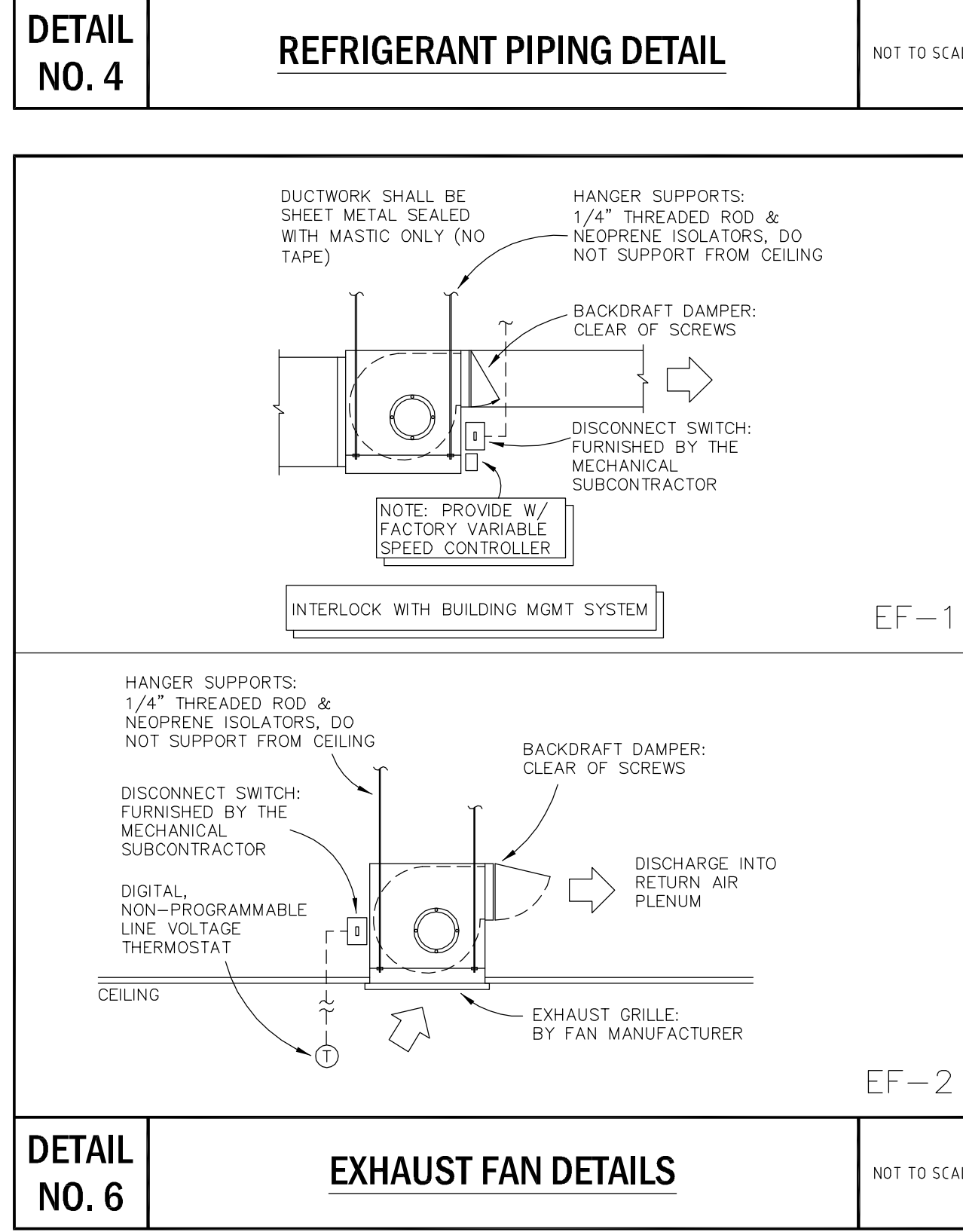
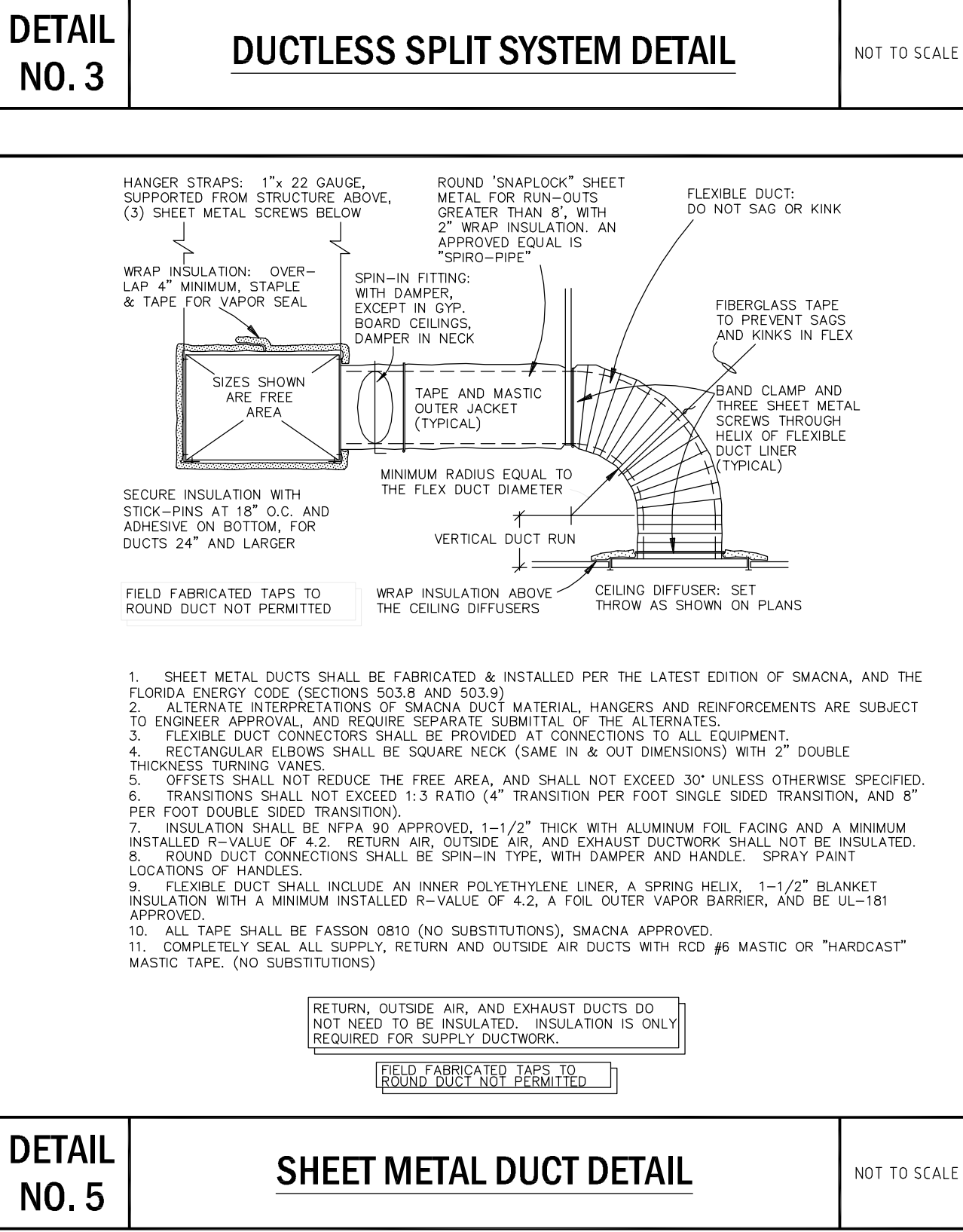
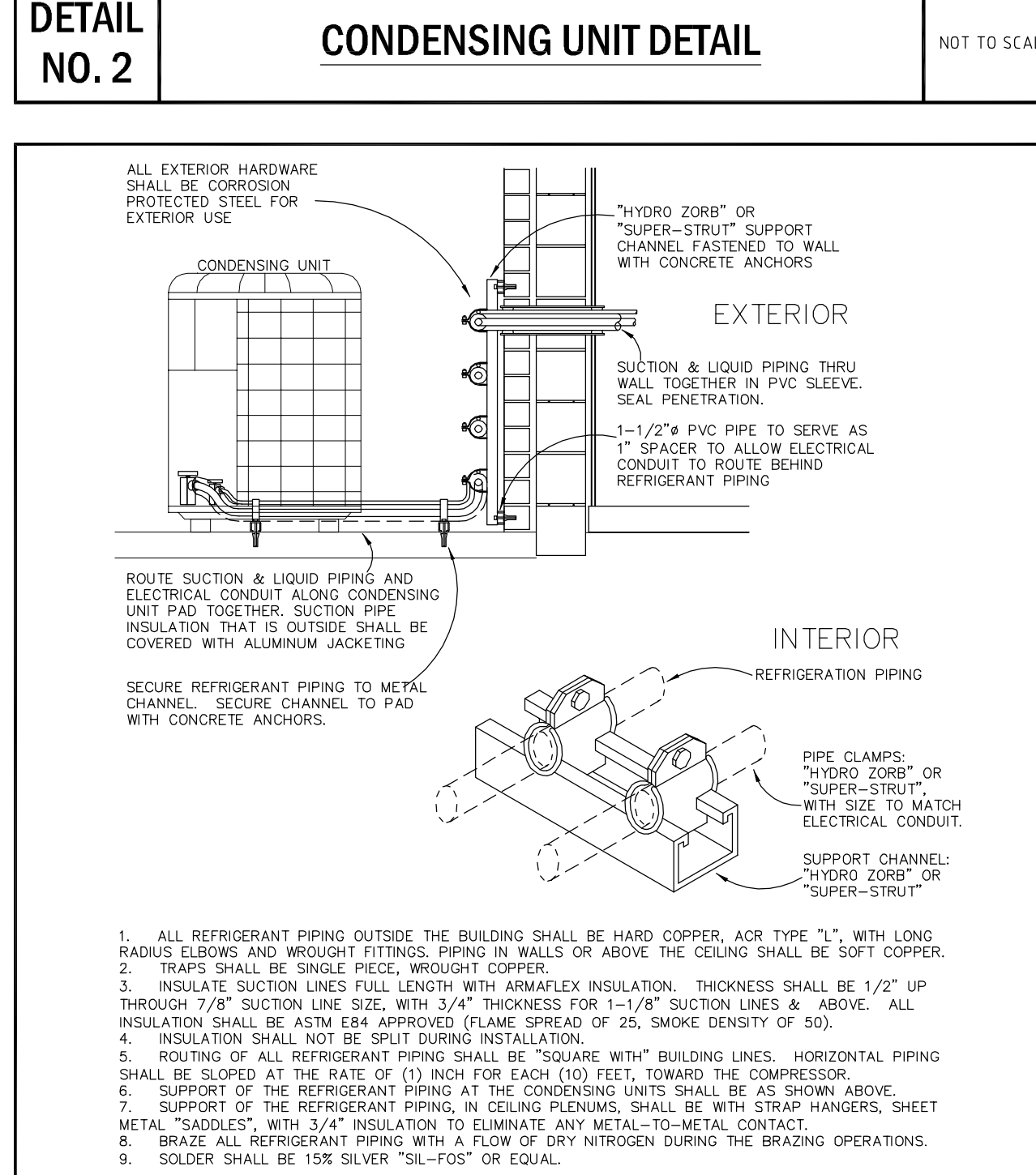
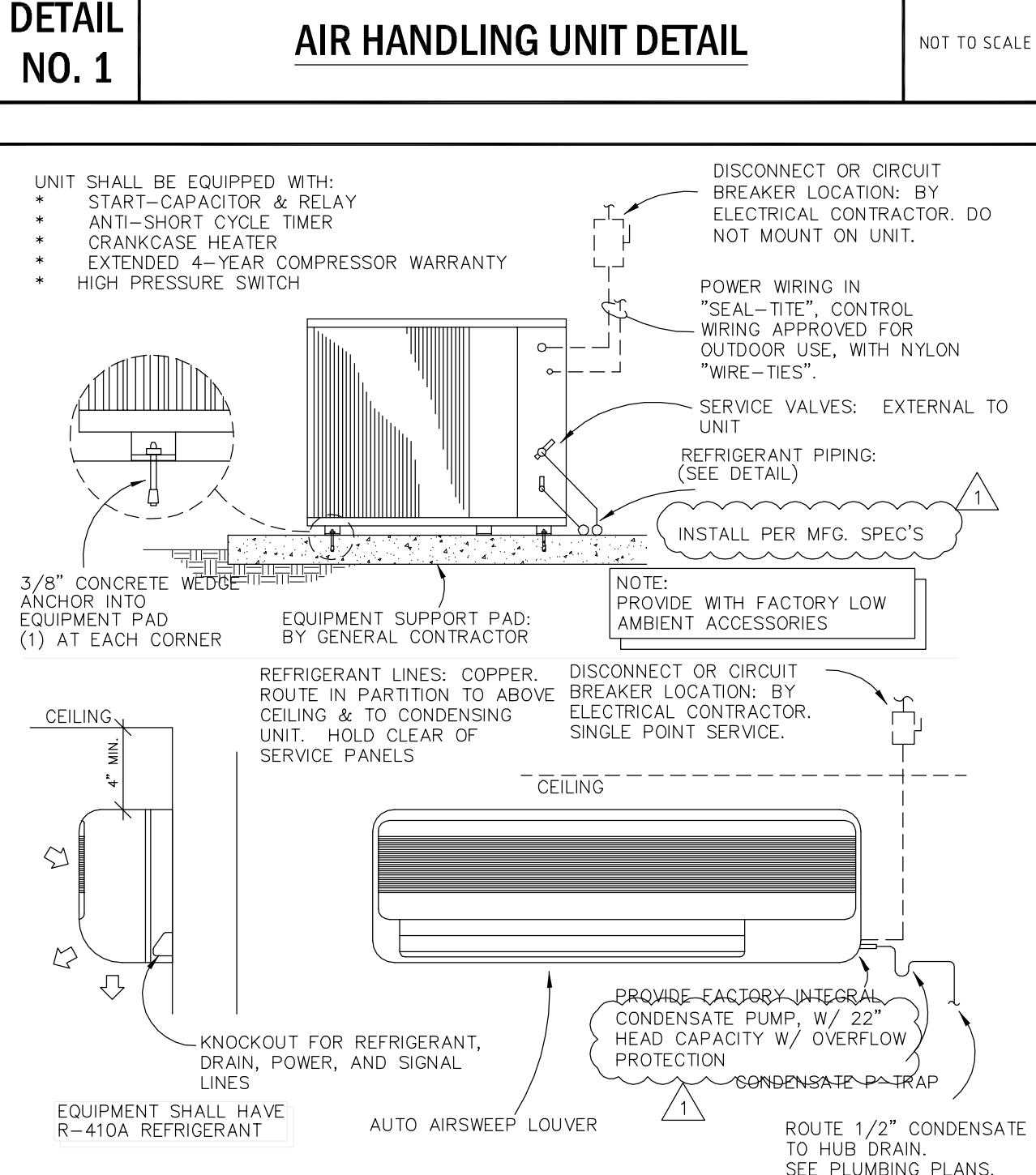
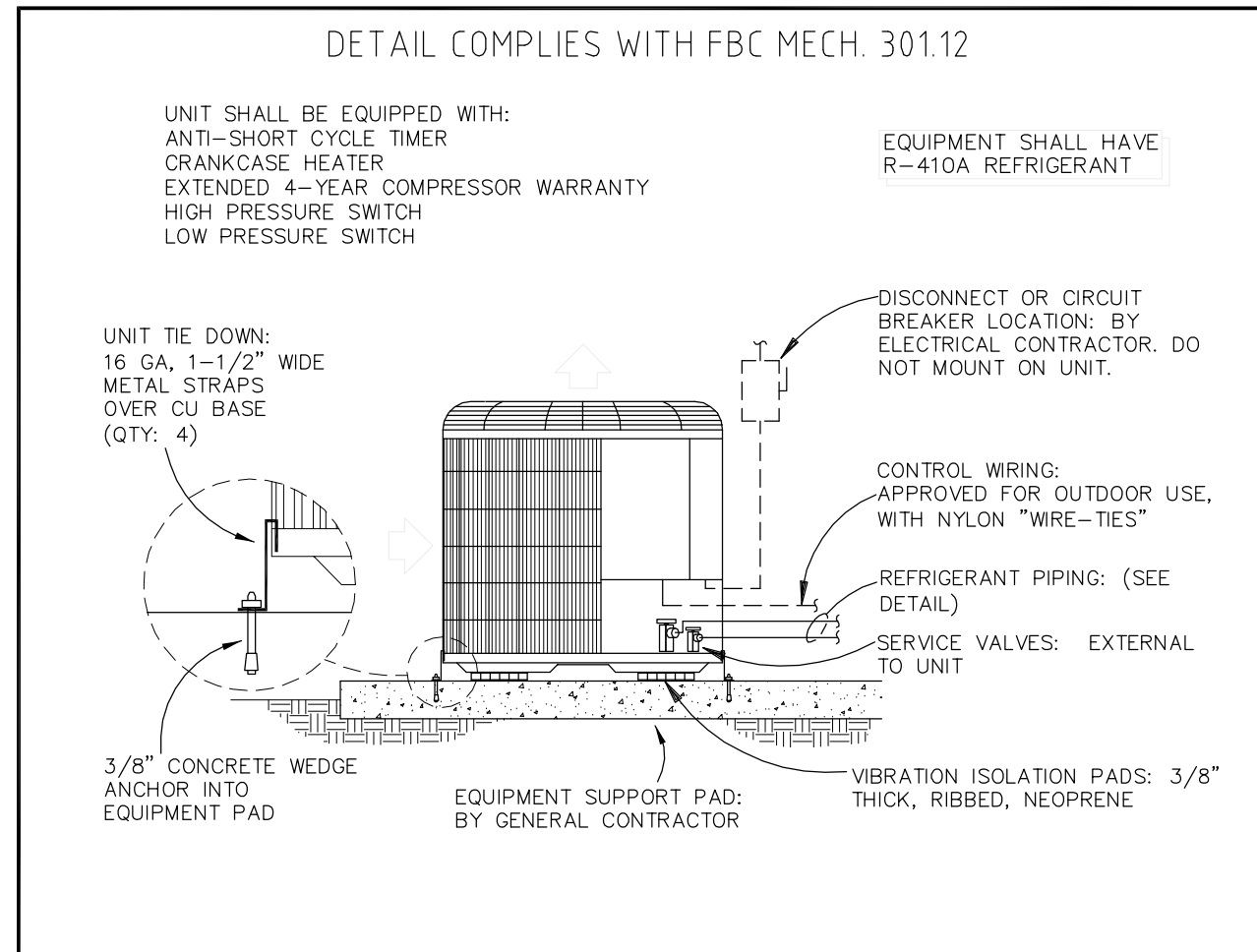
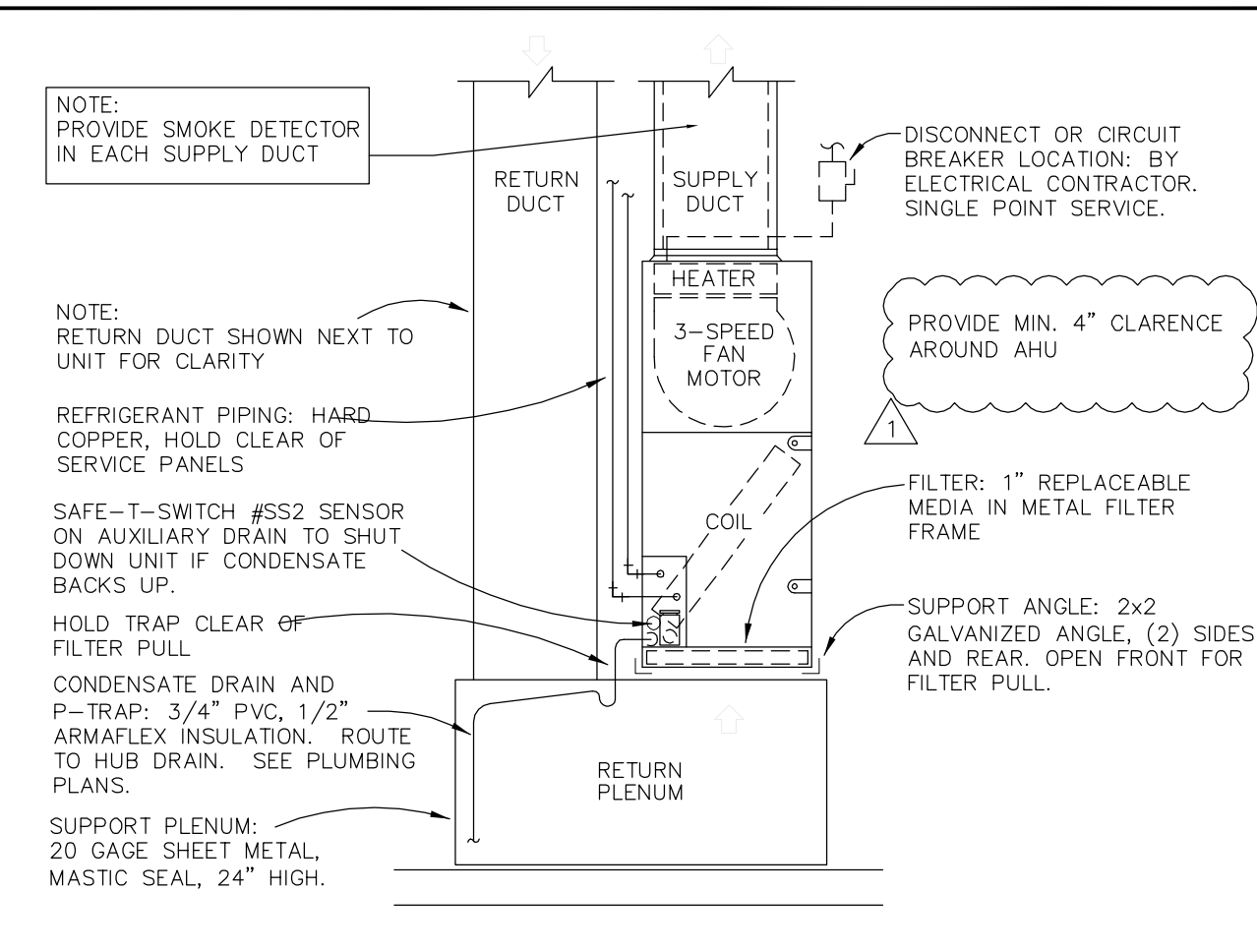


**AIR CONDITIONING SPECIFICATION**

- A. GENERAL**
- AIR CONDITIONING CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND VERIFY ALL CONDITIONS, LOCATIONS, DIMENSIONS, MATERIALS, ELEVATIONS AND COUNTS AS SHOWN AND/OR NOTED ON THE DRAWINGS AND INCLUDE IN THE BID ANY AND ALL FABRICATION REQUIRED PRIOR TO INSTALLATION. THE CONTRACTOR SHALL VERIFY SIZE, ELEVATION, AND PRESENT STATE OF ALL EXISTING UTILITIES.
  - THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY AND ALL EXISTING FIELD CONDITIONS WHICH DEVIATE FROM WHAT WAS SHOWN ON THE PLANS. CONTRACTOR IS RESPONSIBLE TO PROVIDE PRICING FOR A COMPLETE INSTALLATION INCLUDING ANY COSTS ASSOCIATED WITH FIELD CONDITIONS AT THE TIME OF BIDDING.
  - IT SHALL BE THE RESPONSIBILITY OF THE AIR CONDITIONING CONTRACTOR FOR THE ADVANCED ORDERING OF LONG LEAD ITEMS SO THAT DELIVERY WILL NOT INTERFERE WITH THE PRODUCTION OF OTHER TRADES RESULTING IN ANY DOWN OR LAG TIME.
  - IT SHALL BE THE RESPONSIBILITY OF THE AIR CONDITIONING CONTRACTOR TO PROVIDE ALL LABOR, MATERIALS, AND SUPERVISION NECESSARY TO ACCOMPLISH THE WORK SHOWN AND/OR NOTED ON THE DRAWINGS. THE DRAWINGS ARE DIAGRAMMATIC, DO NOT SCALE FOR EXACT LOCATIONS. THE AIR CONDITIONING CONTRACTOR SHALL INSTALL ALL NECESSARY OFFSETS, BENDS, AND TRANSITIONS AS REQUIRED TO PROVIDE A COMPLETE AND FULLY OPERATIVE SYSTEM. ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR SHALL NOTIFY ENGINEER IF DUCT SIZE CHANGES ARE REQUIRED DUE TO EXISTING CONDITIONS.
  - CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS, TESTS, AND ALL REQUIRED INSURANCE FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
  - AFTER BID SELECTION AND PRIOR TO COMMENCEMENT OF WORK, THE AIR CONDITIONING CONTRACTOR SHALL SUBMIT (6) COPIES OF EQUIPMENT CUTS FOR ALL DUCT WORK, EXHAUST FANS, AIR DEVICES, AND EQUIPMENT AS STATED ON SCHEDULES AND/OR NOTES. IF THE CONTRACTOR PROPOSES TO USE ANY ARTICLE, DEVICE, PRODUCT, OR MATERIAL WHICH IS NOT AS SPECIFIED, THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVE TO THE ENGINEER THAT THE PROPOSED SUBSTITUTION IS EQUAL AND WILL FIT ALLOCATED SPACE.
- B. WORKMANSHIP**
- ALL WORK SHALL BE PERFORMED BY A LICENSED AIR CONDITIONING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES AND ORDINANCES.
  - THE AIR CONDITIONING CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR TO ORIGINAL CONDITION ANY AND ALL DAMAGES TO BUILDING SURFACES, EQUIPMENT, AND FURNISHINGS CAUSED BY THE CONTRACTOR DURING THE PERFORMANCE OF WORK.
  - CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
- C. PIPING**
- ALL REFRIGERANT PIPING SHALL BE TYPE "L" OR TYPE "K" COPPER WITH WROUGHT COPPER OR BRASS FITTINGS. STEEL VALVES ARE NOT PERMITTED.
  - THE AIR CONDITIONING CONTRACTOR SHALL RUN ALL CONDENSATE DRAINS PER PLUMBING SPECIFICATIONS. (SEE PLUMBING SHEETS)
  - INTERIOR CONDENSATE DRAIN PIPING AND REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 5/8" THICK MCKLOCK OR ARMAFLEX.
  - COMBUSTIBLE PIPING IS NOT PERMITTED IN RETURN AIR PLENUMS OR CEILING SPACES USED FOR RETURN AIR.
- D. INSTALLATION**
- LOCATION OF AIR CONDITIONING DUCTS AND AIR DEVICES MAY CHANGE. VERIFY EXACT LOCATION WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION. DRAWINGS ARE DIAGRAMMATIC, DO NOT SCALE FOR THE EXACT LOCATION OF DUCTS, DIFFUSERS, GRILLES, REGISTERS, PIPING, EQUIPMENT, ETC. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF AIR DEVICES.
  - THE AIR CONDITIONING CONTRACTOR SHALL MOUNT ALL ROOFTOP EQUIPMENT ON FACTORY FABRICATED CURBS AND ANCHORS FOR A MINIMUM OF 140 MPH WIND LOADS. WIND LOADS AT MOUNTING HEIGHTS SHALL BE AS REQUIRED BY LOCAL CODES.
  - THE AIR CONDITIONING CONTRACTOR SHALL USE VANE ELBOWS OR APPROVED 3 PIECE ELBOWS, SPLITTER DAMPERS WHERE INDICATED, VOLUME CONTROLS IN ALL BRANCH LINES AND SUPPLY AND RETURN AIR DEVICES.
  - THE AIR CONDITIONING CONTRACTOR SHALL SEAL ALL DUCTS IN AN APPROVED MANNER TO INSURE AGAINST LEAKAGE.
  - ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID ANY CONFLICTS IN LOCATIONS FOR DUCTS, DIFFUSERS, GRILLES, REGISTERS, PIPING, EQUIPMENT, ETC. IN ORDER TO NOT INTERFERE WITH THE PROGRESS OF CONSTRUCTION.
- E. EQUIPMENT AND MATERIALS**
- THE AIR CONDITIONING CONTRACTOR SHALL PROVIDE FLEXIBLE DUCT CONNECTIONS TO ALL FANS, A/C UNITS, OR MECHANICAL EQUIPMENT, EXCEPT FOR EXHAUST HOODS.
  - ALL EXHAUST AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH ASHRAE, SMACNA, AND LOCAL CODES. ALL OUTSIDE AIR DUCTS SHALL HAVE 1" INSULATION IN AIR CONDITIONED SPACES.
  - UNLESS NOTED AS EXISTING, ALL EQUIPMENT, PIPING, DUCTS, REGISTERS, ETC., SHALL BE NEW.
  - TERMINAL AIR DISTRIBUTION DEVICES SHALL BE TITUS, METAL AIRE OR NAILOR-HART OR EQUAL AS SCHEDULED. ALL VOLUME DAMPERS SHALL BE OPPOSED BLADE TYPE WITH SCREWDRIVER ADJUSTMENT.
  - ALL SUPPLY AND RETURN FIBERGLASS AIR DUCTWORK SHALL BE JOHNS MANVILLE FIBERGLASS (15" THICK). TYPE 475 OR 800 OR SHEET METAL WITH MINIMUM R-6 EXTERIOR FOAM BACK INSULATION, UNLESS OTHERWISE NOTED ON PLANS. ALL DUCTS SHALL BE SUPPORTED IN AS STRAIGHT AND LEVEL AS FASHION AS POSSIBLE. THE ENTIRE INSTALLATION SHALL BE INSTALLED IN ACCORDANCE WITH ASHRAE, SMACNA, AND LOCAL CODES. FLEXIBLE DUCTS SHALL BE UL-181 RATED, NONMETALLIC, CLASS 1, R-6 - INSTALLED IN ACCORDANCE WITH FBC-M 306.1. FLEXIBLE DUCTS SHALL NOT BE LIMITED IN LENGTH PER FBC-M 6035.1.1
  - THE AIR CONDITIONING CONTRACTOR SHALL PROVIDE ALL CONTACTORS, STARTERS, RELAYS, AND THERMOSTATS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SWITCHES, DISCONNECTS, POWER WIRING AND CONTROL WIRING.
  - THE AIR CONDITIONING CONTRACTOR SHALL PROVIDE 1" THICK FARR 30/30 THROW-AWAY TYPE FILTERS WITH EACH A/C UNIT.
  - ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BEAR UNDERWRITERS LABEL WHERE APPLICABLE.
- F. SAFETY**
- ALL PENETRATIONS OF FIRE-RATED WALLS, FLOORS OR CEILINGS SHALL BE FIREPROOFED BY A SEALING METHOD AND RATING AS SPECIFIED ON THE DRAWINGS OR AS REQUIRED BY THE LOCAL OR STATE CODES.
  - AIR HANDLING DEVICES IN EXCESS OF 2000 CFM WILL HAVE A DUCT SMOKE DETECTOR TO STOP THE FAN AND ACTIVATE A HORN AND STROBE LIGHT. ALL EQUIPMENT SHALL BE INTERLOCKED AS REQUIRED BY LOCAL CODES OR FIRE SAFETY OFFICIALS.
  - ALL WORK SHALL COMPLY WITH BASE BUILDING LIFE SAFETY/SMOKE CONTROL SYSTEM REQUIREMENTS. PROVIDE ALL NECESSARY WIRING, CONTACTORS, RELAYS, ETC., AS REQUIRED FOR INTERFACE WITH BASE BUILDING SYSTEM.
  - THE AIR CONDITIONING CONTRACTOR SHALL KEEP ALL AREAS IN WHICH WORK IS BEING PERFORMED, FREE FROM DEBRIS AT ALL TIMES AND SAID AREAS SHALL BE LEFT BROOM CLEAN AT THE END OF EACH WORKING DAY.
- G. COMPLETION**
- THE AIR CONDITIONING CONTRACTOR SHALL PROVIDE A COMPLETE SET OF AS BUILT DRAWINGS TO THE ENGINEER UPON COMPLETION OF INSTALLATION. IF FIELD CHANGES ARE MADE WHICH DEVIATE FROM ENGINEERING DRAWINGS TO THE EXTENT THAT THE BUILDING DEPARTMENT REQUIRES THESE CHANGES BE INCORPORATED PRIOR TO INSPECTION, THE CONTRACTOR SHALL PROVIDE SKETCHES TO THE ENGINEER FOR INCORPORATION INTO THE BUILDING PLANS. ENGINEERING EXPENSES THAT ARE INCURRED DUE TO REVISIONS OR SUBSTITUTIONS REQUESTED BY THE CONTRACTOR SHALL BE PAID FOR BY THAT CONTRACTOR.
  - THE AIR CONDITIONING CONTRACTOR SHALL PROVIDE A TEST AND BALANCE REPORT PER FBC 2010, CH 13, 4.10.1A B C D FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AHU'S AND FANS FOR ALL PROJECTS. THE T & B REPORT SHALL BE IN ACCORDANCE WITH AIR BALANCE COUNCIL STANDARDS AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLES, RETURN GRILLES, AND EXHAUST GRILLES AND THE LEAVING AND ENTERING AIR TEMP (°F) FROM SUPPLY GRILLES AND EVAPORATORS. IF THE OWNER EXPERIENCES UNCOMFORTABLE CONDITIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF AIR FLOW TO WITHIN PLUS OR MINUS 10% FROM AIR QUANTITIES STATED ON THE PLAN.
  - AIR CONDITIONING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP TO BE FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN (1) YEAR FROM DATE OF ACCEPTANCE, AND ALL GUARANTEES AND WARRANTIES SHALL BE DELIVERED TO THE OWNER. COMPRESSORS SHALL HAVE EXTENDED FIVE YEAR WARRANTIES.
- H. EXISTING CONDITIONS**
- IF THE NATURE OF THIS CONTRACT INVOLVES EXTENSIVE REMODELING OF THE EXISTING BUILDING, THE AIR CONDITIONING CONTRACTOR, PRIOR TO BID, SHALL INSPECT THE EXISTING CONDITIONS AT THE JOB SITE AND ACQUAINT HIMSELF WITH THE CONDITIONS THAT WILL AFFECT HIS WORK.
  - PRIOR TO INSTALLATION, THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL EQUIPMENT WITH THE OWNER'S REPRESENTATIVE AND THE ACTUAL EQUIPMENT BEING FURNISHED.
  - PRESENT AIR CONDITIONING EQUIPMENT WHERE INDICATED ON THE DRAWINGS IS FOR INFORMATION ONLY AND THE CONTRACTOR SHALL INCLUDE THE INSTALLATION OF CONDUIT AND WIRE AS REQUIRED. THE INSTALLATION OF NEW EQUIPMENT THAT INTERFERES WITH EXISTING SHALL BE REMOVED, RELOCATED, OR RE-ROUTED TO PERMIT COMPLETION OF SUCH WORK.
  - SALVAGED MATERIALS, EQUIPMENT, AND DIFFUSERS SHALL BE DELIVERED TO THE OWNER AT HIS PROPERTY AND STORED WITHIN THE BUILDING WHERE DIRECTED. ANY REMOVED MATERIALS OR EQUIPMENT WHICH THE OWNER DOES NOT WISH TO KEEP SHALL BE DISPOSED OF BY THE CONTRACTOR, WITHOUT ADDITIONAL COST TO THE OWNER.
  - ALL PRESENT DUCTWORK AND PIPING IN EXISTING AREAS TO BE ALTERED, WHICH WILL HAVE NO USE UPON COMPLETION OF THE ALTERATIONS SHALL BE REMOVED. WHENEVER DUCTS OR PIPING ARE OR WILL BE EXPOSED TO VIEW, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
  - THE AIR CONDITIONING CONTRACTOR SHALL DETERMINE THE EXTENT TO WHICH EXISTING DUCTWORK AND PIPING WILL HAVE TO BE RE-ROUTED, RELOCATED, OR RECONNECTED, AND THE AMOUNT OF ADDITIONAL WORK WHICH MAY BE REQUIRED DUE TO THE PHYSICAL CONDITIONS OF THE DUCTWORK & PIPING SHALL BE PERFORMED UNDER THIS CONTRACT WITHOUT ADDITIONAL CHARGES TO THE OWNER.
  - INTERRUPTION OF EXISTING FACILITIES OR SERVICES SHALL BE KEPT TO A MINIMUM AND THE CONTRACTOR SHALL FURNISH ALL MATERIALS AND LABOR REQUIRED WHENEVER TEMPORARY CONDITIONS ARE NECESSARY TO MAINTAIN CONTINUITY OF SERVICE. INTERRUPTION OF SERVICES, THE INSTALLATION OF TEMPORARY FACILITIES, AND THE WORK OF MAKING FINAL CONNECTIONS TO NEW WORK SHALL BE DONE ONLY AT SUCH TIMES AS PERMITTED AND SCHEDULED BY THE OWNER WITHOUT ADDITIONAL COST. THE AIR CONDITIONING CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE SERVICE INTERRUPTIONS WITH THE OWNER & GENERAL CONTRACTOR.



**AIR CONDITIONING DATA**

QTY.	UNIT NO.	MFG.	CONDENSING UNIT MODEL NO.	AIR HANDLER UNIT MODEL NO.	TOTAL	SENSIBLE	SEER	TOTAL	O/A	FAN ESP - IN WATER	ELECTRIC HEAT	SUCTION & LIQUID LINES
1	AHU-1 CU-1	CARRIER	24ANA136	FE4ANB006	38,000	28,180	19.5	1200	130	0.75	12,900 BTU/H	7/8" & 3/8"
1	AHU-2 CU-2	CARRIER	24ANA160	FE4ANB006	59,300	44,000	16	2050	242	0.75	12,900 BTU/H	7/8" & 3/8"
1	AHU-3 CU-3	CARRIER	24ANA148	FE4ANB006	49,340	37,050	17.3	1600	100	0.75	12,900 BTU/H	7/8" & 3/8"
1	DFC-1 DCU-1	CARRIER	38DF018	40QNC018	17,700	15,700	13.0	640	-	-	NA	BY MANUFACTURER

**A/C EQUIPMENT NOTES:**  
 1) VERIFY ALL A/C ELECTRICAL REQUIREMENTS WITH MANUFACTURERS SPEC. PRIOR TO INSTALLATION.  
 2) PROVIDE R-410A REFRIGERANT  
 3) PROVIDE PULL DISCONNECTS  
 4) REFRIGERANT LINE SIZE BASED ON 0-80 FT. TOTAL EQUIVALENT LENGTH  
 5) PROVIDE SMOKE DETECTORS WITHIN 5'-0" OF THE AHU'S  
 6) PROVIDE DIGITAL 7-DAY PROGRAMMABLE THERMOSTAT WITH NIGHT SET-BACK.  
 7) PROVIDE KFCHE260C0 ELECTRIC HEAT ACCESSORIES WITH CIRCUIT BREAKER

**ELECTRICAL DATA**

UNIT NO.	V/PHz	COMPRESSOR			CONDENSING UNIT			AIR HANDLER UNIT					
		QTY	FLA	LRA	QTY	FLA	HP	FLA	MIN. CAPACITY	MAX FUSE			
AHU-1 CU-1	208/1/60	1	16.7	82.0	1	2.2	1/2	6.8	38 kW	23.1	30	312	35
AHU-2 CU-2	208/1/60	1	25.6	118.0	1	1.3	3/4	6.8	38 kW	34.8	50	312	35
AHU-3 CU-3	208/1/60	1	21.1	96.0	1	1.1	1/2	6.8	38 kW	28.7	40	312	35
DFC-1 DCU-1	208/1/60	1	-	-	1	0.35	1/11	0.79	-	13.2	20	-	-

**FAN DATA**

FAN #	EF-1	RF-1
MANUFACTURER	GREENHECK ESP-A390	GREENHECK SP-A200
CFM	350	200
ESP. IN WG	5	125
RPM - ROOF CURB TYPE	-	-
- DIRECT DRIVE	1200	1200
ELECTRIC V/PHz	115/1/60 14.4 WATTS	115/1/60 4.8 WATTS
OPERATING WEIGHT	23 LBS	24 LBS
ACCESS - ROOF CURB TYPE	-	-
- FIRESTAT	-	-
- BACKDRAFT DAMPER	X	X
- DISCONNECT SWITCH	-	-
- SPEED CONTROL	-	-

REMARKS: SEE DETAIL #6, THIS SHEET PROVIDE WALL LOUVER W/ CORROSION PROOF SCREEN. SEE DETAIL #6, THIS SHEET.

**HVAC DESIGN REQUIRES:**

	YES	NO
DUCT SMOKE DETECTOR	X	
FIRE DAMPER(S)		X
SMOKE DAMPER(S)		X
FIRE RATED ENCLOSURE		X
FIRE RATED ROOF/FLOOR CEILING ASSEMBLY		X
FIRE STOPPING		X
SMOKE CONTROL		X

REVISION SET: 11-22-13  
 PERMIT SET: 08-05-13

NO CHANGES SHALL BE MADE TO THESE PLANS WITHOUT PRIOR APPROVAL FROM THE ENGINEER OF RECORD. ALL CHANGES SHALL BE SUBMITTED FOR REVIEW PRIOR TO INSTALLATION. NOT FOR BID UNTIL PERMIT HAS BEEN ISSUED.

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**SunTrust Bank - South Florida**  
 MIAMI WEST OFFICE  
 FITNESS AND FINANCIAL PLAZA  
 8300 BIRD ROAD  
 MIAMI, FLORIDA

12-065

date	description
08-05-13	ISSUED FOR PERMIT
08-03-13	1. BUILDING DEPARTMENT COMMENTS
11-22-13	2. BUILDING DEPARTMENT COMMENTS