXTURES WITH GENERAL CONTRACTOR.
- FIXTURE SHALL BE MOUNTED IN CASEWORK, CASEWORK TO PROVIDED BY GENERAL CONTRACTOR. CONTRACTOR SHALL COORDINATE SIZE OF FIXTURE, MOUNTING OF FIXTURE AND FAUCET WITH GENERAL CONTRACTOR.
- SANITARY PIPING UNDERGROUND AND BENEATH SLAB ON GRADE SHALL NOT BE LESS THAN 2" IN DIAMETER.
- ELECTRIC WATER COOLER SPOUT SHALL BE AT A MAXIMUM OF 36" ABOVE FLOOR TO COMPLY WITH (ADA) AMERICAN WITH DISABILITIES ACT.
- ELECTRIC WATER COOLER/BOTTLE FILLING STATION IS A WALL MOUNTED UNIT, SPLIT-LEVEL (STANDARD AND HANDICAP ACCESSIBLE).
- ELECTRIC BOTTLE FILLING STATION SHALL BE MOUNTED TO COMPLY WITH (ADA) AMERICAN WITH DISABILITIES ACT.



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REVISIONS
4 0021/24-ADDENDUM NO. 4

BID SET 02/19/24

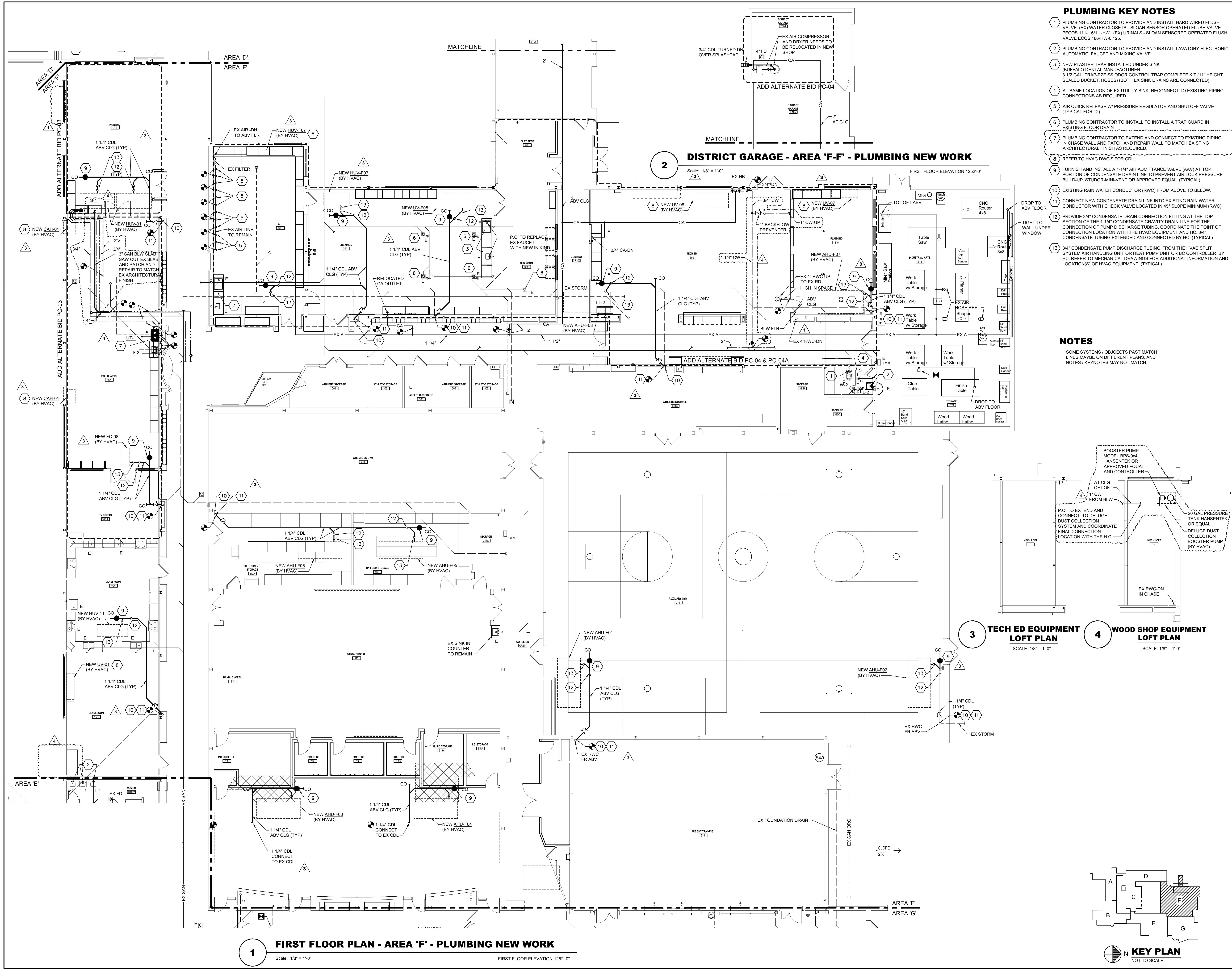
HIGH SCHOOL RENOVATIONS
511 HIGHLAND AVENUE, GROVE CITY, PA 16127
GROVE CITY AREA SCHOOL DISTRICT
PLUMBING SCHEDULES

Proj No. 23-S43-01
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PLUMBING KEY NOTES

- 1 PLUMBING CONTRACTOR TO PROVIDE AND INSTALL HARD WIRED FLUSH VALVE. (EX) WATER CLOSETS - SLOAN SENSOR OPERATED FLUSH VALVE PECOS 111-1.611.1-HW. (EX) URINALS - SLOAN SENSORED OPERATED FLUSH VALVE ECOS 186-HW-0.125.
- 2 PLUMBING CONTRACTOR TO PROVIDE AND INSTALL LAVATORY ELECTRONIC AUTOMATIC FAUCET AND MIXING VALVE.
- 3 NEW PLASTER TRAP INSTALLED UNDER SINK (BUFFALO DENTAL MANUFACTURER - 3 1/2 GAL. TRAP-EZE SS DOOR CONTROL TRAP COMPLETE KIT (11" HEIGHT SEALED BUCKET, HOSES) (BOTH EX SINK DRAINS ARE CONNECTED).
- 4 AT SAME LOCATION OF EX UTILITY SINK, RECONNECT TO EXISTING PIPING CONNECTIONS AS REQUIRED.
- 5 AIR QUICK RELEASE W/ PRESSURE REGULATOR AND SHUTOFF VALVE (TYPICAL FOR 12)
- 6 PLUMBING CONTRACTOR TO INSTALL TO INSTALL A TRAP GUARD IN EXISTING FLOOR DRAIN
- 7 PLUMBING CONTRACTOR TO EXTEND AND CONNECT TO EXISTING PIPING IN CHASE WALL AND PATCH AND REPAIR WALL TO MATCH EXISTING ARCHITECTURAL FINISH AS REQUIRED.
- 8 REFER TO HVAC DWGS FOR CDL.
- 9 FURNISH AND INSTALL A 1-1/4" AIR ADMITTANCE VALVE (AAV) AT TOP PORTION OF CONDENSATE DRAIN LINE TO PREVENT AIR LOCK PRESSURE BUILD-UP. STUDDOR-MINI-VENT OR APPROVED EQUAL. (TYPICAL)
- 10 EXISTING RAIN WATER CONDUCTOR (RWC) FROM ABOVE TO BELOW.
- 11 CONNECT NEW CONDENSATE DRAIN LINE INTO EXISTING RAIN WATER CONDUCTOR WITH CHECK VALVE LOCATED IN 45° SLOPE MINIMUM (RWC)
- 12 PROVIDE 3/4" CONDENSATE DRAIN CONNECTION FITTING AT THE TOP SECTION OF THE 1-1/4" CONDENSATE GRAVITY DRAIN LINE FOR THE CONNECTION OF PUMP DISCHARGE TUBING. COORDINATE THE POINT OF CONNECTION LOCATION WITH THE HVAC EQUIPMENT AND HC. 3/4" CONDENSATE TUBING EXTENDED AND CONNECTED BY HC. (TYPICAL)
- 13 3/4" CONDENSATE PUMP DISCHARGE TUBING FROM THE HVAC SPLIT SYSTEM AIR HANDLING UNIT OR HEAT PUMP UNIT OR BC CONTROLLER BY HC. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION AND LOCATION(S) OF HVAC EQUIPMENT. (TYPICAL)

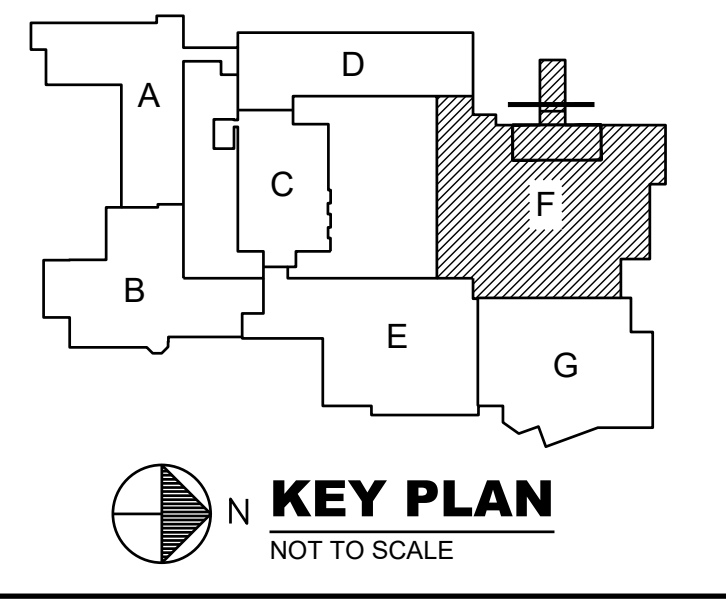
NOTES
 SOME SYSTEMS / OBJECTS PAST MATCH LINES MAYBE ON DIFFERENT PLANS, AND NOTES / KEYNOTES MAY NOT MATCH.

1 FIRST FLOOR PLAN - AREA 'F' - PLUMBING NEW WORK
 Scale: 1/8" = 1'-0"
 FIRST FLOOR ELEVATION 1252'-0"

2 DISTRICT GARAGE - AREA 'F-F' - PLUMBING NEW WORK
 Scale: 1/8" = 1'-0"
 FIRST FLOOR ELEVATION 1252'-0"

3 TECH ED EQUIPMENT LOFT PLAN
 SCALE: 1/8" = 1'-0"

4 WOOD SHOP EQUIPMENT LOFT PLAN
 SCALE: 1/8" = 1'-0"



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REVISIONS
 A 02/20/24 ADDENDUM NO. 1
 B 03/13/24 ADDENDUM NO. 3
 C 03/21/24 ADDENDUM NO. 3

BID SET 02/19/24

HIGH SCHOOL RENOVATIONS
 511 HIGHLAND AVENUE, GROVE CITY, PA 16127
 GROVE CITY AREA SCHOOL DISTRICT
FIRST FLOOR PLAN - AREA - F
PLUMBING NEW WORK

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HVAC SYMBOLS

	3-WAY CONTROL VALVE, ELECTRIC		1-LINE BACK-DRAFT DAMPER		INDICATES NOTES ELSEWHERE ON DRAWING
	3-WAY CONTROL VALVE, PNEUMATIC		1-LINE MOTOR OPERATED DAMPER		CONNECTION BETWEEN NEW AND EXISTING
	AIR VENT WITH COCK ANCHOR		1-LINE FIRE DAMPER		DISCONNECTION POINT
	ANGLE VALVE		1-LINE SMOKE DAMPER		DETAIL NUMBER OR SECTION LETTER
	AQUA STAT		1-LINE COMBINATION FIRE/SMOKE DAMPER		DRAWING NUMBER WHERE DRAWN
	AUTOMATIC AIR VENT		1-LINE ZONE DAMPER		DETAIL NUMBER OR SECTION LETTER
	BALANCING COCK		1-LINE TRANSITION		DRAWING NUMBER WHERE DETAIL IS DRAWN
	BASKET STRAINER		1-LINE VOLUME CONTROL DAMPER		SECTION LETTER
	BOTTOM CONNECTION		FLEXIBLE DUCTWORK		DRAWING NUMBER WHERE SECTION IS DRAWN
	CONCENTRIC REDUCER		DUCTWORK TO BE REMOVED		SUPPLY DIFFUSER, 4-WAY THROW UNLESS NOTED OTHERWISE
	CONTROL VALVE, ELECTRIC		EXISTING DUCT TO REMAIN (LIGHT LINE WORK)		AIR FLOW ARROW
	CONTROL VALVE, PNEUMATIC		DUCT (SHOWN x HIDDEN)		CARBON MONOXIDE SENSOR
	CHECK VALVE		ROUND DUCT (DIAMETER)		DIFFERENTIAL PRESSURE SENSOR
	CONDUCTIVITY SENSOR FOR CHEMICAL FEEDER		FLEXIBLE CONNECTION		DOOR UNDERCUT 1" ABOVE FINISHED FLOOR
	DIRECTION OF FLOW		ACOUSTIC DUCT LINING		DUCT MOUNTED STATIC PRESSURE SENSOR
	DIRECTION OF PIPE PITCH, DOWN		COIL IN DUCT		FLOW METER, DDC
	DROP IN PIPE		CONTROL PANEL		HUMIDISTAT, ELECTRIC
	ELBOW DOWN		ELECTRIC COIL IN DUCT		HUMIDISTAT, PNEUMATIC
	ELBOW (TEE) UP		VOLUME CONTROL DAMPER		PE SWITCH ABOVE CEILING (WITH ACCESS PANEL)
	ECCENTRIC REDUCER		PERFORATED PLATE DAMPER		PE SWITCH EXPOSED
	END CAP		DUCT TRANSITION		PRESSURE SENSOR
	FIRE DAMPER IN FLOOR		FILTER SECTION IN DUCT		REFRIGERANT SENSOR
	FLANGED CONNECTION		HUMIDIFIER IN DUCT		SMOKE DETECTOR
	FLEXIBLE CONNECTION		BACK-DRAFT DAMPER		SPACE STATIC PRESSURE SENSOR
	FLOW CONTROL DEVICE		MOTOR OPERATED DAMPER		STATIC PRESSURE SENSOR
	FLOW INDICATOR		FIRE DAMPER		THERMOSTAT, ELECTRIC
	FLOW SWITCH		SMOKE DAMPER		THERMOSTAT, PNEUMATIC
	GUIDE		COMBINATION FIRE/SMOKE DAMPER		CARBON DIOXIDE SENSOR
	HOSE END VALVE		ZONE DAMPER		
	INVERTED ECCENTRIC REDUCER		LOUVER IN WALL		
	ISOLATION VALVE STATION		SUPPLY / OUTDOOR / MAKE-UP AIR - RECTANGULAR DUCT SECTION		
	PIPE CONNECTION		RETURN / TRANSFER / RELIEF AIR - RECTANGULAR DUCT SECTION		
	PIPE TO BE REMOVED		EXHAUST AIR - RECTANGULAR DUCT SECTION		
	PRESSURE GAUGE WITH COCK, WATER		SUPPLY / OUTDOOR / MAKE-UP AIR - ROUND DUCT SECTION		
	PRESSURE GAUGE WITH SYPHON AND COCK, STEAM		RETURN / TRANSFER / RELIEF AIR - ROUND DUCT SECTION		
	PRESSURE REDUCING VALVE, WATER		EXHAUST AIR - ROUND DUCT SECTION		
	PRESSURE TEMPERATURE TAP		SQUARE ELBOW WITH TURNING VANES		
	RELIEF VALVE, STEAM		RADIUS ELBOW		
	RISE IN PIPE		RECTANGULAR BOOT CONNECTION		
	SIDE CONNECTION		BELLMOUTH TAKEOFF CONNECTION		
	STEAM TRAP		CONICAL TAKEOFF CONNECTION		
	STUB UP		CONICAL TAKEOFF CONNECTION		
	SUCTION DIFFUSER		STRAIGHT ROUND TAKEOFF CONNECTION		
	TEMPERATURE CONTROL VALVE		CONICAL 'T' CONNECTION		
	THERMOMETER WITH SEPERABLE WELL		STRAIGHT 'T' CONNECTION		
	TRIPLE DUTY VALVE				
	UNION				
	VACUUM BREAKER				
	VALVE, SEE SPECIFICATIONS FOR TYPE				
	VALVE WITH HOSE END				
	VENTURI FLOW STATION				
	VENTURI FLOW STATION WITH FLOW METER				
	WELL				
	WYE STRAINER				
	WYE STRAINER WITH BALL VALVE				
	PUMP DISCHARGE				
	PIPE SECTION				
	PIPE DOWN				

DEMOLITION GENERAL NOTES

- DO NOT SCALE DRAWINGS.
- ALL WORK PERFORMED ON THIS BUILDING SHALL BE IN COMPLIANCE WITH ALL PERTINENT CODES, RULES, ORDINANCES AND REGULATIONS OF THE LOCAL AND STATE GOVERNING AUTHORITIES.
- ALL WORK PERFORMED AND IN CONNECTION WITH THESE DRAWINGS AND SPECIFICATIONS SHALL BE IN STRICT COMPLIANCE WITH THE LATEST OSHA SAFETY AND HEALTH STANDARDS.
- THE ARCHITECT, ENGINEER AND CONSTRUCTION MANAGER HAVE NO KNOWLEDGE OR ASSOCIATION WITH THE EXACT LOCATIONS OF ANY HAZARDOUS MATERIALS OR THEIR REMOVAL. THE DEMOLITION CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ANY ABATEMENT CONTRACTOR THROUGH THE JOB REPRESENTATIVE. THE CONTRACTOR'S PERSONNEL ENCOUNTERING ANY MATERIAL(S) SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE TO NOTIFY THE CONSTRUCTION MANAGER IMMEDIATELY (WITHOUT PROCEEDING WITH THE WORK) UNTIL THE SUSPECT MATERIAL IS IDENTIFIED. THE RECOMMENDATIONS DESCRIBED SHALL NOT BE CONSTRUED AS A REQUIREMENT OF THIS CONTRACT, UNLESS SPECIFICALLY REFERENCED IN THE CONTRACT DOCUMENTS.
- THESE DRAWINGS, BY THEIR NATURE, CANNOT REVEAL ALL CONDITIONS THAT EXIST ON THE SITE. SHOULD CONDITIONS BE FOUND TO VARY SUBSTANTIALLY FROM THIS REPORT, CHANGES IN THE WORK WILL BE MADE WITH RESULTING CREDITS OR EXPENDITURES TO THE CONTRACT SUM ACCRUING TO THE OWNER.
- THE DRAWINGS INDICATE THE GENERAL LAYOUT AND DO NOT NECESSARILY REPRESENT A COMPLETE FIELD VERIFIED LAYOUT. THE MAJORITY OF THE MECHANICAL ITEMS ARE SHOWN ON THE DRAWINGS. CERTAIN ITEMS ARE SHOWN AND INDICATED TO REMAIN OR BE REMOVED. GENERALLY, ALL MECHANICAL DEMOLITION IS DESCRIBED BY THE NOTES. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS WITHIN THE DEMOLITION AREAS. REPORT ANY DISCREPANCIES FOUND TO THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING.
- ALL MECHANICAL AND ELECTRICAL EQUIPMENT, PIPING, DUCTWORK, CONDUIT, WIRING, ETC., INDICATED ON THE DRAWINGS DESCRIBED IN THE NOTES AND WHICH IS NOT REQUIRED TO FUNCTION AS PART OF THE FINAL SYSTEM, SHALL BE REMOVED IN ITS ENTIRETY. ALL REMOVED MATERIAL, UNLESS DESIGNATED FOR SALVAGE, SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS. SALVAGED ITEMS SHALL BE STORED ON SITE IN A LOCATION DESIGNATED BY THE OWNER.
- WHERE IT BECOMES NECESSARY TO TEMPORARILY DISTURB SYSTEMS TO PERMIT EXECUTION OF THE DEMOLITION PROCESS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE OWNER, THROUGH THE ARCHITECT, TO SCHEDULE A SHUTDOWN. THE DEMOLITION CONTRACTOR SHALL GIVE A MINIMUM OF 24-HOUR ADVANCE NOTICE FOR ANY SUCH GIVEN SHUTDOWN. IF THE SHUTDOWN INCLUDES MAJOR SYSTEMS, SUCH AS DOMESTIC FEED, STEAM, ELECTRICAL PANELS, ETC., TWO-WEEK NOTICE SHALL BE REQUIRED.
- THE OWNER WILL BE TAGGING SPECIFIC ITEMS FOR SELECTIVE REMOVAL FOR ITEMS WHICH SHALL REMAIN. THIS DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY SUCH TAGGED ITEMS. THIS CONTRACTOR SHALL PLACE IN STORAGE ON SITE ANY SUCH ITEMS AS DIRECTED BY THE OWNER. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ITEMS TAGGED TO REMAIN.
- UNDER THIS CONTRACT, THE USE OF THE WORD "DEMOLISH", MEANS SHALL BE DEMOLISHED.
- ALL EXISTING EXTERIOR WALLS AND SURFACES (EXCLUSIVE OF FURRED AREAS), SHAFT WALLS, WALLS ADJACENT TO A DEMOLITION AREA TO REMAIN, SHALL BE PROTECTED FROM DAMAGE AND UNDISTURBED.
- THE HEATING CONTRACTOR SHALL SCHEDULE HIS WORK WITH THE ARCHITECT IN ORDER TO HAVE THE ELECTRICAL CONTRACTOR DISCONNECT AND RECONNECT ALL CIRCUITS ASSOCIATED WITH THE FIRE ALARM SYSTEM. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS WITH A LIFE SAFETY SYSTEM ON ELEMENTS THAT ARE INDICATED TO BE REMOVED.
- ALL RAIN WATER CONDUCTORS AND ASSOCIATED VENT STACKS SHALL REMAIN INTACT AND NOT BE DISTURBED THROUGHOUT THE DEMOLITION PROCESS. CONTRACTOR SHALL INSTALL BRACING AND BRACKETS AS NECESSARY FOR SUPPORT OF PIPING DUE TO IMPACT OF DEMOLITION OF WALL/CEILING SYSTEM.
- ANY SALVAGE VALUE ASSOCIATED WITH DEMOLISHED ITEMS IS THE CONTRACTOR'S. THE CONTRACTOR SHOULD USE ANY SALVAGE VALUE AS A MEANS OF REDUCING THEIR BID PRICE.
- ALL AUTOMATIC TEMPERATURE CONTROL PANELS, RISERS, WIRING, AND ACCESSORIES, ETC., AND ALL PNEUMATIC AND/OR ELECTRIC CONTROL PANELS, RISERS, ACCESSORIES, ETC., ARE TO REMAIN INTACT AND IN PROPER OPERATING CONDITION DURING THE ENTIRE DEMOLITION PROCESS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- THE HEATING CONTRACTOR SHALL INCLUDE IN HIS BID THE COST OF DISCONNECTING AND REMOVING ALL HVAC EQUIPMENT, PIPING, LOUVERS, DUCTWORK, GRILLES, CONTROLS, ETC., COMPLETE BUT NOT REQUIRED TO FUNCTION UNDER THIS CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND CLEANUP OF ALL DEBRIS ASSOCIATED WITH THE DEMOLITION OF HVAC ITEMS COMPLETE. HE SHALL REFER TO THE ARCHITECT'S PHASING PLAN FOR THE SCHEDULING OF HIS WORK.
- THE HEATING CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING AND PAINTING ALL REMAINING OPENINGS IN THE INTERIOR WALLS, FLOORS, AND CEILING. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING, ETC., OF ALL REMAINING OPENINGS THROUGH EXTERIOR WALLS AND ROOF.
- IF DURING THE COURSE OF DEMOLITION, EXISTING UTILITIES ARE ENCOUNTERED, WORK IN THAT AREA IS TO BE HALTED UNTIL THE STATUS OF THE UTILITIES HAS BEEN ASCERTAINED BY THE ARCHITECT AND AUTHORITY TO PROCEED GIVEN BY THE ARCHITECT.
- ALL CUTTING, DEMOLITION AND PATCHING OF EXISTING AND/OR NEW CONSTRUCTION OR EQUIPMENT IS TO BE PERFORMED BY THE CONTRACTOR WHO IS TO SUPPLY AND INSTALL ALL THE NEW CONSTRUCTION AND/OR EQUIPMENT UNLESS NOTED OTHERWISE.
- WHERE DEMOLITION OF EXISTING CONSTRUCTION AND/OR EQUIPMENT OCCURS, PATCH AND REPAIR FLOOR, WALL AND CEILING CONSTRUCTION AND/OR FINISHES TO MATCH ADJACENT CONSTRUCTION AND/OR FINISHES.

GENERAL NOTES

- THE HEATING CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS IN THE LOCATION OF DUCTWORK, PIPING, ETC.
- THE HEATING CONTRACTOR SHALL VISIT AND THOROUGHLY ACQUAINT HIMSELF WITH THE EXISTING SYSTEM AND CONDITIONS IN THE AREAS HE WILL BE REQUIRED TO WORK BEFORE ISSUING HIS BID.
- THE HEATING CONTRACTOR SHALL RELOCATE EXISTING SYSTEMS WHERE CONFLICTS WITH NEW WORK EXIST TO ACCOMMODATE NEW WORK.
- ALL INTERRUPTIONS OF EXISTING SYSTEMS SHALL BE SCHEDULED IN ADVANCE WITH THE OWNER AND APPROVED BEFORE WORK COMMENCES.
- ALL DUCTWORK AND PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE UNLESS NOTED OTHERWISE.
- DO NOT SCALE DRAWINGS - ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR AT THE SITE. NOTIFY ARCHITECT OF ANY DEVIATIONS FROM THE DRAWINGS.
- THE DRAWINGS ARE DIAGRAMMATIC AND SHOW ONLY THE GENERAL ARRANGEMENTS OF ALL PIPING AND EQUIPMENT. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO SHOW OR INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES WHICH MAY BE REQUIRED TO AVOID EXISTING PIPING OR STRUCTURAL FEATURES.
- ALL PIPING, CONDUIT, DUCTWORK, ETC., SHALL BE INSTALLED IN A MANNER WHICH WILL NOT DEFACE OR ALTER ANY AREAS. ROUTING OF THE ABOVE EQUIPMENT SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.
- ALL WORK PERFORMED ON THIS BUILDING SHALL BE IN COMPLIANCE WITH ALL PERTINENT CODES, RULES, ORDINANCES, AND REGULATIONS OF THE LOCAL, STATE, AND NATIONAL GOVERNING AUTHORITIES.
- ALL WORK PERFORMED UNDER AND IN CONNECTION WITH THESE DRAWINGS AND SPECIFICATIONS SHALL BE IN STRICT COMPLIANCE WITH THE LATEST SAFETY AND HEALTH STANDARDS.
- REPORT ANY DISCREPANCIES FOUND IN THE DRAWINGS AND/OR IN THE SPECIFICATIONS DURING THE BIDDING PROCESS FOR CLARIFICATION BY THE ARCHITECT.
- HEATING CONTRACTOR SHALL PROVIDE AND INSTALL ACCESS PANELS AS REQUIRED FOR ACCESS TO VALVES, TRAPS, CLEAN OUTS, CONTROLS, FIRE DAMPERS, ETC. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ACCESS PANELS WITH FINISH WORK AND ALL OTHER TRADES.
- THE HEATING CONTRACTOR SHALL FURNISH SHOP DRAWINGS OF ANY RELOCATED PIPING, DUCTWORK, EQUIPMENT, ETC., FOR APPROVAL PRIOR TO RELOCATION OF ITEM.
- ALL PIPING AND DUCTWORK TO BE LOCATED AND COORDINATED WITH ARCHITECTURAL PLANS. ALL PIPING AND DUCTWORK SHALL BE CONCEALED IN FINISHED AREAS.
- ALL PIPE PENETRATIONS THROUGH CHASES, WALLS, OR FLOORS WHICH ARE FIRE-RATED, SHALL BE PROPERLY SEALED TO MAINTAIN FIRE PROTECTION. HEATING CONTRACTOR SHALL SUBMIT PROPOSED UL SYSTEM FOR REVIEW.
- ALL DUCTS THAT PENETRATE CHASES, WALLS, OR FLOORS WHICH ARE FIRE-RATED, SHALL BE INSTALLED WITH FIRE DAMPERS IN ACCORDANCE WITH NFPA 90A. THIS APPLIES EVEN IF THEY ARE NOT SPECIFICALLY SHOWN ON THE DRAWING.
- ANY PHYSICAL INSTALLATION MODIFICATIONS, DUE TO FIELD CONDITIONS, SHALL BE RESOLVED BY THE HEATING CONTRACTOR IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MECHANICAL ENGINEER.
- THE HEATING CONTRACTOR SHALL PAY FOR ALL FEES AND PERMITS AS NECESSARY TO COMPLETE THE INSTALLATION.
- THE HEATING CONTRACTOR SHALL COORDINATE THE LOCATION OF DUCTWORK WITH ALL EXISTING PIPING AND NEW PIPING BEING INSTALLED.
- ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN FURRED CHASES OR ABOVE SUSPENDED CEILING.
- FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
- ALL LIGHT LINES SHOWN ON DRAWINGS INDICATE EXISTING CONSTRUCTION OR EQUIPMENT TO REMAIN. ALL HEAVY LINES INDICATE NEW CONSTRUCTION OR EQUIPMENT. ALL CROSS-HATCHED LINES INDICATE REMOVAL OF EXISTING CONSTRUCTION OR EQUIPMENT.

PIPING NOTES

- ALL DOWNFEED BRANCHES AND EQUIPMENT SHALL HAVE DRAIN COCKS INSTALLED AT LOWEST POINT.
- ALL HORIZONTAL LINES SHALL BE RUN LEVEL WITHOUT POCKETS. WHERE POCKETS OCCUR, AUTO AIR VENTS SHALL BE INSTALLED AT EACH VERTICAL RISE.
- ALL UPFEED RISERS SHALL BE MADE WITH TOP CONNECTIONS AT MAIN. ALL DOWNFEED RISERS SHALL BE MADE WITH BOTTOM CONNECTIONS AT MAIN.
- CHANGES OF PIPE SIZES ON HORIZONTAL RUNS SHALL BE MADE WITH INVERTED ECCENTRIC REDUCERS WITH TOP OF PIPE LEVEL.
- ARROWS ON SUPPLY AND RETURN LINES INDICATE DIRECTION OF FLOW.
- PROVIDE VALVE WITH HOSE END ON ALL LOW POINTS OF PIPING SYSTEM AND AUTO AIR VENTS AT ALL HIGH POINTS OF THE PIPING SYSTEM UNLESS NOTED OTHERWISE.
- FOR TYPICAL WATER AND REFRIGERANT PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD DETAILS.
- WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE SO THERE WILL BE COUNTER FLOW BETWEEN WATER AND AIR.
- DIELECTRIC UNIONS AND FLANGES SHALL BE USED ON ALL CONNECTIONS BETWEEN DISSIMILAR METALS.
- WHERE WATER LINES ARE RUN IN CRAWL SPACES, RUN LINE HIGH AS POSSIBLE. WHERE LINES INTERFERE WITH HEATING LINES, THE HEATING LINES SHALL HAVE PRECEDENCE.
- COORDINATE LOCATIONS OF ALL LINES AND EQUIPMENT WITH OTHER CONTRACTORS.
- AT LOCATIONS WHERE NEW CONNECTIONS ARE TO BE MADE TO EXISTING PIPING, THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF EXISTING LINES BEFORE INSTALLING NEW PIPING SYSTEMS.

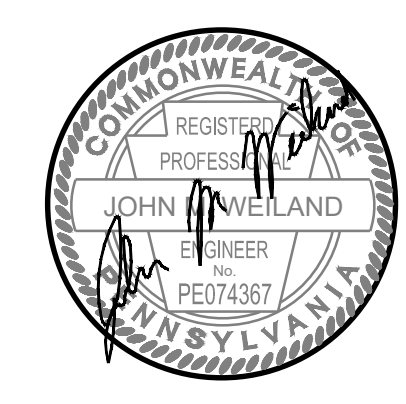
DUCTWORK NOTES

- ALL DUCTWORK SIZES NOTED ARE FREE AREA SIZES.
- TURNING VANES SHALL BE PROVIDED IN ALL NON-RADIUSSED DUCT ELBOWS EXCEPT TRANSFER DUCTWORK.
- ALL DUCT JUNCTIONS SHALL BE CONSTRUCTED OF STANDARD 45 DEGREE. ENTRY BRANCHES WITH BALANCING DAMPERS DOWNSTREAM OF DUCT BRANCH ENTRY.
- MAXIMUM LENGTH OF FLEXIBLE DUCTWORK IN ANY ONE BRANCH SHALL BE SIX (6) FEET.
- NO RUN OF FLEXIBLE DUCTWORK SHALL CONTAIN MORE THAN A TOTAL OF 90 DEGREES OF TURN. INSULATED RIGID SHALL BE USED WHERE MORE THAN 90 DEGREES IS REQUIRED. SUPPORT FLEXIBLE DUCTWORK TO PREVENT BUCKLING OF THE DUCT.
- TOTAL STATIC PRESSURE NOTED IN SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
- CEILING DIFFUSER SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES.



REVISIONS
03/21/04 ADDENDUM NO. 4
BID SET 02/19/24

HIGH SCHOOL RENOVATIONS
511 HIGHLAND AVENUE, GROVE CITY, PA 16127
GROVE CITY AREA SCHOOL DISTRICT
SYMBOLS AND GENERAL NOTES
Proj No. 23-S43-01
Issue Date 02/19/2024
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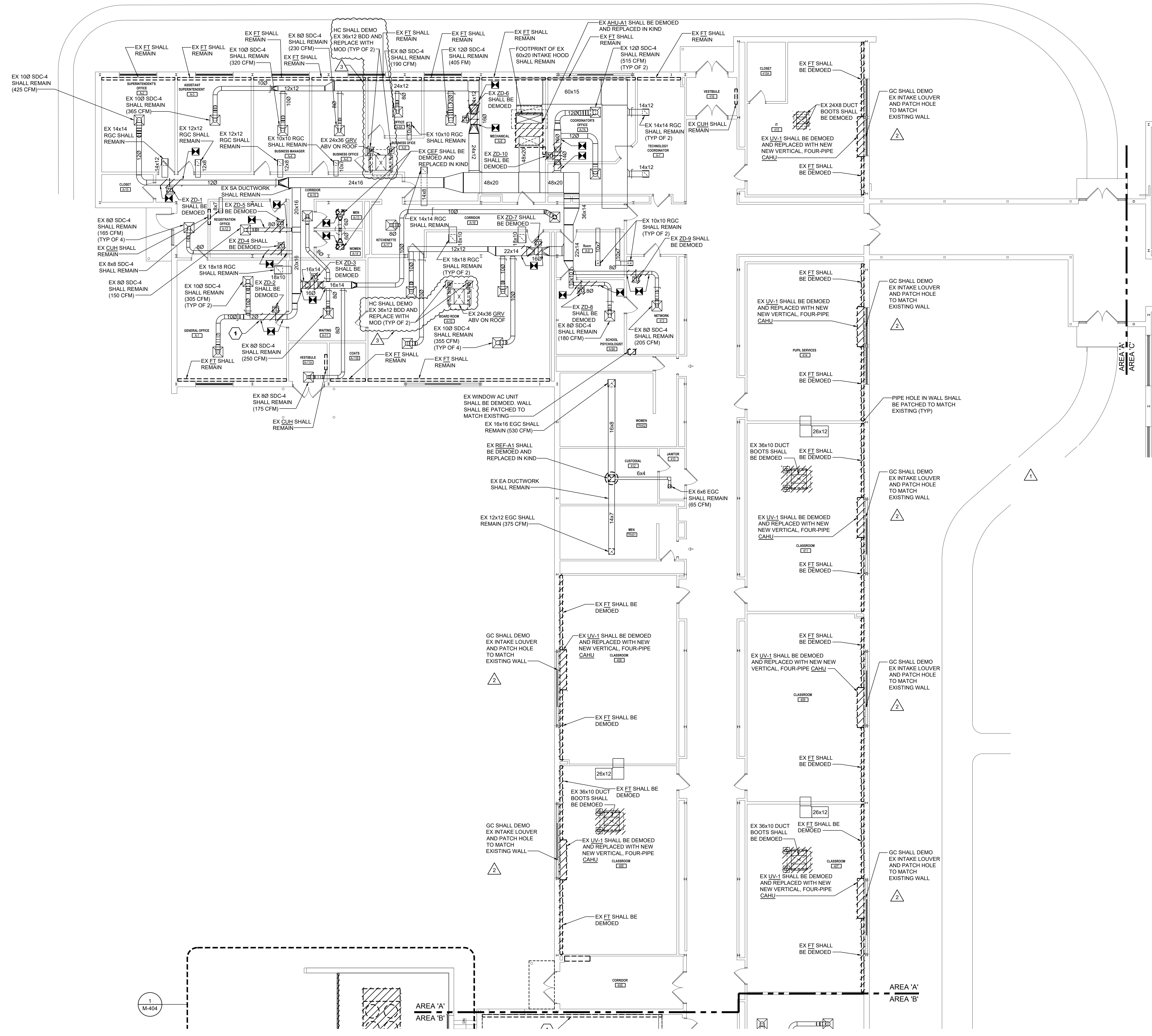


REVISIONS

02/20/24	ADDENDUM NO. 1
03/13/24	ADDENDUM NO. 3
03/27/24	ADDENDUM NO. 4

BID SET 02/19/24

HIGH SCHOOL RENOVATIONS
511 HIGHLAND AVENUE, GROVE CITY, PA 16127
GROVE CITY AREA SCHOOL DISTRICT
FIRST FLOOR PLAN - AREA - A
MECHANICAL DUCTWORK DEMOLITION



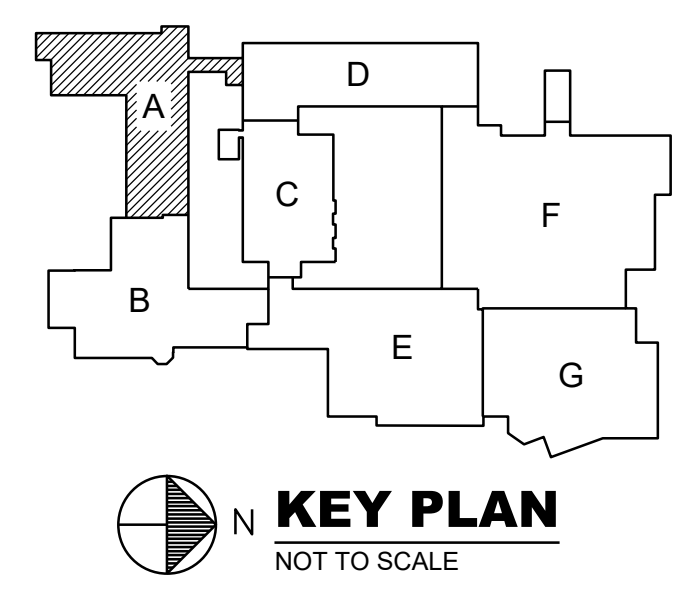
KEYNOTES THIS DRAWING

- 1 CONTRACTOR TO COORDINATE EXISTING SECTION OF DUCT & INSULATION TO BE REMOVED WITH VVB TO BE INSTALLED.

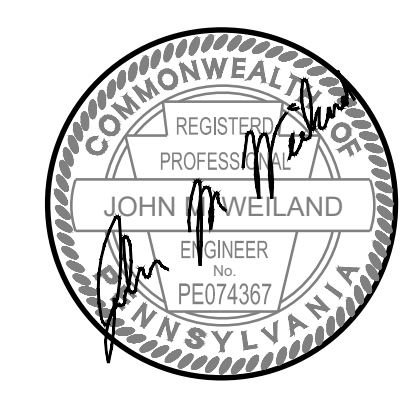
GENERAL NOTES THIS DRAWING

- ALL EXISTING TRANSFER DUCTS SHALL REMAIN, EXCEPT WHERE MARKED.
- CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING VOLUME CONTROL DAMPERS TO REMAIN TO VERIFY FUNCTIONALITY IF DAMAGED/INOPERABLE. CONTRACTOR SHALL REPLACE IN KIND.
- ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED, STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.
- ALL FIN TUBE BEING REMOVING FROM CLASSROOMS AND OTHER ROOMS, THE HC SHALL PATCH AND PAINT THE WALL TO MATCH THE EXISTING WALLS.

1 FIRST FLOOR PLAN - AREA 'A' - MECHANICAL DUCTWORK DEMOLITION
Scale: 1/8" = 1'-0"
FIRST FLOOR ELEVATION 1252'-0"



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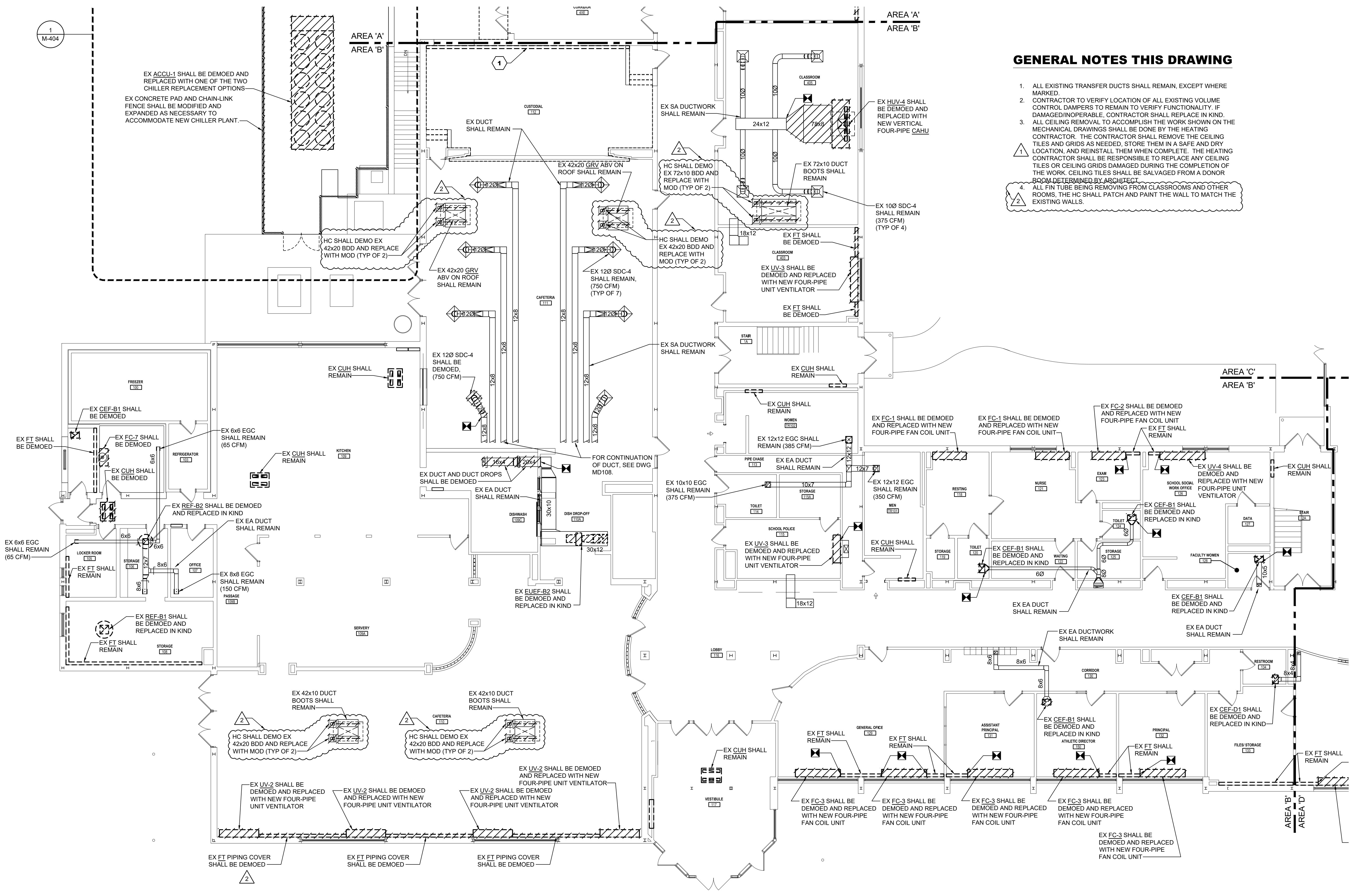


KEYNOTES THIS DRAWING

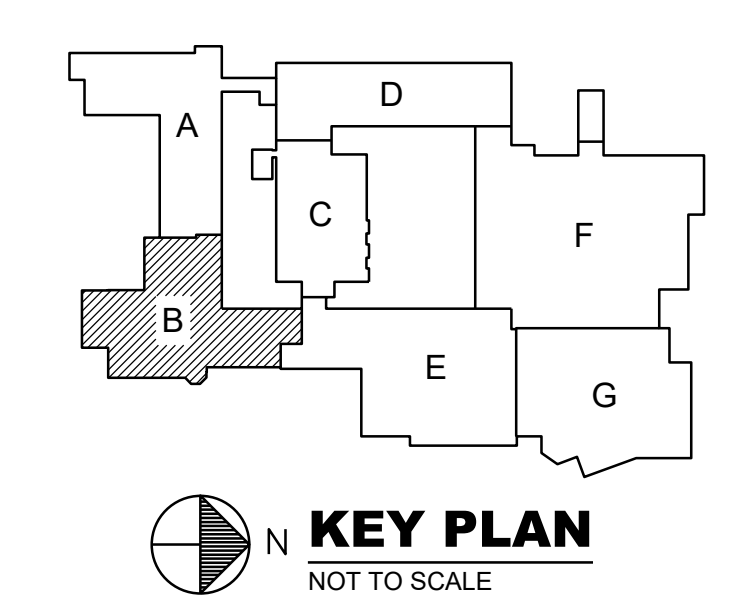
- 1 UNDER BASE BID, EX FT SHALL REMAIN, UNDER ALTERNATE BID, EX FT SHALL BE DEMOED, UNIT HEATER SHALL BE ADDED.
- 2 EXISTING HARD CEILING

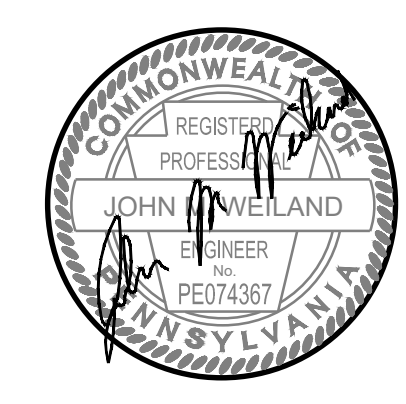
GENERAL NOTES THIS DRAWING

- 1. ALL EXISTING TRANSFER DUCTS SHALL REMAIN, EXCEPT WHERE MARKED.
- 2. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING VOLUME CONTROL DAMPERS TO REMAIN TO VERIFY FUNCTIONALITY. IF DAMAGED/INOPERABLE, CONTRACTOR SHALL REPLACE IN KIND.
- 3. ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED, STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.
- 4. ALL FIN TUBE BEING REMOVING FROM CLASSROOMS AND OTHER ROOMS, THE HC SHALL PATCH AND PAINT THE WALL TO MATCH THE EXISTING WALLS.



1 FIRST FLOOR PLAN - AREA 'B' - MECHANICAL DUCTWORK DEMOLITION
Scale: 1/8" = 1'-0"
FIRST FLOOR ELEVATION 1252'-0"





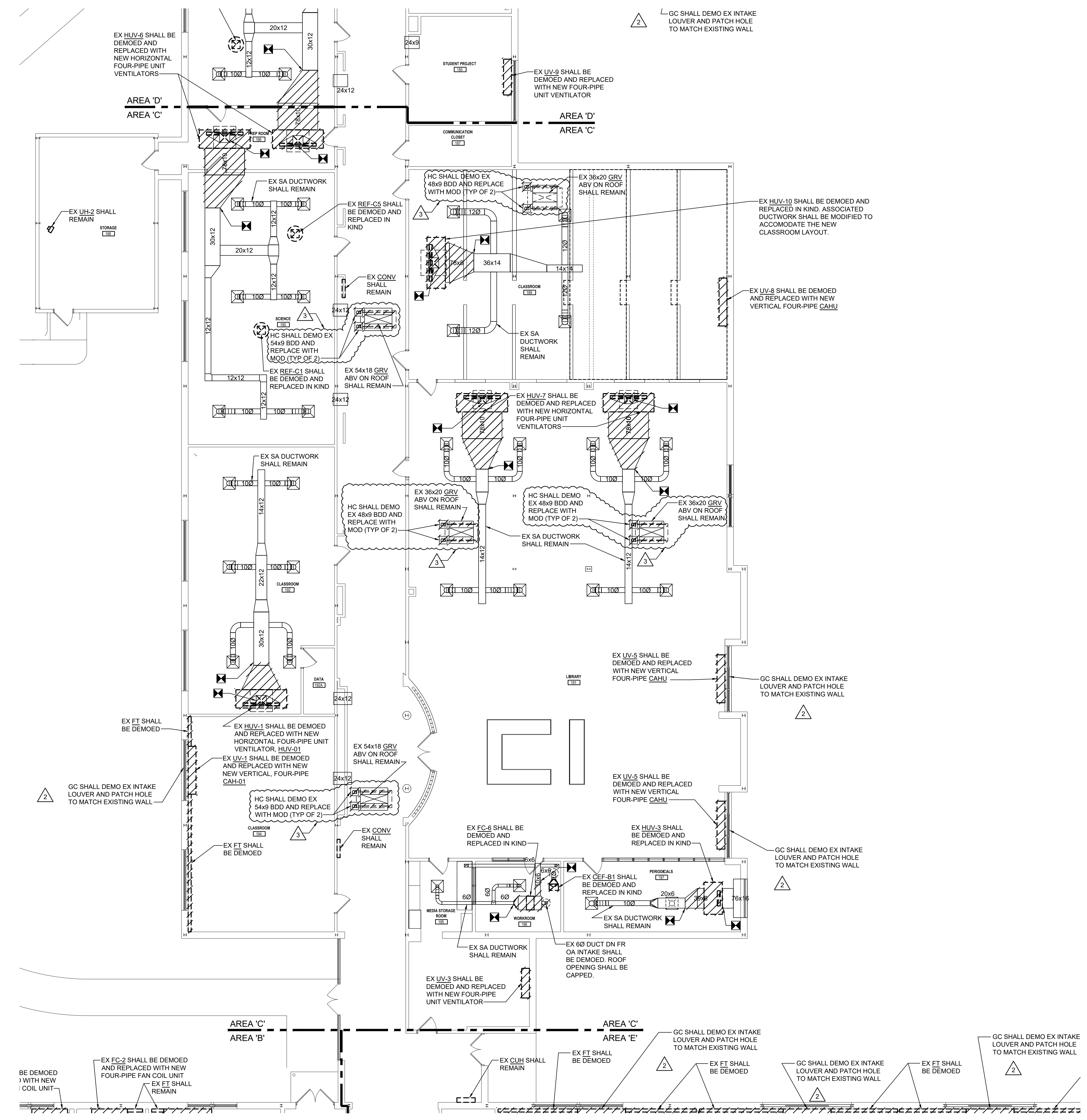
REVISIONS

02/20/24	ADDENDUM NO. 1
03/13/24	ADDENDUM NO. 3
03/27/24	ADDENDUM NO. 4

BID SET 02/19/24

HIGH SCHOOL RENOVATIONS
511 HIGHLAND AVENUE, GROVE CITY, PA 16127
GROVE CITY AREA SCHOOL DISTRICT
FIRST FLOOR PLAN - AREA - C
MECHANICAL DUCTWORK DEMOLITION

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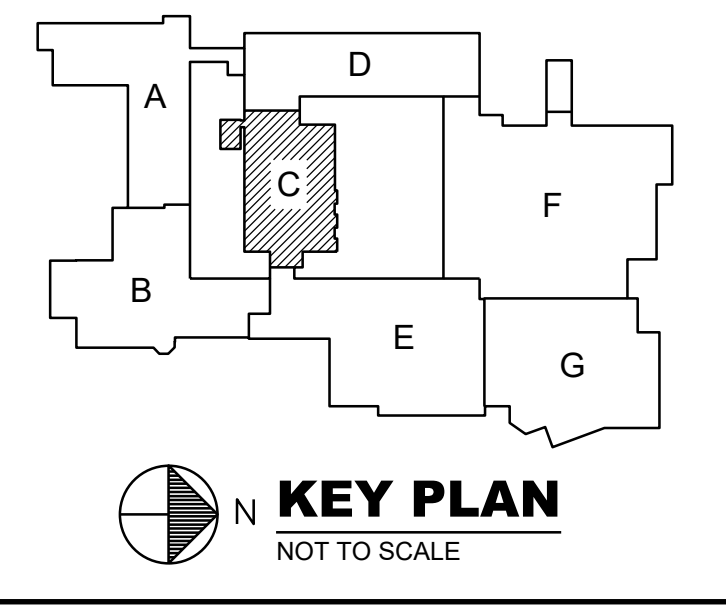


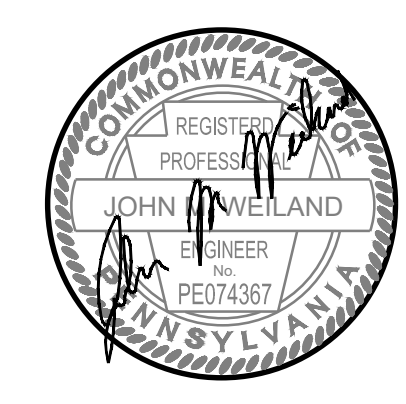
KEYNOTES THIS DRAWING

GENERAL NOTES THIS DRAWING

- ALL EXISTING TRANSFER DUCTS SHALL REMAIN, EXCEPT WHERE MARKED.
- CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING VOLUME CONTROL DAMPERS TO REMAIN TO VERIFY FUNCTIONALITY. IF DAMAGED/INOPERABLE, CONTRACTOR SHALL REPLACE IN KIND.
- ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED, STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.
- ALL FIN TUBE BEING REMOVING FROM CLASSROOMS AND OTHER ROOMS, THE HC SHALL PATCH AND PAINT THE WALL TO MATCH THE EXISTING WALLS.

1 FIRST FLOOR PLAN - AREA 'C' - MECHANICAL DUCTWORK DEMOLITION
Scale: 1/8" = 1'-0"
FIRST FLOOR ELEVATION 1252'-0"

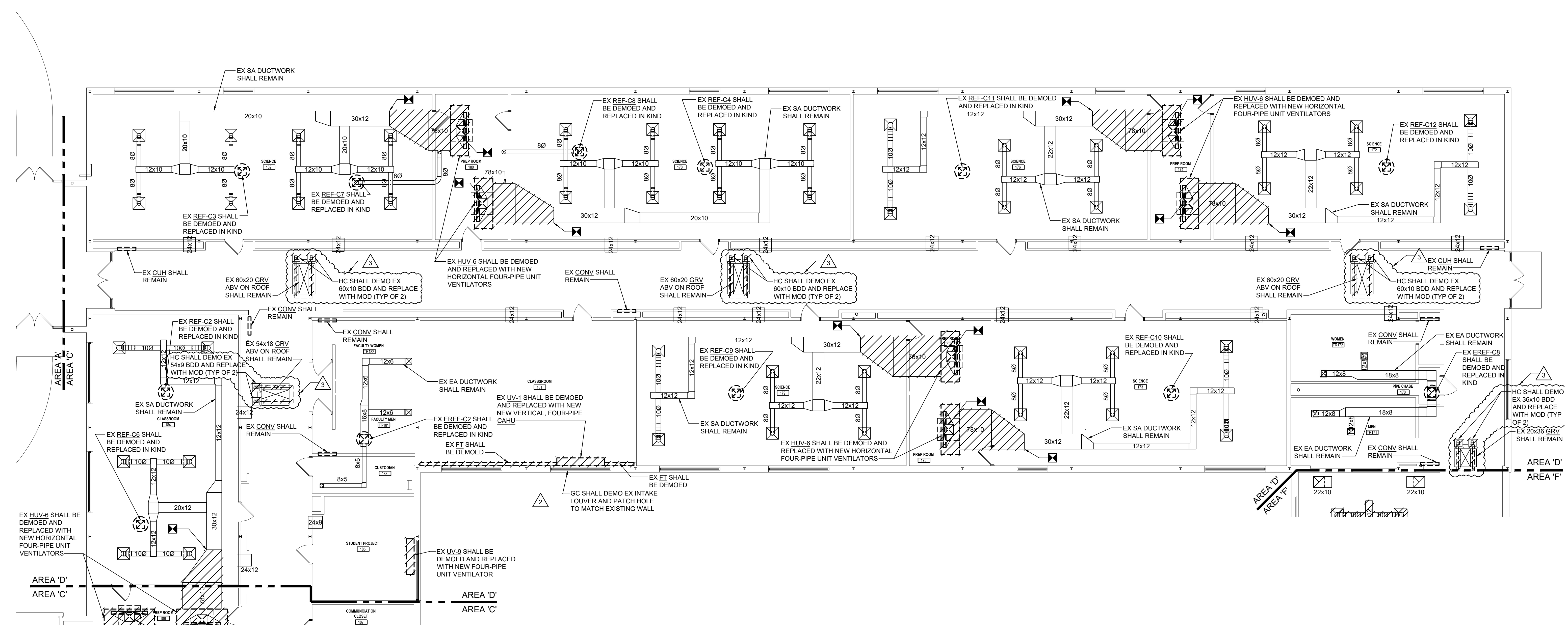




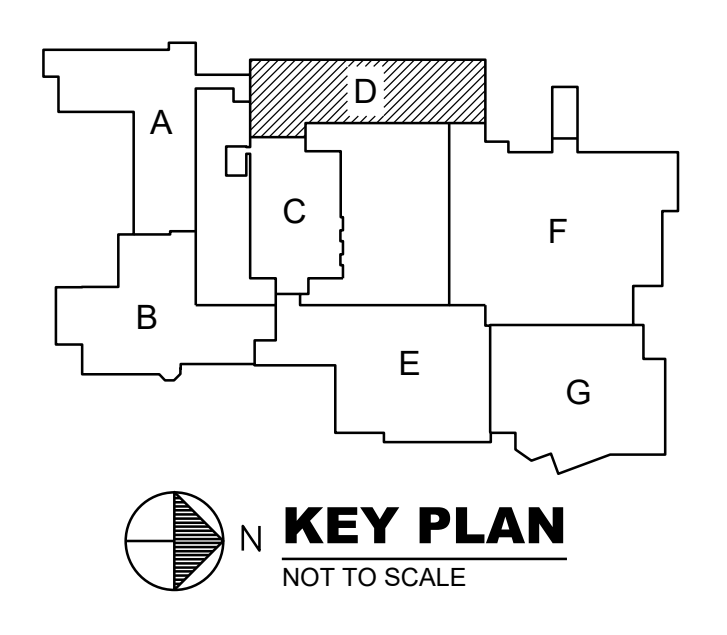
KEYNOTES THIS DRAWING

GENERAL NOTES THIS DRAWING

1. ALL EXISTING TRANSFER DUCTS SHALL REMAIN, EXCEPT WHERE MARKED
2. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING VOLUME CONTROL DAMPERS TO REMAIN TO VERIFY FUNCTIONALITY. IF DAMAGED/INOPERABLE, CONTRACTOR SHALL REPLACE IN KIND.
3. ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED, STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.
4. ALL FIN TUBE BEING REMOVING FROM CLASSROOMS AND OTHER ROOMS, THE HC SHALL PATCH AND PAINT THE WALL TO MATCH THE EXISTING WALLS.



1 FIRST FLOOR PLAN - AREA 'D' - MECHANICAL DUCTWORK DEMOLITION
 Scale: 1/8" = 1'-0"
 FIRST FLOOR ELEVATION 1252'-0"

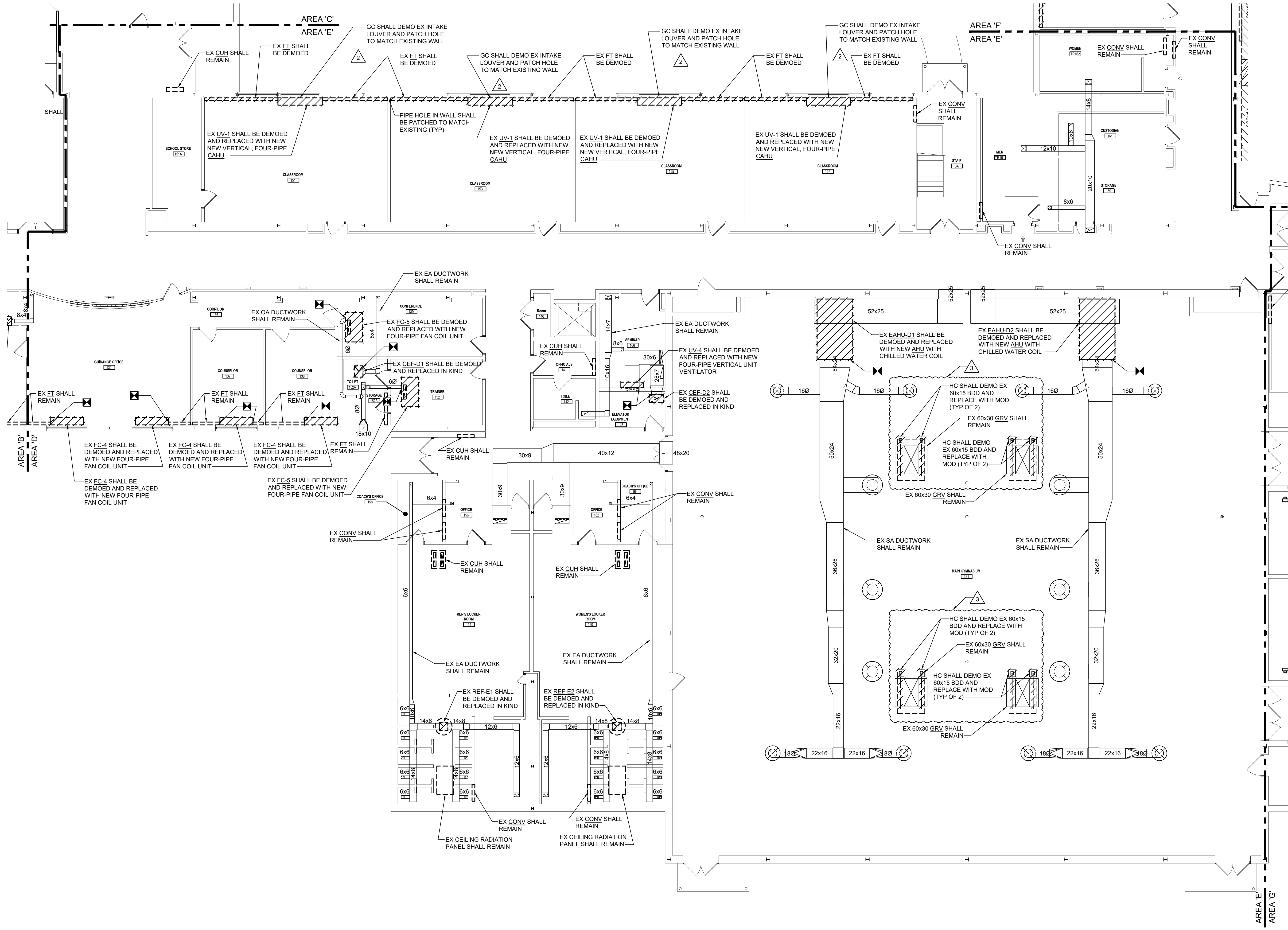


REVISIONS

A	02/20/24 ADDENDUM NO. 1
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A	03/27/24 ADDENDUM NO. 4

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HIGH SCHOOL RENOVATIONS
 511 HIGHLAND AVENUE, GROVE CITY, PA 16127
GROVE CITY AREA SCHOOL DISTRICT
FIRST FLOOR PLAN - AREA - D
MECHANICAL DUCTWORK DEMOLITION

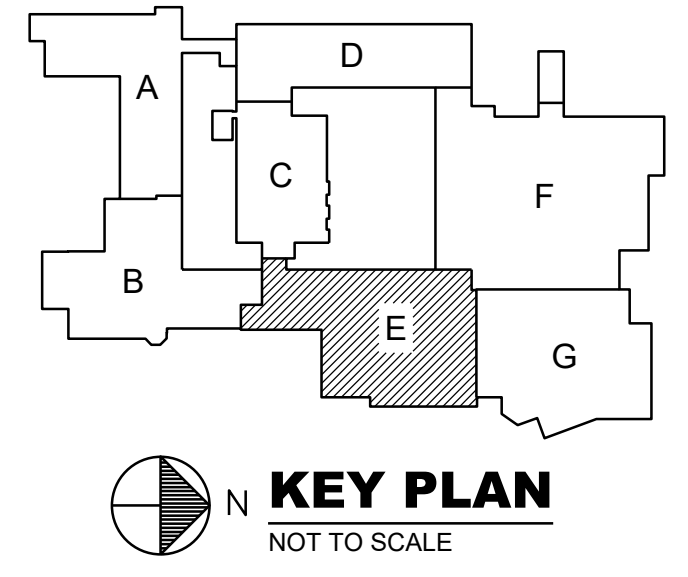


KEYNOTES THIS DRAWING

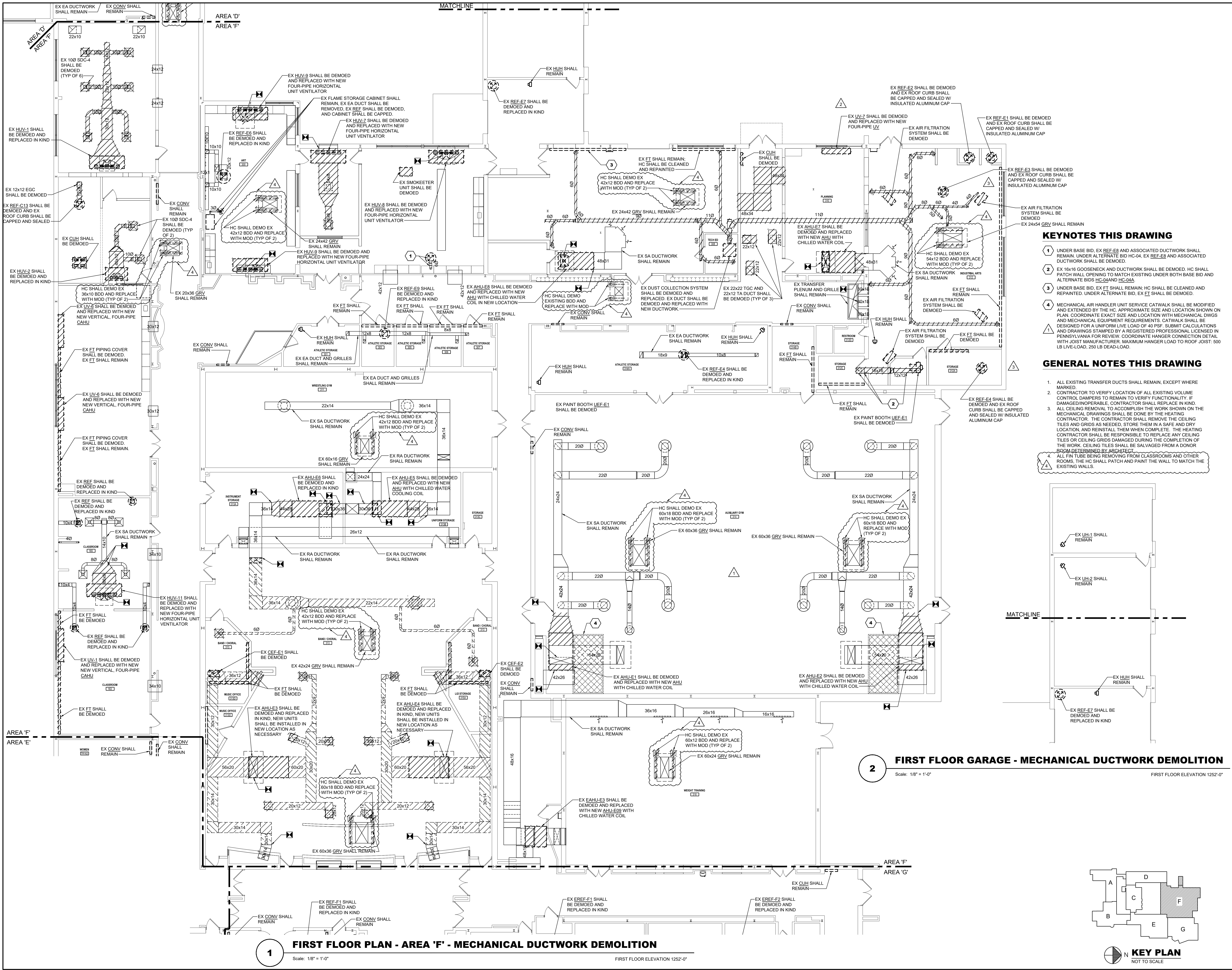
GENERAL NOTES THIS DRAWING

1. ALL EXISTING TRANSFER DUCTS SHALL REMAIN, EXCEPT WHERE MARKED.
2. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING VOLUME CONTROL DAMPERS TO REMAIN TO VERIFY FUNCTIONALITY. IF DAMAGED/INOPERABLE, CONTRACTOR SHALL REPLACE IN KIND.
3. ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED, STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.
4. ALL FIN TUBE BEING REMOVING FROM CLASSROOMS AND OTHER ROOMS, THE HC SHALL PATCH AND PAINT THE WALL TO MATCH THE EXISTING WALLS.

1 FIRST FLOOR PLAN - AREA 'E' - MECHANICAL DUCTWORK DEMOLITION
Scale: 1/8" = 1'-0"
FIRST FLOOR ELEVATION 1252'-0"



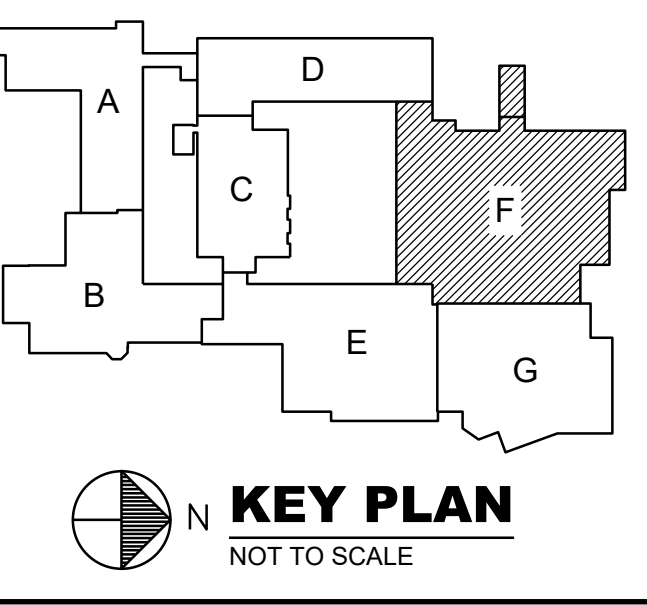
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JMcMinn



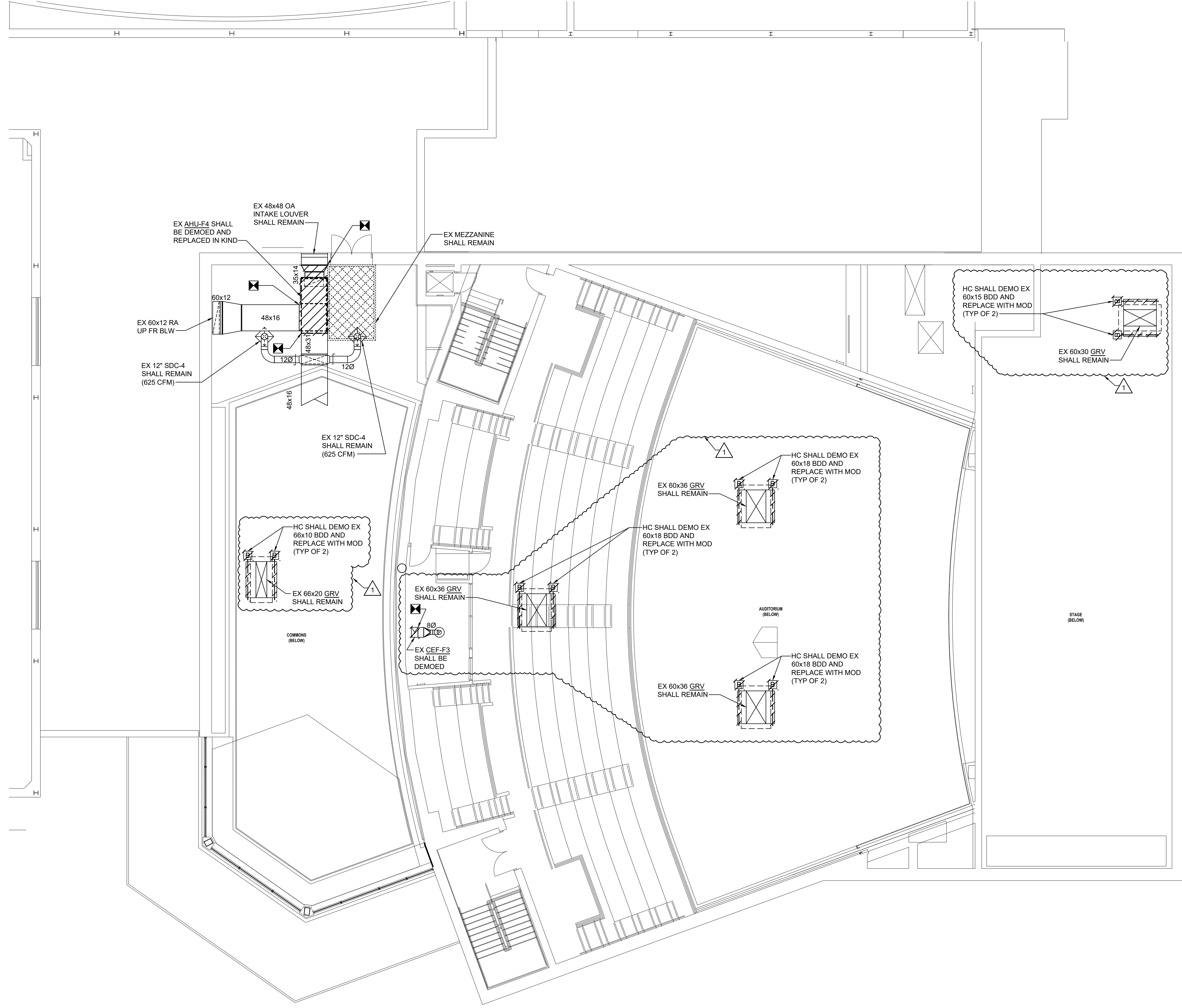
- KEYNOTES THIS DRAWING**
- 1 UNDER BASE BID, EX REF-E8 AND ASSOCIATED DUCTWORK SHALL REMAIN. UNDER ALTERNATE BID HC-04, EX REF-E8 AND ASSOCIATED DUCTWORK SHALL BE DEMOED.
 - 2 EX 18x16 GOOSENECK AND DUCTWORK SHALL BE DEMOED. HC SHALL PATCH WALL OPENING TO MATCH EXISTING UNDER BOTH BASE BID AND ALTERNATE BIDS HC-04 AND HC-04A.
 - 3 UNDER BASE BID, EX ET SHALL BE CLEANED AND REPAINTED. UNDER ALTERNATE BID, EX ET SHALL BE DEMOED.
 - 4 MECHANICAL AIR HANDLER UNIT SERVICE CATWALK SHALL BE MODIFIED AND EXTENDED BY THE HC. APPROXIMATE SIZE AND LOCATION SHOWN ON PLAN. COORDINATE EXACT SIZE AND LOCATION WITH MECHANICAL DWGS AND MECHANICAL EQUIPMENT REQUIREMENTS. CATWALK SHALL BE DESIGNED FOR A UNIFORM LIVE LOAD OF 40 PSF. SUBMIT CALCULATIONS AND DRAWINGS STAMPED BY A REGISTERED PROFESSIONAL LICENSED IN PENNSYLVANIA FOR REVIEW. COORDINATE HANGER CONNECTION DETAIL WITH JOIST MANUFACTURER. MAXIMUM HANGER LOAD TO ROOF JOIST: 500 LB LIVE-LOAD, 250 LB DEAD-LOAD.
- GENERAL NOTES THIS DRAWING**
1. ALL EXISTING TRANSFER DUCTS SHALL REMAIN, EXCEPT WHERE MARKED.
 2. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING VOLUME CONTROL DAMPERS TO REMAIN TO VERIFY FUNCTIONALITY. IF DAMAGED/INOPERABLE, CONTRACTOR SHALL REPLACE IN KIND.
 3. ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED. STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.
 4. ALL FIN TUBE BEING REMOVING FROM CLASSROOMS AND OTHER ROOMS. THE HC SHALL PATCH AND PAINT THE WALL TO MATCH THE EXISTING WALLS.

1 FIRST FLOOR PLAN - AREA 'F' - MECHANICAL DUCTWORK DEMOLITION
 Scale: 1/8" = 1'-0"
 FIRST FLOOR ELEVATION 1252'-0"

2 FIRST FLOOR GARAGE - MECHANICAL DUCTWORK DEMOLITION
 Scale: 1/8" = 1'-0"
 FIRST FLOOR ELEVATION 1252'-0"



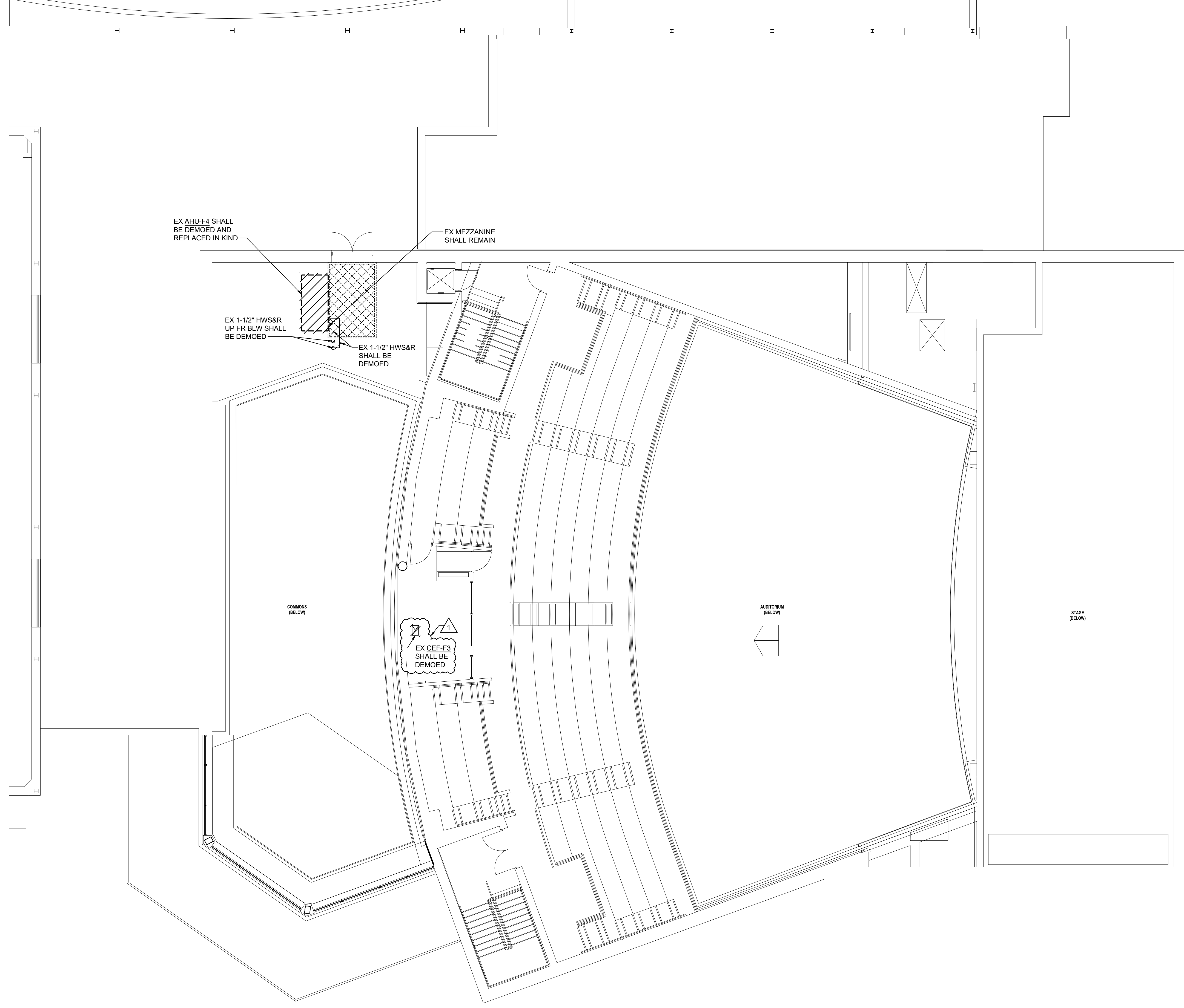
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1 SECOND FLOOR PLAN - AREA 'G' - MECHANICAL DEMOLITION
 Scale: 1/8" = 1'-0" FIRST FLOOR ELEVATION 1252'-0"

GENERAL NOTES THIS DRAWING

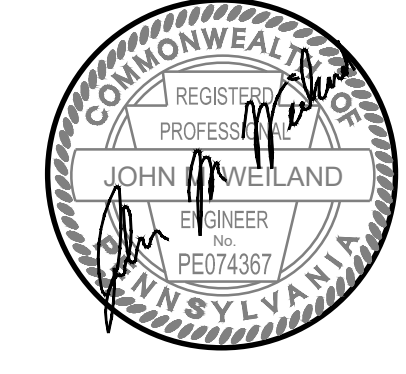
1. ALL EXISTING TRANSFER DUCTS SHALL REMAIN.
2. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING VOLUME CONTROL DAMPERS TO REMAIN TO VERIFY FUNCTIONALITY. IF DAMAGED/INOPERABLE, CONTRACTOR SHALL REPAIR IN KIND.



1 **SECOND FLOOR PLAN - AREA 'G' - MECHANICAL DEMOLITION**

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

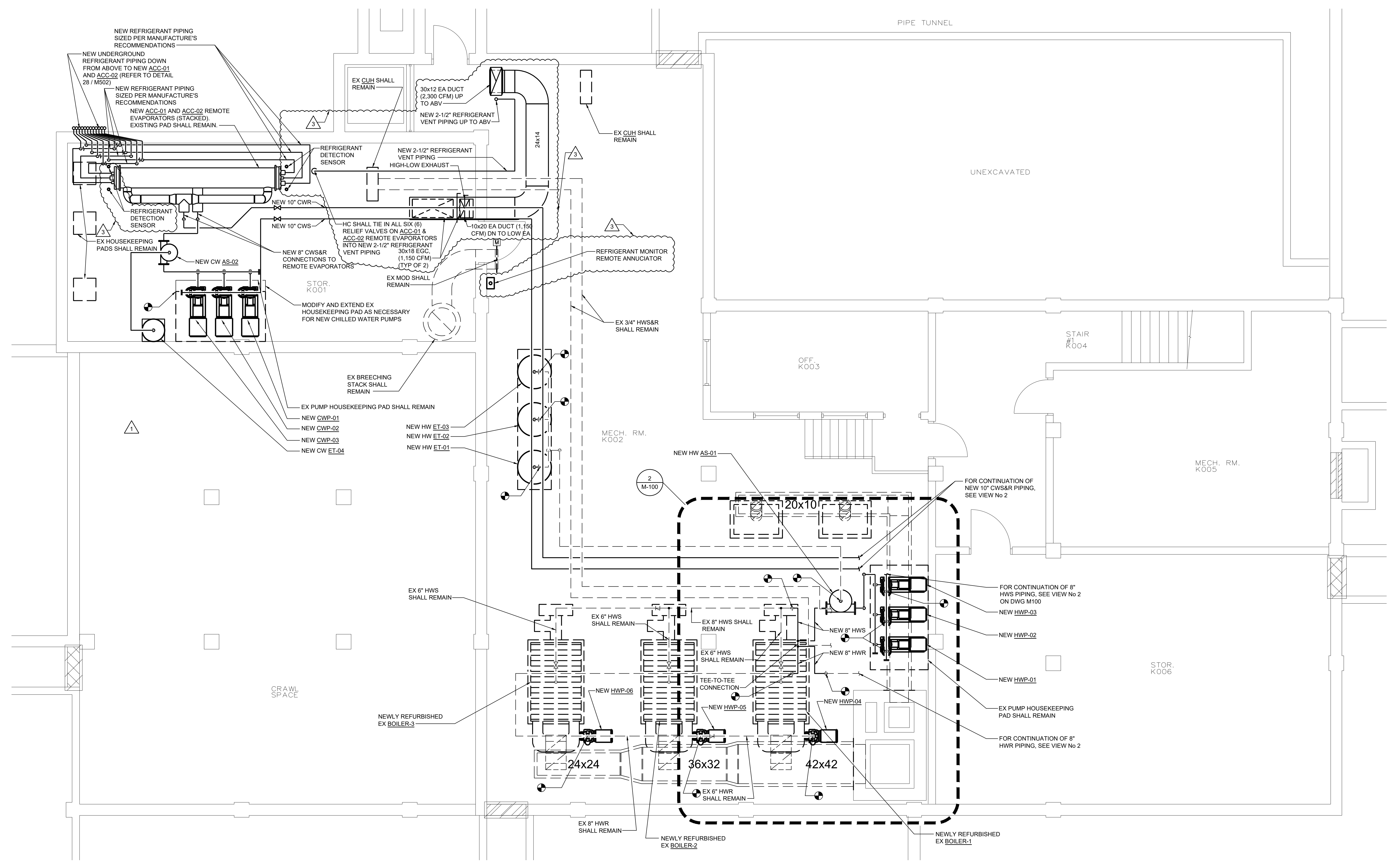
FIRST FLOOR ELEVATION 1252'-0"



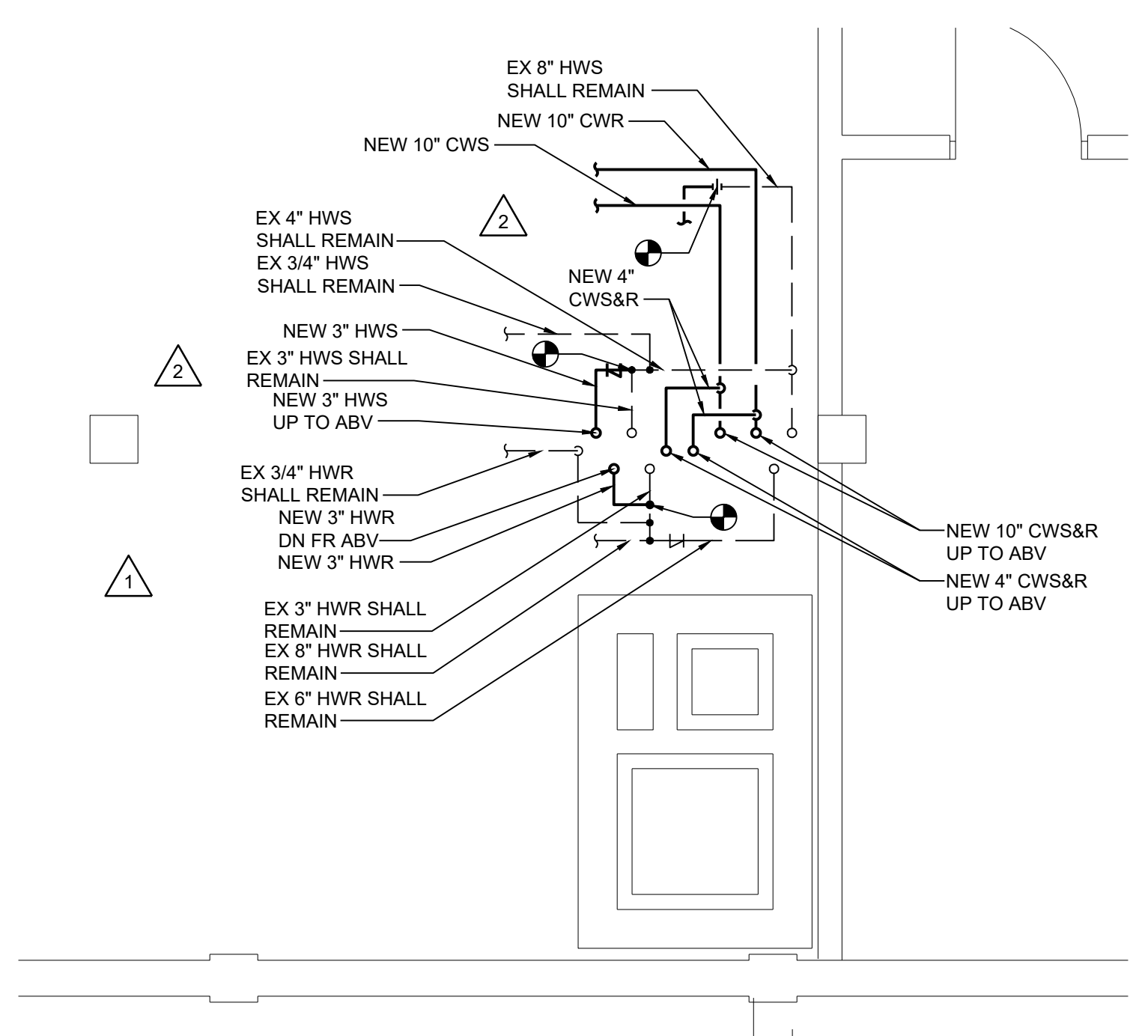
REVISIONS

△	02/20/24	ADDENDUM NO. 1
△	03/07/24	ADDENDUM NO. 2
△	03/27/24	ADDENDUM NO. 4

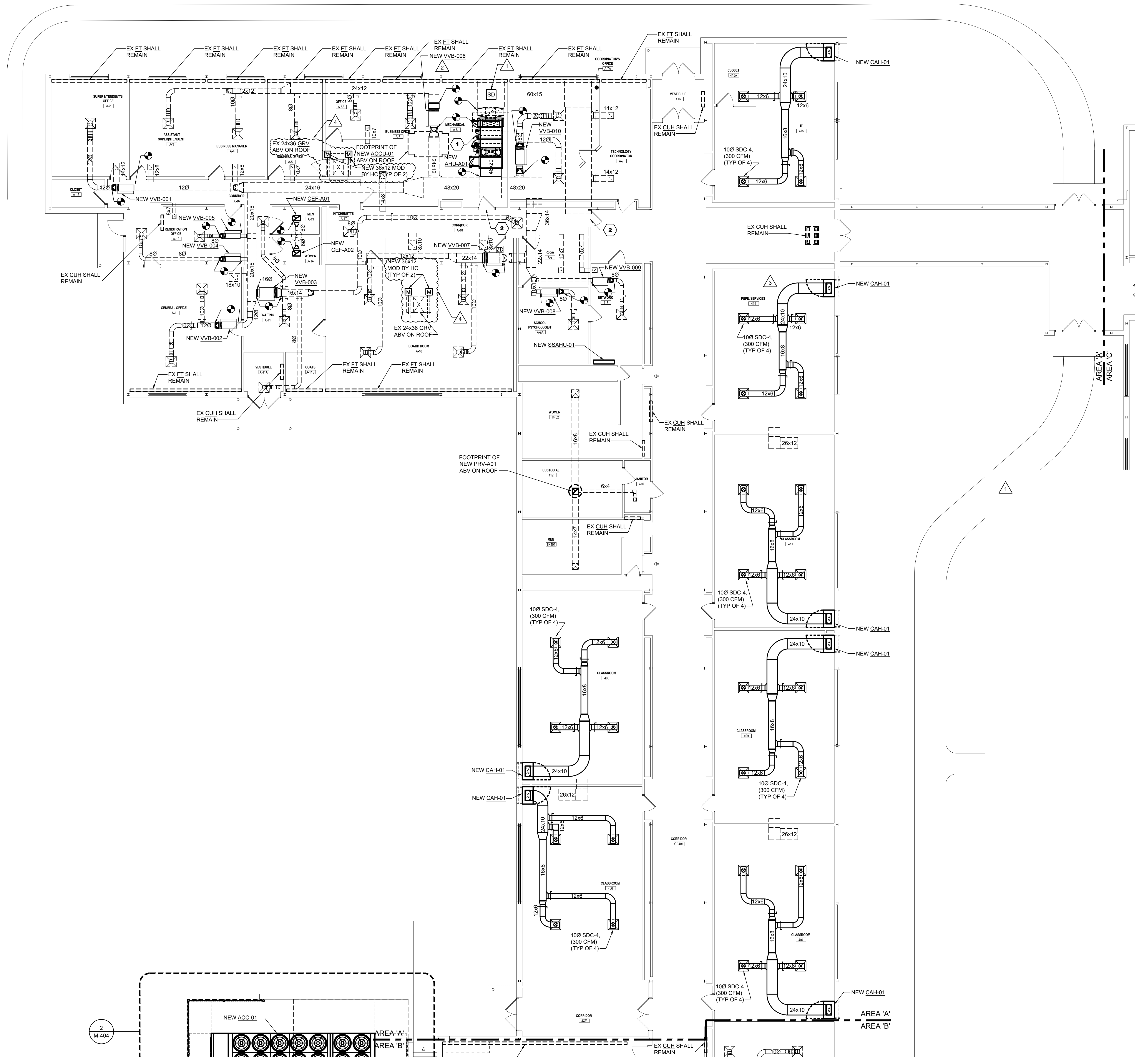
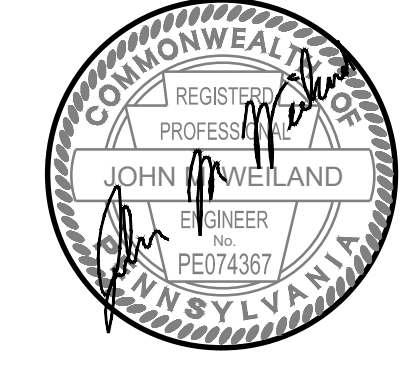
BID SET 02/19/24



1 BASEMENT FLOOR PLAN - AREA 'B' - MECHANICAL NEW WORK
Scale: 1/4" = 1'-0"
FIRST FLOOR ELEVATION 1252'-0"



2 BASEMENT PARTIAL FLOOR PLAN - MECHANICAL PIPING NEW WORK
Scale: 1/4" = 1'-0"
FIRST FLOOR ELEVATION 1252'-0"



KEYNOTES THIS DRAWING

- 1 HC SHALL BREAK DOWN AHU-A01 ALONG SPLIT SECTIONS AND ASSEMBLE AHU IN FINAL LOCATION.
- 2 HC SHALL BREAK DOWN FAN SECTION OF AHU-A01 INTO BASE COMPONENTS TO FIT THROUGH DOORWAYS, AND REASSEMBLE PRIOR FINAL UNIT ASSEMBLY.

GENERAL NOTES THIS DRAWING

- 1. AT AREAS WHERE NEW VAVs ARE INSTALLED IN EXISTING DUCTWORK, CONTRACTOR SHALL PATCH/REPAIR EXISTING DUCTWORK AND PATCH, REPAIR, REPLACE EXISTING INSULATION. CONTRACTOR TO INSPECT AND CLEAN ALL EXISTING TRANSFER DUCTS.
- 2. ALL EXISTING FIN TUBES AND CABINET HEATERS SHALL BE CLEANED. EXISTING VALVES SHALL BE VERIFIED. CONTRACTOR SHALL REPORT ANY ISSUES TO ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- 3. CONTRACTOR SHALL VERIFY CONDITION OF EXISTING DUCT INSULATION TO REMAIN. CONTRACTOR SHALL PATCH, REPAIR, AND REPLACE AS NECESSARY.
- 4. ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED, STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.

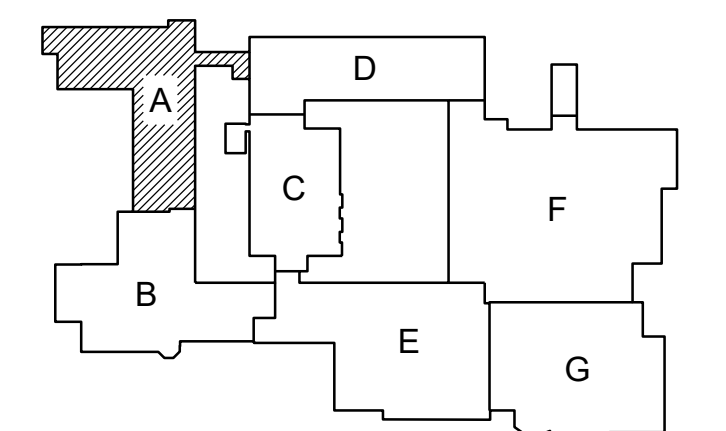
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03/07/24	ADDENDUM NO. 2		
03/13/24	ADDENDUM NO. 3		

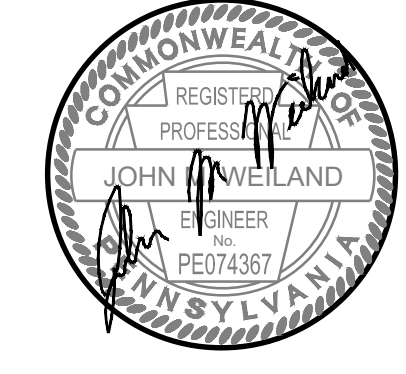
BID SET 02/19/24

1 FIRST FLOOR PLAN - AREA 'A' - MECHANICAL EQUIPMENT & DUCTWORK NEW WORK
Scale: 1/8" = 1'-0"

FIRST FLOOR ELEVATION 1252'-0"



KEY PLAN
NOT TO SCALE



REVISIONS

△	02/29/24	ADDENDUM NO. 1
△	03/13/24	ADDENDUM NO. 3
△	03/21/24	ADDENDUM NO. 4

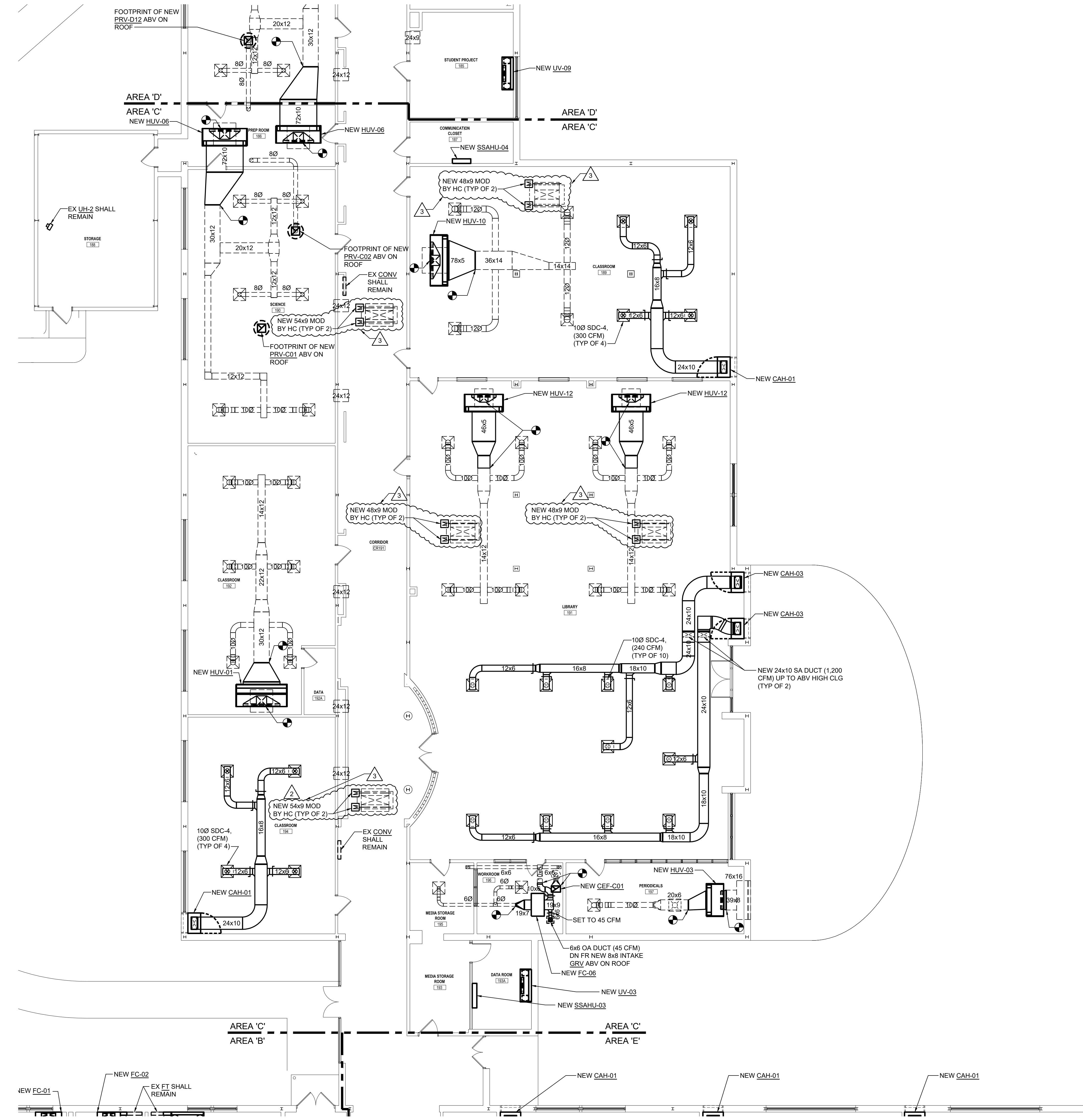
BID SET 02/19/24

HIGH SCHOOL RENOVATIONS
511 HIGHLAND AVENUE, GROVE CITY, PA 16127
GROVE CITY AREA SCHOOL DISTRICT
FIRST FLOOR PLAN - AREA - C
MECHANICAL DUCTWORK NEW WORK

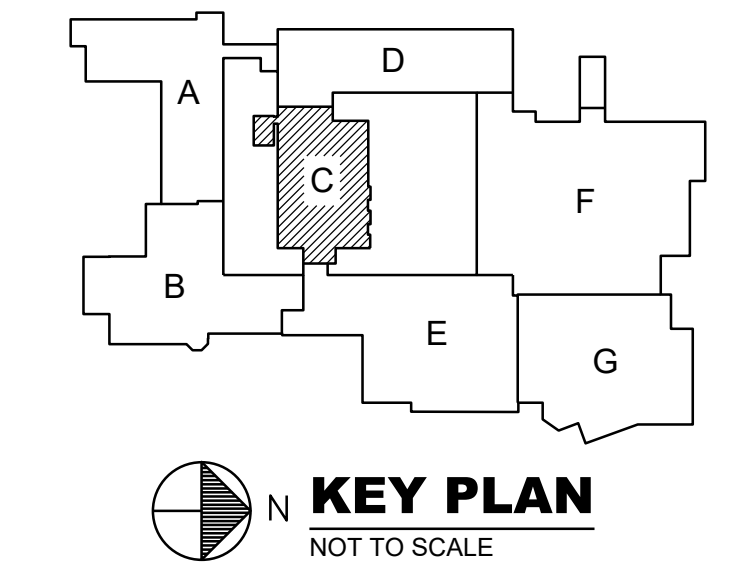
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Issue Date 02/19/2024
M103
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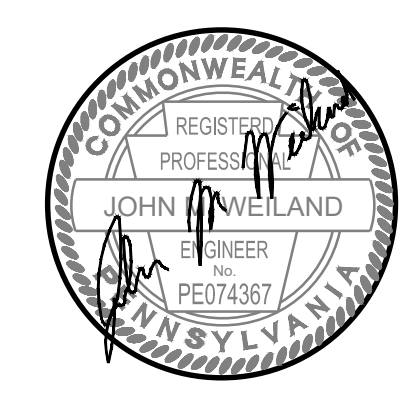
GENERAL NOTES THIS DRAWING

- CONTRACTOR TO INSPECT AND CLEAN ALL EXISTING TRANSFER DUCTS.
- ALL EXISTING FINTUBES AND CABINET HEATERS SHALL BE CLEANED. EXISTING VALVES SHALL BE VERIFIED. CONTRACTOR SHALL REPORT ANY ISSUES TO ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- CONTRACTOR SHALL VERIFY CONDITION OF EXISTING DUCT INSULATION TO REMAIN. CONTRACTOR SHALL PATCH, REPAIR, AND REPLACE AS NECESSARY.
- ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED, STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.



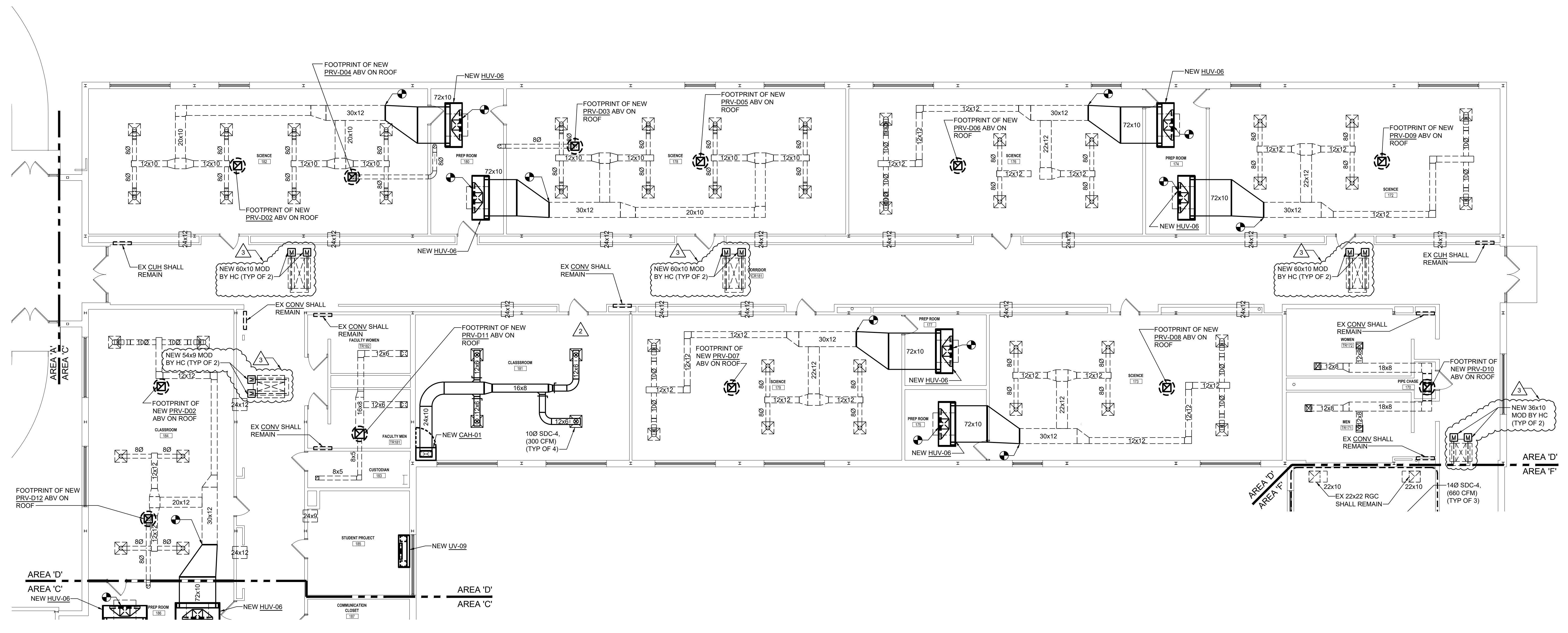
1 FIRST FLOOR PLAN - AREA 'C' - MECHANICAL EQUIPMENT & DUCTWORK NEW WORK
Scale: 1/8" = 1'-0"
FIRST FLOOR ELEVATION 1252'-0"





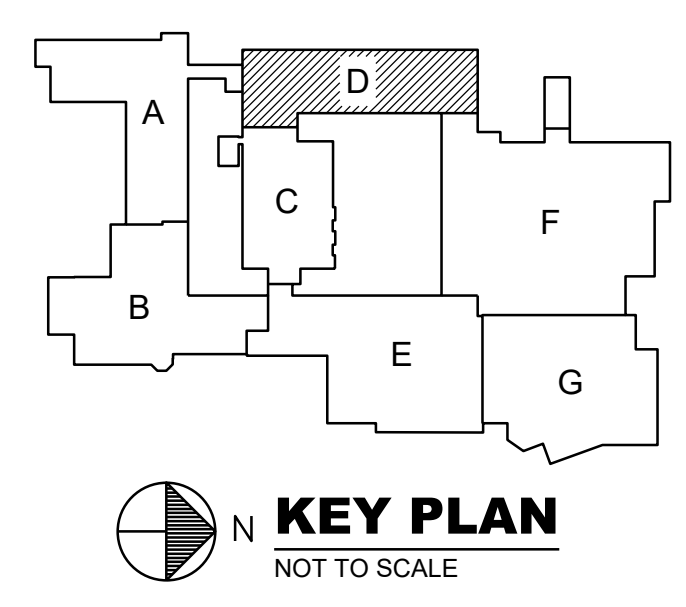
GENERAL NOTES THIS DRAWING

1. CONTRACTOR TO INSPECT AND CLEAN ALL EXISTING TRANSFER DUCTS.
2. ALL EXISTING FINTUBES AND CABINET HEATERS SHALL BE CLEANED. EXISTING VALVES SHALL BE VERIFIED. CONTRACTOR SHALL REPORT ANY ISSUES TO ARCHITECT PRIOR TO PROCEEDING WITH WORK.
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1 FIRST FLOOR PLAN - AREA 'D' - MECHANICAL EQUIPMENT & DUCTWORK NEW WORK

Scale: 1/8" = 1'-0" FIRST FLOOR ELEVATION 1252-0'



REVISIONS

02/29/24	ADDENDUM NO. 1
03/13/24	ADDENDUM NO. 3
03/21/24	ADDENDUM NO. 4

BID SET 02/19/24

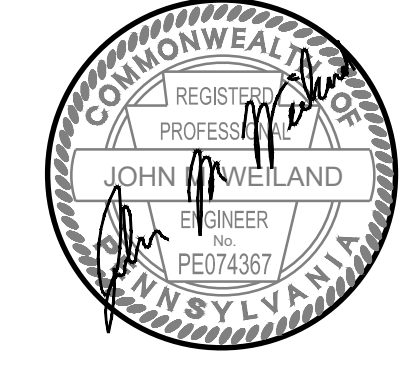
HIGH SCHOOL RENOVATIONS
511 HIGHLAND AVENUE, GROVE CITY, PA 16127
GROVE CITY AREA SCHOOL DISTRICT

FIRST FLOOR PLAN - AREA - D
MECHANICAL DUCTWORK NEW WORK

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Issue Date 02/19/2024

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1	02/20/24	ADDENDUM NO. 1
2	03/07/24	ADDENDUM NO. 2
3	03/27/24	ADDENDUM NO. 4

BID SET 02/19/24

HIGH SCHOOL RENOVATIONS
511 HIGHLAND AVENUE, GROVE CITY, PA 16127
GROVE CITY AREA SCHOOL DISTRICT
FIRST FLOOR PLAN - AREA - E
MECHANICAL DUCTWORK NEW WORK

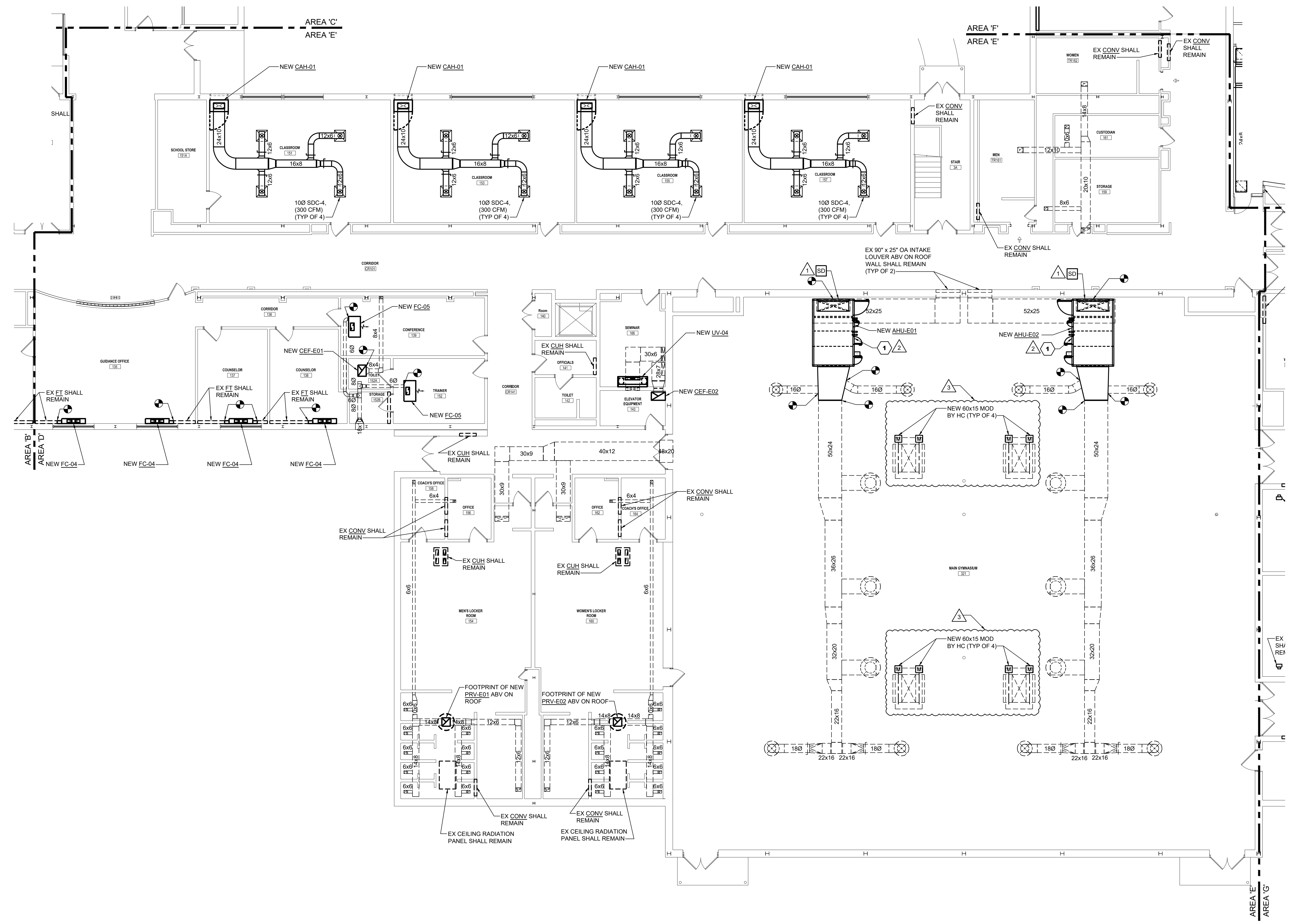
Proj No. 23-S43-01
Issue Date 02/19/2024
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KEYNOTES THIS DRAWING

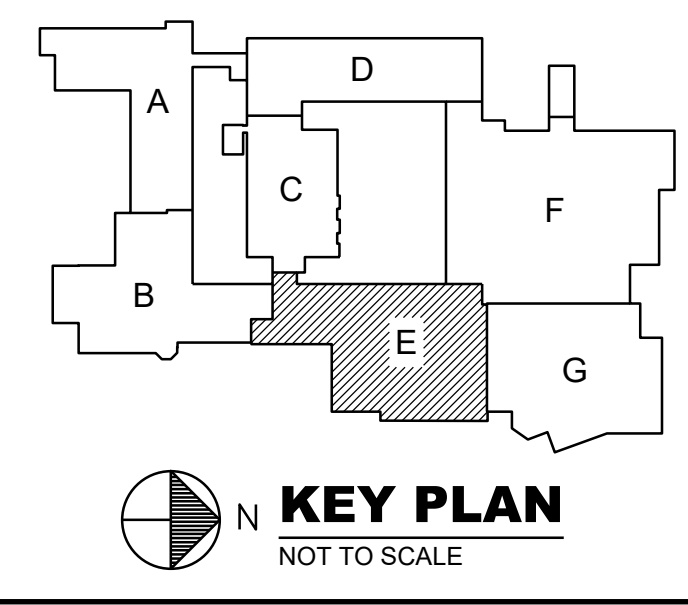
- MECHANICAL AIR HANDLER UNIT SERVICE CATWALK MODIFICATIONS BY HC. APPROXIMATE SIZE AND LOCATION SHOWN ON PLAN. COORDINATE EXACT SIZE AND LOCATION WITH MECHANICAL DIVS AND MECHANICAL EQUIPMENT REQUIREMENTS. CATWALK SHALL BE DESIGNED FOR A UNIFORM LIVE LOAD OF 40 PSF. SUBMIT CALCULATIONS AND DRAWINGS STAMPED BY A REGISTERED PROFESSIONAL LICENSED IN PENNSYLVANIA FOR REVIEW. COORDINATE HANGER CONNECTION DETAIL WITH JOIST MANUFACTURER. MAXIMUM HANGER LOAD TO ROOF JOIST: 500 LB LIVE-LOAD, 250 LB DEAD-LOAD.

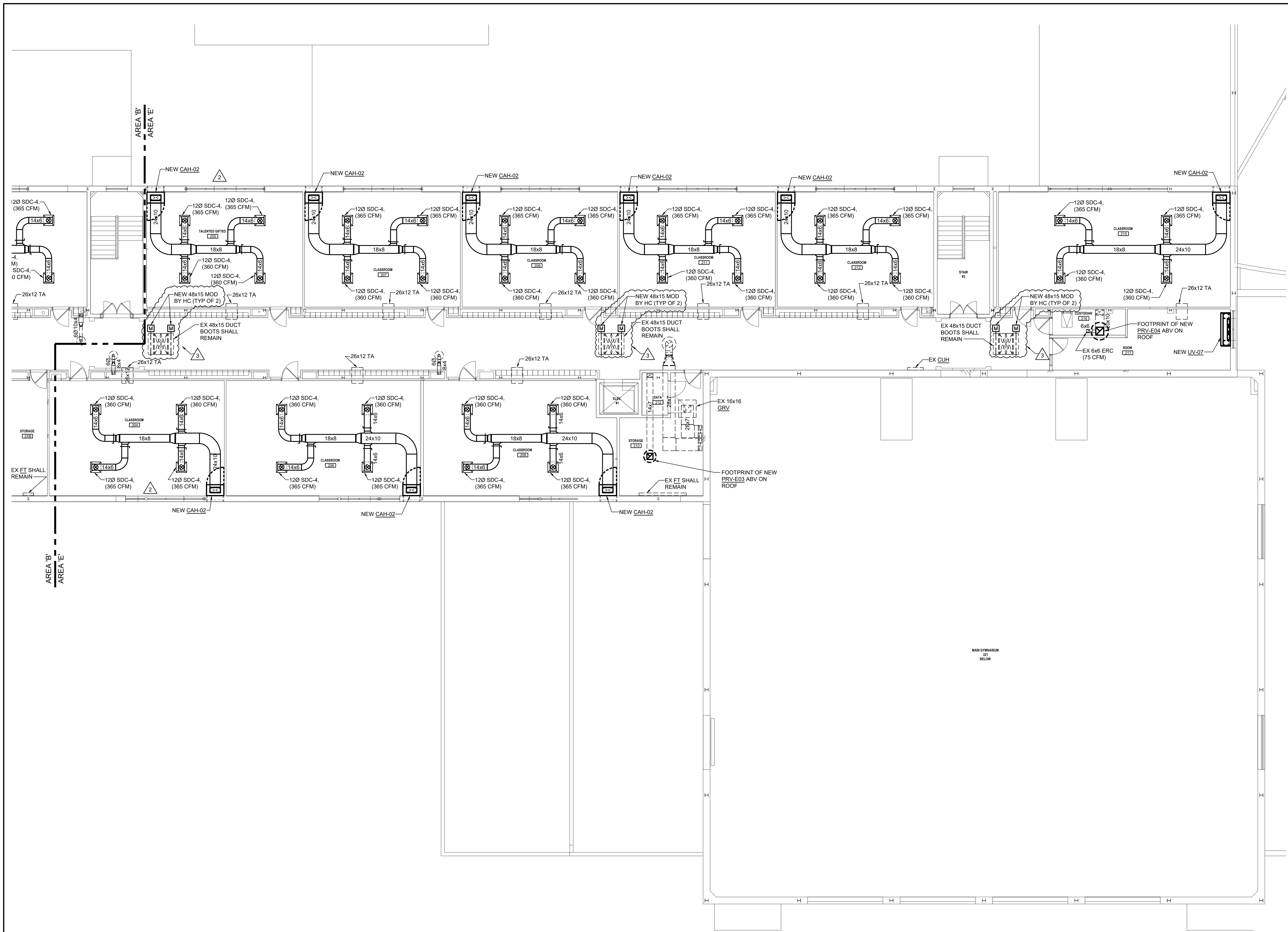
GENERAL NOTES THIS DRAWING

- CONTRACTOR TO INSPECT AND CLEAN ALL EXISTING TRANSFER DUCTS.
- ALL EXISTING FINTUBES AND CABINET HEATERS SHALL BE CLEANED. EXISTING VALVES SHALL BE VERIFIED. CONTRACTOR SHALL REPORT ANY ISSUES TO ARCHITECT PRIOR TO PROCEEDING WITH WORK.
- CONTRACTOR SHALL VERIFY CONDITION OF EXISTING DUCT INSULATION TO REMAIN. CONTRACTOR SHALL PATCH, REPAIR, AND REPLACE AS NECESSARY.
- ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED, STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.



1 FIRST FLOOR PLAN - AREA 'E' - MECHANICAL EQUIPMENT & DUCTWORK NEW WORK
Scale: 1/8" = 1'-0"
FIRST FLOOR ELEVATION 1252'-0"



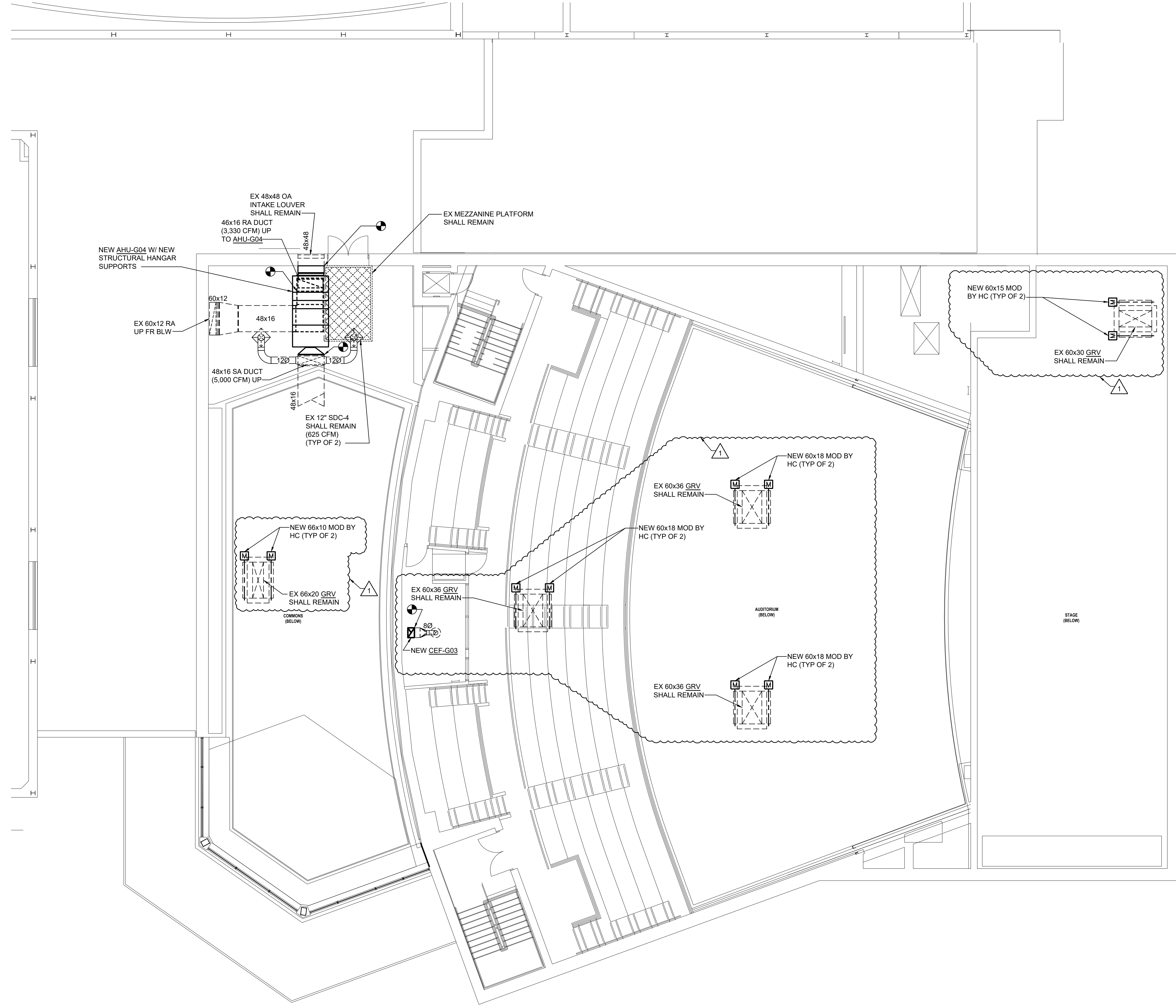


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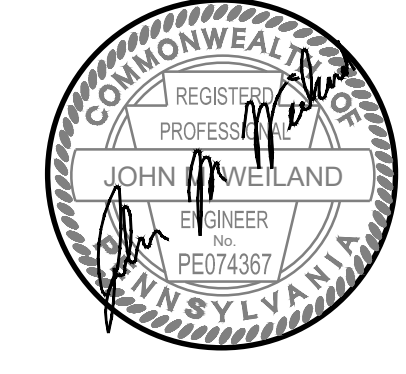
GENERAL NOTES THIS DRAWING

1. CONTRACTOR TO INSPECT AND CLEAN ALL EXISTING TRANSFER DUCTS.
2. ALL EXISTING FIN TUBES AND CABINET HEATERS SHALL BE CLEANED. EXISTING VALVES SHALL BE VERIFIED. CONTRACTOR SHALL REPORT ANY ISSUES TO ARCHITECT PRIOR TO PROCEEDING WITH WORK.
3. CONTRACTOR SHALL VERIFY CONDITION OF EXISTING DUCT INSULATION TO REMAIN. CONTRACTOR SHALL PATCH, REPAIR, AND REPLACE AS NECESSARY.
4. ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED, STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.

1 SECOND FLOOR PLAN - AREA 'E' - MECHANICAL NEW WORK
Scale: 1/8" = 1'-0" FIRST FLOOR ELEVATION 1252'-0"



1 SECOND FLOOR PLAN - AREA 'G' - MECHANICAL NEW WORK
 Scale: 1/8" = 1'-0" FIRST FLOOR ELEVATION 1252'-0"



REVISIONS

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△	03/21/24	ADDENDUM NO. 4

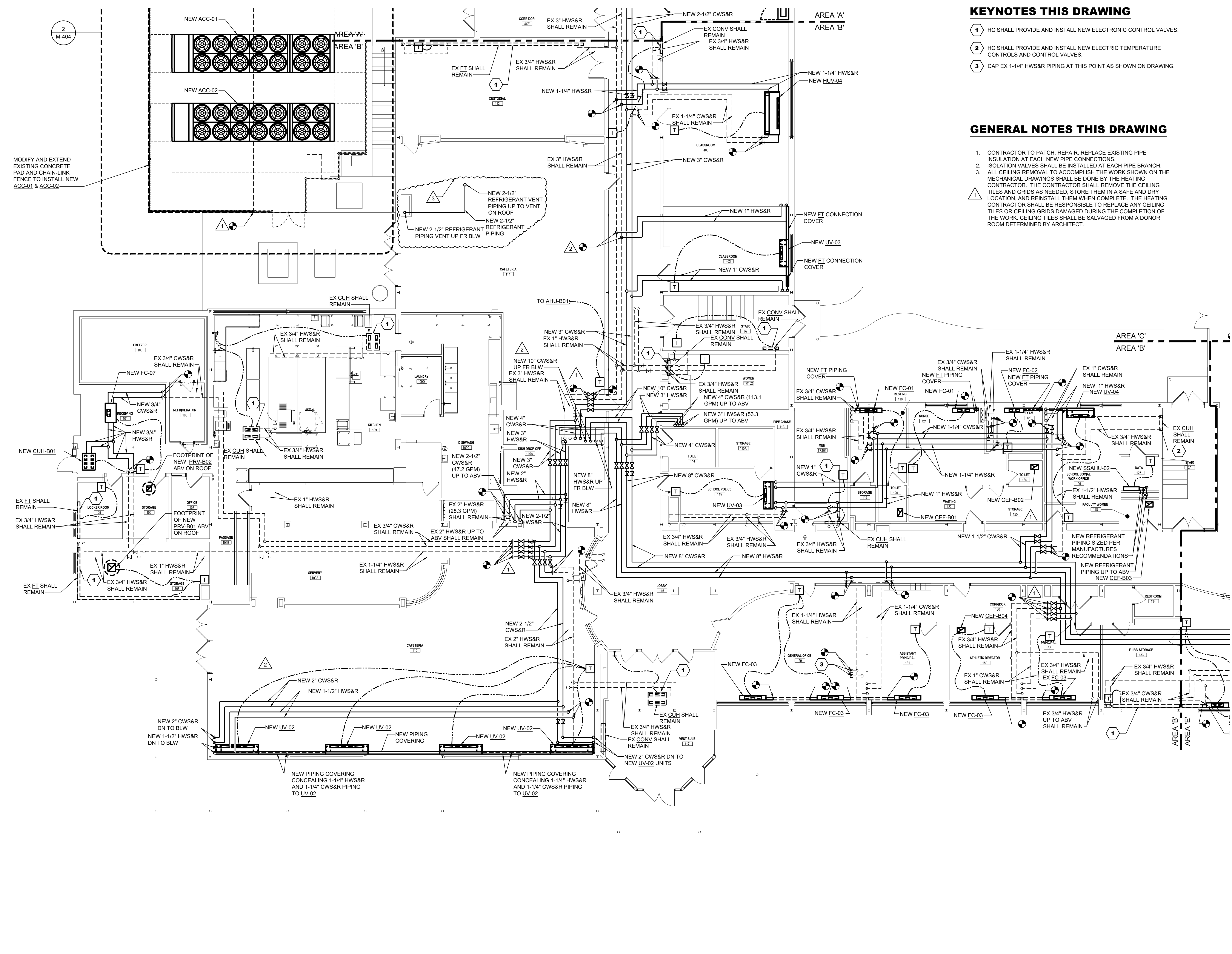
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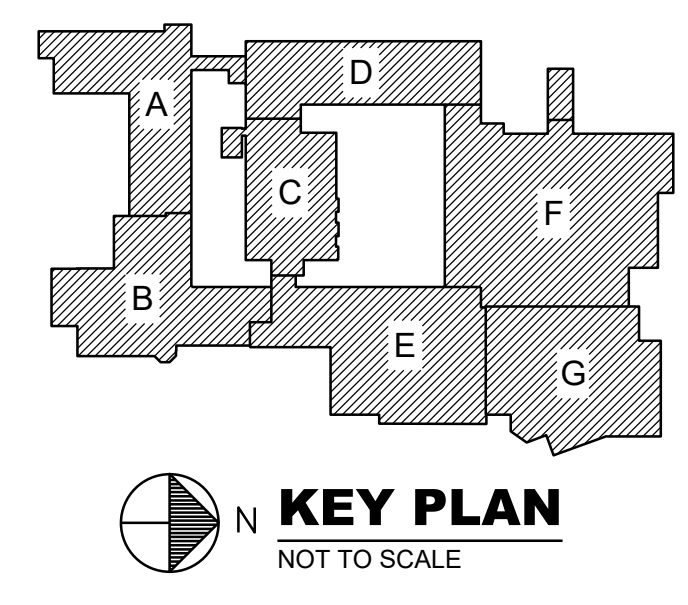
1. HC SHALL PROVIDE AND INSTALL NEW ELECTRONIC CONTROL VALVES.
2. HC SHALL PROVIDE AND INSTALL NEW ELECTRIC TEMPERATURE CONTROLS AND CONTROL VALVES.
3. CAP EX 1-1/4" HWS&R PIPING AT THIS POINT AS SHOWN ON DRAWING.

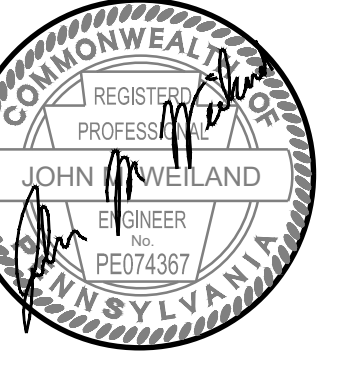
GENERAL NOTES THIS DRAWING

1. CONTRACTOR TO PATCH, REPAIR, REPLACE EXISTING PIPE INSULATION AT EACH NEW PIPE CONNECTIONS.
2. ISOLATION VALVES SHALL BE INSTALLED AT EACH PIPE BRANCH.
3. ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED, STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.



1 FIRST FLOOR PLAN - AREA 'B' - MECHANICAL PIPING NEW WORK
 Scale: 1/8" = 1'-0"
 FIRST FLOOR ELEVATION 1252'-0"



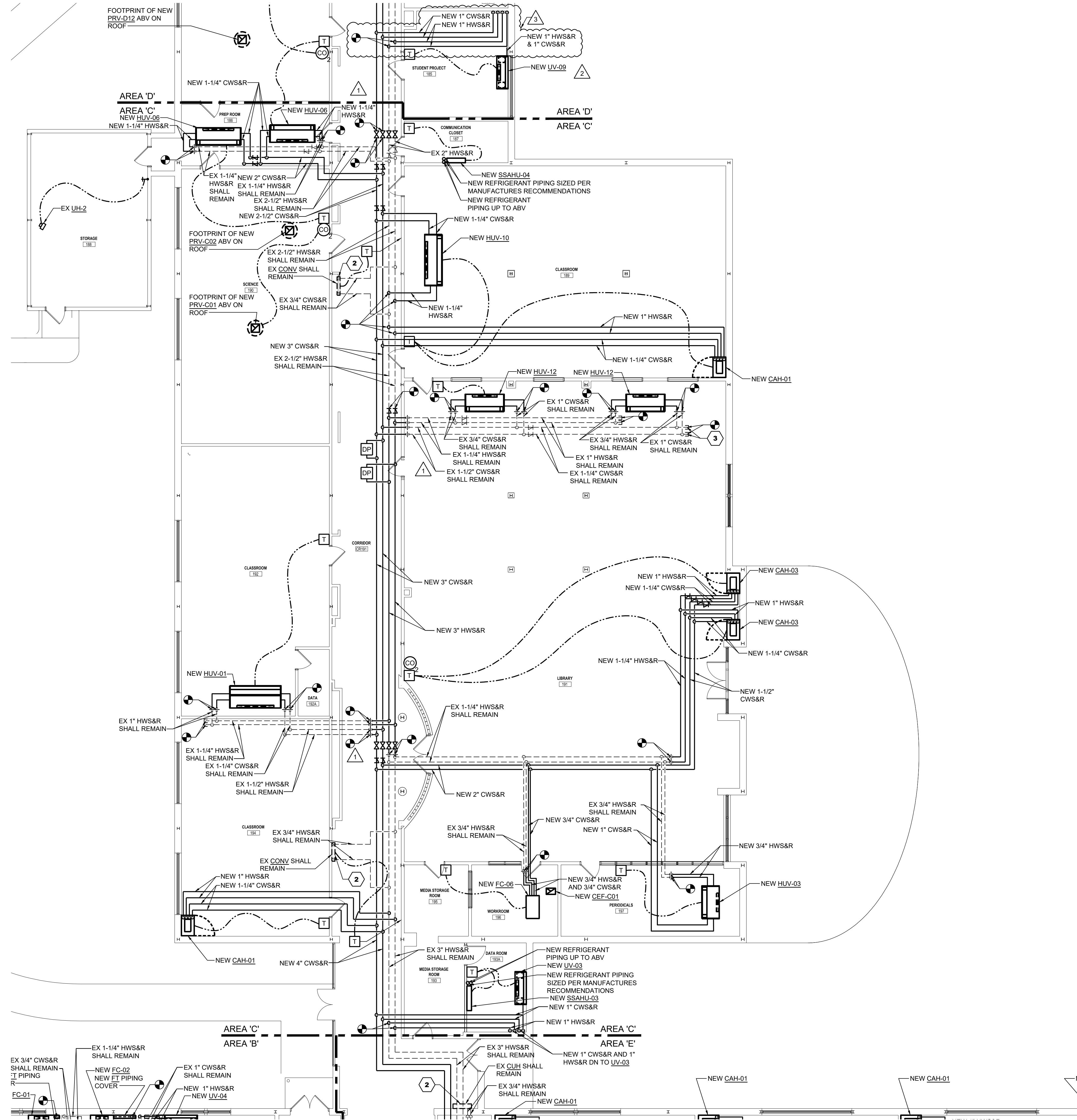


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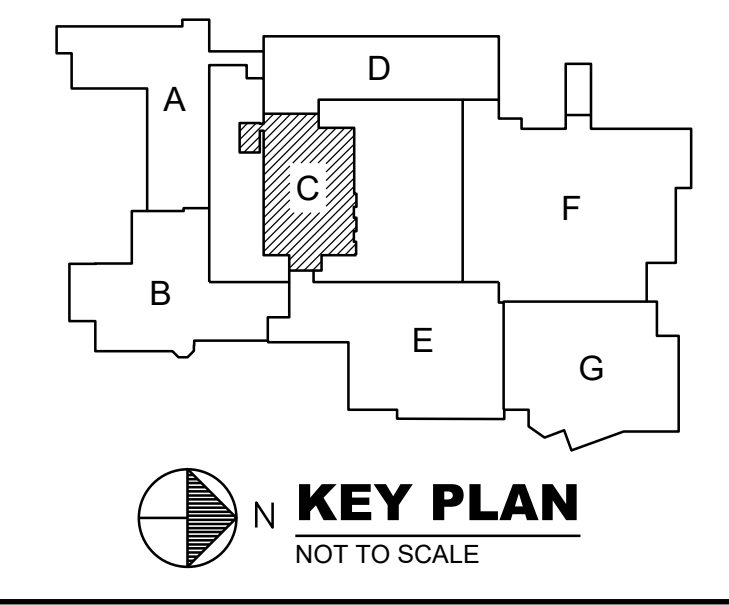
1. HC SHALL PROVIDE AND INSTALL NEW ELECTRONIC CONTROL VALVES.
2. HC SHALL PROVIDE AND INSTALL NEW ELECTRIC TEMPERATURE CONTROLS AND CONTROL VALVES.
3. DISCONNECT AND REMOVE EX 1" CWS&R PIPING TO THIS POINT AND CAP AS SHOWN ON DRAWING.

GENERAL NOTES THIS DRAWING

1. CONTRACTOR TO PATCH, REPAIR, REPLACE EXISTING PIPE INSULATION AT EACH NEW PIPE CONNECTIONS.
2. ISOLATION VALVES SHALL BE INSTALLED AT EACH PIPE BRANCH.
3. ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED, STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.



1 FIRST FLOOR PLAN - AREA 'C' - MECHANICAL PIPING NEW WORK
Scale: 1/8" = 1'-0"
FIRST FLOOR ELEVATION 1252'-0"



REVISIONS

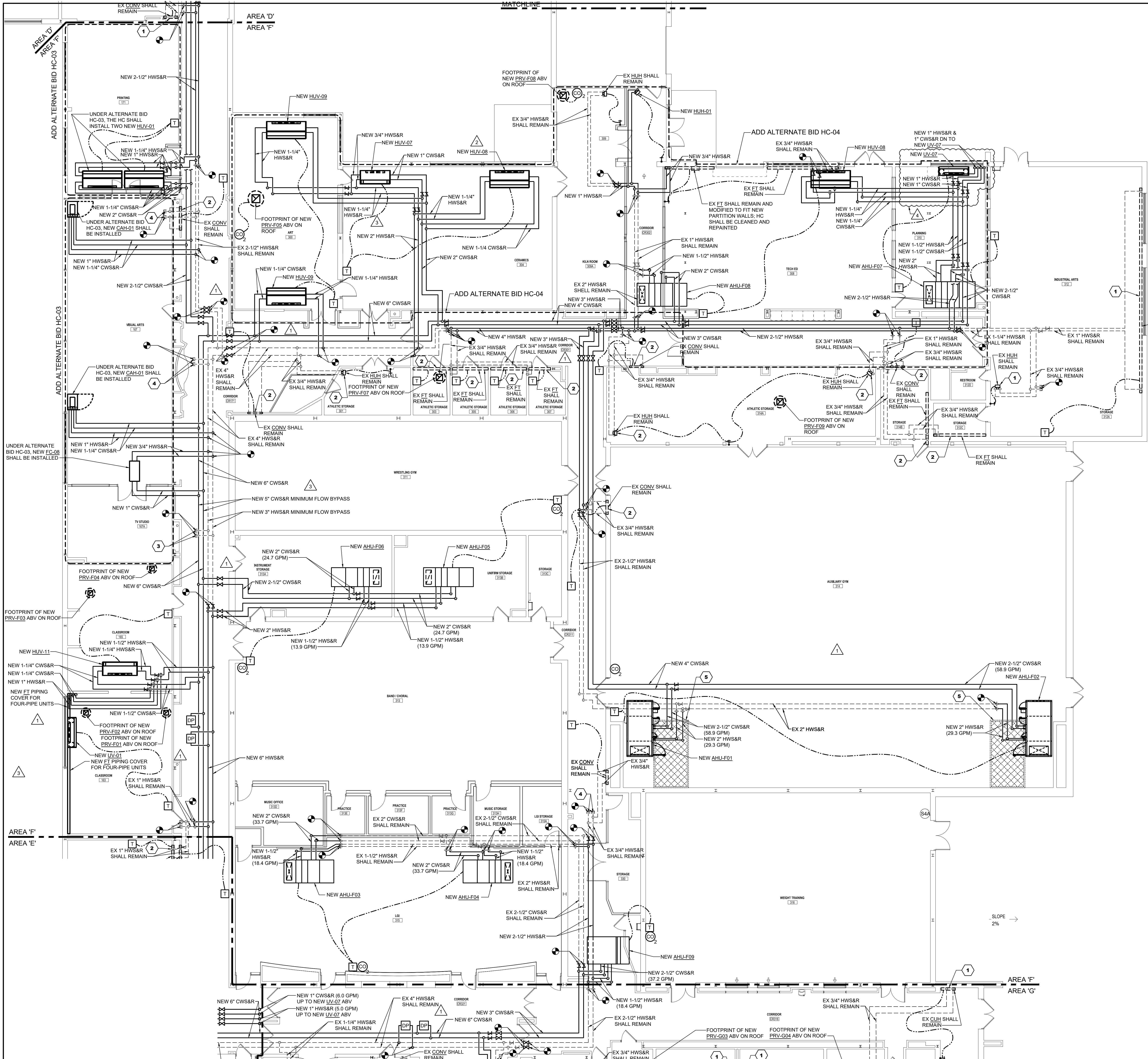
A	02/20/24	ADDENDUM NO. 1
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A	03/27/24	ADDENDUM NO. 4

BID SET 02/19/24

HIGH SCHOOL RENOVATIONS
511 HIGHLAND AVENUE, GROVE CITY, PA, 16127
GROVE CITY AREA SCHOOL DISTRICT
FIRST FLOOR PLAN - AREA - C
MECHANICAL PIPING NEW WORK

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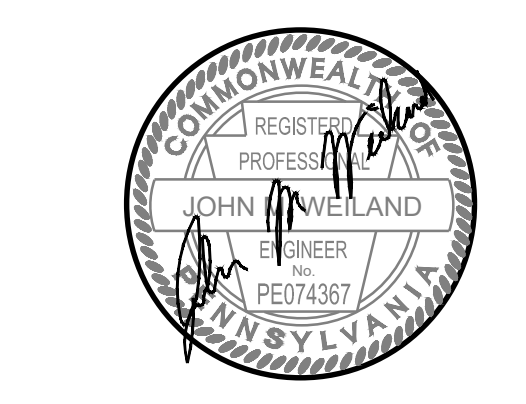
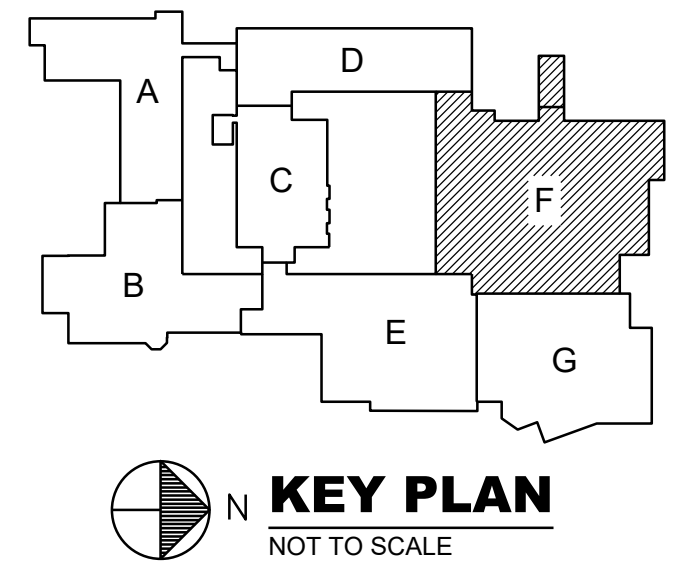
FIRST FLOOR PLAN - AREA 'F' - MECHANICAL PIPING NEW WORK
 Scale: 1/8" = 1'-0"
 FIRST FLOOR ELEVATION 1252'-0"

KEYNOTES THIS DRAWING

1. HC SHALL PROVIDE AND INSTALL NEW ELECTRIC CONTROL VALVES.
2. HC SHALL PROVIDE AND INSTALL NEW ELECTRIC TEMPERATURE CONTROLS AND CONTROL VALVES.
3. CAP EX 1" HWS&R PIPING AT THIS POINT AS SHOWN ON DRAWING.
4. CAP EX 3/4" HWS&R PIPING AT THIS POINT AS SHOWN ON DRAWING.
5. MECHANICAL AIR HANDLER UNIT SERVICE CATWALK MODIFICATIONS BY HC. APPROXIMATE SIZE AND LOCATION SHOWN ON PLAN. COORDINATE EXACT SIZE AND LOCATION WITH MECHANICAL DWGS AND MECHANICAL EQUIPMENT REQUIREMENTS. CATWALK SHALL BE DESIGNED FOR A UNIFORM LIVE LOAD OF 40 PSF. SUBMIT CALCULATIONS AND DRAWINGS STAMPED BY A REGISTERED PROFESSIONAL LICENSED IN PENNSYLVANIA FOR REVIEW. COORDINATE HANGER CONNECTION DETAIL WITH JOIST MANUFACTURER. MAXIMUM HANGER LOAD TO ROOF JOIST: 500 LB LIVE-LOAD, 250 LB DEAD-LOAD.

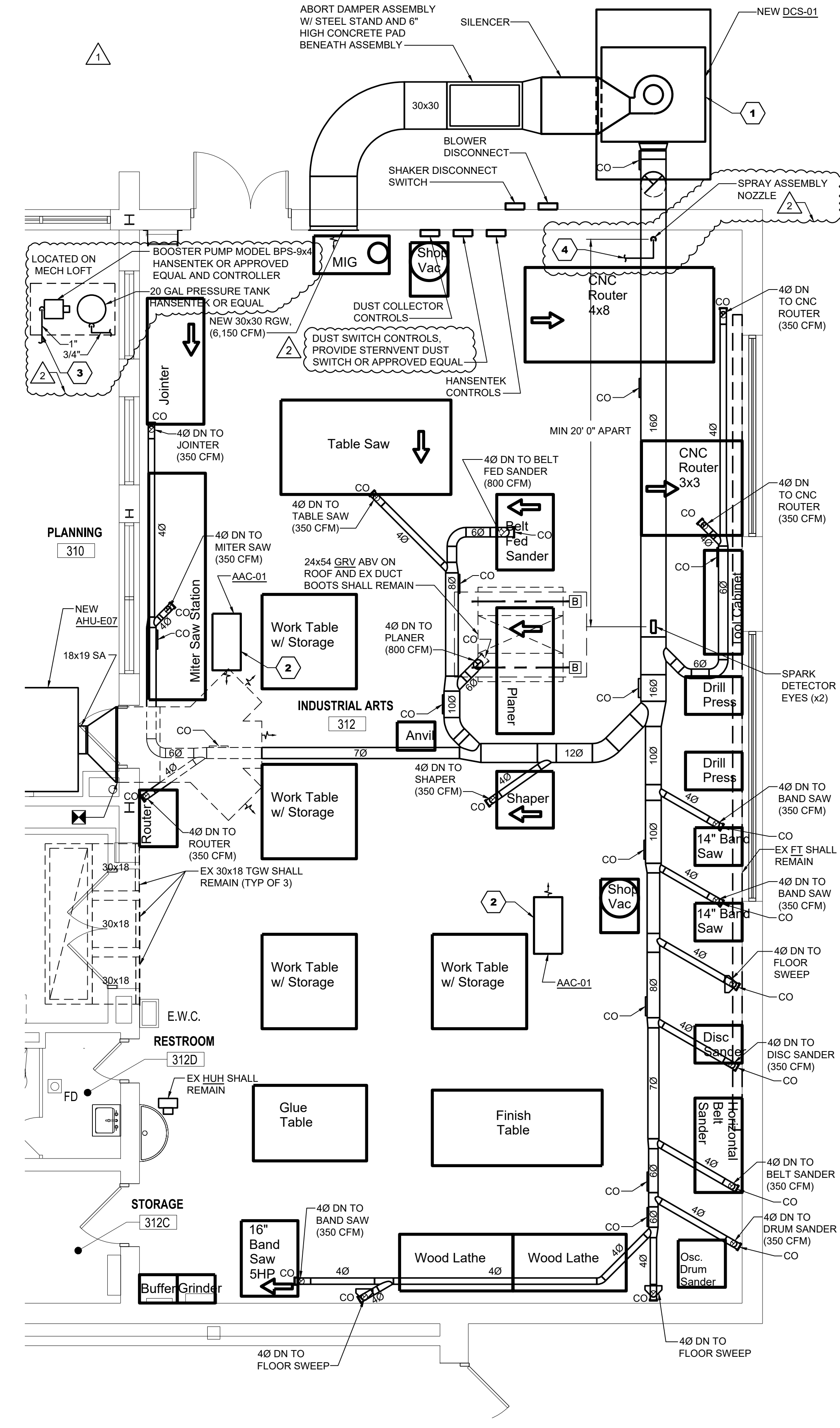
GENERAL NOTES THIS DRAWING

1. CONTRACTOR TO PATCH, REPAIR, REPLACE PIPE INSULATION AT CONNECTION TO EXISTING PIPE.
2. ISOLATION VALVES SHALL BE INSTALLED AT EACH PIPE BRANCH.
3. ALL CEILING REMOVAL TO ACCOMPLISH THE WORK SHOWN ON THE MECHANICAL DRAWINGS SHALL BE DONE BY THE HEATING CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CEILING TILES AND GRIDS AS NEEDED. STORE THEM IN A SAFE AND DRY LOCATION, AND REINSTALL THEM WHEN COMPLETE. THE HEATING CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY CEILING TILES OR CEILING GRIDS DAMAGED DURING THE COMPLETION OF THE WORK. CEILING TILES SHALL BE SALVAGED FROM A DONOR ROOM DETERMINED BY ARCHITECT.



REVISIONS	DATE	DESCRIPTION
1	02/29/24	ADDENDUM NO. 1
2	03/07/24	ADDENDUM NO. 2
3	03/13/24	ADDENDUM NO. 3
4	03/21/24	ADDENDUM NO. 4

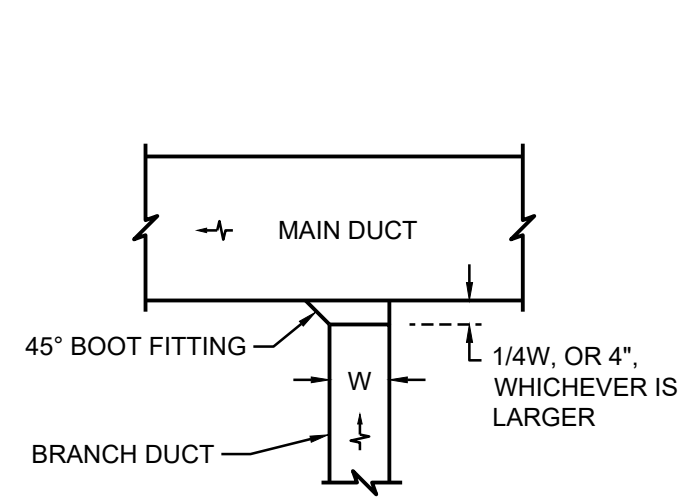
BID SET 02/19/24



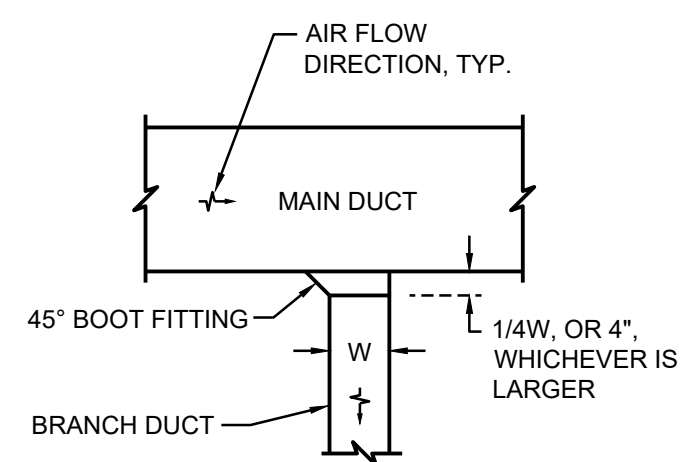
KEYNOTES THIS DRAWING

- 1 DCS-01 RECIRCULATING DUST COLLECTOR 24x36x36 LG SUPPLY SILENCER, BLOWER MOTOR 20HP, 3600/480V TEFC, 3.450 RPM, SHAKER MOTOR 1/2HP, 3/60/480V TEFC, 850 RPM, BLOWER: NON-SPARKING AMCA "C", AUTOMATIC SHAKER, MUL TI-POCKET FILTER MODULES, 8-OUNCE COTTON SATEEN FABRIC, 6,150 CFM @ 12" EXH. SP. COMPLETE W/ CONTROL PANEL, VFD FOR BLOWER MOTOR, STARTER FOR SHAKER MOTOR, ETC. BASIS OF DESIGN STERNVENT MODEL DKPL72020 (W/ DUSTSWITCH AND SPARK DETECTOR)
- 2 AAC-01 AMBIENT AIR CLEANER (HANG FROM CEILING PER MANUFACTURER'S RECOMMENDATIONS), 2,500 CFM NOMINAL AIRFLOW, 0.75 HP, 1/60/115V, BASIS OF DESIGN: AIRFLOW SYSTEMS INC. MODEL F70R.
- 3 EXTEND AND CONNECT 1" BOOSTER WATER SUPPLY LINE FROM BOOSTER PUMP WITH SHUT-OFF TO SPRAY ASSEMBLY IN THE 160 RETURN DUCT TO THE SAW DUST COLLECTOR
- 4 EXTEND AND CONNECT 1" WATER SUPPLY FROM BOOSTER PUMP TO SPRAY ASSEMBLY

1 INDUSTRIAL ARTS CLASSROOM - MECHANICAL NEW WORK
 Scale: 1/4" = 1'-0"
 FIRST FLOOR ELEVATION 1252'-0"

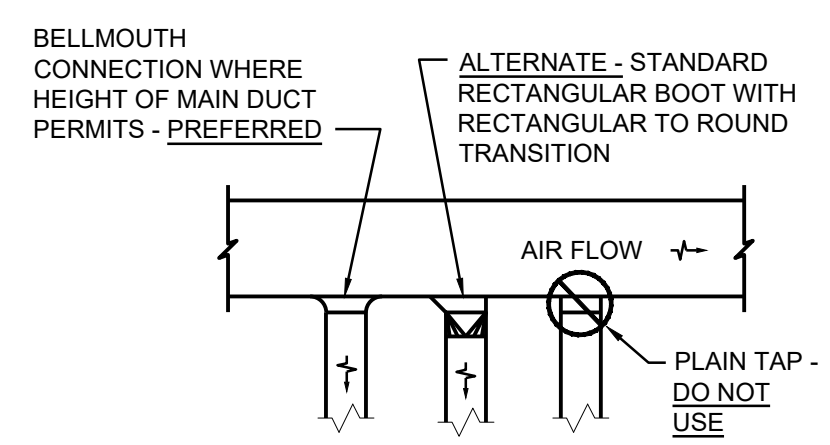


CONVERGING BRANCH DUCT TAKE-OFF WHERE BRANCH DUCT FLOW AREA IS LESS THAN 25% OF MAIN DUCT AREA

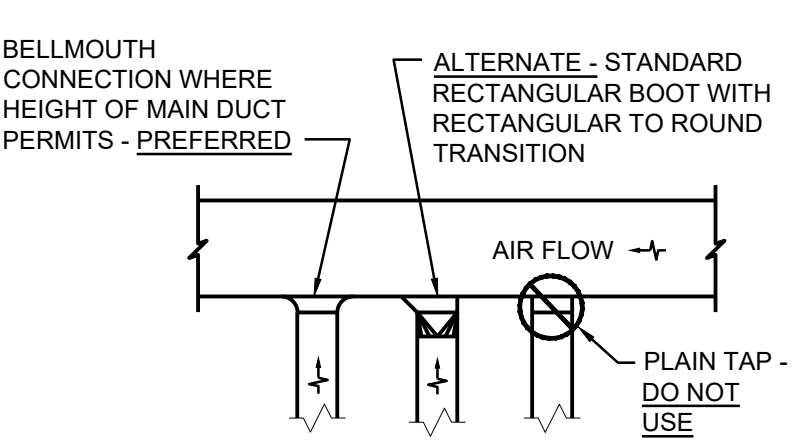


DIVERGING BRANCH DUCT TAKE-OFF WHERE BRANCH DUCT AREA IS LESS THAN 25% OF MAIN DUCT AREA

RECTANGULAR BRANCH DUCT CONNECTIONS TO RECTANGULAR DUCT



DIVERGING BRANCH FLOW



CONVERGING BRANCH FLOW

- NOTES:**
- ALTERNATE FITTINGS SHALL BE USED WHEN DUCT HEIGHT DOES NOT PERMIT THE USE OF THE PREFERRED FULL SIZE BELLMOUTH. NOTE THAT PLAIN TAPS MAY BE DEPICTED ON THE PLANS. IN SUCH CASES, PROVIDE THE ALTERNATE CONNECTION SHOWN HERE.
 - THIS DETAIL APPLIES TO BRANCH RUNOUTS TO DIFFUSERS AS WELL AS SUB-MAIN BRANCH DUCT TAKEOFFS.
 - FOR ALTERNATE RECTANGULAR CONNECTIONS, THE ROUND TO RECTANGULAR TRANSITION SHALL BE TO A SIZE EQUAL TO THE MAIN DUCT HEIGHT, AND A WIDTH AS REQUIRED TO MAINTAIN AN EQUAL OR GREATER FLOW AREA AS THE CONNECTING ROUND BRANCH DUCT.

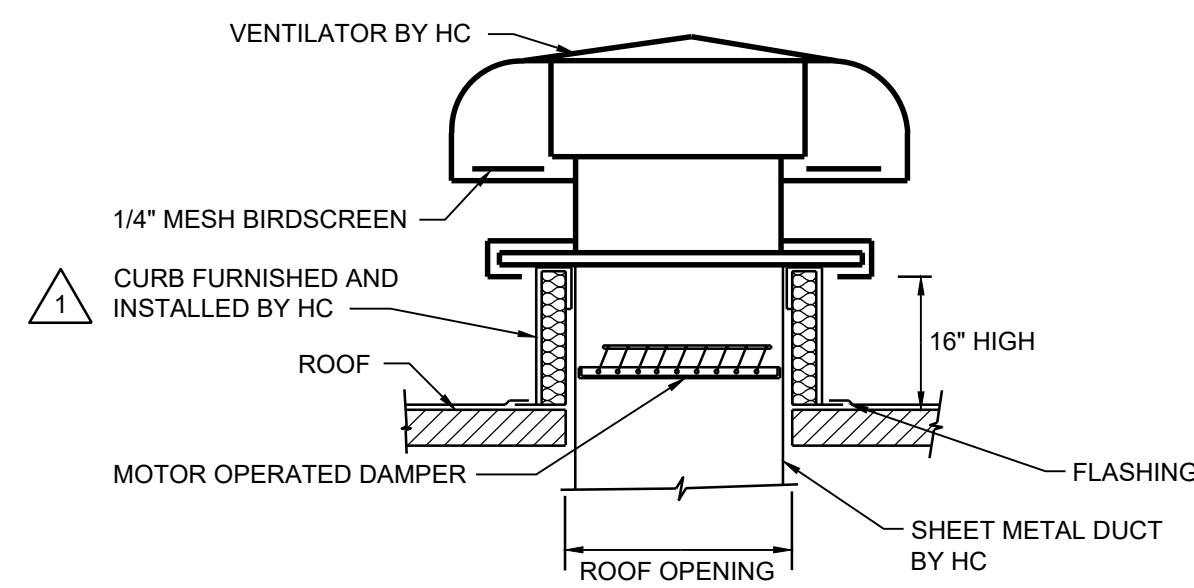
ROUND BRANCH DUCT CONNECTIONS TO RECTANGULAR MAIN DUCT

NOTE: IN THE EVENT OF A CONFLICT BETWEEN THE PLAN REPRESENTATIONS AND THIS DETAIL, THIS DETAIL SHALL TAKE PRECEDENCE.

1 DUCTWORK FITTING DETAILS

NOT TO SCALE

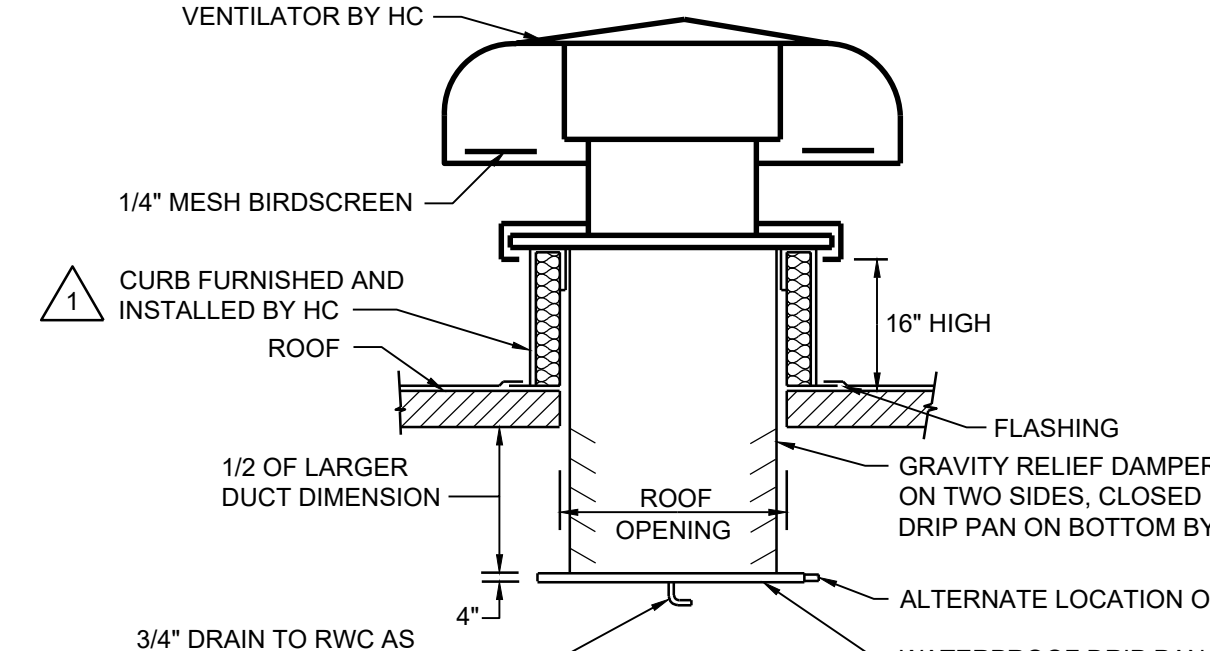
NOTE: THE ROOF OPENING OF EACH VENTILATOR IS INDICATED ON THE SCHEDULE.



8 TYPE B-1 GRAVITY ROOF VENTILATOR

NOT TO SCALE

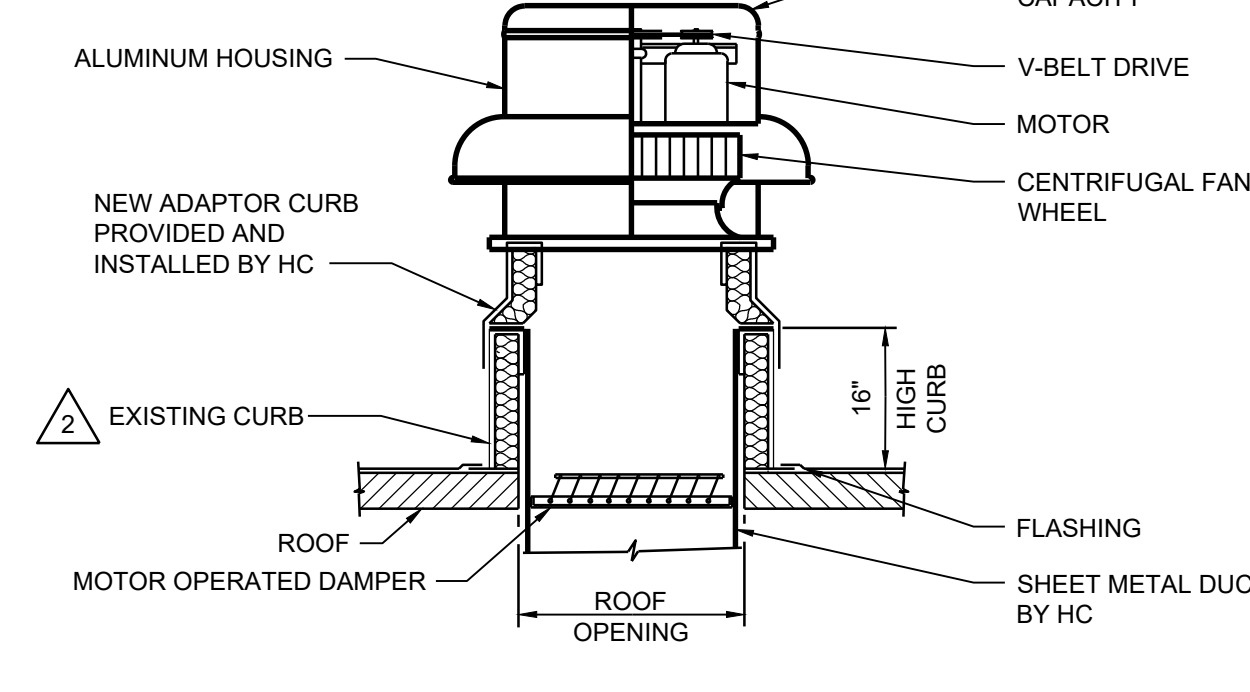
NOTE: THE ROOF OPENING OF EACH VENTILATOR IS INDICATED ON THE SCHEDULE.



9 TYPE B-2 GRAVITY ROOF VENTILATOR

NOT TO SCALE

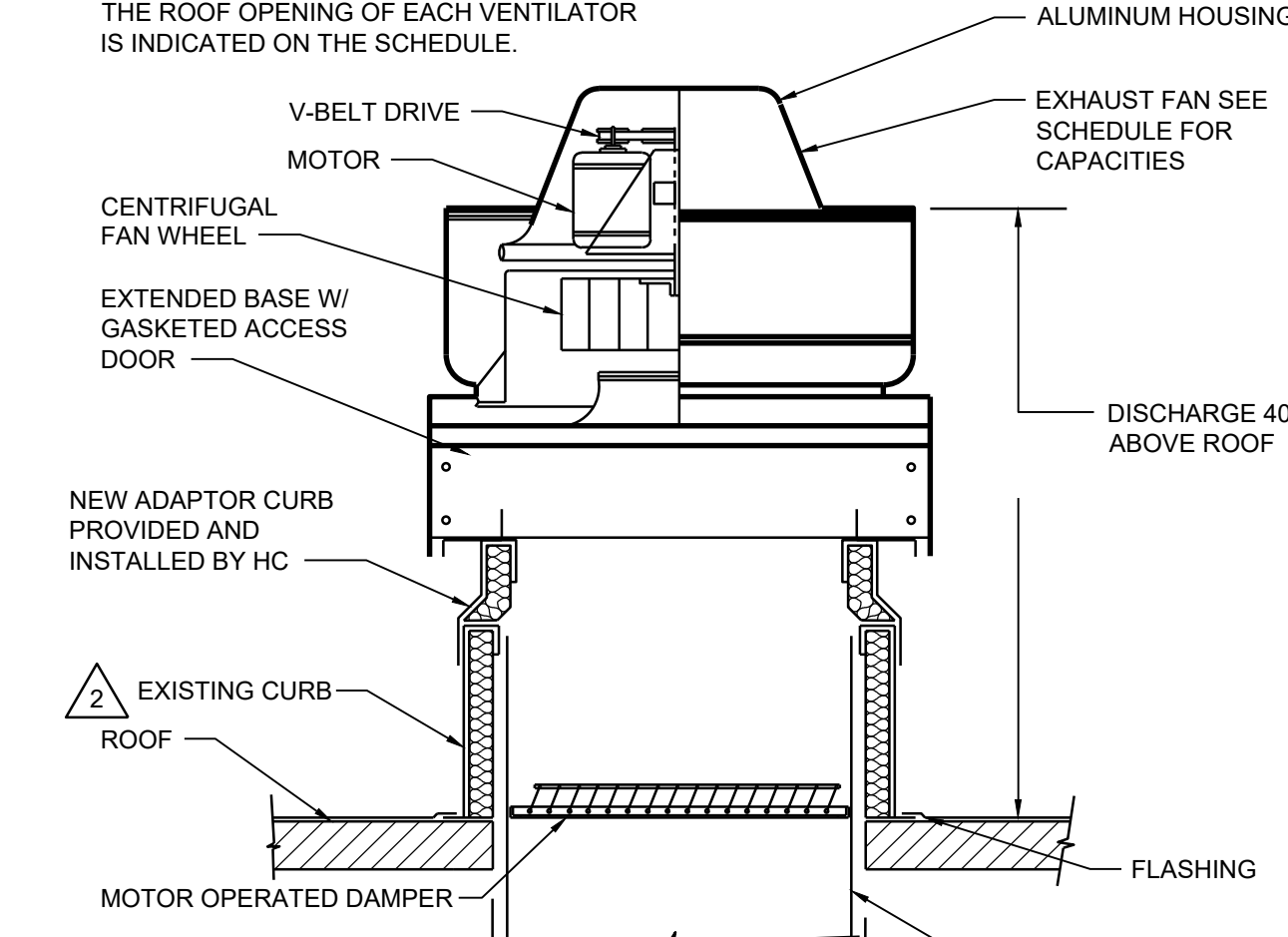
NOTE: THE ROOF OPENING OF EACH VENTILATOR IS INDICATED ON THE SCHEDULE.



10 EXISTING TYPE - RE POWER ROOF VENTILATOR

NOT TO SCALE

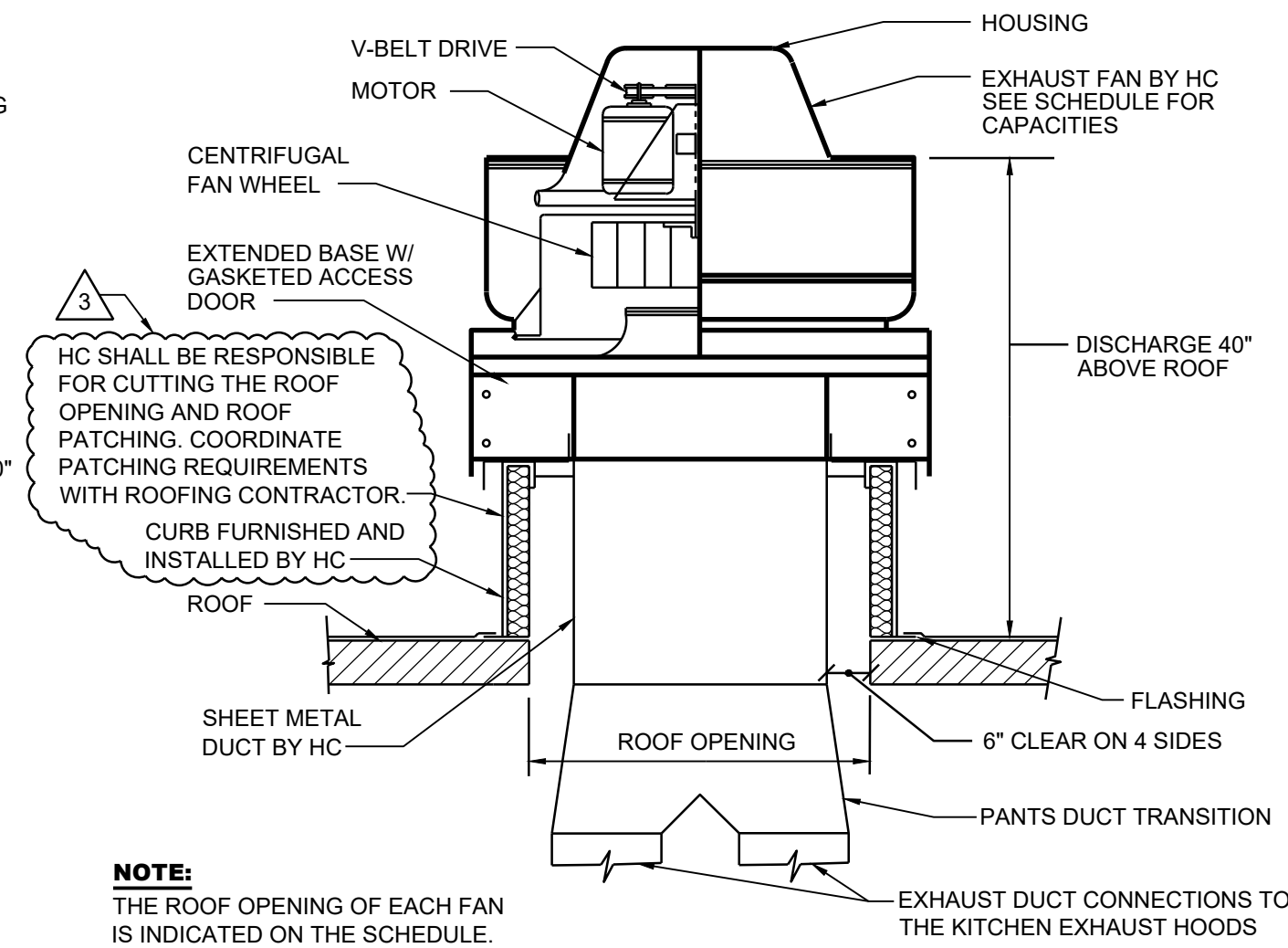
NOTE: THE ROOF OPENING OF EACH VENTILATOR IS INDICATED ON THE SCHEDULE.



11 EXISTING TYPE - HE EXHAUST FAN

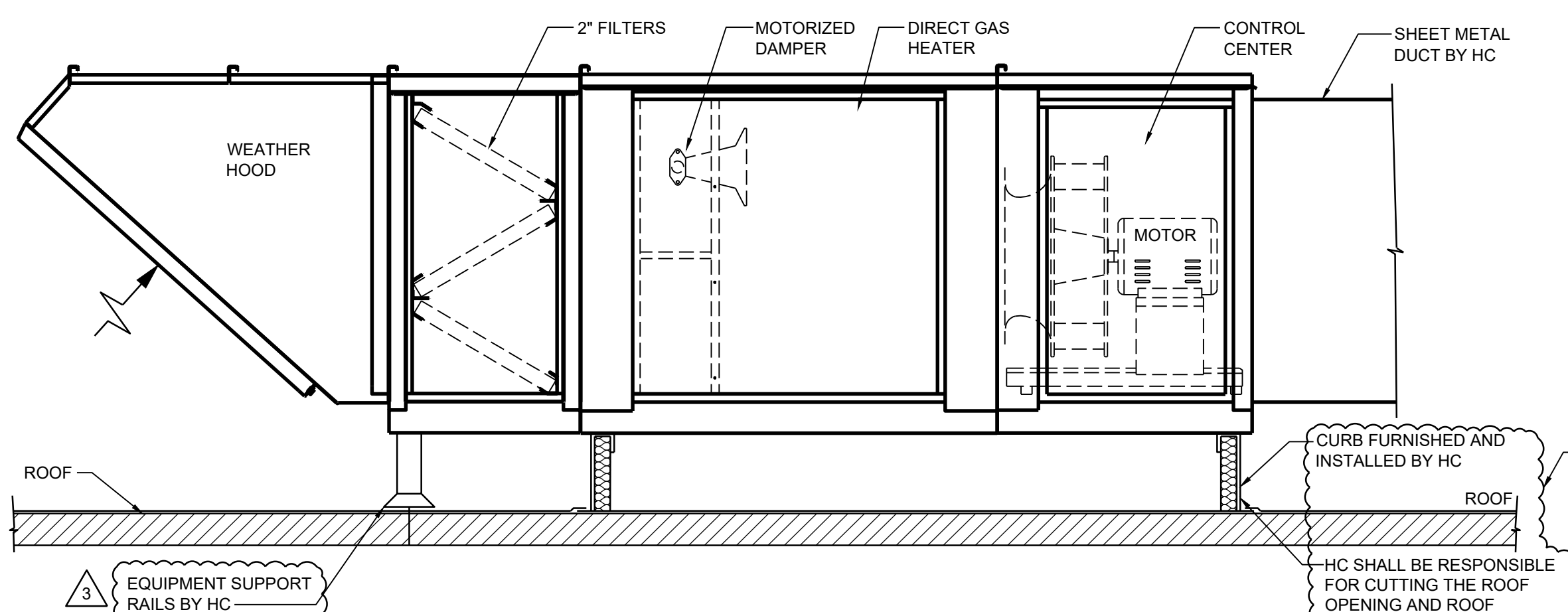
NOT TO SCALE

NOTE: THE ROOF OPENING OF EACH FAN IS INDICATED ON THE SCHEDULE.



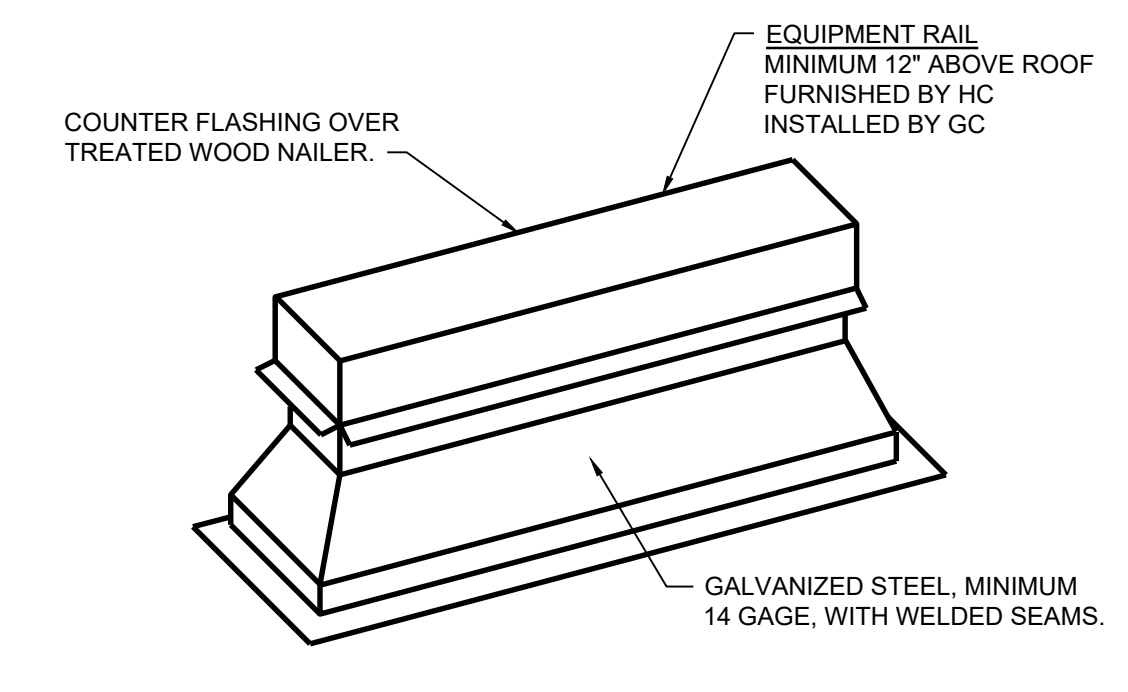
12 NEW TYPE KHE KITCHEN HOOD EXHAUST FAN - PRV-B04

NOT TO SCALE



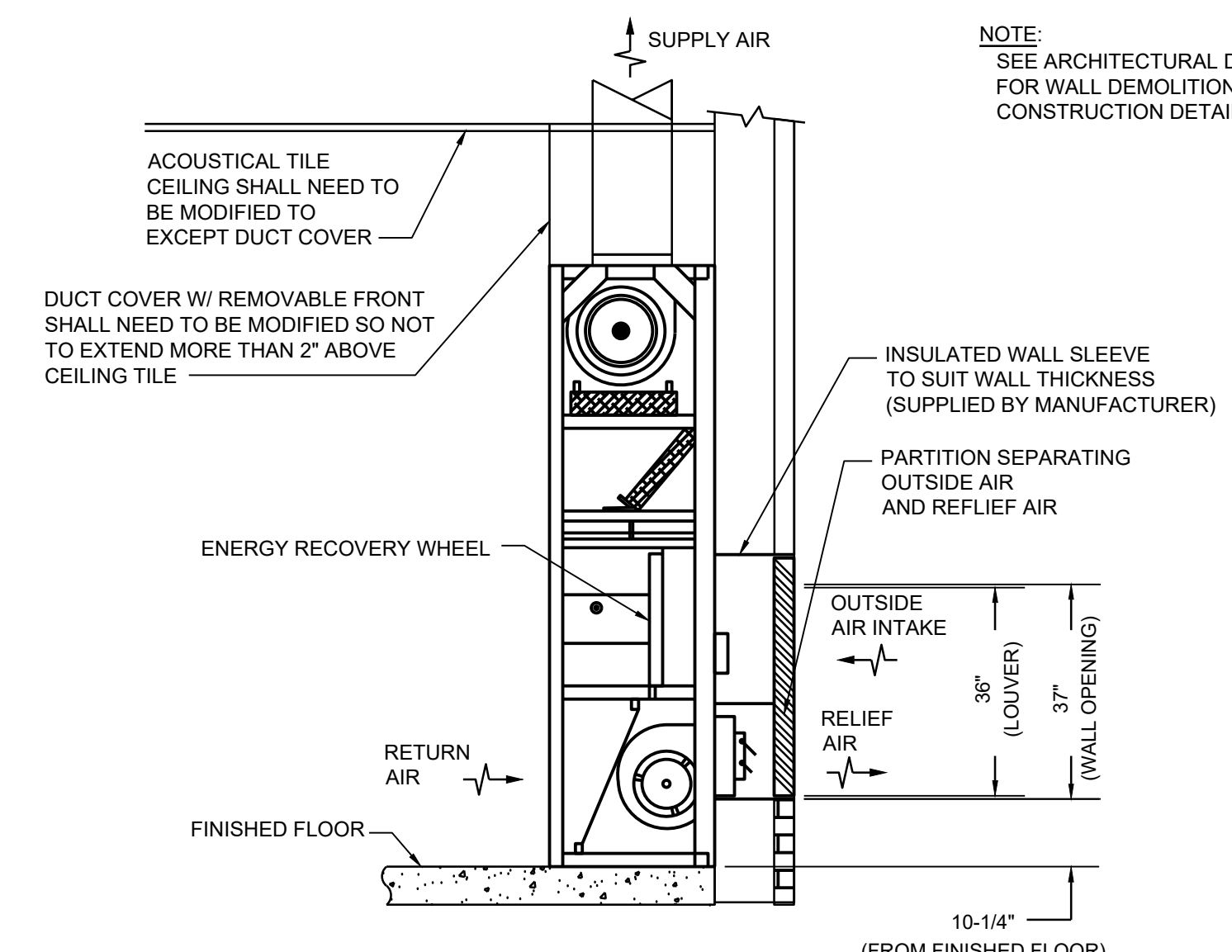
13 MAKE-UP AIR UNIT (DIRECT GAS FIRED)

NOT TO SCALE



14 EQUIPMENT RAIL FOR ROOF MOUNTING

NOT TO SCALE

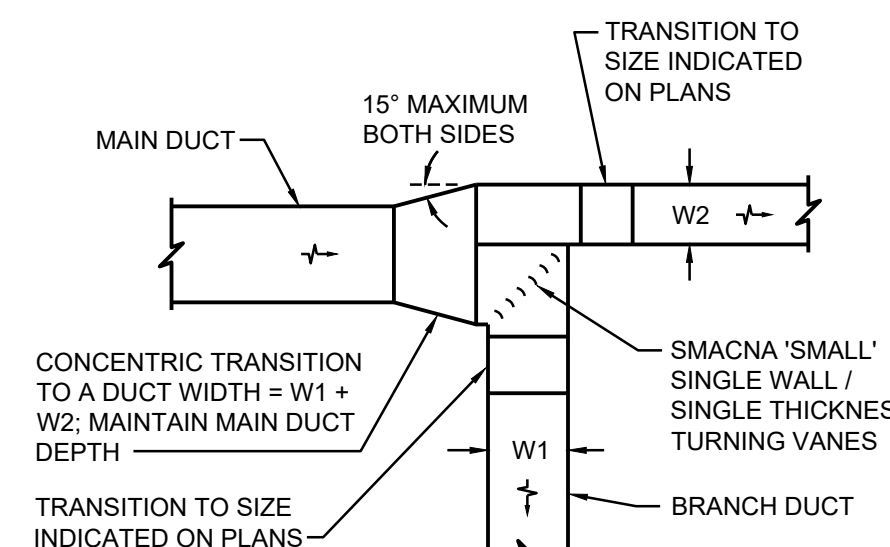


15 TYPICAL CLASSROOM (CAH) VENTING DETAIL FOR WALL WITHOUT WINDOW

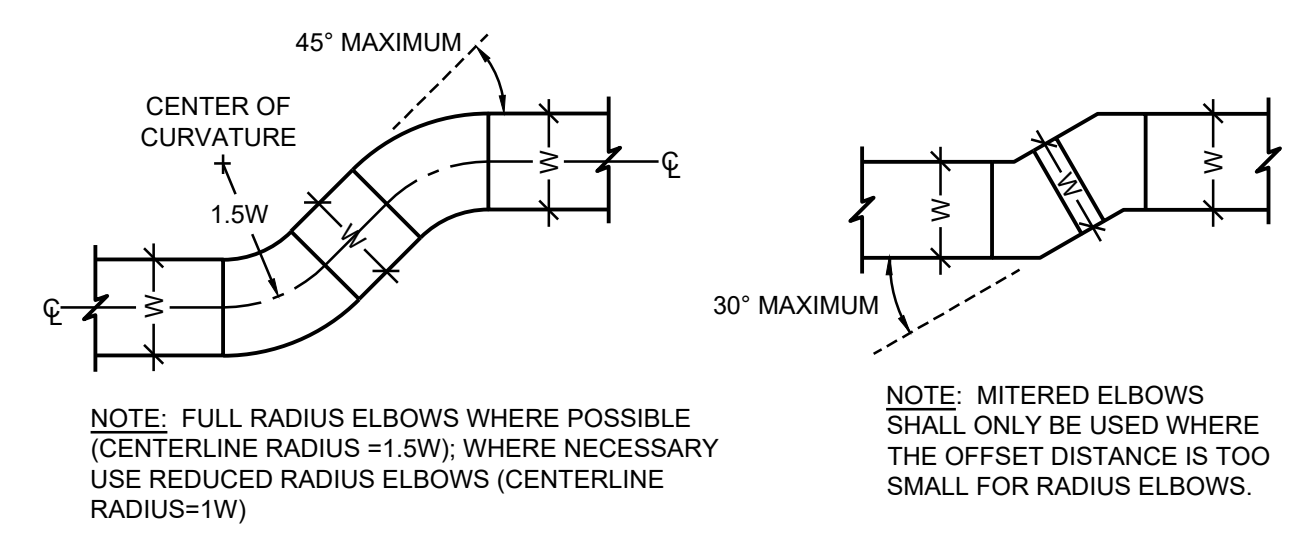
NOT TO SCALE

CONVERGING BRANCH DUCT TAKE-OFF WHERE BRANCH DUCT FLOW AREA IS LESS THAN 25% OF MAIN DUCT AREA

CONVERGING BRANCH DUCT TAKE-OFF WHERE BRANCH DUCT FLOW AREA IS GREATER THAN 25% OF MAIN DUCT AREA

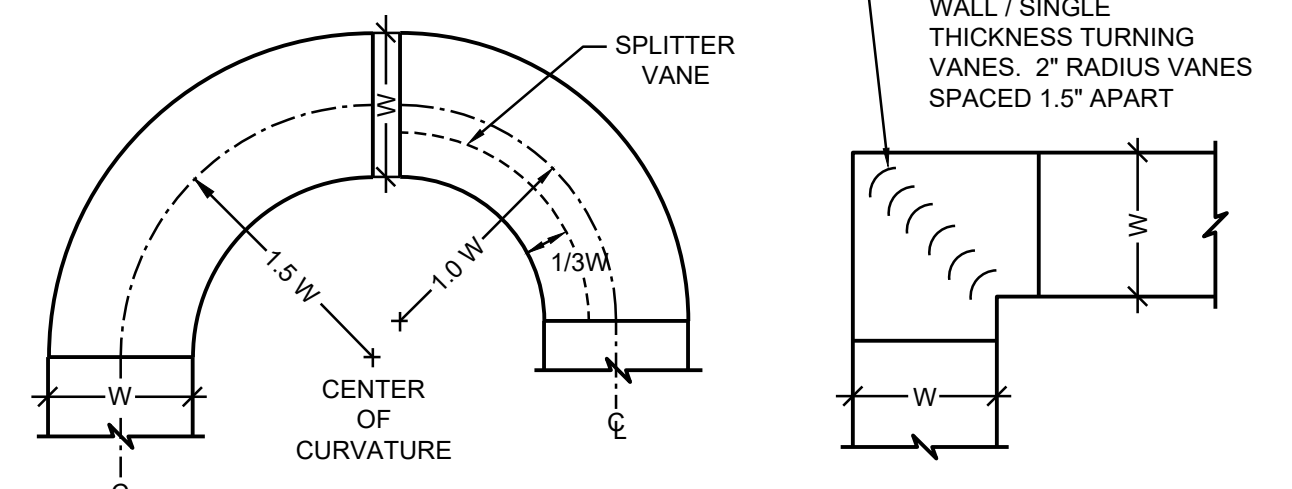


DIVERGING BRANCH DUCT TAKE-OFF WHERE BRANCH DUCT AREA IS GREATER THAN 25% OF MAIN DUCT AREA



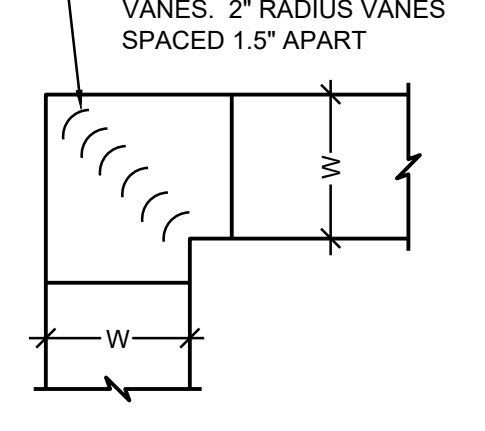
TRANSITIONS

OFFSETS



MITERED ELBOW OFFSETS

SMACNA 'SMALL' SINGLE WALL / SINGLE THICKNESS TURNING VANES

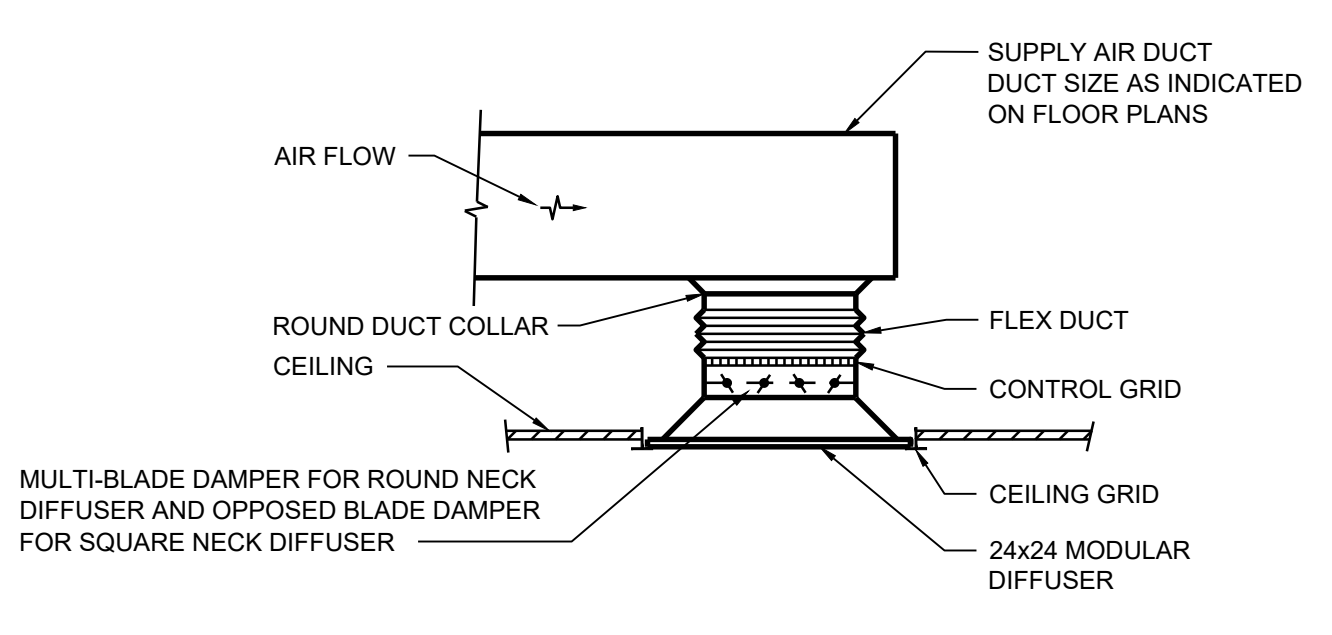


MITERED 90 DEG. ELBOW - RECTANGULAR DUCT

- NOTES:**
- USE THIS DESIGN WHERE MITERED 90 ELLS ARE SHOWN ON PLANS OR IF SPACE CONDITIONS DO NOT PERMIT INSTALLATION OF 1.5W C-L RADIUS 90 DEG. ELLS.
 - PROVIDE TURNING VANES IN ALL MITERED DUCT ELBOWS, EXCEPT FOR TRANSFER DUCTS, AND GREASE EXHAUST DUCTS, AND SOLID MATERIAL-HANDLING DUCTS. VANES MAY NOT BE EXPLICITLY SHOWN ON THE PLANS FOR CLARITY PURPOSES ONLY.
 - ALSO PROVIDE SPLITTER VANES WHERE INDICATED ON THE PLANS.

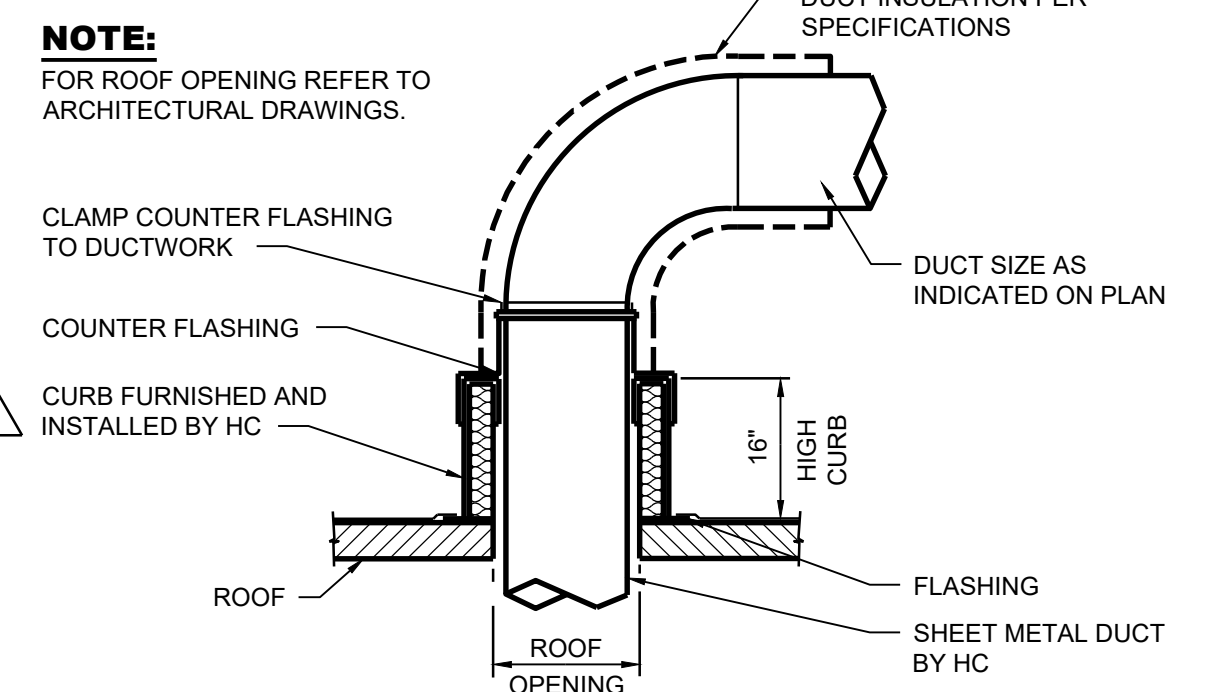
RADIUS ELBOWS

ELBOWS



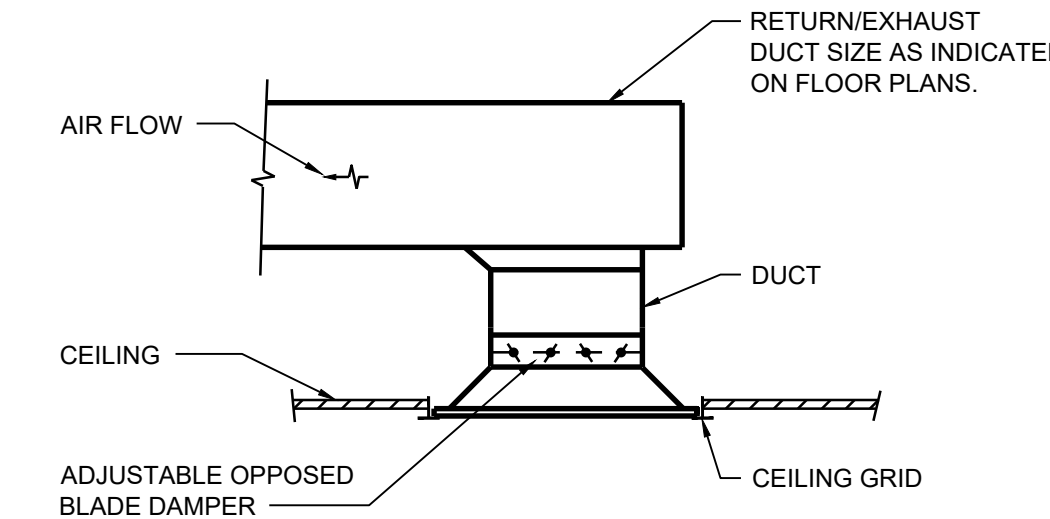
2 SUPPLY AIR DIFFUSER SQUARE TYPICAL CONNECTION

NOT TO SCALE



3 DUCT THRU ROOF (RECTANGULAR)

NOT TO SCALE

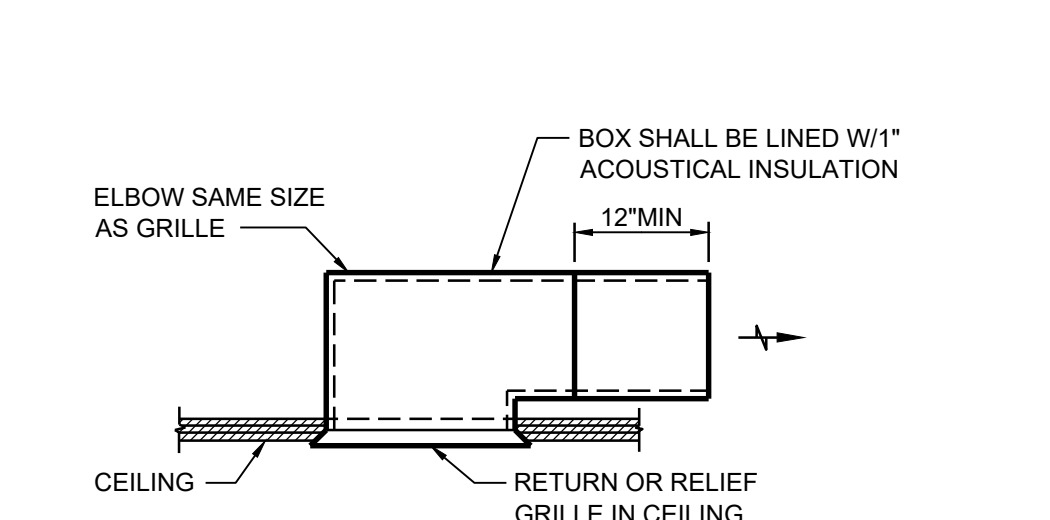


4 RETURN/EXHAUST REGISTER TYPICAL CONNECTION

NOT TO SCALE

5 WATERTIGHT DEPRESSION DETAIL

NOT TO SCALE



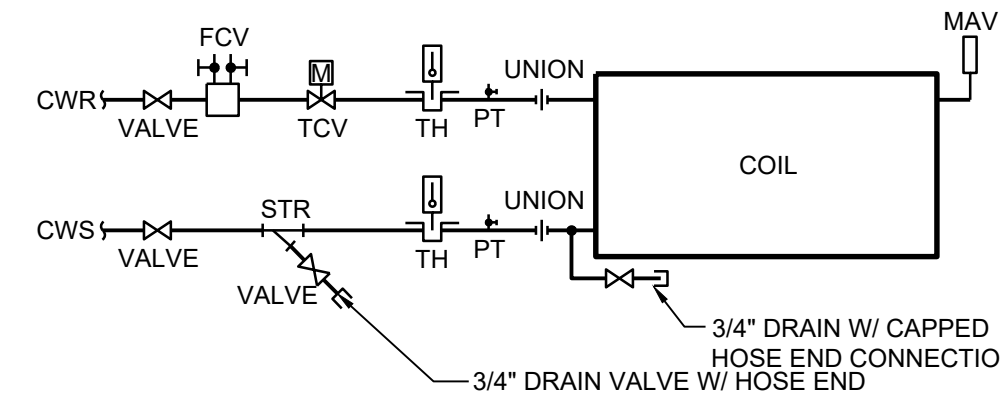
6 RELIEF/TRANSFER AIR GRILLE BOX DETAIL

NOT TO SCALE

7 WATERTIGHT INTAKE DUCT CONNECTION

NOT TO SCALE

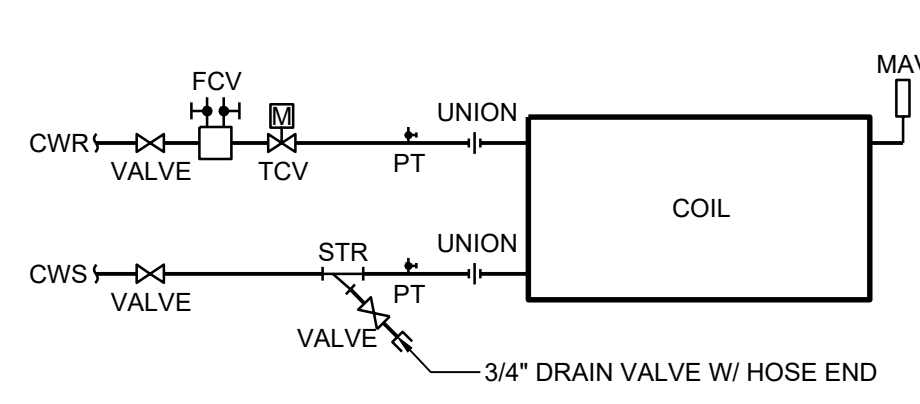
- NOTES:**
- THE AHU COIL SHALL BE PIPED IN A MANNER IN WHICH ONLY THE UNIONS MUST BE DISCONNECTED TO PULL/SERVICE THE COIL
 - CONTROL VALVE SHALL BE PROVIDED WITH FLANGED ENDS OR SHALL BE PROVIDED WITH ADJACENT UNIONS TO FACILITATE REMOVAL
 - IF THE AHU HAS MULTIPLE COILS, THEN ALL COMPONENTS SHOWN SHALL BE FOR EACH INDIVIDUAL COIL, EXCEPT THAT ONLY (1) ONE TCV AND STRAINER ARE REQUIRED FOR THE ENTIRE COIL BANK



INDOOR AIR HANDLING UNIT PIPING SCHEMATIC CHILLED WATER - 2-WAY

14 NOT TO SCALE

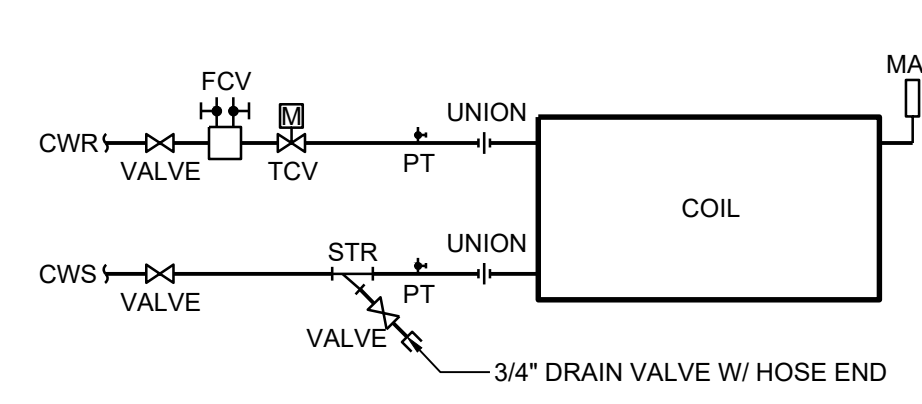
- NOTES:**
- INSTALL DRAIN PAN BELOW ALL VALVES AND UNINSULATED PIPING
 - CONTROL VALVE SHALL BE PROVIDED WITH ADJACENT UNIONS TO FACILITATE REMOVAL



UNIT VENTILATOR PIPING SCHEMATIC CHILLED WATER - 2-WAY

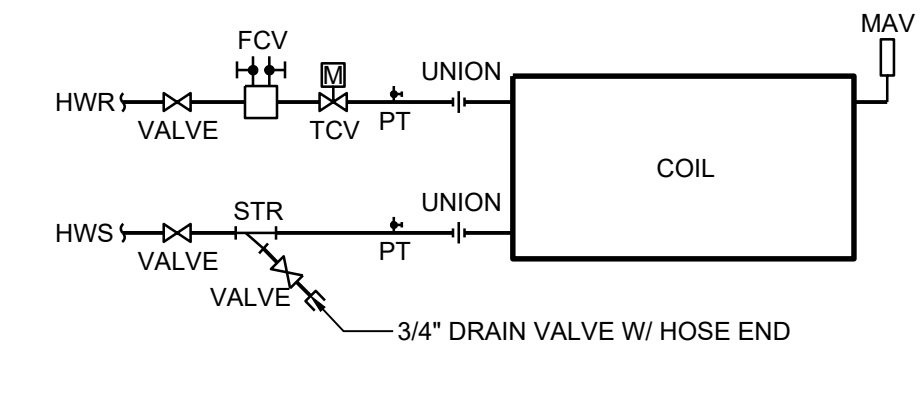
15 NOT TO SCALE

NOTE TO CONTRACTOR
CONTROL VALVE SHALL BE PROVIDED WITH ADJACENT UNIONS TO FACILITATE REMOVAL



FAN COIL PIPING SCHEMATIC CHILLED WATER - 2-WAY

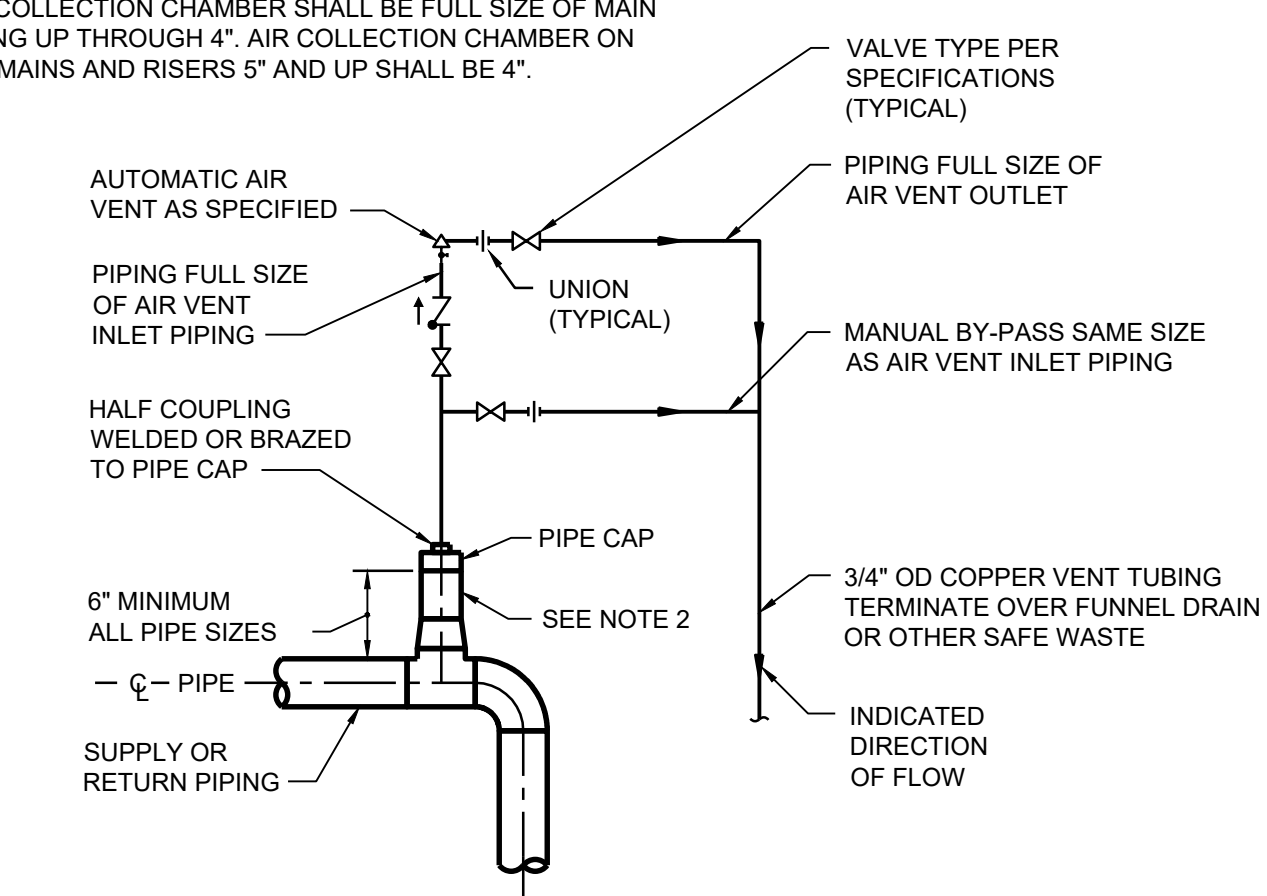
16 NOT TO SCALE



CABINET UNIT HEATER PIPING SCHEMATIC - HOT WATER

17 NOT TO SCALE

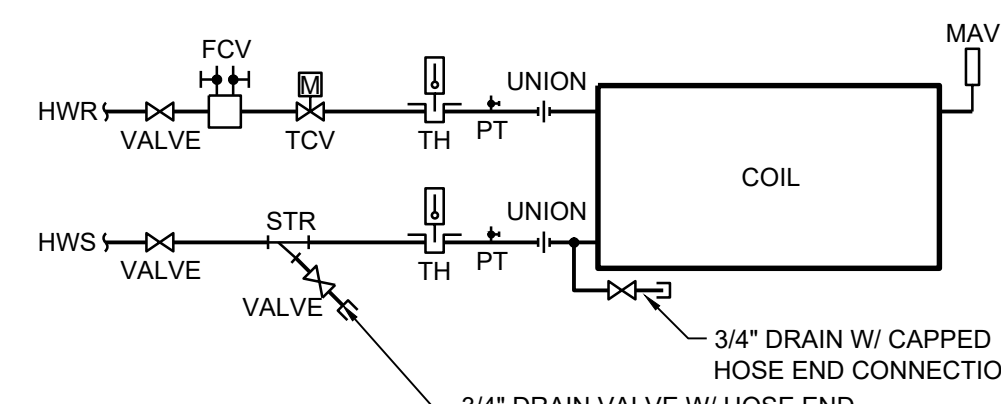
- NOTES:**
- AUTOMATIC AIR VENTS ARE TO BE PROVIDED IN THE FOLLOWING LOCATIONS:
A. WHERE INDICATED ON DRAWINGS
B. WHERE ACCESS TO THE VENT IS RESTRICTED
 - AIR COLLECTION CHAMBER SHALL BE FULL SIZE OF MAIN PIPING UP THROUGH 4". AIR COLLECTION CHAMBER ON ALL MAINS AND RISERS 5" AND UP SHALL BE 4".



18 AUTOMATIC AIR VENT SCHEMATIC

NOT TO SCALE

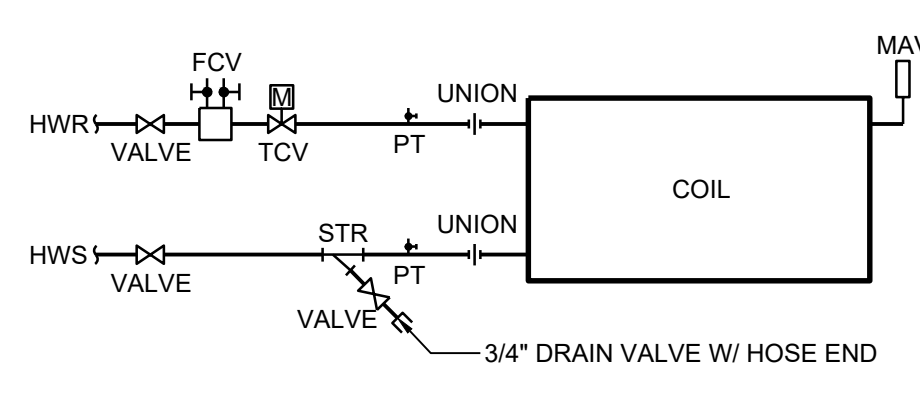
- NOTES:**
- THE AHU COIL SHALL BE PIPED IN A MANNER IN WHICH ONLY THE UNIONS MUST BE DISCONNECTED TO PULL/SERVICE THE COIL
 - CONTROL VALVE SHALL BE PROVIDED WITH FLANGED ENDS OR SHALL BE PROVIDED WITH ADJACENT UNIONS TO FACILITATE REMOVAL
 - IF THE AHU HAS MULTIPLE COILS, THEN ALL COMPONENTS SHOWN SHALL BE FOR EACH INDIVIDUAL COIL, EXCEPT THAT ONLY (1) ONE TCV AND STRAINER ARE REQUIRED FOR THE ENTIRE COIL BANK



INDOOR AIR HANDLING UNIT PIPING SCHEMATIC - HOT WATER - 2-WAY

19 NOT TO SCALE

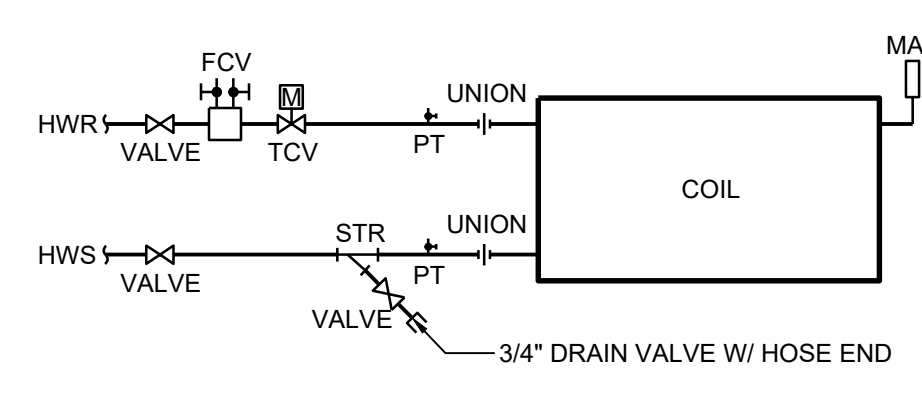
NOTE TO CONTRACTOR
CONTROL VALVE SHALL BE PROVIDED WITH ADJACENT UNIONS TO FACILITATE REMOVAL



UNIT VENTILATOR PIPING SCHEMATIC - HOT WATER - 2-WAY

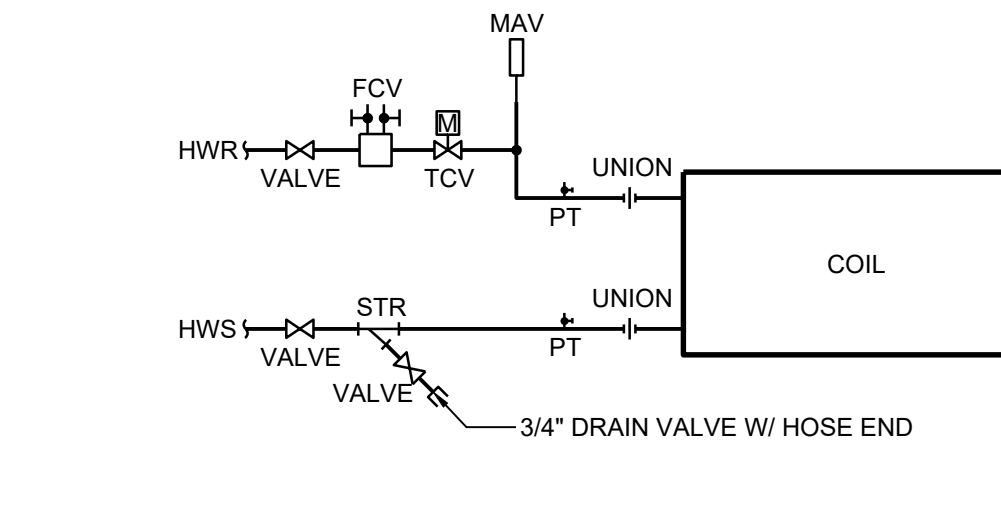
20 NOT TO SCALE

NOTE TO CONTRACTOR
CONTROL VALVE SHALL BE PROVIDED WITH ADJACENT UNIONS TO FACILITATE REMOVAL



FAN COIL PIPING SCHEMATIC HOT WATER - 2-WAY

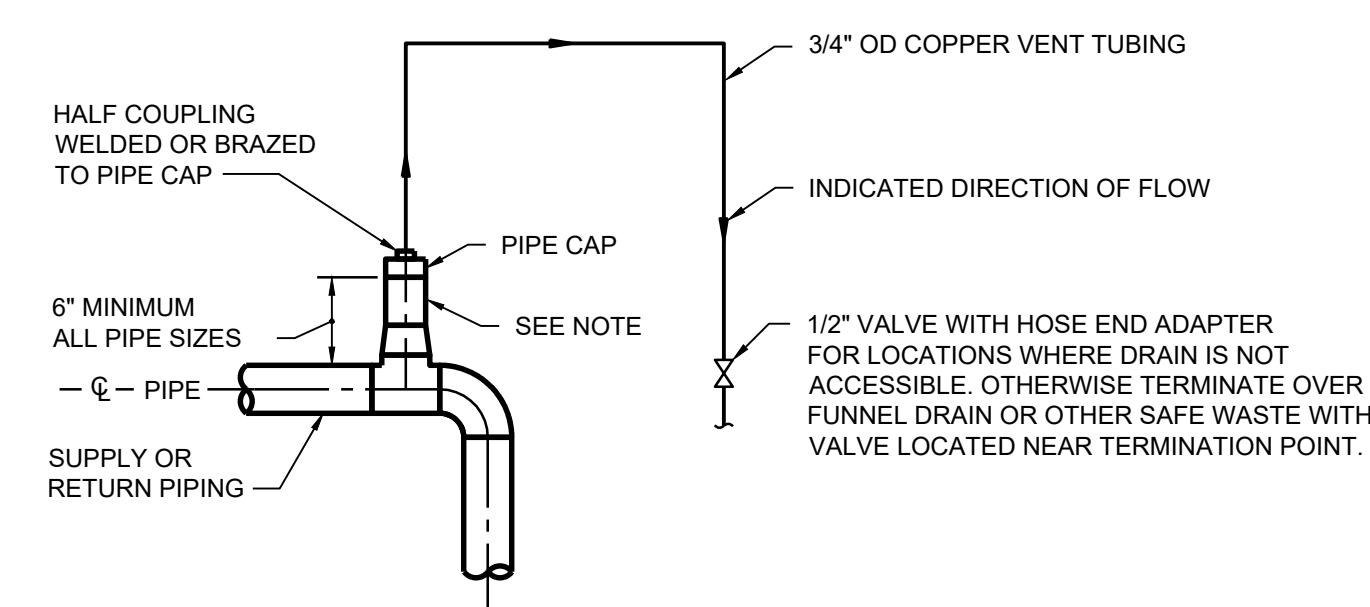
21 NOT TO SCALE



HORIZONTAL AND VERTICAL UNIT HEATER PIPING SCHEMATIC - HOT WATER

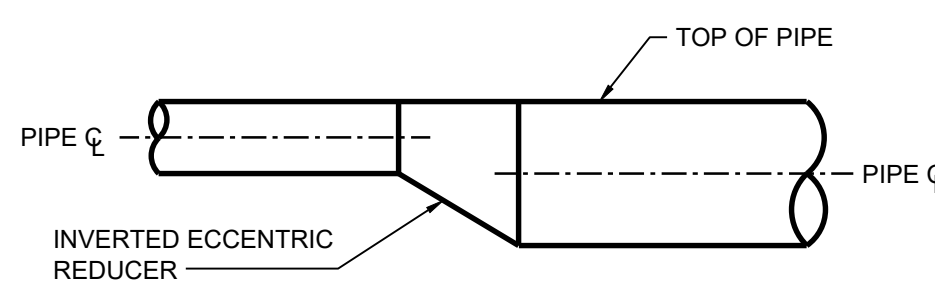
22 NOT TO SCALE

NOTE:
AIR COLLECTION CHAMBER SHALL BE FULL SIZE OF MAIN PIPING UP THROUGH 4". AIR COLLECTION CHAMBER ON ALL MAINS AND RISERS 5" AND UP SHALL BE 4".



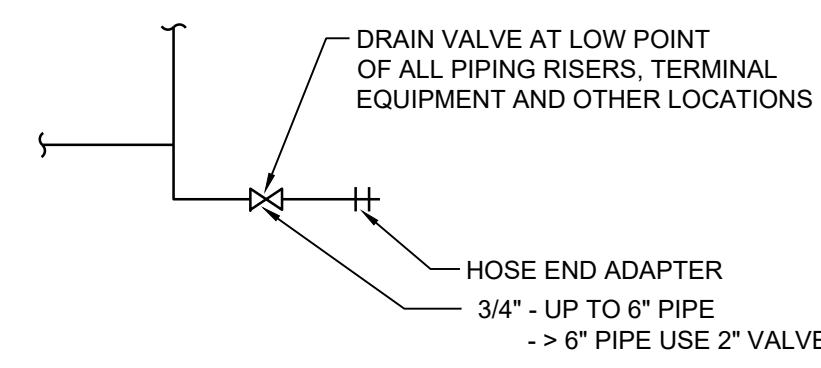
23 MANUAL AIR VENT SCHEMATIC

NOT TO SCALE



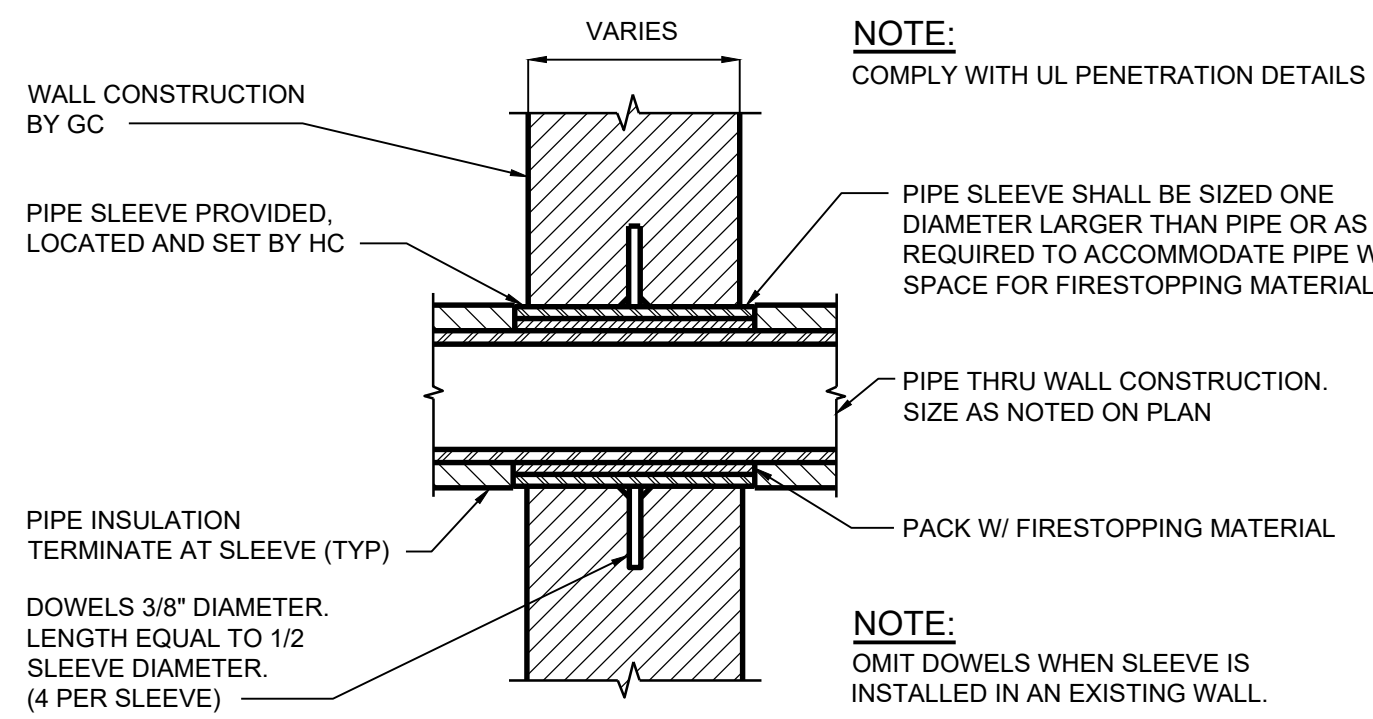
TYPICAL PIPE SIZE CHANGE FOR WATER

24 NOT TO SCALE



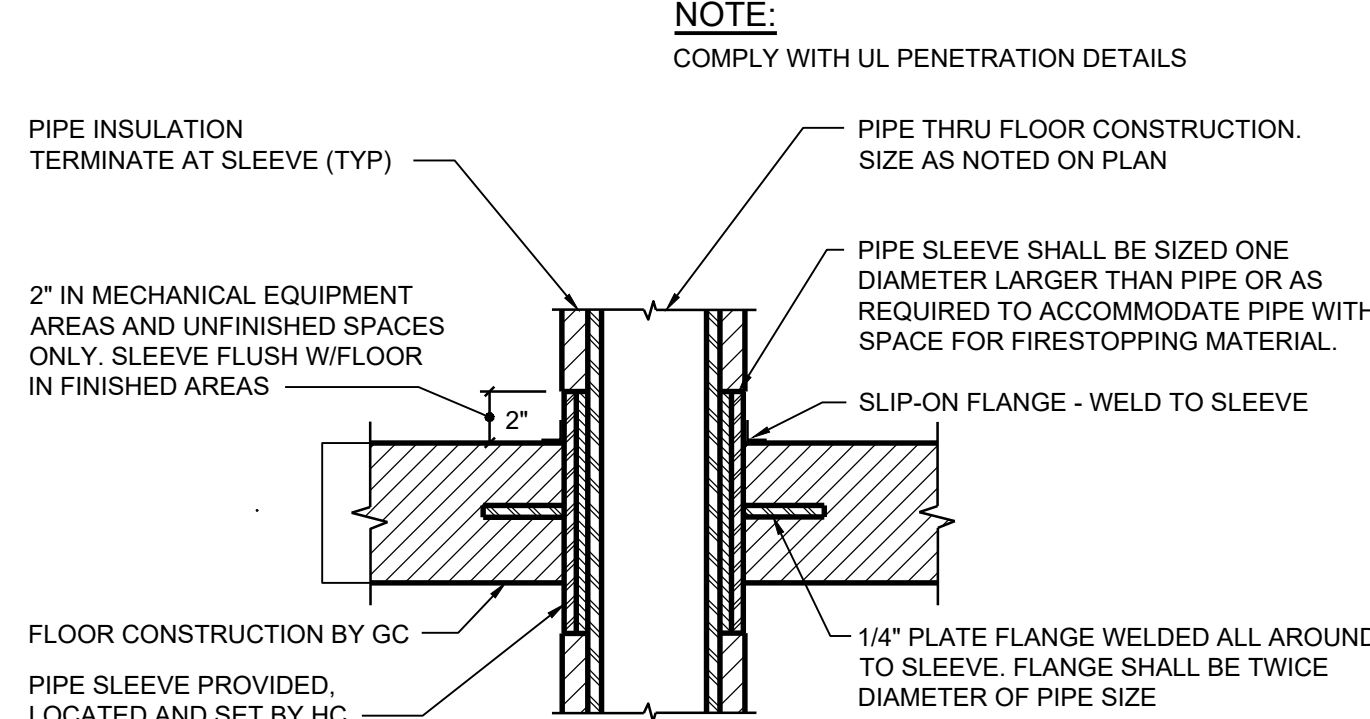
25 PIPING SYSTEM DRAIN DETAIL

NOT TO SCALE



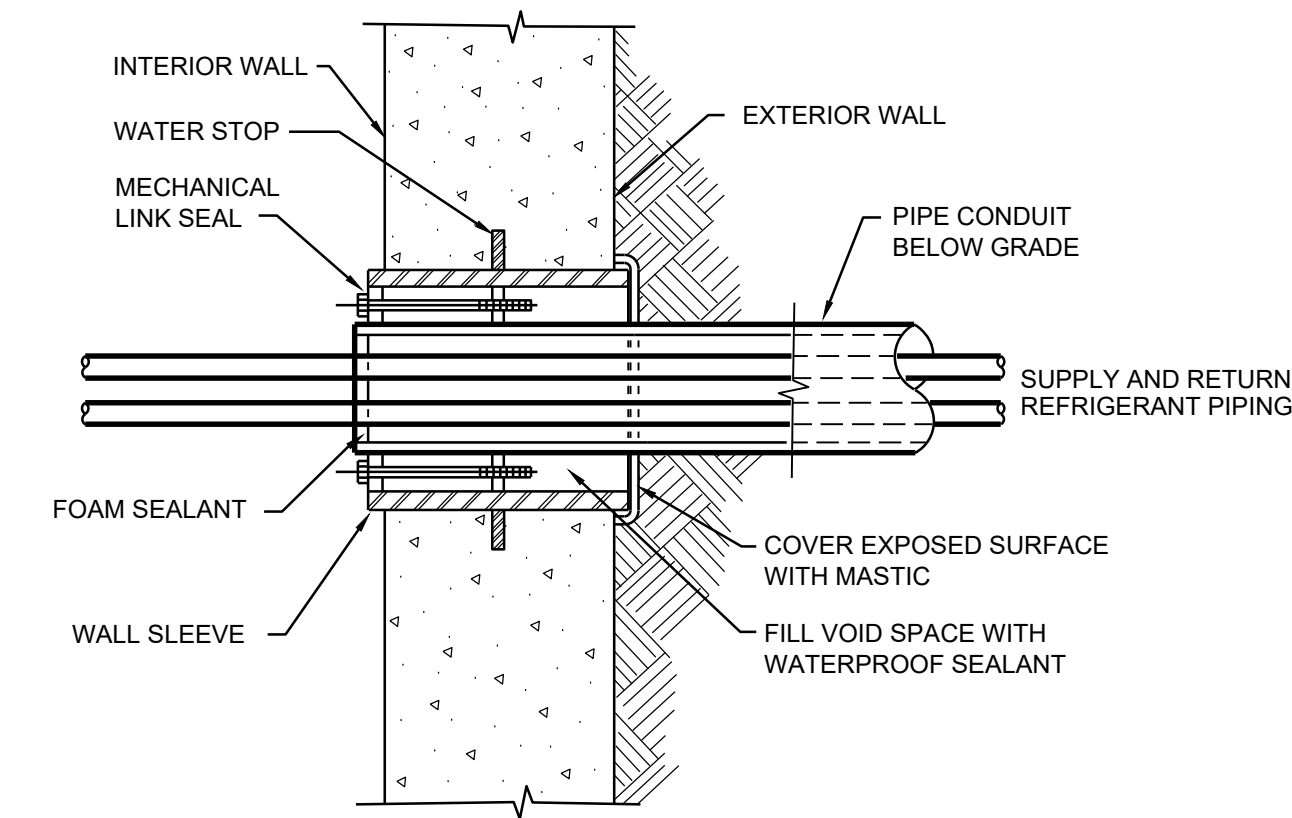
26 WALL SLEEVE DETAIL

NOT TO SCALE



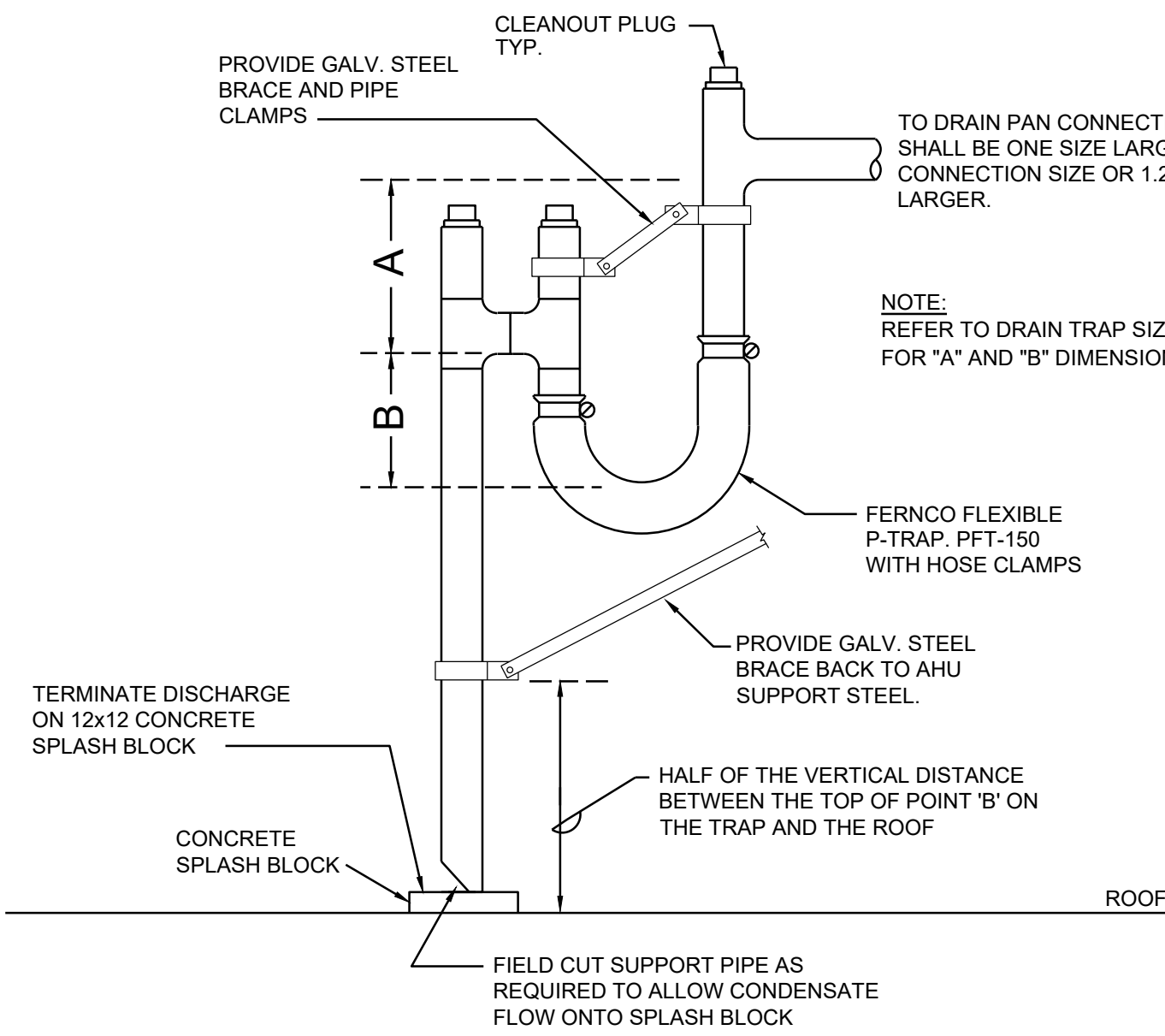
27 FLOOR SLEEVE DETAIL

NOT TO SCALE



28 PIPE PENETRATION BELOW GRADE

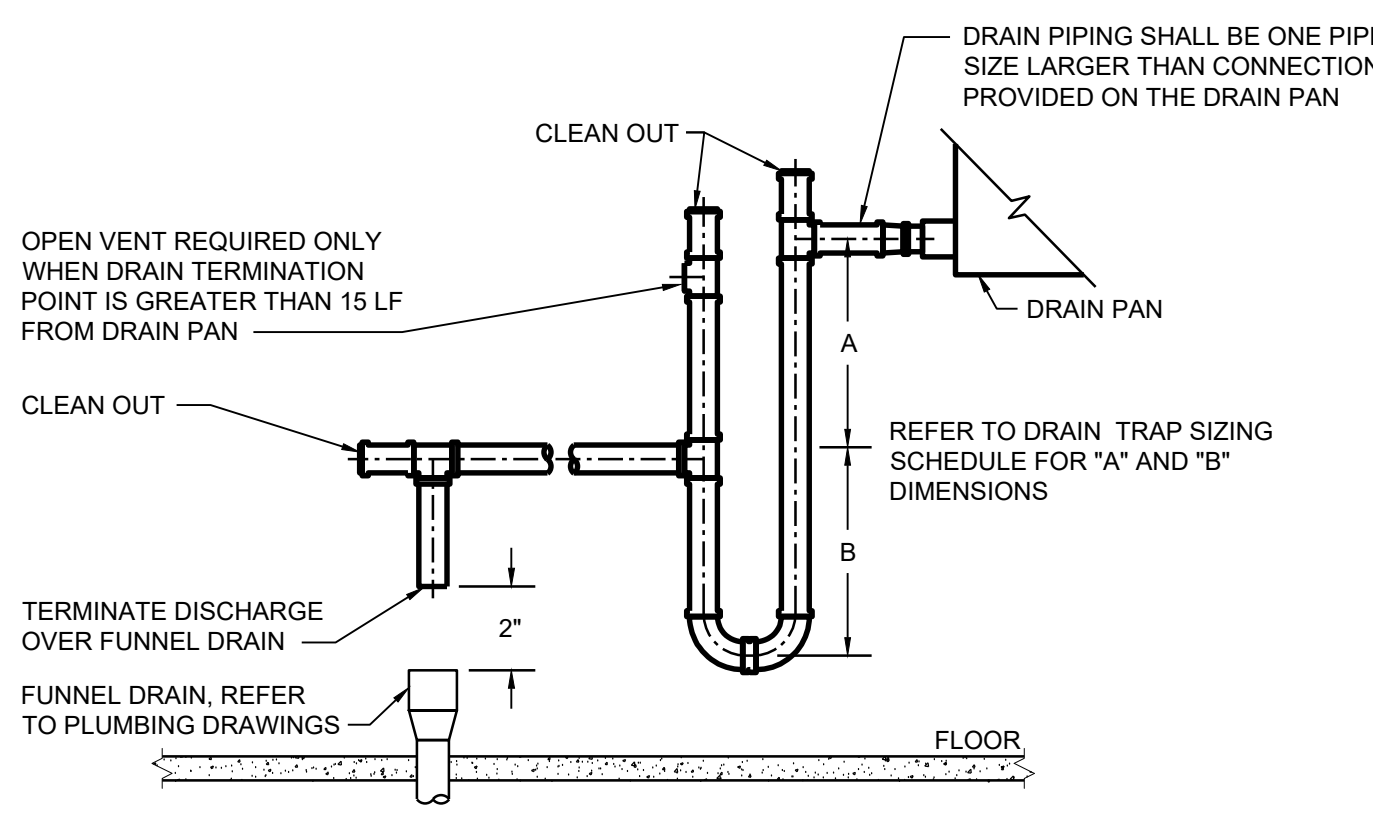
NOT TO SCALE



NOTE:
DRAIN PAN MAY BE LOCATED IN THE NEGATIVE OR POSITIVE PRESSURE AREA OF THE AIR STREAM. REFER TO DRAIN TRAP SIZING SCHEDULE FOR DIMENSIONAL DATA REQUIRED FOR SPECIFIC DRAIN LOCATION.

DIMENSION	DRAIN TRAP LOCATION FOR NEGATIVE PRESSURE	DRAIN TRAP LOCATION FOR POSITIVE PRESSURE
A	TOTAL AHU SP ± 1 (4" MINIMUM)	2"
B	4"	TOTAL AHU SP ± 1 (4" MINIMUM)

CONDENSATE DRAIN TRAP SIZING SCHEDULE



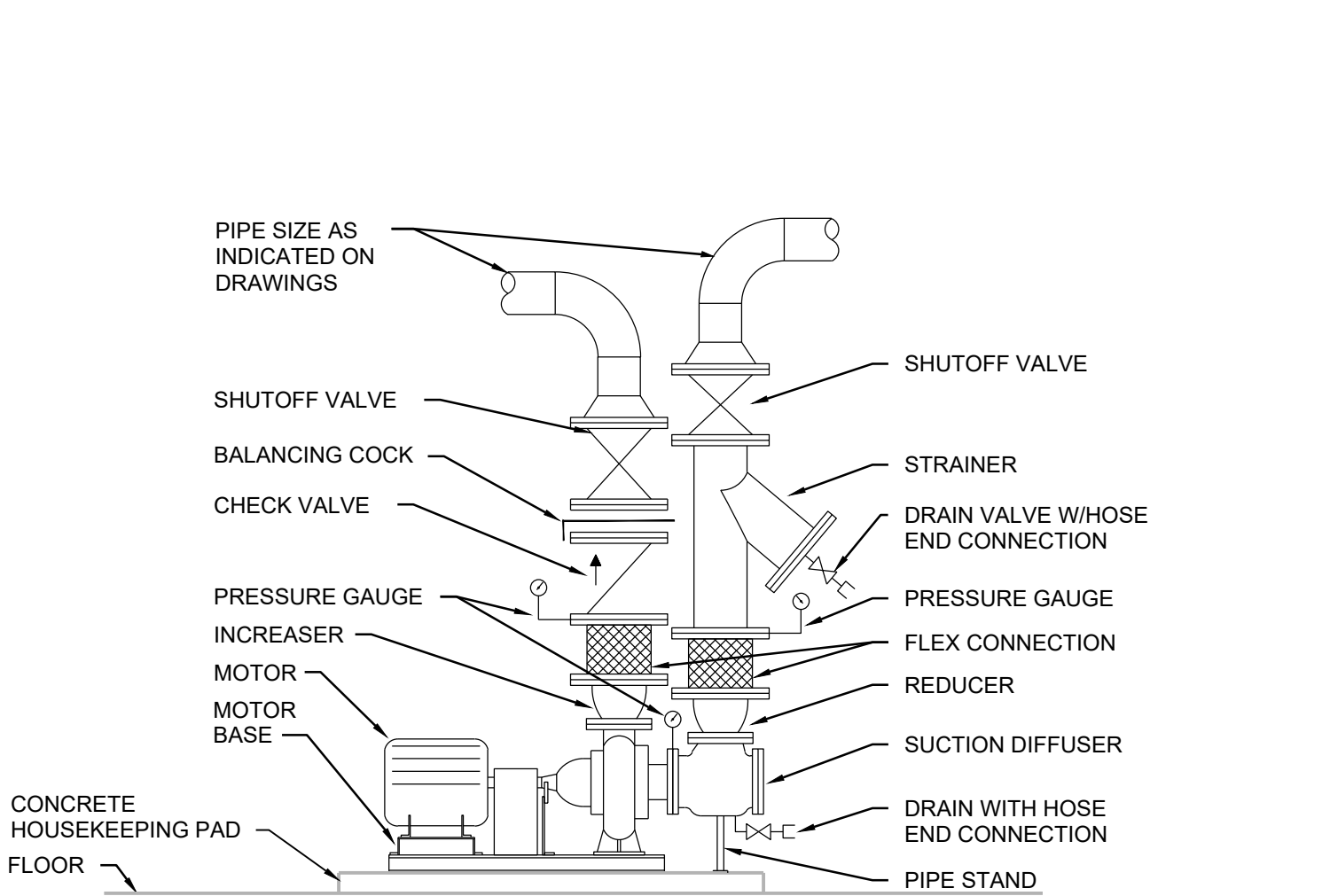
NOTE:
DRAIN PAN MAY BE LOCATED IN THE NEGATIVE OR POSITIVE PRESSURE AREA OF THE AIR STREAM. REFER TO DRAIN TRAP SIZING SCHEDULE FOR DIMENSIONAL DATA REQUIRED FOR SPECIFIC DRAIN LOCATION.

DIMENSION	DRAIN TRAP LOCATION FOR NEGATIVE PRESSURE	DRAIN TRAP LOCATION FOR POSITIVE PRESSURE
A	TOTAL AHU SP ± 1 (4" MINIMUM)	2"
B	4"	TOTAL AHU SP ± 1 (4" MINIMUM)

CONDENSATE DRAIN TRAP SIZING SCHEDULE

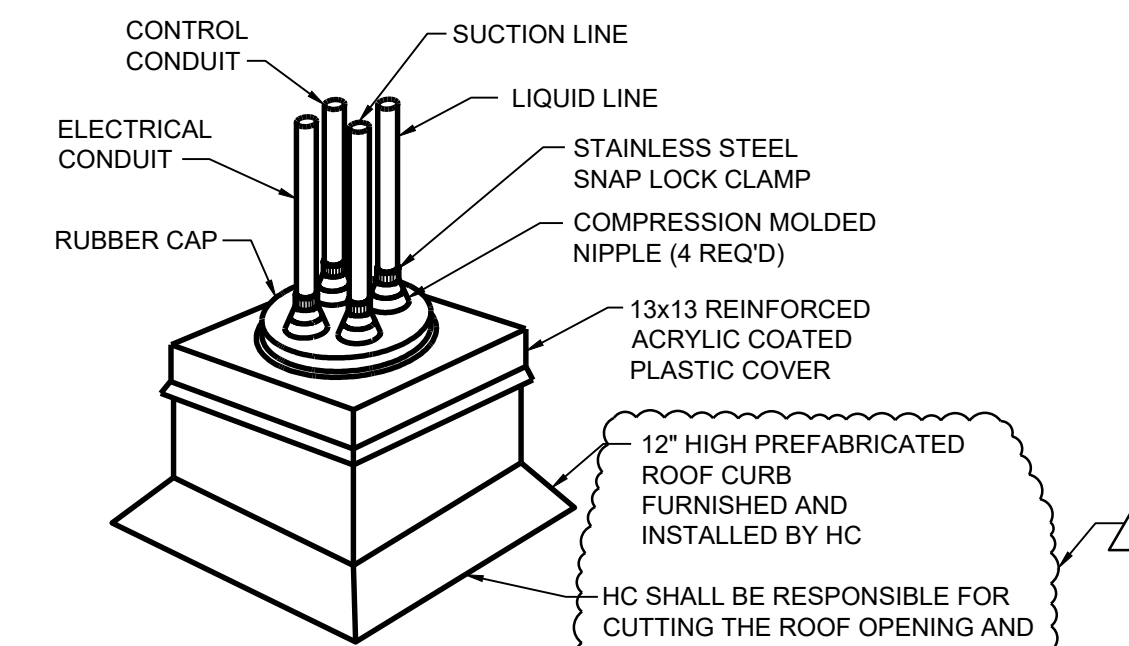
30 INDOOR CONDENSATE DRAIN TRAP PIPING DETAIL

NOT TO SCALE



31 END SUCTION PUMP MOUNTING AND PIPING DETAIL

NOT TO SCALE

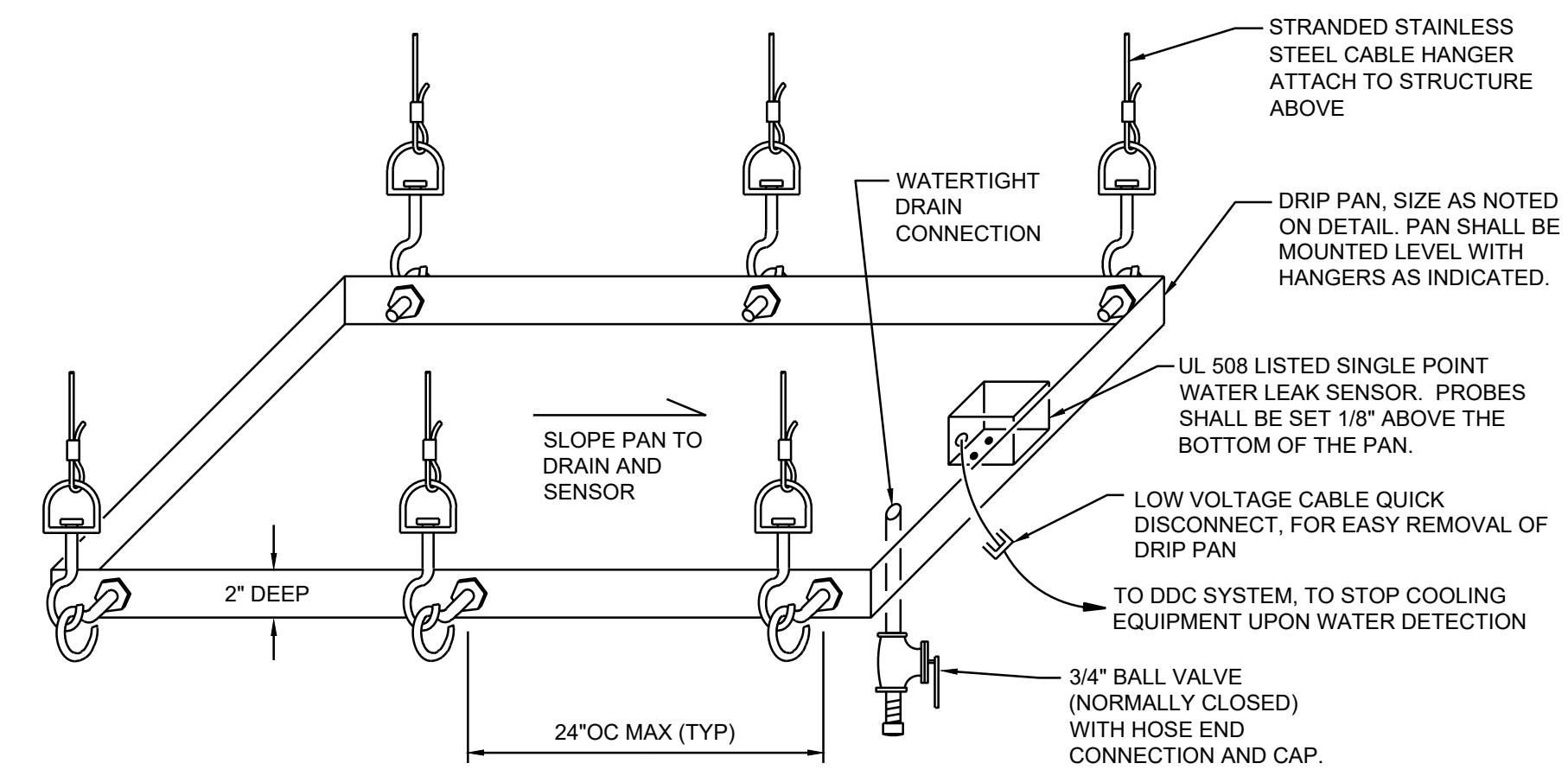


32 PIPE PORTAL DETAIL

NOT TO SCALE

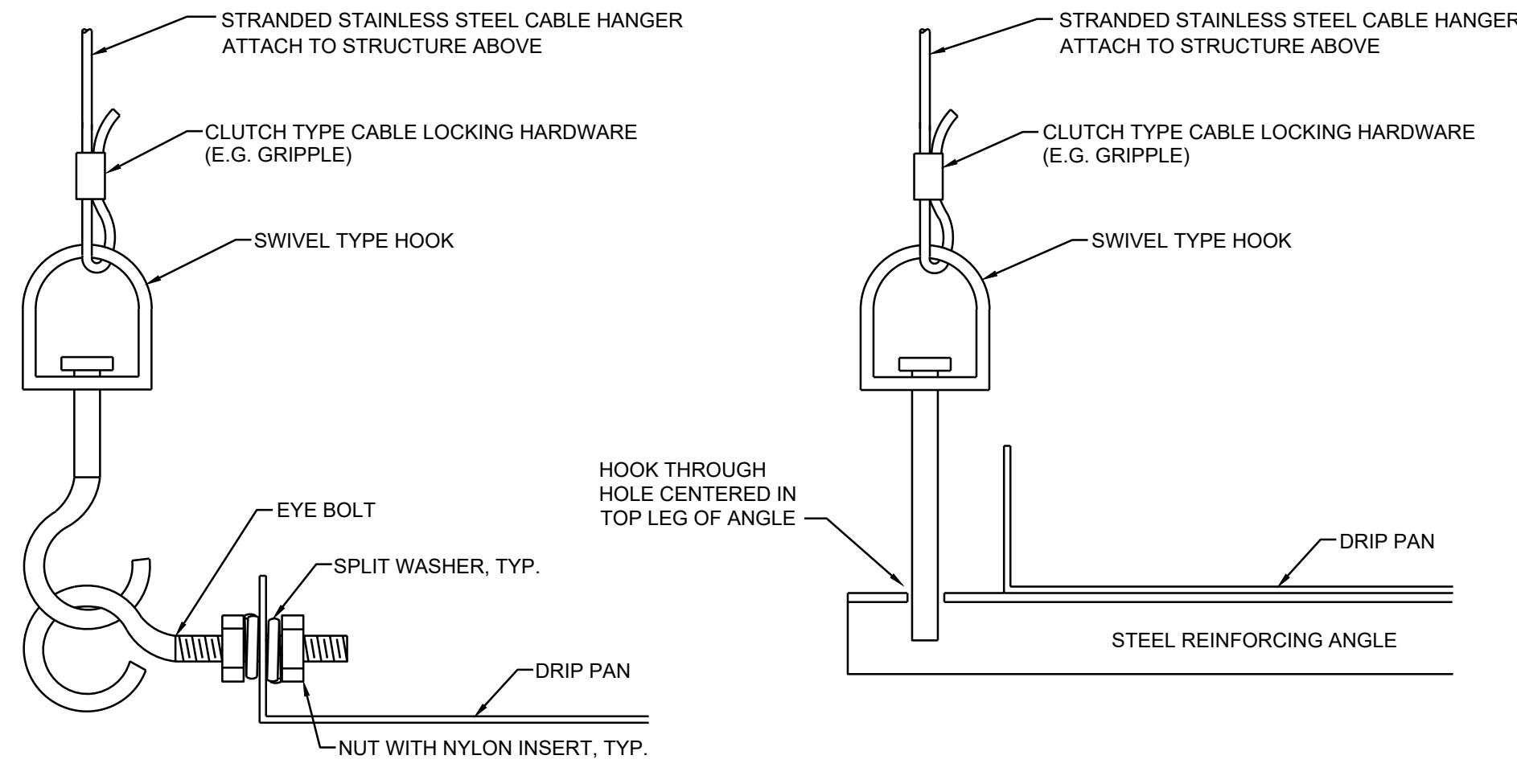
29 OUTDOOR AIR HANDLING UNIT CONDENSATE DRAIN TRAP PIPING DETAIL

NOT TO SCALE



GENERAL NOTES:

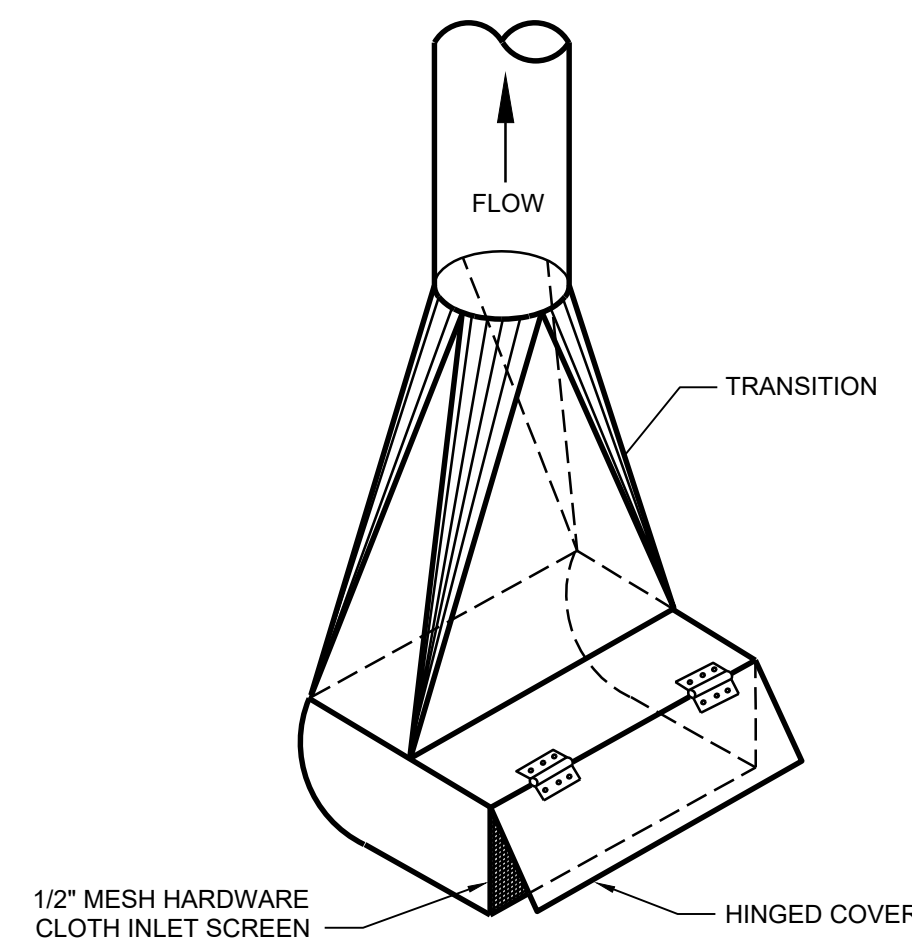
1. PROVIDE UNDER EACH SUSPENDED FAN COIL UNIT, UNIT VENTILATOR, AND AIR HANDLING UNIT.
2. PROVIDE A MINIMUM OF (4) FOUR HANGERS FOR EACH DRIP PAN.
3. PAN SHALL BE FORMED OF MIN. 16 GAUGE G90 GALVANIZED SHEET METAL. TOP EDGE OF RIM SHALL BE HEMMED, CORNERS LAPPED, AND ALL SEAMS SOLDERED OR WELDED LIQUID-TIGHT. REPAIR ZINC COATING WITH ZINC RICH PAINT. PROVIDE ANGLE REINFORCEMENTS SPOT WELDED AT 6" INTERVALS TO UNDERSIDE OF PAN TO PREVENT VERTICAL DEFLECTION OF PAN IN EXCESS OF 1/4" WHEN FULL OF WATER TO 1/2" DEPTH.
4. PAN SHALL EXTEND (HORIZONTALLY) NO LESS THAN 3" PAST THE SIDES OF THE ASSOCIATED EQUIPMENT. PAN SHALL ALSO BE EXTENDED UNDER THE CONDENSATE PUMP (WHERE APPLICABLE).



TYPICAL HANGER ALTERNATE TYPICAL HANGER W/ REINFORCEMENT

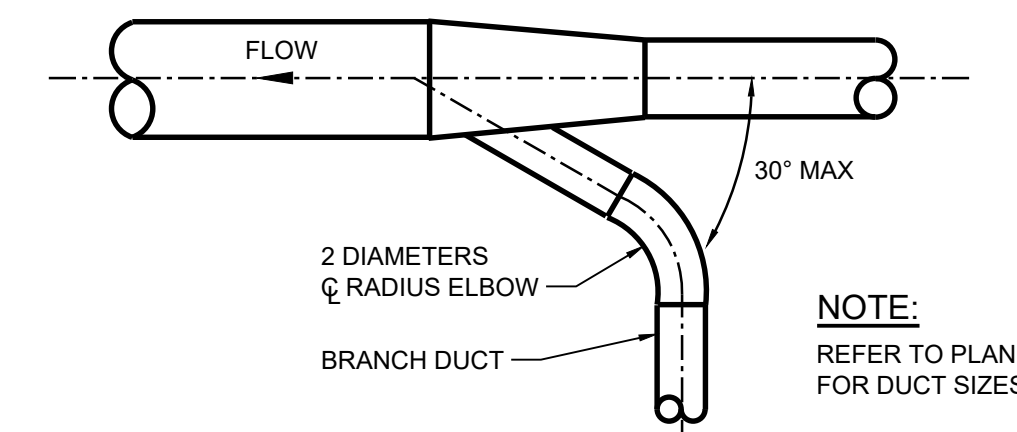
33 DEMOUNTABLE DRIP PAN DETAIL

NOT TO SCALE



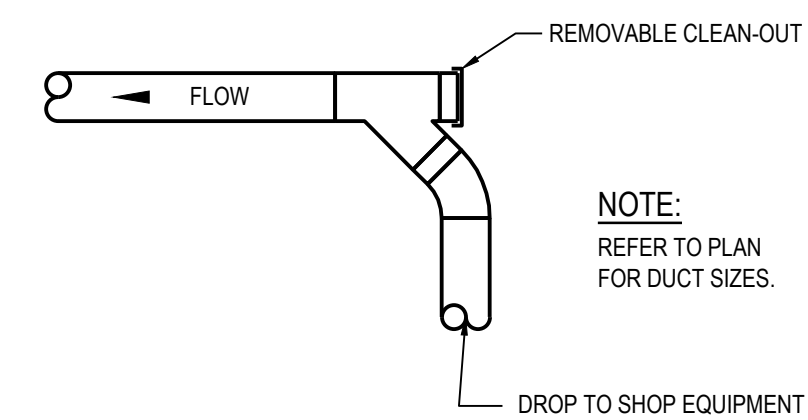
34 SAWDUST COLLECTION SYSTEM - FLOOR SWEEP

NOT TO SCALE



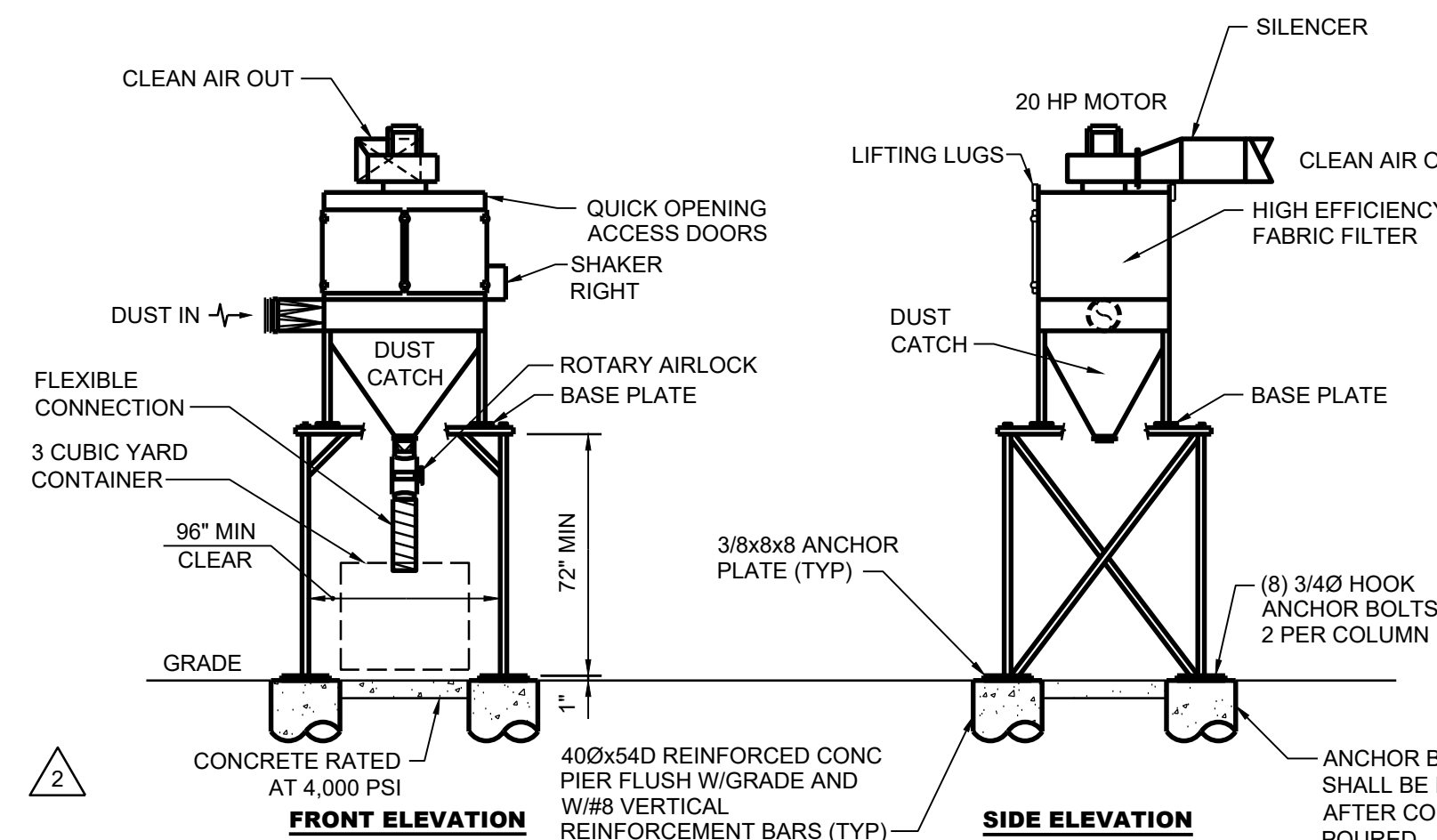
35 SAWDUST COLLECTION SYSTEM - BRANCH DUCT CONNECTION

NOT TO SCALE



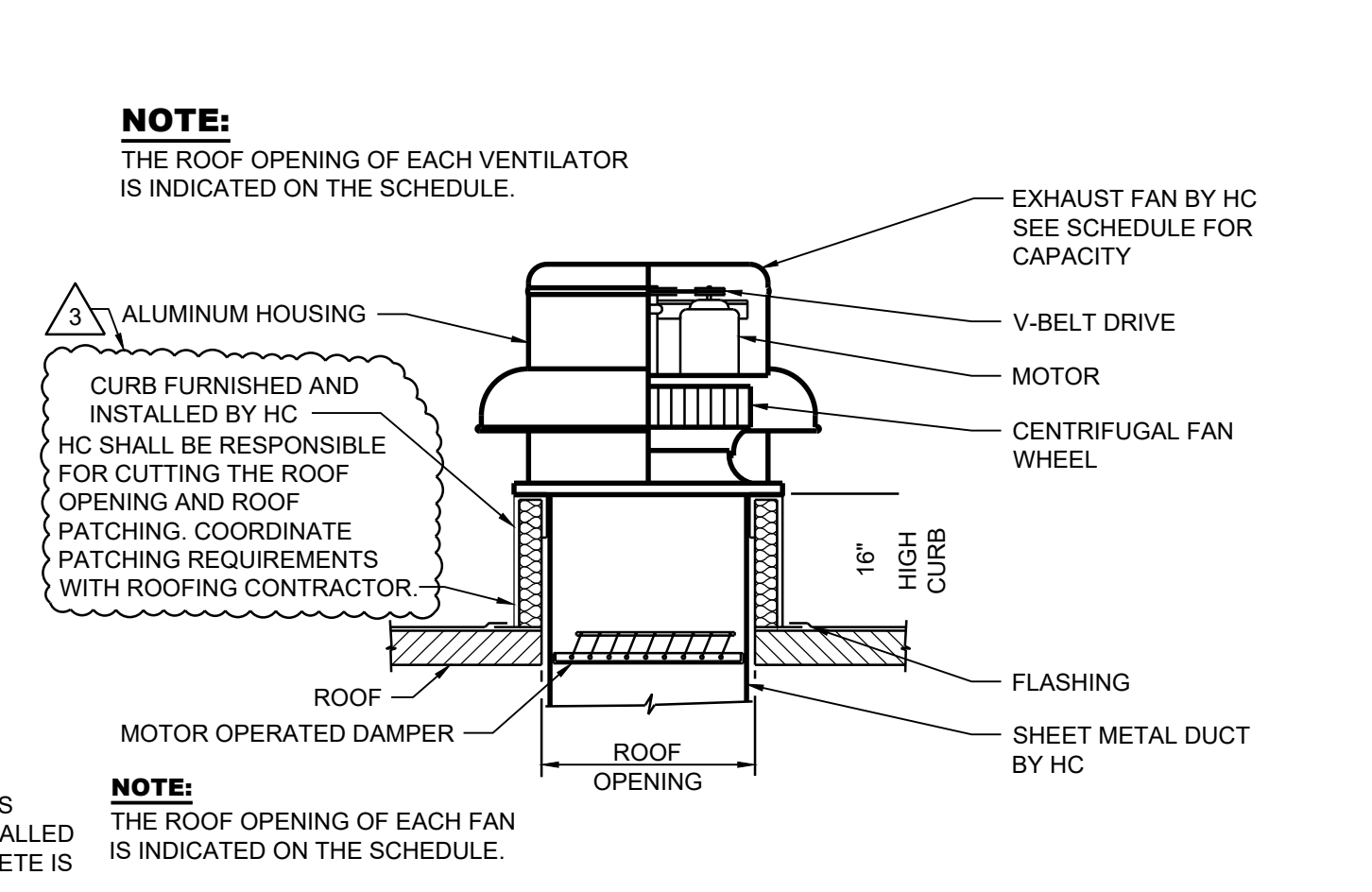
36 TYPICAL DROP TO SHOP EQUIPMENT

NOT TO SCALE



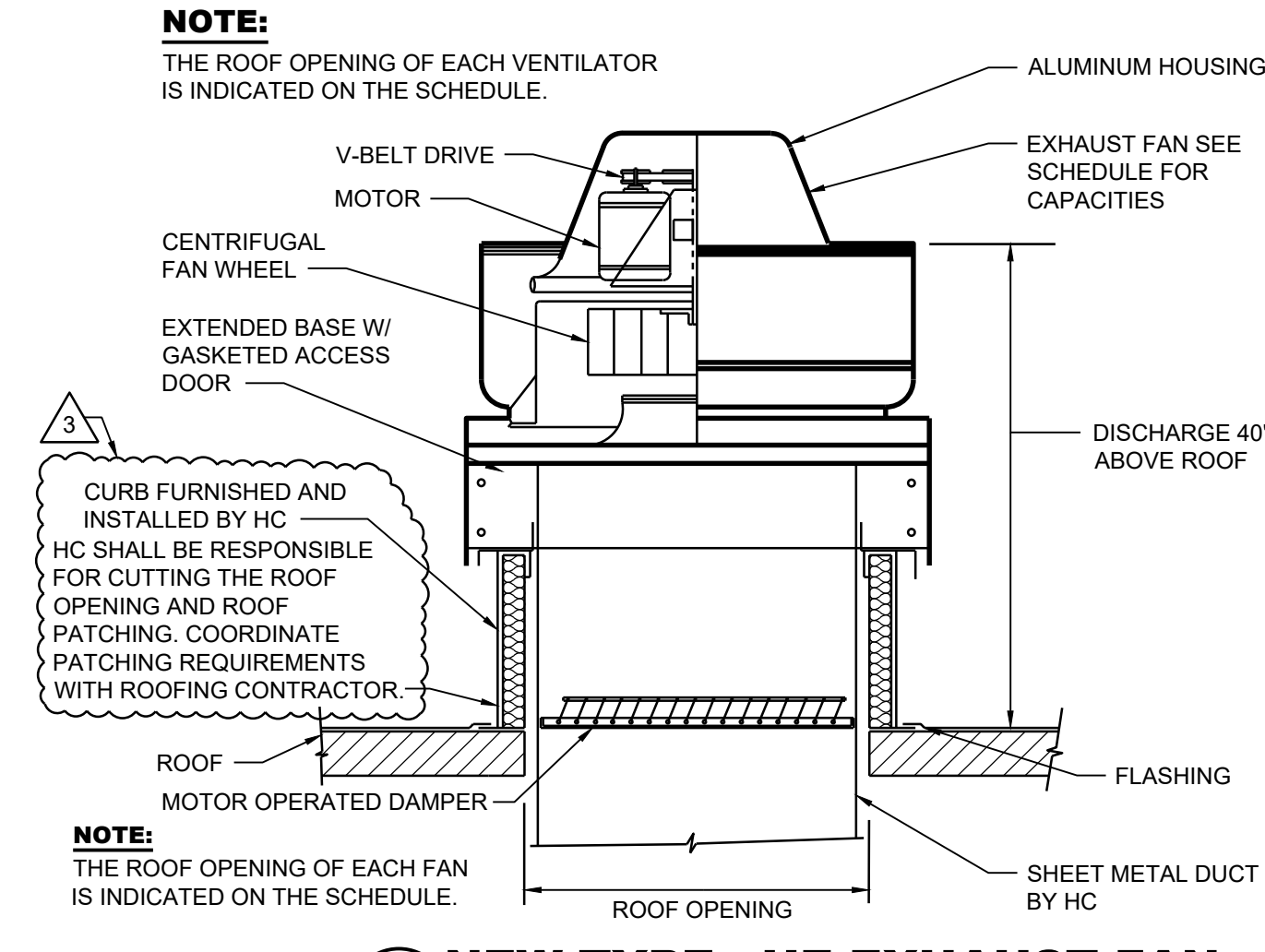
37 SAWDUST COLLECTION - RECIRCULATING TYPE

NOT TO SCALE



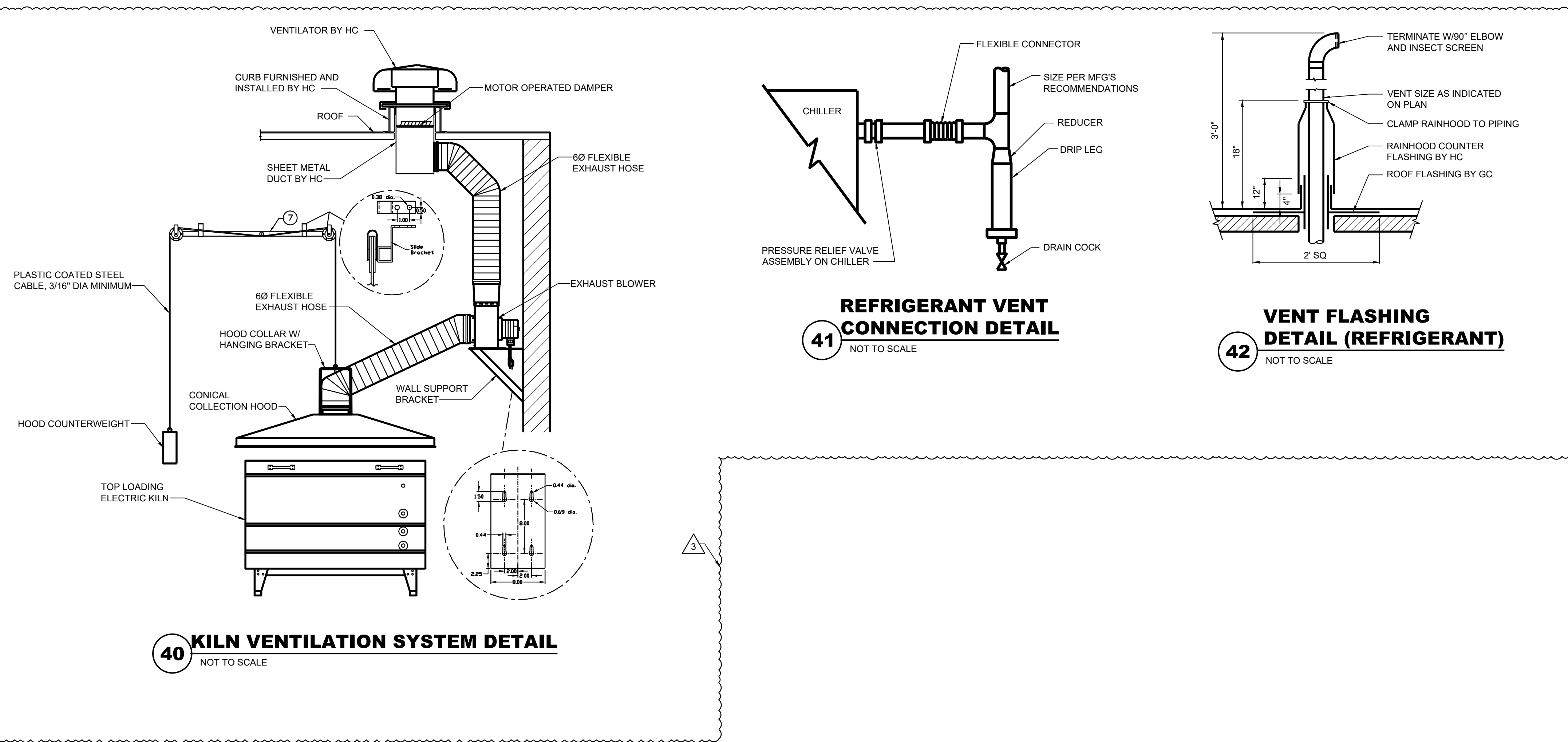
38 NEW TYPE - RE POWER ROOF VENTILATOR

NOT TO SCALE



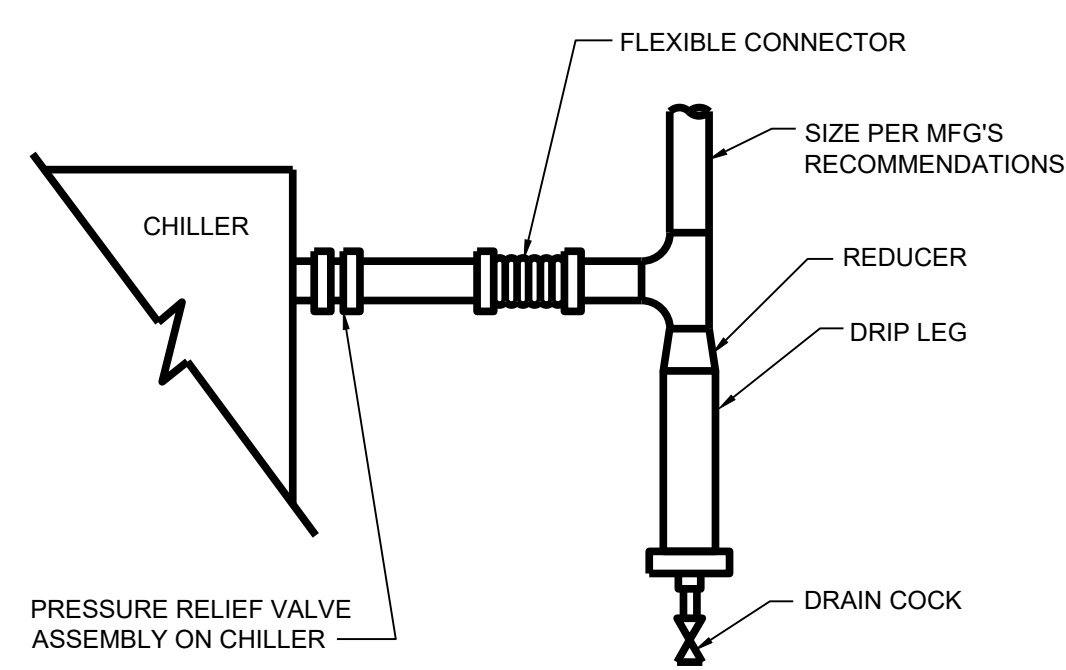
39 NEW TYPE - HE EXHAUST FAN

NOT TO SCALE



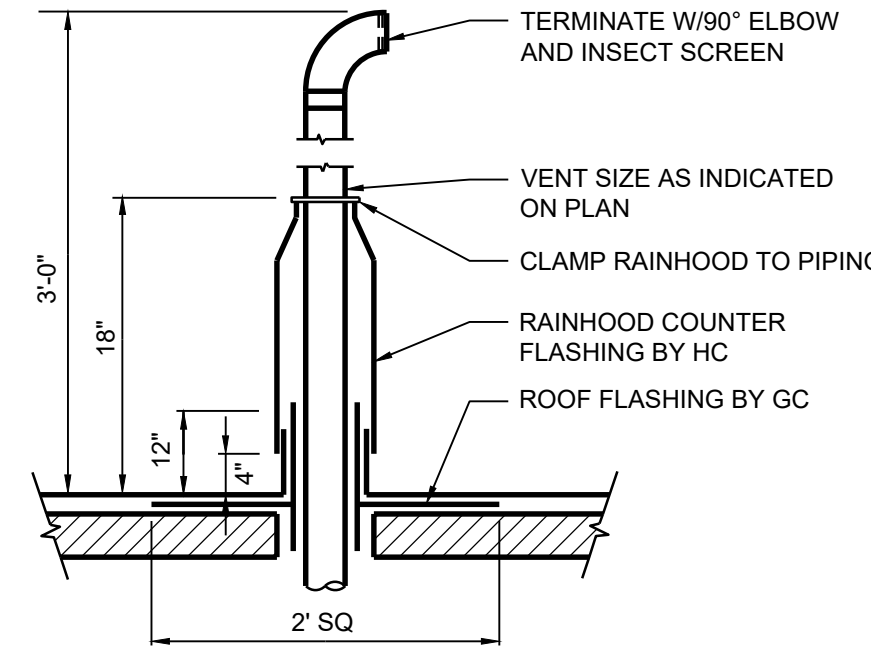
40 KILN VENTILATION SYSTEM DETAIL

NOT TO SCALE



41 REFRIGERANT VENT CONNECTION DETAIL

NOT TO SCALE



42 VENT FLASHING DETAIL (REFRIGERANT)

NOT TO SCALE

POWER ROOF VENTILATOR SCHEDULE																
SYMBOL	LOCATION	SERVES	TYPE	ROOF OPENING	SYSTEM CFM	FAN CFM	RPM	STATIC PRESSURE	TIP SPEED	HP	ELECT CHAR	WEIGHT	CONTROL TYPE	BASIS OF DESIGN		
PRV-A01	ABOVE 412 ON ROOF	TR401, TR402, 410	RE	15.5 x 15.5	970	970	1,060	0.375	3.625	DIRECT	1/4	180/115 V	48 lbs	BMS	GREENHECK G-120-VG	
PRV-B01	ABOVE 108 ON ROOF	108	RE	13.5 x 13.5	450	450	1,271	0.25	3.618	DIRECT	0.01	180/115 V	30 lbs	BMS	GREENHECK G-090-VG	
PRV-B02	ABOVE 106 ON ROOF	101, 105, 106, 107	RE	13.5 x 13.5	450	450	1,414	0.375	4.026	DIRECT	0.01	180/115 V	30 lbs	BMS	GREENHECK G-090-VG	
PRV-B03	ABOVE 2XC ON ROOF	TR101, TR102, 114, ...	RE	18.5 x 18.5	2,235	2,235	952	0.375	6.044	DIRECT	1	180/115 V	65 lbs	BMS	GREENHECK G-160-VG	
PRV-B04	ABOVE 109 ON ROOF	109	KHE	36.5 x 36.5	8,214	8,214	757	1.25	5.266	DIRECT	5	3/60/230 V	397 lbs	LOCAL SWITCH, INTERLOCKED WITH KITCHEN HOOD	GREENHECK CUE-300-C-VGD	
PRV-B05	ABOVE 109C ON ROOF	109C	HE	15.5 x 15.5	600	600	960	0.25	2.795	DIRECT	1/4	180/115 V	62 lbs	BMS	GREENHECK CUE-100-VG	
PRV-B06	ABOVE 110A ON ROOF	109C	HE	18.5 x 18.5	1,695	1,695	811	0.375	3.628	DIRECT	1/2	180/115 V	80 lbs	BMS	GREENHECK CUE-160-VG	
PRV-B07	ABOVE 111 ON ROOF	K001	HE	18.5 x 18.5	2,300	2,300	1,025	0.5	4.460	DIRECT	3/4	180/115 V	78 lbs	BMS	GREENHECK CUE-160-VG	
PRV-C01	ABOVE 110 ON ROOF	109	RE	18.5 x 18.5	1,900	1,900	1,142	0.25	4.373	DIRECT	1/2	180/115 V	55 lbs	BMS	GREENHECK G-140-VG	
PRV-C02	ABOVE 190 ON ROOF	186 FUME HOOD	RE	15.5 x 15.5	1,000	1,000	1,562	0.625	4.549	DIRECT	1/4	180/115 V	49 lbs	BMS	GREENHECK CUE-100-VG	
PRV-D01	ABOVE 184 ON ROOF	186 FUME HOOD	RE	18.5 x 18.5	1,900	1,900	1,142	0.25	4.373	DIRECT	1/2	180/115 V	55 lbs	BMS	GREENHECK G-140-VG	
PRV-D02	ABOVE 182 ON ROOF	182	RE	18.5 x 18.5	1,900	1,900	1,142	0.25	4.373	DIRECT	1/2	180/115 V	55 lbs	BMS	GREENHECK G-140-VG	
PRV-D03	ABOVE 178 ON ROOF	180 FUME HOOD	RE	15.5 x 15.5	1,000	1,000	1,562	0.625	4.549	DIRECT	1/4	180/115 V	49 lbs	BMS	GREENHECK CUE-100-VG	
PRV-D04	ABOVE 182 ON ROOF	180 FUME HOOD	RE	15.5 x 15.5	1,000	1,000	1,562	0.625	4.549	DIRECT	1/4	180/115 V	49 lbs	BMS	GREENHECK CUE-100-VG	
PRV-D05	ABOVE 178 ON ROOF	178	RE	18.5 x 18.5	1,900	1,900	1,142	0.25	4.373	DIRECT	1/2	180/115 V	55 lbs	BMS	GREENHECK G-140-VG	
PRV-D06	ABOVE 176 ON ROOF	176	RE	18.5 x 18.5	1,900	1,900	1,142	0.25	4.373	DIRECT	1/2	180/115 V	55 lbs	BMS	GREENHECK G-140-VG	
PRV-D07	ABOVE 179 ON ROOF	179	RE	18.5 x 18.5	1,900	1,900	1,142	0.25	4.373	DIRECT	1/2	180/115 V	55 lbs	BMS	GREENHECK G-140-VG	
PRV-D08	ABOVE 173 ON ROOF	173	RE	18.5 x 18.5	1,900	1,900	1,142	0.25	4.373	DIRECT	1/2	180/115 V	55 lbs	BMS	GREENHECK G-140-VG	
PRV-D09	ABOVE 172 ON ROOF	172	RE	18.5 x 18.5	1,900	1,900	1,142	0.25	4.373	DIRECT	1/2	180/115 V	55 lbs	BMS	GREENHECK G-140-VG	
PRV-D10	ABOVE 170 ON ROOF	TR171, TR172	RE	15.5 x 15.5	640	640	1,532	0.375	4.488	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-090-VG	
PRV-D11	ABOVE TR181 ON ROOF	TR181, TR182, 183	HE	15.5 x 15.5	640	640	1,618	0.375	4.606	DIRECT	1/10	180/115 V	30 lbs	BMS	GREENHECK CUE-090-VG	
PRV-D12	ABOVE 184 ON ROOF	184	RE	15.5 x 15.5	1,000	1,000	1,725	0.625	5.053	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-090-VG	
PRV-E01	ABOVE 154 ON ROOF	154, 156, 158	RE	15.5 x 15.5	1,000	1,000	1,580	0.375	4.627	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-090-VG	
PRV-E02	ABOVE 160 ON ROOF	160, 162, 164	RE	15.5 x 15.5	1,000	1,000	1,580	0.375	4.627	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-090-VG	
PRV-E03	ABOVE 210 ON ROOF	212	RE	13.5 x 13.5	370	370	1,693	0.375	4.819	DIRECT	1/10	180/115 V	29 lbs	BMS	GREENHECK G-080-VG	
PRV-E04	ABOVE 216 ON ROOF	TR161, TR162, 161, 216	RE	15.5 x 15.5	1,135	1,135	1,725	0.375	5.053	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-090-VG	
PRV-F01	ABOVE 163 ON ROOF	163 EXH. HOOD	RE	15.5 x 15.5	150	150	1,148	0.375	3.361	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-097-VG	
PRV-F02	ABOVE 163 ON ROOF	163 EXH. HOOD	RE	15.5 x 15.5	150	150	1,148	0.375	3.361	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-097-VG	
PRV-F03	ABOVE 165 ON ROOF	163 EXH. HOOD	RE	15.5 x 15.5	150	150	1,148	0.375	3.361	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-097-VG	
PRV-F04	ABOVE 165 ON ROOF	163 EXH. HOOD	RE	15.5 x 15.5	150	150	1,148	0.375	3.361	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-097-VG	
PRV-F05	ABOVE 300 ON ROOF	300	RE	15.5 x 15.5	2,000	2,000	1,593	0.5	5.473	DIRECT	3/4	180/115 V	53 lbs	BMS	GREENHECK G-130-VG	
PRV-F06	ABOVE DARK RM ON ROOF	DARK ROOM	RE	13.5 x 13.5	400	400	1,199	0.25	3.413	DIRECT	1/10	180/115 V	30 lbs	BMS	GREENHECK G-090-VG	
PRV-F07	ABOVE 303 ON ROOF	301, 303, 305, 306, 307	RE	15.5 x 15.5	730	730	1,687	0.375	4.942	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-090-VG	
PRV-F08	ABOVE 309 ON ROOF	309	RE	15.5 x 15.5	1,600	1,600	1,486	0.375	5.082	DIRECT	1/2	180/115 V	49 lbs	BMS	GREENHECK G-120-VG	
PRV-F09	ABOVE 314A ON ROOF	314A, 314B	RE	15.5 x 15.5	1,000	1,000	1,580	0.375	4.627	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-090-VG	
PRV-F10	ABOVE 308 ON ROOF	308	RE	15.5 x 15.5	1,650	1,650	1,725	1.36	5.927	DIRECT	3/4	180/115 V	53 lbs	LOCAL SWITCH	GREENHECK G-130-VG	
PRV-G01	ABOVE 327 ON ROOF	325B, 326, 327, 328	RE	15.5 x 15.5	1,070	1,070	1,488	0.375	4.334	DIRECT	1/4	180/115 V	41 lbs	BMS	GREENHECK G-100-VG	
PRV-G02	ABOVE TR301 ON ROOF	TR301, TR302, 317	RE	13.5 x 13.5	755	755	1,577	0.375	4.491	DIRECT	1/6	180/115 V	33 lbs	BMS	GREENHECK G-095-VG	
PRV-G03	ABOVE 318 ON ROOF	318	RE	13.5 x 13.5	850	850	1,682	0.375	4.790	DIRECT	1/6	180/115 V	33 lbs	BMS	GREENHECK G-095-VG	
PRV-G04	ABOVE 320 ON ROOF	320	RE	13.5 x 13.5	800	800	1,627	0.375	4.631	DIRECT	1/6	180/115 V	33 lbs	BMS	GREENHECK G-095-VG	

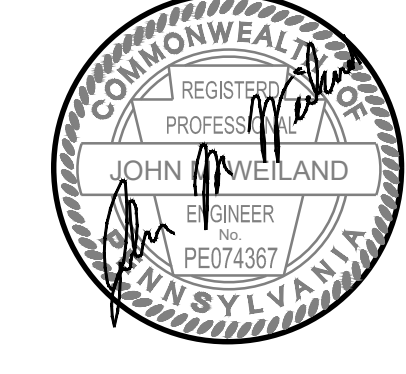
- NOTES:
1. PROVIDE AND INSTALL 20" HIGH CURBS.

CEILING EXHAUST FAN SCHEDULE														
SYMBOL	EXH. CAP LOCATION	SERVES	WHEEL DIA.	TYPE	SYSTEM CFM	FAN CFM	RPM	STATIC PRESSURE	TIP SPEED	HP	ELECT CHAR	WEIGHT	BASIS OF DESIGN	
CEF-A01	ABOVE A-14 ON ROOF	A-13	5.5	OP	100	100	950	0.233	1368	17 W	180/115 V	17 lbs	SP-A110	
CEF-A02	ABOVE A-14 ON ROOF	A-14	5.5	OP	100	100	950	0.233	1368	17 W	180/115 V	17 lbs	SP-A110	
CEF-B01	ABOVE C101 ON ROOF	120	7.75	TN	165	165	1100	0.375	1897	25 W	180/115 V	24 lbs	SP-A390-VG	
CEF-B02	ABOVE C101 ON ROOF	124	7.75	TN	165	165	1100	0.375	1897	25 W	180/115 V	24 lbs	SP-A390-VG	
CEF-B03	ABOVE C101 ON ROOF	128	7.75	TN	165	165	1100	0.375	1897	25 W	180/115 V	24 lbs	SP-A390-VG	
CEF-B04	ABOVE C101 ON ROOF	150	7.75	TN	165	165	1100	0.375	1897	25 W	180/115 V	24 lbs	SP-A390-VG	
CEF-C01	ABOVE 196 ON ROOF	196	7.75	TN	165	165	1100	0.375	1897	25 W	180/115 V	24 lbs	SP-A390-VG	
CEF-E01	ABOVE C101 ON ROOF	152A	7.75	TN	165	165	1100	0.375	1897	25 W	180/115 V	24 lbs	SP-A390-VG	
CEF-E02	ABOVE C101 ON ROOF	143	7.5	TN	880	880	1212	0.375	2356	185 W	180/115 V	50 lbs	SP-A1050-VG	
CEF-G01	ABOVE 325 ON ROOF	325D	7.75	TN	165	165	1100	0.375	1897	25 W	180/115 V	24 lbs	SP-A390-VG	
CEF-G02	ABOVE 324 ON ROOF	324	7.5	TN	350	350	1178	0.5	2012	76 W	180/115 V	32 lbs	SP-A510-VG	
CEF-G03	ABOVE - ON ROOF	SOUND BOOTH	7.5	TN	350	350	1178	0.5	2012	76 W	180/115 V	32 lbs	SP-A510-VG	

PUMP SCHEDULE																			
PUMP No	TYPE	FLR	MTD/IN-LINE	SYSTEM	OPERATION DUTY/STAND-BY	FLUID TYPE	MOTOR HP	MAX RPM	DUTY-POINT RPM	MOTOR BHP	ELECTRICAL CHAR	EMERGENCY POWER	VARIABLE FREQ DRIVE	OPERATING CONDITIONS		IMPELLER SIZE	MAX IMPELLER SIZE	BASIS OF DESIGN	
HWP-01	FLR	MTD		HOT WATER	DUTY	WATER	20	1,800	1,783	16.4	3/60/460V	YES	YES	GPM 500 FT HD 105 EFF 78.0%	10.625"	11.0"	BELL & GOSSETT - E-1510 4EB		
HWP-02	FLR	MTD		HOT WATER	DUTY	WATER	20	1,800	1,783	16.4	3/60/460V	YES	YES	GPM 500 FT HD 105 EFF 78.0%	10.625"	11.0"	BELL & GOSSETT - E-1510 4EB		
HWP-03	FLR	MTD		HOT WATER	STAND-BY	WATER	20	1,800	1,783	16.4	3/60/460V	YES	YES	GPM 500 FT HD 105 EFF 78.0%	10.625"	11.0"	BELL & GOSSETT - E-1510 4EB		
HWP-04	IN-LINE			HOT WATER	DUTY	WATER	3	1,200	1,116	2.01	3/60/460V	YES	YES	GPM 462.7 FT HD 15 EFF 83.5%	5.5"	7.0"	BELL & GOSSETT - E-80 6x6x7B		
HWP-05	IN-LINE			HOT WATER	DUTY	WATER	3	1,200	1,116	2.01	3/60/460V	YES	YES	GPM 462.7 FT HD 15 EFF 83.5%	5.5"	7.0"	BELL & GOSSETT - E-80 6x6x7B		
HWP-06	IN-LINE			HOT WATER	DUTY	WATER	3	1,200	1,116	2.01	3/60/460V	YES	YES	GPM 462.7 FT HD 15 EFF 83.5%	5.5"	7.0"	BELL & GOSSETT - E-80 6x6x7B		
CWP-01	FLR	MTD		CHILLED WATER	DUTY	WATER	40	1,800	1,689	24.1	3/60/460V	NO	YES	GPM 725 FT HD 105 EFF 79.7%	11.0"	11.0"	BELL & GOSSETT - E-1510 5EB		
CWP-02	FLR	MTD		CHILLED WATER	DUTY	WATER	40	1,800	1,689	24.1	3/60/460V	NO	YES	GPM 725 FT HD 105 EFF 79.7%	11.0"	11.0"	BELL & GOSSETT - E-1510 5EB		
CWP-03	FLR	MTD		CHILLED WATER	STAND-BY	WATER	40	1,800	1,689	24.1	3/60/460V	NO	YES	GPM 725 FT HD 105 EFF 79.7%	11.0"	11.0"	BELL & GOSSETT - E-1510 5EB		

- NOTES:
1. VFD'S PROVIDED AND INSTALLED BY EC.

GRAVITY ROOF VENTILATOR SCHEDULE						
SYMBOL	TYPE	LOCATION OVER	SERVES	ROOF OPENING	INTAKE/RELIEF	REMARKS
GRV-C01	B-1	ABOVE 196 ON ROOF	FC-06	8 x 8	INTAKE	GREENHECK FGI
GRV-F01	B-1	ABOVE 171 ON ROOF	HUV-01	20 x 20	INTAKE	GREENHECK FGI
GRV-F02	B-1	ABOVE				



REVISIONS

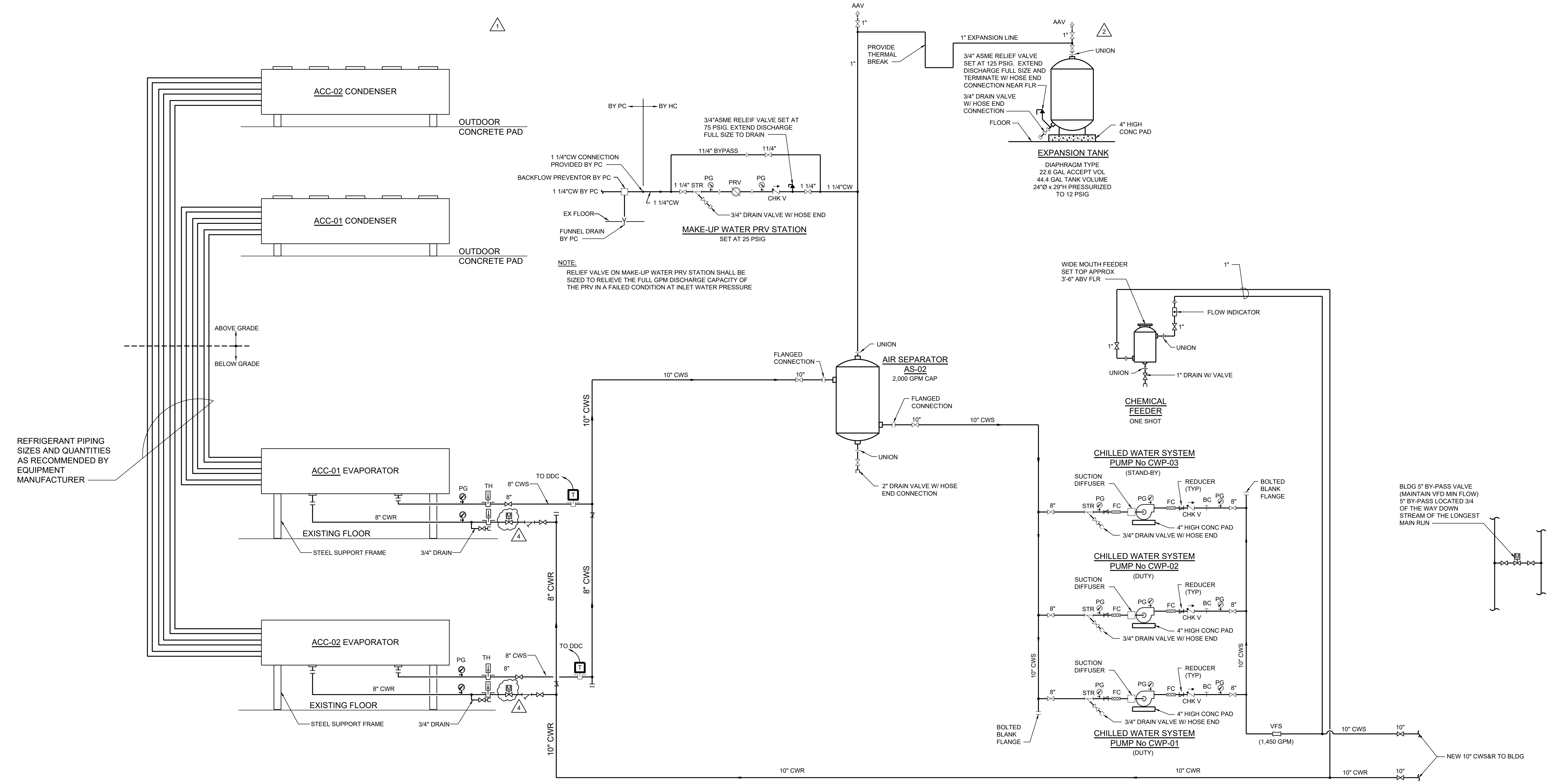
02/20/24	ADDENDUM NO. 1
03/20/24	ADDENDUM NO. 4

BID SET 02/19/24

HIGH SCHOOL RENOVATIONS
511 HIGHLAND AVENUE, GROVE CITY, PA 16127
GROVE CITY AREA SCHOOL DISTRICT
MECHANICAL CHILLED WATER FLOW
DIAGRAM - NEW WORK

Proj No. 23-S43-01
Issue Date 02/19/2024
M702
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1 CHILLED WATER FLOW DIAGRAM
Scale: NTS

ELECTRICAL EQUIPMENT SCHEDULE												
TAG	EQUIPMENT	LOCATION	VOLTAGE	MCA/HP	WIRE & CONDUIT	DISCONNECT SIZE	STARTER SIZE	FUSES SIZE	CIRCUIT No.	CONNECTION	STARTER/VD LOCATION	NOTES
PREV 407	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (F-27)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 408	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/16 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (KA-13)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 409	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/16 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (KA-9)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No.3
PREV 410	POWER ROOF VENTILATOR	ON ROOF	30-208V	1 HP	3 #12 & 1 #12 GRD-1/2"	30A	NEMA 1	10A	B-11,13,15	FINAL CONNECTION TO UNIT BY EC	2ND FLOOR PIPE CHASE	SEE NOTE No. 1 & 2
PREV 411	KITCHEN HOOD EXHAUST FAN	ON ROOF	30-208V	5 HP	3 #10 & 1 #10 GRD-1/2"	30A	NEMA 1	25A	KC-37,39,41	FINAL CONNECTION TO UNIT BY EC	LOCATED IN KITCHEN DISHWASH ROOM	SEE NOTE No. 1 & 2 & 4
PREV 412	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	2 #12 & 1 #12 GRD-1/2"	20A	N/A	N/A	KC-1	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 413	DISHWASHING HOOD EXHAUST FAN	ON ROOF	10-120V	1/2 HP	2 #12 & 1 #12 GRD-1/2"	20A	N/A	N/A	KC-3	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3 & 5
PREV 414	POWER ROOF VENTILATOR	ON ROOF	10-120V	3/4 HP	2 #12 & 1 #12 GRD-1/2"	20A	N/A	N/A	BC-19	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 415	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/2 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (U-25)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 416	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (U-25)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 417	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/2 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (U-27)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 418	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/2 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (V-33)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 419	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (V-35)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 420	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (V-33)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 421	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/2 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (V-35)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 422	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/2 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (X-21)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 423	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/2 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (W-23)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 424	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/2 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (W-23)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 425	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/2 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (X-21)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 426	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKR (W-25)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 427	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (U-23)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 428	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (U-27)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 429	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (L-15)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 430	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (L-15)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 431	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/16 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (C-32)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 432	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (C-34)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 433	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (N-20)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 434	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (N-20)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 435	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (N-18)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 436	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (N-18)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 437	POWER ROOF VENTILATOR	ON ROOF	10-120V	3/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (AA-26)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 438	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/8 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (Z-11)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 439	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (AA-16)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 440	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/2 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (AC-14)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 441	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (AC-5)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 442	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/4 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (AE-12)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 443	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/8 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (AE-12)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 444	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/8 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (AE-14)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
PREV 445	POWER ROOF VENTILATOR	ON ROOF	10-120V	1/8 HP	CONNECT TO EXISTING	20A	N/A	N/A	EXISTING CKT (AE-14)	FINAL CONNECTION TO UNIT BY EC	INTEGRAL W/ FAN	SEE NOTE No. 3
EF 446	EXHAUST FAN	ON ROOF	30-480V	3 HP	3 #12 & 1 #12 GRD-1/2"	30A	NEMA 1	10A	P-32,34,36	FINAL CONNECTION TO UNIT BY EC	LOCATED IN KITCHEN DISHWASH ROOM	SEE NOTES No. 1 & 2
MAK 447	MAKE-UP AIR UNIT	ON ROOF	30-208V	3 HP	3 #10 & 1 #10 GRD-1/2"	30A	NEMA 1	20A	KD-38,40,42	FINAL CONNECTION TO UNIT BY EC	LOCATED IN KITCHEN DISHWASH ROOM	SEE NOTES No. 1 & 4

NOTE No. 1 - FURNISH AND INSTALL A 30A-3P-208V NON-FUSED WEATHERPROOF DISCONNECT SWITCH NEXT TO FAN ON ROOF FOR DISCONNECTION OF POWER TO SERVICE UNIT.

NOTE No. 2 - FURNISH AND INSTALL ELECTRICAL CONNECTIONS AND A MANUAL MOTOR SWITCH FOR THE MOTORIZED DAMPER (MOD) LOCATED IN DUCTWORK BELOW POWER ROOF VENTILATOR. CONNECT TO NEAREST NON-SWITCHED 120V CIRCUIT.

NOTE No. 3 - FURNISH AND INSTALL ELECTRICAL CONNECTIONS AND A MANUAL MOTOR SWITCH FOR THE MOTORIZED DAMPER (MOD) LOCATED IN DUCTWORK BELOW POWER ROOF VENTILATOR. CONNECT TO THE SAME 120V POWER SUPPLY THAT SERVES THIS POWER ROOF VENTILATOR.

NOTE No. 4 - INTERLOCK WITH KITCHEN HOOD. FURNISH AND INSTALL A LOCAL SWITCH ON HOOD TO CONTROL PANEL.

NOTE No. 5 - INTERLOCK WITH DISHWASHER. FURNISH AND INSTALL A LOCAL SWITCH AND CONNECTION TO DISHWASHER SO THE FAN TURNS ON WHEN DISHWASHER IS IN USE.

ELECTRICAL EQUIPMENT SCHEDULE - AREA 'A'												
TAG	EQUIPMENT	LOCATION	VOLTAGE	MCA/HP	WIRE & CONDUIT	DISCONNECT SIZE	STARTER SIZE	FUSES SIZE	CIRCUIT No.	CONNECTION	DISCONNECT LOCATION	NOTES
CAH 406	CLASSROOM AIR HANDLING UNIT	CLASSROOM 406	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	F-26,28	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01
CAH 407	CLASSROOM AIR HANDLING UNIT	CLASSROOM 407	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	F-32,34	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01
CAH 408	CLASSROOM AIR HANDLING UNIT	CLASSROOM 408	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	F-36,38	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01
CAH 409	CLASSROOM AIR HANDLING UNIT	CLASSROOM 409	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	F-40,42	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01
CAH 410	CLASSROOM AIR HANDLING UNIT	CLASSROOM 410	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	F-18,20	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01
CAH 411	CLASSROOM AIR HANDLING UNIT	PUPIL SERVES 414	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	G-36,38	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01
CAH 412	CLASSROOM AIR HANDLING UNIT	IT 415	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	G-40,42	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01

ELECTRICAL EQUIPMENT SCHEDULE - AREA 'C'												
TAG	EQUIPMENT	LOCATION	VOLTAGE	MCA/HP	WIRE & CONDUIT	DISCONNECT SIZE	STARTER SIZE	FUSES SIZE	CIRCUIT No.	CONNECTION	DISCONNECT LOCATION	NOTES
CAH 189	CLASSROOM AIR HANDLING UNIT	CLASSROOM 189	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	T-24,26	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01
CAH 190	CLASSROOM AIR HANDLING UNIT	LIBRARY 191	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	T-28,30	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-03
CAH 191	CLASSROOM AIR HANDLING UNIT	LIBRARY 191	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	T-32,34	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-03
CAH 192	CLASSROOM AIR HANDLING UNIT	CLASSROOM 194	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	T-36,38	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01

ELECTRICAL EQUIPMENT SCHEDULE - AREA 'D'												
TAG	EQUIPMENT	LOCATION	VOLTAGE	MCA/HP	WIRE & CONDUIT	DISCONNECT SIZE	STARTER SIZE	FUSES SIZE	CIRCUIT No.	CONNECTION	DISCONNECT LOCATION	NOTES
CAH 187	CLASSROOM AIR HANDLING UNIT	CLASSROOM 181	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	W-36,38	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01

ELECTRICAL EQUIPMENT SCHEDULE - AREA 'E'												
TAG	EQUIPMENT	LOCATION	VOLTAGE	MCA/HP	WIRE & CONDUIT	DISCONNECT SIZE	STARTER SIZE	FUSES SIZE	CIRCUIT No.	CONNECTION	DISCONNECT LOCATION	NOTES
CAH 151	CLASSROOM AIR HANDLING UNIT	CLASSROOM 151	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	L-11,13	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01
CAH 152	CLASSROOM AIR HANDLING UNIT	CLASSROOM 153	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	L-12,14	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01
CAH 153	CLASSROOM AIR HANDLING UNIT	CLASSROOM 155	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	L-20,22	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01
CAH 154	CLASSROOM AIR HANDLING UNIT	CLASSROOM 157	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	M-39,41	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01

ELECTRICAL EQUIPMENT SCHEDULE - AREA 'F'												
TAG	EQUIPMENT	LOCATION	VOLTAGE	MCA/HP	WIRE & CONDUIT	DISCONNECT SIZE	STARTER SIZE	FUSES SIZE	CIRCUIT No.	CONNECTION	DISCONNECT LOCATION	NOTES
CAH 167A	CLASSROOM AIR HANDLING UNIT	VISUAL ARTS 167	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	Z-36,38	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01
CAH 167B	CLASSROOM AIR HANDLING UNIT	VISUAL ARTS 167	10-208V	8.1 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	Z-40,42	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-01

ELECTRICAL EQUIPMENT SCHEDULE - SECOND FLOOR												
TAG	EQUIPMENT	LOCATION	VOLTAGE	MCA/HP	WIRE & CONDUIT	DISCONNECT SIZE	STARTER SIZE	FUSES SIZE	CIRCUIT No.	CONNECTION	DISCONNECT LOCATION	NOTES
CAH 200	CLASSROOM AIR HANDLING UNIT	CLASSROOM 200	10-208V	10.48 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	B-18,20	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-02
CAH 201	CLASSROOM AIR HANDLING UNIT	CLASSROOM 201	10-208V	10.48 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	B-22,24	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-02
CAH 202	CLASSROOM AIR HANDLING UNIT	CLASSROOM 202	10-208V	10.48 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	B-30,32	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-02
CAH 203	CLASSROOM AIR HANDLING UNIT	CLASSROOM 203	10-208V	10.48 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	B-36,38	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-02
CAH 204	CLASSROOM AIR HANDLING UNIT	CLASSROOM 204	10-208V	10.48 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	B-40,42	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-02
CAH 205	CLASSROOM AIR HANDLING UNIT	CLASSROOM 205	10-208V	10.48 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	C-17,19	FINAL CONNECTION TO UNIT BY EC	MOUNTED ON EQUIPMENT	CAH-02
CAH 206	CLASSROOM AIR HANDLING UNIT	CLASSROOM 206	10-208V	10.48 MCA	2 #12 & 1 #12 GRD-1/2"	FURNISHED W/ UNIT	FURNISHED W/ UNIT	FURNISHED W/ UNIT	C-21,23	FINAL CONNECTION TO UNIT		

REPLACEMENT PANEL 'A'					
MAIN BUSING		MLO 225 AMPS		VOLTAGE 480 /277V	
SCR 14,000 AIC		3-Ph 4-W		MOUNTING SURFACE	
2ND FLOOR					
NO	DESCRIPTION	CB/P	CB/P	DESCRIPTION	NO
1	EXISTING LIGHTING	20/1	20/1	EXISTING LIGHTING	2
3	EXISTING LIGHTING	20/1	20/1	EXISTING LIGHTING	4
5	EXISTING LIGHTING	20/1	20/1	EXISTING LIGHTING	6
7	EXISTING LIGHTING	20/1	20/1	EXISTING LIGHTING	8
9	EXISTING LIGHTING	20/1	20/1	REPLACEMENT LIGHTING (CORRIDORS)	10
11	EXISTING LIGHTING	20/1	20/1	REPLACEMENT LIGHTING (CORRIDORS)	12
13	SPACE	20/1	-	SPACE	14
15	SPACE	20/1	-	SPACE	16
17	SPACE	20/1	-	SPACE	18
19	SPACE	20/1	-	SPACE	20
21	SPACE	20/1	-	SPACE	22
23	SPACE	20/1	-	SPACE	24
25	SPACE	20/1	-	SPACE	26
27	SPACE	20/2	-	EXISTING EXTERIOR LIGHTING (GYM WALL)	28
29	SPACE	-	-	-	30

REPLACEMENT PANEL 'F'					
MAIN BUSING		MLO 225 AMPS		VOLTAGE 208 /120V	
SCR 10,000 AIC		3-Ph 4-W		MOUNTING RECESSED	
1ST FLOOR - AREA 'A'					
NO	DESCRIPTION	CB/P	CB/P	DESCRIPTION	NO
1	EXISTING RECEPTACLES (CLASSROOM 415)	20/1	20/1	EXISTING RECEPTACLES (CLASSROOMS 411, 413)	2
3	EXISTING RECEPTACLES (CLASSROOM 415)	20/1	20/1	EXISTING RECEPTACLES (CLASSROOMS 411)	4
5	EXISTING RECEPTACLES (CLASSROOM 413)	20/1	20/1	EXISTING RECEPTACLES (CLASSROOMS 409)	6
7	EXISTING RECEPTACLES (CLASSROOM 408)	20/1	20/1	EXISTING RECEPTACLES (CLASSROOMS 407, 409)	8
9	EXISTING RECEPTACLES (CLASSROOM 406 & 408)	20/1	20/1	EXISTING RECEPTACLES (CLASSROOMS 407)	10
11	EXISTING RECEPTACLES (CLASSROOM 406 & COW SHED)	20/1	20/1	EXISTING RECEPTACLES (BOYS & GIRLS RR, PIPE A117)	12
13	EXISTING WATER COOLER & PIPE CHASE L'S	20/1	20/1	EXISTING RECEPTACLES (BOYS & GIRLS RR, PIPE A117)	14
15	SPACE	20/1	20/1	EXISTING EQUIPMENT OR SPARE	16
17	SPACE	20/1	20/2	NEW CLASSROOM AIR HANDLING UNIT (CAH)	18
19	SPACE	20/1	-	SPACE	20
21	SPACE	20/1	20/1	SPACE	22
23	EXISTING RECEPT & AUTO FLUSH	20/1	20/1	NEW ROOF RECEPTACLES (GFI)	24
25	SPACE	20/1	-	NEW CLASSROOM AIR HANDLING UNIT (CAH)	26
27	REPLACEMENT EXHAUST FAN (PRV-A01)	20/1	-	SPACE	28
29	NEW SPLIT SYSTEM A/C (NETWORK 413)	30/2	-	NEW CLASSROOM AIR HANDLING UNIT (CAH)	30
31	SPACE	-	15/2	NEW CLASSROOM AIR HANDLING UNIT (CAH)	32
33	SPACE	-	-	SPACE	34
35	EXISTING HAND DRYERS (GIRLS ROOM)	25/2	15/2	NEW CLASSROOM AIR HANDLING UNIT (CAH)	36
37	SPACE	-	-	SPACE	38
39	EXISTING HAND DRYERS (BOYS ROOM)	25/2	15/2	NEW CLASSROOM AIR HANDLING UNIT (CAH)	40
41	SPACE	-	-	SPACE	42

REPLACEMENT PANEL 'J'					
MAIN BUSING		MLO 225 AMPS		VOLTAGE 480 /277V	
SCR 14,000 AIC		3-Ph 4-W		MOUNTING RECESSED	
1ST FLOOR - AREA 'D'					
NO	DESCRIPTION	CB/P	CB/P	DESCRIPTION	NO
1	EXISTING LIGHTING - HOME ED	20/1	20/1	REPLACEMENT GYMNASIUM LIGHTING	2
3	EXISTING LIGHTING	20/1	20/1	REPLACEMENT GYMNASIUM LIGHTING	4
5	EXISTING LIGHTING	20/1	20/1	REPLACEMENT GYMNASIUM LIGHTING	6
7	EXISTING LIGHTING	20/1	20/1	REPLACEMENT GYMNASIUM LIGHTING	8
9	EXISTING LIGHTING	20/1	20/1	REPLACEMENT GYMNASIUM LIGHTING	10
11	EXISTING LIGHTING	20/1	20/1	REPLACEMENT GYMNASIUM LIGHTING	12
13	EXISTING LIGHTING - LOCKER ROOM	20/1	20/1	REPLACEMENT GYMNASIUM LIGHTING	14
15	EXISTING LIGHTING - LOCKER ROOM	20/1	20/1	REPLACEMENT GYMNASIUM LIGHTING	16
17	SPACE	20/1	-	SPACE	18
19	SPACE	20/1	-	SPACE	20
21	SPACE	20/1	-	SPACE	22
23	SPACE	20/1	-	SPACE	24
25	SPACE	20/1	-	SPACE	26
27	SPACE	20/1	-	SPACE	28
29	SPACE	20/1	-	SPACE	30
31	SPACE	15/3	-	EXISTING AREA PROTECTION	32
33	SPACE	-	-	SPACE	34
35	SPACE	-	-	SPACE	36
37	SPACE	-	-	SPACE	38
39	REPLACEMENT AIR HANDLING UNIT (MAIN GYM)	30/3	30/3	REPLACEMENT AIR HANDLING UNIT (MAIN GYM)	40
41	SPACE	-	-	SPACE	42

REPLACEMENT PANEL 'B'					
MAIN BUSING		MLO 225 AMPS		VOLTAGE 208 /120V	
SCR 10,000 AIC		3-Ph 4-W		MOUNTING RECESSED	
2ND FLOOR					
NO	DESCRIPTION	CB/P	CB/P	DESCRIPTION	NO
1	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	2
3	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	4
5	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	6
7	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	8
9	EXISTING LIGHTING PIPE CHASE - BOYS ROOM	20/1	20/1	EXISTING EXTERIOR FLOOD LIGHT (CENTER PARKING)	10
11	SPACE	-	20/1	NEW MOTOR OPERATED DAMPERS (MODS)	12
13	REPLACEMENT EXHAUST FAN (PRV-B03)	20/3	20/1	EXISTING PADDLE FANS	14
15	SPACE	-	20/1	NEW AHU-B01 CONTROL PANEL	16
17	EXISTING CABINET UNIT HEATERS	20/1	15/2	NEW CLASSROOM AIR HANDLING UNIT	18
19	EXISTING AUTOMATIC FLUSH VALVES	20/1	-	SPACE	20
21	EXISTING WATER COOLER	20/1	15/2	NEW CLASSROOM AIR HANDLING UNIT	22
23	EXISTING WATER COOLER	20/1	-	SPACE	24
25	SPACE	-	20/1	NEW ROOF RECEPTACLES (GFI)	26
27	EXISTING HAND DRYER - GIRLS ROOM	25/2	20/1	EXISTING EQUIPMENT OR SPARE	28
29	SPACE	-	15/2	NEW CLASSROOM AIR HANDLING UNIT	30
31	EXISTING HAND DRYER - GIRLS ROOM	25/2	-	SPACE	32
33	SPACE	-	-	SPACE	34
35	EXISTING HAND DRYER - BOYS ROOM	25/2	15/2	NEW CLASSROOM AIR HANDLING UNIT	36
37	SPACE	-	-	SPACE	38
39	EXISTING HAND DRYER - BOYS ROOM	25/2	15/2	NEW CLASSROOM AIR HANDLING UNIT	40
41	SPACE	-	-	SPACE	42

REPLACEMENT PANEL 'G'					
MAIN BUSING		MLO 225 AMPS		VOLTAGE 208 /120V	
SCR 10,000 AIC		3-Ph 4-W		MOUNTING SURFACE	
1ST FLOOR - AREA 'A'					
NO	DESCRIPTION	CB/P	CB/P	DESCRIPTION	NO
1	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	2
3	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	4
5	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	6
7	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	8
9	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	10
11	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	12
13	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	14
15	EXISTING RECEPTACLES	20/1	20/1	NEW VARIABLE VOLUME BOX (WB)	16
17	EXISTING EQUIPMENT REPAIR SHOP	20/1	20/1	NEW VARIABLE VOLUME BOX (WB)	18
19	EXISTING EQUIPMENT REPAIR SHOP	20/1	20/1	NEW VARIABLE VOLUME BOX (WB)	20
21	EXISTING EQUIPMENT REPAIR SHOP	20/1	20/1	NEW MOTOR OPERATED DAMPERS (MODS)	22
23	NEW AHU CONTROL PANEL	20/1	20/1	SPACE	24
25	SPACE	20/1	20/1	SPACE	26
27	EXISTING EQUIPMENT OR SPARE	20/1	20/1	SPACE	28
29	SPACE	20/1	20/1	SPACE	30
31	SPACE	-	-	SPACE	32
33	SPACE	-	-	SPACE	34
35	SPACE	-	15/2	NEW CLASSROOM AIR HANDLING UNIT (CAH)	36
37	SPACE	-	-	SPACE	38
39	REPLACEMENT PANEL 'CA'	60/3	15/2	NEW CLASSROOM AIR HANDLING UNIT (CAH)	40
41	SPACE	-	-	SPACE	42

REPLACEMENT PANEL 'L'					
MAIN BUSING		MLO 225 AMPS		VOLTAGE 208 /120V	
SCR 10,000 AIC		3-Ph 4-W		MOUNTING SURFACE	
1ST FLOOR - AREA 'D'					
NO	DESCRIPTION	CB/P	CB/P	DESCRIPTION	NO
1	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	2
3	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	4
5	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	6
7	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	8
9	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	10
11	NEW CLASSROOM AIR HANDLING UNIT (CAH)	20/2	15/2	NEW CLASSROOM AIR HANDLING UNIT (CAH)	12
13	SPACE	-	-	SPACE	14
15	REPLACEMENT EXHAUST FANS (PRV-E01 & PRV-E02)	20/1	20/1	NEW GYM AHU'S CONTROL PANEL	16
17	EXISTING CUH	20/1	20/1	EXISTING RECEPTACLES	18
19	SPACE	20/1	15/2	NEW CLASSROOM AIR HANDLING UNIT (CAH)	20
21	SPACE	-	-	SPACE	22
23	EXISTING PADDLE FANS GYM - SOUTH	20/1	30/2	EXISTING MOTORIZED BLEACHERS	24
25	EXISTING BACKBOARDS	20/1	-	SPACE	26
27	EXISTING BACKBOARDS	20/1	40/2	EXISTING MOTORIZED BLEACHERS	28
29	EXISTING EQUIPMENT OR SPARE	20/1	-	SPACE	30
31	EXISTING HAND DRYERS (GIRLS LOCKER RM)	25/2	-	SPACE	32
33	SPACE	-	20/3	NEW MAIN GYM SCOREBOARD	34
35	EXISTING HAND DRYERS (LOCKER RM)	25/2	-	SPACE	36
37	SPACE	-	-	SPACE	38
39	EXISTING HAND DRYERS (BOYS LOCKER RM)	25/2	20/3	NEW MAIN GYM SCOREBOARD	40
41	SPACE	-	-	SPACE	42

REPLACEMENT PANEL 'C'					
MAIN BUSING		MLO 225 AMPS		VOLTAGE 208 /120V	
SCR 10,000 AIC		3-Ph 4-W		MOUNTING RECESSED	
2ND FLOOR					
NO	DESCRIPTION	CB/P	CB/P	DESCRIPTION	NO
1	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	2
3	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	4
5	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	6
7	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	8
9	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	10
11	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	12
13	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	14
15	EXISTING RECEPTACLES	20/1	20/1	EXISTING RECEPTACLES	16
17	NEW CLASSROOM AIR HANDLING UNIT (CAH)	20/2	15/2	NEW CLASSROOM AIR HANDLING UNIT (CAH)	18
19	SPACE	-	-	SPACE	20
21	NEW CLASSROOM AIR HANDLING UNIT (CAH)	15/2	20/2	NEW CLASSROOM AIR HANDLING UNIT (CAH)	22
23	SPACE	-	-	SPACE	24
25	NEW CLASSROOM AIR HANDLING UNIT (CAH)	15/2	20/1	EXISTING RECEPTACLES	26
27	SPACE	-	20/1	EXISTING PADDLE FANS	28
29	NEW CLASSROOM AIR HANDLING UNIT (CAH)	20/2	20/1	EXISTING PADDLE FANS	30
31	SPACE	-	20/1	REPLACEMENT EXHAUST FAN (PRV-E03)	32
33	NEW CLASSROOM AIR HANDLING UNIT (CAH)	20/2	20/1	REPLACEMENT EXHAUST FAN (PRV-E04)	34
35	SPACE	-	20/1	EXISTING EQUIPMENT OR SPARE	36
37	NEW CLASSROOM AIR HANDLING UNIT (CAH)	15/2	30/2	NEW SPLIT SYSTEM A/C (DATA 212)	38
39	SPACE	-	-	SPACE	40
41	NEW MOTOR OPERATED DAMPERS (MODS)	20/1	20/1	EXISTING CABINET UNIT HEATERS	42

REPLACEMENT PANEL 'H'					
MAIN BUSING		MLO 225 AMPS		VOLTAGE 480 /277V	
SCR 14,000 AIC		3-Ph 4-W		MOUNTING RECESSED	
1ST FLOOR - AREA 'B'					
NO	DESCRIPTION	CB/P	CB/P	DESCRIPTION	NO
1	EXISTING LIGHTING - BOYS RR, NURSE, FAC ROOM	20/1	20/1	EXISTING LIGHTING - CAFE A 4X4 FIXTURES	2
3	EXISTING LIGHTING - MAIN OFFICE	20/1	20/1	EXISTING LIGHTING - CAFE A 4X4 FIXTURES	4
5	EXISTING LIGHTING - RM 405, FAC DINING	20/1	20/1	EXISTING LIGHTING - CAFE ARECESSED & LOBBY	6
7	EXISTING LIGHTING - LOBBY/DISPLAY, SEC, MEN FARR	20/1	20/1	EXISTING LIGHTING - KITCHEN	8
9	EXISTING LIGHTING - CAFE STORAGE B112	20/1	20/1	EXISTING LIGHTING - KITCHEN	10
11	REPLACEMENT LIGHTING - CAFE B	20/1	20/1	REPLACEMENT LIGHTING - CORRIDOR	12
13	REPLACEMENT LIGHTING KITCHEN AREA	20/1	20/1	SPACE	14
15	SPACE	20/1	20/1	SPACE	16
17	SPACE	20/1	20/1	SPACE	18
19	SPACE	20/1	20/1	SPACE	20
21	SPACE	20/1	20/1	SPACE	22
23	SPACE	20/1	20/1	SPACE	24
25	SPACE	-	-	SPACE	26
27	EXISTING AREA PROTECTION	15/3	20/3	REPLACEMENT AIR HANDLING UNIT (CAFETERIA)	28
29	SPACE	-	-	SPACE	30

REPLACEMENT PANEL 'M'					
MAIN BUSING		MLO 225 AMPS		VOLTAGE 208 /120V	
SCR 10,000 AIC		3-Ph 4-W		MOUNTING RECESSED	
1ST FLOOR - AREA 'D'					
NO	DESCRIPTION	CB/P	CB/P	DESCRIPTION	NO
1	EXISTING RECEPTACLES - ROOM 151	20/1	20/1	EXISTING RECEPTACLES - GUIDANCE OFFICE	2
3	EXISTING RECEPTACLES - ROOM 151	20/1	20/1	EXISTING RECEPTACLES - GUIDANCE OFFICE	4
5	EXISTING RECEPTACLES - ROOM 153	20/1	20/1	EXISTING RECEPTACLES - GUIDANCE/COUNSELOR	6
7	EXISTING RECEPTACLES - ROOM 153, 155	20/1	20/1	EXISTING RECEPTACLES - COUNSELOR	8
9	EXISTING RECEPTACLES - ROOM 155	20/1	20/1	EXISTING RECEPTACLES - AD OFFICE / TRAINING	10
11	EXISTING RECEPTACLES - ROOM 157	20/1	20/1	EXISTING RECEPTACLES - AD OFFICE / TRAINING	12
13	EXISTING RECEPTACLES - ROOM 157	20/1	20/1	EXISTING RECEPTACLES - COMM CLOSET	14
15	EXISTING WATER COOLERS	20/1	20/1	EXISTING RECEPTACLES - TRAINERS	16
17	EXISTING EXHAUST FAN - ELEV ROOM	20/1	20/1	EXISTING RECEPTACLES	18
19	EXISTING HEATER - ELEV ROOM	20/1	20/1	EXISTING RECEPTACLES	20
21	SPACE	20/1	20/1	EXISTING WATER COOLERS	22
23	SPACE	20/1	20/1	EXISTING AUTO FLUSH VALVES	24
25	EXISTING CABINET UNIT HEATERS	20/1	20/1	EXISTING LIGHTING - PIPE CHASE	26
27	SPACE	20/1	20/1	EXISTING ELEC CONTROL ELEV ROOM	28
29	SPACE	20/1	20/1	EXISTING ELEVATOR PIT	30
31	EXISTING FAN COIL UNITS	20/1	20/1	EXISTING RECEPTACLES - GUIDANCE OFFICE	32
33	EXISTING UNIT VENTILATORS - ATH DIR / TRAIN	20/1	20/1	NEW RECEPTACLES (SCORERS TABLE)	34
35	EXISTING CABINET UNIT HEATERS	20/1	25/2	EXISTING HAND DRYER - WOMENS ROOM	36
37	SPACE	-	-	SPACE	38
39	NEW CLASSROOM AIR HANDLING UNIT (CAH)	15/2	25/2	EXISTING HAND DRYER - MENS ROOM	40
41	SPACE	-	-	SPACE	42