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Revisions/Issues

06/21/18 PERMIT SET

Key Plan

Seal

James L. Cohen AR0015903
 Project Title
 SOUTHERN PALM CROSSING
 BUILDING SHELL
 11001-11161 Southern Blvd.
 Royal Palm Beach, FL 33411

Job Number 017512.00
 Drawing
 MECHANICAL PLAN

Scale AS SHOWN
 Drawing Date 05/16/18

Drawing No.

M.O. 1
 Sheet of

MECHANICAL SHEET INDEX

SHEET #	DESCRIPTION
M0.1	MECHANICAL GENERAL NOTES, LEGEND, CALC. & INDEX
M1.1	MECHANICAL PLAN
M3.1	MECHANICAL SCHEDULE AND DETAILS

NOTES

- FOLLOW MR'S INSTRUCTIONS FOR INSTALLATION OF SUPPLY/RETURN AIR CEILING.
- SHEET METAL DUCTS SHALL BE FABRICATED & INSTALLED PER THE LATEST EDITION OF SMACNA, AND THE FLOOR/CEILING CONNECTIONS SHALL BE ALTERNATE INTERPRETATIONS OF SMACNA THAT HAVE BEEN APPROVED & SEPARATE SUBMITTALS OF THE ALTERNATES.
- FLEXIBLE DUCTS: EITHER SPIRAL ROUND SPRING STEEL WITH ALUMINIZED SHEATHING OR CORRUGATED ALUMINUM SHALL COMPLY WITH UL-181 PROVIDE 1.5 INCH THICK (INSTALLED VALUE OF R=0) CONTINUOUS FIBERGLASS SHEATH WITH ALUMINIZED VAPOR BARRIER JACKET, MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 6 FEET AND SHALL SERVICE ONE AIR DEVICE ONLY.
- RECTANGULAR FLEXIBLE DUCTS SHALL BE SQUARE NECK (INNER & OUT DIMENSIONS) WITH MINIMUM WALL THICKNESS OF 1/8".
- OFFSETS SHALL NOT EXCEED THE FREE AREA, AND SHALL NOT EXCEED 30° UNLESS OTHERWISE SPECIFIED.
- TRANSITION SHALL NOT EXCEED 1:3 RATIO (4" TRANSITION PER FOOT SINGLE SIDED TRANSITION) AND 8° PER (4" TRANSITION PER FOOT DOUBLE SIDED TRANSITION).
- ALL DUCT CONNECTIONS SHALL BE SPIN-IN TYPE, WITH DAMPER AND HANDLE. HANDLING SHALL BE AS SHOWN ON DRAWINGS.
- ALL DUCTS SHALL INCLUDE AN INNER POLYETHYLENE LINER, A SPRING HELIX, AND PIPER WIRE OR STRAPS 5'-0" MAX DISTANCE BETWEEN.
- OUTSIDE AIR DUCTS SHALL BE UL-181 APPROVED.
- ALL AIR DUCTS SHALL BE FASSON 0810 (NO SUBSTITUTIONS), SMACNA APPROVED.
- COMPLETELY SEAL ALL SUPPLY, RETURN AND OUTSIDE AIR DUCTS WITH RCD #6 MASTIC OR "HARDCAST" MASTIC TAPE (NO SUBSTITUTIONS)
- MINIMUM WALL THICKNESS SHALL BE 1/4" UNLESS OTHERWISE NOTED.
- SUPPORTS: MAX SLAG 1/2" PER FOOT OF SUPPORT SPACING. SUPPORTS SHALL BE PROVIDED WITHIN 18" OF INTERMEDIATE FITTING AND BETWEEN INTERMEDIATE FITTINGS AND BENDS.
- 1-1/2" GALV STEEL BAND CLAMP TO MATCH DUCT.

MECHANICAL DEMOLITION NOTES

- FOR EQUIPMENT AND SYSTEMS TO REMAIN, OR REUSE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE CONDITION, EXACT SIZES AND LOCATION OF EXISTING DUCT AND PIPING ETC. BEFORE DEMOLITION WORK BEGINS. REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL FIELD CONDITIONS TO THE OWNER AND ENGINEER PRIOR TO THE COMMENCEMENT OF DEMOLITION WORK.
- REMOVE THE INDICATED HVAC ITEMS AS SHOWN ON PLANS. THIS INCLUDES ALL HANGERS, STRAPS AND RELATED MATERIAL. AS DIRECTED THIS MATERIAL SHALL BE REMOVED FROM THE SITE OR TURNED OVER TO THE OWNER (AS DIRECTED BY THE OWNER).
- CAP AND SEAL AIR TIGHT ALL POINTS AT WHICH DUCT WORK IS REMOVED FROM DUCTWORK THAT WILL REMAIN.
- PATCH AND MATCH OPENINGS IN WALLS TO MAINTAIN THE INTEGRITY OF THE WALL WHERE AIR DEVICES, DUCTS, PIPING, ETC. HAVE BEEN REMOVED. (MAINTAIN THE EXISTING RATINGS).
- CONTRACTOR SHALL VERIFY CLEARANCE REQUIREMENTS AND INDICATE ROUTING OF NEW DUCTWORK BEFORE FABRICATION BEGINS AS RISES AND DROPS MAY BE NECESSARY DUE TO EXISTING FIELD CONDITIONS.
- ALL DEMOLITION WORK SHALL COMPLY WITH NFPA 241 AND THE REQUIREMENTS OF THE OWNER.

CONTRACTOR NOTES:

CONTRACTOR SHALL PROVIDE A FULLY OPERATIONAL AND CODE COMPLIANT MECHANICAL SYSTEM. THESE DRAWINGS MAY OR MAY NOT INCLUDE ALL THE DETAILS, EQUIPMENT, AND ACCESSORIES TO ACCOMPLISH THIS. THE CONTRACTOR SHALL REVIEW THEM IN CONJUNCTION WITH ALL THE OTHER TRADES/DISCIPLINES AND BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO BIDDING AND CONSTRUCTION. ALL WORK SHALL BE PERFORMED BY A LICENSED MECHANICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE FLORIDA ENERGY CONSERVATION CODE - 2017, SEC.500 FLORIDA BUILDING CODE - 2017 SEC. 3004, AND ALL OTHER APPLICABLE CODES AND LOCAL ORDINANCES. UPON COMPLETION OF THE WORK, A TEST SHALL BE CONDUCTED IN THE PRESENCE AND UNDER DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, QUALIFIED TO CONDUCT SUCH TESTS. THE TEST SHALL SHOW COMPLIANCE WITH THE CODE REQUIREMENTS FOR VENTILATION AND THE PROPER FUNCTIONING OF ALL OPERATING DEVICES, BEFORE THE SYSTEM IS APPROVED. ALL INSPECTIONS AND TESTS WILL BE MADE IN COMPLIANCE WITH THE 2017 BUILDING CODE.

DUCTWORK

- ALL GENERAL AND TOILET EXHAUST AIR DUCTWORK SHALL BE UNINSULATED GALVANIZED SHEET METAL OF LOCK-FORMING QUALITY UNLESS NOTED OTHERWISE. IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS, EXHAUST DUCT SHALL BE INSULATED WITH 1-1/2" WRAP 5' UPSTREAM OF DISCHARGE. ALL TOILET DUCTWORK IS TO BE OF AIR TIGHT CONSTRUCTION WHEN ROUTED IN A RETURN PLENUM. EXHAUST DUCTWORK SHALL NOT EXTEND INTO OR THROUGH DUCTS OR PLENUMS.
- ALL COMMON AREA SUPPLY & RETURN DUCTWORK SHALL BE 1.5" FIBERGLASS (R-6.0) CONSTRUCTED FOR 2' x 4' IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS (WHERE APPLICABLE IN COMMERCIAL BUILDINGS).
- FLEXIBLE DUCTS: EITHER SPIRAL ROUND SPRING STEEL WITH ALUMINIZED SHEATHING OR CORRUGATED ALUMINUM SHALL COMPLY WITH UL-181 PROVIDE 1.5 INCH THICK (INSTALLED VALUE OF R=0) CONTINUOUS FIBERGLASS SHEATH WITH ALUMINIZED VAPOR BARRIER JACKET, MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 6 FEET AND SHALL SERVICE ONE AIR DEVICE ONLY.

COORDINATION NOTES:

- A/C CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS WORK/EQUIPMENT FOR SIZE, LOCATION, CLEARANCE, ACCESS AND ELECTRICAL CHARACTERISTICS WITH ALL OTHER TRADES AND TO PROVIDE SHOP DRAWINGS TO THE ENGINEER FOR REVIEW BEFORE INSTALLATION OF DUCTWORK, PIPING, OR EQUIPMENT. SHOP DRAWINGS WILL INCLUDE BEAM OR STRUCTURE ELEVATION & REQUIRED EQUIPMENT ACCESS AREAS. CONTRACTOR SHALL INFORM ENGINEER OF ANY CLEARANCE PROBLEMS WITH OTHER TRADES BEFORE INSTALLATION.
- WALL, ROOF, AND CEILING OPENINGS INDICATED ON CONTRACT DRAWINGS ARE NOMINAL DIMENSIONS ONLY AND ALL DUCT, PIPING, OR EQUIPMENT PENETRATIONS SHALL BE SLEEVED AND FIRE RATED AS REQUIRED. ADJUST OPENINGS FOR STRUCTURE.
- COORDINATE LOCATION OF CEILING DIFFUSERS, GRILLES, REGISTERS AND DUCTS IN THE FIELD WITH LIGHTS, SPRINKLERS AND ARCHITECTURAL/STRUCTURAL ELEMENTS.
- COORDINATE LOCATION OF A/C EQUIPMENT AND ACCESS SPACE, THERMOSTATS, FANS AND DUCTWORK WITH BUILDING STRUCTURE AND OTHER TRADES SO THAT NO INTERFERENCES OCCUR.
- COORDINATE LOCATION OF SMOKE DETECTORS TO PROVIDE 3 FT. MIN. BETWEEN EDGE OF S/A DIFFUSERS AND CLG. MOUNTED SMOKE DETECTORS.
- ALL MECHANICAL SYSTEMS ARE TO BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE NFPA STANDARDS, ANSI STANDARDS, THE LOCAL BUILDING CODE, NOISE & HEIGHT ORDINANCES, PLANS AND SPECIFICATIONS.
- CONTRACTOR SHALL RESIZE (INCREASE THE CROSS-SECTIONAL AREA OF) DUCTWORK TO ACHIEVE THE AIRFLOWS SHOWN IN CASE THE EXISTING AHU DOES NOT HAVE ENOUGH ESP. THIS SHALL BE DONE AT NO COST TO THE OWNER.
- ALL MECHANICAL WORK SHALL MEET ALL THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, BROWARD COUNTY AMENDMENTS TO THE F.B.C. AND ALL APPLICABLE CODES AND STANDARDS.
- IT IS THE INTENT OF THE PLANS AND GENERAL NOTES TO PROVIDE A COMPLETE AND OPERATING INSTALLATION INCLUDING ALL NECESSARY ITEMS REQUIRED. EVEN THOUGH ITEMS ARE NOT INDICATED ON THE DRAWINGS OR IN THE NOTES, THEY ARE CONSIDERED NECESSARY FOR THE COMPLETION OF THE WORK IN PROPER ORDER. NOT SHOWN ON THE PLANS OR NOTES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER IN WRITING PRIOR TO BIDDING. OTHERWISE, WORK SHALL BE ADDITIONALLY CHARGED AFTER BID IS AWARDED.
- VERIFY VOLTAGE WITH ELECTRICAL CONTRACTOR BEFORE ORDERING ANY EQUIPMENT. CONTRACTOR IS RESPONSIBLE FOR ALL UNEXPECTED ELECTRICAL COSTS WHICH MAY RESULT FROM SUBSTITUTED EQUIPMENT, PROVIDING CORRECT ELECTRICAL CONNECTIONS FOR ALL HVAC EQUIPMENT UNLESS OTHERWISE NOTED. PROVIDE TRANSFORMERS AS REQUIRED TO OPERATE ALL THERMOSTATS, THERMISTATS, CONDENSATE PUMPS, FANS, AND ANY OTHER EQUIPMENT IN THE SYSTEM.
- COORDINATE THE LOCATION OF SUPPLY AND DIFFUSER AND RETURN AIR GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLANS.
- MAINTAIN A COMPLETE SET OF MECHANICAL PRINTS FOR INDICATING ALL CHANGES. MAKE SURE TO MAKE CHANGES AT THE TIME OF EXECUTION. THE COMPLETE SET OF AS-BUILT DRAWINGS TO THE ENGINEER, CHANGES FROM THE CONTRACT DOCUMENTS REQUIRED FOR OBTAINING OCCUPANCY NOT APPROVED BY THE ARCHITECT AND ENGINEER IN WRITING SHALL BE REVIEWED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE. DELIVER THE SET TO THE ARCHITECT PRIOR TO FINAL PAYMENT.

AIR BALANCE

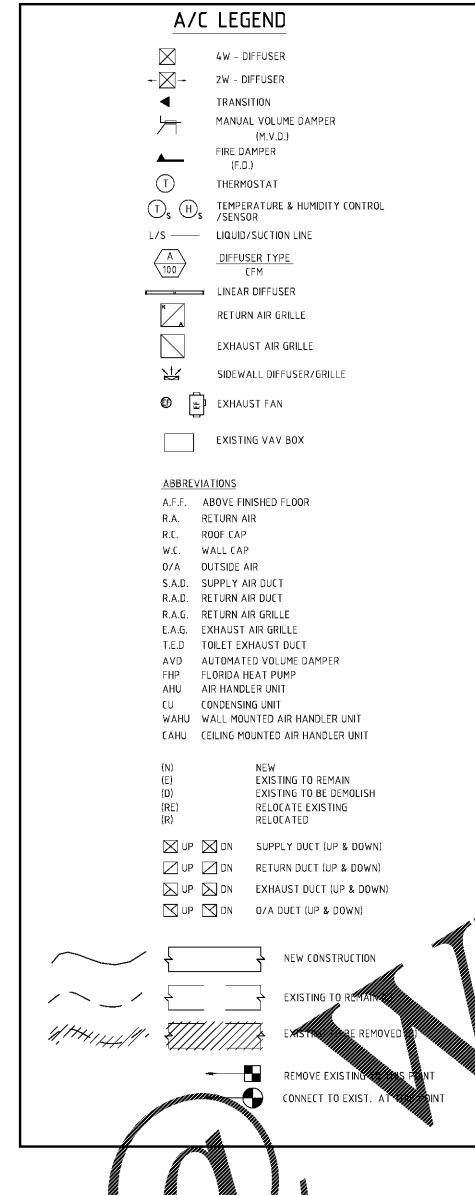
UNIT	SPACE/AREA SERVED	OUTDOOR AIR	MAKE-UP AIR	EXHAUST AIR	TOTAL
RTU-1A	OFFICE SPACE	300	-	-	+300
RTU-2A	OFFICE SPACE	300	-	-	+300
RTU-1B	RESTAURANT	400	-	-	+400
RTU-2B	RESTAURANT	400	-	-	+400
RTU-3B	RESTAURANT	400	-	-	+400
					+1800.0

BUILDING IS 1800.0 CFM POSITIVE WHEN ALL A/C UNITS ARE RUNNING.

OUTDOOR AIR CALCULATIONS

UNIT	SPACE TYPE	NET SQFT.	OCCUPANCY DENSITY PER 1000 SQFT	ESTIMATED OCCUPANCY	VENTILATION RATE (CFM/PERSON)	VENTILATION RATE (CFM/SQFT)	MINIMUM OUTDOOR AIR REQUIRED (CFM)	OUTDOOR AIR PROVIDED (CFM)
RTU-1A & 2A	OFFICE SPACE	2905	-	15	5.0	0.06	75-174-249	600
RTU-1B, 2B, & 3B	RESTAURANT	3300	-	80	7.5	0.18	600-594-1194	1200
								1800.0

1. OCCUPANCY DENSITIES AND VENTILATION RATES BASED ON TABLE 403.3 OF THE 2017 FLORIDA MECHANICAL CODE. ACTUAL OCCUPANCY BASED ON INFORMATION PROVIDED BY OWNER AND/OR ARCHITECT.
 2. OUTDOOR AIR REQUIRED PROVIDED BY RTUs.



FLORIDA BUILDING CODE 2017 CONFORMANCE

- CONTRACTOR TO PROVIDE ALL LABOR AND MATERIAL TO CONFORM TO FBC 2017 6TH EDITION, RELATED SECTIONS, AND STANDARDS.
- OWNER SHALL PROVIDE SERVICES OF AN INDEPENDENT COMMISSIONING AGENT (ICA) TO PREPARE FUNCTIONAL TEST PROCEDURES, AS REQUIRED BY FBC.
- CONTRACTOR SHALL PROVIDE SERVICES TO TEST, BALANCE AND COMMISSION THE SYSTEM VIA AN INDEPENDENT AGENT.
- CONTRACTOR TO PROVIDE COMPLETE CERTIFICATION AND CHECKLISTS AS REQUIRED BY FBC FOR HIS WORK RESPONSIBILITIES.

LIFE SAFETY NOTE

- CONTRACTOR IS CAUTIONED TO REFER TO ARCHITECT'S LIFE SAFETY DRAWINGS FOR RATED WALLS, CONSTRUCTION.
- PROVIDE COMPLETE REQUIRED FIRE DAMPERS, FIRE/SMOKE DAMPERS, RELEASING F.A. SMOKE DETECTORS, HVAC INTERLOCKING ETC. TO MEET AHJ/PERMITS/O.O. REQUIREMENTS.
- COORDINATE WITH ALL PROJECT DRAWINGS.

TYPICAL @ EA. RTU, PROVIDE "SAFE-T-SWITCH" CONDENSATION CONTROL SYSTEM INSIDE THE PRIMARY DRAIN THAT SHUTS OFF THE SYSTEM TO DETECT AND PREVENT CLOGGING. OR APPROVED EQUAL.

05/21/2018
 DATE

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 NO. 31989

HVAC GENERAL NOTES

- HVAC DRAWINGS ARE DIAGRAMMATICAL IN NATURE AND REPRESENT EXISTING CONDITIONS BASED ON DRAWINGS AND SITE OBSERVATIONS. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL ACTUAL CONDITIONS INCLUDING DUCTWORK AND PIPING LOCATIONS AND SIZES.
- DUE TO DRAWINGS BEING DIAGRAMMATICAL IN NATURE RISERS AND DROPS ARE NOT SHOWN - CONTRACTOR SHALL INCLUDE THESE IN THE BID - WHERE POSSIBLE, ALL RISERS AND DROPS SHALL BE CONSTRUCTED USING 45 DEGREE OR LONG RADIUS ELBOWS.
- PROVIDE AND INSTALL NECESSARY DUCTWORK TRANSITIONS AND PIPING INCREASERS/REDUCERS AS REQUIRED FOR EQUIPMENT CONNECTIONS. CONSULT MANUFACTURER'S DATA FOR ACTUAL DUCTWORK AND PIPING CONNECTIONS SIZES, INCLUDING, BUT NOT LIMITED TO THOSE SHOWN.
- 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 IS SHOWN ON THE PLANS. CONTRACTOR IS RESPONSIBLE TO PROVIDE PROPOSALS 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 DIAGRAMMATICAL, 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 BECAUSE OF 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 SHOP DRAWINGS FOR ALL DUCTWORK, CEILING FANS, AIR DEVICES, AND EQUIPMENT AS STATED ON SCHEDULES AND OR NOTES. AHR CERTIFICATES FOR ALL EQUIPMENT SHALL BE INCLUDED IN THE SUBMITTAL PACKAGE. IF THE CONTRACTOR PROPOSES TO USE ANY ARTIFICE, 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.
- LOCATION OF AIR CONDITIONING DUCTS AND AIR DEVICES MAY CHANGE. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION. DRAWINGS ARE DIAGRAMMATICAL, DO NOT SCALE FOR EXACT LOCATION OF DUCTS, DIFFUSERS, GRILLES, REGISTERS, PIPING, EQUIPMENT, ETC. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF AIR DEVICES.
- PROVIDE MANUAL VOLUME DAMPERS AT ALL LOW PRESSURE BRANCH DUCTS TO INDIVIDUAL DIFFUSERS AND GRILLES AND TO ALL LOW PRESSURE BRANCH DUCTS TO REHEAT COILS. PROVIDE DAMPERS AS CLOSE AS POSSIBLE TO BRANCH CONNECTION TO MAIN. SEE DIFFUSER AND GRILLE SCHEDULE AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- NO PIPING, DUCTWORK, OR CONDUIT SHALL BE INSTALLED UNTIL IT IS COORDINATED WITH ALL OTHER TRADES AFFECTED. PROVIDE ALL OFFSETS REQUIRED TO AVOID INTERFERENCE WITH OTHER TRADES, EXISTING CONDITIONS AND WITH THE STRUCTURE, INCLUDING, BUT NOT LIMITED TO THOSE SHOWN.
- SCHEDULE NEW CONSTRUCTION WORK WITH THE OWNER WELL IN ADVANCE. CONSTRUCTION WORK AND DEMOLITION SHALL BE PERFORMED OR REPLACED TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
- ALL FINISHES AND SURFACES TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION WORK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
- DO NOT BLOCK TUBE PULL OR SERVICE SPACE ON EQUIPMENT WITH PIPING, DUCTWORK, ETC. (FLANGED OR REMOVABLE SECTIONS MAY BE USED IN SOME INSTANCES WHERE TIGHT CLEARANCES EXIST).
- IF NO SIZE IS SHOWN FOR DUCT SERVING DIFFUSER OR GRILLES, USE SIZE SHOWN ON DIFFUSER AND GRILLE SCHEDULE.
- DUCTWORK ROUTED PARALLEL TO A WALL, RATED OR CORRIDOR SHALL BE INSTALLED WITH MINIMUM 6" CLEARANCE TO ALLOW FOR INSPECTION OF WALL PENETRATIONS. CONTRACTOR SHALL PROVIDE 12" CLEARANCE WHERE POSSIBLE, COORDINATE.
- REFER TO DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS.
- CONTRACTOR SHALL SUBMIT A COMPLETE LIST OF EQUIPMENT AND ITEMS TO BE REMOVED TO THE OWNER. ALL ITEMS THAT THE OWNER WISHES TO RETAIN SHALL BE TURNED OVER TO OWNER AND THE REMAINDER SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A PROPER MANNER BY CONTRACTOR.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL WORK NECESSARY TO PREPARE THE STRUCTURE FOR THE INSTALLATION AND/OR DEMOLITION WORK OF THE MECHANICAL SYSTEMS. ALL HOLES, OPENINGS AND ANY DAMAGED MATERIALS OR SURFACES SHALL BE REPAIRED AND FINISHED TO MATCH EXISTING.
- ALL DEMOLITION WORK SHALL COMPLY WITH NFPA 241 AND THE REQUIREMENTS OF THE OWNER.
- PROVIDE TEMPORARY FILTERS ON ALL RETURN AIR GRILLES AND TRANSFER OPENINGS IN THE WORK AREA.
- EXISTING SYSTEMS SHOWN ON THE DRAWINGS ARE BASED ON AVAILABLE RECORD DRAWINGS. THIS INFORMATION IS ONLY PARTIALLY VERIFIED. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY AND INVESTIGATE ALL CONDITIONS THAT AFFECTS THE WORK PRIOR TO SUBMITTING THE BID.
- INSTALL AHU CONTROL PANELS TO PROVIDE FOR 3'-0" MIN. CLEARANCE IN FRONT OF PANEL.
- UNLESS OTHERWISE NOTED ON PLANS, LOW PRESSURE AIR GRILLES, AND LOW

- EXHAUST GRILLES SHALL BE 6" TO 8" A.F.F. TO BOTTOM OF GRILLE.
- ALL DIFFUSERS IN SAME SPACE SHALL HAVE THE SAME FULL FACE SIZE USING LARGEST SIZE REQUIRED FROM DIFFUSER AND GRILLE SCHEDULE.
- PROVIDE CLEAR ACCESS TO FIRE DAMPERS, SMOKE DAMPERS, AND VALVES.
- 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.
- 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.
- THE PLUMBING CONTRACTOR SHALL RUN ALL CONDENSATE DRAINS PER PLUMBING SPECIFICATIONS. (SEE PLUMBING SHEETS)
- COMBUSTIBLE PIPING IS NOT PERMITTED IN RETURN AIR PLENUMS OR CEILING SPACES USED FOR RETURN AIR.
- 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.
- THE AIR CONDITIONING CONTRACTOR SHALL USE RADIUS TURNS WITH A 1:5 CENTERLINE TO WIDTH RATIO (5 R/W). VANED 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.
- THE AIR CONDITIONING CONTRACTOR SHALL PROVIDE FLEXIBLE DUCT CONNECTIONS TO ALL FANS, A/C UNITS, OR MECHANICAL EQUIPMENT, EXCEPT FOR EXHAUST HOODS.
- UNLESS NOTED AS EXISTING TO BE REUSED (E) OR RELOCATED (RE), ALL EQUIPMENT, PIPING, DUCTS, REGISTERS, ETC., SHALL BE NEW.
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BEAR UNDERWRITERS LABEL WHERE APPLICABLE.
- THE AIR CONDITIONING CONTRACTOR SHALL PROVIDE ALL CONTRACTORS, STARTERS, RELAYS, AND THERMOSTATS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SWITCHES, DISCONNECTS, POWER WIRING AND CONTROL WIRING, UNLESS NOTED OTHERWISE.
- THE AIR CONDITIONING CONTRACTOR SHALL PROVIDE 1" THICK FARR 30/30 (THROW-AWAY TYPE) FILTERS WITH EACH A/C UNIT.
- 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 SHALL HAVE A DUCT SMOKE DETECTOR TO STOP THE FAN AND ACTIVATE A HORN AND STRIKE 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.
- 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.
- 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.
- BEFORE 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 WHEN THE OWNER DOES NOT WISH TO KEEP SHALL BE DISPOSED OF BY THE CONTRACTOR, WITHOUT ADDITIONAL COST TO THE OWNER.
- THE AIR CONDITIONING CONTRACTOR SHALL DETERMINE THE EXTENT TO WHICH EXISTING DUCTWORK AND PIPING WILL HAVE TO BE QUOTED, RELOCATED, OR RECONNECTED. AN AMOUNT OF ADDITIONAL WORK WHICH MAY BE REQUIRED DUE TO THE PHYSICAL CONDITION OF THE EXISTING WORK & PIPING SHALL BE RELEVANT UNDER A CONTRACTOR'S BID. ALL CHARGES TO THE OWNER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- INTERFERENCE OF EXISTING UTILITIES OR SERVICES SHALL BE KEPT TO A MINIMUM. THE CONTRACTOR SHALL FURNISH ALL MATERIALS AND LABOR REQUIRED TO MAINTAIN OR TEMPORARY CONDITIONS ARE NECESSARY TO MAINTAIN CONTINUITY OF SERVICE. INTERRUPTION OF SERVICE DURING THE INSTALLATION OF TEMPORARY FACILITIES AND THE WORK OF MAKING PERMANENT CONNECTIONS TO NEW WORK 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.
- ALL ROOF MOUNTED EQUIPMENT SHALL BE MOUNTED ON CURBS OR STANDS. CURBS AND STANDS SHALL BE FLORIDA PRODUCT APPROVED OR MIAMI DECADE PRODUCT APPROVED AND HAVE CURRENT NOTICE OF ACCEPTANCE (NOA) CURBS AND STANDS SHALL BE ATTACHED TO THE ROOF STRUCTURE AND THE EQUIPMENT SHALL BE MOUNTED TO THE CURB OR STAND IN ACCORDANCE WITH THE NOA DOCUMENTS.

UL LISTING AND NRTL CERTIFICATIONS NOTE

CONTRACTOR SHALL VERIFY ALL REQUIRED DOCUMENTATION AND CERTIFICATIONS FOR ANY EQUIPMENT THAT HE/SHE PROPOSES WITH A NRTL. NATIONAL LABORATORY CERTIFICATION, WHICH IS THE LABELING EQUIVALENT TO THE BASIS OF DESIGN (UL) LISTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM ALL CERTIFICATIONS WITH THE LOCAL AHJ AND AGENCIES FOR THE NRTL LISTING AND CERTIFICATION FOR THE PRODUCTS HE PROPOSES AND DEMONSTRATE SUCH AS PART OF THE PERMIT DATA SUBMISSION AND INSTALLATION.

MECHANICAL NOTES, INDEX, AND CALCULATIONS

1 SCALES

