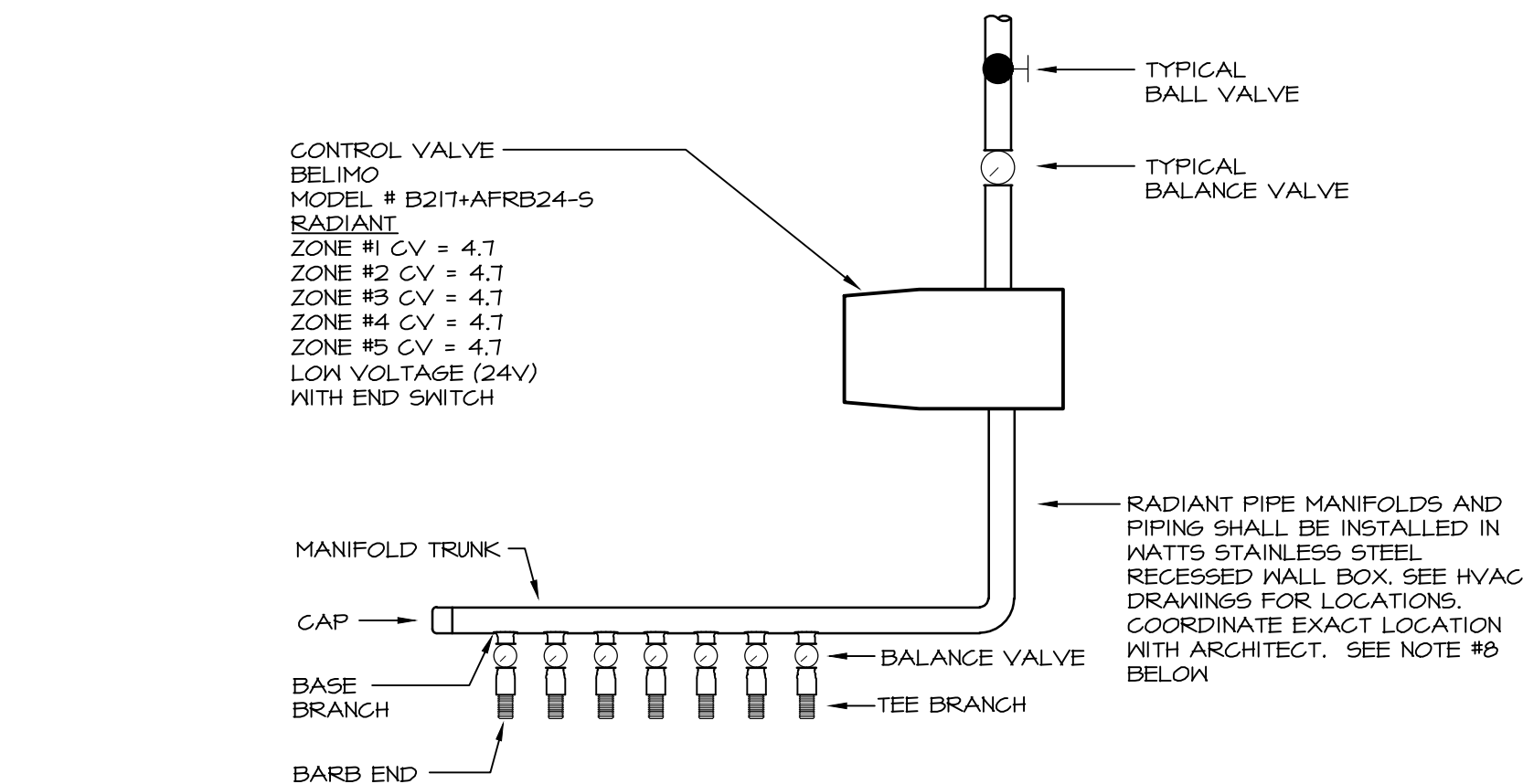


NOTE:
REFRIGERANT PIPING SHALL BE COPPER TUBING TYPE ACR HARD DRAWN. WROUGHT COPPER FITTINGS, SILVER BRAZE JOINTS. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS BASED ON ELEVATION AND LENGTH. INSULATE SUCTION LINE WITH 1 1/2\"/>

1 HEAT PUMP UNIT DETAIL

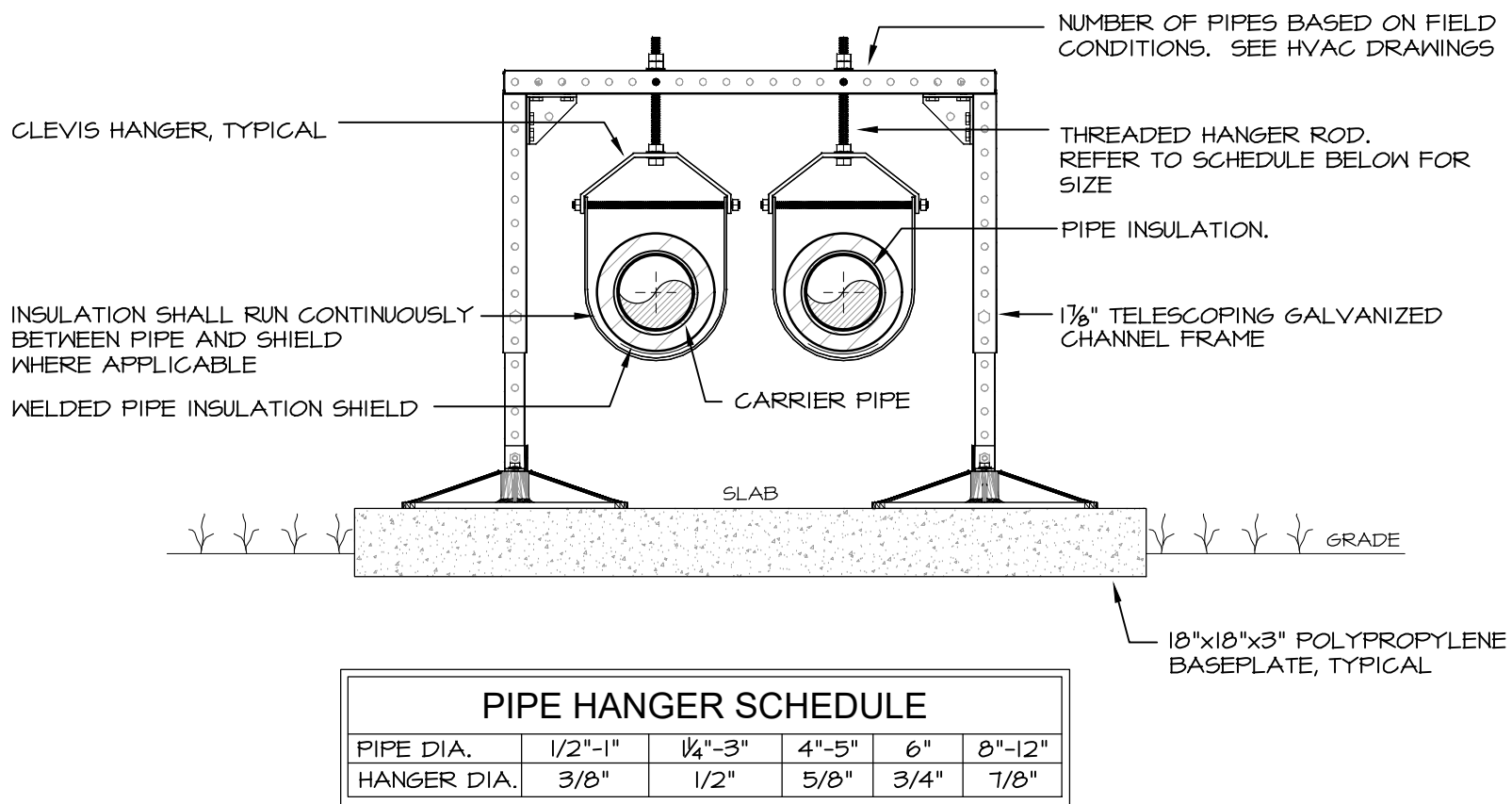
M205 NOT TO SCALE



- RADIANT HEAT NOTES**
1. HVAC CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON RADIANT PIPING LAYOUT AND EQUIPMENT FOR ENGINEER'S REVIEW.
 2. HVAC CONTRACTOR SHALL INSTALL ALL RADIANT HEAT PIPING AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 3. EXACT LOCATION OF RADIANT PIPE MANIFOLDS SHALL BE APPROVED BY ARCHITECT IN FIELD PRIOR TO INSTALLATION. PIPING COORDINATE INSTALLATION OF ALL RADIANT PIPING IN SLAB WITH GENERAL CONTRACTOR.
 4. CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS SHOWING EXACT LOCATIONS OF RADIANT PIPE AND MANIFOLDS.
 5. FURNISH & INSTALL ACCESS DOORS FOR MANIFOLD SERVICING. EXACT LOCATION OF ACCESS DOOR SHALL BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION. PAINT ACCESS DOORS (1) - COAT PRIMER, (2) - COATS PAINT. COLOR OF ACCESS DOORS AS DIRECTED BY ARCHITECT. MATCH ACCESS DOOR FIRE RATING TO WALL/CEILING. PROVIDE METAL BACK BOXES FOR RADIANT MANIFOLDS SHOWN SURFACE MOUNTED ON WALLS.
 6. INSLAB RADIANT TUBING SHALL BE 5/8\"/>
 7. HVAC CONTRACTOR SHALL SLEEVE RADIANT PIPING THAT PENETRATES OR COMES IN CONTACT WITH SHARP EDGES AND ABRASIVE SURFACES.
 8. CONTRACTOR SHALL LOCATE RADIANT MANIFOLDS AND ASSOCIATED RADIANT PIPING IN STAINLESS STEEL MANIFOLD BOX MANUFACTURED BY WATTS RADIANT. EXACT SIZE AND NUMBER OF BOXES SHALL BE BASED ON APPROVED SHOP DRAWINGS.
 9. SEE DETAIL #5 ON THIS DRAWING FOR RADIANT TUBING SLAB INSTALLATION.

2 IN FLOOR RADIANT HEAT MANIFOLD

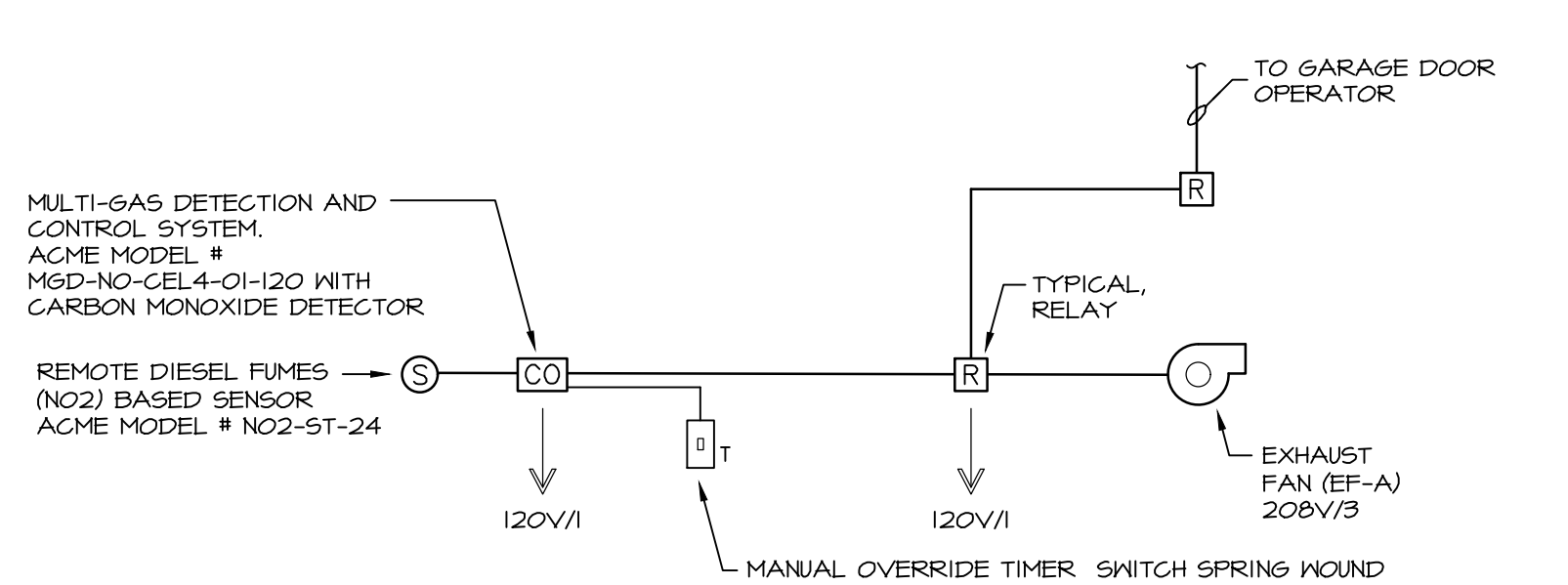
M205 NOT TO SCALE



- PIPE HANGER SCHEDULE**
- | PIPE DIA. | 1/2"-1" | 1 1/4"-3" | 4"-5" | 6" | 8"-12" |
|-------------|---------|-----------|-------|------|--------|
| HANGER DIA. | 3/8" | 1/2" | 5/8" | 3/4" | 7/8" |
- NOTES:
1. PIPE SUPPORT SYSTEM SHALL BE BASED ON PHP SYSTEMS/DESIGN MODEL NUMBER PSE-CUSTOM OR PSE-2-2 DEPENDING ON NUMBER OF PIPES SUPPORTED.
2. CLEVIS HANGERS WITH WELDED INSULATION SHIELDS SIMILAR TO RAUCH FIG. 100SH ON ALL PIPES R4 LARGER THAN 1".
3. BOTTOM OF PIPE ELEVATION SHALL BE MIN. OF 2'-0" ABOVE GRADE. PIPING SHALL BE INSTALLED AS TO ELIMINATE ANY UNNECESSARY OFFSETS UP OR DOWN.
4. FOR PIPES 1" OR SMALLER, A BAND HANGER WITH INSULATION SHIELD MAY BE USED SIMILAR TO RAUCH FIG. NO. 1ASH.
5. FOR NON-INSULATED PIPE, INSULATION SHIELDS MAY BE OMITTED. FOR NON FERROUS PIPING WITHOUT INSULATION, ALL HANGERS SHALL BE COPPER PLATED OR FURNISHED WITH A DI-ELECTRIC BETWEEN PIPE AND HANGERS.
6. ALL PIPE SUPPORT COMPONENTS SHALL BE GALVANIZED STEEL OR FACTORY PAINTED BLACK WITH ENAMEL.
7. THIS CONTRACTOR SHALL VERIFY SIZE AND NUMBER OF PIPES TO BE SUPPORTED BASED ON FINAL LAYOUT.

3 PIPE SUPPORT AT GRADE DETAIL

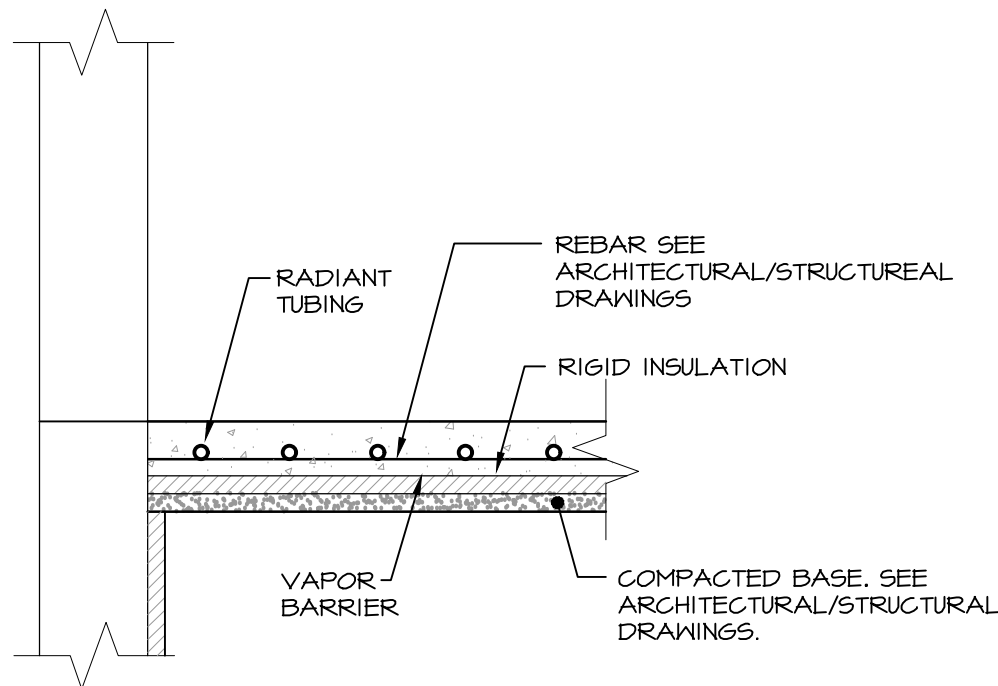
M205 NOT TO SCALE



- NOTES:**
1. CONTRACTOR SHALL FURNISH AND INSTALL A MULTI-GAS DETECTION CONTROL SYSTEM WITH BUILT-IN CARBON MONOXIDE FUME DETECTION SENSOR, REMOTE DIESEL FUME SENSOR AND MANUAL OVERRIDE TIMER SWITCH. INCLUDING ALL CONDUITS, CONDUCTORS, RELAYS, JUNCTION BOXES, SENSORS, APPURTENANCES AND ALL NECESSARY EQUIPMENT TO MAKE SYSTEMS COMPLETE AND OPERABLE.
 2. CONTRACTOR SHALL HIRE MANUFACTURER'S REPRESENTATIVE TO FURNISH COMPLETE EQUIPMENT, WIRING DIAGRAMS WITH SYSTEM OPERATING DESCRIPTION FOR ENGINEER'S APPROVAL. MANUFACTURER'S REPRESENTATIVE SHALL INSPECT SYSTEM INSTALLATION AND TEST ALL SENSORS AND OPERATION OF SYSTEM. SUBMIT REPORT ON FINDINGS TO ENGINEER FOR REVIEW.
 3. ELEVATION OF SENSORS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND GENERALLY ACCEPTED INDUSTRY STANDARDS.
 4. INSTALL WIRE CAGE PROTECTOR OVER SENSORS AND PANEL.

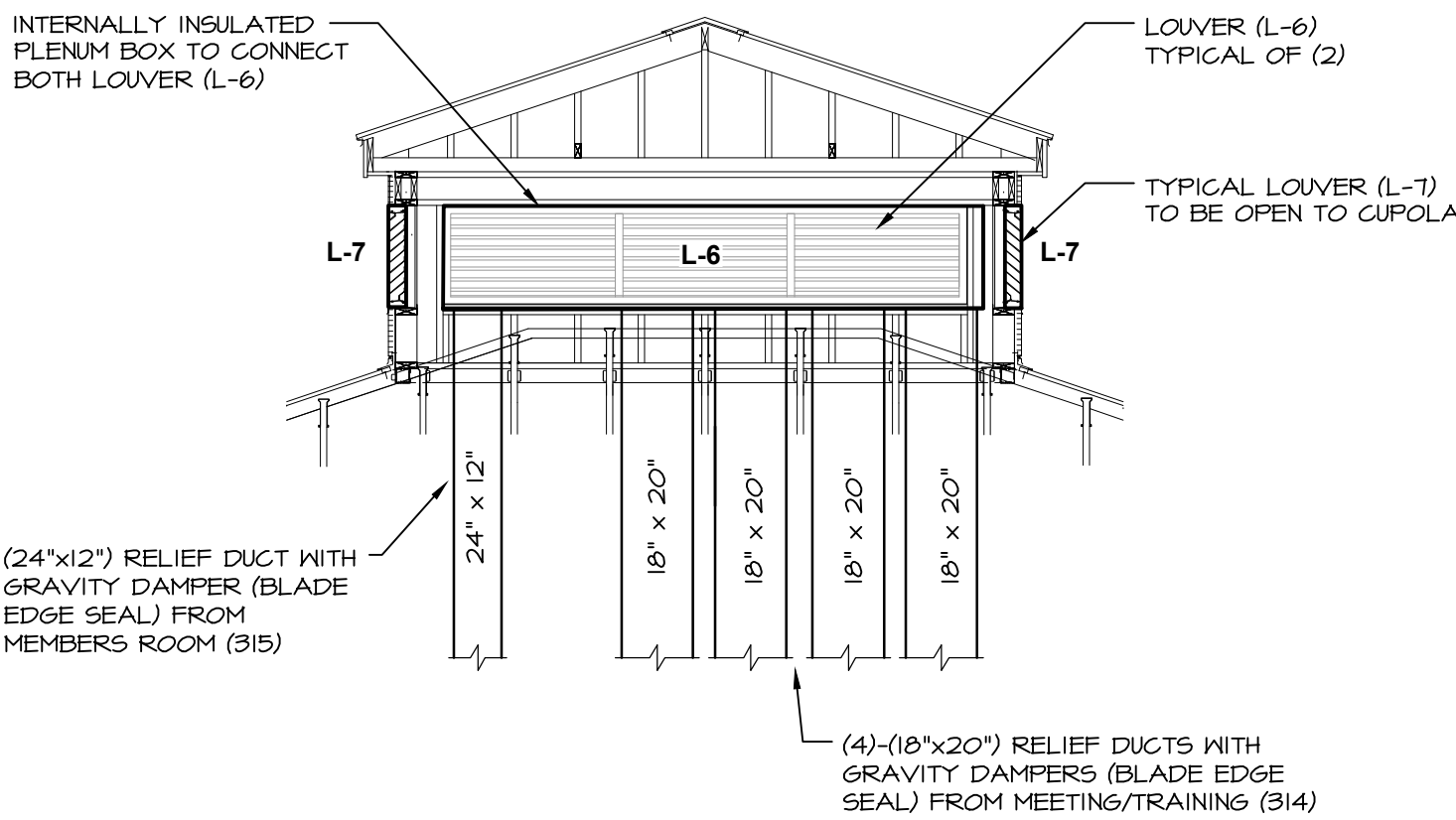
4 CARBON MONOXIDE/DIESEL FUEL DETECTION SYSTEM

M205 NOT TO SCALE



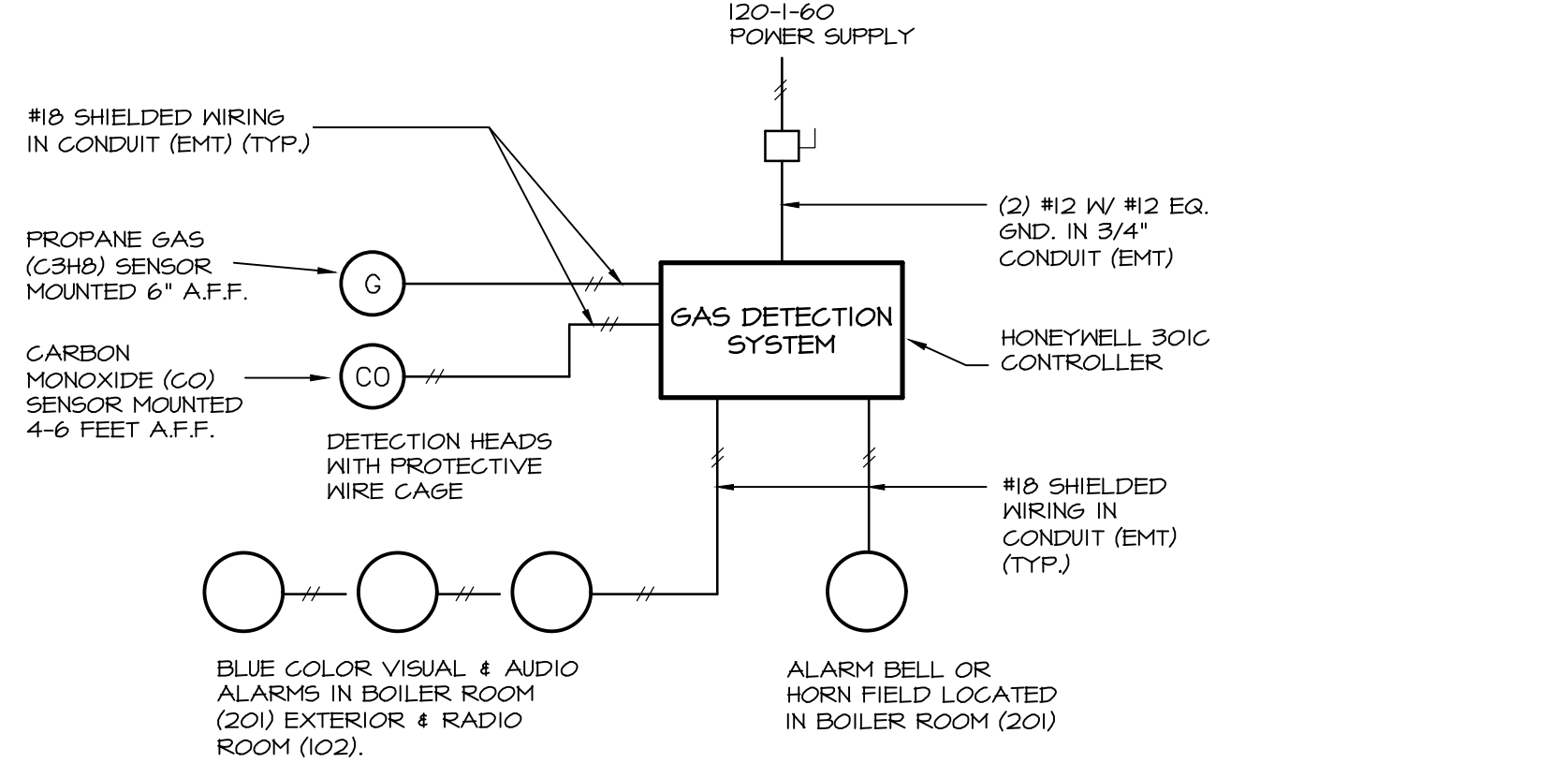
5 RADIANT PIPE SLAB DETAIL

M205 NOT TO SCALE



6 CUPOLA DUCT CONNECTION DETAIL

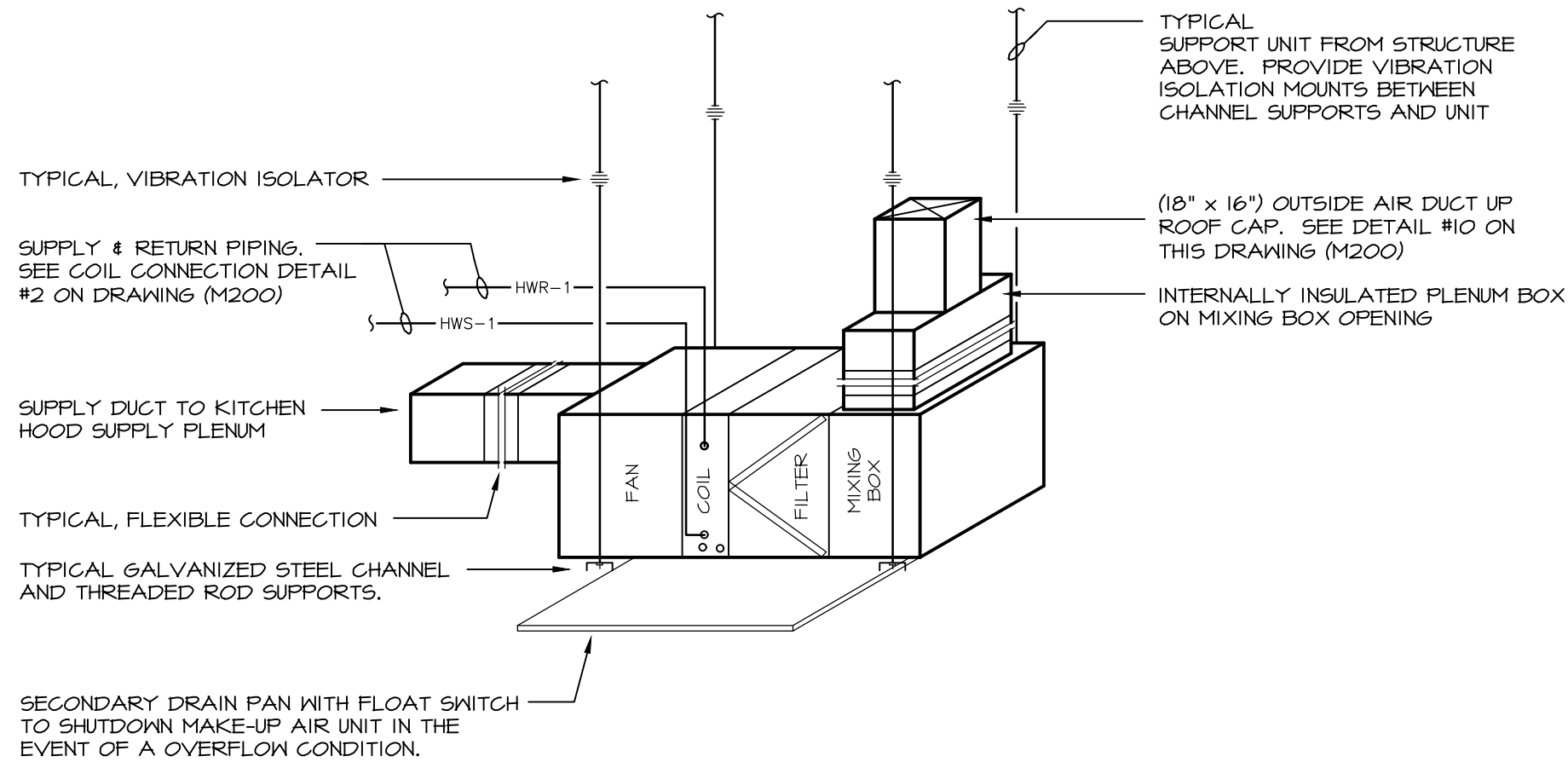
M205 NOT TO SCALE



- NOTE:**
1. SEE HVAC SPECIFICATION SECTION (230493-2.23) GAS DETECTION SYSTEM
 2. GAS SENSORS FIELD LOCATED IN MECH. ROOM (201).
 3. GAS DETECTION PANEL FIELD LOCATED IN MECH. ROOM (201).

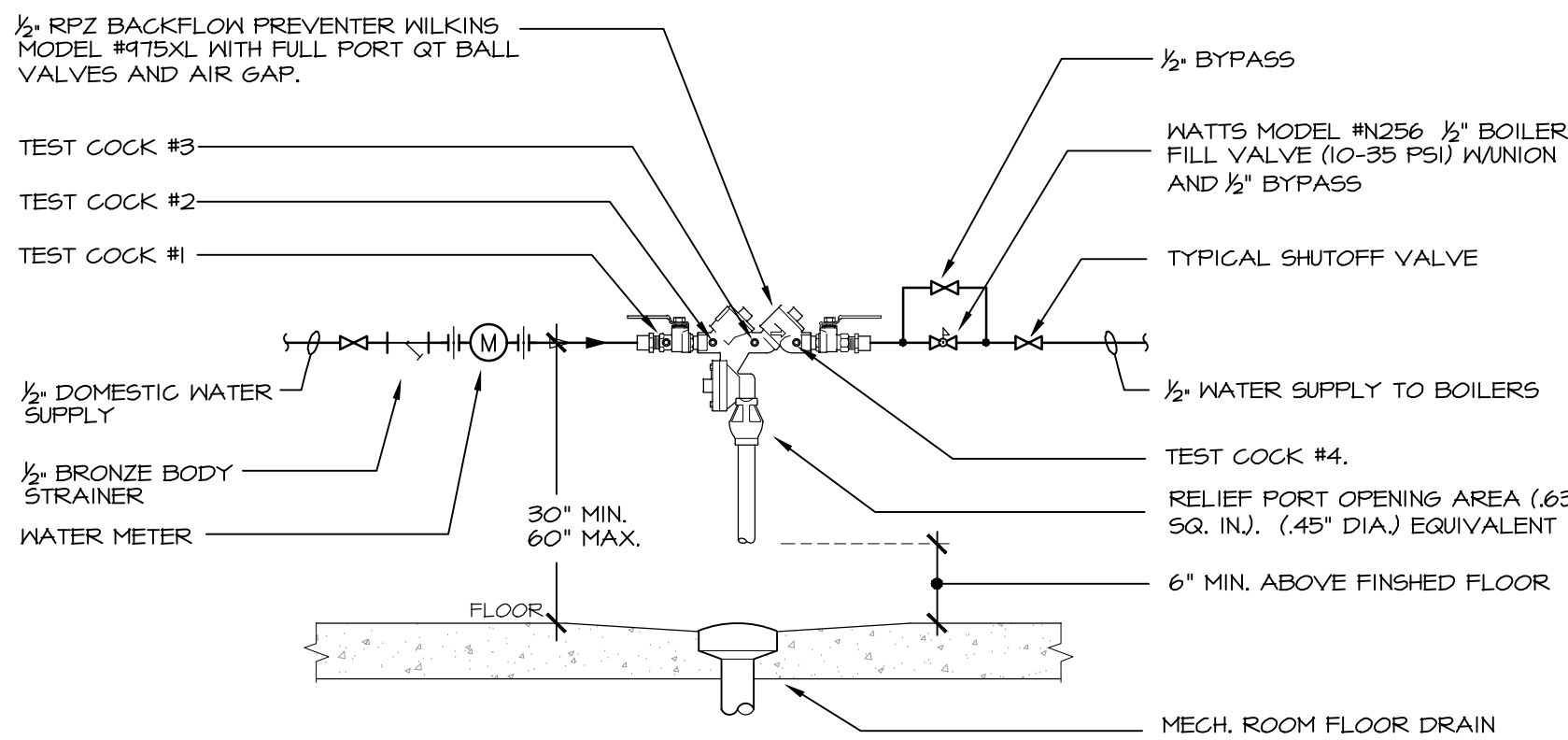
8 GAS DETECTION SYSTEM

M205 NOT TO SCALE



9 MAKE-UP AIR UNIT (MAU-1) DETAIL

M205 NOT TO SCALE



- REQUIRED CLEARANCES (RPZ)**
1. FRONT OF RPZ (2'-6") MINIMUM
 2. BEHIND RPZ (8") MINIMUM
 3. DISCHARGE PORT (1'-6") MINIMUM ABOVE FINISHED FLOOR
 4. BACKFLOW PREVENTER MINIMUM (2'-6") ABOVE FINISHED FLOOR
 5. BACKFLOW PREVENTER MAXIMUM (5'-0") ABOVE FINISHED FLOOR
 6. CLEAR SPACE ABOVE BACKFLOW PREVENTER MINIMUM (2'-0")

7 BOILER WATER FEEDER DETAIL

M205 NOT TO SCALE

MA

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NEW STATION FOR PUTNAM VALLEY FIRE STATION #1

OSCAWANA LAKE ROAD
PUTNAM VALLEY, NEW YORK

REVISION HISTORY		
DATE	DESCRIPTION	

MECHANICAL: DETAILS

SCALE: AS NOTED
DWG. BY: KC
DWG. DATE: 8/14/2020
STATUS: BID DRAWINGS

M205