





**KEYED NOTES**

H6 INSTALL NEW AIR DEVICE IN NEAR CEILING. CONNECT NEW AIR DEVICE TO EXISTING DUCTWORK  
 H6 SEE ARCHITECTURAL DRAWINGS FOR LOUVER LOCATION COORDINATION



ARCHITECT & INTERIOR DESIGN  
 ARCX STUDIO  
 FIRM 18314912  
 1616 WINE STREET, CINCINNATI, OH 45202  
 513.832.1302



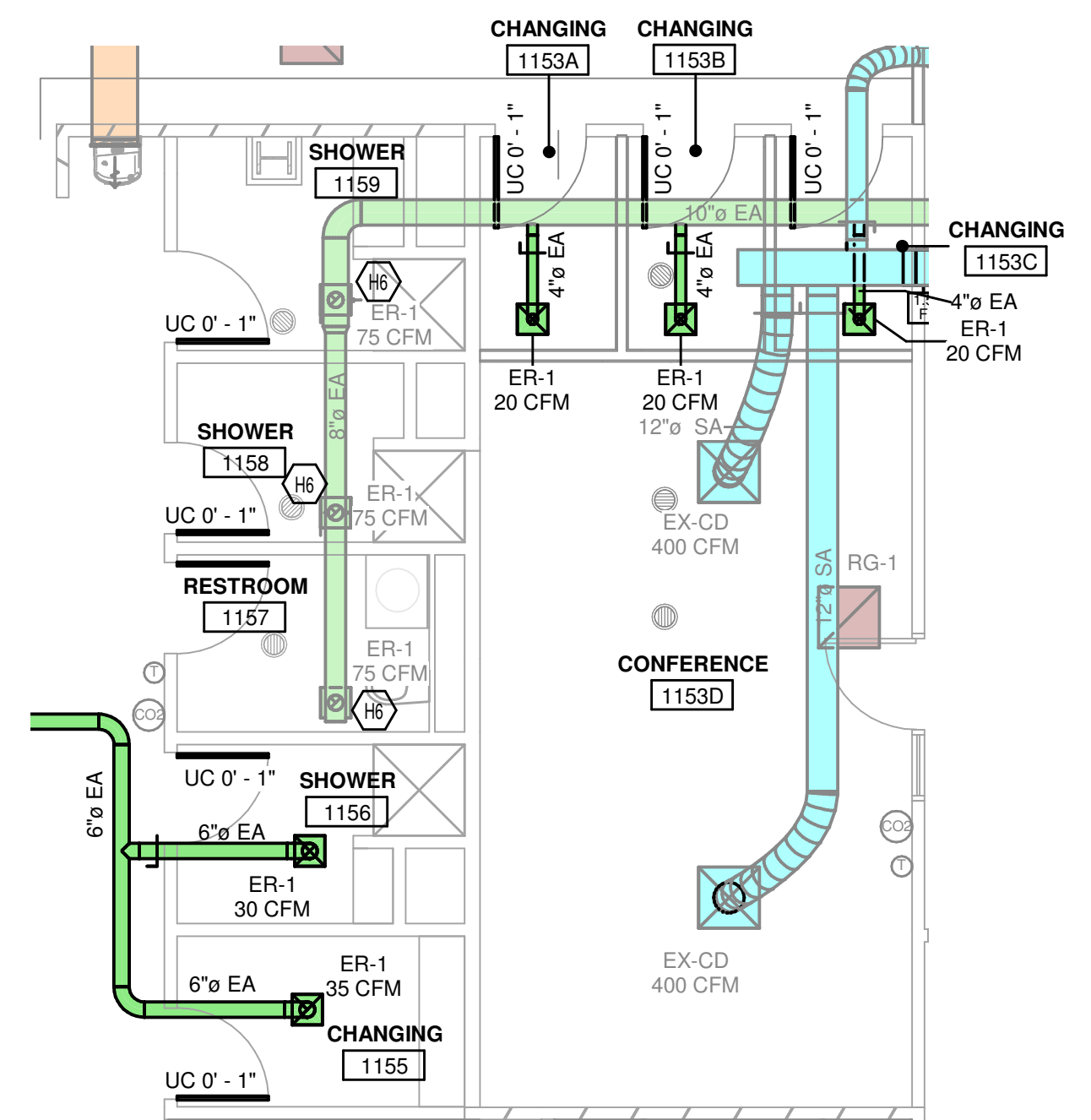
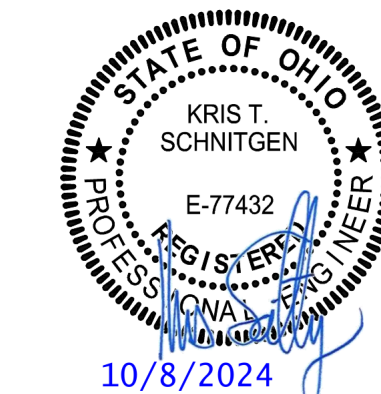
ENGINEER  
 KOHRS LONNEMANN HEIL ENGINEERS, INC.  
 1538 ALEXANDRIA PIKE, SUITE 11  
 FT. THOMAS, KY 41075  
 859.442.8050

**MEDPACE B100 L1 GYM RENOVATION**

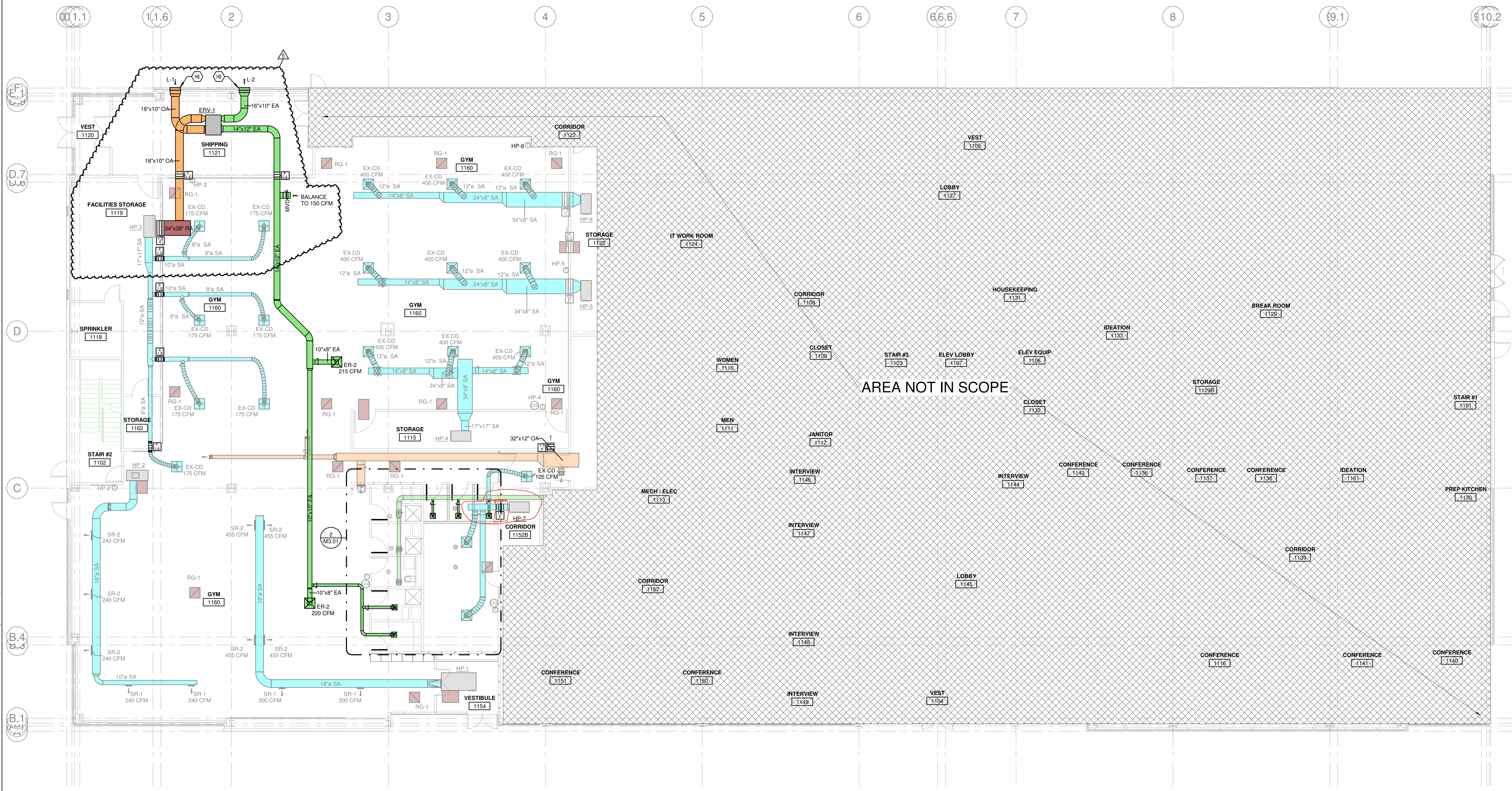
5375 MEDPACE WAY  
 CINCINNATI, OH 45227

ARCX STUDIO PROJECT NUMBER  
 2315

OWNER  
 MEDPACE, INC.



2 MECHANICAL PLAN - ENLARGED VIEW  
 3/16" = 1'-0"



1 MECHANICAL PLAN - LEVEL 1  
 1/8" = 1'-0"

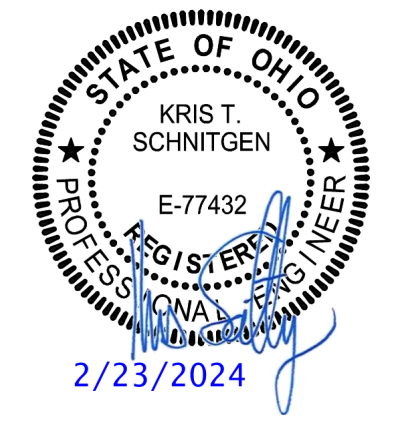
AREA NOT IN SCOPE

| REVISION | DESCRIPTION  | DATE       |
|----------|--------------|------------|
| 1        | BID & PERMIT | 09-23-2023 |
| 3        | BULLETIN 2   | 02-23-2024 |
| 5        | BULLETIN 5   | 10-09-2024 |

ISSUED FOR  
**BULLETIN 2**  
**02-23-2024**  
 SHEET NAME  
**MECHANICAL**  
**DUCTWORK LEVEL 1**  
**OVERALL**

**M3.01**





**HVAC ELECTRICAL COORDINATION SCHEDULE**

| ABBREVIATIONS   | CONTRACTOR TYPE   | MOTOR CONTROL TYPE  | CONTROL TYPE  | CONTROL TYPE   |
|---|---|---|---|--|
| DC LOCAL DISCONNECT<br>MC MOTOR CONTROL (POWER)<br>SD DUCT SMOKE DETECTOR<br>CN CONTROLS<br>TS TOGGLE SWITCH<br>CIS H.A.C.R. CIRCUIT BREAKER AT SOURCE PANEL BOARD<br>FUSE FUSE AT LOCAL DISCONNECT (VERIFY FIELD RATING)<br>FLA OPERATING FULL LOAD AMPS<br>MCA MINIMUM CIRCUIT CAPACITY<br>CP CORD AND PLUG CONNECTION<br>[BLANK] HARD WIRED (WHEN INDICATED FOR DC TYPE) | EC ELECTRICAL CONTRACTOR<br>EX EXISTING<br>FC FIRE PROTECTION CONTRACTOR<br>GC GENERAL CONTRACTOR<br>HC HVAC CONTRACTOR<br>MFR MANUFACTURER<br>PC PLUMBING CONTRACTOR<br>OR OWNER OR OTHERS | CS COMBINATION STARTER<br>MCC MOTOR CONTROL STARTER<br>MG MAGNETIC STARTER OR CONTACT<br>MS MANUAL STARTER<br>VFD VARIABLE FREQUENCY DRIVE<br>MFR MANUAL STARTER W/ CONTROL RELAY<br>MFR OVERCURRENT PROTECTION | TC TIMECLOCK<br>CPT CONTROL POWER TRANSFORMER<br>BAS BUILDING AUTOMATION SYSTEM<br>LV LOW VOLTAGE CONTROLS<br>LV LINE VOLTAGE CONTROLS<br>RVS REVERSE ACTING LINE VOLTAGE THERMOSTAT<br>MAN MANUAL<br>FA FIRE ALARM<br>CO CARBON MONOXIDE SENSOR<br>INT INTEGRAL TO EQUIPMENT<br>ASD AREA SMOKE DETECTOR<br>DSD DUCT SMOKE DETECTOR | WHERE SHORT CIRCUIT RATINGS CODE REQUIRED VALUE INDICATES "YES" APPLICABLE EQUIPMENT'S SHORT CIRCUIT RATINGS SHALL EXCEED THE AVAILABLE FAULT CURRENT VALUE INDICATED. |

**HVAC ENERGY RECOVERY UNITS SCHEDULE**

| EQUIPMENT MARK | DESCRIPTION                              | WEIGHT (lbs) | MANUFACTURER | MODEL          | OACFM | OA ESP (in WC) | EA CFM | EA ESP (in WC) | EA FAN RPM (rpm) | OA EAT WB (Deg F) | OA EAT WB (Deg F) | OA LAT WB (Deg F) | OA LAT WB (Deg F) | EA EAT WB (Deg F) | EA LAT WB (Deg F) | EA LAT WB (Deg F) | ELECTRIC CONNECTION SUMMARY | AVAILABLE FAULT CURRENT |      |
|----------------|--|--------------|--------------|----------------|-------|----------------|--------|----------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------------|-------------------------|------|
| ERV-1          | AIR SOURCE PACKAGED ENERGY RECOVERY UNIT | 240          | GREENHECK    | MINVENT-750-VG | 700   | 0.5            | 650    | .5             | 1725             | 93                | 75                | 80                | 67                | 50                | 90                | 72                | ERV-1-120V1PH               | 20.5 MCA, 25A CCP       | 1468 |

**HVAC DIFFUSERS AND REGISTERS SCHEDULE**

| TAG  | MANUFACTURER   | MODEL          | Size    | MOUNTING | MATERIAL | FINISH         | DAMPER TYPE   | BORDER STYLE                                     |
|------|----------------|----------------|---------|----------|----------|----------------|---------------|--|
| ER-1 | MATCH EXISTING | MATCH EXISTING | 12"x12" | CEILING  | ALUMINUM | STANDARD WHITE | OPPOSED BLADE | LAY-IN PANEL, PROVIDE FRAME FOR CEILING MOUNTING |
| ER-2 | MATCH EXISTING | MATCH EXISTING | 24"x24" | CEILING  | ALUMINUM | STANDARD WHITE | OPPOSED BLADE | LAY-IN PANEL, PROVIDE FRAME FOR CEILING MOUNTING |

**HVAC WATER SOURCE HEAT PUMPS SCHEDULES**

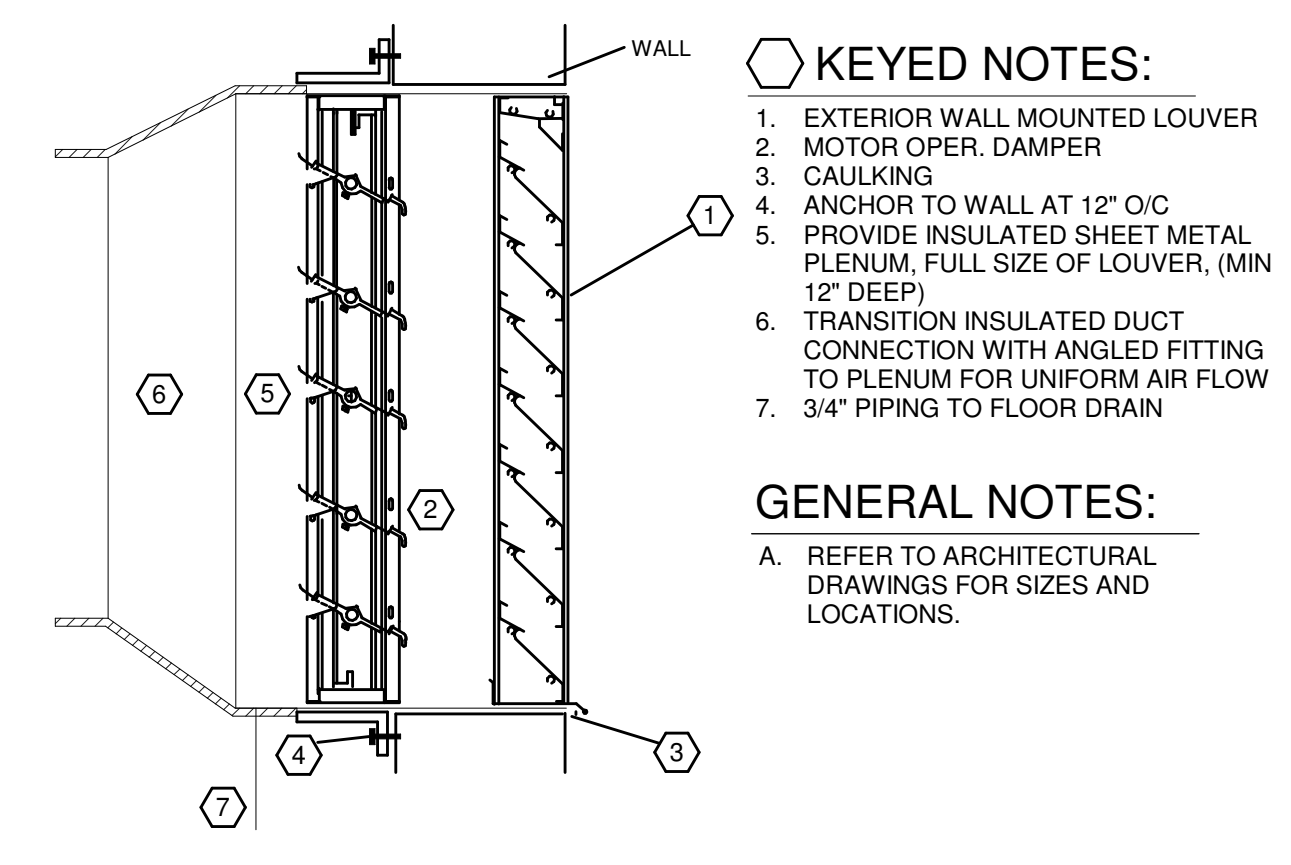
| EQUIPMENT MARK | DESCRIPTION            | STATUS   | CFM  | NOMINAL TONS | MIN COP | ECWLT CLG (Deg F) | LCWT CLG (Deg F) | ECWLT HTG (Deg F) | LCWT HTG (Deg F) | COND GPM | MIN EER | MAT CLG DB (Deg F) | MAT CLG WB (Deg F) | CLG SENS (Deg F) | LAT CLG DB (Deg F) | LAT CLG WB (Deg F) | MAT HTG (Deg F) | HTG MBH | LAT HTG (Deg F) | EMERGENCY | ELECTRIC CONNECTION SUMMARY |                        |
|----------------|------------------------|----------|------|--------------|---------|-------------------|------------------|-------------------|------------------|----------|---------|--------------------|--------------------|------------------|--------------------|--------------------|-----------------|---------|-----------------|-----------|-----------------------------|------------------------|
| HP-1           | WATER SOURCE HEAT PUMP | EXISTING | 2225 | 6            | 4.7     | 90                | 100              | 70                | 60               | 18       | 12.4    | 76                 | 84                 | 73               | 48                 | 55                 | 54              | 70      | 12              | 90        | NO                          | HP-1-480V3PH, 13.1 MCA |
| HP-2           | WATER SOURCE HEAT PUMP | EXISTING | 1982 | 3            | 4.6     | 90                | 100              | 70                | 60               | 9        | 15.7    | 76                 | 84                 | 55               | 41                 | 55                 | 54              | 70      | 24              | 90        | NO                          | HP-2-480V3PH, 8.08 MCA |
| HP-3           | WATER SOURCE HEAT PUMP | EXISTING | 1145 | 3            | 4.6     | 90                | 100              | 70                | 60               | 9        | 13.7    | 76                 | 84                 | 51               | 23                 | 55                 | 54              | 70      | 1               | 90        | NO                          | HP-3-480V3PH, 8.08 MCA |
| HP-4           | WATER SOURCE HEAT PUMP | EXISTING | 1660 | 4            | 4.6     | 90                | 100              | 70                | 60               | 12       | 13.4    | 76                 | 84                 | 78               | 34                 | 55                 | 54              | 70      | 1               | 90        | NO                          | HP-4-480V3PH, 11.3 MCA |
| HP-5           | WATER SOURCE HEAT PUMP | EXISTING | 1075 | 4            | 4.6     | 90                | 100              | 70                | 60               | 12       | 13.4    | 76                 | 84                 | 49               | 22                 | 55                 | 54              | 70      | 0               | 90        | NO                          | HP-5-480V3PH, 11.3 MCA |
| HP-6           | WATER SOURCE HEAT PUMP | EXISTING | 1615 | 4            | 4.6     | 90                | 100              | 70                | 60               | 12       | 13.4    | 76                 | 84                 | 60               | 33                 | 55                 | 54              | 70      | 1               | 90        | NO                          | HP-6-480V3PH, 11.3 MCA |
| HP-7           | WATER SOURCE HEAT PUMP | EXISTING | 1015 | 2.5          | 4.5     | 90                | 100              | 70                | 60               | 8        | 13.1    | 76                 | 84                 | 20               | 20                 | 55                 | 54              | 70      | 31              | 90        | NO                          | HP-7-480V3PH, 6.58 MCA |

**HVAC LOUVER SCHEDULE**

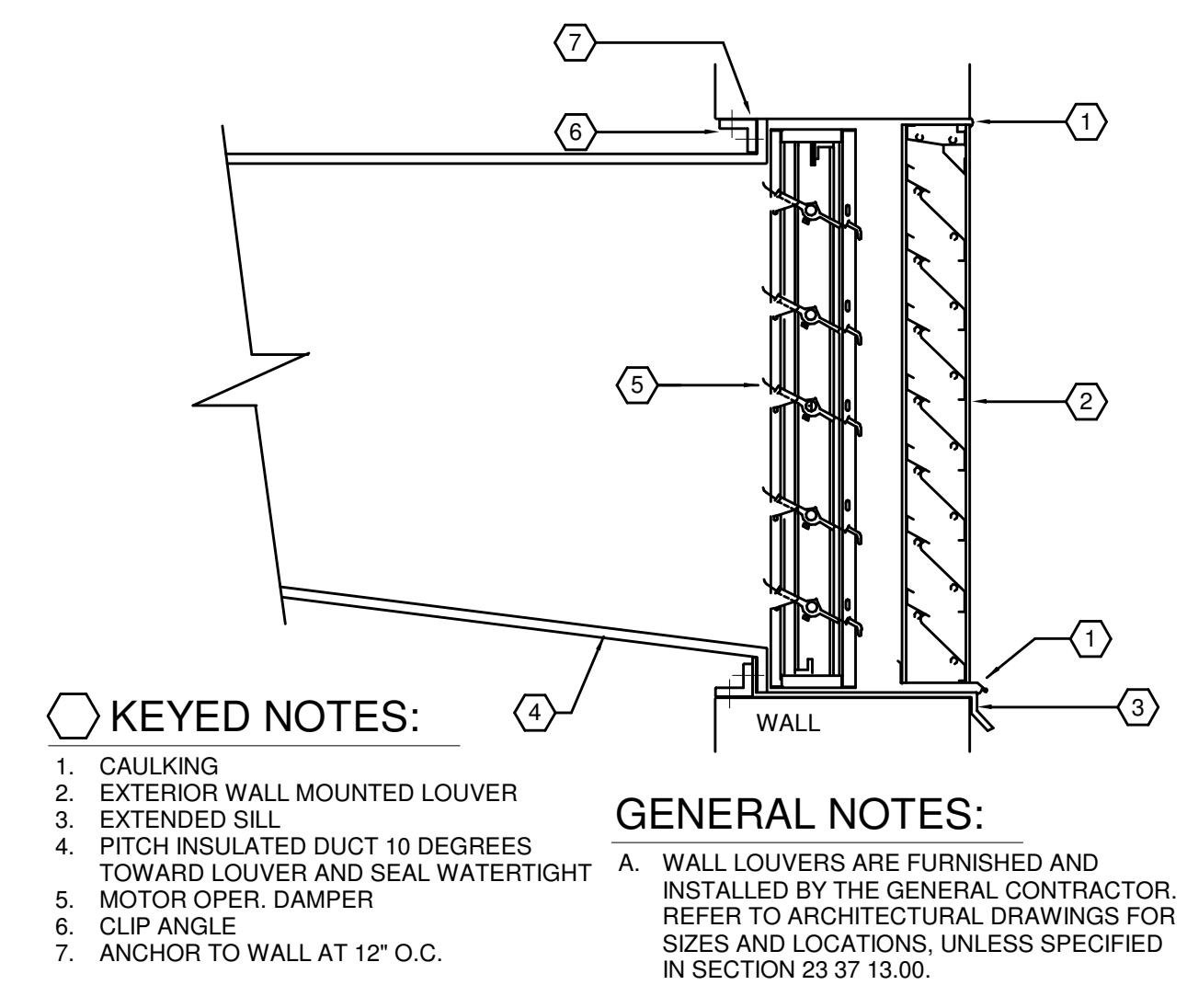
| TAG | DESCRIPTION | MANUFACTURER | MODEL   | FACE SIZE | FREE AREA | MATERIAL | FINISH                        | FURNISHED BY | INSTALLED BY |
|-----|-------------|--------------|---------|-----------|-----------|----------|-------------------------------|--------------|--------------|
| L-1 | LOUVER      | GREENHECK    | ESD-435 | 24"x18"   | 1.20 SF   | ALUMINUM | METALSCENT ALUM. BAKED ENAMEL | HC           | HC           |
| L-2 | LOUVER      | GREENHECK    | ESD-435 | 24"x18"   | 1.20 SF   | ALUMINUM | METALSCENT ALUM. BAKED ENAMEL | HC           | HC           |

**HVAC VENTILATION SCHEDULE**

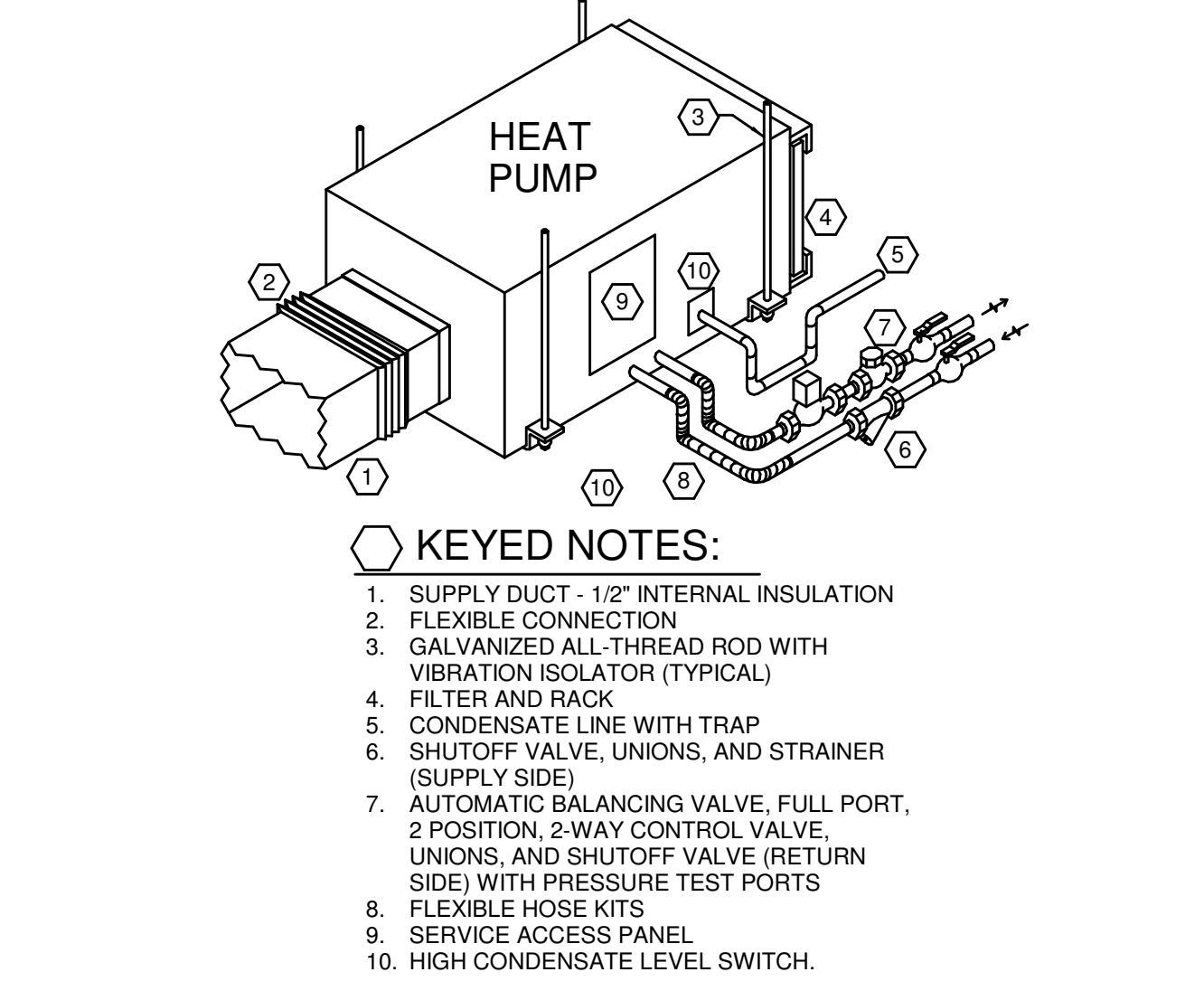
| NUMBER   | NAME      | AREA    | PEOPLE | OA PER PERSON SQ. FT. | OA PER SQ. FT. | REQ SUP | ACT SUP | REQ OA | ACT OA | ACT EXH | CRIT OA | PRESSURE |
|----------|-----------|---------|--------|-----------------------|----------------|---------|---------|--------|--------|---------|---------|----------|
| 1115     | STORAGE   | 293 SF  | 0      | 0                     | 0.12           | 75      | 75      | 0      | 35     | 75      | 0       | Neutral  |
| 1150B    | CORRIDOR  | 148 SF  | 0      | 0                     | 0.06           | 105     | 105     | 0      | 0      | 105     | 0       | Neutral  |
| 1153A    | CHANGING  | 31 SF   | 0      | 0                     | 0              | 20      | 20      | 0      | 0      | 20      | 0       | Neutral  |
| 1153B    | CHANGING  | 31 SF   | 0      | 0                     | 0              | 20      | 20      | 0      | 0      | 20      | 0       | Neutral  |
| 1153C    | CHANGING  | 31 SF   | 0      | 0                     | 0              | 20      | 20      | 0      | 0      | 20      | 0       | Neutral  |
| 1154     | VESTIBULE | 135 SF  | 0      | 0                     | 0.06           | 355     | 355     | 8      | 8      | 355     | 0       | Neutral  |
| 1155     | CHANGING  | 53 SF   | 0      | 0                     | 0              | 35      | 35      | 0      | 0      | 35      | 0       | Neutral  |
| 1156     | CHANGING  | 48 SF   | 0      | 0                     | 0              | 30      | 30      | 0      | 0      | 30      | 0       | Neutral  |
| 1157     | RESTROOM  | 48 SF   | 0      | 0                     | 0              | 30      | 30      | 0      | 0      | 30      | 0       | Negative |
| 1158     | SHOWER    | 49 SF   | 0      | 0                     | 0              | 35      | 35      | 0      | 0      | 35      | 0       | Negative |
| 1159     | SHOWER    | 55 SF   | 0      | 0                     | 0              | 35      | 35      | 0      | 0      | 35      | 0       | Negative |
| 1160     | GYM       | 1275 SF | 0      | 0                     | 0.12           | 195     | 195     | 24     | 24     | 195     | 0       | Neutral  |
| 1160 (1) | GYM       | 930 SF  | 25     | 20                    | 0.06           | 1020    | 1200    | 556    | 556    | 1200    | 0       | Neutral  |
| 1160 (2) | GYM       | 1995 SF | 25     | 20                    | 0.06           | 2225    | 2225    | 607    | 607    | 2225    | 0       | Neutral  |
| 1160 (3) | GYM       | 801 SF  | 10     | 20                    | 0.05           | 1065    | 1065    | 248    | 248    | 1065    | 0       | Neutral  |
| 1160 (4) | GYM       | 1366 SF | 25     | 20                    | 0.06           | 1145    | 1145    | 582    | 582    | 1145    | 0       | Neutral  |
| 1160 (5) | GYM       | 894 SF  | 25     | 20                    | 0.06           | 1075    | 1200    | 554    | 554    | 1200    | 0       | Neutral  |
| TOTAL    |           | 8111 SF |        |                       |                |         |         |        |        |         |         |          |



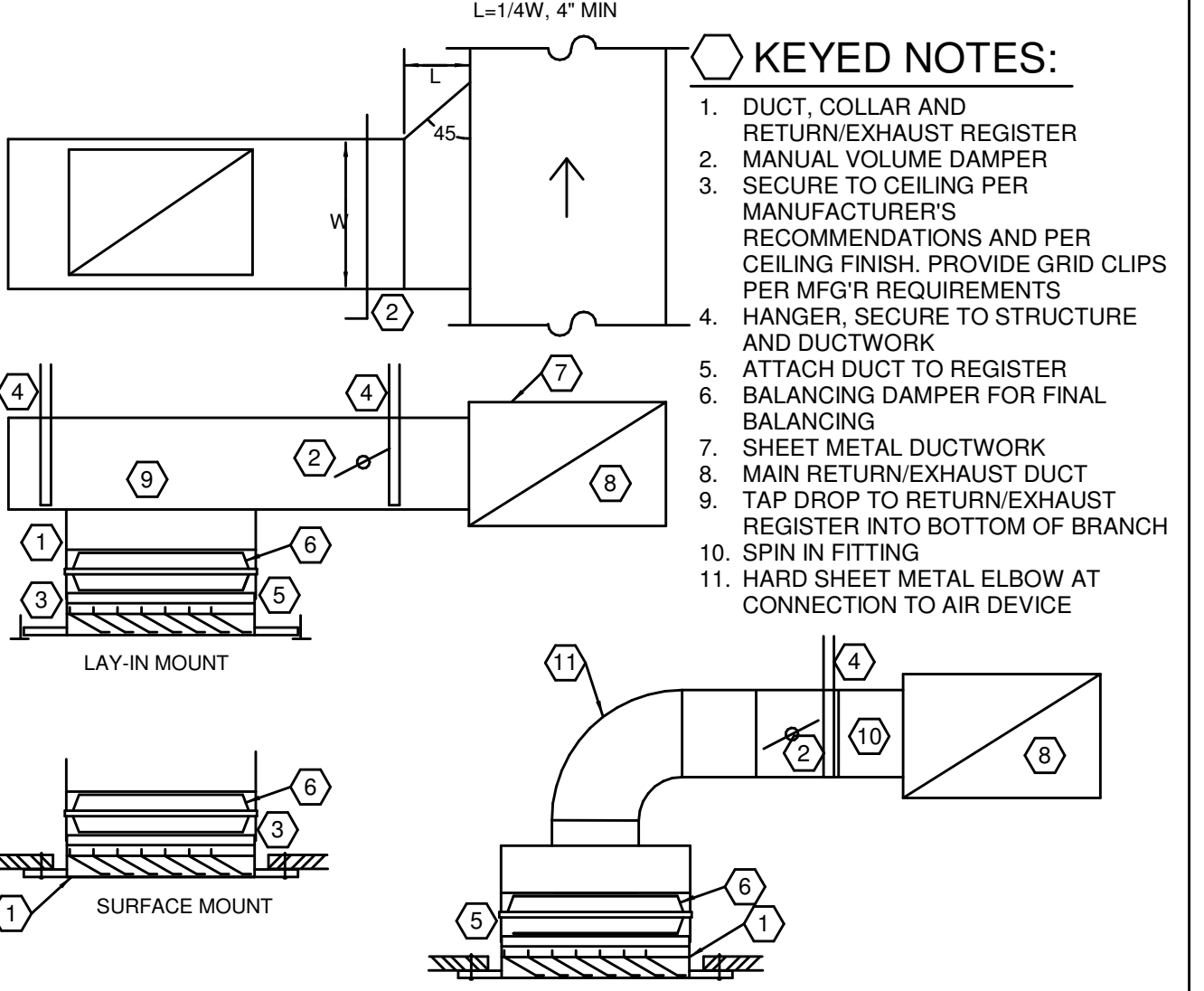
233713.00-11 - INTAKE LOUVER  
SCALE: NONE



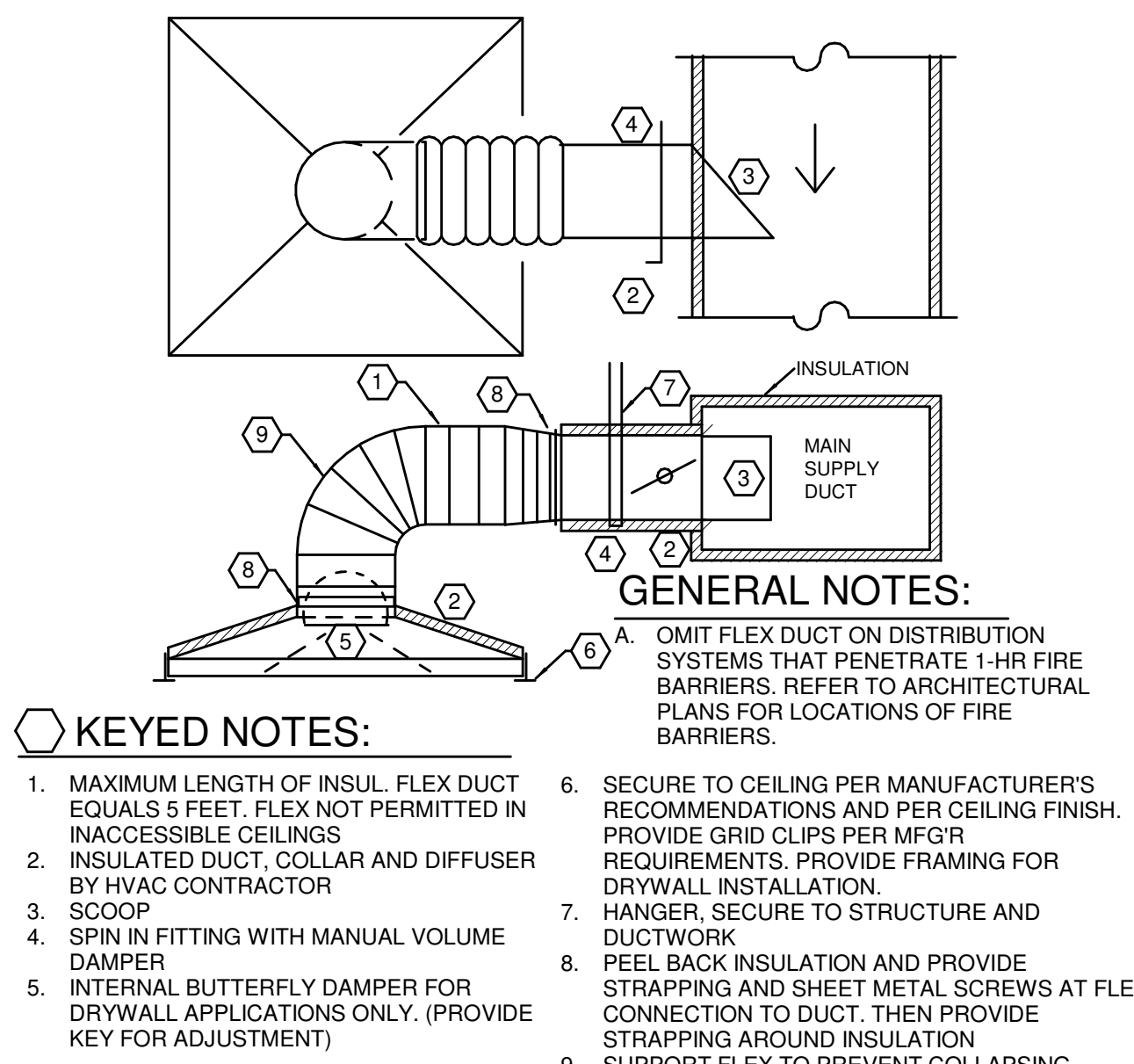
233713.00-07 - EXHAUST LOUVER DETAIL  
SCALE: NONE



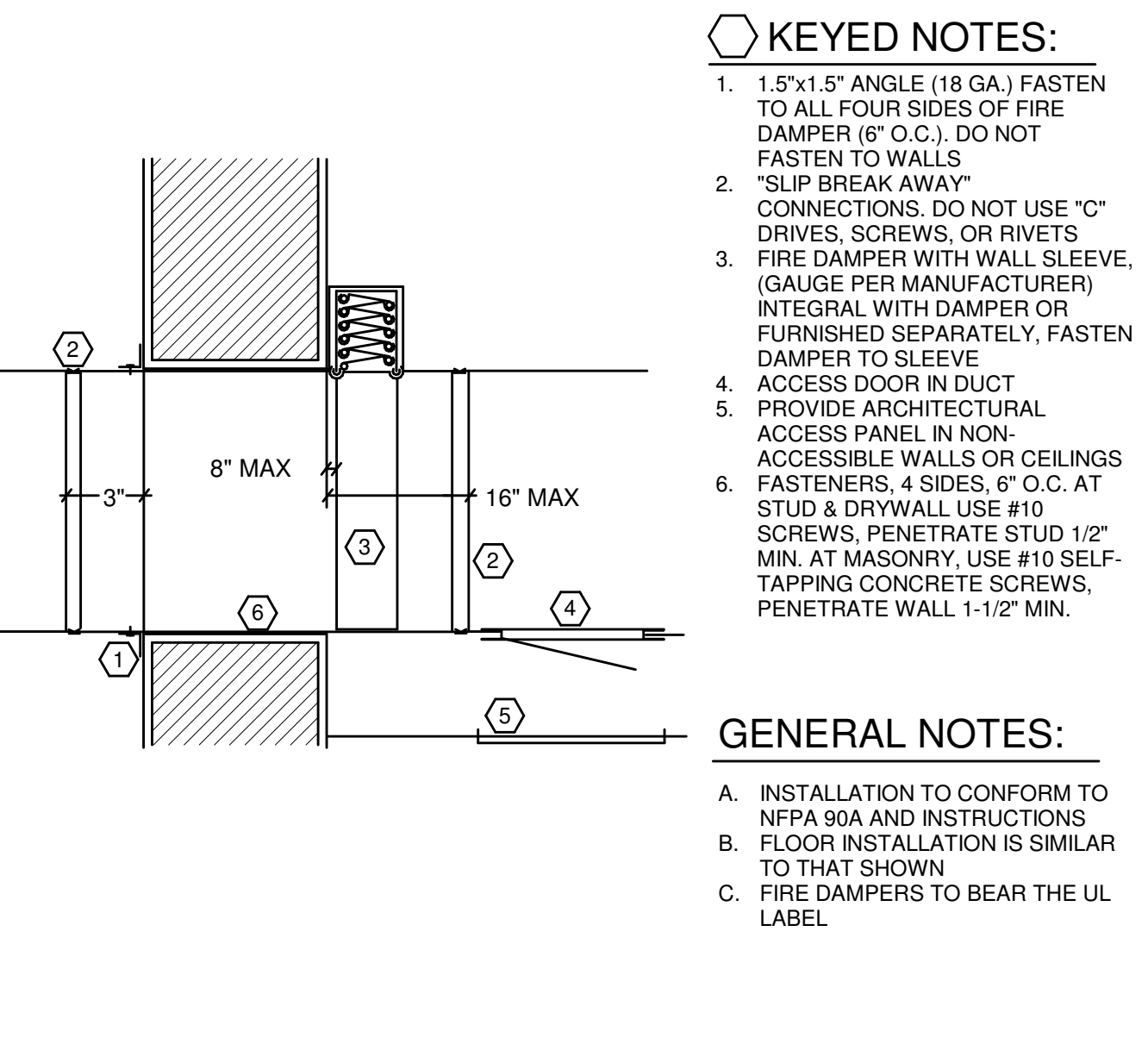
238146.00-06 - WATER SOURCE HEAT PUMP  
SCALE: NONE



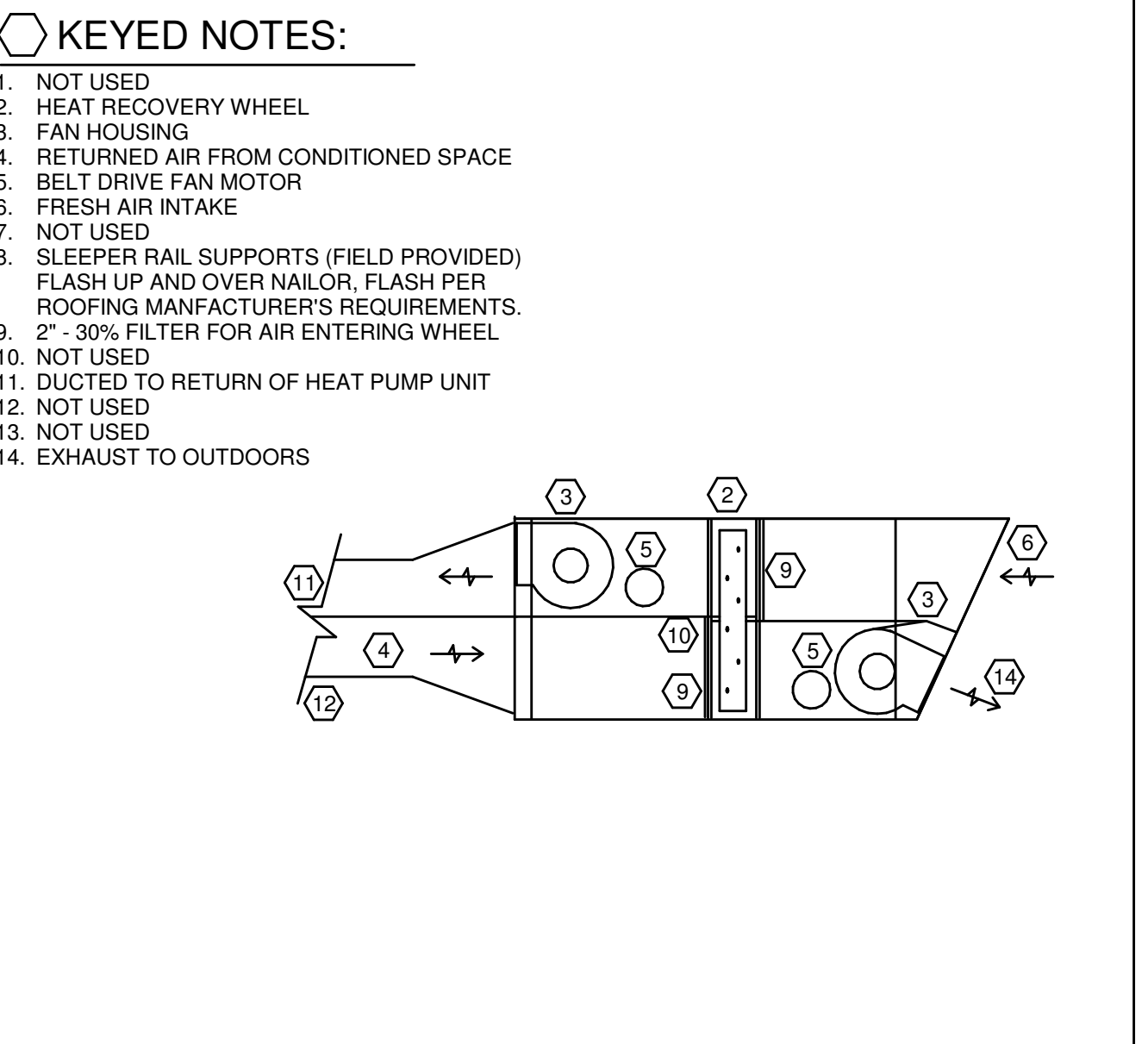
233713.00-21 - RETURN/EXHAUST REGISTER INSTALLATION  
SCALE: NONE



233713.00-04 - DIFFUSER INSTALLATION TYPICAL  
SCALE: NONE



233713.00-12 - FIRE DAMPER TYPE A  
SCALE: NONE



237213.00-02 - HEAT RECOVERY UNIT  
SCALE: NONE

REVISION

| NO. | DESCRIPTION  | DATE       |
|-----|--------------|------------|
| 1   | BID & PERMIT | 09-23-2023 |
| 3   | BULLETIN 2   | 02-23-2024 |