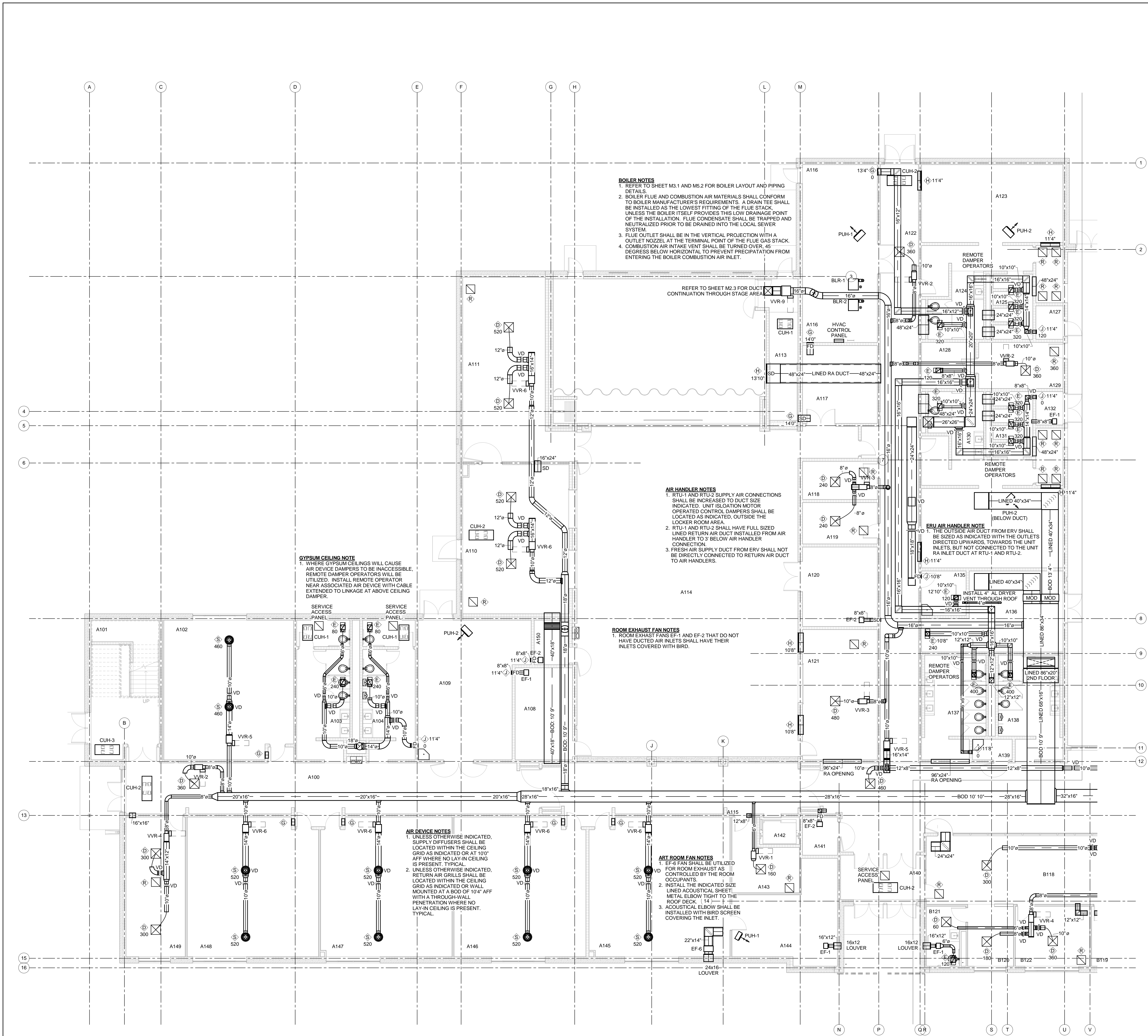


1. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF THE WORK WITH OTHER TRADES DURING CONSTRUCTION. REFER TO SPECIFICATION SECTION 9052 AND 9053 FOR LISTED CONSTRUCTION FINISHES OF EXPOSED EQUIPMENT, DUCT, PIPE, ETC. UNLISTED ITEMS SHALL BE SUBMITTED TO THE PROJECT ARCHITECT FOR CLARIFICATION. ANY DUCT, PIPE, EQUIPMENT, OR ETC. INSTALLED IN A FINISHED EXPOSED SPACE SHALL BE ASSUMED TO BE PAINTED AND SHALL THEREFORE BE THOROUGHLY CLEANED AND PREPARED UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL COORDINATE AIR DEVICE LOCATIONS WITH REFLECTED CEILING, INTERIOR AND EXTERIOR ELEVATION PLANS.
3. CONTRACTOR SHALL REFER TO EQUIPMENT SCHEDULE SHEETS FOR TAGGED EQUIPMENT PERFORMANCE REQUIREMENTS AND CONSTRUCTION DOCUMENTS FOR MINIMUM INSTALLATION REQUIREMENTS.
4. CONTRACTOR IS RESPONSIBLE TO INSTALL DUCT AND PIPE TRANSITIONS FOR THE SELECTED EQUIPMENT AS NECESSARY FOR CONNECTION OF THE INDICATED DUCT AND PIPE SIZES.
5. UNLESS OTHERWISE INDICATED, ALL ABOVE CEILING SPACE(S) SHALL BE CONSIDERED PART OF THE RETURN AIR PLenum. THEREFORE ALL PIPE, DUCT, CONTROL DEVICES, WIRING, AND EQUIPMENT SHALL BE RATED AND ACCEPTABLE FOR INSTALLATION IN A PLenum SPACE.
6. WHENEVER POSSIBLE, DUCT, PIPING, CONTROL DEVICES, AND EQUIPMENT SHALL BE INSTALLED A MINIMUM OF 8" ABOVE THE FINISHED CEILING ELEVATION TO AVOID INSTALLATION CONFLICTS WITH CEILING MOUNTED DEVICES AND UNLESS OTHERWISE NOTED, THE BOTTOM OF HVAC EQUIPMENT SHALL BE A MINIMUM OF 24" ABOVE CEILING ELEVATIONS AND UNOBSTRUCTED BY DUCT, PIPING, EQUIPMENT AND ETC. FOR SERVICE AND MAINTENANCE PURPOSES.
7. INSTALL METAL SLEEVES THROUGH WALL PENETRATION CONSISTING OF UNIFORMINFORM CONSTRUCTION MATERIALS. INSTALL FIRE CAULKING AS NECESSARY. REFER TO THE ARCHITECTURAL SHEETS FOR DESIGNATION OF FIRE AND SMOKE RATED WALL ASSEMBLIES. REFER TO SPECIFICATION 7840 FOR FIRE STOPPING MATERIAL DETAILS.
8. WHEN UTILIZING STRUCTURAL STEEL FOR SUPPORT OF DUCT, PIPE AND EQUIPMENT HANGERS, ATTACHMENT TO THE STRUCTURAL STEEL SHALL OCCUR AT THE TOP OR BOTTOM FLANGE OF THE STRUCTURAL ELEMENT.
9. SYMBOLS AND ABBREVIATIONS ON THIS SHEET MAY NOT ALL BE USED WITHIN THIS SET OF PROJECT DOCUMENTS.



UNIT A - FIRST FLOOR HVAC DUCT PLAN

1/8" = 1'-0"

| ROOM LEGEND - UNIT A1 |                               |                 |
|-----------------------|-------------------------------|-----------------|
| Number                | Name                          | Area            |
| A100                  | INTERVENING ROOM              | 996 SF          |
| A101                  | STAIR                         | 383 SF          |
| A102                  | CLASSROOM                     | 779 SF          |
| A103                  | RESTROOM                      | 251 SF          |
| A104                  | RESTROOM                      | 248 SF          |
| A108                  | GENERAL STORAGE               | 233 SF          |
| A109                  | RECEIVING                     | 615 SF          |
| A110                  | SERVING KITCHEN               | 696 SF          |
| A111                  | TABLE STORAGE                 | 703 SF          |
| A112                  | PLATFORM                      | 1333 SF         |
| A113                  | CORRIDOR                      | 201 SF          |
| A114                  | COMMONS                       | 3271 SF         |
| A115                  | CORRIDOR                      | 589 SF          |
| A116                  | MECHANICAL ROOM               | 587 SF          |
| A116                  | MECHANICAL ROOM               | Redundant Space |
| A117                  | STORAGE                       | 257 SF          |
| A118                  | DRESS RM                      | 126 SF          |
| A119                  | DRESS RM                      | 137 SF          |
| A120                  | TABLE STORAGE                 | 262 SF          |
| A121                  | STAFF DINING                  | 430 SF          |
| A122                  | CORRIDOR                      | 1032 SF         |
| A123                  | GIRLS LOCKER RM               | 644 SF          |
| A124                  | RESTROOM                      | 137 SF          |
| A125                  | SHOWERS                       | 111 SF          |
| A127                  | J.C.                          | 40 SF           |
| A128                  | STORAGE RM                    | 110 SF          |
| A129                  | OFFICE                        | 172 SF          |
| A130                  | RESTROOM                      | 138 SF          |
| A131                  | SHOWERS                       | 110 SF          |
| A132                  | SOUND                         | 40 SF           |
| A133                  | BOYS LOCKER ROOM              | 652 SF          |
| A135                  | LAUNDRY                       | 88 SF           |
| A136                  | GYM STORAGE                   | 406 SF          |
| A137                  | RESTROOM                      | 267 SF          |
| A138                  | RESTROOM                      | 268 SF          |
| A139                  | J.C.                          | 36 SF           |
| A140                  | VESTIBULE                     | 165 SF          |
| A141                  | MACHINE RM                    | 59 SF           |
| A142                  | ELEV                          | 48 SF           |
| A143                  | OFFICE                        | 168 SF          |
| A144                  | ART STORAGE                   | 365 SF          |
| A145                  | ART                           | 852 SF          |
| A146                  | CLASSROOM                     | 799 SF          |
| A147                  | CLASSROOM                     | 794 SF          |
| A148                  | CLASSROOM                     | 794 SF          |
| A149                  | MS ASSISTANT PRINCIPAL OFFICE | 365 SF          |
| A150                  | TECH ROOM                     | 69 SF           |

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UNIT A - FIRST FLOOR HVAC DUCT PLAN

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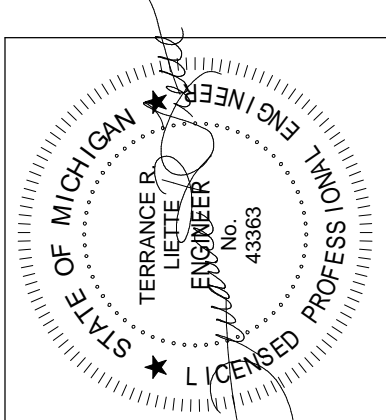
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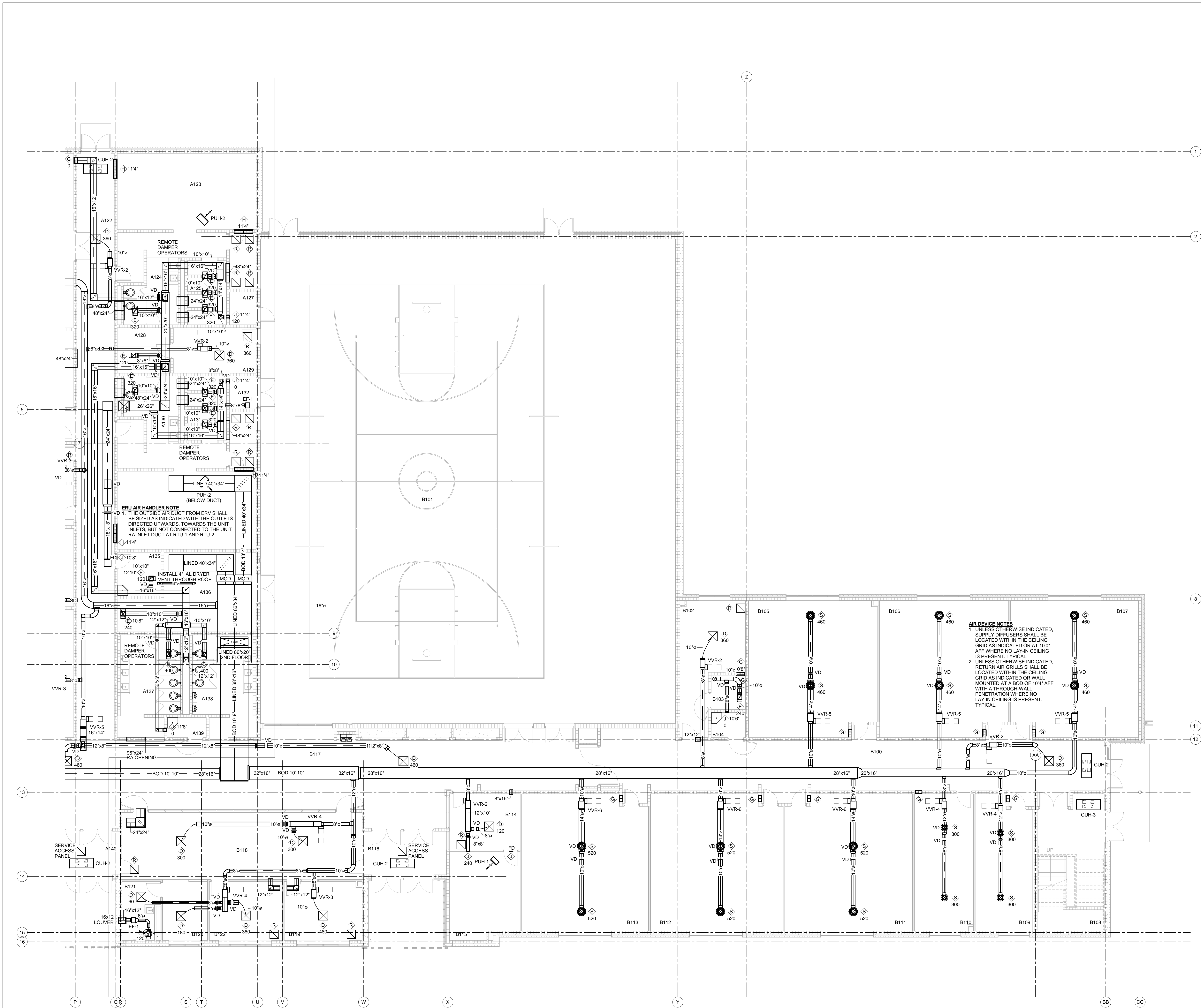
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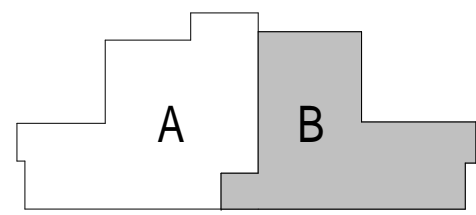


UNIT B - FIRST FLOOR HVAC DUCT PLAN

1/8" = 1'-0"

| ROOM LEGEND - UNIT B1 |                       |                    |
|-----------------------|-----------------------|--------------------|
| Number                | Name                  | Area               |
| A200                  | CORRIDOR              | 1912 SF            |
| A202                  | CLASSROOM             | 779 SF             |
| A203                  | RESTROOM              | 320 SF             |
| A204                  | RESTROOM              | 316 SF             |
| A207                  | STORAGE               | 255 SF             |
| A208                  | WORKROOM              | 650 SF             |
| A209                  | RESOURCE RM           | 366 SF             |
| A210                  | RESOURCE RM           | 382 SF             |
| A211                  | CLASSROOM             | 793 SF             |
| A212                  | BOOKSTORE/WOR<br>K RM | 808 SF             |
| A213                  | HEAD END              | 210 SF             |
| A214                  | ITINERANT OFFICE      | 159 SF             |
| A215                  | MS COUN OFFICE        | 182 SF             |
| A216                  | HS COUN OFFICE        | 123 SF             |
| A217                  | RESTROOM              | 180 SF             |
| A218                  | RESTROOM              | 176 SF             |
| A219                  | J.C.                  | 47 SF              |
| A220                  | MEDIA CENTER          | 2938 SF            |
| A220                  | MEDIA CENTER          | Redundant<br>Space |
| A242                  | ELEV.                 | 48 SF              |
| B100                  | CORRIDOR              | 1324 SF            |
| B101                  | GYMNASIUM             | 9340 SF            |
| B102                  | CONFERENCE RM         | 298 SF             |
| B103                  | TECH ROOM             | 54 SF              |
| B104                  | J.C.                  | 40 SF              |
| B105                  | CLASSROOM             | 788 SF             |
| B106                  | CLASSROOM             | 791 SF             |
| B107                  | CLASSROOM             | 784 SF             |
| B108                  | STAIR                 | 383 SF             |
| B109                  | RESOURCE RM           | 342 SF             |
| B110                  | RESOURCE RM           | 368 SF             |
| B111                  | CLASSROOM             | 785 SF             |
| B112                  | CLASSROOM             | 817 SF             |
| B113                  | CLASSROOM             | 778 SF             |
| B114                  | SECURITY OFFICE       | 181 SF             |
| B115                  | RECORDS               | 271 SF             |
| B116                  | VESTIBULE             | 165 SF             |
| B117                  | CORRIDOR              | 1931 SF            |
| B118                  | RECEPTION             | 737 SF             |
| B119                  | CONFERENCE            | 208 SF             |
| B120                  | CLINIC                | 123 SF             |
| B121                  | TOILET RM             | 94 SF              |
| B122                  | PRINCIPAL OFFICE      | 196 SF             |

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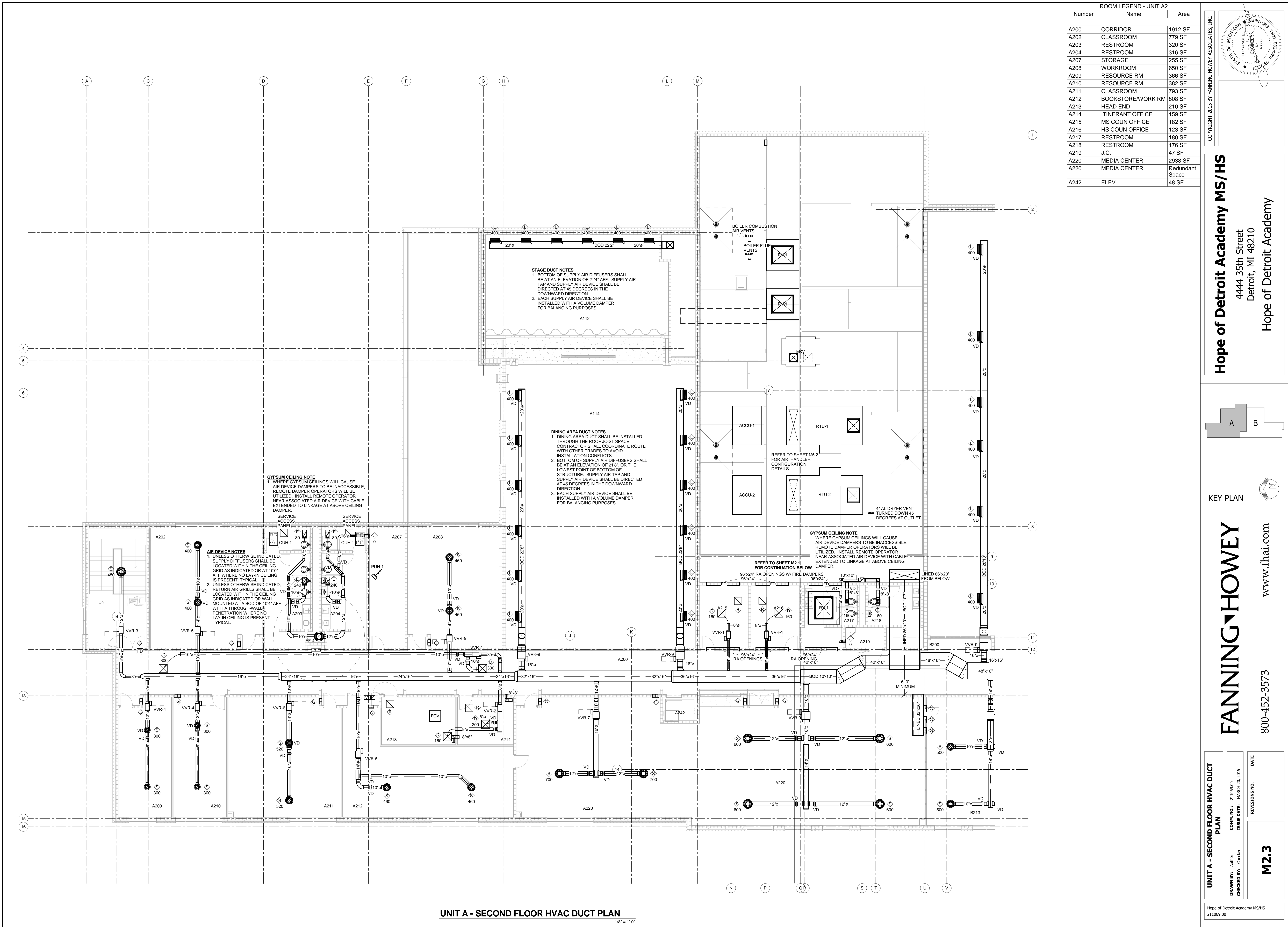
UNIT B - FIRST FLOOR HVAC DUCT  
PLAN

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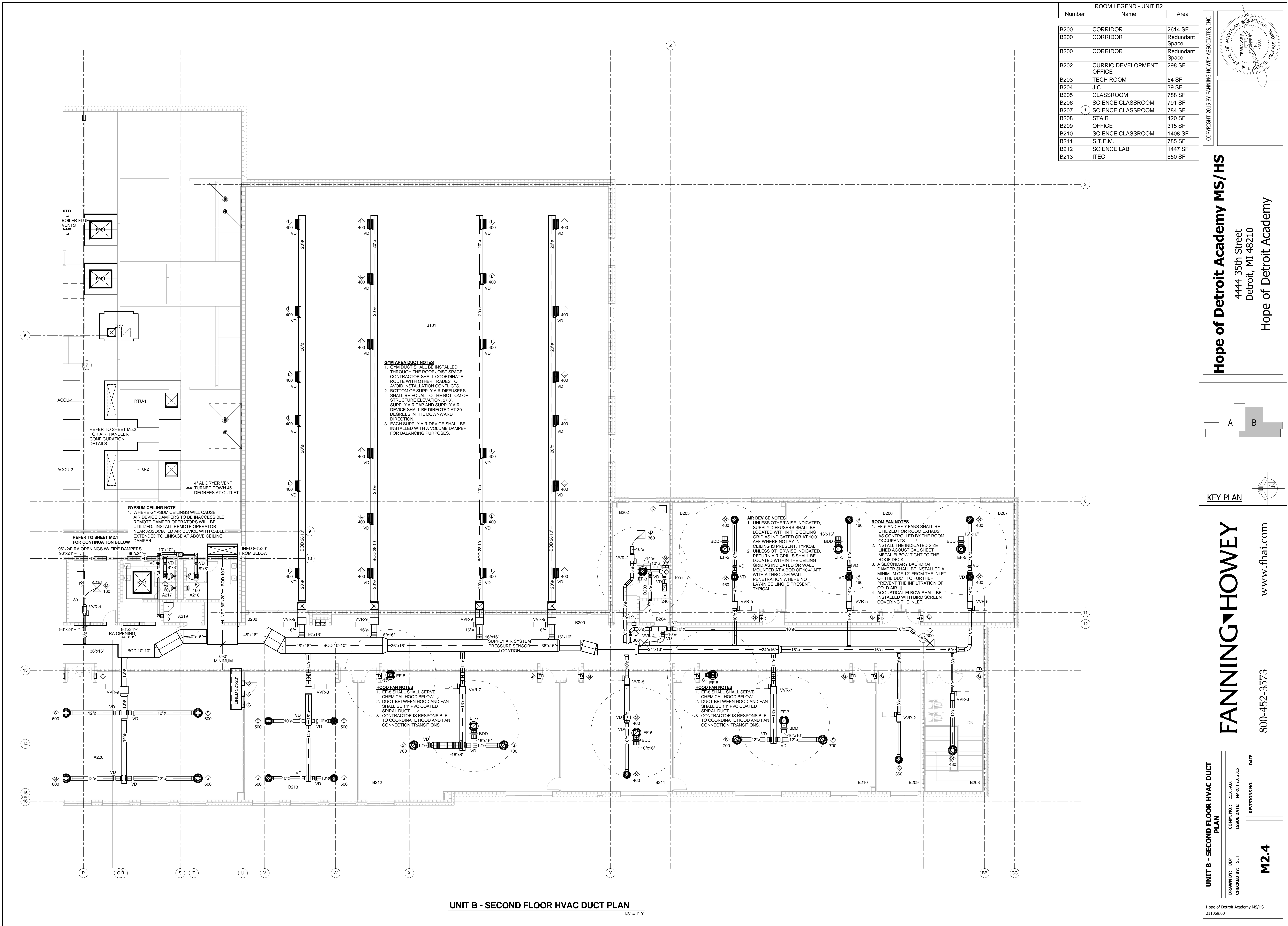
| ROOM LEGEND - UNIT A2 |                   |                 |
|-----------------------|-------------------|-----------------|
| Number                | Name              | Area            |
| A200                  | CORRIDOR          | 1912 SF         |
| A202                  | CLASSROOM         | 779 SF          |
| A203                  | RESTROOM          | 320 SF          |
| A204                  | RESTROOM          | 316 SF          |
| A207                  | STORAGE           | 255 SF          |
| A208                  | WORKROOM          | 650 SF          |
| A209                  | RESOURCE RM       | 366 SF          |
| A210                  | RESOURCE RM       | 382 SF          |
| A211                  | CLASSROOM         | 793 SF          |
| A212                  | BOOKSTORE/WORK RM | 808 SF          |
| A213                  | HEAD END          | 210 SF          |
| A214                  | ITINERANT OFFICE  | 159 SF          |
| A215                  | MS COUN OFFICE    | 182 SF          |
| A216                  | HS COUN OFFICE    | 123 SF          |
| A217                  | RESTROOM          | 180 SF          |
| A218                  | RESTROOM          | 176 SF          |
| A219                  | J.C.              | 47 SF           |
| A220                  | MEDIA CENTER      | 2938 SF         |
| A220                  | MEDIA CENTER      | Redundant Space |
| A242                  | ELEV.             | 48 SF           |

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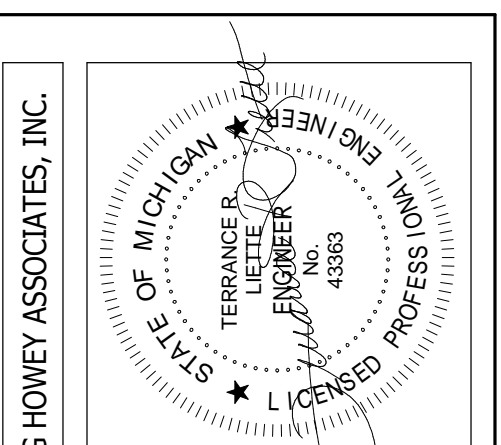
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UNIT A - SECOND FLOOR HVAC DUCT PLAN  
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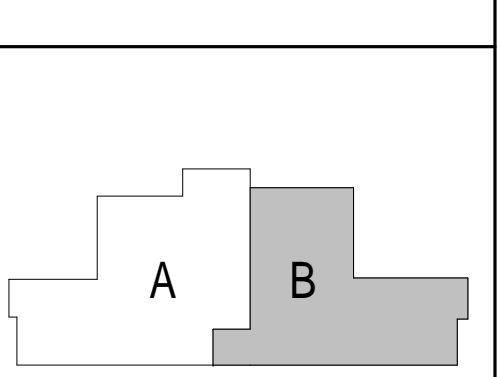


| ROOM LEGEND - UNIT B2 |                           |                 |
|-----------------------|---------------------------|-----------------|
| Number                | Name                      | Area            |
| B200                  | CORRIDOR                  | 2614 SF         |
| B200                  | CORRIDOR                  | Redundant Space |
| B200                  | CORRIDOR                  | Redundant Space |
| B202                  | CURRIC DEVELOPMENT OFFICE | 298 SF          |
| B203                  | TECH ROOM                 | 54 SF           |
| B204                  | J.C.                      | 39 SF           |
| B205                  | CLASSROOM                 | 788 SF          |
| B206                  | SCIENCE CLASSROOM         | 791 SF          |
| B207                  | SCIENCE CLASSROOM         | 784 SF          |
| B208                  | STAIR                     | 420 SF          |
| B209                  | OFFICE                    | 315 SF          |
| B210                  | SCIENCE CLASSROOM         | 1408 SF         |
| B211                  | S.T.E.M.                  | 785 SF          |
| B212                  | SCIENCE LAB               | 1447 SF         |
| B213                  | ITEC                      | 850 SF          |



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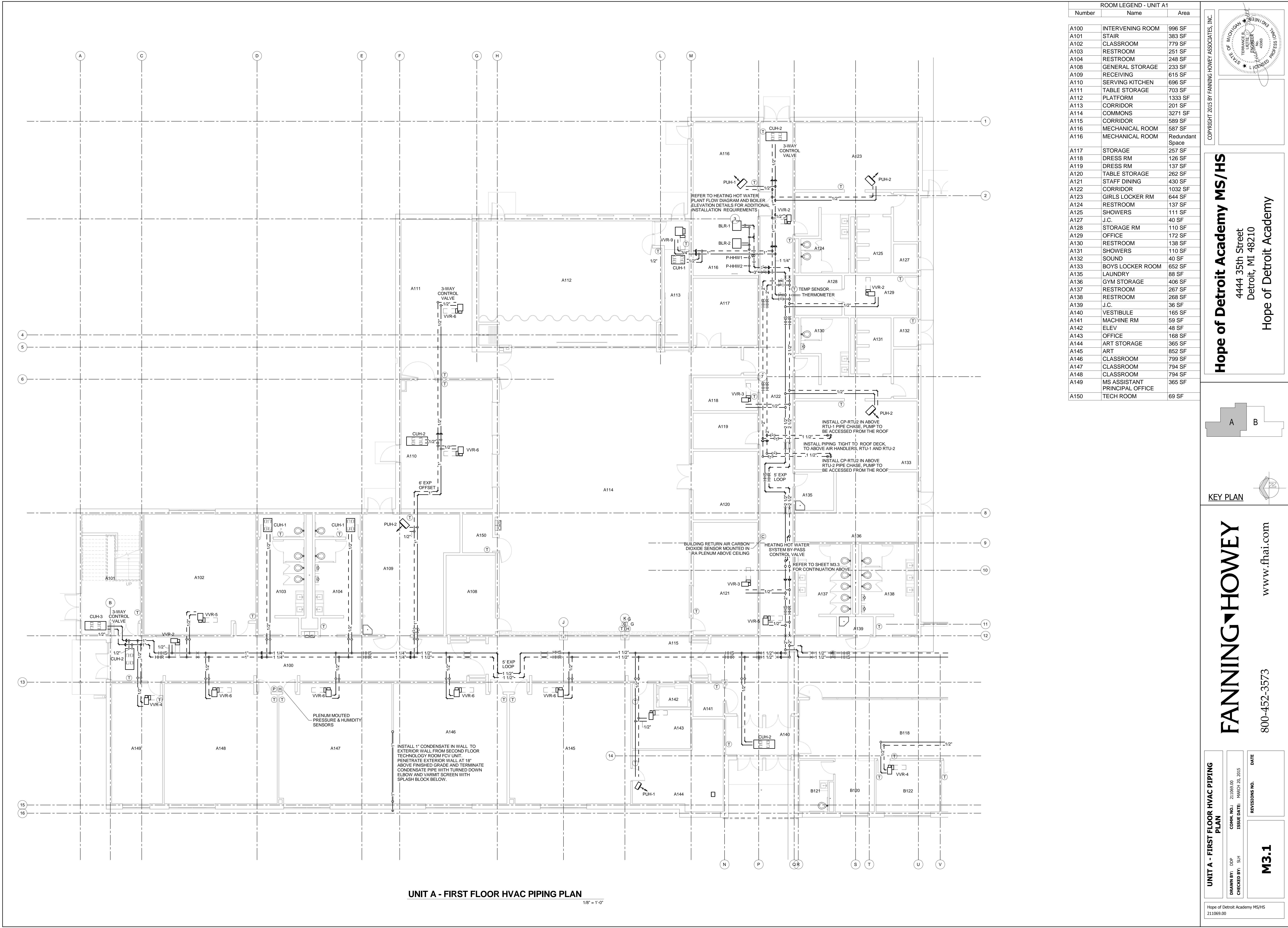
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UNIT A - FIRST FLOOR HVAC PIPING PLAN

1/8" = 1'-0"

| ROOM LEGEND - UNIT A1 |                               |                 |
|-----------------------|-------------------------------|-----------------|
| Number                | Name                          | Area            |
| A100                  | INTERVENING ROOM              | 996 SF          |
| A101                  | STAIR                         | 383 SF          |
| A102                  | CLASSROOM                     | 779 SF          |
| A103                  | RESTROOM                      | 251 SF          |
| A104                  | RESTROOM                      | 248 SF          |
| A108                  | GENERAL STORAGE               | 233 SF          |
| A109                  | RECEIVING                     | 615 SF          |
| A110                  | SERVING KITCHEN               | 696 SF          |
| A111                  | TABLE STORAGE                 | 703 SF          |
| A112                  | PLATFORM                      | 1333 SF         |
| A113                  | CORRIDOR                      | 201 SF          |
| A114                  | COMMONS                       | 3271 SF         |
| A115                  | CORRIDOR                      | 589 SF          |
| A116                  | MECHANICAL ROOM               | 587 SF          |
| A116                  | MECHANICAL ROOM               | Redundant Space |
| A117                  | STORAGE                       | 257 SF          |
| A118                  | DRESS RM                      | 126 SF          |
| A119                  | DRESS RM                      | 137 SF          |
| A120                  | TABLE STORAGE                 | 262 SF          |
| A121                  | STAFF DINING                  | 430 SF          |
| A122                  | CORRIDOR                      | 1032 SF         |
| A123                  | GIRLS LOCKER RM               | 644 SF          |
| A124                  | RESTROOM                      | 137 SF          |
| A125                  | SHOWERS                       | 111 SF          |
| A127                  | J.C.                          | 40 SF           |
| A128                  | STORAGE RM                    | 110 SF          |
| A129                  | OFFICE                        | 172 SF          |
| A130                  | RESTROOM                      | 138 SF          |
| A131                  | SHOWERS                       | 110 SF          |
| A132                  | SOUND                         | 40 SF           |
| A133                  | BOYS LOCKER ROOM              | 652 SF          |
| A135                  | LAUNDRY                       | 88 SF           |
| A136                  | GYM STORAGE                   | 406 SF          |
| A137                  | RESTROOM                      | 267 SF          |
| A138                  | RESTROOM                      | 268 SF          |
| A139                  | J.C.                          | 36 SF           |
| A140                  | VESTIBULE                     | 165 SF          |
| A141                  | MACHINE RM                    | 59 SF           |
| A142                  | ELEV                          | 48 SF           |
| A143                  | OFFICE                        | 168 SF          |
| A144                  | ART STORAGE                   | 365 SF          |
| A145                  | ART                           | 852 SF          |
| A146                  | CLASSROOM                     | 799 SF          |
| A147                  | CLASSROOM                     | 794 SF          |
| A148                  | CLASSROOM                     | 794 SF          |
| A149                  | MS ASSISTANT PRINCIPAL OFFICE | 365 SF          |
| A150                  | TECH ROOM                     | 69 SF           |

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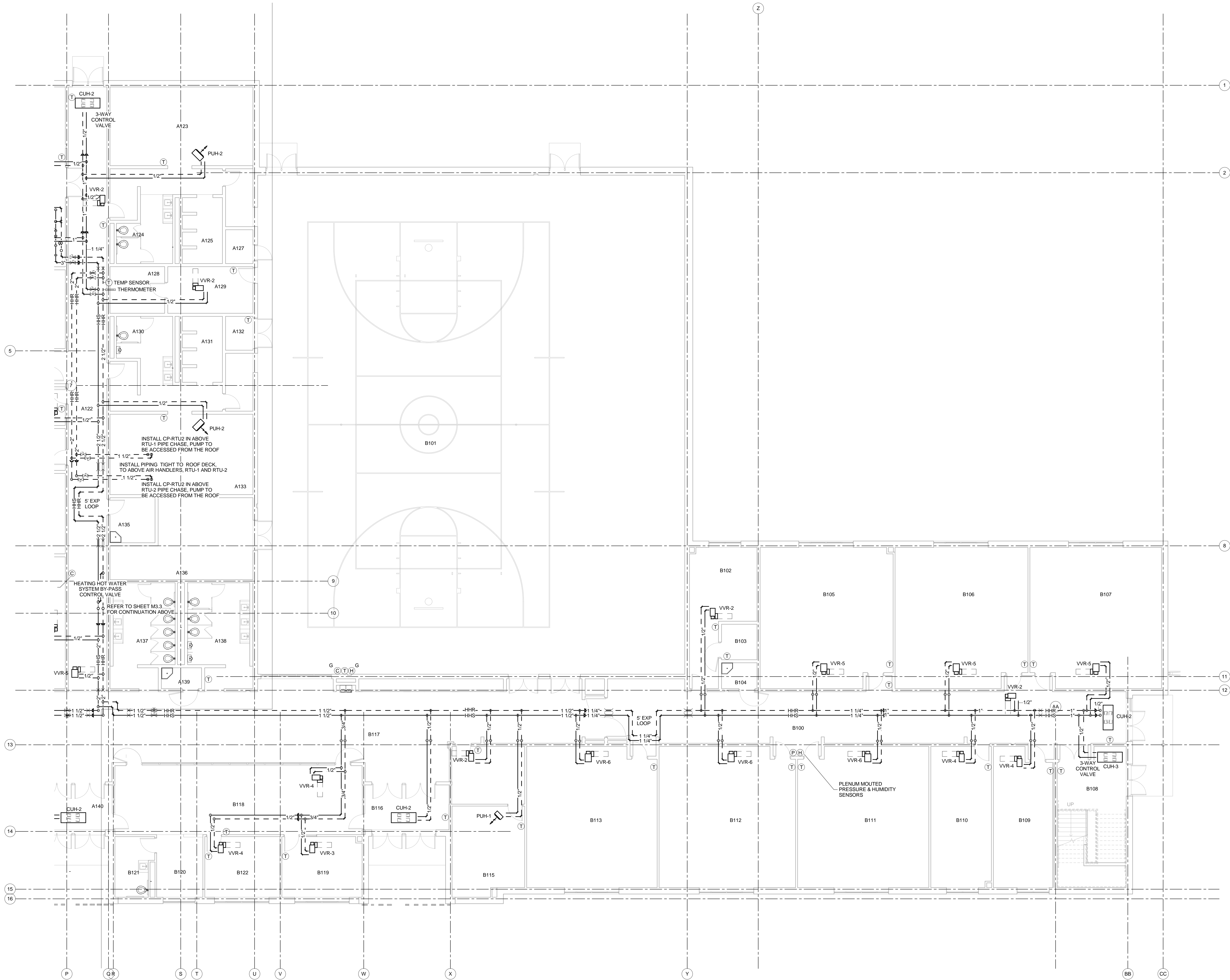
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A B

KEY PLAN



UNIT B - FIRST FLOOR HVAC PIPING PLAN  
1/8" = 1'-0"

| ROOM LEGEND - UNIT B1 |                    |                 |
|-----------------------|--------------------|-----------------|
| Number                | Name               | Area            |
| A200                  | CORRIDOR           | 1912 SF         |
| A202                  | CLASSROOM          | 779 SF          |
| A203                  | RESTROOM           | 320 SF          |
| A204                  | RESTROOM           | 316 SF          |
| A207                  | STORAGE            | 255 SF          |
| A208                  | WORKROOM           | 650 SF          |
| A209                  | RESOURCE RM        | 366 SF          |
| A210                  | RESOURCE RM        | 382 SF          |
| A211                  | CLASSROOM          | 793 SF          |
| A212                  | BOOKSTORE/WOR K RM | 808 SF          |
| A213                  | HEAD END           | 210 SF          |
| A214                  | ITINERANT OFFICE   | 159 SF          |
| A215                  | MS COUN OFFICE     | 182 SF          |
| A216                  | HS COUN OFFICE     | 123 SF          |
| A217                  | RESTROOM           | 180 SF          |
| A218                  | RESTROOM           | 176 SF          |
| A219                  | J.C.               | 47 SF           |
| A220                  | MEDIA CENTER       | 2938 SF         |
| A220                  | MEDIA CENTER       | Redundant Space |
| A242                  | ELEV.              | 48 SF           |
| B100                  | CORRIDOR           | 1324 SF         |
| B101                  | GYMNASIUM          | 9340 SF         |
| B102                  | CONFERENCE RM      | 298 SF          |
| B103                  | TECH ROOM          | 54 SF           |
| B104                  | J.C.               | 40 SF           |
| B105                  | CLASSROOM          | 788 SF          |
| B106                  | CLASSROOM          | 791 SF          |
| B107                  | CLASSROOM          | 784 SF          |
| B108                  | STAIR              | 383 SF          |
| B109                  | RESOURCE RM        | 342 SF          |
| B110                  | RESOURCE RM        | 368 SF          |
| B111                  | CLASSROOM          | 785 SF          |
| B112                  | CLASSROOM          | 817 SF          |
| B113                  | CLASSROOM          | 778 SF          |
| B114                  | SECURITY OFFICE    | 181 SF          |
| B115                  | RECORDS            | 271 SF          |
| B116                  | VESTIBULE          | 165 SF          |
| B117                  | CORRIDOR           | 1931 SF         |
| B118                  | RECEPTION          | 737 SF          |
| B119                  | CONFERENCE         | 208 SF          |
| B120                  | CLINIC             | 123 SF          |
| B121                  | TOILET RM          | 94 SF           |
| B122                  | PRINCIPAL OFFICE   | 196 SF          |

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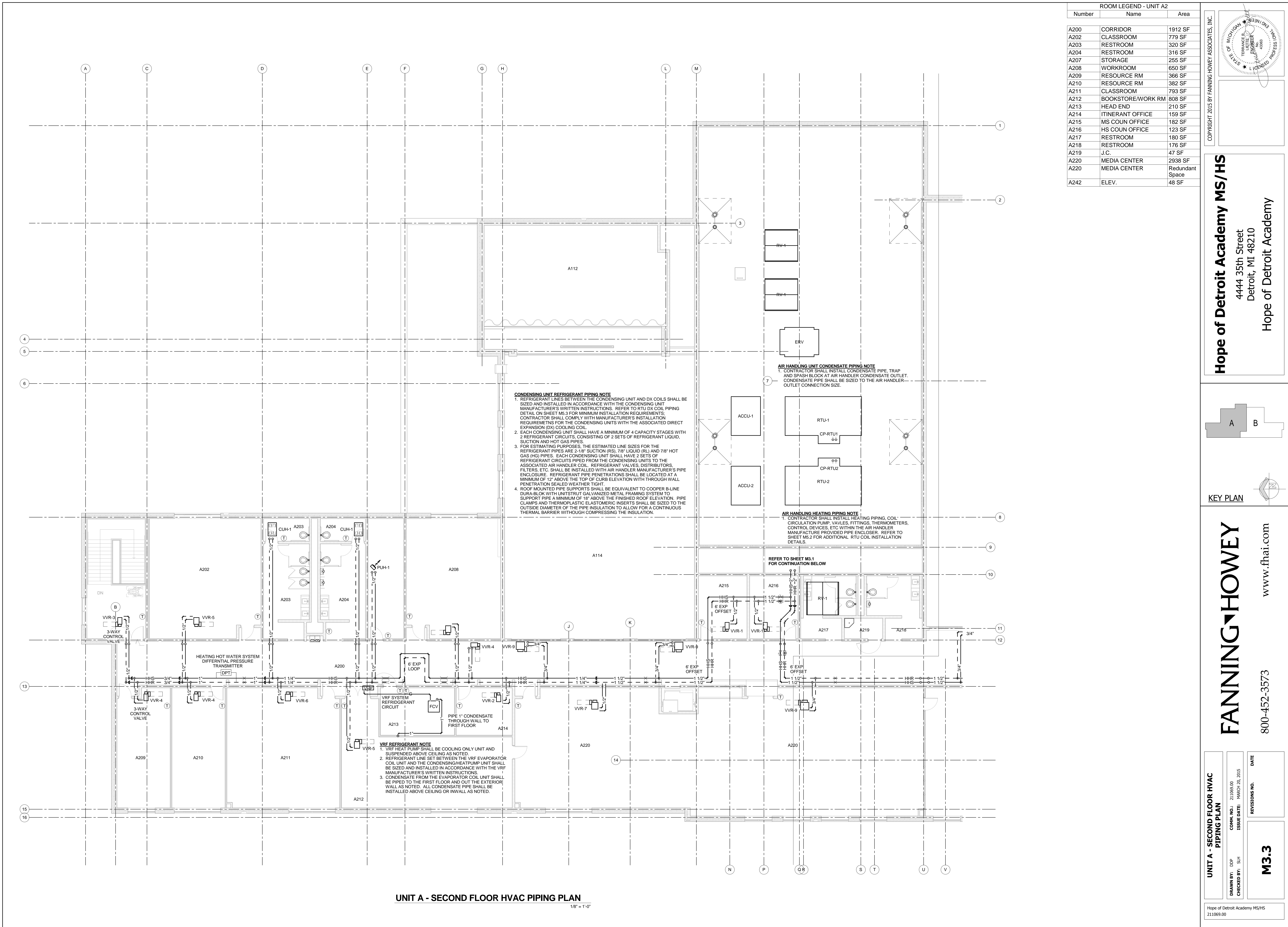
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UNIT B - FIRST FLOOR HVAC PIPING PLAN

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KEY PLAN

A

B

UNIT A - SECOND FLOOR HVAC PIPING PLAN

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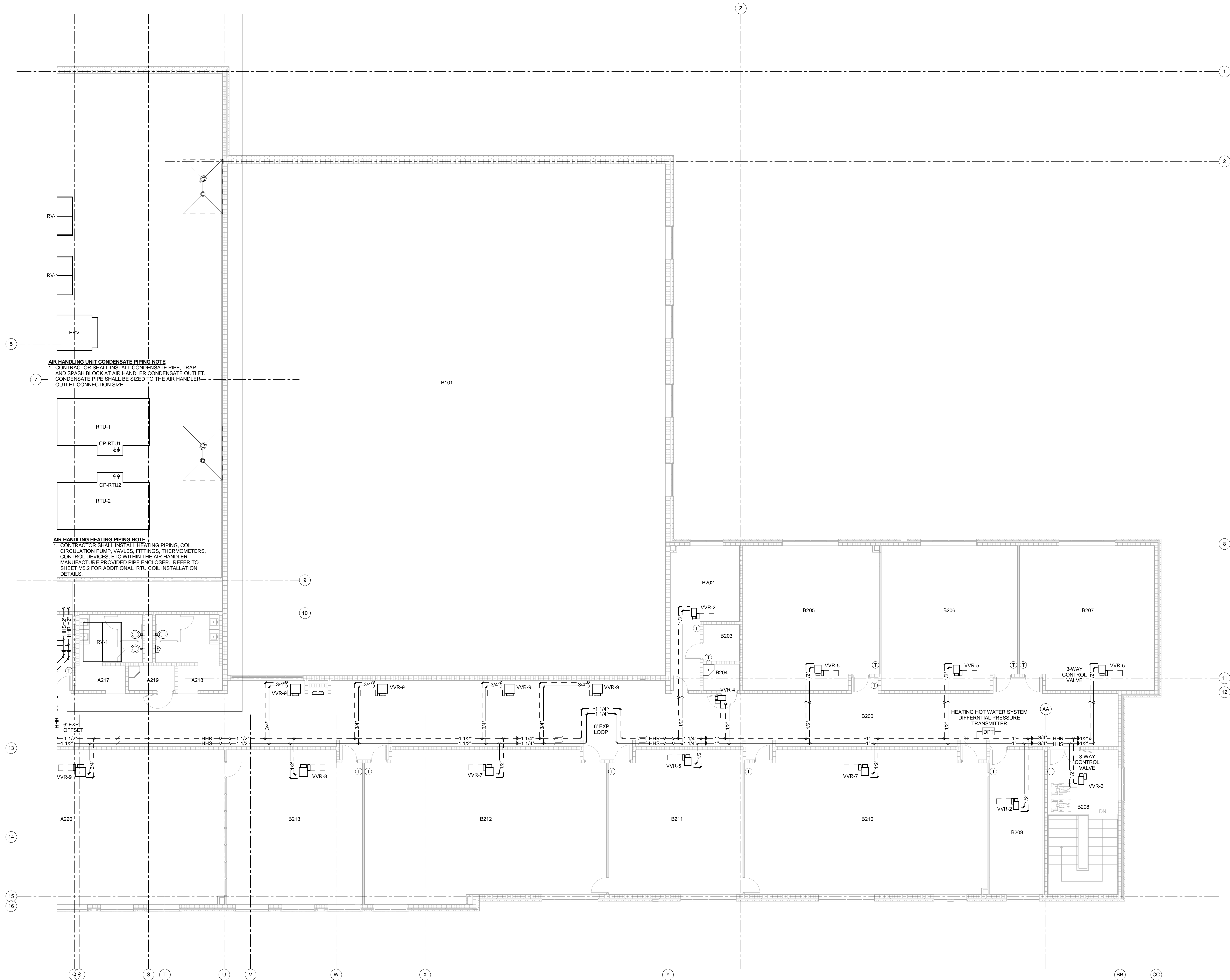
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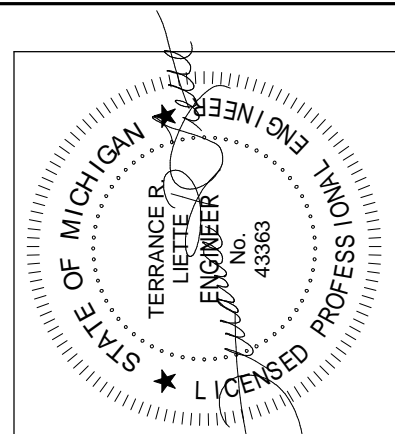
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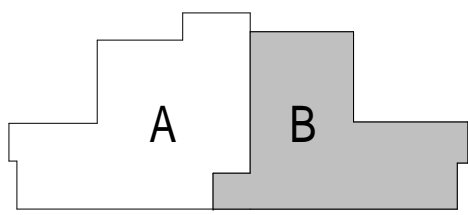


| ROOM LEGEND - UNIT B2 |                           |                 |
|-----------------------|---------------------------|-----------------|
| Number                | Name                      | Area            |
| B200                  | CORRIDOR                  | 2614 SF         |
| B200                  | CORRIDOR                  | Redundant Space |
| B200                  | CORRIDOR                  | Redundant Space |
| B202                  | CURRIC DEVELOPMENT OFFICE | 298 SF          |
| B203                  | TECH ROOM                 | 54 SF           |
| B204                  | J.C.                      | 39 SF           |
| B205                  | CLASSROOM                 | 788 SF          |
| B206                  | SCIENCE CLASSROOM         | 791 SF          |
| B207                  | SCIENCE CLASSROOM         | 784 SF          |
| B208                  | STAIR                     | 420 SF          |
| B209                  | OFFICE                    | 315 SF          |
| B210                  | SCIENCE CLASSROOM         | 1408 SF         |
| B211                  | S.T.E.M.                  | 785 SF          |
| B212                  | SCIENCE LAB               | 1447 SF         |
| B213                  | ITEC                      | 850 SF          |

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UNIT B - SECOND FLOOR HVAC  
PIPING PLAN

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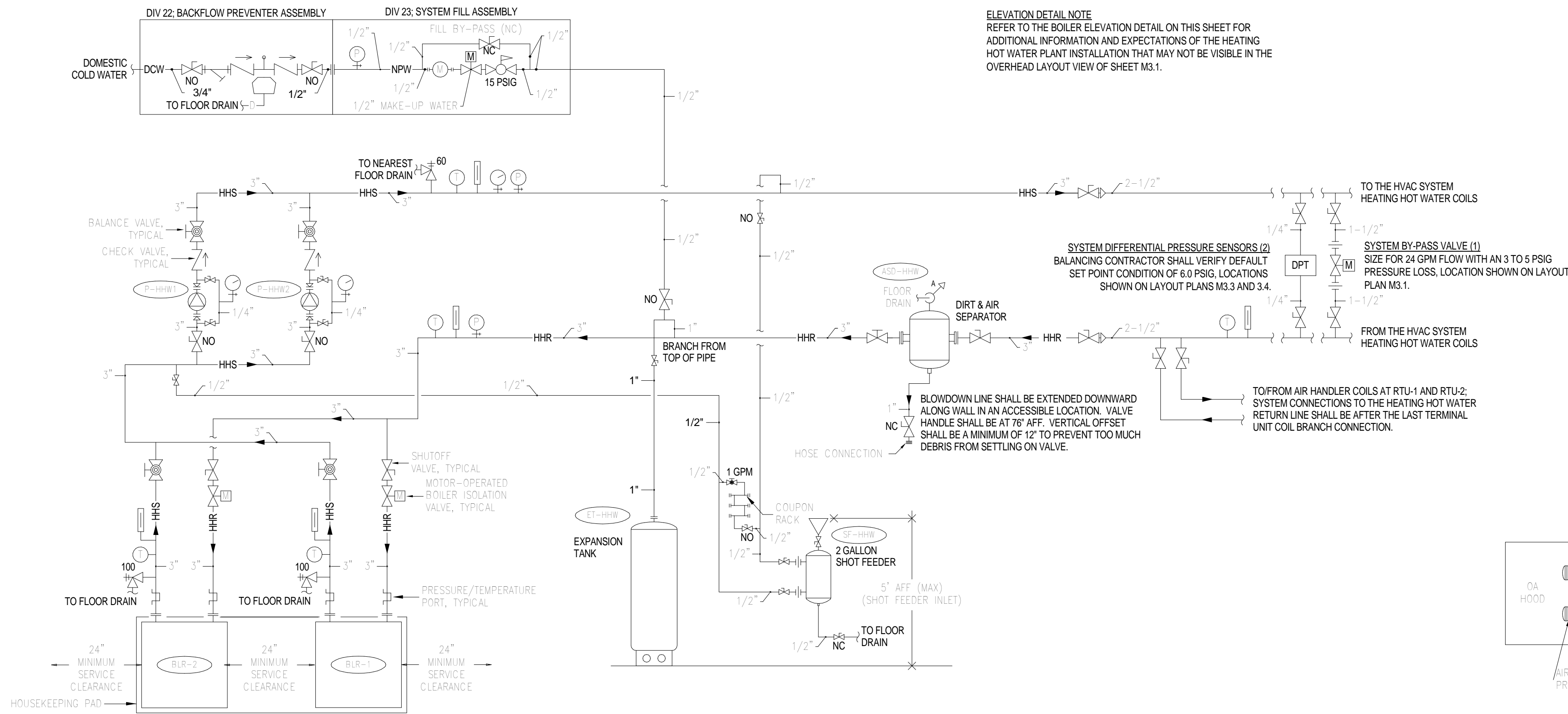
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UNIT B - SECOND FLOOR HVAC PIPING PLAN

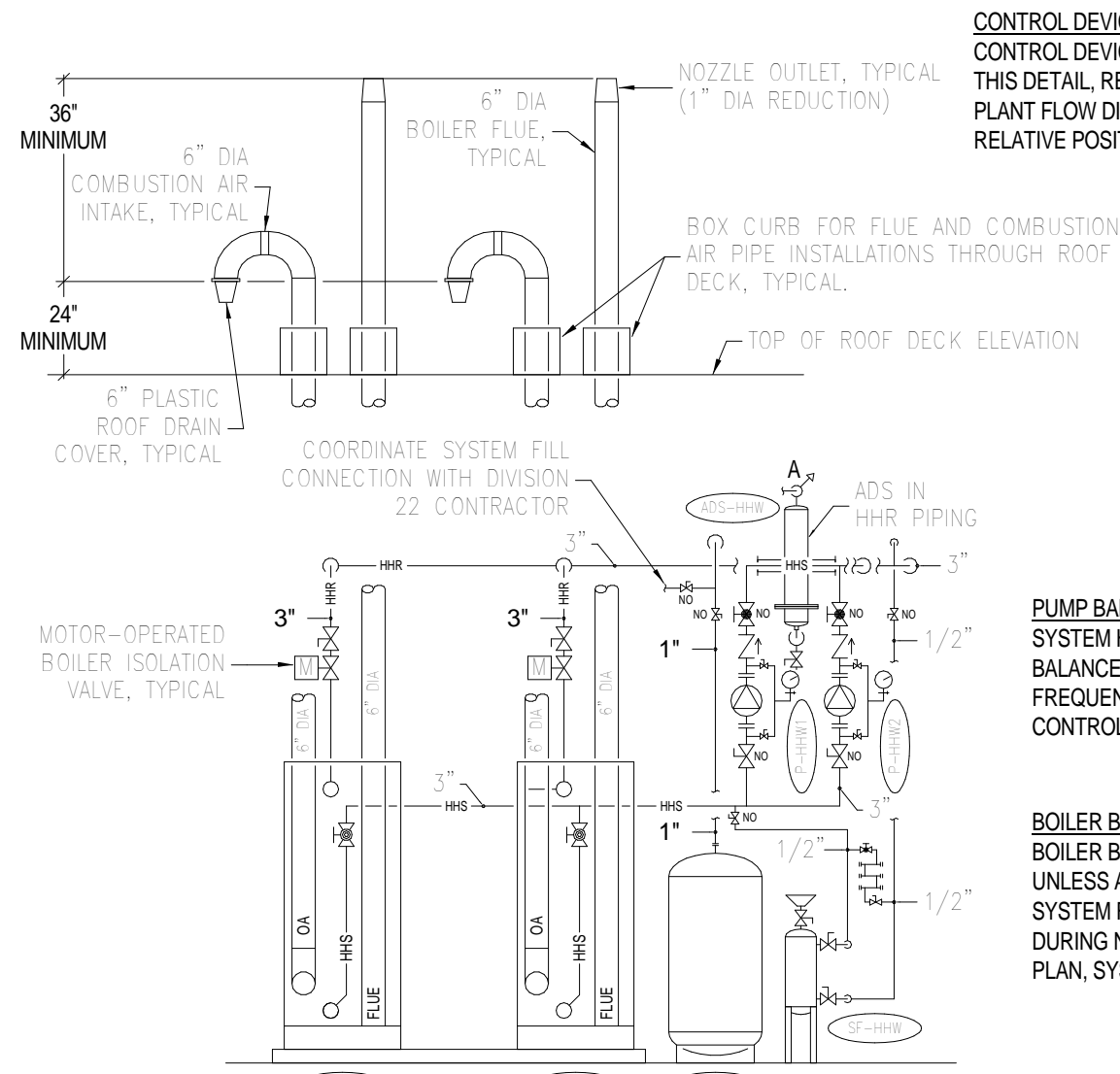
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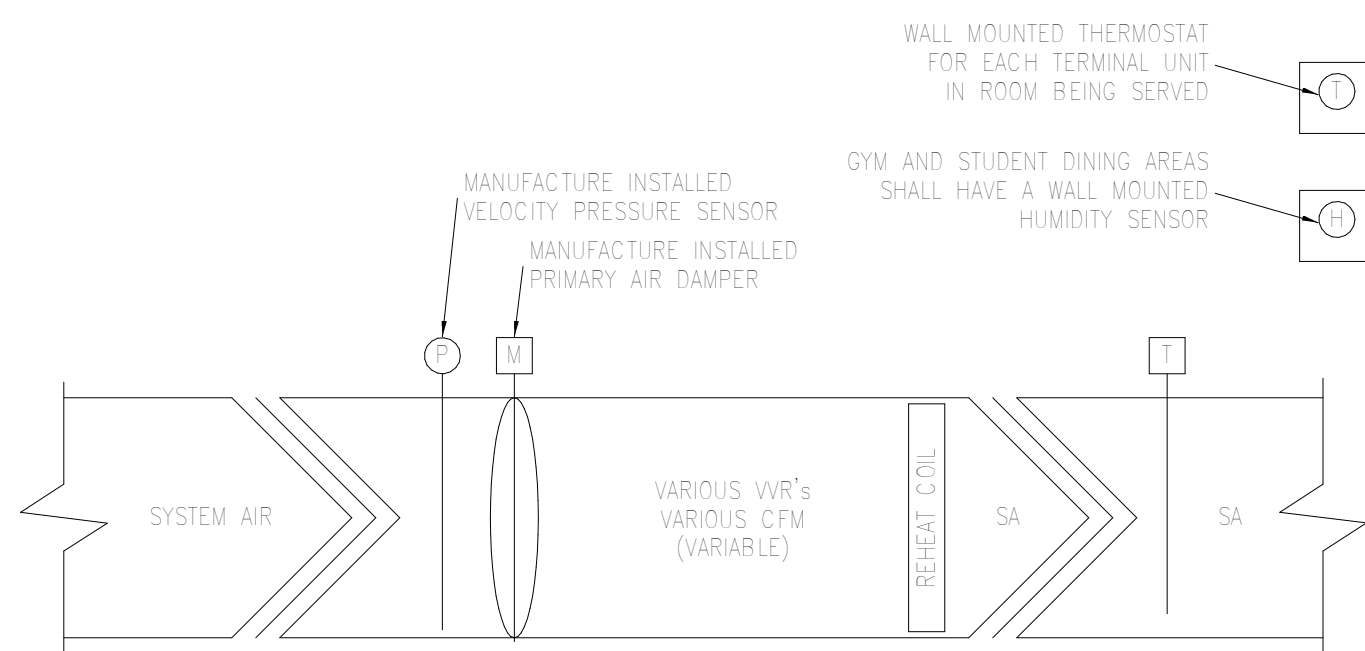


**ROOM MTD CARBON MONOXIDE DETECTOR NOTE**  
A CARBON MONOXIDE DETECTOR SHALL BE INSTALLED IN THE IMMEDIATE VICINITY OF GAS FIRED BOILER AND/OR WATER HEATER INSTALLATIONS FOR ALARM LOCALLY AND THROUGH THE TEMPERATURE CONTROL SYSTEM. REFER TO SPECIFICATION SECTION 230000 FOR ADDITIONAL DEVICE DETAILS.

**HEATING HOT WATER PLANT FLOW DIAGRAM**  
NOT TO SCALE



**BOILER ELEVATION DETAIL**  
NOT TO SCALE



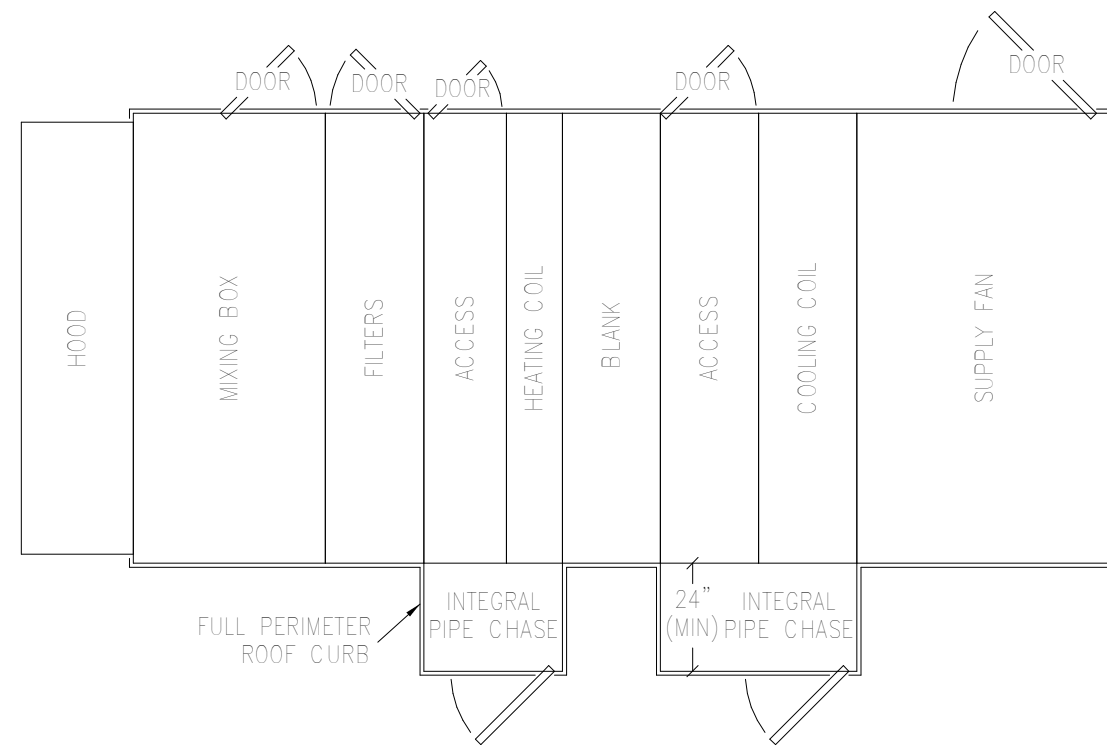
**AIR FLOW DIAGRAM**  
**VARIABLE AIR VOLUME TERMINAL UNIT (VVR)**  
NOT TO SCALE

**CONTROL DEVICES AND SENSORS NOTE**  
CONTROL DEVICES AND SENSORS ARE NOT INDICATED IN THIS DETAIL. REFER TO THE ABOVE HEATING HOT WATER PLANT FLOW DIAGRAM FOR THE REQUIREMENT OF AND RELATIVE POSITIONS OF THESE DEVICES.

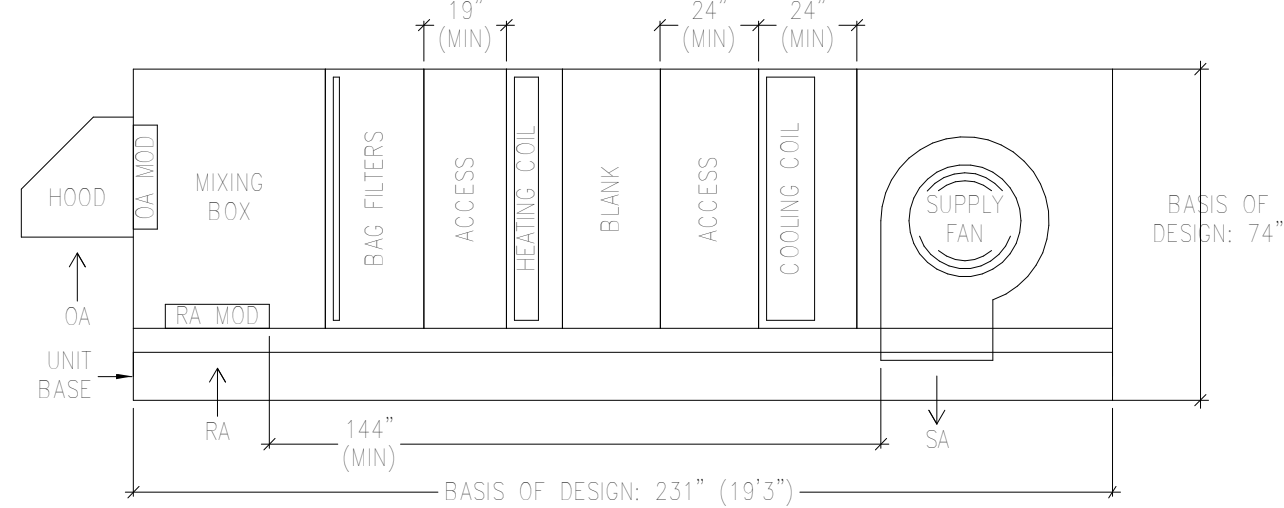
**PUMP BALANCING NOTE**  
SYSTEM HEATING HOT WATER SUPPLY PUMPS SHALL BE BALANCED FOR EQUIVALENT FLOW. INSTALLED VARIABLE FREQUENCY CONTROLLERS (VFC) SHALL BE UTILIZED TO CONTROL SYSTEM FLOW RATE.

**BOILER BY-PASS PIPING NOTE**  
BOILER BY-PASS PIPING VALVES SHALL REMAIN CLOSED UNLESS A BOILER IS NECESSARY TO BE LOCKED OUT OF THE SYSTEM FOR REPAIR, MAINTENANCE, ETC. OTHERWISE DURING NORMAL OPERATION OF THE HEATING HOT WATER PLAN, SYSTEM FLOW SHALL BE THROUGH BOILERS IN SERIES.

**COMBUSTION AIR INLET NOTE**  
BASIS OF DESIGN BOILER HAS AN INTERNAL HEAT TRAP TO PREVENT HEAT LOSS DURING STANDBY CONDITIONS WHEN THERE WILL BE WATER FLOW THROUGH THE HEAT EXCHANGER. IF AN INTERNAL HEAT TRAP IS NOT PROVIDED BY THE BOILER MANUFACTURE, AN EXTERNAL HEAT TRAP OR INLET MOTOR OPERATED DAMPER SHALL BE INSTALLED IN THE COMBUSTION AIR INLET PIPING DUCT BY THE CONTRACTOR. HEAT TRAP SHALL BE A MINIMUM OF 36" TALL WITH A 1/2" DRAIN AT THE LOW POINT OF THE INVERSION.

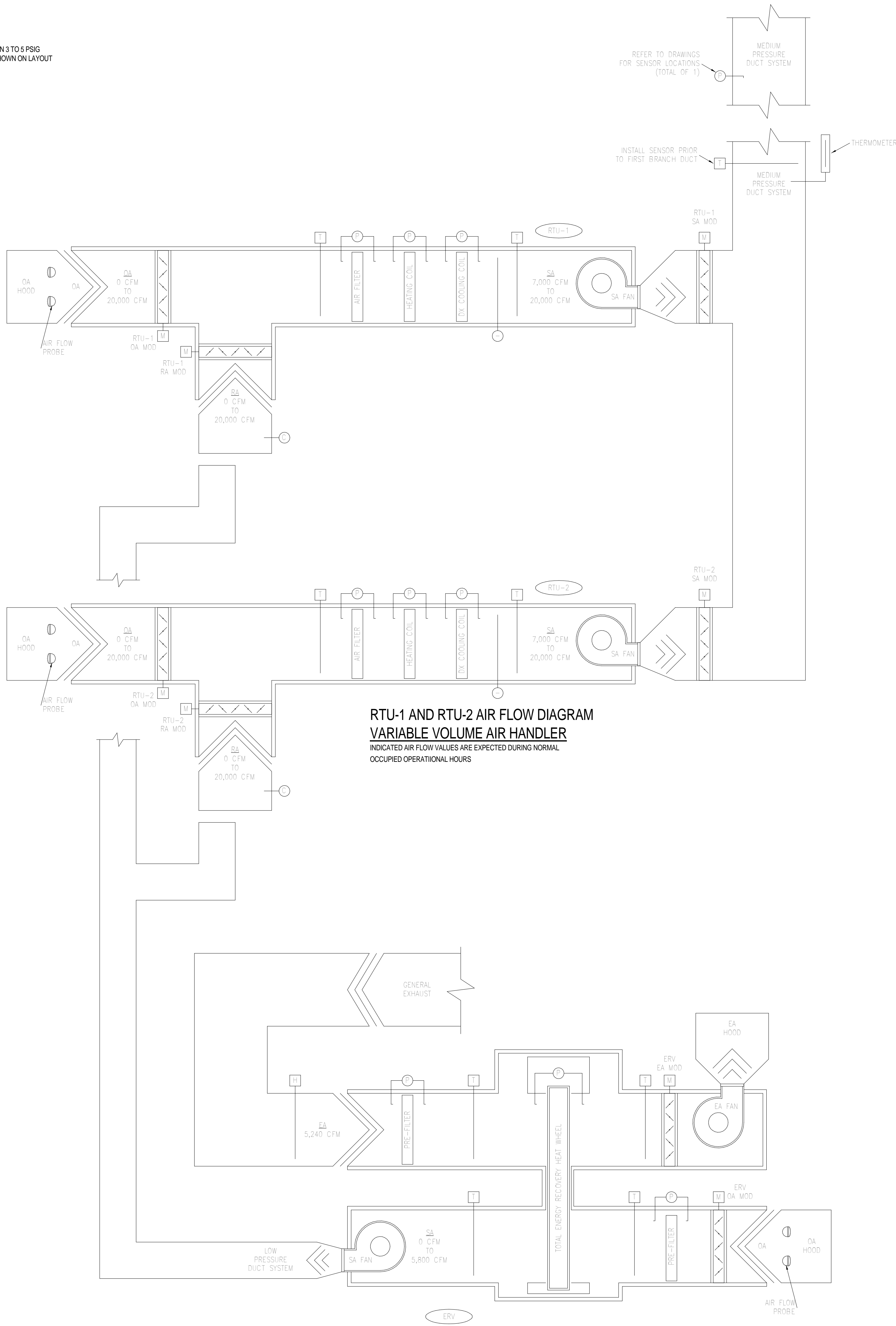


**PLAN VIEW**



**ELEVATION VIEW**

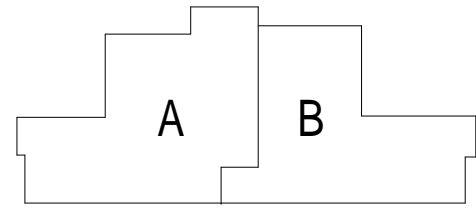
**RTU-1 DETAIL (RTU-2 IS MIRROR IMAGE)**  
**ROOF MOUNTED AIR HANDER**  
NOT TO SCALE



**ERA AIR FLOW DIAGRAM**  
**ENERGY RECOVERY AIR HANDER**  
INDICATED AIR FLOW VALUES ARE EXPECTED DURING NORMAL OCCUPIED OPERATIONAL HOURS

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**HVAC SYSTEM FLOW DIAGRAMS**

**DRAWN BY:** Author  
**CHECKED BY:** Checker

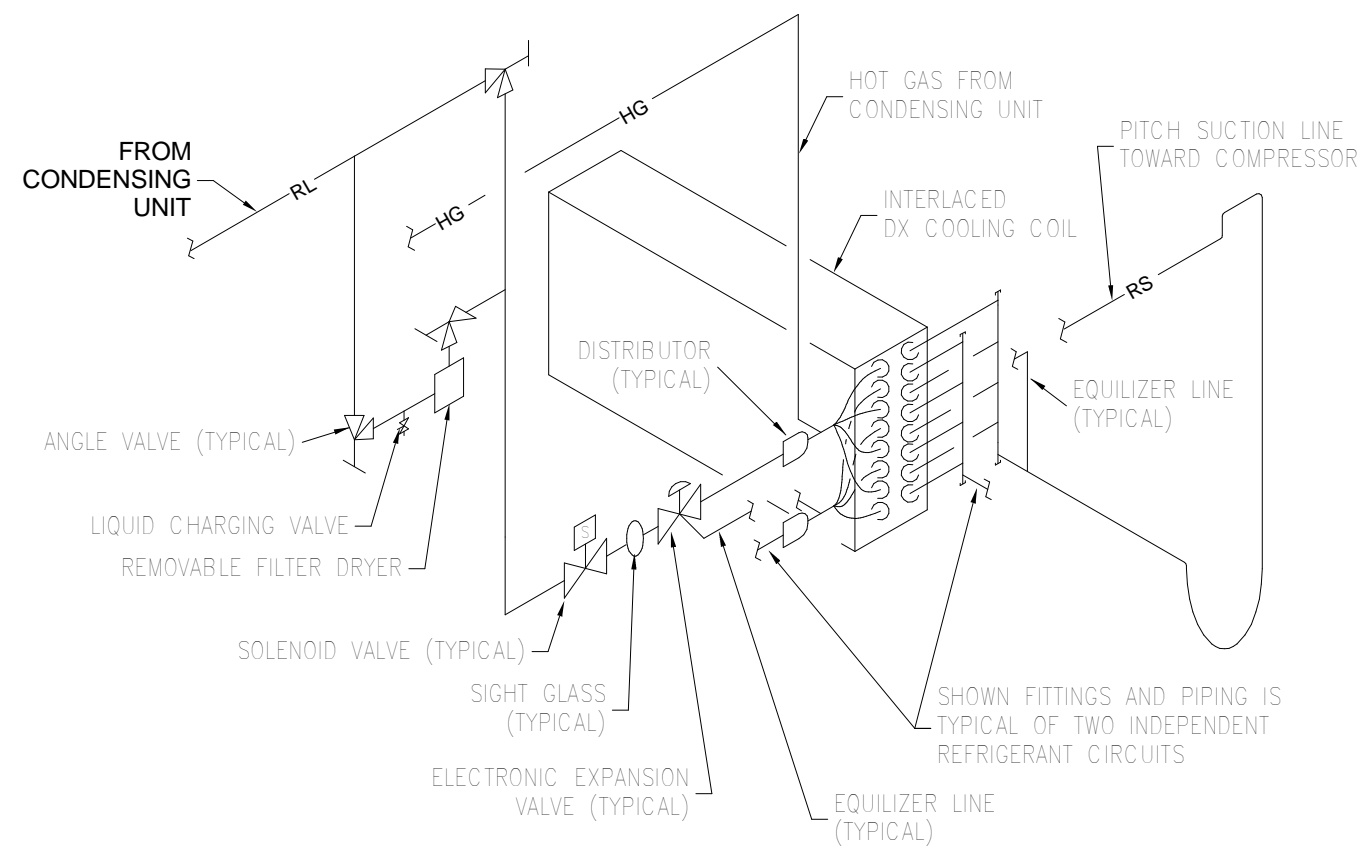
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**REVISIONS NO.**

**DATE**

**M5.2**

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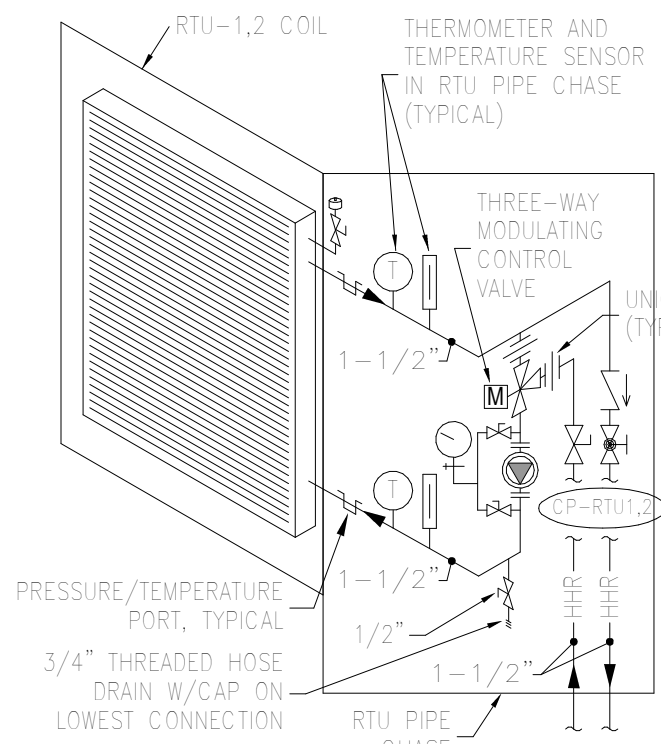


#### NOTES

1. INSTALL PIPING SUCH THAT ACCESS TO AIR HANDLING UNIT COMPONENTS IS NOT LIMITED.
2. REFER TO HVAC LAYOUT SHEET M2.1 FOR EQUIPMENT LOCATIONS.
3. REFER TO SECTION 230993 AND EQUIPMENT SCHEDULES FOR SEQUENCE AND VALVE REQUIREMENTS.
4. INSULATE SUCTION AND HOT GAS PIPING.
5. EQUIPMENT MANUFACTURE SHALL SUBMIT FINAL FIELD INSTALLATION DETAIL WITH MANUFACTURE SPECIFIC REFRIGERANT PIPE SIZING, FITTINGS, AND INSTALLATION REQUIREMENTS.

RTU DX COOLING COIL PIPING DETAIL

NOT TO SCALE

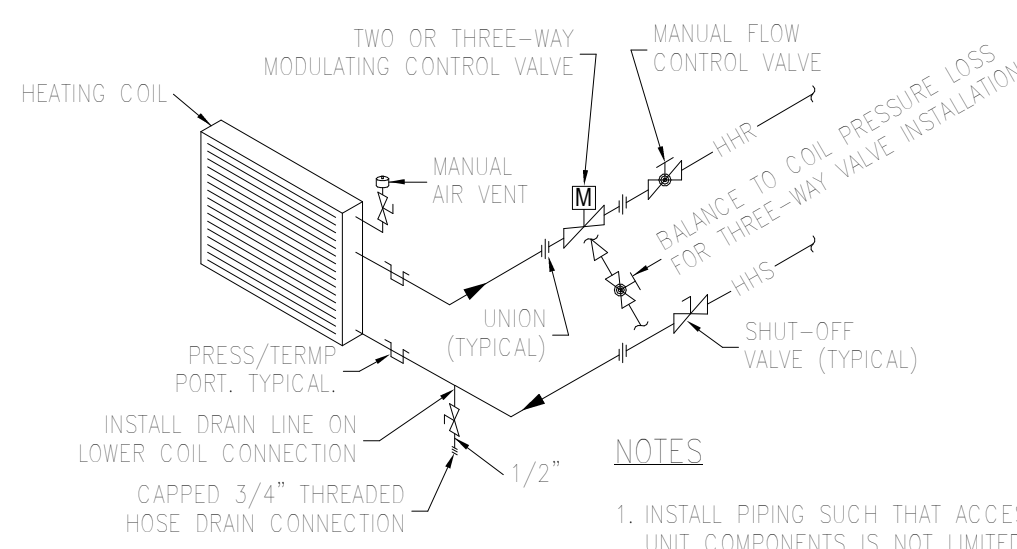


#### NOTES

1. INSTALL PIPING SUCH THAT ACCESS TO AIR HANDLING UNIT COMPONENTS IS NOT LIMITED.
2. REFER TO HVAC PIPING SHEETS, M2.1 SERIES DRAWINGS FOR EQUIPMENT LOCATIONS.
3. REFER TO EQUIPMENT SEQUENCES AND EQUIPMENT SCHEDULES FOR VALVE REQUIREMENTS.
4. BASIS OF DESIGN UNITS HAVE ONE COIL PER AIR HANDLING UNIT, REQUIRING THE ARRANGEMENT AS SHOWN. IF THE SELECTED MANUFACTURE HAS MULTIPLE STACKED COILS IN THE AIR HANDLING UNIT, EACH COIL SHALL REQUIRE A BALANCING VALVE, DRAIN VALVE AND AIR VENT. THESE ITEMS SHALL BE INCLUDED IN THE CONTRACTORS BASE BID SCOPE OF WORK.

RTU HEATING COIL PIPING DETAIL

NOT TO SCALE



#### NOTES

1. INSTALL PIPING SUCH THAT ACCESS TO UNIT COMPONENTS IS NOT LIMITED AND WITHIN A 24" RADIUS OF THE UNITS CONTROL ENCLOSURE. UNIT
2. REFER TO HVAC PIPING SHEETS, M2.1 SERIES DRAWINGS, FOR EQUIPMENT LOCATIONS.
3. REFER TO EQUIPMENT SEQUENCES AND SCHEDULES FOR VALVE REQUIREMENTS.

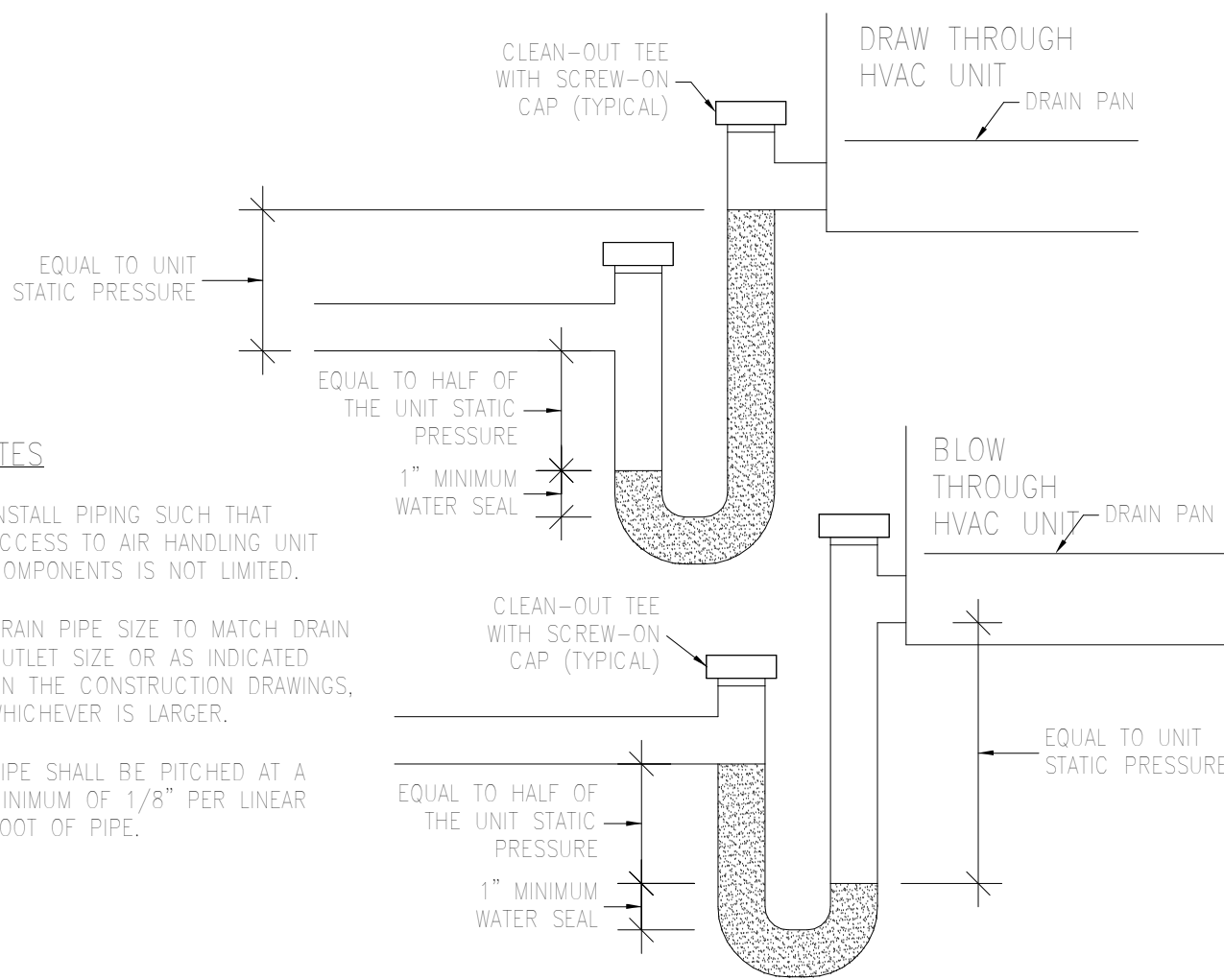
#### THREE-WAY VALVES

THREE-WAY CONTROL VALVES SHALL BE INSTALLED FOR THE HEATING COILS ON THE BELOW LISTED DEVICES IN THE FOLLOWING ROOMS:

TERMINAL UNITS (5): A101/A201, A111, A209, B207, B208  
CABINET HEATERS (3): A101, A122, B108.

VWR, CUH & PUH COIL PIPING DETAIL

NOT TO SCALE

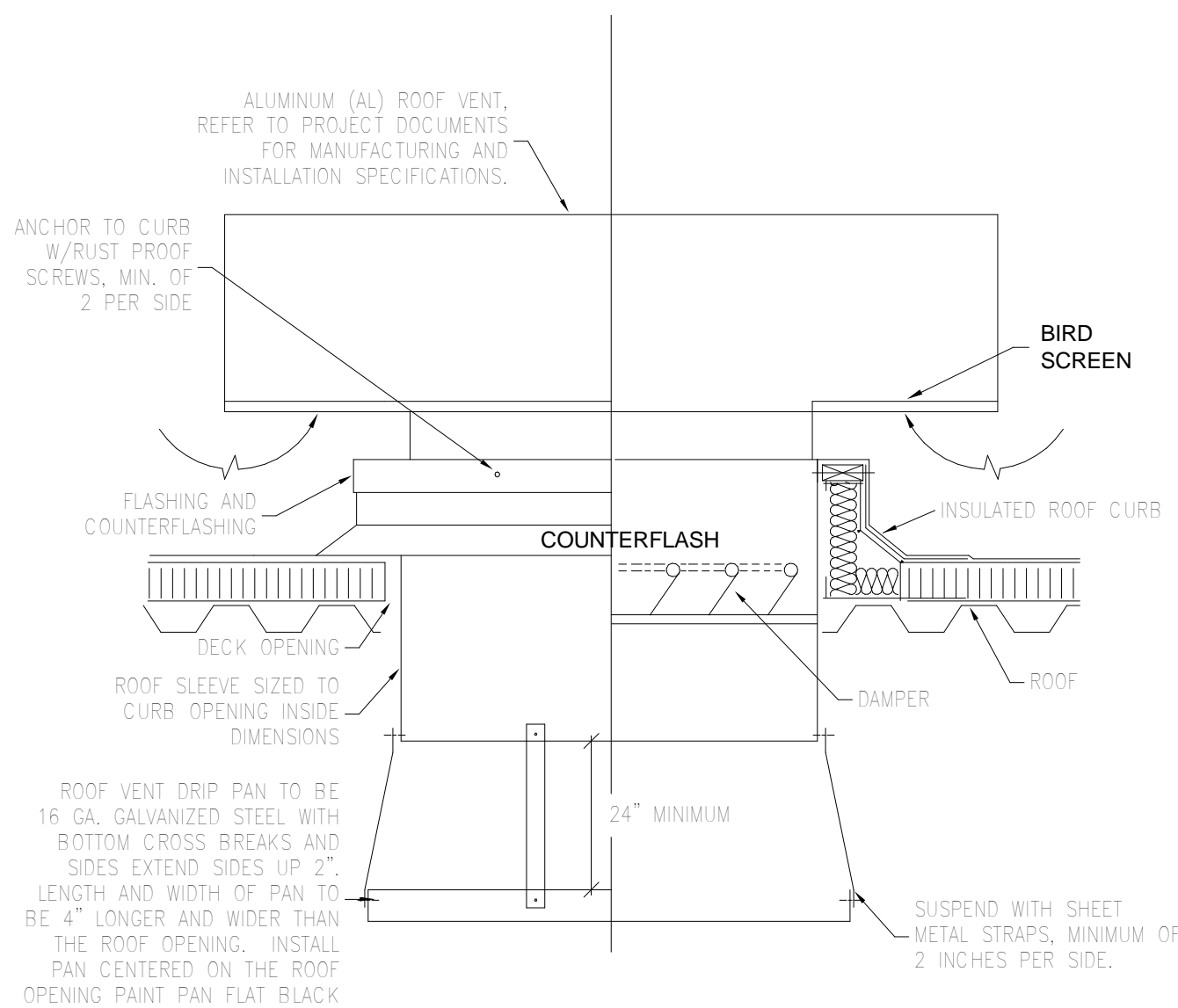


#### NOTES

1. INSTALL PIPING SUCH THAT ACCESS TO AIR HANDLING UNIT COMPONENTS IS NOT LIMITED.
2. DRAIN PIPE SIZE TO MATCH DRAIN OUTLET SIZE OR AS INDICATED ON THE CONSTRUCTION DRAWINGS, WHICHEVER IS LARGER.
3. PIPE SHALL BE PITCHED AT A MINIMUM OF 1/8" PER LINEAR FOOT OF PIPE.

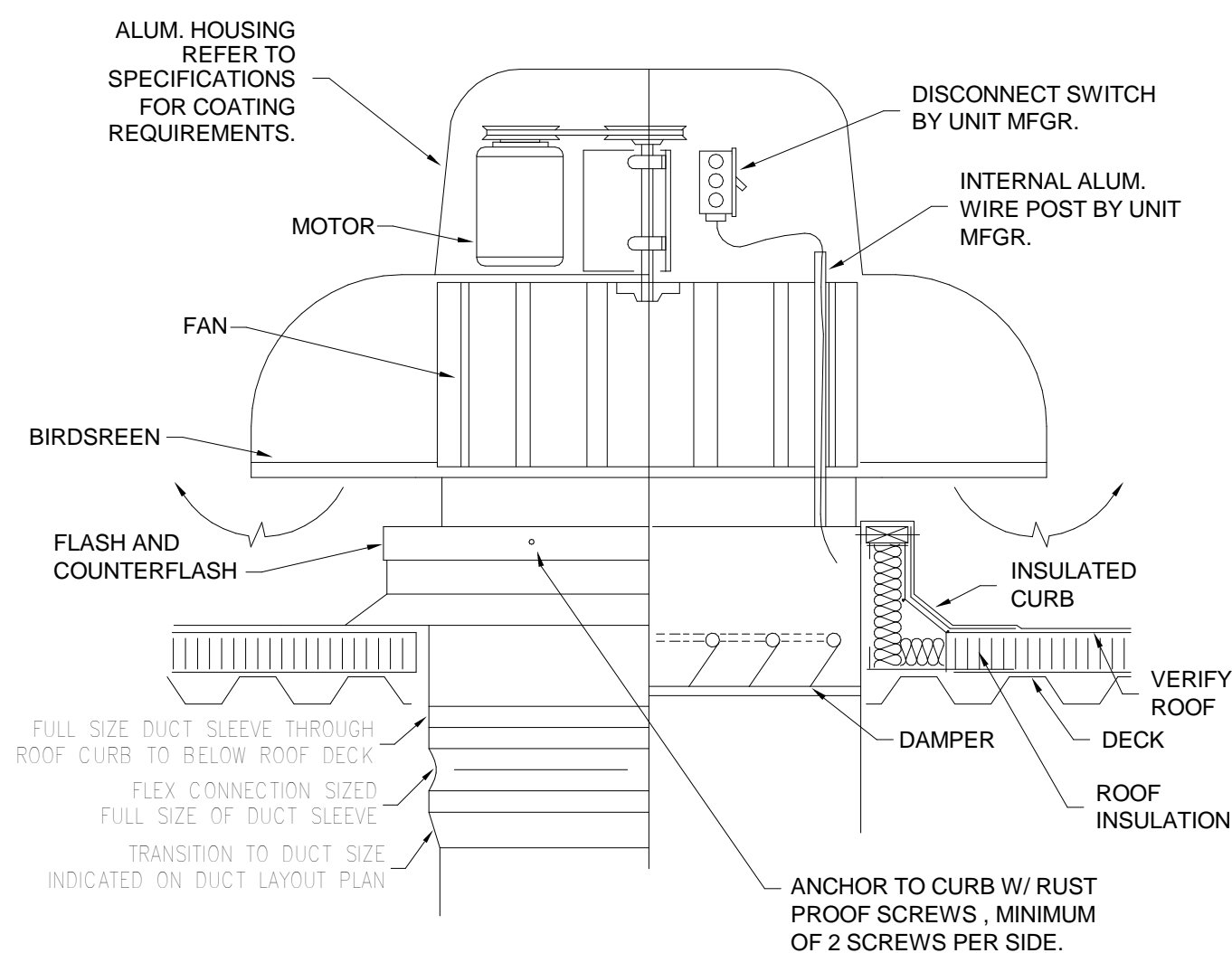
CONDENSATE TRAP PIPING DETAIL

NOT TO SCALE



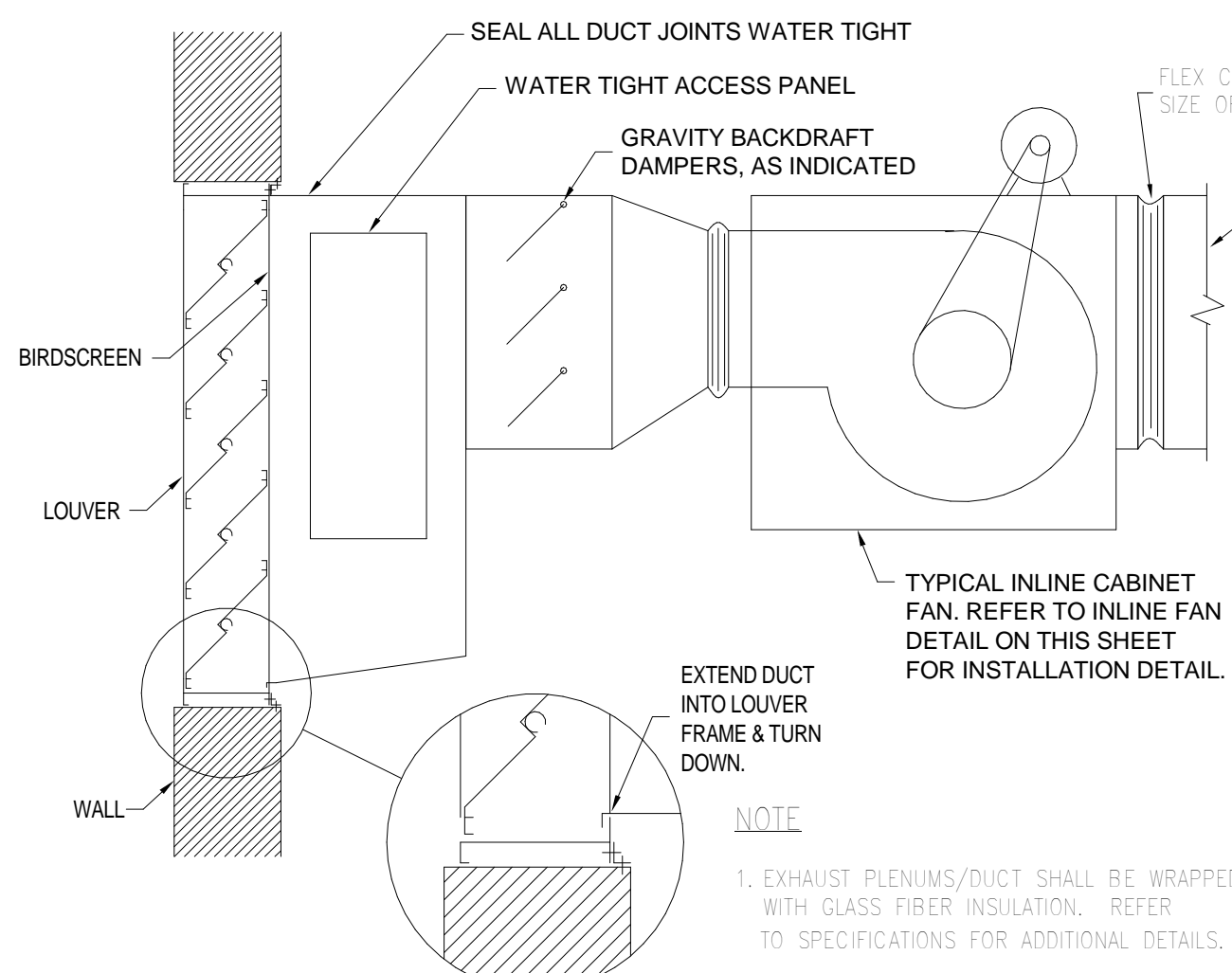
RELIEF HOOD INSTALLATION DETAIL

NOT TO SCALE



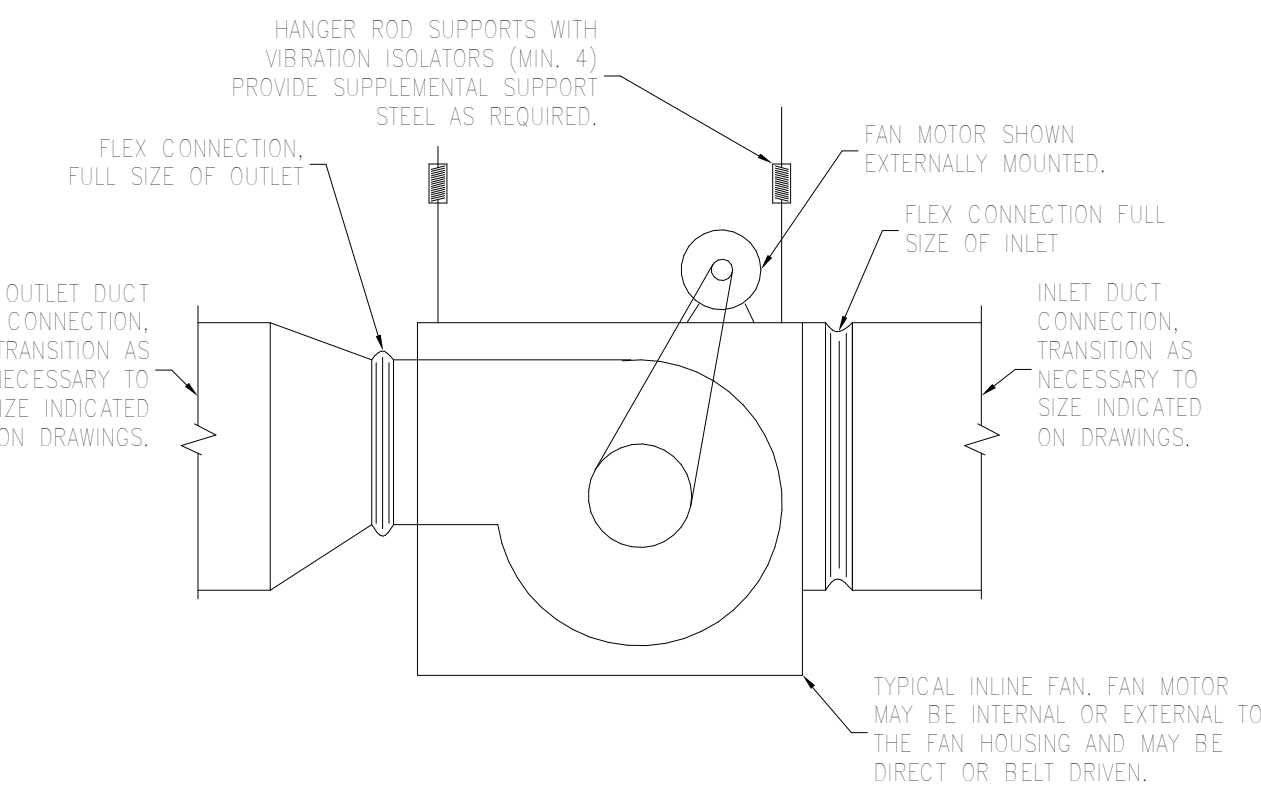
DOWNBLAST CENTRIFUGAL FAN DETAIL

NOT TO SCALE



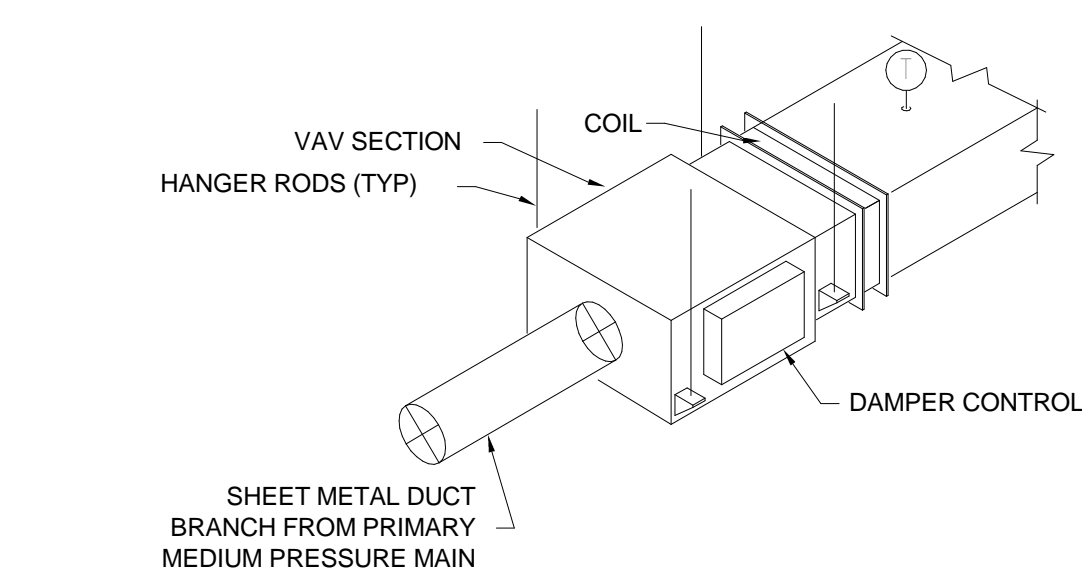
EXHAUST LOUVER DETAIL

NOT TO SCALE



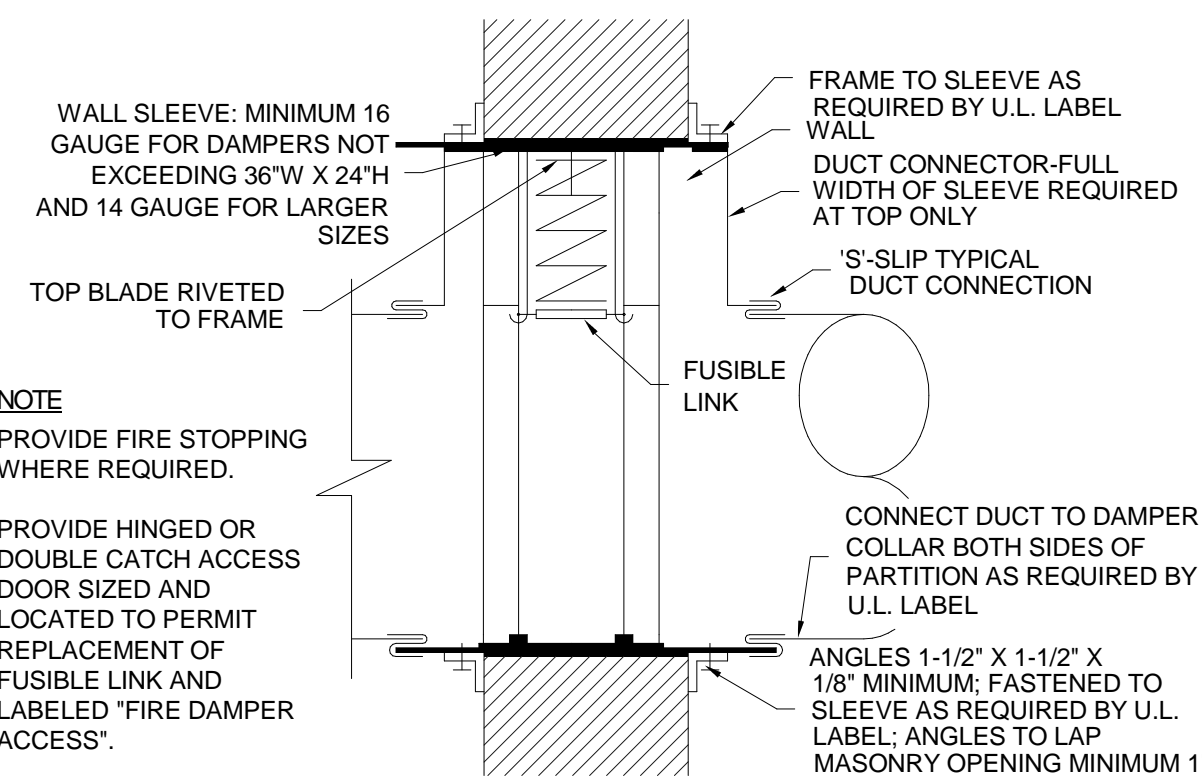
INLINE FAN MOUNTING DETAIL

NOT TO SCALE



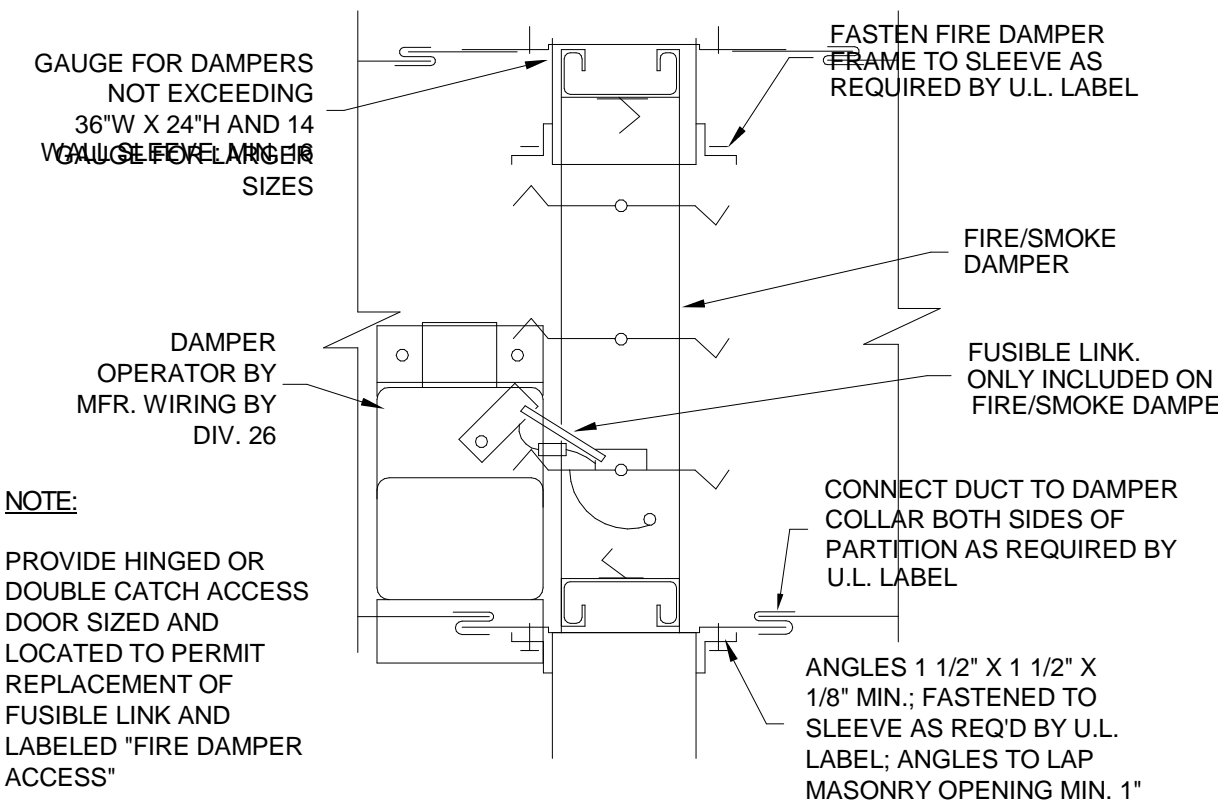
VWR TERMINAL INSTALLATION DETAIL

NOT TO SCALE



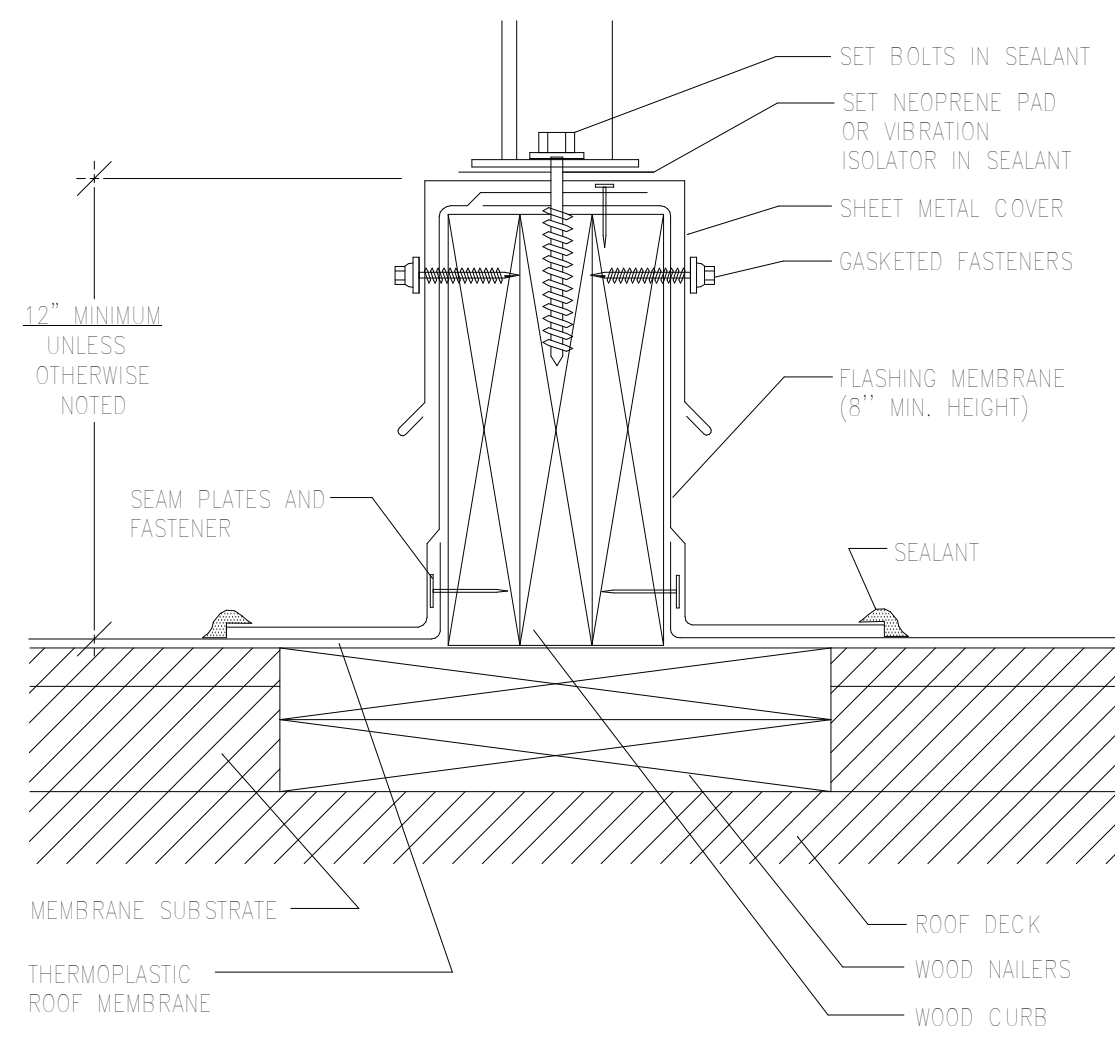
FIRE DAMPER INSTALLATION DETAIL

NOT TO SCALE



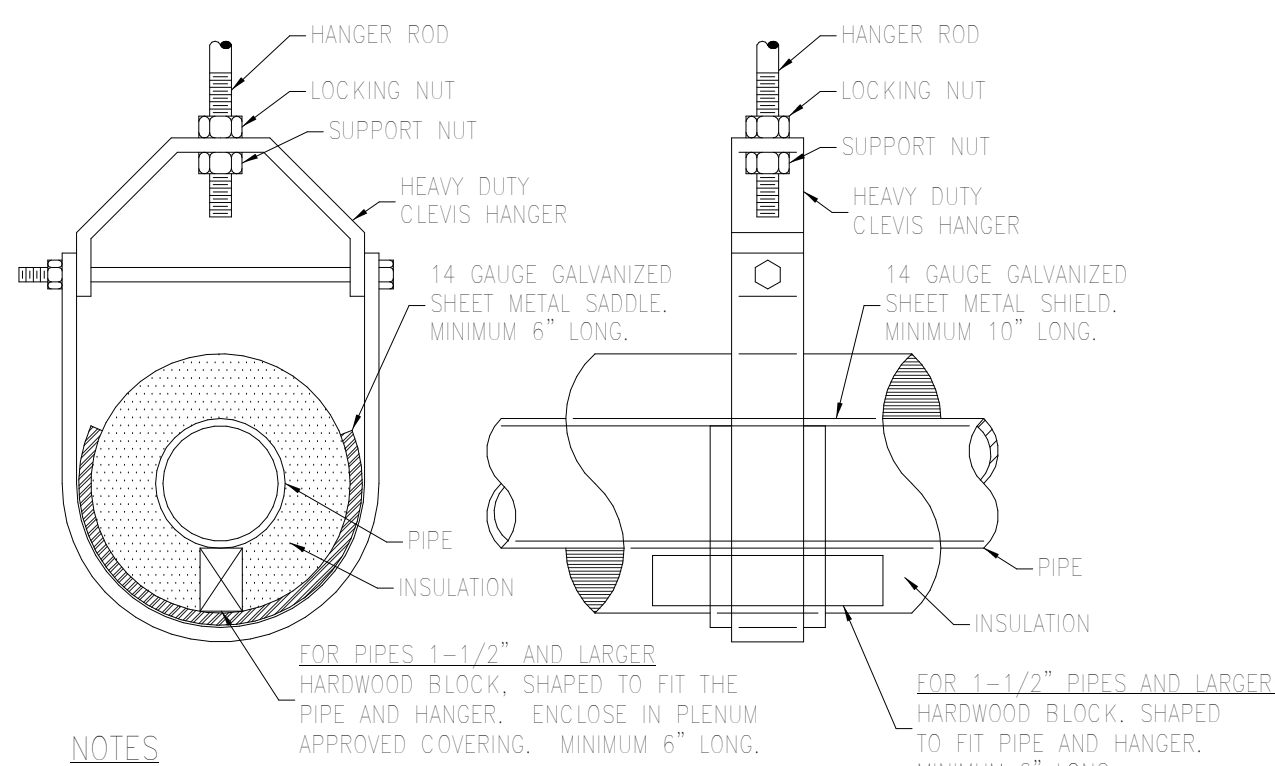
SMOKE OR FIRE/SMOKE DAMPER DETAIL

NOT TO SCALE



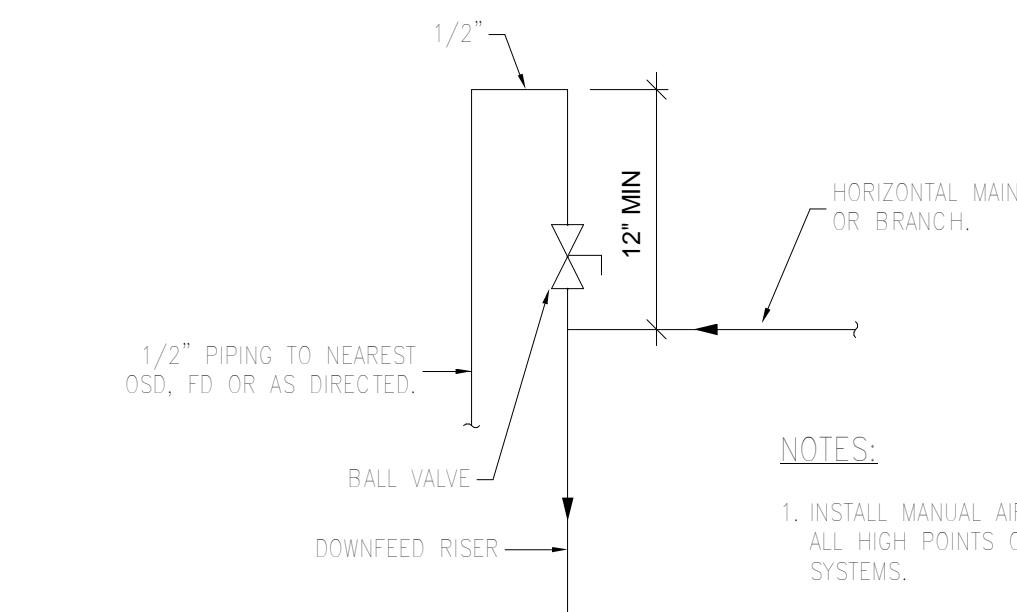
EQUIPMENT RAIL DETAIL

NOT TO SCALE



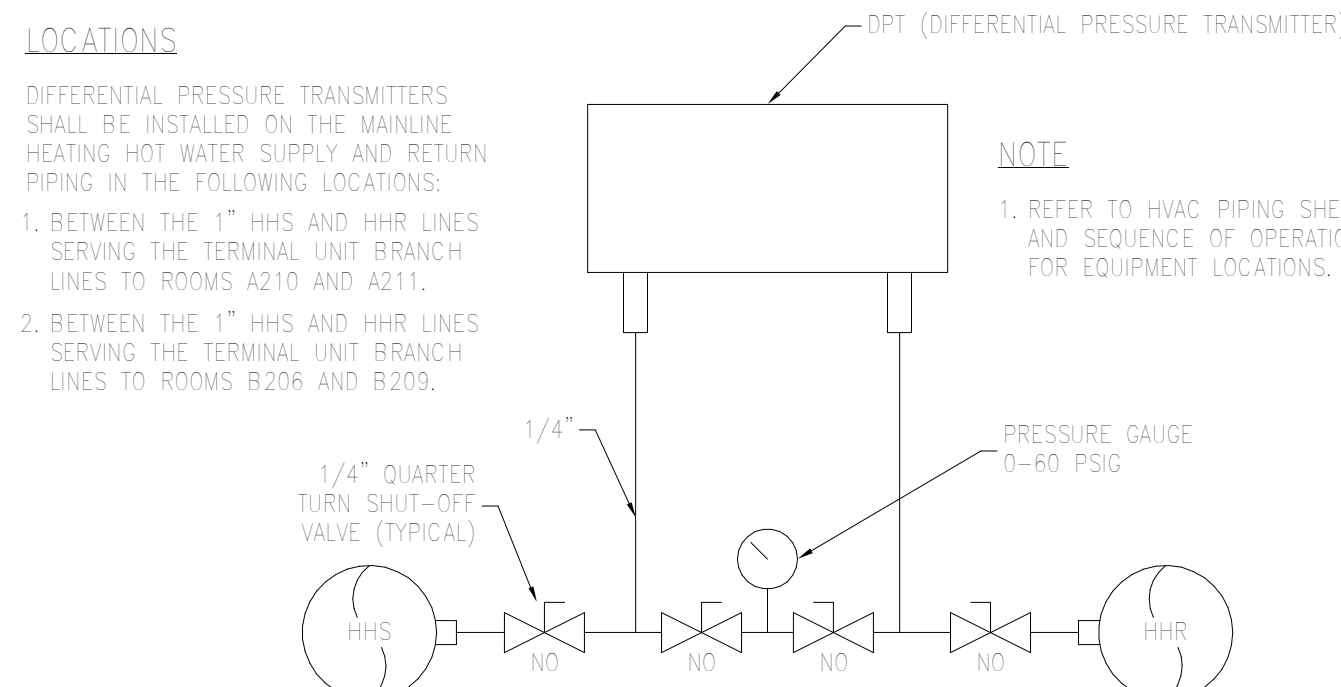
PIPE HANGER DETAIL

NOT TO SCALE



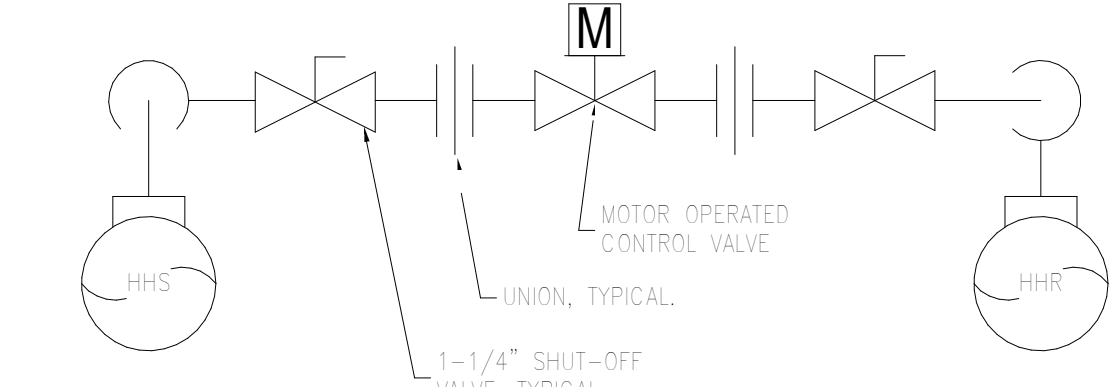
MANUAL AIR VENT DETAIL

NOT TO SCALE



DPT PIPING ASSEMBLY DIAGRAM

NOT TO SCALE



#### LOCATIONS

HEATING HOT WATER SYSTEM BY-PASS CONTROL VALVE SHALL BE SIZED FOR 24 GPM WITH AN 3 TO 5 PSIG PRESSURE LOSS. VALVE SHALL BE LOCATED UPSTREAM OF THE SECOND FLOOR BRANCH LINES, AS INDICATED ON SHEET M5.1.

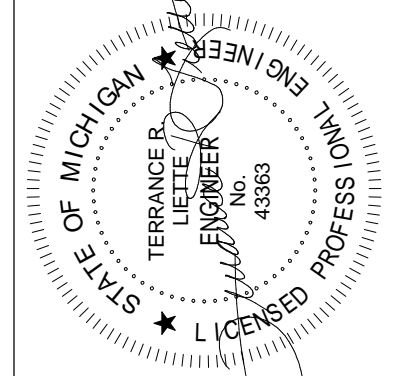
#### NOTE

1. REFER TO HVAC PIPING SHEETS AND SEQUENCE OF OPERATION FOR EQUIPMENT LOCATIONS.

HYDRINIC SYSTEM BY-PASS DETAIL

NOT TO SCALE

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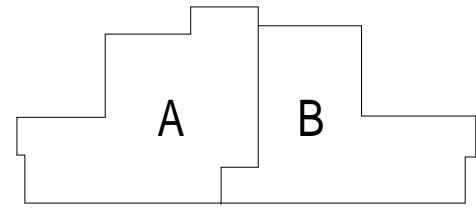


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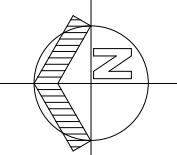
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HVAC EQUIPMENT INSTALLATION DETAILS

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