

ISSUANCE  
 05/20/2021  
 ISSUED FOR REVIEW

06/03/2021  
 ISSUED FOR 60% CD

06/29/2021  
 ISSUED FOR 90% CD

08/12/2021  
 ISSUED FOR PERMIT

12/14/2021  
 PERMIT RESPONSES

01/25/2022  
 ISSUED FOR BID

**HEALTHCO PHARMACY**  
 2541 N. MACGREGOR WAY  
 HOUSTON, TX 77004

SEAL



**MWA**  
 ARCHITECTS

ARCHITECTS  
 AND PLANNING  
 CONSULTANTS

11767 KATY FREEWAY, SUITE 430  
 HOUSTON, TEXAS 77079

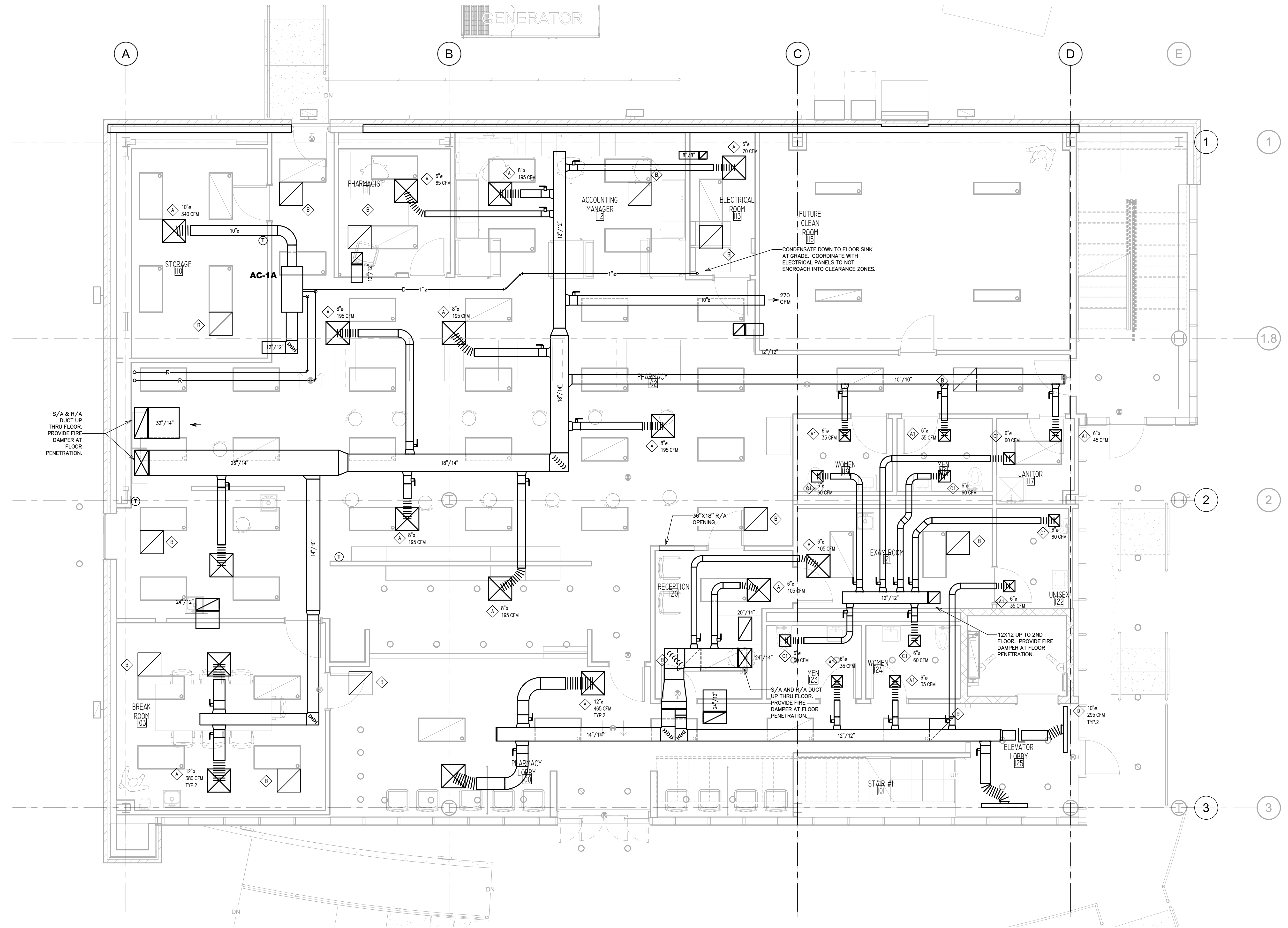
CIVIL ENGINEER  
 NNE, Inc.  
 25422 Alverstone Dr  
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MEPT ENGINEER  
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 Suite 121  
 Houston, TX 77042

STRUCTURAL ENGINEER  
 Active Design Group  
 744 Broad Street, Suite 1905  
 Newark, NJ 07102

PROJ. 21-06  
 DATE: JANUARY 25, 2022

**MECHANICAL  
 FLOOR PLANS**  
**M2.00**

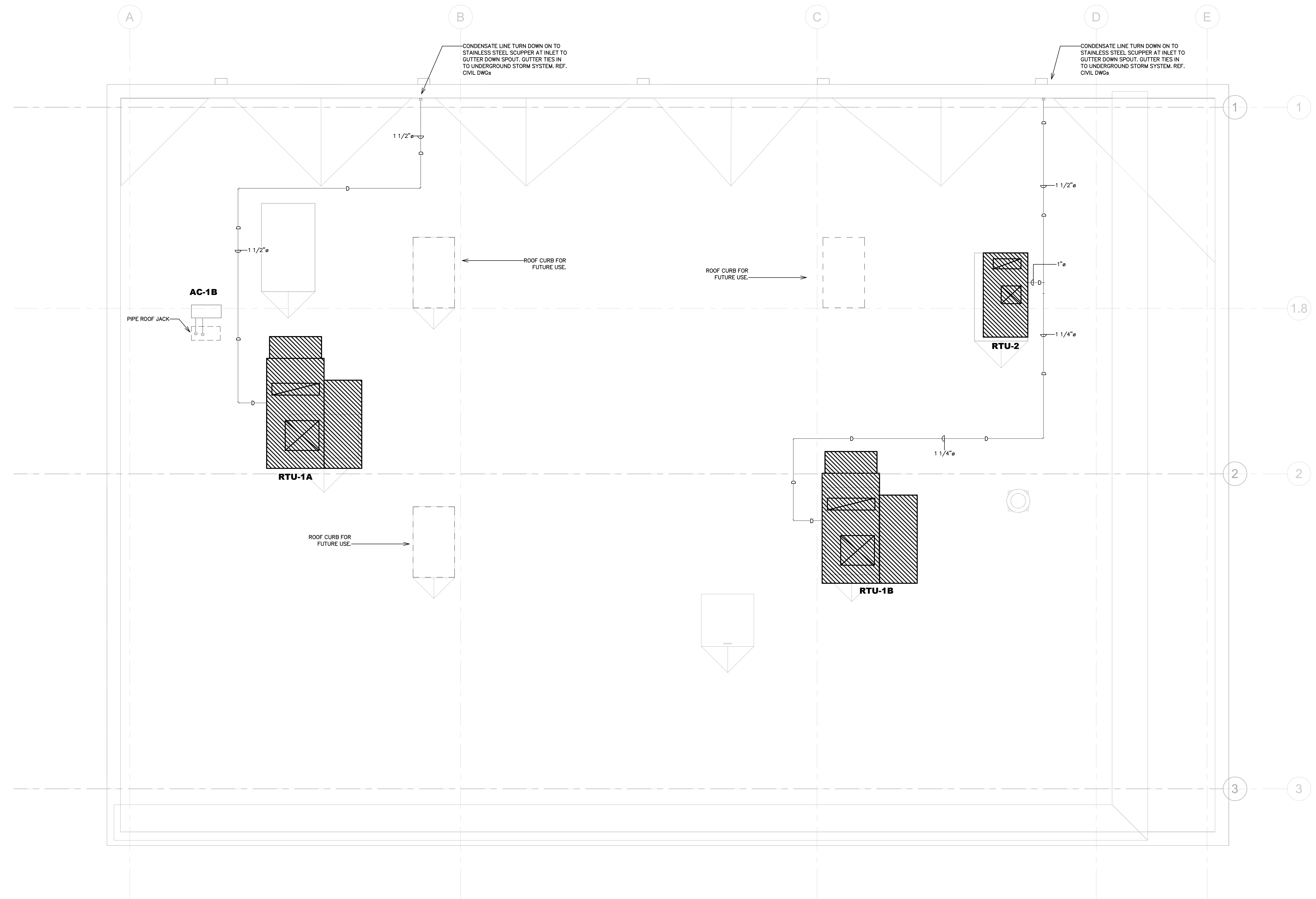


**1 Level 1 - Mechanical Plan**  
 1/4" = 1'-0"





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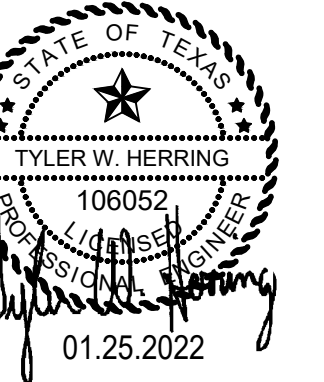


**1** Mechanical Roof Plan  
1/4" = 1'-0"

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744 Broad Street, Suite 1905  
Newark, NJ 07102

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DATE: JANUARY 25, 2022

**MECHANICAL  
ROOF PLAN**

**M2.02**



**MECHANICAL SYMBOL SCHEDULE**

|       |                                   |   |                                 |
|-------|-----------------------------------|---|---------------------------------|
| —CWS— | CONDENSER WATER SUPPLY            | □ | DAMPER MOTOR                    |
| —CWR— | CONDENSER WATER RETURN            | □ | TEMPERATURE TRANSMITTER         |
| —CHS— | CHILLED WATER SUPPLY              | □ | FLOW SWITCH                     |
| —CHR— | CHILLED WATER RETURN              | □ | DIFFERENTIAL PRESSURE SENSOR    |
| —HWS— | HEATING WATER SUPPLY              | □ | DUCT SMOKE DETECTOR             |
| —HWR— | HEATING WATER RETURN              | □ | STATIC PRESSURE SENSOR          |
| —RS—  | REFRIGERANT SUPPLY                | □ | STATIC PRESSURE SENSOR HI-LIMIT |
| —RR—  | REFRIGERANT RETURN                | □ | ACCESS PANEL                    |
| —D—   | CONDENSATE LINE                   | □ | ACCESS PANEL                    |
| —T—   | PETE'S PLUG                       | □ | AHU                             |
| —CH—  | CHILLER                           | □ | AIR HANDLING UNIT               |
| —V—   | ISOLATION VALVE                   | □ | B                               |
| —E—   | ELECTRONIC CONTROL VALVE          | □ | BOILER                          |
| —B—   | BUTTERFLY VALVE                   | □ | CH                              |
| —U—   | UNION OR FLANGE                   | □ | CHILLED WATER PUMP              |
| —S—   | STRAINER                          | □ | CVT                             |
| —A—   | AUTOMATIC AIR VENT                | □ | CONSTANT VOLUME TERMINAL        |
| —L—   | LOCAL CONTROL THERMOSTAT          | □ | DH                              |
| —T—   | TEMPERATURE SENSOR                | □ | DEHUMIDIFIER                    |
| —H—   | HUMIDITY SENSOR                   | □ | E/A                             |
| —F—   | FIRE DAMPER                       | □ | EXHAUST AIR                     |
| —S/A— | SUPPLY AIR                        | □ | EXHAUST FAN                     |
| —M—   | SMOKE DAMPER                      | □ | F&B                             |
| —C—   | FIRE/SMOKE COMBINATION DAMPER     | □ | FACE & BYPASS                   |
| —M—   | MOTORIZED DAMPER                  | □ | FF                              |
| —S—   | CARBON MONOXIDE SENSOR            | □ | FLY FAN                         |
| —S—   | CARBON DIOXIDE SENSOR             | □ | HDT                             |
| —S—   | SUPPLY AIR DIFFUSER               | □ | HORIZONTAL DRAW THROUGH         |
| —S—   | RETURN AIR GRILLE                 | □ | HWP                             |
| —S—   | EXHAUST GRILLE                    | □ | HOT WATER PUMP                  |
| —S—   | RETURN AIR OPENING IN WALL        | □ | K                               |
| —S—   | VOLUME DAMPERS                    | □ | KITCHEN EXHAUST FAN             |
| —S—   | DUCT ELEVATION CHANGE             | □ | KITCHEN SUPPLY FAN              |
| —S—   | 90° DUCT ELBOW WITH TURNING VANES | □ | O/A                             |
| —S—   | FLEXIBLE DUCT                     | □ | OUTSIDE AIR                     |
|       |                                   | □ | OPPOSED-BLADES DAMPER           |
|       |                                   | □ | PRE-TREAT                       |
|       |                                   | □ | RETURN AIR                      |
|       |                                   | □ | ROOF-MOUNTED AIR HANDLING UNIT  |
|       |                                   | □ | SOUND ATTENUATOR                |
|       |                                   | □ | SPLITTER DAMPER                 |
|       |                                   | □ | SINGLE ZONE                     |
|       |                                   | □ | VARIABLE AIR VOLUME             |
|       |                                   | □ | VAV BOX                         |
|       |                                   | □ | VOLUME DAMPER                   |
|       |                                   | □ | VERTICAL DRAW THROUGH           |
|       |                                   | □ | VARIABLE FREQUENCY DRIVE        |
|       |                                   | □ | WATER HEATER                    |
|       |                                   | □ | DESIGNATION FOR "ROUND"         |
|       |                                   | □ | DESIGNATION FOR "OVAL"          |

**GENERAL MECHANICAL NOTES**

- REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS. DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS. SEE DETAIL 4/M4.01.
- PROVIDE CONDENSATE DRAIN TRAP FOR EACH AHU AND FCU. SEE DETAIL 7/M4.01.
- REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
- IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL-TO-DECK ABOVE CEILING THAT BLOCKS PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 400 CFM SUPPLY AIR. REFER TO DRAWINGS.
- COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS.
- ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT. SUB-ASSEMBLES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC. PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS. REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
- DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS.
- CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS OR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER MACHINA 2-10.
- AT EACH LOCATION WHERE DUCTS CROSS FIRE WALLS FOR PENETRATE FLOOR ASSEMBLIES, PROVIDE FIRE DAMPERS.

**AIR DEVICE SCHEDULE**

| MARK | DESCRIPTION   |
|------|---|
| ◇    | CEILING DIFFUSER - 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, NECK SIZE SHOWN ON DRAWING<br>TITUS TMS A1-12" X 12"                                       |
| ◇    | CEILING RETURN GRILLE - 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH<br>TITUS PAR B1-12" X 12"   |
| ◇    | CEILING EXHAUST GRILLE - 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, NECK SIZE SHOWN ON DRAWING<br>TITUS PAR C1-12" X 12"                                    |
| ◇    | CONTINUOUS 1.5" SINGLE WIDTH SLOT WITH 4" LENGTH FLENUM, STEEL CONSTRUCTION WITH FRAME TO MATCH CEILING TYPE. REFER TO ARCHITECTURAL PLANS FOR CEILING TYPE<br>TITUS FL-15-HT |
| ◇    | SIDEWALL SUPPLY REGISTER - ADJUSTABLE DOUBLE DEFLECTION, 0.75" SPACING, AIRFOIL FRONT BLADES PARALLEL TO SHORT DIMENSION, ALUMINUM CONSTRUCTION, WHITE FINISH<br>TITUS 300FS  |
| ◇    | SIDEWALL RETURN REGISTER - FIXED 35° DEFLECTION, 0.75" SPACING, AIRFOIL BLADES PARALLEL TO SHORT DIMENSION, ALUMINUM CONSTRUCTION, WHITE FINISH<br>TITUS 350FS                |

- NOTES:
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPE.
  - PROVIDE RADIATION DAMPERS FOR ALL CEILING DEVICES INSTALLED IN RATED CEILINGS. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING RATING.
  - PROVIDE FIRE DAMPERS FOR ALL WALL REGISTERS INSTALLED IN RATED WALL ASSEMBLIES. REFER TO ARCHITECTURAL FLOOR PLANS TO VERIFY WHICH WALLS ARE FIRE RATED.

**FAN SCHEDULE**

| MARK                 | DESCRIPTION |
|----------------------|-------------|
| EF-1                 | EF-1        |
| RR/AJANTOR           | RR/AJANTOR  |
| INLINE               | INLINE      |
| DIRECT               | DIRECT      |
| CFM                  | 480         |
| EXT. S.P. (IN. W.G.) | 0.50        |
| HORSEPOWER           | 1/6         |
| VOLTAGE              | 120V/1/60   |
| MANUFACTURER         | GREENHECK   |
| MODEL                | 100 ACEB    |
| SONES (MAX.)         | 10.0        |
| NOTES                | 1,2,3       |

- NOTES:
- STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN.
  - FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY AND SHALL HAVE ADJUSTABLE V-BELT SHEAVES.
  - INSULATED ROOF CURB, BACKDRAFT, BIRDSCREEN & DISCONNECT SWITCH.

**DEHUMIDIFIER SCHEDULE**

| MARK             | DESCRIPTION      |
|------------------|------------------|
| DH-1             | DH-1             |
| OPEN TENANT AREA | OPEN TENANT AREA |
| FAN MOTOR DRIVE  |                  |
| CFM              | 150              |
| STATIC PRESSURE  | 0.0              |
| PERFORMANCE      | 70 PINTS/DAY     |
| INLET CONDITIONS |                  |
| REFRIGERANT      |                  |
| VOLTAGE          | 120V             |
| AMPS             | 5.1              |
| POWER (WATTS)    | 680              |
| MANUFACTURER     | QUEST            |
| MODEL NO.        | 70ST             |
| NOTES            |                  |

- NOTES:
- INSTALL PER MANUFACTURERS SPECIFICATIONS.

**OUTSIDE AIR CALCULATIONS**

OUTSIDE AIR REQUIREMENTS ARE BASED UPON THE REQUIREMENTS OF 2015 UNIFORM MECHANICAL CODE, SECTIONS 403 & 404 AND WITH TABLE 402.1, 2015 HA-UMC.

FOR ALL SYSTEMS, CALCULATIONS USE THE FOLLOWING EQUATIONS (2015 HA-UMC):

$$V_{out} = V_{out}/E_{out}$$

$$V_{out} = D \sum_{all\ zones} (R_{in} + R_{out}) + \sum_{all\ zones} (R_{in} + A_{in})$$

403.5.4  $E_{out} = \text{minimum}(E_{out})$

403.4.3(1)  $X_{out} = V_{out}/V_{out}$

404.1  $E_{out} = 1 + X_{out} - Z_{out}$

CALCULATION RESULTS ARE TABULATED BELOW:

| ROOM TYPE                                | (A <sub>z</sub> ) ZONE AREA (SQ.FT.) | (P <sub>z</sub> ) ZONE OCCUPANCY | (R <sub>o</sub> ) REQUIRED CFM/SQ.FT. | (R <sub>p</sub> ) REQUIRED CFM/PERSON | (V <sub>out</sub> ) UNCORRECTED OUTDOOR AIR |
|--|--------------------------------------|----------------------------------|---------------------------------------|---------------------------------------|---|
| OFFICE                                   | 852                                  | 10                               | 0.06                                  | 5                                     | 101   |
| PHARMACY                                 | 1800                                 | 20                               | 0.18                                  | 5                                     | 424   |
| BREAK                                    | 300                                  | 12                               | 0.08                                  | 5                                     | 78  |
| TOTAL                                    |                                      |                                  |                                       |                                       | 603   |
| VENTILATION EFFICIENCY (E <sub>v</sub> ) |                                      |                                  |                                       |                                       | 0.771                                       |
| REQUIRED VENTILATION CFM                 |                                      |                                  |                                       |                                       | 782   |
| DESIGN VENTILATION CFM                   |                                      |                                  |                                       |                                       | 2700  |

| ROOM TYPE                                | (A <sub>z</sub> ) ZONE AREA (SQ.FT.) | (P <sub>z</sub> ) ZONE OCCUPANCY | (R <sub>o</sub> ) REQUIRED CFM/SQ.FT. | (R <sub>p</sub> ) REQUIRED CFM/PERSON | (V <sub>out</sub> ) UNCORRECTED OUTDOOR AIR |
|--|--------------------------------------|----------------------------------|---------------------------------------|---------------------------------------|---|
| LOBBY                                    | 690                                  | 8                                | 0.06                                  | 5                                     | 81  |
| OFFICE                                   | 275                                  | 6                                | 0.08                                  | 5                                     | 47  |
| TOTAL                                    |                                      |                                  |                                       |                                       | 128   |
| VENTILATION EFFICIENCY (E <sub>v</sub> ) |                                      |                                  |                                       |                                       | 0.795                                       |
| REQUIRED VENTILATION CFM                 |                                      |                                  |                                       |                                       | 161   |
| DESIGN VENTILATION CFM                   |                                      |                                  |                                       |                                       | 1830  |

| ROOM TYPE                                | (A <sub>z</sub> ) ZONE AREA (SQ.FT.) | (P <sub>z</sub> ) ZONE OCCUPANCY | (R <sub>o</sub> ) REQUIRED CFM/SQ.FT. | (R <sub>p</sub> ) REQUIRED CFM/PERSON | (V <sub>out</sub> ) UNCORRECTED OUTDOOR AIR |
|--|--------------------------------------|----------------------------------|---------------------------------------|---------------------------------------|---|
| LOBBY                                    | 1023                                 | 6.8                              | 0.06                                  | 5                                     | 95  |
| TOTAL                                    |                                      |                                  |                                       |                                       | 95  |
| VENTILATION EFFICIENCY (E <sub>v</sub> ) |                                      |                                  |                                       |                                       | 0.98  |
| REQUIRED VENTILATION CFM                 |                                      |                                  |                                       |                                       | 97  |
| DESIGN VENTILATION CFM                   |                                      |                                  |                                       |                                       | 100   |

**COMMISSIONING NOTES**

- COMMISSIONING IS TO BE PROVIDED BY A 3RD PARTY, FOR ALL NEW EQUIPMENT INSTALLED, IN ACCORDANCE WITH THE 2015 IECC.
- CONTRACTOR SHALL MAKE EVERY EFFORT TO ASSIST THE 3RD PARTY COMMISSIONING AGENT IN THEIR DUTIES. THEY SHALL PROVIDE ACCESS TO ALL EQUIPMENT AND ASSIST WITH PRE-FUNCTIONAL AND FUNCTIONAL TESTING FOR THE COMPLETION OF THE COMMISSIONING FORMS.
- ALL PROJECT DOCUMENTATION, INCLUDING AS-BUILTS AND O&M MANUALS SHALL BE PROVIDED TO THE OWNER AND COMMISSIONING AGENT WITHIN 90 DAYS OF THE PROJECT SUBSTANTIAL COMPLETION DATE.

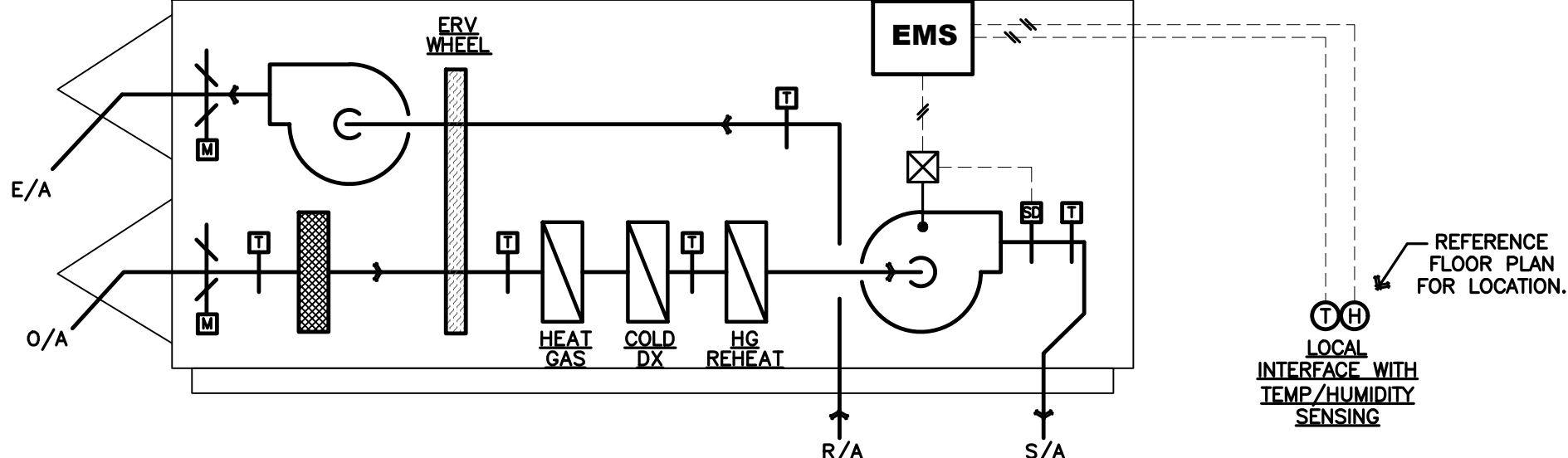
**COMCHECK COMPLIANCE NOTES**

- RTU-2
- SECTION C403.4.4.6 - UNIT IS SINGLE ZONE VAV. REQUIREMENT DOES NOT APPLY.
  - SECTION C404.5, C404.5.1, C404.5.2, C404.6.3 AND C404.7 - NO DOMESTIC WATER HEATING OR PIPING WORK WITHIN THE SCOPE OF WORK. REQUIREMENTS DO NOT APPLY.
- RTU-1A & 1B
- SECTION C404.5, C404.5.1, C404.5.2, C404.6.3 AND C404.7 - NO DOMESTIC WATER HEATING OR PIPING WORK WITHIN THE SCOPE OF WORK. REQUIREMENTS DO NOT APPLY.
- AC-1
- SECTION C403.4.4.6 - UNIT IS SINGLE ZONE VAV. REQUIREMENT DOES NOT APPLY.
  - SECTION C404.5, C404.5.1, C404.5.2, C404.6.3 AND C404.7 - NO DOMESTIC WATER HEATING OR PIPING WORK WITHIN THE SCOPE OF WORK. REQUIREMENTS DO NOT APPLY.
- HVAC
- SECTION C402.2.6 - NO SENSIBLE HEATING PANELS ARE WITHIN SCOPE. REQUIREMENT DOES NOT APPLY.
  - SECTION C403.2.13 - NO UNENCLOSED SPACES ARE HEATED BY ONLY RADIANT HEAT WITHIN SCOPE. REQUIREMENT DOES NOT APPLY.
  - SECTION C403.2.2 - HVAC SYSTEMS AND EQUIPMENT CAPACITY DOES NOT EXCEED CALCULATED LOADS. LOADS HAVE BEEN DEVELOPED IN ACCORDANCE WITH IECC 2015. REQUIREMENT WILL BE MET.
  - SECTION C403.2.4.5 & C403.2.4.6 - NO SNOW/ICE MELT SYSTEMS OR FREEZE PROTECTION SYSTEMS ARE WITHIN THE SCOPE OF WORK. REQUIREMENTS DO NOT APPLY.
  - SECTION C403.2.6.1 - NO SPACES MEET REQUIREMENT FOR DEMAND CONTROLLED VENTILATION. REQUIREMENT DOES NOT APPLY.
  - SECTION C403.2.6.2 - NO SCOPE OF WORK INVOLVING PARKING GARAGE. REQUIREMENT DOES NOT APPLY.
  - SECTION C403.2.8 - NO KITCHEN EXHAUST SYSTEM WITHIN SCOPE. REQUIREMENT DOES NOT APPLY.
  - SECTION C408.2.2.1 - AIR DEVICES SHALL BE BALANCED BY VOLUME DAMPERS, TERMINAL BOXES HAVE INTEGRAL MEANS OF BALANCING. REQUIREMENT DOES NOT APPLY.
  - SECTION C403.5, C403.5.1 AND C403.5.2 - NO ASSOCIATED EQUIPMENT BEING PROVIDED. REQUIREMENT DOES NOT APPLY.

**DX SPLIT SYSTEM SCHEDULE**

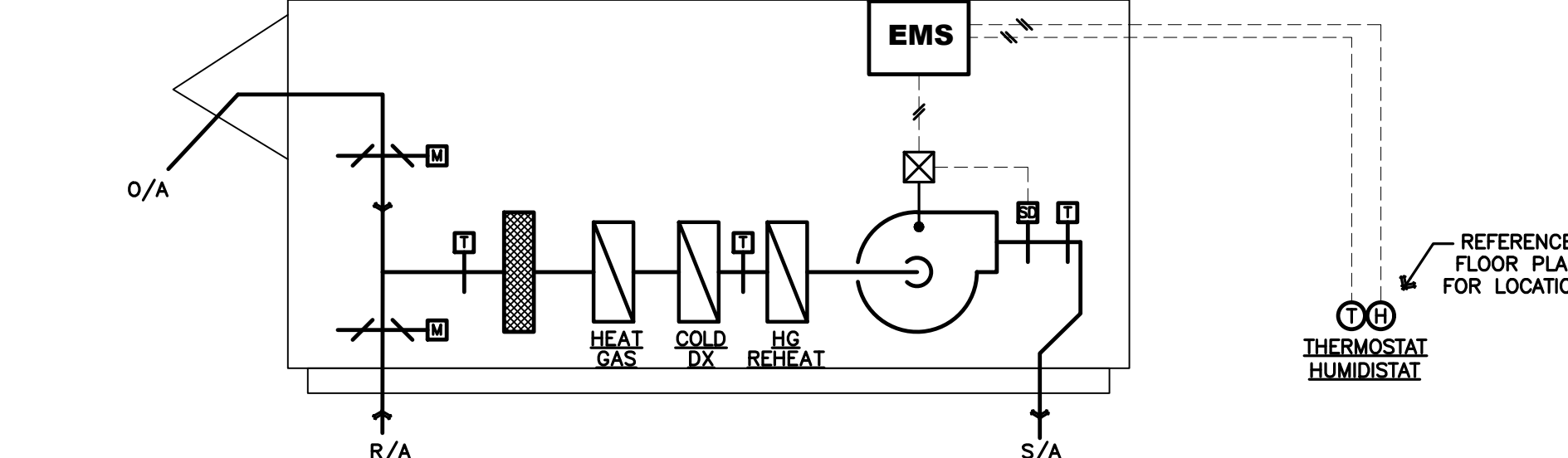
| SYSTEM                         | DESCRIPTION      |
|--------------------------------|------------------|
| AC-1                           | AC-1             |
| COOLING ONLY                   | COOLING ONLY     |
| NOMINAL TONNAGE                | 1.0              |
| EER/SEER                       | 13.4/21.4        |
| REFRIGERANT TYPE               | R410A            |
| MARK                           | OUTDOOR UNIT     |
| MARK                           | AC-1B            |
| SERVES INDOOR UNIT(S)          | AC-1A            |
| NO. OF COMPRESSORS             | 1                |
| NO. OF STAGES                  | 1                |
| AMBIENT AIR, °F                | 95               |
| VOLTAGE                        | 208V/1/60        |
| MCA/MOCP                       | 12A / 15A        |
| MANUFACTURER                   | MITSUBISHI       |
| MODEL NO.                      | PUZ-A12NKA7-BS   |
| MARK                           | INDOOR UNIT      |
| MARK                           | AC-1A            |
| SERVES SPACES                  | STORAGE ROOM     |
| SUPPLY AIR CFM (LO - MED - HI) | 280-340-400      |
| EXTERNAL STATIC PRESSURE       | 0.5              |
| NO. OF FAN SPEEDS              | 3                |
| TOTAL COOLING CAPACITY (MBH)   | 12.0             |
| HEATING CAPACITY (KW)          | 5.7              |
| VOLTAGE                        | FED FROM OUTDOOR |
| MCA/MOCP                       | FED FROM OUTDOOR |
| UNIT TYPE                      | MULTI-POSITION   |
| MANUFACTURER                   | MITSUBISHI       |
| MODEL NO.                      | PVA-A12KA7       |

- NOTES:
- INSTALL PER MANUFACTURERS SPECIFICATIONS.
  - REFRIGERANT LINES TO BE SIZED BY MANUFACTURER.
  - PROVIDE INDOOR UNIT WITH LOCAL THERMOSTAT
  - CONTRACTOR SHALL PROVIDE ALL CLEARANCES AROUND UNIT AS 5. OPTIMUM START CONTROLS PER 2015 IECC.
  - PROVIDE LOW AMBIENT COOLING KIT.



**2 100% O/A RTU CONTROL SCHEMATIC - RTU-1A & 1B**

- NO SCALE
- NOTES:
- RTU SHALL COME WITH FACTORY MOUNTED CONTROLS, CAPABLE OF 7-DAY SCHEDULING, SINGLE ZONE VAV CONTROL WITH HOT GAS REHEAT, AND OPTIMUM START CONTROLS PER IECC 2015.
  - RTU SHALL INCLUDE A BUILDING STATIC PRESSURE SENSOR AND USE IN SEQUENCE WITH EXHAUST FAN TO MAINTAIN BUILDING PRESSURE.
  - RTU SHALL BE PROVIDED WITH LOCAL SPACE TEMPERATURE SENSOR WITH USER INTERFACE TO ADJUST SETPOINT AND TENANT OVERRIDE FUNCTIONALITY.
  - MECH. CONTRACTOR SHALL COORDINATE WITH FIRE ALARM CONTRACTOR FOR CONNECTION OF INTEGRAL DUCT SMOKE DETECTOR.



**1 DX RTU GAS HEAT CONTROL SCHEMATIC - RTU-2**

- NO SCALE
- NOTES:
- RTU-2 SHALL COME WITH FACTORY MOUNTED CONTROLS.
  - RTU-2 SHALL BE PROVIDED WITH 7-DAY PROGRAMMABLE THERMOSTAT WITH TWO STAGE COOLING, TWO STAGE HEATING, AND HUMIDITY SEQUENCE TO OPERATE HOT GAS REHEAT COIL.
  - RTU-2 SHALL HAVE INTEGRAL ENTHALPY BASED ECONOMIZER CONTROL.
  - UNIT SHALL HAVE OPTIMUM START CONTROLS PER IECC 2015.
  - MECH. CONTRACTOR SHALL COORDINATE WITH FIRE ALARM CONTRACTOR FOR CONNECTION OF INTEGRAL DUCT SMOKE DETECTOR.

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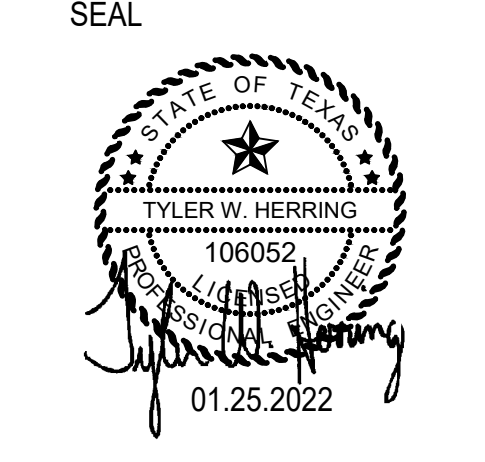
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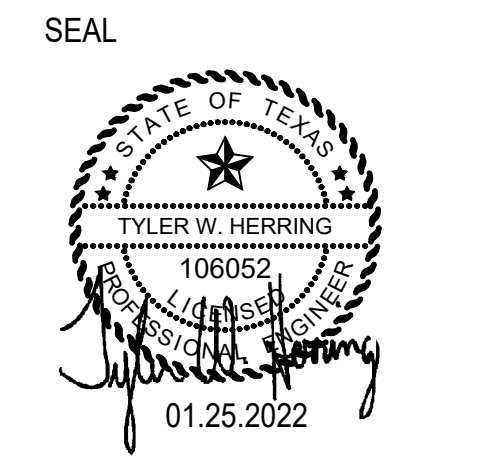
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MECHANICAL SCHEDULES & SCHEMATICS  
**M4.00**



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**MWA ARCHITECTS**  
 ARCHITECTS AND PLANNING CONSULTANTS  
 11767 KATY FREEWAY, SUITE 430  
 HOUSTON, TEXAS 77079

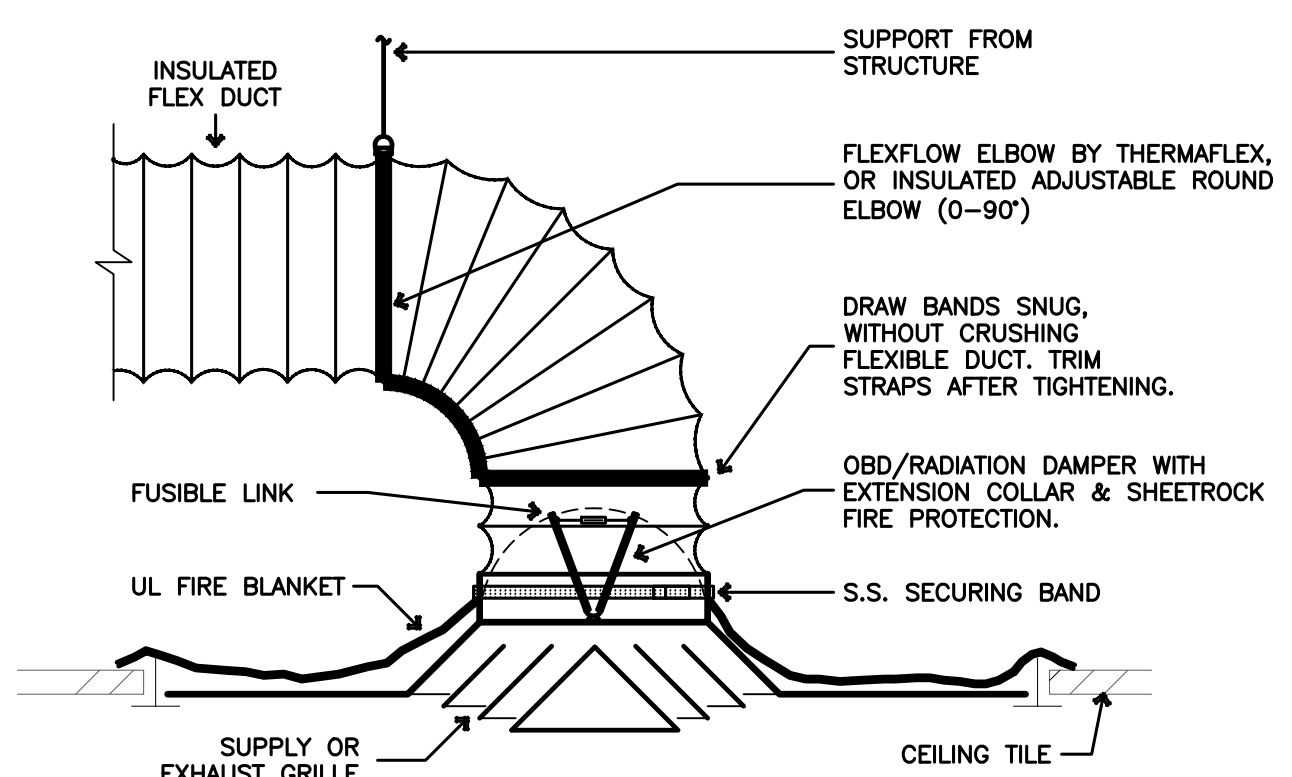
CIVIL ENGINEER  
 NNE, Inc.  
 25422 Alverstone Dr  
 Katy, TX 77494  
 MEPT ENGINEER  
 Stanton Engineering Group  
 1300 W. Sam Houston Pkwy South,  
 Suite 121  
 Houston, TX 77042  
 STRUCTURAL ENGINEER  
 Active Design Group  
 744 Broad Street, Suite 1905  
 Newark, NJ 07102

PROJ. 21-06  
 DATE: JANUARY 25, 2022

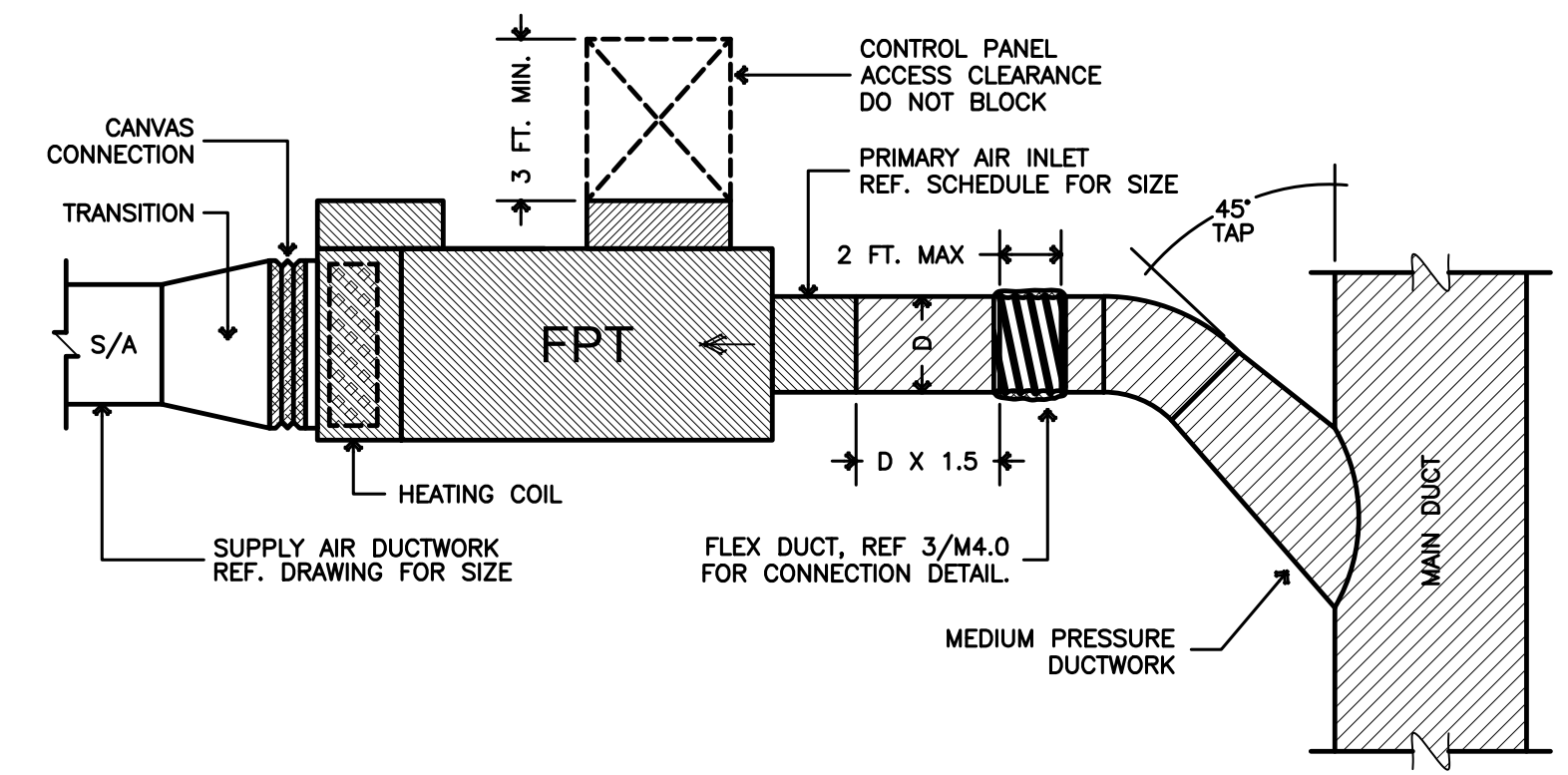
MECHANICAL  
 DETAILS  
**M4.01**



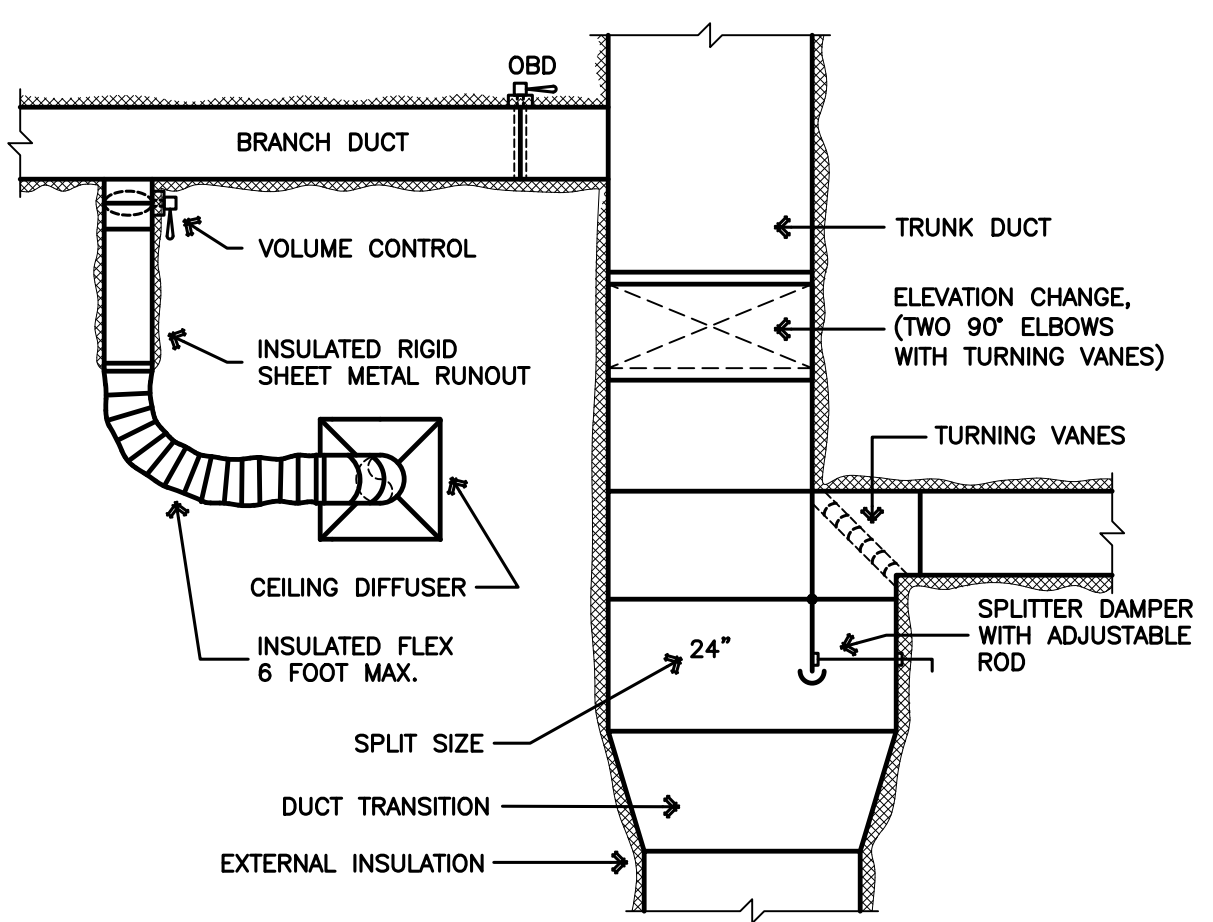
**1 AIR DEVICE DETAIL**  
 NO SCALE  
 NOTES:  
 1. RADIATION DAMPER SHALL ONLY BE PROVIDED IN CEILING DEVICES INSTALLED IN RATED CEILING ASSEMBLIES. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO DETERMINE WHICH, IF ANY, CEILINGS ARE RATED.  
 2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



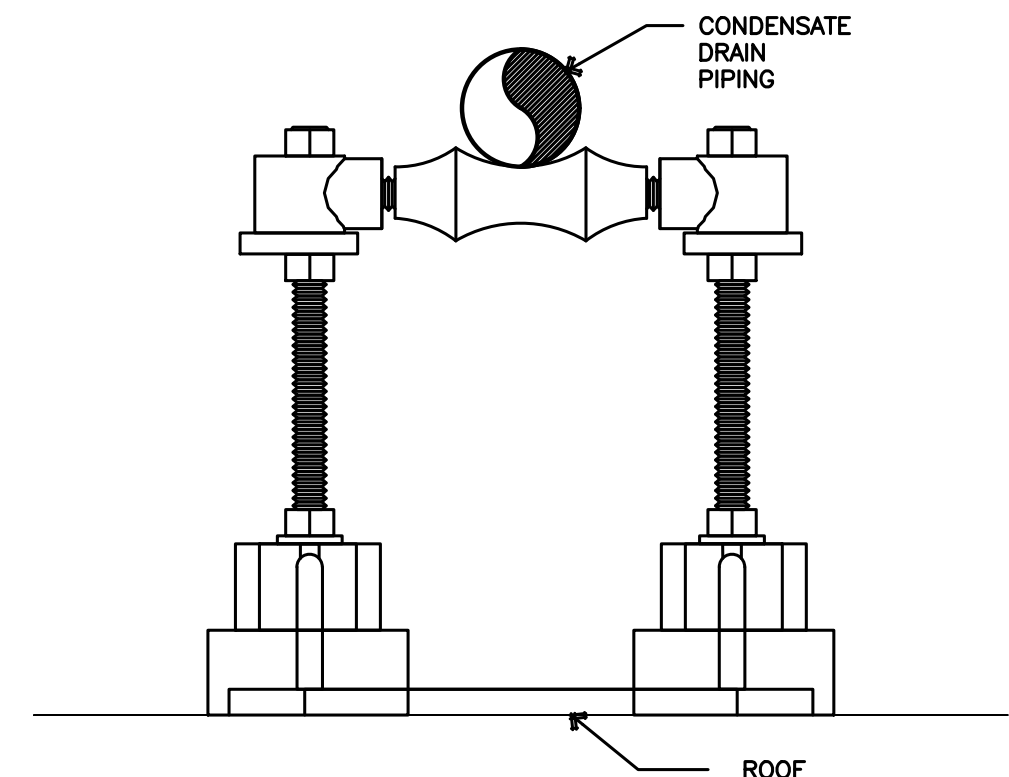
**5 AIR TERMINAL UNIT DETAIL-ELECTRIC REHEAT**  
 NO SCALE  
 NOTES:  
 1. BOTTOM OF VAV SHALL BE AT LEAST 12" ABOVE CEILING WHERE POSSIBLE.  
 2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



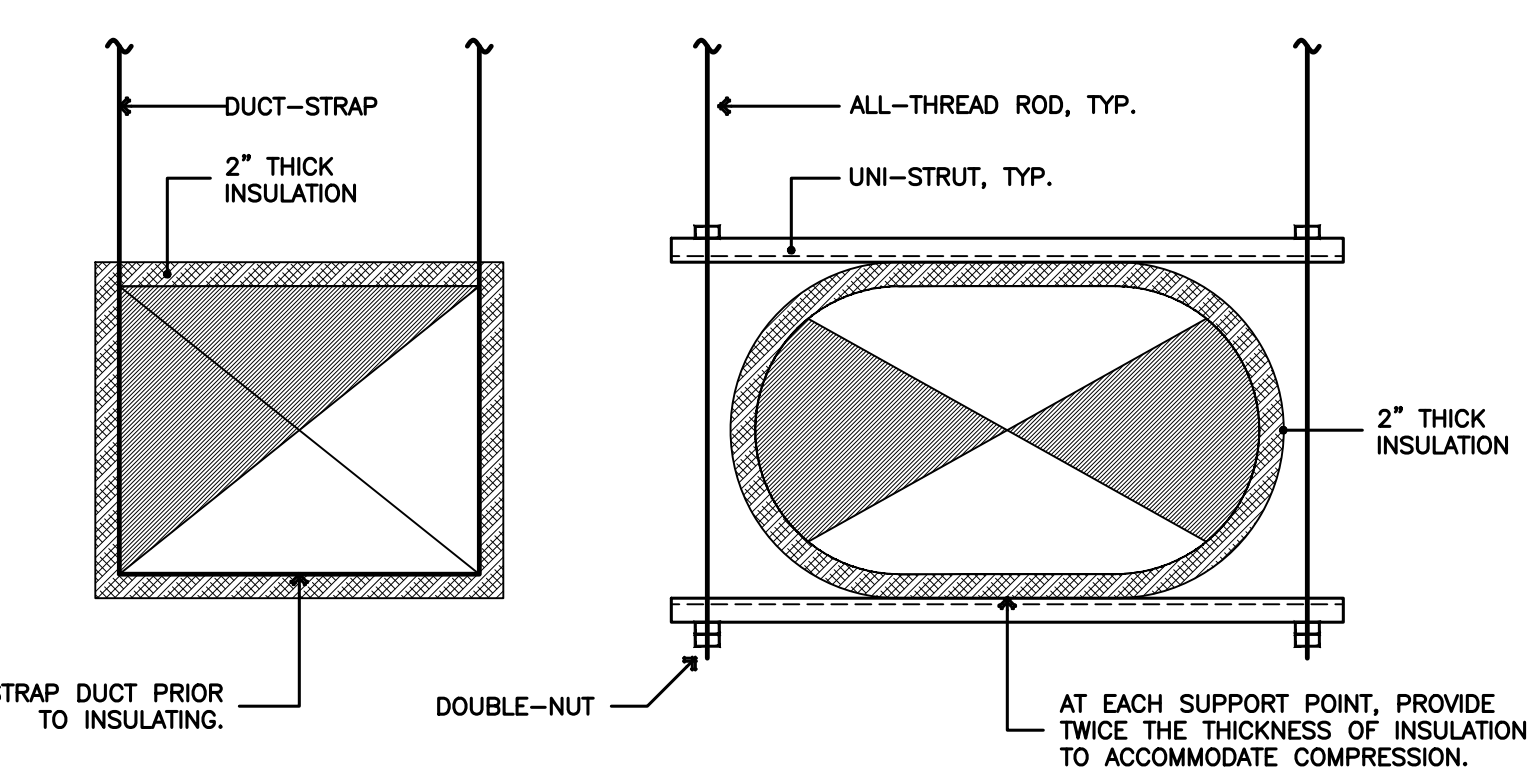
**2 DUCTWORK DETAILS**  
 NO SCALE  
 NOTES:  
 1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



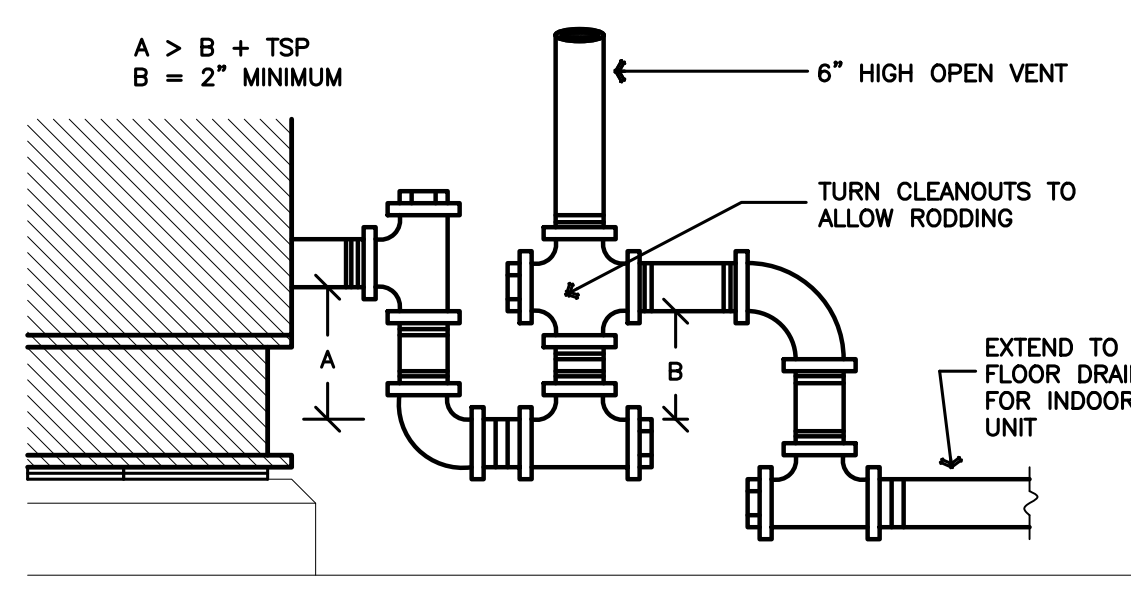
**6 DRAIN LINE SUPPORT ON ROOF**  
 NO SCALE  
 NOTES:  
 1. PROVIDE PORTABLE PIPE HANGER MODEL SSB-R OR APPROVED EQUAL.  
 2. SPACE PIPE SUPPORTS AT MAXIMUM INTERVALS OF 10'-0" ON CENTER.  
 3. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND INSTALLATION REQUIREMENTS.



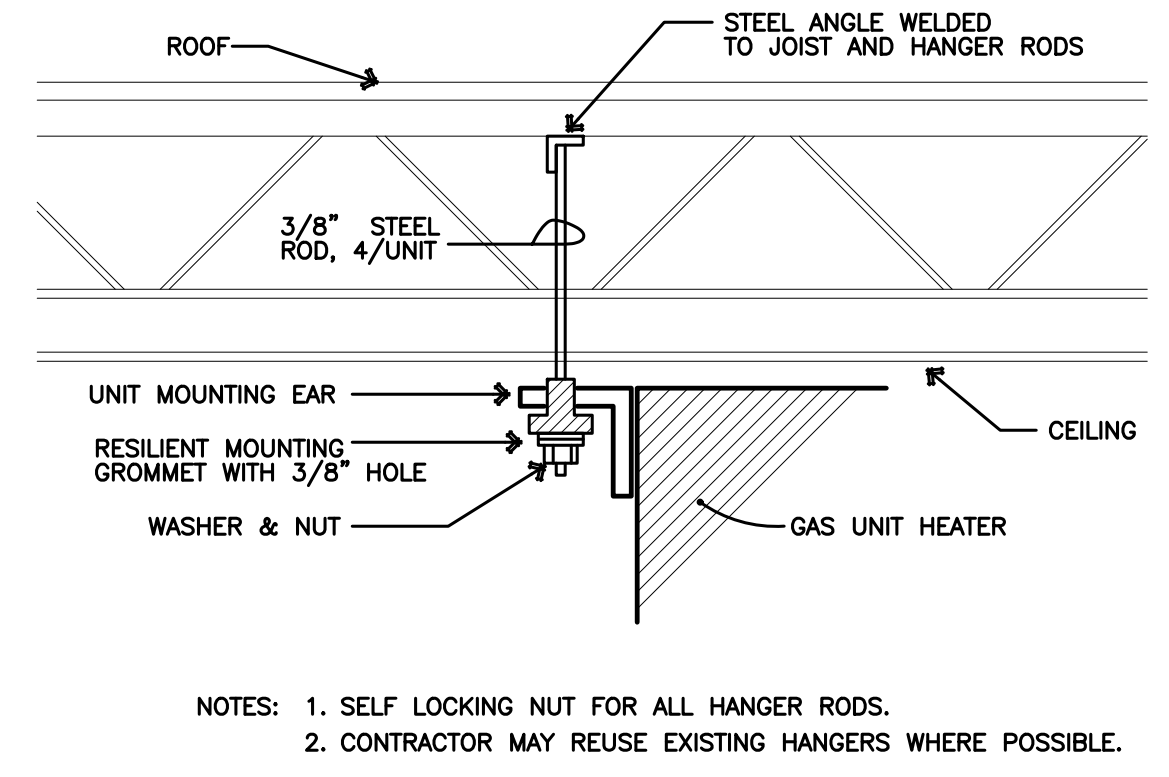
**3 EXTERNALLY INSULATED DUCT SUPPORT DETAIL**  
 NO SCALE  
 NOTES:  
 1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.  
 2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



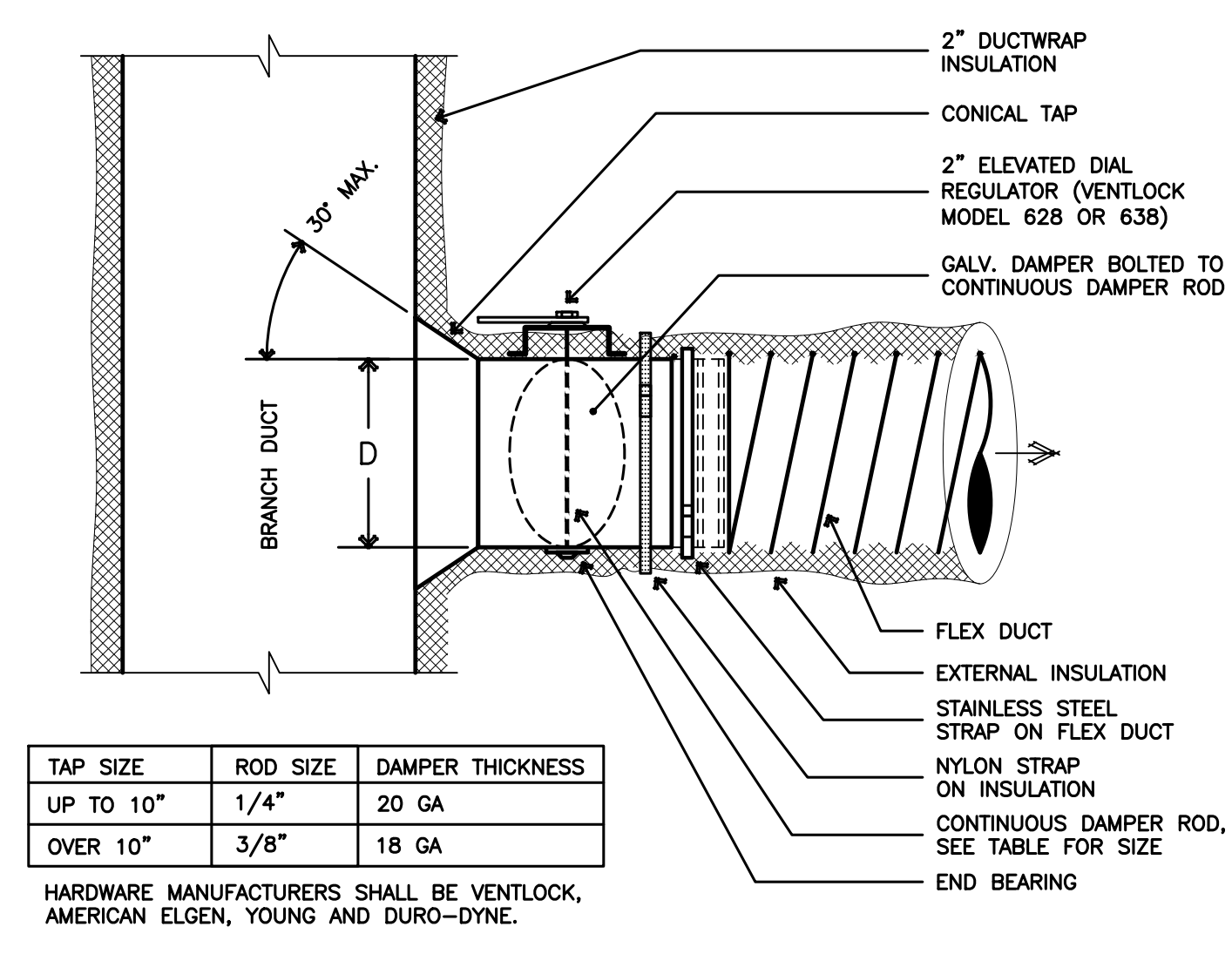
**7 CONDENSATE DRAIN DETAIL**  
 NO SCALE  
 NOTES:  
 1. REFER TO AHU SCHEDULE FOR CONDENSATE PIPE SIZES.  
 2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



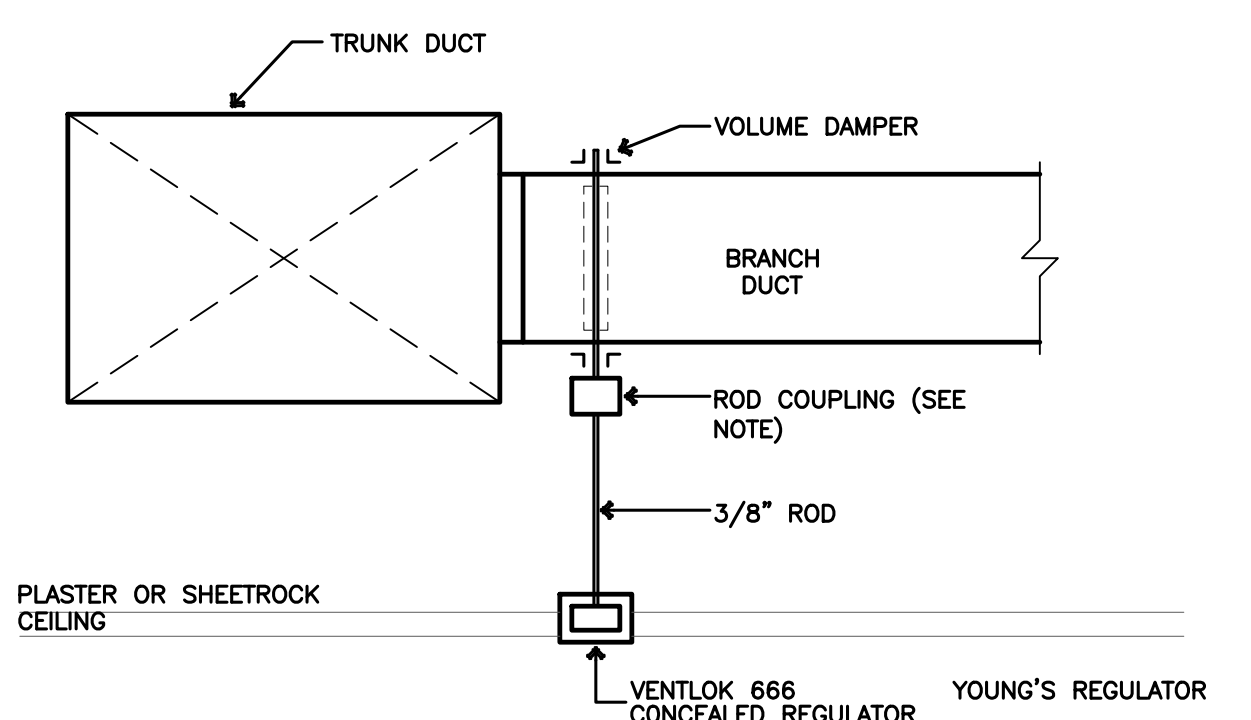
**9 DEHUMIDIFIER HANGER DETAIL**  
 NO SCALE  
 NOTES:  
 1. SELF LOCKING NUT FOR ALL HANGER RODS.  
 2. CONTRACTOR MAY REUSE EXISTING HANGERS WHERE POSSIBLE.



**4 DUCT TAP CONNECTION DETAIL**  
 NO SCALE  
 NOTES:  
 1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.  
 2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



**8 DUCT REGULATOR DETAIL**  
 NO SCALE  
 NOTE: PROVIDE VENTLOK 680, 2 PIECE GEAR DRIVE ELBOW WHEN DAMPER ROD IS MOUNTED HORIZONTAL.



**10 ROOF FAN AND VENT DETAIL**  
 NO SCALE  
 NOTES:  
 1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.  
 2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.  
 3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.  
 4. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

