

MECHANICAL GENERAL NOTES:

- THESE DRAWINGS ARE DIAGRAMMATIC. ALL OFFSETS, FITTINGS, TRANSITIONS AND ACCESSORIES ARE NOT SHOWN. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL ITEMS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM. DO NOT SCALE DRAWINGS FOR INSTALLATION.
- ALL WORK SHALL BE PERFORMED IN A FIRST CLASS WORKMANLIKE MANNER BY LICENSED CONTRACTORS.
- THE CONTRACTOR SHALL OBTAIN AT HIS EXPENSE ALL NECESSARY FEES PERMITS, AND TESTS.
- ALL WORK SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES. NO CONTRACTOR SHALL BID UNLESS FAMILIAR WITH THESE CODES. CORRECTION OF DEFECTS TO THIS WORK SHALL BE MADE PROMPTLY WITHOUT CHARGE TO THE OWNER. REPAIR AND REPLACEMENT FOR DAMAGE CAUSED BY THIS CONTRACTOR SHALL BE MADE PROMPTLY WITHOUT CHARGE TO THE OWNER.
- ALL WORK OF THIS TRADE SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID ANY INTERFERENCES THAT MAY DELAY PROGRESS OF CONSTRUCTION.
- THE CONTRACTOR SHALL INCLUDE THE WORK OF ALL REQUIRED SUB-CONTRACTORS SUCH AS ELECTRICAL, INSULATING, TEST & BALANCE, ETC., AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
- EQUIPMENT SHALL BEAR A U.L. OR OTHER RECOGNIZED LABEL, NAMEPLATES, WIRING DIAGRAMS, AND ENERGY RATINGS AS APPLICABLE.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND ACCESSORIES TO BE READILY ACCESSIBLE FOR SERVICING, TESTING, BALANCING, AND REPLACEMENT.
- THE CONTRACTOR SHALL PROVIDE A WRITTEN GUARANTEE AGAINST DEFECTS IN ALL MATERIALS AND WORKMANSHIP FOR ONE YEAR FROM ACCEPTANCE, WITH FOUR ADDITIONAL YEARS OF WARRANTY ON COMPRESSORS.
- THE CONTRACTOR SHALL PROVIDE THREE COPIES OF SUBMITTAL DATA SHOP DRAWINGS, AND AT COMPLETION OF THE PROJECT TWO SETS OF OPERATION AND MAINTENANCE MANUALS FOR ALL PROJECT ITEMS.
- PROVIDE ALL CONTROLS, STARTERS, CONTROL WIRING, DISCONNECTS AND OTHER ELECTRICAL EQUIPMENT AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
- THE HVAC CONTRACTOR IS RESPONSIBLE FOR MAINTAINING, ON SITE A READIED, AS-BUILT, BUILDING PLANS. COMPLETE INSTALLATION OF THE CONTRACTOR IS TO PROVIDE A NEATLY DRAWN COMPREHENSIVE AS-BUILT SET OF PLANS UPON COMPLETION, WHICH ARE SUITABLE FOR SUBMISSION TO THE BUILDING DEPARTMENT AND TO THE OWNER.
- PRIOR TO ACCEPTANCE BY THE OWNER THE SYSTEMS SHALL BE TESTED AND BALANCED BY AN INDEPENDENT A/C OR NEB CERTIFIED TEST & BALANCE FIRM, AND A TYPED WRITTEN COMPREHENSIVE REPORT SUBMITTED.
- SUPPLY AND INSTALL DUCT MOUNTED SMOKE DETECTORS AS REQUIRED.
- COORDINATE LOCATION OF CEILING DIFFUSERS, GRILLES AND REGISTERS IN THE FIELD WITH LIGHTS AND ARCHITECTURAL ELEMENTS.
- ALL GRILLES TO BE TITUS OR METALARE UNLESS OTHERWISE NOTED. SIZES AS SHOWN ON PLANS, ALUMINUM CONSTRUCTION.
- ALL DUCT WORK SHALL BE BUILT AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS AND LOCAL BUILDING CODES.
- ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
- ALL OUTSIDE AIR DUCTWORK SHALL BE SHEETMETAL WITH EXTERIOR R-6 INSULATION. PROVIDE BLANKET TYPE INSULATION IN CONCEALED SPACES, AND BOARD TYPE IN EXPOSED AREAS.
- ALL EXHAUST AIR DUCT SHALL BE GALVANIZED SHEET METAL CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.
- FLEXIBLE DUCT, WHERE SHOWN, SHALL BE U.L. CLASS 1, R-6 INSULATION, LOW PRESSURE SUPPLY AND RETURN RECTANGULAR DUCTWORK IS RIGID DUCTBOARD, 1 IN. THICK, R-4.2 INSULATION.
- PROVIDE ELBOW TURNING VANES IN ALL RECTANGULAR DUCTS WHERE TURNS ARE GREATER THAN 45 DEGREES.
- PROVIDE BACKDRAFT DAMPERS FOR ALL EXHAUST FANS.
- VERIFY ALL THERMOSTAT LOCATIONS WITH THE LANDLORD.
- CONDENSATE DRAIN PIPING SHALL BE ABOVE GRADE COPPER DRAIN, WASTE OR GREASE TRAP, WITH A MINIMUM 1/4" DRAINAGE SLOPE. PROVIDE W/3/4" JACK W/LOOKLOCK PIPE INSULATION.
- CONDENSER WATER SUPPLY AND RETURN PIPING SHALL BE TYPE "C" COPPER. PROVIDE FLEXIBLE CONNECTIONS AT ALL HANGERS AND SUPPORTS.
- CONDENSER WATER SUPPLY AND RETURN PIPING SHALL BE TYPE "C" COPPER. PROVIDE ISOLATOR PADS AT ALL HANGERS AND SUPPORTS.

GENERAL DEMOLITION NOTES:

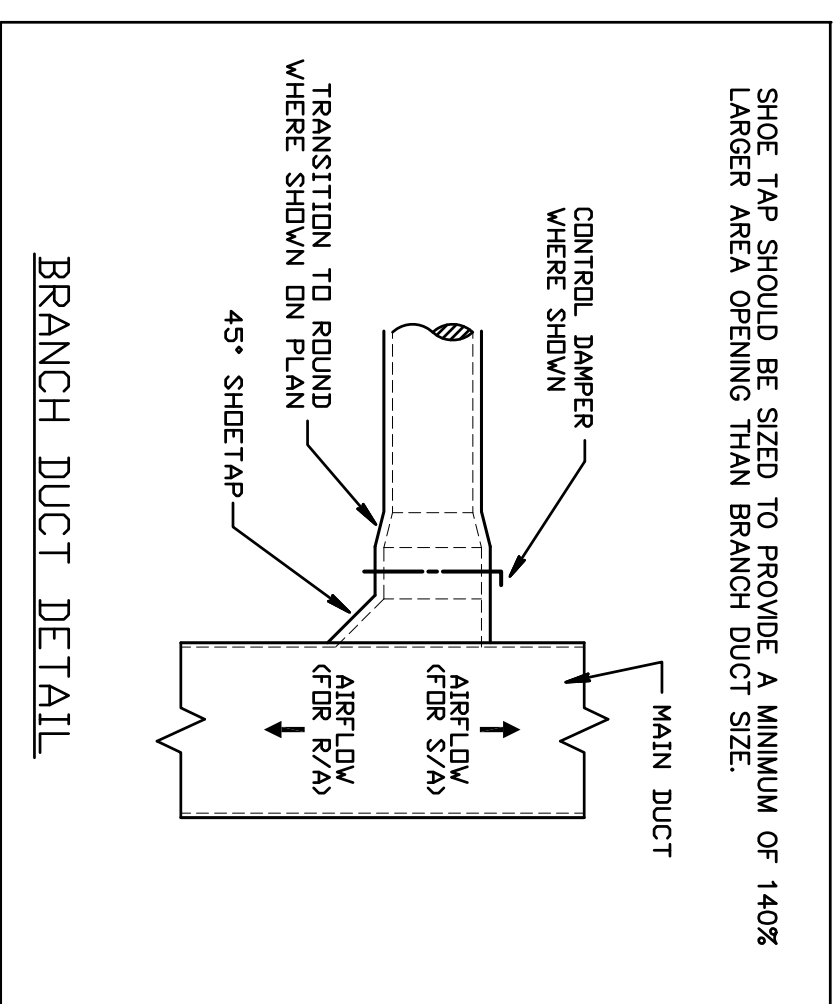
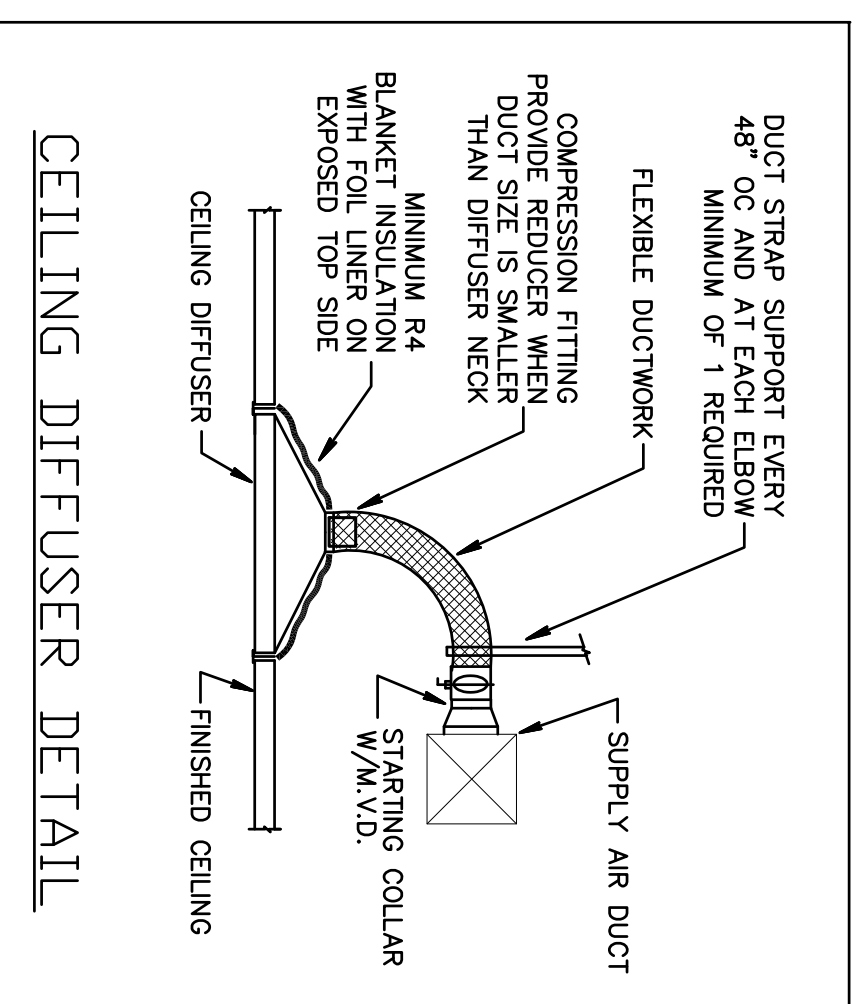
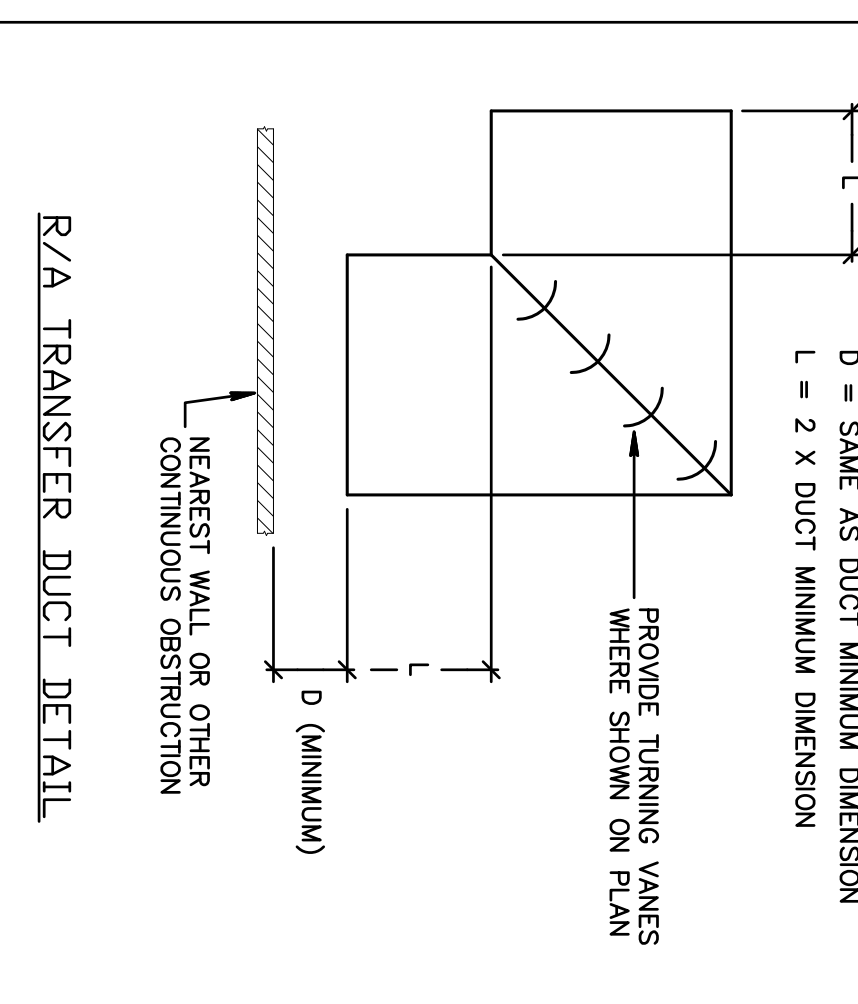
- UNLESS OTHERWISE NOTED, ALL EQUIPMENT AND DUCTWORK IN THE PROJECT AREA WHICH IS NOT INDICATED TO REMAIN, IS TO BE REMOVED. THE CONTRACTOR SHALL INVESTIGATE THE PROJECT AREA PRIOR TO BID TO DETERMINE ALL REQUIRED DEMOLITION.
- EXISTING CONDITIONS SHOWN ON THIS DRAWING ARE TAKEN FROM ORIGINAL DRAWINGS AND FIELD INVESTIGATION. ALL EXISTING CONDITIONS MUST BE VERIFIED PRIOR TO BID. FIELD CONDITIONS SHALL GOVERN.
- DEMOLITION WORK IS NOT SPECIFICALLY IDENTIFIED ON THESE PLANS, AND MAY BE DESCRIBED ON THE ARCHITECTS PLANS. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED DEMOLITION WHETHER SHOWN ON THE PLANS OR NOT.
- ALL MECHANICAL SYSTEMS SERVING OTHER SPACES OR FLOORS THAT RUN THROUGH THE PROJECT AREA SHALL REMAIN ACTIVE DURING CONSTRUCTION, SO AS NOT TO CAUSE ANY DISRUPTION TO THESE OTHER SPACES.
- ALL ITEMS REMOVED UNDER THIS PROJECT SHALL BE DISPOSED OF OR TURNED OVER TO THE OWNER AT THE OWNER'S DISCRETION.
- PROPERLY REMOVE AND DISPOSE OF ALL HVAC DUCTWORK AND AIR DISTRIBUTION DEVICES WHICH ARE TO BE REMOVED. CONSULT WITH OWNER AND OBTAIN THE OWNER'S APPROVAL PRIOR TO DISPOSAL OF REMOVED MATERIAL.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL PIPING AND DUCTS, NEW OR EXISTING, WITHIN THE PROJECT AREA, ARE PROPERLY SUPPORTED.
- ALL OCCUPIED SPACES ARE TO REMAIN OPERATIONAL DURING BUSINESS HOURS THROUGHOUT THE DEMOLITION AND CONSTRUCTION PERIOD. COORDINATE ALL WORK AS DESCRIBED IN THE ARCHITECTS DOCUMENTS.

AIR DISTRIBUTION SCHEDULE

MARK	MAKE	MODEL	SIZE	NECK	MATERIAL	BORDER TYPE	MOUNTING TYPE	DAMPER	THROW	FINISH	REMARKS
A1	TTUS	PAR-AA	12X12	6"	ALUMINUM	1	SURFACE	AG-100	4 WAY	WHITE	SEE NOTES
A	TTUS	PAR-AA	24X24	6"	ALUMINUM	3	LAY-IN	AG-100	4 WAY	WHITE	SEE NOTES
B	TTUS	PAR-AA	24X24	8"	ALUMINUM	3	LAY-IN	AG-100	4 WAY	WHITE	SEE NOTES
C	TTUS	PAR-AA	24X24	10"	ALUMINUM	3	LAY-IN	AG-100	4 WAY	WHITE	SEE NOTES
RA	TTUS	PAR-AA	24X24	22X22	ALUMINUM	3	LAY-IN	-	-	WHITE	SEE NOTES
RB	TTUS	4F	8X8	-	ALUMINUM	1	SURFACE	-	-	WHITE	SEE NOTES

PROVIDE ROUND FLEXIBLE DUCT RUN-OUT SIZED TO MATCH S/A DIFFUSER NECK UNLESS NOTED OTHERWISE. PROVIDE PLENUM BOX ABOVE RETURN AIR GRILLES AS REQUIRED FOR DUCT CONNECTIONS. MINIMUM BOX HEIGHT IS 4 INCHES. PROVIDE DAMPERS ONLY WHERE DUCT TAKE-OFF DAMPER IS NOT ACCESSIBLE.

D = SAME AS DUCT MINIMUM DIMENSION
L = 2 X DUCT MINIMUM DIMENSION



ALL EXISTING GRILLES AND DIFFUSERS ARE TO BE REMOVED AND RETURNED TO LANDLORD. EXISTING FLEXIBLE DUCTS MAY BE RE-CONNECTED TO NEW GRILLES WHERE SIZE AND LENGTH MATCH REQUIREMENTS SHOWN FOR NEW EQUIPMENT

ABBREVIATIONS

HP	HEAT PUMP
WATER SOURCE TYPE	
S/A	SUPPLY AIR
R/A	RETURN AIR
O/A	OUTSIDE AIR
E/A	EXHAUST AIR
CFM	CUBIC FEET PER MINUTE
M/D	MANUAL VOLUME DAMPER (OPPOSED BLADE TYPE)
FD	FIRE DAMPER
E	EXISTING TO REMAIN
R	RE-LOCATED AS SHOWN

SYMBOL LEGEND

- HEAT PUMP A/C UNIT AS NOTED
- EXISTING EQUIPMENT AS NOTED
- SUPPLY AIR DIFFUSER AS NOTED
- RETURN/TRANSFER GRILLE AS NOTED
- DUCTWORK AS NOTED
- EXISTING DUCTWORK TO REMAIN
- DUCT TRANSITION
- GRANTY BACKDRAFT DAMPER
- MANUAL VOLUME DAMPER
- THERMOSTAT AS NOTED
- FLEXIBLE DUCT, U.L. CLASS 1
- CONNECTION TO EXISTING EQUIPMENT
- TAKE-OFF WITH VOLUME DAMPER FOR FLEXIBLE DUCT
- DUCT SMOKE DETECTOR WITH AUDIBLE & VISUAL ALARMS

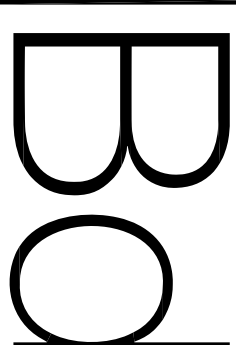
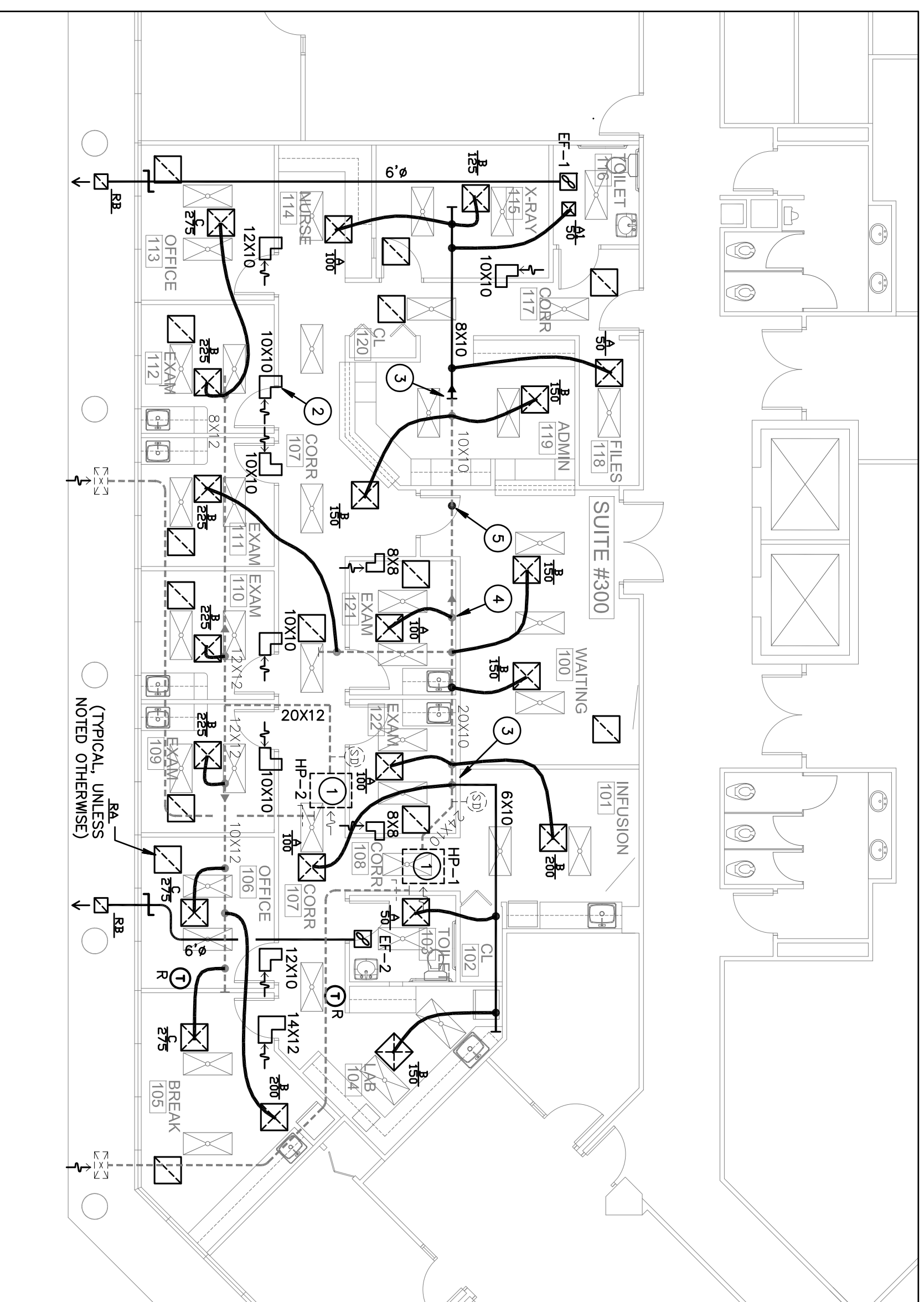
OUTSIDE AIR CALCULATIONS

ZONE TYPE	RECEPTION	HP-1	HP-2
OFFICE	480	1030	196
CORRIDOR	0.06	0.06	0.06
TOILET	0.06	0.06	0.06
SQUARE FEET OF AREA	266	480	1030
CFM/50AFT. REQUIRED	0.06	0.06	0.06
TOTAL OCCUPANTS	8	6	5
CFM/PERSON REQUIRED	5	5	5
ZONE CFM	56	29	37
SYSTEM CFM			177

ABOVE PER ASHRAE 62.1, 2007

PLAN KEYNOTES:

- EXISTING 4 TON HEAT PUMP A/C UNIT TO REMAIN. RE-BALANCE S/A AND O/A QUANTITIES AS INDICATED.
- RETURN AIR TRANSFER DUCT ABOVE CEILING (TYPICAL)
- CONNECT NEW S/A DUCTS TO EXISTING S/A DUCT.
- EXISTING FLEXIBLE DUCT TAKE-OFFS MAY BE RE-USED WHERE SIZE MATCHES DIFFUSER NECK. FIELD VERIFY.
- CAP AND SEAL ANY UNUSED FLEXIBLE DUCT TAKE-OFFS.



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PROJECT NUMBER 710831

REVISIONS

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DRAWN BY GD

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