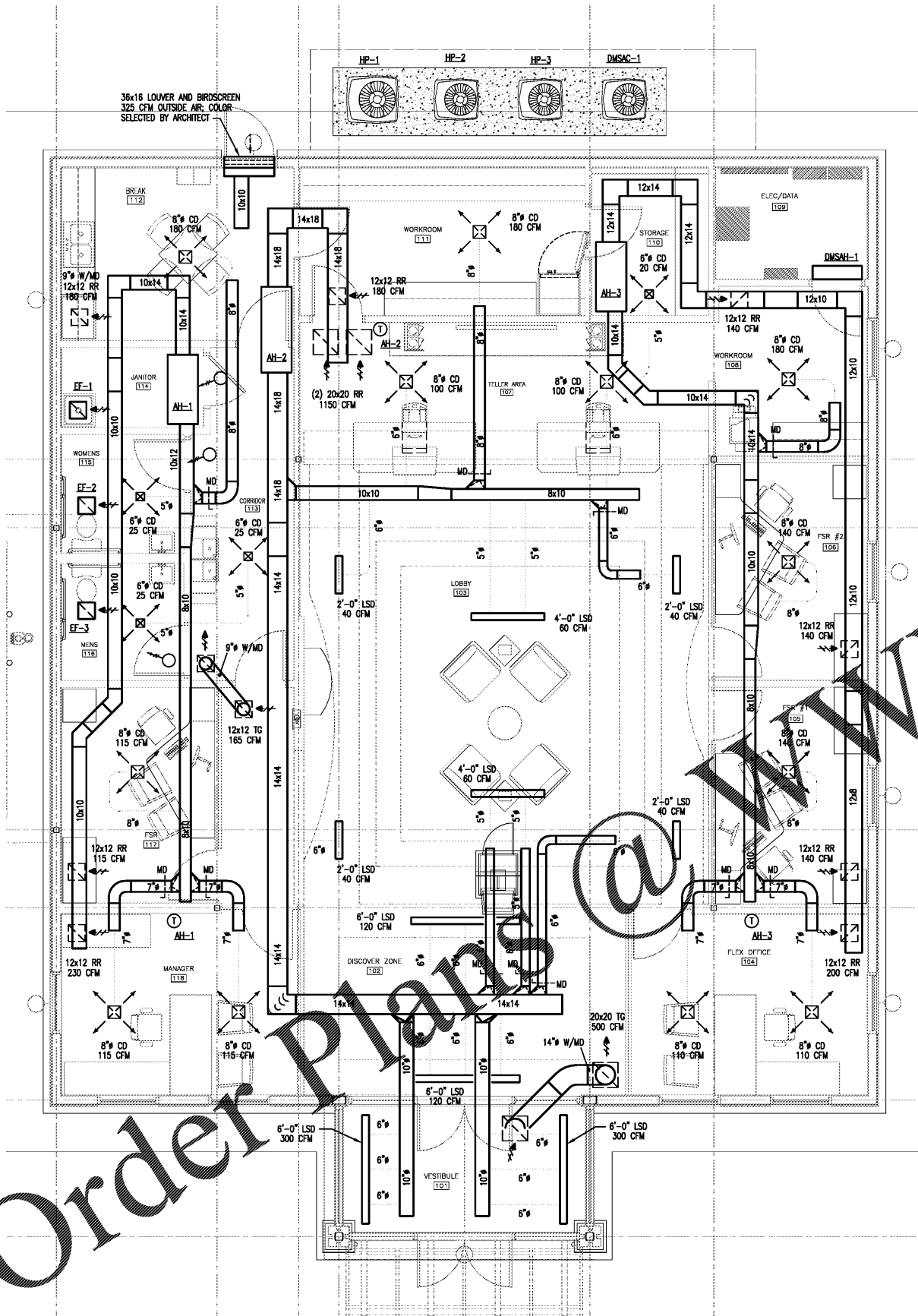


Order Plans @ JPE



MECHANICAL PLAN

Scale 1/4" = 1'-0"

AIR HANDLER SCHEDULE												
UNIT NO.	SUPPLY AIR CFM	APPROX. E.S.P. W.G.	FAN H.P.	COOLING ENT AIR TEMP	COOLING LGV AIR TEMP	O.A. CFM	OUTDOOR TEMP-COOLING	NW ELEC. HEAT (240 V)	MCA	MOCP	VOLT/PHASE	REMARKS
AH-1, 3	700	0.40	1/4	76.9°FDB/64.2°FWB	55.1°FDB/54.2°FWB	80	95°FDB/79°FWB	4.80 KW	27	30	240V/1Ø	1, 2, 3, 5
AH-2	1500	0.50	3/4	76.7°FDB/64.8°FWB	56.7°FDB/54.4°FWB	170	95°FDB/79°FWB	7.68 KW	48	50	240V/1Ø	1, 2, 3, 5
DMSAH-1	420	-	-	80°FDB/67°FWB	54.3°FDB/53.7°FWB	-	95°FDB/79°FWB	-	1.0	-	208-230V/1Ø	4, 5

REMARKS

- UNIT SHALL BE WIRED FOR SINGLE POINT CONNECTION. AIR HANDLER MOTOR SHALL HAVE RAMPING CAPABILITY AND/OR ECM MOTOR FOR VARIABLE AIRFLOW.
- PROVIDE 8" OUTSIDE AIR DUCT WITH 24" MOTORIZED DAMPER AND MANUAL BALANCING DAMPER FROM 10x10 O.A. DUCT AND LOUVER TO UNIT INTAKE.
- PROVIDE AUXILIARY DRAIN PAN WITH FLOAT SWITCH UNDERNEATH AIR HANDLER. ROUTE PRIMARY DRAIN TO SPILL OUTSIDE IN GREEN AREA(S).
- UNIT EQUAL TO MITSUBISHI MSY-GL24NA WITH INTEGRAL CONDENSATE PUMP. AIR HANDLER TO RECEIVE POWER THRU OUTDOOR UNIT; THIS CONTRACTOR TO PROVIDE AND INSTALL POWER CABLING. ROUTE CONDENSATE DRAIN TO SPILL OUTSIDE IN GREEN AREA.
- ROUTE REFRIGERANT LINES TO ENTER BUILDING THRU EXTERIOR WALL AT STORAGE ROOM 110. ROUTE CONDENSATE DRAIN LINES TO SPILL OUTSIDE IN UNPAVED AREAS. WHERE CONDENSATE DRAINS PENETRATE AN EXTERIOR WALL, THAT PENETRATION AND DOWNTURN ELBOW SHALL BE 3/4" COPPER.

AIR COOLED CONDENSING UNIT SCHEDULE												
UNIT NO.	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	LATENT COOLING (MBH)	HEAT PUMP HEATING (MBH)	SEER	OUTDOOR TEMP-COOLING (TDB/FWB)	FLA	MCA	MOCP	VOLT/PHASE	REMARKS	
HP-1, 3	17.3	13.9	3.40	11.4	14.0	95°FDB/79°FWB	9.50	12.0	20	208-230V/1		
HP-2	44.6	32.0	12.6	30.1	14.0	95°FDB/79°FWB	19.7	26.0	45	208-230V/1	1	
DMSAH-1	22.5	16.9	5.6	-	20.5	95°FDB/79°FWB	13.8	7.1	20	208-230V/1	2	

REMARKS

- PROVIDE UNIT WITH ANTI-SHORT-CYCLE TIMER, TXV VALVE, LOW AMBIENT COOLING, EVAPORATOR DEFROST, 2-STAGE COOLING/HEATING.
- UNIT EQUAL TO MITSUBISHI MUY-GL24NA. AIR HANDLER TO RECEIVE POWER THRU OUTDOOR UNIT; THIS CONTRACTOR TO PROVIDE AND INSTALL POWER CABLING.

VENTILATION FAN SCHEDULE												
MARK	CFM	% W.G.	MIN. FLOW	VOLTAGE PHASE	MAX. RPM	MAX. SONES	FAN TYPE	DRIVE TYPE	EQUAL TO GREENCHECK	CONTROL OR INTERLOCK	NOTES	
EF-1	75	0.5	17 W	120/1	870	0.4	CENTRIF.	DIRECT	SP-ABO	LIGHT SWITCH	1, 2, 3	
EF-2	75	0.5	17 W	120/1	870	0.4	CENTRIF.	DIRECT	SP-ABO	MOTION SENSOR	1, 2, 3	
EF-3	75	0.5	17 W	120/1	870	0.4	CENTRIF.	DIRECT	SP-ABO	MOTION SENSOR	1, 2, 3	

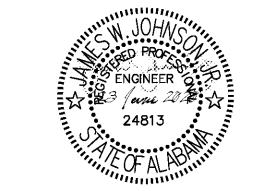
REMARKS

- PROVIDE BACKDRAFT DAMPER, DISCONNECT, THERMAL OVERLOAD PROTECTION, ISOLATION KIT, MOUNTED FAN SPEED CONTROLLER.
- MOTION SENSOR SHALL HAVE OVERRIDE CONTROL.
- DISCHARGE EXHAUST DUCT THROUGH EXHAUST LOUVER IN EXTERIOR WALL.

- GENERAL MECHANICAL NOTES
- FURNISH ALL LABOR, EQUIPMENT, AND MATERIALS TO PROVIDE A COMPLETE MECHANICAL SYSTEM. DUE TO THE SCHEMATIC NATURE OF THESE PLANS, THE CONTRACTOR SHALL FIELD-VERIFY LOCATIONS FOR EQUIPMENT DUCTWORK, AND ACCESSORIES. IN ADDITION, THIS WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICTS. THE CONTRACTOR SHALL ALSO REVIEW THE STRUCTURAL DRAWINGS BEFORE FABRICATING AND INSTALLING DUCTWORK OR EQUIPMENT.
 - ALL WORK SHALL BE PERFORMED BY SKILLED AND EXPERIENCED WORKMEN. WORK SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL CODES. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED PERMITS, LICENSES, AND INSPECTIONS.
 - ALL MATERIALS SHALL BE NEW AND WITHOUT DEFECTS. SUBMIT SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT. ALL WORK DONE BY THIS CONTRACTOR SHALL BE WARRANTED FOR ONE YEAR FROM THE TIME THE OWNER GIVES ACCEPTANCE OR GAINS BENEFICIAL USE, WHICHEVER IS FIRST. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
 - DUCT SIZES ON DRAWINGS ARE INSIDE CLEAR DIMENSIONS. DUCT SHALL BE OF LOW-PRESSURE (2.0" w.g.) CONSTRUCTION AS CLASSIFIED BY SMARNA UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL USE MINIMUM 2" EXTERNAL WRAP (MINIMUM R-6.0). LINER MAY ONLY BE USED WHERE REQUIRED FOR SOUND ATTENUATION. DUCTBOARD SHALL NOT BE USED.
 - FLEXIBLE DUCT MAY BE INSTALLED ONLY WHERE SHOWN ON THE DRAWINGS. DUCT SHALL BE EXTERNALLY-INSULATED CORRUGATED METAL WITH A MAXIMUM LENGTH OF 6'-0". FOR TAKE-OFFS LONGER THAN 6'-0", THE REMAINDER OF THE DISTANCE SHALL BE EXTERNALLY-WRAPPED SINGLE-WALL ROUND DUCT WITH A SPIN-IN STYLE TAP AT THE MAIN DUCT.
 - HANGERS FOR EQUIPMENT AND PIPING SHALL BE SECURED TO THE BUILDING STRUCTURE. NO HANGERS SHALL BE ATTACHED TO THE FLOOR OR ROOF DECK MATERIAL, OR CONCRETE DECKS LESS THAN 4" THICK.
 - ALL RETURN AND EXHAUST GRILLES SHALL HAVE OPPOSED-BLADE DAMPERS. ALL SUPPLY-SIDE TAKE-OFFS SHALL HAVE A BALANCING DAMPER.
 - FIRE DAMPERS AND FIRE-STOPPING SHALL BE PROVIDED FOR ANY PENETRATIONS OF FIRE-RATED PARTITIONS. VERIFY LOCATIONS OF ALL FIRE-STOPPING ON THE ARCHITECTURAL DRAWINGS.
 - ALL GRILLES AND REGISTERS SHALL BE EQUAL TO TITUS WITH ALUMINUM CONSTRUCTION. SUPPLY GRILLES SHALL BE EQUAL TO MODEL 100. SUPPLY REGISTERS SHALL BE EQUAL TO MODEL 301. RETURN, EXHAUST AND TRANSFER GRILLES SHALL BE EQUAL TO MODEL 355 WITH OPPOSED-BLADE DAMPERS. GRILLE FINISH SHALL BE APPROVED BY THE OWNER AND THE ARCHITECT.
 - EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE ABLE TO PROVIDE THE REQUIRED CAPACITIES IN THE MIDDLE OF ITS PERFORMANCE RANGE. ALL COMPRESSORS SHALL HAVE A MINIMUM 5-YEAR WARRANTY UNLESS OTHERWISE NOTED. THE EQUIPMENT SHALL HAVE ALL THE NECESSARY CONTROLS AND ACCESSORIES TO ALLOW FOR FULL OPERATION. IF EQUIPMENT HAS COMPONENTS OF A VIBRATIVE NATURE, THE CONTRACTOR SHALL PROVIDE THE NECESSARY VIBRATION CONTROLS.
 - REFRIGERANT PIPING SHALL BE HARD-DRAWN TYPE K OR L COPPER WITH COPPER SOLDER FITTINGS. PIPING SHALL BE SOLDERED WITH SILVER SOLDER AND INSULATED WITH 1/2" THICK THERMAL TUBULAR JACKETING. SEAL INSULATION JOINTS WITH TAPE AND CEMENT OR PER MANUFACTURER'S INSTRUCTIONS. PRE-INSULATED AND PRE-CHARGED REFRIGERANT LINES MAY BE USED AS PROVIDED BY THE EQUIPMENT MANUFACTURER. WHERE INSULATION IS EXPOSED TO WEATHER PROTECT LINES WITH AN ALUMINUM COVER AND PAINT TO MATCH EXTERIOR FINISH.
 - CONDENSATE DRAINS SHALL BE FULL-SIZE (1" MINIMUM) COPPER OR SCHEDULE 40 PVC. DRAINS SHALL BE INSTALLED IN THE SAME MANNER AS REFRIGERANT LINES. DISCHARGE AS SHOWN ON THE DRAWINGS.
 - CONTROLS SHALL BE EQUAL TO MANUFACTURER'S CONTROLS. OUTDOOR UNITS SHALL HAVE FACTORY-WIRED TIME DELAYS, PRESSURE SWITCHES, LOW-AMBIENT CONTROLS AND DEFROST CONTROLS. THERMOSTATS SHALL BE DIGITAL AND PROGRAMMABLE WITH BATTERY BACK-UP. SETPOINTS SHALL FOLLOW DESIGN CONDITIONS OR BE AS DIRECTED BY THE OWNER. MOUNT ALL THERMOSTATS AND TEMPERATURE SENSORS 60" A.F.F.
 - THE HVAC SYSTEM SHALL BE TESTED AND BALANCED ACCORDING TO ASHRAE STANDARDS. THE CONTRACTOR SHALL PROVIDE THE ARCHITECT WITH A COPY OF THE TEST AND BALANCE REPORT AND THE OWNER WITH A LETTER STATING THAT THE SYSTEM(S) HAVE BEEN BALANCED TO WITHIN 10% OF DESIGN PARAMETERS.

MECHANICAL LEGEND

MARK	DESCRIPTION
CFM	CUBIC FEET PER MINUTE
AH/HP	AIR HANDLER/HEAT PUMP
CD	SUPPLY DIFFUSER (TITUS TDCA-AA)
RR	RETURN REGISTER (TITUS 355FL)
LSD	LINEAR SLOT DIFFUSER W/PLENUM (TITUS ML39)
TG	TRANSFER GRILLE (TITUS 25FL)
OA	OUTSIDE AIR
⊕	THERMOSTAT/SENSOR
⊙	SMOKE DETECTOR
↔	RETURN OR EXHAUST AIR
→	SUPPLY AIR
○	3/4" DOOR UNDERCUT
○	ROUND
○	FLEXIBLE DUCTWORK
↔	TURNING VANES IN DUCT
MD	MANUAL DAMPER
⊕	SUPPLY OR OUTSIDE AIR DUCT IN SECTION
⊕	RETURN OR EXHAUST AIR DUCT IN SECTION
W x H	DUCT SIZE (FIRST DIMENSION AS VIEWED)
⊕	CEILING TYPE AIR DIFFUSER RECTANGULAR 4-WAY SHOWN
⊕	CEILING EXHAUST OR RETURN AIR REGISTER



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RELEASES / DESCRIPTION / DATES

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