

LEGEND

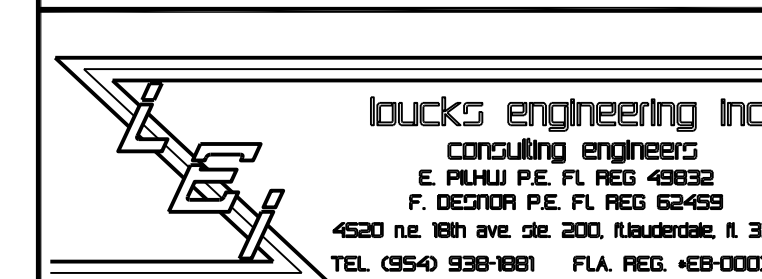
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YOSHINO TRIESCHMANN DESIGN GROUP, 2010
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GENERAL MECHANICAL NOTES

- ALL WORK EXECUTED UNDER THIS OFFICIAL DOCUMENTS SHOULD BE PERFORMED BY A LICENSED AND INSURED MECHANICAL CONTRACTOR AND BE IN COMPLIANCE WITH THE LATEST FLORIDA BUILDING CODE (FBC), SHEET METAL & AIR CONDITIONING CONTRACTOR'S ASSOCIATION (SMACNA) STANDARDS, AND ALL OTHER APPLICABLE STATE AND LOCAL CODE.
- ALL WORK SHALL BE PERFORMED IN A FIRST CLASS WORKMANSHIP MANNER TO PRODUCE A COMPLETE SYSTEM THAT IS FULLY BALANCED, AND ADHERED TO ALL APPLICABLE CODE AND REGULATIONS.
- MECHANICAL CONTRACTOR SHALL PROVIDE A WRITTEN GUARANTEE THAT THE COMPLETE SYSTEM INSTALLED IS FREE OF DEFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF A YEAR AFTER THE WORK IS COMPLETE AND TURNED TO THE OWNER.
- THE MECHANICAL CONTRACTOR IS RESPONSIBLE TO OBTAIN HIS OWN PERMIT AND PAY ALL PERMIT AND INSPECTION FEES.
- AT THE COMPLETION OF THE PROJECT THE CONTRACTOR IS RESPONSIBLE TO PROVIDE A SET OF PRINTS CLEARLY MARKED AND DEPICTED ALL AS-BUILT CONDITIONS TO THE ENGINEER FOR RECORD.
- CONTRACTOR SHALL PAY SPECIAL ATTENTION TO OWNER EQUIPMENT, FURNITURE, AND CARPETING TO PREVENT CONTAMINATION BY COVERING AND WRAPPING FURNITURE AND EQUIPMENT. ALL WASTE AND DEBRIS SHALL BE REMOVE AT THE END OF EACH DAY TO MAINTAIN ACCEPTABLE INDOOR AIR QUALITY LEVEL DURING THE CONSTRUCTION.
- ANY PORTION OF EXISTING BUILDING (FLOOR, WALL, CEILING, OR ROOF) THAT IS AFFECTED BY EITHER REMOVAL, RELOCATION OR INSTALLATION OF A NEW EQUIPMENT SHALL BE REPAIRED AND MATCHED FINISHED EXISTING CONDITIONS ACCORDING TO ARCHITECTURAL DRAWINGS OR SPECIFICATIONS.
- WHEREVER DUCT RUNS THROUGH STRUCTURAL ELEMENT SUCH AS BEAM PRECAUTION SHALL BE TAKEN TO COORDINATE WITH OTHER TRADES TO RELOCATE OR TO PROVIDE NECESSARY SLEEVE BEFORE CONCRETE IS BEING POURED.
- SUPPLY 6 COPIES OF SHOP DRAWNGS FOR REVIEW TO ARCHITECT. NO EQUIPMENT IS TO BE ORDERED PRIOR TO THEIR APPROVAL.
- MECHANICAL CONTRACTOR TO PROVIDE TWO (2) COMFORT BALANCE VISITS TO SUIT THE NEEDS OF THE CLIENTS.
- OPENING AND DUCT TRAVELING THROUGH FIRE RATED WALL, TENANT DEMISING WALL, MECHANICAL AND ELECTRICAL ROOM, WALL AND FLOOR PARTITION, FLOOR AND ROOF SLAB SHALL BE INSTALLED WITH "B"-FIRE DAMPER.
- DIFFUSERS, SUPPLY AND RETURN GRILLES, CEILING EXHAUST FAN, INSTALLED IN FIRE RATED CEILING SHALL BE PROVIDED WITH RADIATION DAMPER. SUPPLY AND RETURN DIFFUSER SHALL BE METAL*AIRE BZZU FIRE RATED.
- H.V.A.C. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A FULLY OPERATIONAL AND BALANCED SYSTEM THAT ADHERES TO ALL APPLICABLE CODES AND REGULATIONS.
- CONTRACTOR TO PROVIDE TEST AND BALANCE OF ALL SYTEMS, INCLUDING BUT LIMITED TO HOODS SUPPLIES AND EXHAUST.

SITE VISIT

- MECHANICAL CONTRACTOR IS DULY REQUIRED TO VISIT PROJECT SITE AND VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. HE OR SHE SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY AT ONCE. FAILURE TO DO SO, THE MECHANICAL CONTRACTOR IS PROCEEDING AT HIS OWN RISK.
- DESIGN THAT IS CALLED FOR NEW DUCT OR PIPING TO BE CONNECTED TO EXISTING SYSTEM REQUIRES THE CONTRACTOR TO VERIFY EXISTING DUCT & PIPING SIZE BEFORE FABRICATION AND INSTALLATION.
- WHENEVER INTERFERENCE OR CONFLICT OCCURS WITH THE PROPOSED DESIGN, BEFORE PROCEEDING TO ANY CHANGE OR DEVIATION FROM THE EXISTING BID, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR THE CHANGE INCLUDED A DETAILED DRAWING FOR APPROVAL FROM ARCHITECT/ ENGINEER.
- CONTRACTOR SHALL CONSULT WITH STRUCTURAL ENGINEER WHEN CUTTING OR MAKING OPENING IN ANY BUILDING COMPONENT. CONTRACTOR SHALL VERIFY THAT STRUCTURAL INTEGRITY OF THE BUILDING IS NOT BEING COMPROMISED.
- POST TENSION STRUCTURAL SLAB:
 NO CUTTING OR DRILLING SHALL BE TAKEN PLACE WITHOUT THE X-RAY OF THE SLAB OR THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF THE BUILDING.

EXISTING HVAC SYSTEM

- MECHANICAL CONTRACTOR MUST CHANGE THE AIR FILTER IN ALL WORKING AIR CONDITIONING UNIT DURING CONSTRUCTION EVERY 21 DAYS OR LESS DEPENDING ON THE AMBIENT ENVIRONMENT TO PREVENT AIR CONTAMINATION, EQUIPMENT FAILURE SUCH AS BEARING FAILURE, DAMPER MALFUNCTION, ETC...
- AFTER CONSTRUCTION MECHANICAL CONTRACTOR IS TO VACUUM THOROUGHLY THE MECHANICAL ROOM TO REMOVE ALL DUSTY PARTICLES, INSPECT AND REPLACE AIR FILTERS, BEARINGS OR BELTS FOR OPTIMAL UNIT OPERATION.
- WHEN REUSE EXISTING AIR CONDITIONING THE CONTRACTOR MUST CLEAN THE COOLING AND THE CONDENSER COILS, CHECK AND ADJUST REFRIGERANT CHARGE TO ENSURE PROPER UNIT FUNCTION, VERIFY THE EXISTING CONDENSATE PIPING IS IN GOOD WORKING CONDITION, AND MAKE NECESSARY REPAIR. CONTRACTOR SHALL CHECK ALL ELECTRICAL COMPONENTS, TIGHTEN ALL ELECTRICAL CONNECTIONS FOR PROPER OPERATION. DETERIORATED DUCTWORK AND CEILING INSULATION SHALL BE REPLACED.
- ALL EXISTING DUCTWORK SHALL BE THOROUGHLY INSPECTED AND REPAIRED REMOVED EQUIPMENT THAT IS NOT BEING USED SHALL BE RETURNED TO THE OWNER.
- TO ENSURE AIRTIGHT SYSTEM AND COMPLIANCE WITH SMACNA. DECAYED AND
- ANY EQUIPMENT THAT WAS TEMPORARY DISCONNECTED WITH RESPECT TO A REMOVAL OF ANY OTHER DEVICE SHALL BE RECONNECTED TO THE EXISTING SYSTEM AND VERIFIED THAT IT IS FULLY OPERATED.
- CONTRACTOR SHALL VERIFY EXISTING AIR CONDITIONING AND HEATING SYSTEM ITS PERFORMANCE RANGE WITH RESPECT TO ITS VOLUME CAPACITY.
- EQUIPMENT THAT IS LOCATED EXTERIOR OF THE BUILDING SHALL BE PROPERLY TIED DOWN AND BE ABLE TO WITHSTAND A 140 MILES FORCE WIND.

H.V.A.C. NOTES

A/C EQUIPMENT: SEE SCHEDULE

DUCTWORK: RIGID FOILFACED 1.5" R=6.0 SUPPORT 48" O.C. ALL TURNS AND TRANSITIONS PRESSURE TAPE AND MASTIC SEAL ALL SEAMS AND JOINTS.

FLEX UL CLASS ONE AIR DUCT, R=6 SUPPORT 48" O.C. SPIN IN COLLARS WITH M.V.D. TIE WRAP INNER LINER AND PRESSURE TAPE AND MASTIC SEAL OUTER LINER WITHOUT COMPRESSING INSULATION

EXHAUST: GALVANIZED SNAP LOCK SUPPORT 48" O.C. AND AT ALL TURNS, NO SUPPORT OR WEIGHT TO LAY ON EXHAUST FAN HOUSING INSULATION R=6

SMOKE EVAC : SMACNA STANDARD GALVANIZED ROUND

DIFFUSERS: NEW USE BLDG STANDARDS, SURFACE MOUNTED DIFFUSERS TO HAVE OBD

RETURNS: NEW USE BLDG STANDARDS

EXHAUST EF1: PENN MODEL Z85 247CFM @0.125CP 120V 77 WATTS, 1050 RPM

THERMOSTAT: NEW

SMOKE DETECTORS: IONIZATION TYPE CARRIER, BRK. WIRE UNIT FOR SHUTDOWN UPON ACTIVATION. PROVIDE TEST SWITCH, VISUAL AND AUDIBLE ALARM.

FRESH AIR REQUIREMENTS

ZONE 1/2 RELOCATED 5 TON HP-11
 OFFICE AREA
 10PEOPLE/1000SF X 11CFM/PERSON X 822SF = 90 CFM
 FRESH AIR REQUIRED 90 CFM
 FRESH AIR PROVIDED 93 CFM

ZONE 3
 OFFICE AREA
 10PEOPLE/1000SF X 11CFM/PERSON X 467SF = 51 CFM
 FRESH AIR REQUIRED 51 CFM
 FRESH AIR PROVIDED 68 CFM

ZONE 4
 OFFICE AREA
 10PEOPLE/1000SF X 11CFM/PERSON X 731SF = 80 CFM
 FRESH AIR REQUIRED 80 CFM
 FRESH AIR PROVIDED 81 CFM

ZONE 5
 RECEPTION
 30PEOPLE/1000SF X 7CFM/PERSON X 352SF = 73 CFM
 OFFICE AREA
 10PEOPLE/1000SF X 11CFM/PERSON X 571SF = 63 CFM
 FRESH AIR REQUIRED 136 CFM
 FRESH AIR PROVIDED 176 CFM

HEAT PUMP SCHEDULE

ZONE - 2 + 3

HP-11 (EXISTING-5 TONS RELOCATED)
 EM060 TC 60.0, SC 46.6, @ 2000 CFM
 @ EWT 85°F, 1" FPT, EER 13.0
 HEATING CAPACITY: 68.8, @ EWT 60°F, COP: 4.2, 14.6 GPM.

ELECTRICAL SPECIFICATION:
 460-3-60, COMPRESSOR: RLA: 9.7, LRA: 70
 BLOWER: NPA: 2.5, HP: 0.75, MCA: 14.7, MOCP: 20

HP-3 & NEW 2 TON
 EM024 TC 25.5, SC 19.6 @ 850 CFM
 @ EWT 85°F, 3/4" FPT, EER 13.8
 HEATING CAPACITY: 25.1, @ EWT 50°F, COP: 4.0, 6.0 GPM

ELECTRICAL SPECIFICATION:
 460-3-60, COMPRESSOR: RLA: 3.6, LRA: 30
 BLOWER: FLA: 0.9, HP: 0.25, MCA: 5.4, MOCP: 15

HP-4 NEW 3.5 TON
 EM042 TC 42.8, SC 32.9 @ 1500 CFM
 @ EWT 85°F, 3/4" FPT, EER 13.0
 HEATING CAPACITY: 44.9, @ EWT 50°F, COP: 4.0, 10.0 GPM

ELECTRICAL SPECIFICATION:
 460-3-60, COMPRESSOR: RLA: 5.8, LRA: 40
 BLOWER: FLA: 2.0, HP: 0.5, MCA: 9.3, MOCP: 15

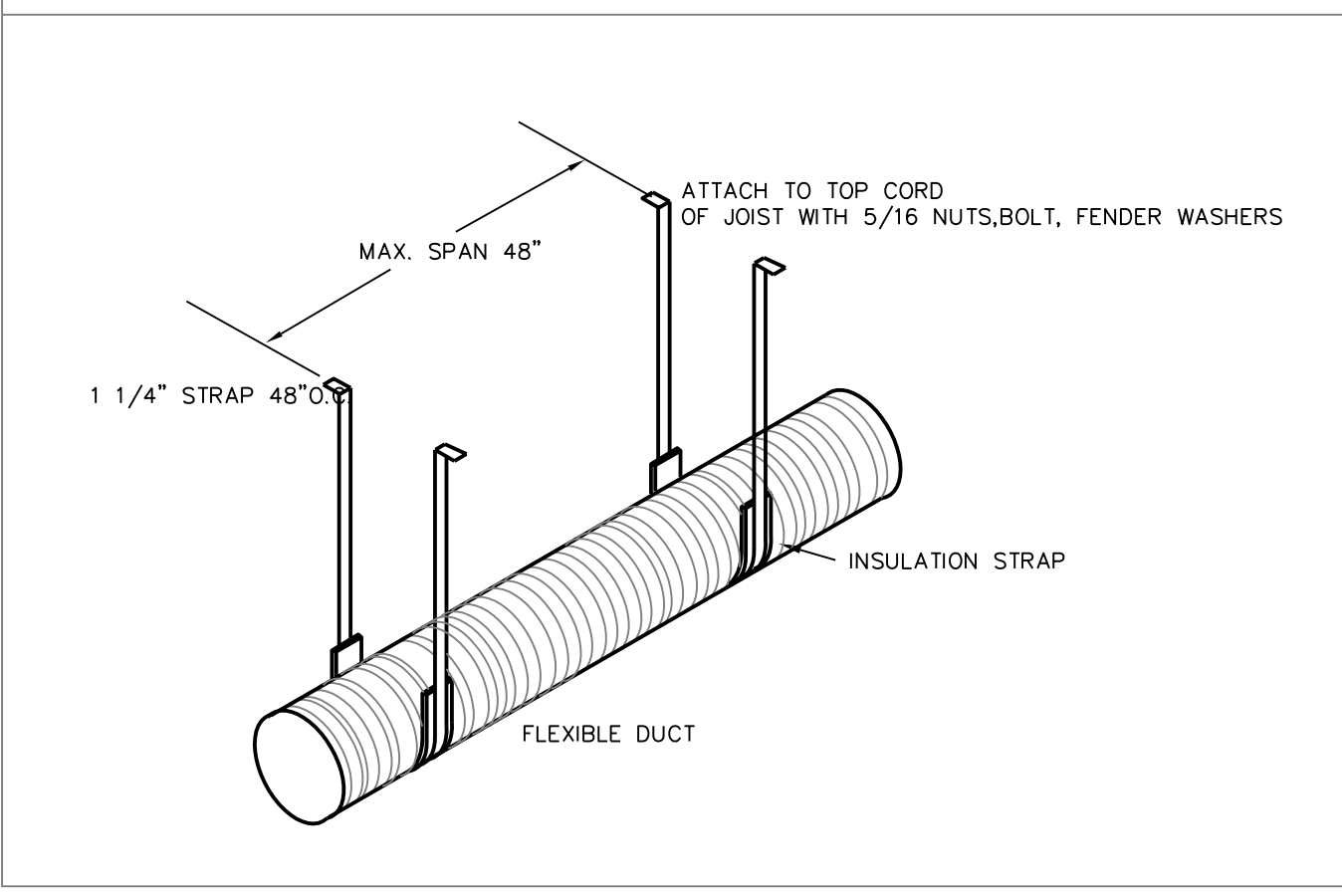
HP-5 NEW 3.0 TON
 EM036 TC 36.1, SC 27.6 @ 1200 CFM
 @ EWT 85°F, 3/4" FPT, EER 12.8
 HEATING CAPACITY: 39.1, @ EWT 50°F, COP: 4.0, 9.0 GPM

ELECTRICAL SPECIFICATION:
 460-3-60, COMPRESSOR: RLA: 5.4, LRA: 40
 BLOWER: FLA: 2.0, HP: 0.5, MCA: 8.5, MOCP: 15

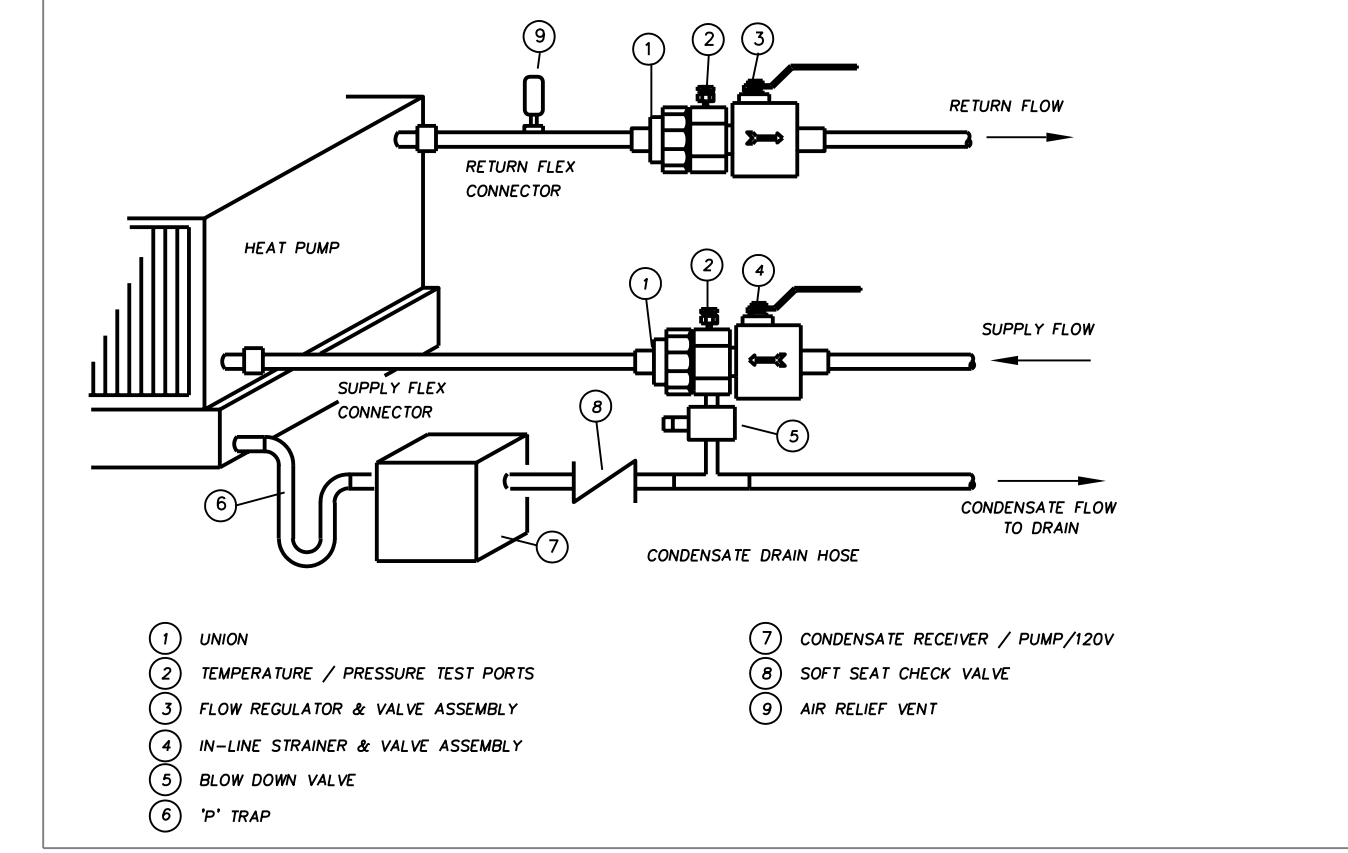
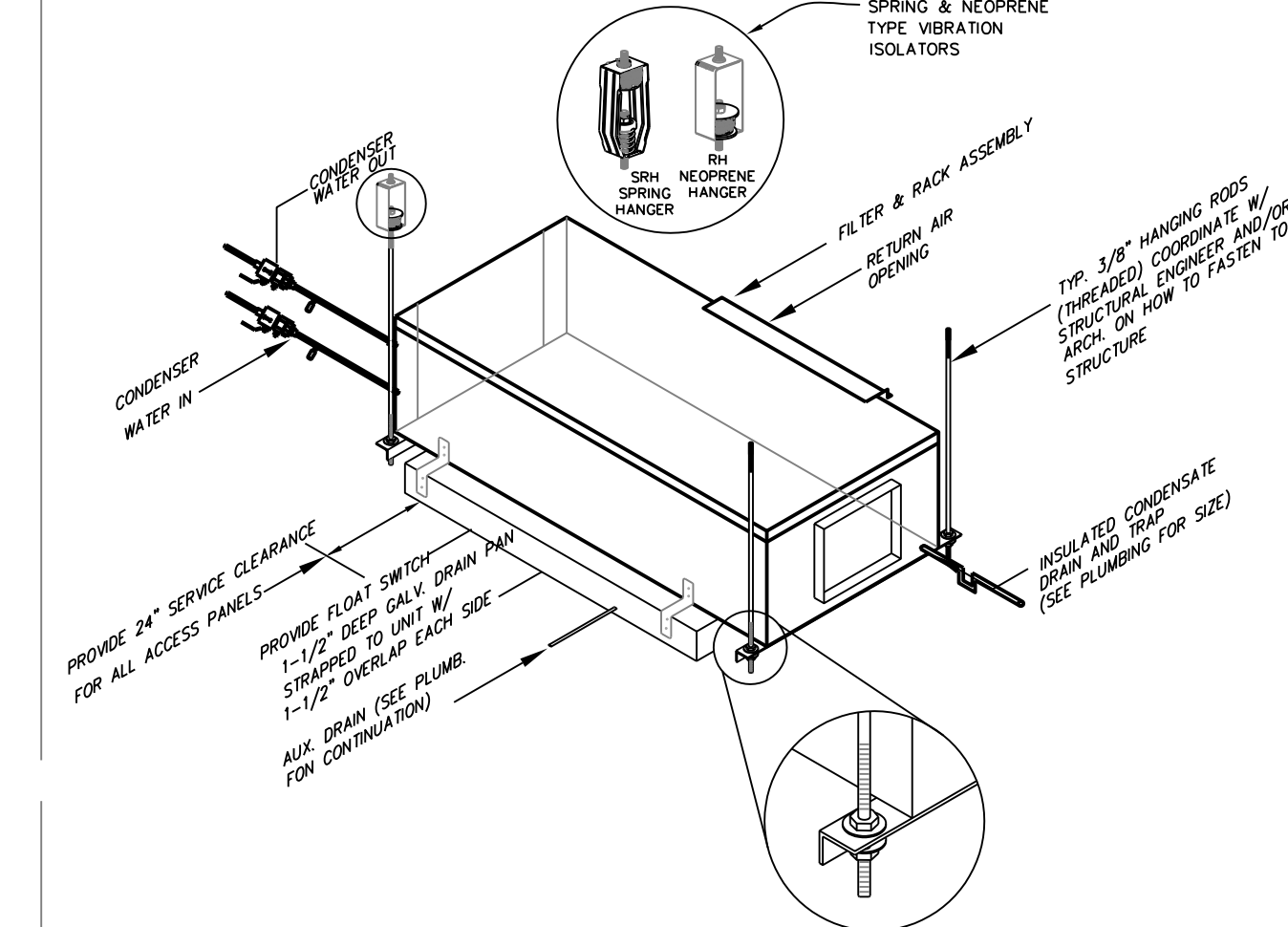
HP-6 & NEW 2 TON (DEDICATED SERVER UNIT)
 EM024 TC 25.5, SC 19.6 @ 850 CFM
 @ EWT 85°F, 3/4" FPT, EER 13.8
 HEATING CAPACITY: 25.1, @ EWT 50°F, COP: 4.0, 6.0 GPM

ELECTRICAL SPECIFICATION:
 460-3-60, COMPRESSOR: RLA: 3.6, LRA: 30
 BLOWER: FLA: 0.9, HP: 0.25, MCA: 5.4, MOCP: 15

ROUND FLEX DUCT HANGING DETAIL



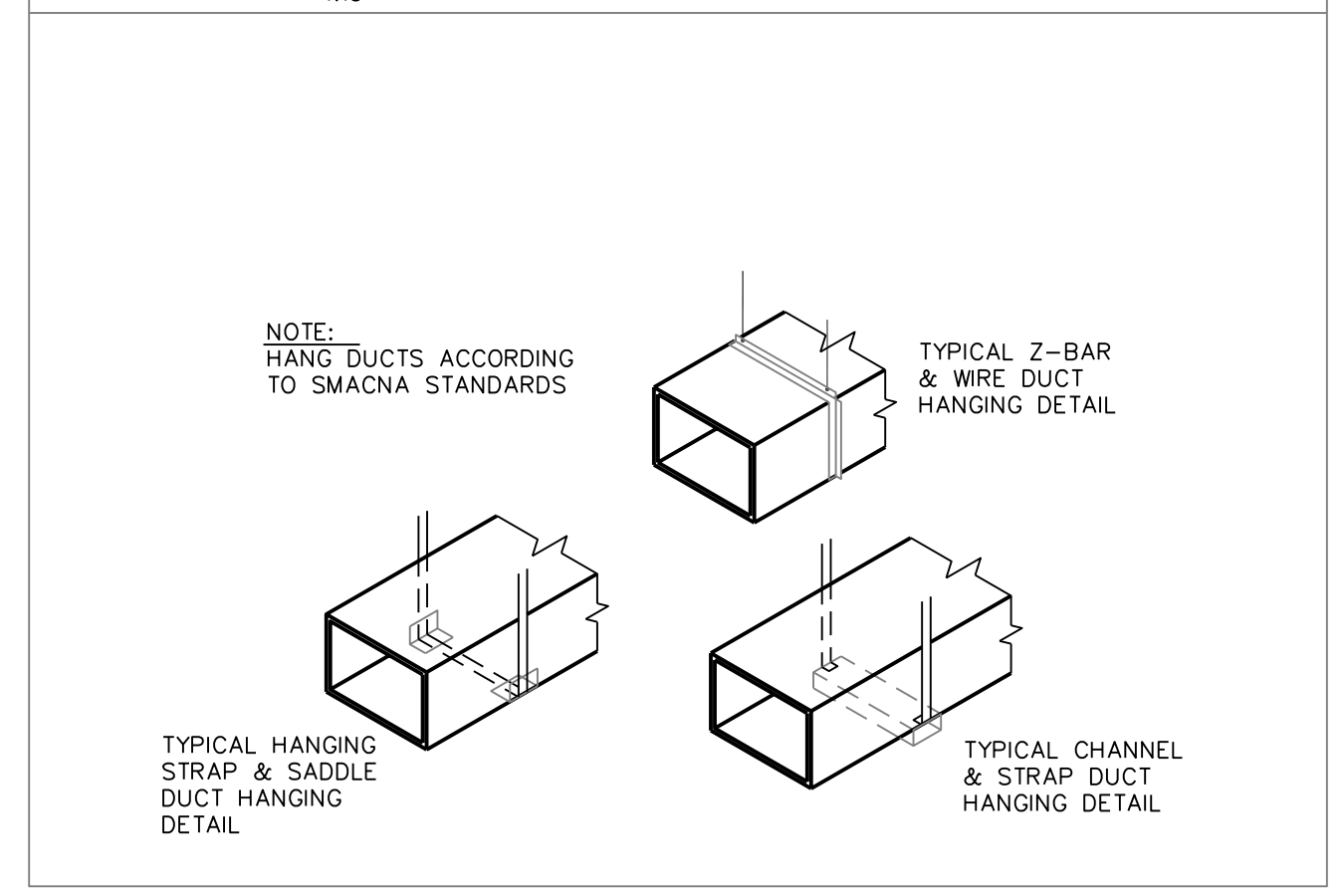
HEAT PUMP MOUNTING DETAIL & CONDENSER WATER CONTROL PIPING



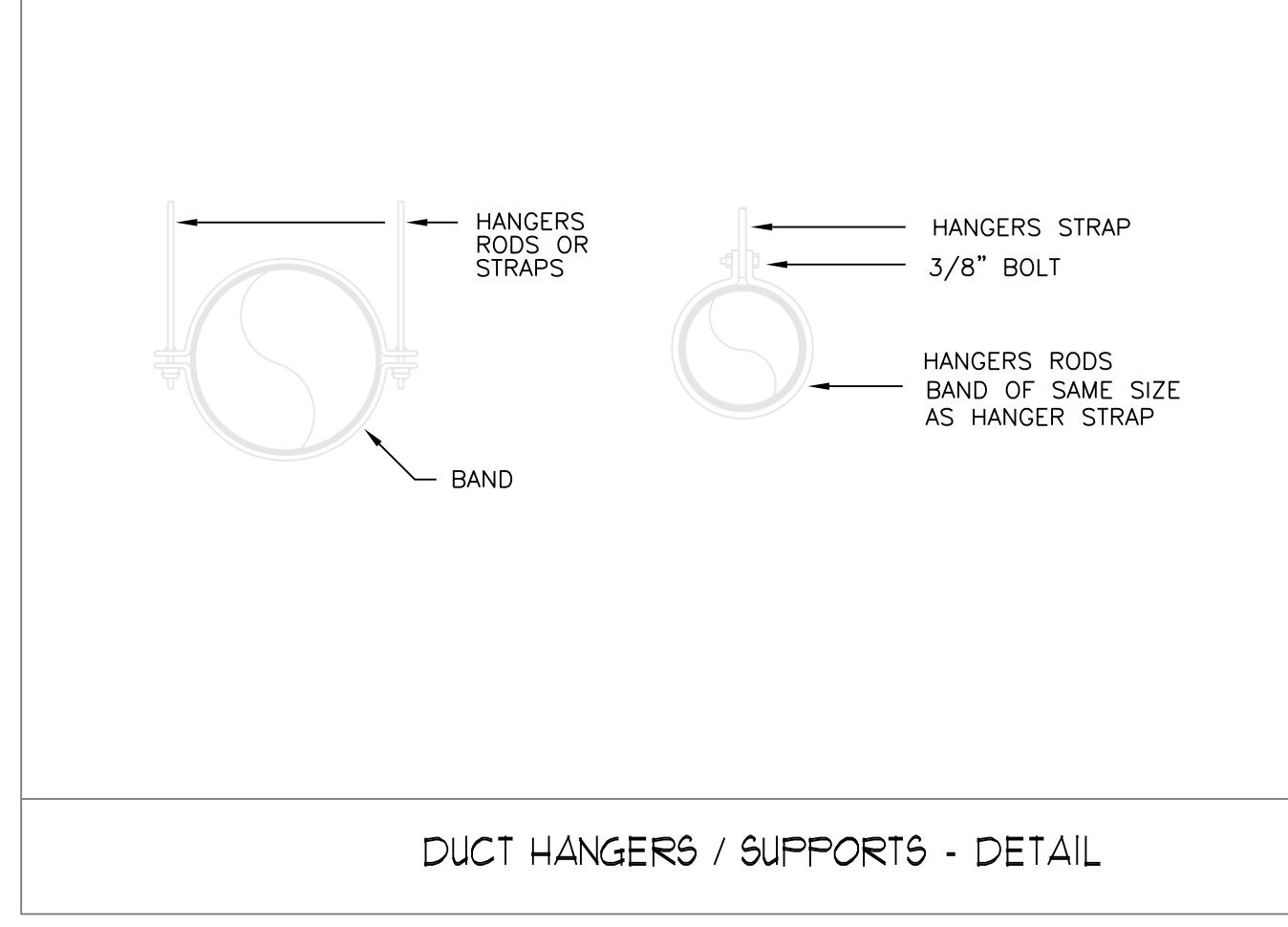
EXHAUST FAN CALCULATIONS

50CFM/WC-UR X 2 = 100 CFM
 247 CFM PROVIDED

DUCT HANGING DETAIL



DUCT HANGERS / SUPPORTS - DETAIL



M2 MECHANICAL DETAILS AND NOTES

N.T.S.

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