



LATHAN · McKEE
ARCHITECTS

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ADDENDUM NO. 4
NEW BUS SHOP FOR BLOUNT COUNTY SCHOOLS
Architect Job No. 25-46
March 16, 2026
DCM #2026084

BIDS DUE:

Thursday, March 19, 2026, until
3:30 p.m., local time, held at
Blount County Board of Education
415 5th Ave. E.
Oneonta, AL 35121

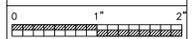
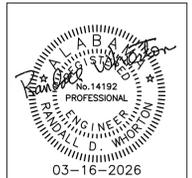
The Plans and Specifications are here by amended. The following supersedes all contrary and/or conflicting information and is made part of the contract documents.

DRAWINGS

1. **See Sheets M1.1, M1.2, M1.3 and M3.1.**
Add supply fan (SF-1), exhaust fan (EF-6), louvers (L-5 & L-6, carbon monoxide detectors, associated duct, details, etc. as indicated by the revisions clouded on the attached sheets for pit ventilation.
2. **See Sheet E4.1**
The clouded revisions pick up the power being added for the new supply and exhaust fans in the pit.

CLARIFICATIONS

1. **Fire Protection: Reference Sheet SP1.1**
Sprinkler system monitoring: Contractor shall provide and install all equipment for fire sprinkler system to be monitored by an approved supervising station. Coordinate with the owner as required.
2. **Fire Protection: Reference Sheet SP1.2**
Sprinkler piping feeding pit shall route down by new "blue duct" and go underground to pit. Piping in Pit may be exposed along pit wall.



HVAC NOTES

- 1 ALL DUCT DIMENSIONS SHOWN ARE NET INTERNAL.
- 2 WHERE BALANCING DAMPERS ARE LOCATED ABOVE HARD CEILING OR AREAS NOT ACCESSIBLE, THE CONTRACTOR SHALL FURNISH AND INSTALL GREENHECK, OR APPROVED EQUAL, ROUND OR RECTANGULAR REMOTE BALANCING DAMPER. CONTRACTOR SHALL FURNISH AND INSTALL "EZ BALANCE" HAND HELD REMOTE EQUIPPED WITH 9 VOLT POWER SUPPLY TO OPERATE THE DAMPER ACTUATOR WHEN CONNECTED TO THE DIFFUSER CONNECTOR OR WALL/CEILING PLATE. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

WHERE BRANCH RUNOUTS OR SPIN-IN ARE LOCATED ABOVE AN ACCESSIBLE CEILING, MANUAL DAMPERS ARE ACCEPTABLE.

ALL NEW DIFFUSERS/GRILLES SHALL HAVE FACE OPERABLE DAMPERS.
- 3 THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT A COMPLETE HVAC SYSTEM BE PROVIDED WITH ALL NECESSARY EQUIPMENT, APPURTENANCES, AND CONTROLS, COMPLETELY COORDINATED WITH ALL DISCIPLINES. ALL REQUIREMENTS OF THESE DOCUMENTS SHALL BE STRICTLY CONFORMED WITH. ANY ITEMS AND LABOR REQUIRED FOR A COMPLETE HVAC SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS, AND THESE CONTRACT DOCUMENTS SHALL BE FURNISHED WITHOUT INCURRING ANY ADDITIONAL COST TO THE CONTRACT. CAREFULLY REVIEW ALL CONTRACT DOCUMENTS AND THE DESIGN OF OTHER TRADES BEFORE PREPARING SHOP DRAWINGS.
- 4 COORDINATE DUCTWORK AND PIPING WITH STRUCTURAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL. MAKE OFFSETS AND TRANSITIONS AS REQUIRED TO CLEAR STRUCTURAL MEMBERS, ETC. COORDINATE WITH OTHER TRADES WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
- 5 REFER TO ARCHITECTURAL CEILING PLANS FOR EXACT LOCATION OF ALL CEILING MOUNTED AIR DISTRIBUTION DEVICES; COORDINATE EXACT LOCATION OF GRILLES, REGISTERS, AND DIFFUSERS WITH ARCHITECTURAL AND INTERIOR REFLECTED CEILING PLANS AND LIGHTING FIXTURES. FOR PARTICULAR ITEMS NOT SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLAN, PREPARE A DRAWING AND PRESENT IT TO THE ARCHITECT FOR REVIEW AND/OR APPROVAL.
- 6 COORDINATE ALL ROOF AND SLAB PENETRATIONS WITH THE STRUCTURAL ENGINEER. TRANSITIONS RECTANGULAR DUCTWORK ON THE BOTTOM AND THE SIDES. MAINTAIN DUCTWORK LEVEL AS HIGH AS POSSIBLE UNLESS NOTED OTHERWISE.
- 7 THE HVAC CONTRACTOR IS TO REVIEW THE ENTIRE SET OF PLANS FOR COORDINATION WITH OTHER TRADES. SHOP DRAWINGS WITH ALL TRADES COORDINATED WILL BE REQUIRED.
- 8 THE HVAC CONTRACTOR SHALL REVIEW THE ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL RATED WALLS, CEILINGS, FLOORS, ETC. THE HVAC CONTRACTOR SHALL FURNISH AND INSTALL FIRE OR FIRE/SMOKE DAMPERS IN ALL RATED LOCATIONS WHETHER SHOWN ON THE MECHANICAL PLANS OR NOT.
- 9 CONTRACTOR SHALL COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING.
- 10 ALL THREE PHASE EQUIPMENT SHALL BE EQUIPPED WITH PHASE LOSS PROTECTION.
- 11 ALL MOTOR STARTERS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR.
- 12 CONTRACTOR TO COORDINATE ALL CEILING TYPES WITH DIFFUSERS. ALL DIFFUSERS IN GYPSUM CEILING SHALL INCLUDE PLASTER FRAME.
- 13 INSULATE TOP SIDE/BACK OF ALL DIFFUSERS/GRILLES, ETC.
- 14 CONDENSATE DRAIN PIPING SHALL BE SLOPED A MINIMUM OF 1/8" PER FOOT AND SHALL BE SIZED PER TABLE 307.2.2 IN THE 2021 INTERNATIONAL MECHANICAL CODE UNLESS SHOWN LARGER ON PLANS.
- 15 ALL 3/4" AND 1" CONDENSATE DRAIN TRAPS SHALL BE EZ-TRAP OR APPROVED EQUAL WITH FLOAT SWITCH.
- 16 INSTALL AUXILIARY DRAIN PAN UNDER ALL UNITS MOUNTED IN ATTIC, ABOVE CEILINGS, ETC. INSTALL FLOAT SWITCH FOR UNIT SHUT DOWN IN AUXILIARY DRAIN PAN.
- 17 REFERENCE PLUMBING PLANS FOR CONDENSATE PIPING. IF CONDENSATE DRAINS ARE NOT SHOWN ON THE PLUMBING PLANS, ALL CONDENSATE DRAINS SHALL BE FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR.
- 18 VERIFY WITH THE ARCHITECTURAL DRAWINGS, SIZE, LOCATION, AND MOUNTING HEIGHT OF ALL LOUVERS. VERIFY COLOR AND FINISH WITH ARCHITECT.
- 19 ALL THERMOSTATS TO BE AUTOMATIC CHANGE OVER TYPE AND SHALL INCLUDE LOCKING THERMOSTAT COVERS.
- 20 ALL THERMOSTATS TO BE MOUNTED 4'-0" A.F.F. TO HIGHEST OPERABLE CONTROL UNLESS OTHERWISE INDICATED.
- 21 ALL REFRIGERANT LINES SHALL BE SIZED/APPROVED BY THE EQUIPMENT VENDOR/COMPRESSOR MANUFACTURER. ALL REFRIGERANT LINES SHALL BE INSTALLED USING INSULATED LINE CLAMPS.
- 22 ALL EXTERIOR EXPOSED ARMAFLEX INSULATION SHALL BE ARMAFLEX SHIELD WITH UV RESISTANT COATING.
- 23 PORTIONS OF DUCTWORK VISIBLE THROUGH GRILLES, REGISTERS, AND DIFFUSERS IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK.
- 24 FLEXIBLE DUCT (SUPPLY RUNOUTS ONLY) SHALL NOT EXCEED 6'-0" IN LENGTH.
- 25 DUCTWORK SHALL BE INSULATED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:
RECTANGULAR SUPPLY: 1" INTERNAL ROUND SUPPLY; 1-1/2" EXTERNAL FLEXIBLE SUPPLY; 1" PRE INSULATED RECTANGULAR RETURN; 1" INTERNAL OSA/EXHAUST; 1-1/2" EXTERNAL
- 26 DUCTWORK SHALL BE GALVANIZED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
- 27 ROUND DUCT SHALL BE INSULATED WITH DUCT WRAP EQUAL TO CERTAINTED SOFT TOUCH DUCT WRAP WITH FSK VAPOR RETARDER FACING TYPE 75 WITH MINIMUM INSTALLED R-VALUE 4.2. ROUND DUCTS LOCATED WITHIN THE ATTIC SHALL BE INSULATED WITH DUCT WRAP EQUAL TO CERTAINTED SOFT TOUCH DUCT WRAP WITH FSK VAPOR RETARDER FACING TYPE 100 WITH MINIMUM INSTALLED R-VALUE 6.0
- 28 ALL OPEN ENDED DUCT SHALL BE CAPPED WITH 1/2"x1/2" WIRE MESH.
- 29 ALL EXPOSED DUCT SHALL BE INSULATED INTERNALLY WITH 1" DUCT LINER EQUAL TO CERTAINTED T62 DUCT LINER WITH MINIMUM INSTALLED R-VALUE 4.0.
- 30 ALL EXPOSED DUCT SHALL BE PAINTED. DUCT SHALL BE "PAINT GRIP". COORDINATE PAINT COLOR WITH ARCHITECT.
- 31 DUCT LINER FOR RECTANGULAR DUCTS SHALL BE EQUAL TO CERTAINTED T62 DUCT LINER WITH A MINIMUM R-VALUE OF 4.0. RECTANGULAR DUCTS LOCATED WITHIN THE ATTIC SHALL BE LINED WITH DUCT LINER EQUAL TO CERTAINTED T62 DUCT LINER WITH A MINIMUM R-VALUE OF 4.0 AND WRAPPED EXTERNALLY WITH DUCT WRAP EQUAL TO CERTAINTED SOFT TOUCH DUCT WRAP WITH FSK VAPOR RETARDER FACING TYPE 75 WITH A MINIMUM INSTALLED R-VALUE OF 4.2.
- 32 DUCTWORK AND PIPING SHALL NOT BE INSTALLED IN ELECTRICAL ROOMS, TELECOM ROOMS OR ELEVATOR EQUIPMENT ROOMS EXCEPT FOR DUCTWORK AND PIPING SERVING THAT SPECIFIC ROOM. DUCTWORK AND PIPING SHALL NOT BE ROUTED ABOVE ELECTRICAL EQUIPMENT PER THE NATIONAL ELECTRICAL CODE ARTICLE 110.
- 33 WARRANTIES SHALL BEGIN AT DATE OF SUBSTANTIAL COMPLETION. ALL COMPRESSORS SHALL INCLUDE MIN. OF FIVE YEAR WARRANTY. ONE YEAR WARRANTY FOR LABOR, PARTS, UNITS, ETC. IS REQUIRED FOR ALL EQUIPMENT.
- 34 INSTALL ANGLE COVER OVER CONDENSATE LINES, REFRIGERANT LINES, ETC. THAT CROSS MEZZANINE FLOOR WHERE TRIPPING MIGHT BE A HAZARD. PRIME AND PAINT ANGLE COVER SAFETY YELLOW COLOR.
- 35 CONTRACTOR SHALL ANCHOR OUTDOOR UNITS TO CONCRETE PAD IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION, WIND LOAD REQUIREMENTS, AND AS PER PLANS/SPECIFICATIONS. COORDINATE CONCRETE PAD SIZE, UNIT CLEARANCES, ETC. WITH STRUCTURAL AND ARCHITECTURAL PLANS, FRAMING, ETC.
- 36 THE CONTRACTOR SHALL INSTALL ANY CURB-MOUNTED EQUIPMENT IN SUCH A WAY THAT NO WATER LEAKAGE IS INTRODUCED INTO THE BUILDING.
- 37 MANUFACTURER/CONTRACTOR SHALL FURNISH AND INSTALL TORNADO/HURRICANE WIND CLIPS FOR CURB MOUNTED EQUIPMENT.
- 38 ALL INDOOR AND OUTDOOR UNITS SHALL BE LOCATED SO THAT MAINTENANCE CLEARANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND AS PER PLANS/SPECIFICATIONS ARE MAINTAINED. COORDINATE MAINTENANCE CLEARANCES WITH STRUCTURAL AND ARCHITECTURAL PLANS, FRAMING, ETC.
- 39 CARBON MONOXIDE/NITROGEN DIOXIDE SENSOR SHALL BE MACURCO MODEL CX-6 (OR APPROVED EQUAL).

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CEILING DIFFUSER - SUPPLY RECTANGULAR WITH ROUND NECK 4-WAY THROW UNLESS OTHERWISE INDICATED		MANUAL VOLUME DAMPER OPPOSED BLADE		STANDARD 90° RADIUS ELBOW
	CEILING DIFFUSER - RETURN RECTANGULAR WITH SQUARE NECK		LOW LEAKAGE MOTORIZED VOLUME DAMPER		STANDARD 45° RADIUS ELBOW
	SIDEWALL DIFFUSER - SUPPLY WITH MULTI-VANE DEFLECTOR		THERMOSTAT LOCATION		90° VANED ELBOW (PROVIDE ALL SQUARE OR RECTANGULAR ELBOWS WITH VANES EVEN IF SYMBOL IS MISSING)
	SIDEWALL DIFFUSER - RETURN WITH 30° FIXED DEFLECTION		HUMIDISTAT LOCATION		45° VANED ELBOW (PROVIDE ALL SQUARE OR RECTANGULAR ELBOWS WITH VANES EVEN IF SYMBOL IS MISSING)
XX-X XXX CFM	DIFFUSER TAG REFERENCE SCHEDULE FOR SIZING		CARBON MONOXIDE/NITROGEN DIOXIDE SENSOR LOCATION		VANED TEE (PROVIDE ALL SQUARE OR RECTANGULAR TEE'S WITH VANES EVEN IF SYMBOL IS MISSING)
	CEILING EXHAUST FAN		ELECTRIC UNIT HEATER WALL MOUNTED (RECESSED)		STANDARD DUCT SIZE TRANSITION
	NEW RECTANGULAR DUCT WIDTH X DEPTH		HVAC CONDENSATE DRAIN PIPING		STANDARD SQUARE TO ROUND TRANSITION
	NEW ROUND DUCT DIAMETER		HVAC REFRIGERANT LINE		

LOUVER SCHEDULE

MARK NO.	MOUNTING	SIZE W X H	BLADE ANGLE	BLADE CENTERS	MIN. FREE AREA	MINIMUM FREE AREA SQ. FT.	MAXIMUM PRESSURE DROP IN W.G.	CFM	MODEL NO. DATA		NOTES
									MANUFACTURER (OR APPROVED EQUAL)	MODEL NO.	
	SIDE WALL	56"x64"	45°	6"	41%	10.31	0.10	8,500	GREENHECK	EACC-601	1 2 3
	SIDE WALL	56"x64"	45°	6"	41%	10.31	0.10	8,500	GREENHECK	EACC-601	1 2 3
	SIDE WALL	56"x64"	45°	6"	41%	10.31	0.15	10,000	GREENHECK	EACC-601	1 2 3
	SIDE WALL	16"x8"	45°	3"	23%	0.20	0.10	125	GREENHECK	ESD-202	1 4
	SIDE WALL	16"x24"	37°	4"	44%	1.10	0.10	425	GREENHECK	ESD-635	1
	SIDE WALL	16"x24"	37°	4"	44%	1.10	0.10	425	GREENHECK	ESD-635	1

1 ALL LOUVERS TO INCLUDE FLANGE FRAME AND KYNAR FINISH. VERIFY FINAL COLOR AND FINISH WITH ARCHITECT. VERIFY QUANTITY WITH PLANS.
2 LOUVER L-1, L-2, AND L-3 TO INCLUDE MOTORIZED DAMPER CONCEALED IN EXTENDED LOUVER BASE. (SIZE SCHEDULED INCLUDES EXTENDED BASE. FREE AREA SCHEDULED IS ACTUAL FREE AREA WITH CONCEALED DAMPER).
3 LOUVER L-1, L-2, AND L-3 TO INCLUDE MILLER WIREWORKS HEAVY DUTY WIRE GYM GUARD.
4 LOUVER TO INCLUDE 2'-0" DEEP PLENUM BOX ON INTERIOR OF LOUVER. SIZE TO MATCH LOUVER SIZE.

APPROVED EQUALS: RUSKIN AND UNITED ENERTECH.

WALL MOUNTED ELECTRIC HEATER SCHEDULE

MARK NO.	NOMINAL CFM	VOLTAGE	WATTS	BTU/HR	AMPS	MANUFACTURER (OR APPROVED EQUAL)	UNIT MODEL NO.	UNIT WEIGHT (LBS)	NOTES
	100	208-1-60	1,500	5,120	7.2	BERKO	FRC4024F	25	SEE BELOW

1 UNIT TO INCLUDE BUILT-IN TAMPER-PROOF THERMOSTAT.
2 UNIT TO INCLUDE FACTORY DISCONNECT SWITCH - MOUNTED BEHIND FRONT GRID PANEL.
3 UNIT TO INCLUDE THERMAL CUTOUT.
4 UNIT TO INCLUDE SEMI-RECESSED MOUNTING FRAME.
5 UNIT TO BE MOUNTED AT 16" AFF.

APPROVED EQUALS: INDEECO, MARKEL, QMARK, AND RAYWALL

CODES AND STANDARDS

- 2021 INTERNATIONAL PLUMBING CODE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2021 INTERNATIONAL FUEL GAS CODE
- 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
- ASHRAE 90.1-2013 ENERGY STANDARD

HVAC DRAWING INDEX

SHEET NO.	SHEET TITLE
M1.1	HVAC LEGEND, NOTES, AND SCHEDULES
M1.2	HVAC SCHEDULES
M1.3	HVAC SCHEDULES AND DETAILS
M2.1	HVAC DETAILS
M2.2	HVAC DETAILS
M2.3	HVAC DETAILS AND COMPLIANCE CALCULATIONS
M2.4	HVAC REFRIGERANT CALCULATIONS
M3.1	HVAC PLANS

HVAC LEGEND, NOTES, AND SCHEDULES

WHORTON ENGINEERING, INC.

HVAC - PLUMBING - PROCESS CONTROL

RANDALL WHORTON, P.E. 25 SUMMERALL GATE ROAD
PHONE: (256) 820-9897 ANNISTON, ALABAMA 36205

WHORTON ENGINEERING PROJECT NO. 25192

DUCTLESS HEAT PUMP EQUIPMENT SCHEDULE (ONE-WAY CEILING CASSETTE)

MARK NO.	NOMINAL FAN CFM	COOLING CAPACITY					HEATING CAPACITY			MANUFACTURER (OR APPROVED EQUAL)	INDOOR UNIT DATA				OUTDOOR UNIT DATA					APPROXIMATE REFRIG. PIPING SIZE		NOTES	
		TOTAL CAP. MBH	SENS. CAP. MBH	COND. E.A.T.	EVAP. E.W.B. TEMP	MIN. SEER2	LOW TEMP 17° E.A.T. MBH	HIGH TEMP 47° E.A.T. MBH	MIN. HSPF2		VOLTAGE	MODEL NO.	FAN MOTOR OUTPUT (W)	UNIT WEIGHT (LBS.)	VOLTAGE	MODEL NO.	FAN MOTOR OUTPUT (W)	MCA (A)	MOCP (A)	UNIT WEIGHT (LBS.)	GAS (IN. O.D.)		LIQUID (IN. O.D.)
DHP 1	310	9.0	7.2	95	80/67	20.9	7.8	12	12.2	DAIKIN	208/230-1-60	MLZ-KX09NL	30	34	208/230-1-60	SUZ-AA09NL	55	13	22	81	3/8	1/4	SEE BELOW
DHP 2	310	9.0	7.2	95	80/67	20.9	7.8	12	12.2	DAIKIN	208/230-1-60	MLZ-KX09NL	30	34	208/230-1-60	SUZ-AA09NL	55	13	22	81	3/8	1/4	SEE BELOW
DHP 3	400	16.4	11.6	95	80/67	17.2	12.6	19	10	DAIKIN	208/230-1-60	MLZ-KX18NL	30	34	208/230-1-60	SUZ-AA18NL	50	25	42	115	1/2	1/4	SEE BELOW
DHP 4	310	9.0	7.2	95	80/67	20.9	7.8	12	12.2	DAIKIN	208/230-1-60	MLZ-KX09NL	30	34	208/230-1-60	SUZ-AA09NL	55	13	22	81	3/8	1/4	SEE BELOW
DHP 5	310	9.0	7.2	95	80/67	20.9	7.8	12	12.2	DAIKIN	208/230-1-60	MLZ-KX09NL	30	34	208/230-1-60	SUZ-AA09NL	55	13	22	81	3/8	1/4	SEE BELOW
DHP 6	400	16.4	11.6	95	80/67	17.2	12.6	19	10	DAIKIN	208/230-1-60	MLZ-KX18NL	30	34	208/230-1-60	SUZ-AA18NL	50	25	42	115	1/2	1/4	SEE BELOW
TOTAL		68.8																					

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|---|---|---|
| <p>① ALL UNITS TO INCLUDE A WALL MOUNTED 7-DAY PROGRAMMABLE AUTOMATIC CHANGEOVER THERMOSTAT WITH SUB-BASE AND LOCKING COVER. THERMOSTAT SHALL BE FACTORY MA REMOTE CONTROLLER MODEL PAR-42MAAUB.</p> <p>② INDOOR UNIT TO BE CEILING CASSETTE WITH INTERNAL FACTORY CONDENSATE PUMP.</p> <p>③ INDOOR UNIT TO RECEIVE POWER FROM OUTDOOR UNITS THROUGH FIELD-SUPPLIED INTERCONNECTED WIRING.</p> <p>④ ALL CASSETTE UNITS SHALL BE ONE-WAY CEILING CASSETTE UNITS.</p> <p>⑤ CASSETTE UNIT FRAME SHALL NOT IMPEDE ACCESS TO ADJACENT ITEMS SUCH AS CEILING LIGHTS, ETC.</p> <p>⑥ VERIFY FINAL REFRIGERANT PIPING SIZE AND LENGTH WITH MANUFACTURER (REFRIGERANT R-454B).</p> <p>⑦ ALL UNITS TO INCLUDE CONDENSER HAIL GUARDS.</p> | <p>⑧ ALL UNITS TO INCLUDE BIOCLIMATIC (OR APPROVED EQUAL) BI-POLAR IONIZATION UNIT MOUNTED INSIDE CEILING CASSETTE UNIT PER MANUFACTURER'S RECOMMENDATION. IONIZATION UNIT SHALL BE POWERED FROM ASSOCIATED UNIT.</p> <p>⑨ ALL UNITS SHALL BE ASHRAE 90.1-2013 COMPLIANT.</p> <p>⑩ ALL UNITS TO INCLUDE FACTORY START-UP.</p> <p>⑪ ADDITIONAL REFRIGERANT CHARGE IS NEEDED DEPENDING ON THE SIZE AND LENGTH OF EXTENDED PIPING. COORDINATE WITH EQUIPMENT MANUFACTURER.</p> <p>⑫ CONTRACTOR'S VENDOR SHALL PROVIDE REFRIGERANT LINE FINAL SIZES, LENGTHS, ETC. PER MANUFACTURER'S RECOMMENDATION. SUBMITTAL DRAWINGS SHALL INCLUDE CONTROLS, LINE SIZES, ETC. CONTRACTOR SHALL COORDINATE SIZES SHOWN ON PLANS WITH ACTUAL EQUIPMENT QUOTED PRIOR TO BIDDING.</p> | <p>⑬ FURNISH AND INSTALL FACTORY PRE-INSULATED REFRIGERANT LINE SETS.</p> <p>⑭ EACH LINE SET SHALL INCLUDE FACTORY BALL VALVES FOR UNIT ISOLATION.</p> <p>⑮ REFRIGERANT PIPING SHALL BE LABELED TO MATCH ASSOCIATED INDOOR AND OUTDOOR UNIT.</p> <p>⑯ ALL EXPOSED INTERIOR REFRIGERANT PIPING SHALL BE ROUTED IN SCHEDULE 40 PVC. PRIME AND PAINT TO MATCH ADJACENT SURFACES. VERIFY PAINT COLOR WITH OWNER.</p> <p>⑰ USE INSULATED REFRIGERANT PIPING CLAMPS WHERE REFRIGERANT PIPING IS INSULATED.</p> <p>⑱ ALL UNITS TO INCLUDE FACTORY CONDENSER WALL BRACKET IN STAINLESS STEEL FINISH. VERIFY FINAL MOUNTING HEIGHT WITH ARCHITECT.</p> |
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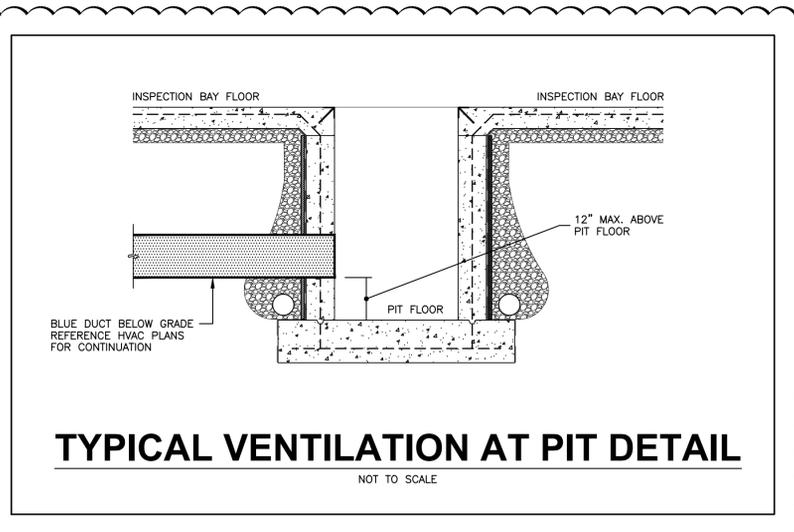
APPROVED EQUALS: FUJITSU, CARRIER TOSHIBA, DAIKIN MCQUAY, AND TRANE

DUCTLESS AIR CONDITIONING EQUIPMENT SCHEDULE (WALL MOUNT)

MARK NO.	NOMINAL FAN CFM	COOLING CAPACITY					MANUFACTURER (OR APPROVED EQUAL)	INDOOR UNIT DATA				OUTDOOR UNIT DATA					APPROXIMATE REFRIG. PIPING SIZE		NOTES	
		TOTAL CAP. MBH	SENS. CAP. MBH	COND. E.A.T.	EVAP. E.W.B. TEMP	MIN. SEER2		VOLTAGE	MODEL NO.	FAN MOTOR OUTPUT (W)	UNIT WEIGHT (LBS.)	VOLTAGE	MODEL NO.	FAN MOTOR OUTPUT (W)	MCA (A)	MOCP (A)	UNIT WEIGHT (LBS.)	GAS (IN. O.D.)		LIQUID (IN. O.D.)
DAC 1	375	12.0	8.8	95	80/67	21.1	DAIKIN	208/230-1-60	PKA-AL12NL	30	28	208/230-1-60	PUY-AK12NL	51	16	27	99	1/2	1/4	SEE BELOW

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|--|--|
| <p>① ALL UNITS TO INCLUDE A WALL MOUNTED 7-DAY PROGRAMMABLE AUTOMATIC CHANGEOVER THERMOSTAT WITH SUB-BASE AND LOCKING COVER. THERMOSTAT SHALL BE FACTORY MA REMOTE CONTROLLER MODEL PAR-42MAAUB.</p> <p>② INDOOR UNIT TO BE WALL MOUNTED WITH FACTORY CONDENSATE PUMP AND SHALL INCLUDE LINE SET/CONDENSATE PUMP ENCLOSURE KIT (CONDENSATE PUMP APPROVED EQUALS: LITTLE GIANT EC-1K AND ASPEN/AIRTEC MINI AND MAXI LIME).</p> <p>③ INDOOR UNIT TO RECEIVE POWER FROM OUTDOOR UNITS THROUGH FIELD-SUPPLIED INTERCONNECTED WIRING.</p> <p>④ UNIT TO INCLUDE LOW AMBIENT CONTROLS TO OFF.</p> <p>⑤ VERIFY FINAL REFRIGERANT PIPING SIZE AND LENGTH WITH MANUFACTURER (REFRIGERANT R-454B).</p> <p>⑥ UNIT TO INCLUDE BIOCLIMATIC (OR APPROVED EQUAL) BI-POLAR IONIZATION UNIT MOUNTED INSIDE WALL MOUNT UNIT PER MANUFACTURER'S RECOMMENDATION. IONIZATION UNIT SHALL BE POWERED FROM ASSOCIATED UNIT.</p> <p>⑦ UNIT TO INCLUDE CONDENSER HAIL GUARDS.</p> <p>⑧ UNIT SHALL BE ASHRAE 90.1-2013 COMPLIANT.</p> <p>⑨ UNIT TO INCLUDE FACTORY START-UP.</p> | <p>⑩ ADDITIONAL REFRIGERANT CHARGE IS NEEDED DEPENDING ON THE SIZE AND LENGTH OF EXTENDED PIPING. COORDINATE WITH EQUIPMENT MANUFACTURER.</p> <p>⑪ CONTRACTOR'S VENDOR SHALL PROVIDE REFRIGERANT LINE FINAL SIZES, LENGTHS, ETC. PER MANUFACTURER'S RECOMMENDATION. SUBMITTAL DRAWINGS SHALL INCLUDE CONTROLS, LINE SIZES, ETC. CONTRACTOR SHALL COORDINATE SIZES SHOWN ON PLANS WITH ACTUAL EQUIPMENT QUOTED PRIOR TO BIDDING.</p> <p>⑫ FURNISH AND INSTALL FACTORY PRE-INSULATED REFRIGERANT LINE SETS.</p> <p>⑬ EACH LINE SET SHALL INCLUDE FACTORY BALL VALVES FOR UNIT ISOLATION.</p> <p>⑭ REFRIGERANT PIPING SHALL BE LABELED TO MATCH ASSOCIATED INDOOR AND OUTDOOR UNIT.</p> <p>⑮ ALL EXPOSED INTERIOR REFRIGERANT PIPING SHALL BE ROUTED IN SCHEDULE 40 PVC. PRIME AND PAINT TO MATCH ADJACENT SURFACES. VERIFY PAINT COLOR WITH ARCHITECT.</p> <p>⑯ USE INSULATED REFRIGERANT PIPING CLAMPS WHERE REFRIGERANT PIPING IS INSULATED.</p> <p>⑰ UNIT TO INCLUDE FACTORY CONDENSER WALL BRACKET IN STAINLESS STEEL FINISH. VERIFY FINAL MOUNTING HEIGHT WITH ARCHITECT.</p> |
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APPROVED EQUALS: FUJITSU, CARRIER TOSHIBA, DAIKIN MCQUAY, AND TRANE



SUPPLY FAN SCHEDULE

MARK NO.	MOUNTING	CFM	STATIC IN W.G.	SONES	WATTS	VOLTAGE	MANUFACTURER (OR APPROVED EQUAL)	MODEL NO.	WEIGHT (LBS.)	NOTES
SF 1	INLINE	425	0.35	3	165	115-1-60	LOREN COOK	GN-720	34	SEE BELOW

- ① FAN TO INCLUDE FACTORY MOUNTED/PRE-WIRED FAN SPEED CONTROL.
- ② FAN TO BE SWITCHED WITH EXHAUST FAN EF-6
- ③ FAN TO INCLUDE FACTORY DISCONNECT AND DAMPER.

APPROVED EQUALS: BREIDERT, GREENHECK, AND PENN.

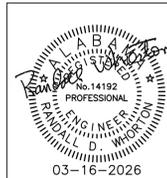
HVAC SCHEDULES

WHORTON ENGINEERING, INC.
HVAC - PLUMBING - PROCESS CONTROL

RANDALL WHORTON, P.E. 25 SUMMERALL GATE ROAD
PHONE: (256) 820-9897 ANNISTON, ALABAMA 36205

WHORTON ENGINEERING PROJECT NO. 25192

SHEET TITLE:
HVAC SCHEDULES



PROJ. MGR.: RDW
DRAWN: JH

DATE: JANUARY 16, 2026

REVISIONS

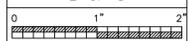
① 3-16-26 ADD #4

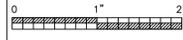
JOB NO. 25-46

SHEET NO:

M1.2

2 OF 8





GAS-FIRED UNIT HEATER SCHEDULE

MARK NO.	PERFORMANCE DATA							MOTOR DATA				MODEL NO. DATA		UNIT WEIGHT (LBS)	NOTES
	TOTAL INPUT (BTU/HR.)	TOTAL OUTPUT (BTU/HR.)	CFM @ 70°F	OUTLET VELOCITY (FPM)	AIR TEMP. RISE (°F)	MAXIMUM MOUNTING HEIGHT	HEAT THROW	MOTOR H.P.	FULL LOAD AMPS (@ 115V)	MOCF (@ 115V)	MOTOR RPM	MANUFACTURER (OR APPROVED EQUAL)	UNIT MODEL NO.		
GUH 1	300,000	249,000	3,843	802	60°	18'-0"	66'-0"	1/2	11	20	1,050	REZTOR	UDXC300	323	SEE BELOW
GUH 2	300,000	249,000	3,843	802	60°	18'-0"	66'-0"	1/2	11	20	1,050	REZTOR	UDXC300	323	SEE BELOW
GUH 3	300,000	249,000	3,843	802	60°	18'-0"	66'-0"	1/2	11	20	1,050	REZTOR	UDXC300	323	SEE BELOW
GUH 4	300,000	249,000	3,843	802	60°	18'-0"	66'-0"	1/2	11	20	1,050	REZTOR	UDXC300	323	SEE BELOW
GUH 5	300,000	249,000	3,843	802	60°	18'-0"	66'-0"	1/2	11	20	1,050	REZTOR	UDXC300	323	SEE BELOW
GUH 6	300,000	249,000	3,843	802	60°	18'-0"	66'-0"	1/2	11	20	1,050	REZTOR	UDXC300	323	SEE BELOW

① UNIT TO INCLUDE SPARK IGNITION, LOW VOLTAGE THERMOSTAT CONTROLS, 6" EXHAUST FLUE, AND 6" INTAKE FLUE.
 ② THERMOSTAT SHALL BE 7-DAY PROGRAMMABLE THERMOSTAT WITH TEMPERATURE SETBACK CONTROLS.
 ③ THERMOSTAT SHALL INCLUDE HEAVY DUTY WIRE GYM GUARD.
 ④ UNIT INSTALLATION TO INCLUDE FACTORY CONCENTRIC ROOF VENT/INTAKE.
 ⑤ VERIFY FINAL MOUNTING HEIGHT AND LOCATION WITH ARCHITECT/ENGINEER.

APPROVED EQUALS: JANITROL AND MODINE

DEHUMIDIFIER EQUIPMENT SCHEDULE

MARK NO.	NOMINAL FAN CFM	NOMINAL OSA CFM	REFRIGERANT	WATER REMOVAL		OPERATING RANGE	ELECTRICAL		MODEL NO. DATA		WEIGHT (LBS.)	NOTES
				80°F	60% RH		POWER SUPPLY	AMPS	MANUFACTURER (OR APPROVED EQUAL)	UNIT MODEL NO.		
DH 1	360	125	R-454B	155 PINTS/DAY		34"-105°F	115-1-60	10	THERMA-STOR	SANTA-FE ULTRA V155	112	SEE BELOW

① UNIT TO BE CONTROLLED WITH FACTORY MODEL DEH 3000 WALL MOUNTED HUMIDISTAT.
 ② UNIT TO INCLUDE FACTORY DUCT COLLARS (10").
 ③ UNIT TO INCLUDE FACTORY MERV-13 FILTER.
 ④ UNIT TO INCLUDE BIOCLIMATIC (OR APPROVED EQUAL) BI-POLAR IONIZATION UNIT MOUNTED IN UNIT SUPPLY DUCT AND SHALL BE POWERED FROM ASSOCIATED DEHUMIDIFIER AND SHALL INCLUDE ALL NECESSARY TRANSFORMERS, INTERLOCK, ETC.
 ⑤ UNIT TO INCLUDE FACTORY CONDENSATE PUMP KIT.

EXHAUST FAN SCHEDULE

MARK NO.	MOUNTING	CFM	STATIC IN W.G.	SONES	WATTS/H.P.	VOLTAGE	MANUFACTURER (OR APPROVED EQUAL)	MODEL NO.	WEIGHT (LBS.)	NOTES
EF 1	CEILING	75	0.25	1.6	55 WATTS	115-1-60	LOREN COOK	GC-142	15	① ② ③
EF 2	CEILING	200	0.25	1.7	90 WATTS	115-1-60	LOREN COOK	GC-520	32	① ② ③
EF 3	CEILING	85	0.25	1.6	80 WATTS	115-1-60	LOREN COOK	GC-164	15	① ② ③
EF 4	ROOF	17,000	0.50	12.5	3 H.P.	208-3-60	LOREN COOK	490R10B	450	④ ⑤ ⑥
EF 5	ROOF	10,000	0.50	16	3 H.P.	208-3-60	LOREN COOK	300R10B	250	④ ⑤ ⑥
EF 6	INLINE	425	0.35	3	165 WATTS	115-1-60	LOREN COOK	GN-720	34	① ④ ⑦ ⑧

① FAN TO INCLUDE FACTORY MOUNTED/PRE-WIRED FAN SPEED CONTROL.
 ② FAN TO BE SWITCHED WITH LIGHTING.
 ③ FAN TO DISCHARGE TO FACTORY ALUMINUM WALL CAP. REFERENCE PLANS FOR ADDITIONAL INFORMATION.
 ④ FAN TO INCLUDE FACTORY DISCONNECT AND DAMPER.
 ⑤ FAN TO INCLUDE FACTORY ROOF CURB AND TIE-DOWN EYELETS (4). COORDINATE ALL ROOF CURBS WITH THE ROOFING CONTRACTOR. PRIME AND PAINT ROOF CURB AND EXHAUST FAN TO MATCH ROOF (VERIFY COLOR WITH ARCHITECT).
 ⑥ EXHAUST FAN INSTALLATION SHALL INCLUDE A FIELD INSTALLED WALL MOUNTED VARIABLE SPEED DRIVE. VARIABLE SPEED DRIVE SHALL INCLUDE PHASE LOSS PROTECTION, MOTOR "START-STOP", AND "MANUAL-AUTOMATIC" CONTROL. VARIABLE SPEED DRIVE SHALL BE INTERLOCKED WITH AREA LIGHTING.
 ⑦ FAN TO BE SWITCHED WITH CARBON MONOXIDE/NITROGEN DIOXIDE CONTROL PANEL (MACURCO DVP-120M).
 ⑧ FAN TO BE SWITCHED WITH WALL SWITCH.

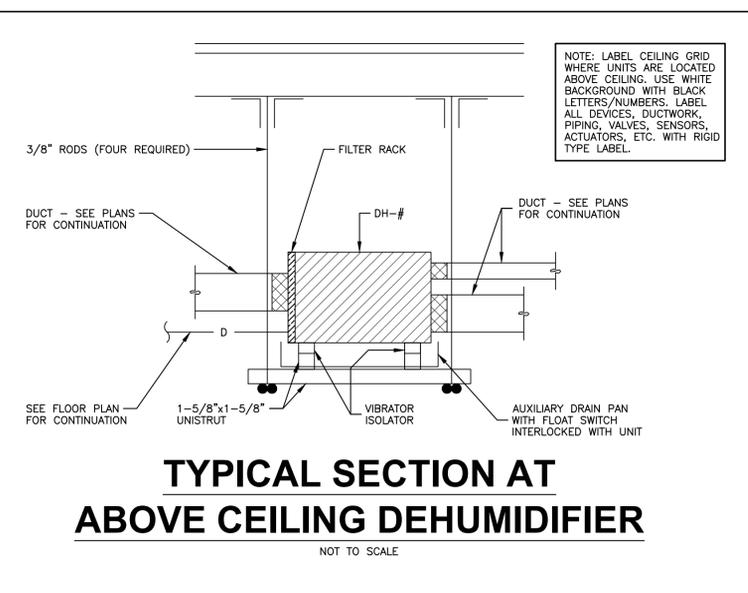
APPROVED EQUALS: BREIDERT, GREENHECK, AND PENN.

DESTRATIFICATION FAN SCHEDULE DF-1 / DF-2 (20 FT. DIAMETER)

MANUFACTURER - MODEL NO.	MACRO AIR - AIR LEGACY (20 FT. DIA.) OR APPROVED EQUAL.
NUMBER AND TYPE OF AIRFOILS	6 EXTRUDED ANODIZED ALUMINUM AIRFOILS
AIRFOIL FINISH	CLEARCOAT ANODIZED (STANDARD) OR POWDER COAT CUSTOM COLOR (OPTIONAL)
CONTROLLER	FORWARD, REVERSE, VARIABLE SPEED - ANALOG REMOTE (WALL MOUNT)
INPUT POWER AND MAX AMP DRAW	208-240 V, 50/60 HZ, 3Ø (MAXIMUM AMP DRAW - 10.8 A)
MOTOR AND DRIVE	1.5 HP (AC INDUCTION MOTOR WITH A SEALED 2-STAGE HELICAL GEAR BOX)
MAXIMUM SPEED	70 RPM
OPERATING TEMPERATURE RANGE (°F)	16°F-104°F
FAN HANGING WEIGHT	217 LBS
MINIMUM AIRFOIL CLEARANCES REQUIRED	3 FT. ON SIDES AND 10 FT. ABOVE THE FLOOR

① 15 YEAR MECHANICAL WARRANTY; 5 YEAR ELECTRICAL WARRANTY; 1 YEAR LABOR WARRANTY.
 ② CONTRACTOR SHALL FURNISH AND INSTALL STRUCTURAL SUPPORTS REQUIRED TO INSTALL FAN IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. STRUCTURAL SUPPORTS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL.
 ③ FAN TO INCLUDE ALL MOUNTING HARDWARE KITS, EXTENSIONS, ETC. AS REQUIRED FOR PROPER INSTALLATION FOR A FULLY FUNCTIONAL AND OPERATING FAN PER MANUFACTURER'S RECOMMENDATION.
 ④ FAN TO INCLUDE ALL SAFETY COMPONENTS: SAFETY CABLE, UNIVERSAL MOUNT WITH GUY WIRES, AND BLADE RETAINER LINKS. TO ENSURE PROPER OPERATION.
 ⑤ COORDINATE HANGING HEIGHT AND FINAL LOCATION WITH ARCHITECT AND LIGHTING, STRUCTURAL, ETC.
 ⑥ FAN SHALL BE INTERLOCKED TO SHUTDOWN IMMEDIATELY UPON A FIRE SPRINKLER WATERFLOW ALARM. WHERE BUILDING IS PROTECTED WITH A FIRE ALARM SYSTEM, FAN SHUTDOWN SHALL BE IN ACCORDANCE WITH NFPA 72.

APPROVED EQUALS: BIG ASS FANS, HUNTER, AND GREENHECK

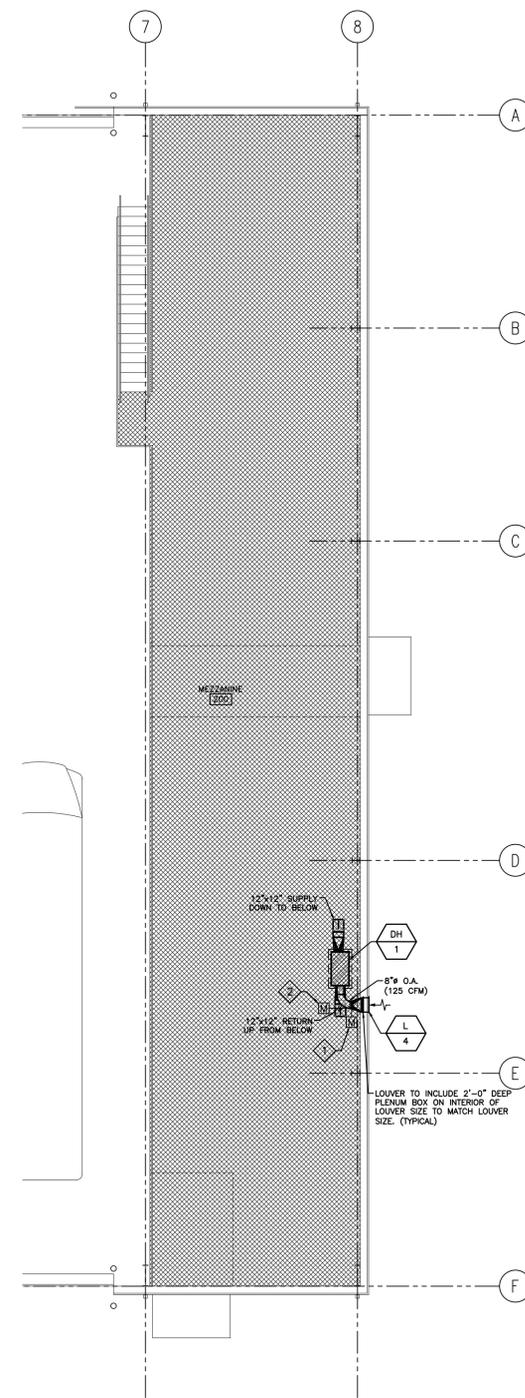
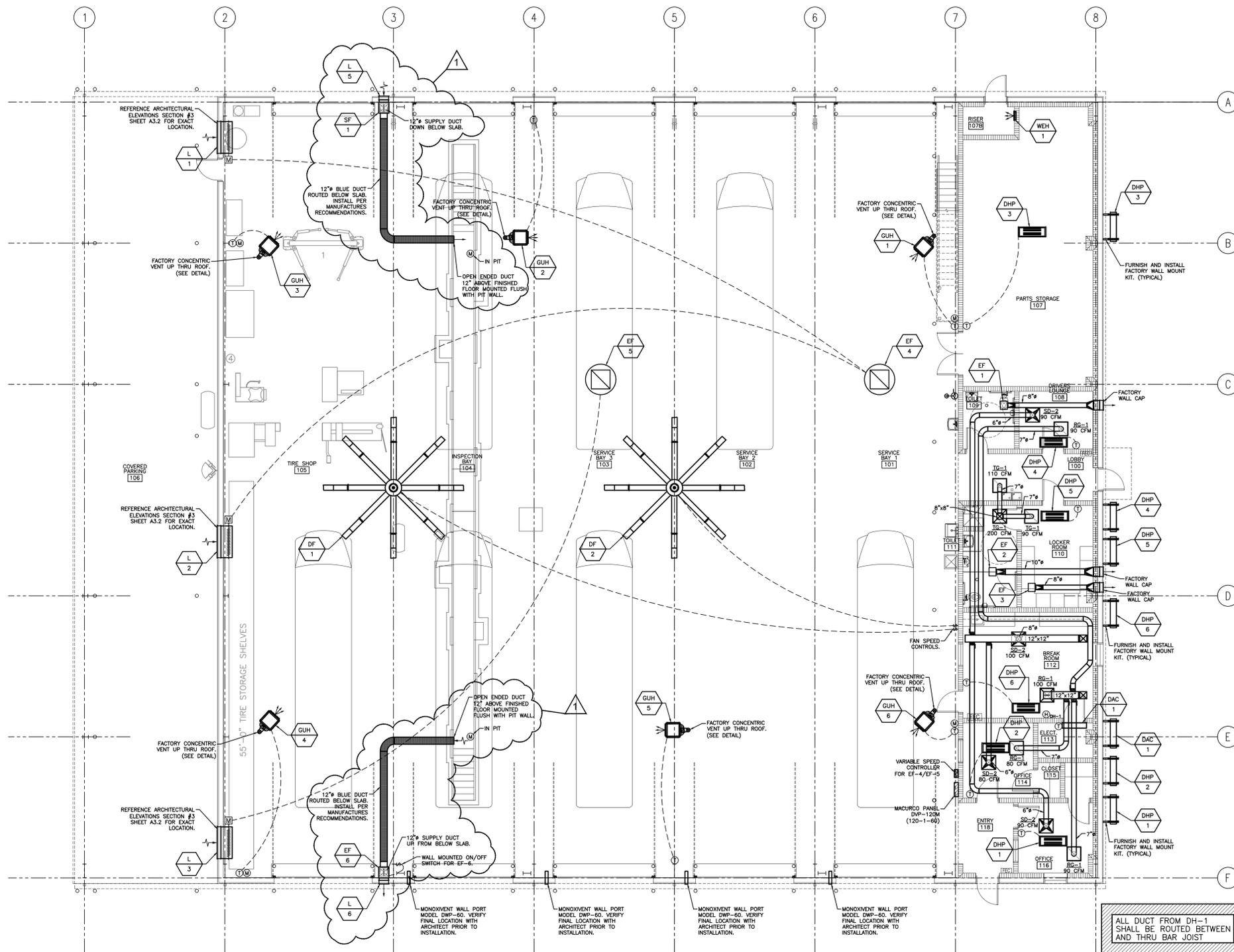


HVAC SCHEDULES AND DETAILS

WHORTON ENGINEERING, INC.
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EXHAUST FAN SEQUENCE OF OPERATION

EF-4 WALL MOUNTED VARIABLE SPEED DRIVE/CONTROL SHALL BE MOUNTED AT 60°AFF. WHEN THE FAN IS SWITCHED "ON" L-1 AND L-2 SHALL OPEN.

EF-5 WALL MOUNTED VARIABLE SPEED DRIVE/CONTROL SHALL BE MOUNTED AT 60°AFF. WHEN THE FAN IS SWITCHED "ON" L-3 SHALL OPEN.

1 SWITCH AND ALL WIRING SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

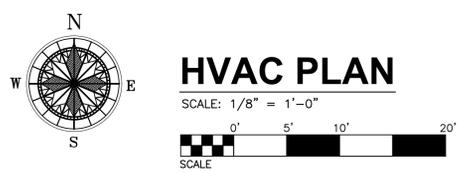
2 MAGNETIC MOTOR STARTERS AND OVERLOADS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

3 THE INTAKE LOUVER DAMPER OPERATOR AND LIMIT SWITCH SHALL BE MOUNTED IN A BASE FRAME BELOW THE FAN/LOUVER WALL SLEEVE. REFERENCE ARCHITECTURAL PLANS FOR EXACT MOUNTING LOCATION OF LOUVER.

HVAC SHEET NOTES

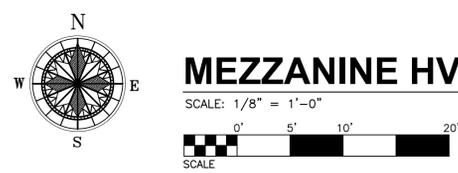
1 OUTSIDE AIR DAMPERS SHALL BE 120V, NORMALLY CLOSED AND INTERLOCKED TO OPEN WHEN THE ROOM LIGHTS ARE "ON".

2 UNIT RETURN AIR MOTORIZED DAMPER SHALL BE 120V, NORMALLY OPEN AND SHALL PARTIALLY CLOSE WHEN THE ROOM LIGHTS ARE "ON".



HVAC PLAN

SCALE: 1/8" = 1'-0"



MEZZANINE HVAC PLAN

SCALE: 1/8" = 1'-0"

HVAC PLANS

DIFFUSER SCHEDULE

TAG	Size	Neck Size	Quantity	Manufacturer	Model Number	Type	Notes
RG-1	24"x24"	23x23	4	TITUS	BRF	RETURN	20"x20"x1" FILTER
SD-2	24"x24"	8"	4	TITUS	TDC	SUPPLY	
TG-1	24"x24"	23x23	3	TITUS	BRF	TRANSFER	ALUMINIUM
			11				

NOTE: FURNISH AND INSTALL AN INSULATION BLANKET ON THE BACK OF ALL CEILING MOUNTED DIFFUSERS AND GRILLES.

REFERENCE PLUMBING PLANS FOR CONDENSATE PIPING

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