



© COR3 Design, LLC

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PLUMBING

LWI Consulting Engineers
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ELECTRICAL Matrix Engineering, INC 912 S Pine Street

Spartanburg, SC 29302 864.583.6274



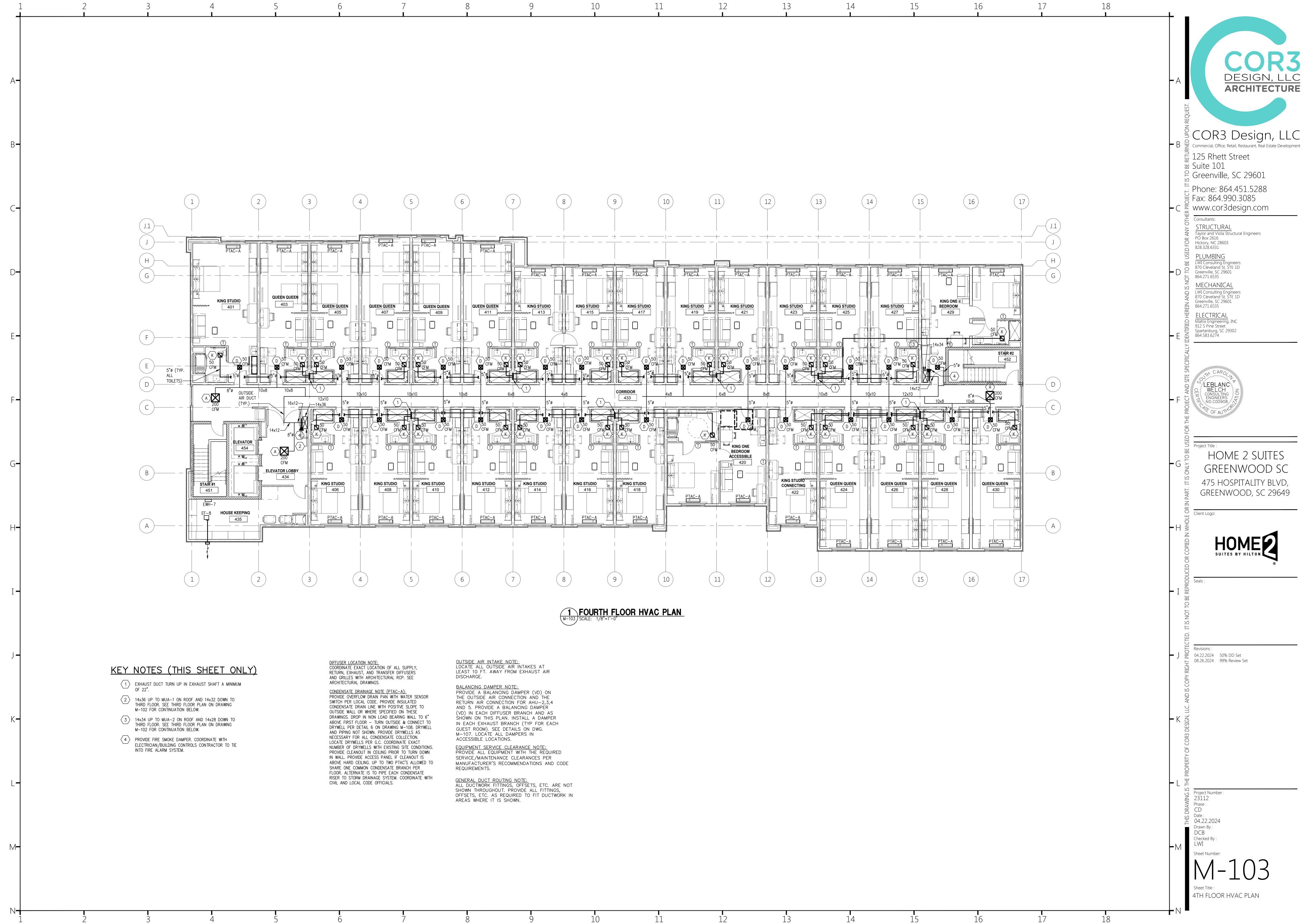
HOME 2 SUITES GREENWOOD SC 475 HOSPITALITY BLVD, GREENWOOD, SC 29649

Client Logo:

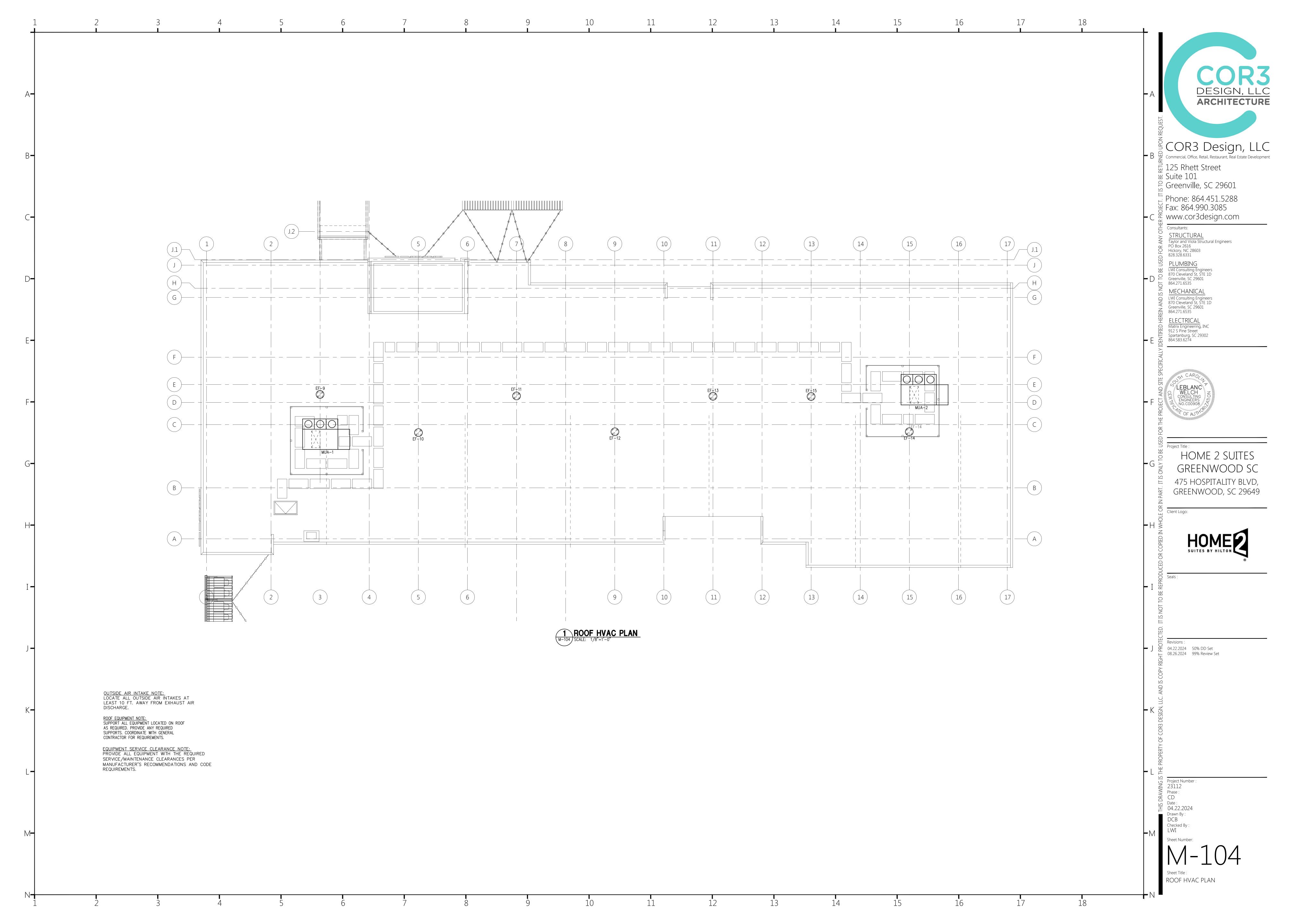


04.22.2024 50% DD Set

Project Number : 23112



ARCHITECTURE



										SI	PLIT	SYS	STEM	1 HE	ΑT	PUMP	SCHE	DULE										
UNIT	SUPPLY	OUTSIDE	E.S.P.	INDOOR	INDOOR	INDOOR	INDOOR		SYSTE	M COOLIN	G (NET)				Sì	STEM HEATING	G		AHU MODEL		OUTDOOR UNI	T MODEL	OUTDOOR	OUTDOOR	OUTDOOR	NOMINAL	SEER	EER REMARKS
NO.	CFM	CFM	IN W.G.	FAN H.P.	ELECTRICAL	UNIT MCA	UNIT MOCP	E.D.B.	E.W.B.	COND.	SENSIBLE MBH	TOTAL MBH	E.D.B.	OUTDOOR AMBIENT	мвн	NOMINAL HEATER KW	MIN. HTR KW OUTPUT @ VOLT.	STAGES	TRANE	NO. CIRCUITS	TRANE	QUANTITY	UNIT ELECTRICAL	UNIT MCA	UNIT MOCP	TONS	1	
AHU-1/HP-1	1000	140	0.5	0.5	208/1/60	40	40	80	67	95	22.2	29.3	64.3	17° F	18.1	7.68	5.77	1	TEM6AOB30H21	1	4TWR5030N1	1	208/1/60	15	25	2.5	15.2 1	12.0 1,2,3,4,5
AHU-2/HP-2	2000	300	0.5	0.75	208/3/60	45	45	80	67	95	44.1	58.5	63.8	17° F	34.8	14.4	10.8	1	TEM6B0C60H51	1	4TWA4060A3	1	208/3/60	21	35	5.0	15.0 1	12.5 1,2,3,4,5
AHU-3/HP-3	1200	200	0.5	0.5	208/3/60	30	30	80	67	95	25.9	35.2	62.8	17° F	20.4	9.6	7.2	1	TEM6AOC36H31	1	4TWA4036A3	1	208/3/60	13	20	3.0	15.0 1	12.5 1,2,3,4,5
AHU-4/HP-4	1200	200	0.5	0.5	208/3/60	30	30	80	67	95	25.9	35.2	62.8	17° F	20.4	9.6	7.2	1	TEM6AOC36H31	1	4TWA4036A3	1	208/3/60	13	20	3.0	15.0 1	12.5 1,2,3,4,5
AHU-5/HP-5	1200	150	0.5	0.5	208/3/60	30	30	80	67	95	25.9	35.2	65.1	17° F	20.4	9.6	7.2	1	TEM6AOC36H31	1	4TWA4036A3	1	208/3/60	13	20	3.0	15.0 1	12.5 1,2,3,4,5

COMMENTS

1,2,3,4

ELECTRIC UNIT HTR. SCHEDULE

MARK	DESCRIPTION	VOLTS	PH	Hz	HEATING KW	TOTAL AMPS	BASIS OF DESIGN	
EUH-1	ELECTRIC UNIT MTD.	208	3	60	3.0	10	INDEECO ULTRA-SAFE EXP.	-
EUH-2	ELECTRIC UNIT MTD.	208	3	60	3.0	10	INDEECO ULTRA-SAFE EXP.	

FURNISH WITH BUILT-IN THERMOSTAT & DISCONNECT. HEATER TO BE EXPLOSION PROOF AND CORROSION RESISTANT.

ACCESSORIES:
. LOW AMBIENT CONTROL. . HAIL GUARDS.

UNIT

NO.

2. 2 SPEED FAN.

PTAC-A

. PROVIDE SINGLE POINT CONNECTION. 4. FACTORY PROGRAMMABLE THERMOSTAT WITH CLEAR LOCKING COVER. 5. PROVIDE FILTER RACK WITH MERV-13 FILTER.

MANUFACTURER/MODEL NO.

AMANA/PTH093G

SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. SIZES SHALL BE BASED ON INSTALLED PIPING DISTANCES FROM CONDENSING UNIT TO AIR HANDLING UNIT. PROVIDE ALL NECESSARY ACCESSORIES PER MANUFACTURER'S RECOMMENDATIONS.

MOCP

NOTE:

ROOFTOP A/C UNIT SCHEDULE IS BASED ON UNITS AS MANUFCTURED BY TRANE. ACCEPTABLE ALTERNATE MANUFACTURERS ARE YORK, CARRIER

FOR ACCEPTABLE ALTERNATE MANUFACTURERS, CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.

1.	SUPPLY AIR FANS SHALL RUN CONTINUOUSLY DURING NORMALLY OCCUPIED HOURS.	

ELE	CTRIC	WAL	_L	ΗΊ	ΓR. S	SCH	EDULE
MARK	DESCRIPTION	VOLTS	PH	Hz	HEATING KW	AMPS	BASIS OF DESIGN
EWH-1	ELECTRIC WALL MTD.	208	3	60	2.0	5.6	MARKEL J3422T
EWH-2	ELECTRIC WALL MTD.	208	3	60	2.0	5.6	MARKEL J3422T
EWH-3	ELECTRIC WALL MTD.	208	3	60	2.0	5.6	MARKEL J3422T
EWH-4	ELECTRIC WALL MTD.	208	3	60	2.0	5.6	MARKEL J3422T
EWH-5	ELECTRIC WALL MTD.	208	3	60	2.0	5.6	MARKEL J3422T
EWH-6	ELECTRIC WALL MTD.	208	3	60	2.0	5.6	MARKEL J3422T
EWH-7	ELECTRIC WALL MTD.	208	3	60	2.0	5.6	MARKEL J3422T
EWH-8	ELECTRIC WALL MTD.	208	3	60	2.0	5.6	MARKEL J3422T

1. FURNISH WITH BUILT-IN THERMOSTAT & DISCONNECT, 2" SEMI-RECESSING MOUNTING SLEEVE.

HEATER SCHEDULE IS BASED ON UNITS AS MANUFACTURED BY MARKEL. ACCEPTABLE ALTERNATE MANUFACTURERS ARE QMARK AND RAYWALL.

		NEYWELL "INC			FAN SPEED CAPABILI PRIOR TO ORDERIN		. GUESTROOM F	PTAC'S.												
					DUC	TLES	S SPL	IT S	YSTE	M H	HEA	T PL	IMP	SCH	ED	ULE				
					INDO	OR UNIT DATA	A										OUTDO	OR UNIT DATA	1	
İ	INDOOR		OUTDOOR		MITSUBISHI			C	OOLING DA	.TA		F	HEATING DA	TA		MITSUBISHI				
	UNIT NO.	QUANTITY	UNIT NO.	QUANTITY	MODEL NO.	VOLTAGE	MOUNTING	TOTAL		AIR	SEER	TOTAL		AIR	HSPF	MODEL NO.	VOLTAGE	MCA	МОСР	REMARKS
	110.		NO.		NO.			M.B.H.	DB. Ł	WB° F	A.R.I.	М.В.Н.	DB° F	WB° F		110.				
	AHU-6	1	HP-6	1	TPKAOA0181LA10A	208/1/60	WALL	18	72	60	20.2	22.0	72	60	9.2	TRUZAO181KA70NA	208/1/60	11	28	1,2,3
	AHU-7	1	HP-7	1	TPKAOA0181LA10A	208/1/60	WALL	18	72	60	20.2	22.0	72	60	9.2	TRUZAO181KA70NA	208/1/60	11	28	1,2,3

REMARKS:
1. PROGRAMMABLE THERMOSTAT.
2. CONDENSATE PUMP. 3. PROVIDE LOW AMBIENT WIND BAFFLE. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. SIZES SHALL BE BASED ON INSTALLED PIPING DISTANCES FROM CONDENSING UNIT TO AIR HANDLING UNIT. PROVIDE ALL NECESSARY ACCESSORIES PER MANUFACTURER'S RECOMMENDATIONS.

					FAN S	CHE	DUL	E				
MARK	AREA	TYPE	SERVICE	MANUFACTURER	MODEL	CAPA	ACITY	- HP	ELECTRICAL	REMARKS	OPERATING	COMMENTS
WARK	SERVED	IIFE	SERVICE	MANOFACTORER	NO.	CFM	ESP	(WATTS)	ELECTRICAL	KLWAKKS	NOTES	COMMENTS
EF-1	TOILET	CEILING	EXHAUST	GREENHECK	SP-B90	70	0.25	(21)	115/1/60	1	1	-
EF-2	TOILET	CEILING	EXHAUST	GREENHECK	SP-B90	70	0.25	(21)	115/1/60	1	1	_
EF-3	TOILET	CEILING	EXHAUST	GREENHECK	SP-B90	70	0.25	(21)	115/1/60	1	1	_
EF-4	TOILET	CEILING	EXHAUST	GREENHECK	SP-B150	140	0.25	(128)	115/1/60	1	2	_
EF-5	ELECTRICAL RM	INLINE	EXHAUST	GREENHECK	CSP-A510-VG	400	0.25	(73)	115/1/60	3	3	_
EF-6	HOUSEKEEPING	CEILING	EXHAUST	GREENHECK	SP-B200	200	0.25	(172)	115/1/60	1	3	_
EF-7	HOUSEKEEPING	CEILING	EXHAUST	GREENHECK	SP-B200	200	0.25	(172)	115/1/60	1	3	-
EF-8	HOUSEKEEPING	CEILING	EXHAUST	GREENHECK	SP-B200	200	0.25	(172)	115/1/60	1	3	_
EF-9	GUEST ROOMS	ROOF	EXHAUST	GREENHECK	G-099-VG	600	0.5	1/4	115/1/60	2	4	_
EF-10	GUEST ROOMS	ROOF	EXHAUST	GREENHECK	G-099-VG	600	0.5	1/4	115/1/60	2	4	_
EF-11	GUEST ROOMS	ROOF	EXHAUST	GREENHECK	G-099-VG	700	0.5	1/4	115/1/60	2	4	_
EF-12	GUEST ROOMS	ROOF	EXHAUST	GREENHECK	G-099-VG	600	0.5	1/4	115/1/60	2	4	_
EF-13	GUEST ROOMS	ROOF	EXHAUST	GREENHECK	G-099-VG	600	0.5	1/4	115/1/60	2	4	_
EF-14	GUEST ROOMS	ROOF	EXHAUST	GREENHECK	G-120-VG	1050	0.5	1/4	115/1/60	2	4	_
EF-15	GUEST ROOMS	ROOF	EXHAUST	GREENHECK	G-100-VG	800	0.5	1/4	115/1/60	2	4	_

PACKAGED TERMINAL AIR CONDITIONING UNIT (PTAC) SCHEDULE

EER

11.5

COOLING HEATING AUXILLARY

MBH

HEAT

3.5

ELECTRICAL

208/1

MCA

19.5

CAPACITY CAPACITY

MBH

9.0

OUTSIDE AIR

CFM

1. G.C. SHALL PROVIDE SUB-BASE KIT WITH DISCONNECT SWITCH FOR ALL PTAC'S. CONCEAL ALL ELECTRICAL CONNECTIONS WITH-IN KIT.

FAN CFM

360

ESP (WG)

- REMARKS:
  1. PROVIDE WALL CAP, DISCONNECT SWITCH, BACKDRAFT DAMPER, AND
- SPEED CONTROLLER. 2. PROVIDE ROOF CURB, BACKDRAFT DAMPER, DISCONNECT SWITCH, AND

BACKDRAFT DAMPER, AND DISCONNECT.

3. PROVIDE VARI GREEN MOTOR, ISOLATION KIT, MOUNTING BRACKETS,

OPERATING NOTES:

1. INTERLOCK WITH LIGHTS. 2. INTERLOCK WITH AHU-1. 3. THERMOSTATICALLY CONTROLLED.

4. RUNS CONTINUOUSLY.

NOTE: ALL INTERLOCK WIRING BY MECHANICAL CONTRACTOR.

				VENTILA	ATION CA	ALCULAT	ION			
AREA	SQ. FT.	NET OCCUPIABLE AREA (SQ. FT.)	OCCUPANTS	CFM PER SQ.FT.	CFM PER OCC.	REQ'D O.A. (CFM) (OCCUPANCY)	REQ'D O.A. (CFM) (AREA)	REQ'D O.A. TOTAL —VBZ (CFM) (OCCUPANCY + AREA)	ACTUAL DESIGN O.A. (CFM)	UNITS SERVED BY
FITNESS ROOM	933	560	5	0.06	20	100	34	134	140	AHU-1
LOBBY	1715	1030	30	0.06	7.5	225	62	287	300	AHU-2
REGISTRATION, ETC.	1268	761	20	0.06	7.5	150	46	196	200	AHU-3
BREAKFAST, ETC.	936	562	20	0.06	7.5	150	34	184	200	AHU-4
LAUNDRY, ETC.	834	500	10	0.12	7.5	75	60	135	150	AHU-5
TYPICAL GUEST ROOM	546	328	2	0.06	5	10	20	30	50	PTAC-A

LOUVER SCHEDULE

				`					
MARK	SERVES	MANUFACTURER	MODEL NO.	AIRFLOW CFM	MAX. PRESS. DROP IN. W.C.	LOUVER SIZE WXH	FREE AREA SQ. FT.	INTERLOCK WITH	COMMENTS
L-1	ELECTRICAL/027	RUSKIN	ELF6375DX	400	0.04	24"×12"	0.79	_	1
L-2	POOL EQUIP/015B	RUSKIN	ELF6375DX	_	_	12"x12"	0.36	_	1
L-3	POOL MECH/015A	RUSKIN	ELF6375DX	_	_	12"x12"	0.36	_	1
L-4	DRYER RM/013A	RUSKIN	ELF6375DX	_	_	48"x18"	2.89	DRYERS	1,2
L-5	DRYER RM/013A	RUSKIN	ELF6375DX	_	_	48"x18"	2.89	DRYERS	1,2
L-6	FIRE PUMP/015C	RUSKIN	ELF6375DX	_	_	12"x12"	0.36	_	1

<u>COMMENTS:</u> INSECT SCREEN.

2. PROVIDE MOTORIZED DAMPER ON BACK OF LOUVER. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR DAMPER WIRING. THE DAMPER IS TO BE INTERLOCKED WITH DYERS TO OPEN WHEN DRYERS ARE ENERGIZED AND CLOSE WHEN DRYERS ARE NOT ENERGIZED.

		GRII	LLE A	ND DIFF	USER	SCH	EDULE				
SYMBOL	DUTY	CFM	MFR.	MODEL NO.	DIFFUSER NECK SIZE	GRILLE FACE SIZE	DISCHARGE PATTERN	SLOT LENGTH (FT.)	NO. SLOTS —	SLOT SPACING -	REMARKS
A	SUPPLY	SEE PLAN	PRICE	SCD 4 CONE	SEE PLAN	24×24	_	_	_	_	1,2,3,5
B	SUPPLY	SEE PLAN	PRICE	SDS100	_	_	_	4.0	3	1"	1,2,5,6
$\bigcirc$	SUPPLY	SEE PLAN	PRICE	SDS100	_	_	_	4.0	2	1"	1,2,5,6
D	SUPPLY	SEE PLAN	PRICE	SCD 4 CONE	SEE PLAN	12x12	_	-	_	_	1,2,3,5
E	SUPPLY	SEE PLAN	PRICE	SDS100	_	_	_	3.0	1	1"	1,2,5,6
F	SUPPLY	SEE PLAN	PRICE	SDS100	_	_	_	3.5	2	1"	1,2,5,6
G	RETURN	SEE PLAN	PRICE	PDDR ROUND NECK	SEE PLAN	24×24	_	_	_	_	2,3,5
H	RETURN	SEE PLAN	PRICE	PDDR SQUARE NECK	18x18	24x24	_	_	_	_	2,5
	TRANSFER	SEE PLAN	PRICE	PDDR SQUARE NECK	8x8	24×24	_	_	_	_	2,5
$\bigcirc$	TRANSFER	SEE PLAN	PRICE	PDDR SQUARE NECK	6x6	24×24	_	_	_	_	2,5
K	EXHAUST	SEE PLAN	PRICE	PDDR ROUND NECK	SEE PLAN	12x12	_	-	_	_	1,2,3,5

NOTES:

- 1. PROVIDE WITH OPPOSED BLADE DAMPER. 2. COORDINATE COLOR WITH ARCHITECT.
- 3. DIFFUSER NECK SIZE EQUALS RUNOUT SIZE.
  4. ALUMINUM CONSTRUCTION.
  5. SEE ARCHITECTURAL RCP FOR MOUNTING TYPE
- REQUIRED. PROVIDE PLASTER FRAME FOR ALL
- AIR DEVICES LOCATED IN GYP. BOARD CEILINGS.

6. PROVIDE PLENUM.

												1	00%	s ou	TSID	E A	IR L	INIT	SCI	HED	ULE						
UNIT	SUPPLY OUTSIDE E.S.P. INDOOR AIR AIR FAN SEED OF STAN OF STAN AIR CEM IN W.C. H.B. W.C						SYSTEM COOLING								GAS HE	ATING SE	CTION		REHEAT COIL	MANUEACTURER MOREL NO		WEIGHT	ACCESSORIES				
NO.	NO. AIR CFM	CFM	IN W.G.	H.P.	V/PH/HZ	МСА	MAX FUSE	COMP RLA	EVAP FAN FLA	COND FAN FLA	E.D.B. ℉	E.W.B.	L.D.B. °F	L.W.B.	COND. °F	SENSIBLE MBH	TOTAL MBH	E.D.B.	L.D.B.	INPUT MBH	OUTPUT MBH	_	TOTAL CAPACITY MBH	MANUFACTURER/MODEL NO.	EER	LBS.	SEE NOTES
MAU-1	4390	4390	1.5	3	208/3/60	26	133.3	175	8	3 @ 4.2	89.7	78.4	52.3	51.6	95	174.9	389.0	23	91	400	324	_	_	TRANE/HORIZON D030 - OADG030A1	10.2	3800	1
MAU-2	3550	3550	1.5	2	208/3/60	26	112.8	150	6	3 @ 4.2	89.7	78.4	53.0	52.2	95	138.8	309.4	23	96.6	350	283.5	_	_	TRANE/HORIZON DO25 - OADG025A1	11.7	3800	1

**ACCESSORIES:** 1. SEE EQUIPMENT SPECS ON DRAWING M-106.

**ARCHITECTURE** 

COR3 Design, LLC Commercial, Office, Retail, Restaurant, Real Estate Development

£ 125 Rhett Street ₩ Suite 101 ☐ Greenville, SC 29601

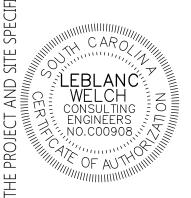
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LWI Consulting Engineers

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Matrix Engineering, INC
912 S Pine Street Spartanburg, SC 29302 864.583.6274



HOME 2 SUITES GREENWOOD SC 475 HOSPITALITY BLVD, GREENWOOD, SC 29649

Client Logo:



- 04.22.2024 50% DD Set 08.26.2024 99% Review Set

Project Number: 23112

## GREASE HOOD EXHAUST AIR DUCT: <u>GENERAL PROVISIONS - MECHANICAL</u> HVAC LEGEND GRILLES AND DIFFUSERS: Contractor shall provide all labor, materials, tools, equipment and management necessary or reasonably incidental to complete the work shown on the drwaings The drawings show, by approproate symbol and number, the location and air quantities (where applicable) for each register, grille and diffuser. All equipment shall and/or described in the specifications. All work performed under this contract shall be in strict accordance with requirements of the International Mechanical Code, be installed and adjusted according to manufacturer's recommendations and instructions. All equipment shall be tested and certified in accordance with the air NFPA codes, and all laws, rules and regulations of public bodies having legal jurisdiction. diffusion council (ADC). Air devices shall be from the manufacturer as shown in the schedule, or pre—approved equal. Finish shall be coordinated with architect CEILING MTD SUPPLY DIFFUSER during submittal process. The Contractor shall inform the Engineer, clearly and explicitly in writing, of any deviation from the contract documents. Contractor shall not be relieved of any requirements of the INTERIOR DUCT INSULATION: contract documents by virtue of the Engineer's review of shop drawings, product data, etc. unless the contractor has clearly and explicitly informed the Engineer in writing of any CEILING MTD RETURN OR EXHAUST DIFFUSER Supply and return ductwork shall be insulated with 2" thick 3/4 lb fiberglass duct insulation with reinforced foil kraft (rfk) vapor barrier facing. Duct wrap shall be deviations at the time of submission, and the Engineer has given written approval for the specific deviations from the Contract Documents. cut to form 2" overlap which shall be sealed with mastic. Seal small tears, punctures and other penetrations of the duct wrap insulation facing to provide a COORDINATION OF WORK: Prior to bidding, Mechanical Contractor shall be responsible for coordinating and resolving any and all questions about Contractor's and Subcontractors' responsibilities in regard to SIDEWALL MTD SUPPLY GRILLE who is to furnish or install supporting components, services, and interconnections for mechanical systems. All parts of the mechanical work and associated services shall be included, and no additional payments will be made for failure to coordinate the Work among the various contractors. Roof and wall openings, where required, shall be defined ACOUSTICAL AND THERMAL DUCT LINER: and located by the mechanical contractor and constructed by the general contractor. Hvac contractor shall furnish roof curbs for mechanical equipment where SIDEWALL MTD RETURN GRILLE All rectangular supply and return duct shall be internally lined with acoustical liner through the first elbow or takeoff, or the first 10 ft. Supply air ducts not applicable. externally insulated shall have 1½" thick liner. Supply air ducts externally insulated shall have 1" thick liner. Return air ducts shall have 1" thick liner. All internal acoustical liner and insulation shall be mechanically and adhesively bonded to ductwork. All exposed rectangular duct shall be insulated with internally lined insulation. **DIMENSIONS:** THERMOSTAT/TEMPERATURE CONTROLLER All internally lined ducts shall be constructed so that inside clear dimensions of the liner correspond to the duct dimensions shown on the drawings. Duct liner shall The drawings are not intended to show and cannot show complete or fully accurate measurements and details of the building and installation in every respect. Drawings should be COR3 Design, LLC interpreted as general layout and arrangement drawings, and they do not include all details of manufactured equipment, construction, piping, ductwork conduits, etc. No scale be closed—cell elastomeric. measurement taken from a drawing shall be relied upon as a dimension for installation purposes. The figures written upon the drawings indicating dimensions shall be used instead REMOTE TEMPERATURE SENSOR of scaled measurements. Precise locations and measurements are to be defined in the field, and the Contractor shall be responsible for their accuracy and use in construction of Where acoustically lined round metal ducts are specified or shown on contract documents, ducts shall be lined with pre-formed round acoustic insulation duct liner. Commercial, Office, Retail, Restaurant, Real Estate Development Unless otherwise indicated, all duct diameters shown on drawings are clear inner surface dimensions. Outer dimension of the insulation liner shall provide a snug fit in standard sized round metal ducts. Duct liner shall be closed—cell elastomeric. 125 Rhett Street FIRE SMOKE DAMPER **INTERFERENCES** The Contractor shall coordinate his work with that of all other trades in order to preclude and eliminate interferences and conflicts between trades. He shall examine in advance ₩ Suite 101 Acoustic duct liner shall be installed according to the manufacturer's recommendations and referenced SMACNA standards using accessory materials (adhesive, the location of existing structures, sprinklers, electrical systems, ducts, piping, conduits, as well as all new equipment and systems to be installed, and properly coordinate the mechanical fasteners, etc.) tested and recommended by both the liner manufacturer and the accessory manufacturer. All duct shall be clean and dry before SUPPLY, RETURN, EXHAUST, OR OUTSIDE AIR DUCT installation of his work to avoid interferences. The Engineers have considered existing interferences and the work of other trades in making the drawings, but it is the responsibility Greenville, SC 29601 adhesive or liner is applied. of the Contractor to include in his bid proposal adequate allowances to modify, offset, or otherwise accommodate all new equipment to the structure, utilities, and existing equipment. Particular attention is called to clearances for ductwork passing through roof and wall openings, and work in congested spaces, for example above suspended ceilings VOLUME DAMPER EXTERIOR DUCTWORK INSULATION (IF APPLICABLE): and within wall cavities. As the mechanical Work requires the greatest amount of space in the construction, the Contractor is advised to schedule and prioritize his installations Phone: 864.451.5288 with the General Contractor and other trades as soon as possible in the construction schedule to avoid conflicts later. Prior to installing insulation the ducts shall be sealed air tight with silicone rubber compound equal to g.e or dow corning. Insulation board shall be 2" thick MOTORIZED DAMPER Fax: 864.990.3085 expanded polystrene foam board with density of 1.8 lb/cu ft and installed as per manufacture's instructions. Prior to covering insulation with weatherproofing fill all **GUARANTEE:** voids, cracks and joints with childers CP-10 VI-CRYL mastic as per manufacture's recommendations for a smooth and uniform surface. Provide weatherpoof All materials and workmanship provided shall be warranted against defects for a period of one year from the date of final acceptance of the work. DUCT SMOKE DETECTOR www.cor3design.com covering using tightly stretched woven fiberglass duct insulation wrap embedded in wet childers CP-10 as per manufactures recommendations. Apply intermediate and final coats of childers CP-10 as per manufacture's remcommendations. After final coating has dried inspect and touch up all areas where fabric mesh is visible. Alternate weatherproof coverings shall be submitted to the engineer for approval prior to installation. All debris, rubbish, scraps, etc. shall be cleaned up at the end of each work day at the completion of the work, upon completion of the job, all new construction SUPPLY, RETURN OR EXHAUST GRILLE TYPE Consultants: work and materials shall be cleaned up of markings, dirt, etc. and left in a clean and sightly condition, ready for use by the owner. STRUCTURAL AIR DISTRIBUTION ——— C ——— CONDENSATE DRAIN LINE Taylor and Viola Structural Engineers Manually adjustable components shall be constructed to move properly and prevent binding or corrosion at the bearing points and adjusting elements. Volume dampers shall be Hickory, NC 28603 ELECTRICAL PROVISIONS FOR MECHANICAL WORK adjustable through the face of the grille, register, diffuser, etc. All terminal air distribution products shall be installed with approved self—adhering closed cell flexible polymeric or 828.328.6331 rubber foam sealing strips fitted between the air distribution device and the mounting surface. The seal shall preclude HVAC system air leakage around grille face. Sealing COORDINATION OF WORK: RETURN AIR **PLUMBING** products subject to dry—rot or other deterioration will not be accepted. Mechanical Contractor shall be responsible for coordinating and resolving any and all questions about Contractor's and Subcontractors' responsibilities in regard to who is to furnish .WI Consulting Engineers or install electrical components, wiring, and interconnections for mechanical systems. All parts of the mechanical and electrical Work and associated services shall be included, and EXHAUST AIR 870 Cleveland St, STE 1D no additional payments will be made for failure to coordinate the Work among the various contractors. Products shall be furnished in the type and color of finish as specified. If type and color are not specified, the type and color of standard finishes shall be submitted for Greenville, SC 29601 selection. Manufacturer's standard white or off-white enamel coating shall be used for steel components unless specified otherwise. Clear anodized finish will be a minimum 864.271.6535 ROOFTOP UNIT Areas to be carefully reviewed with the Electrical Contractor and General Contractor to preclude or avoid potential misunderstandings among subcontractors are: requirement for all aluminum products, and color anodized or enamel coating shall be provided if specified. **MECHANICAL** AIR HANDLING UNIT Power wiring for HVAC controls COMPATIBILITY WITH MOUNTING LOCATION: LWI Consulting Engineers Control wiring for HVAC controls Where installed on walls, partitions, ceilings or other similar building surfaces, products shall be compatible with the adjacent surface shape and finish, and shall be specifically HEAT PUMP (OUTDOOR UNIT) 870 Cleveland St, STE 1D Starters and disconnects for mechanical equipment manufactured to fit ceiling modules and styles or component wall types with accurate fit and adequate support. Products installed on duct or plenum surfaces shall be matched to Greenville, SC 29601 Smoke detectors and interlock wiring PACKAGED TERMINAL AIR CONDITIONING UNIT 864.271.6535 the adjacent finish, curvature, coating, etc. Refer to mechanical and architectural drawings and schedules for necessary information. All products shall be submitted in full detail Interlock wiring for mechanical equipment such as pumps and fans. for approval prior to purchase or installation. • Wiring to interconnect safety devices to the building alarm system. ELECTRIC WALL HEATER Wiring within HVAC air plenums. Matrix Engineering, INC 100% OUTSIDE AIR UNIT Install all products according to manufacturer's recommendation. Grille and diffuser frames shall fit snugly to duct, ceiling, wall, casing, or other surface upon which mounted. 912 S Pine Street Exposed fasteners shall match the finish of the grille or diffuser. Coordinate installation with ceiling and light fixture plans. Locate outlets as indicated on architectural reflected Spartanburg, SC 29302 864.583.6274 EXHAUST FAN In general, the following shall apply unless otherwise agreed upon by the Contractor and the Subcontractors: ceiling plans. Unless otherwise indicated, locate ceiling outlets in the center of acoustical ceiling modules with sides parallel to the grid. LOUVER • Power wiring and code required disconnecting devices, including but not limited to wiring required to power HVAC Units, fan motors, pump motors, heaters, cooling tower fans, AIR INLET AND OUTLET LOUVERS HVAC control panels, transformers, etc. shall be furnished and installed by the Electrical Contractor. ELECTRIC UNIT HEATER • HVAC automatic control wiring, except for power wiring, shall be furnished and installed by the Mechanical Subcontractor. • Mechanical equipment and associated electrical equipment (motors, variable frequency drives, SCR power controllers, unit lighting, electric heating coils, etc.) shall be furnished Furnish and install all louvers as shown on the drawings and called for in the specifications. Provide other trades with roof, wall and partition opening locations and dimensions as and put in place by the Mechanical Subcontractor and power wiring shall be by the Electrical Contractor. required for proper installation complying with all sections of these specifications. • Starters or contactors integral to the mechanical equipment (factory mounted on units or within equipment control panels, or shipped with the unit for field installation) shall be furnished by the mechanical contractor. Install louvers at locations indicated on the drawings and in accordance with manufacturer's installation instructions. Install louvers square and free from racking or binding. • Starters and contactors for larger motors or power equipment not integral to the HVAC equipment (shown or specified in motor control centers or other power distribution Adjustments shall be made to relieve any binding, stiffness or irregular operation. Damaged blade seal material shall be replaced. Do not compress or stretch louver frame into arrangement) shall be furnished, installed and wired by the Electrical Subcontractor. opening. Lift and handle louvers by the frame, not by the blades. Where multiple louvers are required for a given area, the Contractor shall provide additional structural support • Service disconnects shall be furnished, installed, and wired by the Electrical Subcontractor. If service disconnect is pre—installed on equipment, Electrical Subcontractor shall as required to prevent warping or deflection more than 1/240 of the longest dimension of the louver assembly when operable blades are tightly closed against a static pressure of provide wiring. %NO.C00908、 <u>DX PIPING</u> TESTING, ADJUSTING, AND BALANCING **REFRIGERANT PIPING: SMOKE DETECTOR NOTE:** Piping shall be type ACR hard—drawn copper tubing, ASTM B88, ANSI H23.1. Fittings shall be wrought copper, ASTM B16.22, ANSI B16.22 and unions shall be QUALITY ASSURANCE: specifically designed for refrigerant piping. PROVIDE SMOKE DETECTOR ACCORDING TO SOUTH CAROLINA The Contractor shall be responsible for all test, adjust and balance (TAB) work, but TAB work under this section shall be done by an independent certified testing and balancing MECHANICAL CODE, NFPA 90A AND NFPA 72E FOR AHU-2. firm acceptable to the Owner and Engineer. The TAB firm shall not be related in any way to the Mechanical, Plumbing, or HVAC subcontractors. The independent TAB HVAC DUCTWORK SMOKE DETECTOR SHALL BE INSTALLED IN THE RETURN DUCT subcontractor shall be certified by the National Environmental Balancing Bureau (NEBB) or the Associated Air Balance Council (AABC). Certification shall be currently valid in the PRIOR TO ANY EXHAUST CONNECTIONS OR THE MIXING OF disciplines required for the mechanical systems covered in this project. All field work by the TAB firm shall be performed by or under the direct supervision of an engineer or an REFERENCES: OUTSIDE AIR. THE DETECTOR SHALL BE PROVIDED WITH AN experienced certified TAB technician who is a full-time employee of the certified firm. All reports, opinions and recommendations shall be approved and signed by the responsible Ductwork shall meet applicable requirements of the Codes and Standards listed below. The latest edition of the code or standard shall apply unless an earlier edition is specifically AUDIOVISUAL DEVICE MOUNTED IN THE OCCUPIED SPACE. THE professional TAB authority in charge. AUDIOVISUAL DEVICE SHALL BE FURNISHED WITH A REMOTE During all tests, it shall be demonstrated that the systems are free from leaks and that all parts of the system are operating correctly and will continue to operate correctly RESET SWITCH AND STROBE ALARM LIGHT. SMOKE DETECTOR • Sheet Metal and Air Conditioning Contractors" National Association (SMACNA) Standards shall be considered a minimum requirement only, and ductwork shall also meet any throughout the warranty period. Temporary repairs, modifications or adjustments shall not be acceptable. The TAB firm shall make final adjustments, or shall instruct Contractor SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR OR THE additional requirements of these specifications and drawings which may provide more detail or be more stringent than the listed SMACNA Standards. Take care to use to make recommended final adjustments to air, water and steam distribution equipment and controls as may be required for proper operation, maintaining correct temperature, ALARM SYSTEM CONTRACTOR, AND SHALL BE INSTALLED BY schedules, tables, figures, and construction details listed in referenced to SMACNA Standards. humidity, air quality, and process flows in all parts of the building. Automatic HVAC controls shall be tuned and adjusted by the control subcontractor's technicians in cooperation THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL National Fire Protection Association (NFPA) CONTRACTOR TO THE FIRE ALARM SYSTEM. THE MECHANICAL American Society for Testing and Materials (ASTM) CONTRACTOR SHALL INTERLOCK WIRE THE SMOKE DETECTOR TO Before building ducts or order materials, submit proposed changes or alterations in ductwork, with support detail drawings and calculations showing that he modified design will THE A/C UNIT SHUT DOWN SWITCH. MECHANICAL CONTRACTOR GREENWOOD, SC 29649 not increase total pressure or negatively impact system performance. Submittals for proposed changes must be approved by the Engineer prior to commencement of work. The Contractor shall furnish all services for complete testing, adjusting, and balancing of the mechanical systems. In cases where these specifications differ from the referenced IS RESPONSIBLE FOR COORDINATING THE ABOVE ARRANGEMENTS codes and standards (AABC, NEBB or ASHRAE), the more stringent specification or requirement shall supersede. All access openings, pressure taps, wells and closures required to **DUCT COORDINATION DRAWINGS:** WITH ELECTRICAL, CONTROLS, AND/OR SECURITY/ALARM do the TAB work as shown on the drawings or described in the specifications shall be installed by the Mechanical Contractor or the TAB Subcontractor prior to undertaking the TAB SUBCONTRACTORS. Where other trades' systems, structures, and equipment may interfere with the routing of the ductwork, the Contractor shall submit ¼" scale drawings of ductwork layout showing tests and adjustments. potential interferences. Include reflected ceiling layout, doors and panels required to provide access to dampers and other operating devices, and in—ceiling items including light fixtures, electrical conduits, plumbing pipes, diffusers, grilles, speakers, and sprinklers. Provide elevation and section drawings through congested areas to insure clarity. Where HVAC SYSTEM COMMISSIONING: clearance above ceiling or interferences prevent diffuser connections exactly as shown on drawings, relocate ducts or diffusers not more than 2 feet to facilitate installation, show changes on shop drawing submittals for approval. Provide HVAC System Commissioning if required by code (verify local code requirement). Contractor to verify that economizers (if provided) are in proper working condition. Provide commissioning reports per code requirements. DUCTWORK PRESSURE CLASSIFICATION: Unless otherwise indicated on the construction drawings, ductwork shall be constructed to meet the appropriate pressure class defined below. HVAC AUTOMATED CONTROLS Supply Ductwork shall be fabricated to meet minimum 2" w.g. internal pressure. N/A. The HVAC system is designed for human comfort. The control system shall be designed for continuous and fully automatic operation, requiring a minimum of adjustment and • Return and Outside air ductwork shall be fabricated to meet minimum 2" w.g. external pressure. maintenance. Furnish and install all digital, electric and electronic devices such as sensors, transmitters, controllers, switches, relays, operators, linkages, recorders, pilot lights, valves, dampers, wiring, etc., required for providing the effective and efficient operation of the HVAC system. • Restroom exhaust and general exhaust ductwork shall be fabricated to meet the greater of either 2" w.g. negative pressure, or the maximum available exhaust fan negative As a minimum, a programmable thermostat shall be furnished by the manufacturer of each packaged single—zone rooftop and DX split system equipment. Typical controls shall be manufactured by Honeywell Controls, commercial products. The decision of the Engineer shall be final in regard to alternate control systems. RECTANGULAR RADIUS ELBOWS: Unless otherwise noted on the drawings, all long radius elbows shall be constructed with the radius to the centerline of the elbows not less than 1.5 times the width of the duct. All low-voltage control wiring (24V or lower) to and from control equipment shall be the responsibility of the controls control wiring may be installed by the electrical Turning vanes in radius duct elbows shall be heavy—duty single thickness vanes in accordance with referenced standards and the following specified construction. Number of vanes contractor under arrangements with the mechanical or controls contractor, but contractual responsibility for control wiring including terminal connections, points lists, testing, and and radius location in the elbow shall be as shown in SMACNA. All turning vanes shall be constructed of the same material and of the same gauge as the ductwork in which warranty shall remain with the HVAC or Controls Contractor. installed. Each vane shall be constructed according to SMACNA standards and shall be permanently anchored to the duct wall with formed tabs or welded clips using approved screws, bolts, or welds, tight and rattle—free. Rectangular 90" miter elbows shall have double thickness metal turning vanes in accordance with referenced standards and the following specified construction. Number of vanes and radius location in the elbow shall be as shown in SMACNA. All turning vanes shall be constructed of the same material and of the same gauge as the ductwork in which installed. Each vane shall be constructed according to SMACNA standards and shall be permanently anchored to the duct wall with formed tabs or welded clips using approved screws, bolts, or welds, tight and rattle—free. Specs - MAU-1 Specs - MAU-2 ROUND DUCTWORK: 04.22.2024 50% DD Set Round ductwork shall be furnished according to referenced SMACNA Standards. Ducts shall be spiral lockseam or longitudinal welded seam as manufactured by United McGill Sheet 08.26.2024 99% Review Set Metal Company or Hamlin Sheetmetal, Inc. Minimum galvanized steel or stainless steel gauges, hanger spacing, and reinforcement shall be per SMACNA HVÁC Duct Construction Unit Voltage: 208-3-60 Unit Voltage: 208-3-60 Curb Selection: 2" Vibration Isolation Rails (Field Installed) - Primary Cabinet (Includes Curb) Curb Selection: 2" Vibration Isolation Rails (Field Installed) - Primary Cabinet (Includes Curb) Warranty: 1-Year Labor DX Gas Heat or Cooling Only Warranty: 1-Year Labor DX Gas Heat or Cooling Only Warranty: 1-Year Parts Only (manufacturer warranty) Warranty: 1-Year Parts Only (manufacturer warranty) General: Refer to Section IV of SMACNA Duct Construction Standards — Metal and Flexible for support requirements. Also refer to Rectangular Industrial Duct Construction Warranty: 5-Year Digital/Variable Speed/Standard Scroll Compressor / 25-Year Heat Exchanger Warranty: 5-Year Digital/Variable Speed/Standard Scroll Compressor / 25-Year Heat Exchanger Standards, and Round Industrial Duct Construction Standard respectively for products and installation of duct supports and hangers. All supports, including hangers, rods, angles, channels, straps, bars, anchors, clamps, etc., and all associated fasteners and miscellaneous materials shall be stainless steel, hot—dip galvanized steel, structural grade aluminum, Airflow Configuration: Vertical Discharge/No Return Airflow Configuration: Vertical Discharge/No Return brass, or other corrosion resistant material. Painted black steel materials and electroplated materials shall not be acceptable unless approved as alternative prior to bidding. Indoor Coil Type: DX 6-Row Indoor Coil Type: DX 6-Row Reheat: Fin & Tube Modulating HGRH Reheat: Fin & Tube Modulating HGRH Compressor: Scroll Compressors Compressor: Scroll Compressors Install flexible duct connectors at the inlet and outlet connection of each air handling unit or fan, securely fastened to the unit and to the ductwork by a galvanized steel band Outdoor Coil Type: Air Cooled Fin & Tube Outdoor Coil Type: Air Cooled Fin & Tube provided with tightening screws. There shall be no metal—to—metal contact at flexible connections. There shall be no stretching of the flexible material at flexible connections and metal—to—metal spacing as installed shall be approximately 1" to 2". The connection shall be UL listed, to meet NFPA 90 requirements, and the installation shall meet applicable Refrigerant & Capacity Control: R-454B - Low GWP Refrigerant & RCC Valve on 1st Circuit Refrigerant & Capacity Control: R-454B - Low GWP Refrigerant & RCC Valve on 1st Circuit codes and standards. Heat Type - Primary: Indirect Fired NG (IF) - High Efficiency (81%) Heat Type - Primary: Indirect Fired NG (IF) - High Efficiency (81%) Heat Capacity - Primary: 400 MBH, (10:1 Turndown NG, 8:1 Turndown LP) Heat Capacity - Primary: 350 MBH, (10:1 Turndown NG, 8:1 Turndown LP) Supply Fan Motor Type: Direct Drive w/VFD Supply Fan Motor Type: Direct Drive w/VFD Fire dampers dampers: Furnish and install fire dampers with curtain style blades according to these specifications and as shown or noted on drawings and schedules. Fire Fan Piezo Rings: Supply Fan Piezo Ring/Tap Fan Piezo Rings: Supply Fan Piezo Ring/Tap dampers shall meet the requirements set forth in the following standards and codes. AMCA 500—D — Laboratory Methods for Testing Dampers for Ratings. Unit Controls: Space Control - UC600 Unit Controls: Space Control - UC600 AMCA 511 — Certified Ratings Program for Air Control Devices. Filter Options: MERV-8 30%, MERV-13 80% Filter Options: MERV-8 30%, MERV-13 80% • IBC — International Building Code Damper Options: 100% OA 2-Position Damper Damper Options: 100% OA 2-Position Damper • NFPA 80 - Fire doors & Other Opening Protectives Electrical Options: Non-Fused Disconnect "Circuit Breaker" Electrical Options: Non-Fused Disconnect "Circuit Breaker" NFPA 90A — Installation of Air Conditioning and Ventilating Systems. Outdoor Air Monitoring: Airflow Probes Outdoor Air Monitoring: Airflow Probes • UL 555 — Standard for Safety: Fire Dampers Condenser Fan Options: Active (VFD) Head Pressure Low Ambient Control Condenser Fan Options: Active (VFD) Head Pressure Low Ambient Control Sound Attenuation Package: Compressor Sound Blankets BALANCING DAMPERS: Sound Attenuation Package: Compressor Sound Blankets Install balancing dampers where shown on drawings and as may be required to balance system. For restangular duct, dampers shall be opposed blade and shall be provided with Hailguards: Hailguards Hailguards: Hailguards Project Number locking quandrant manual damper operator. For round duct provide butterfly type damper with locking quadrant. Provide manual balancing dampers for all duct run—outs to Installation: Outdoor Installation: Outdoor 23112 diffusers or arilles mounted in 45° take—off as manufactured by Flexmaster. Furnish and install sputter dampers and volume dampers as required for control and Convenience Outlet: Convenience Outlet Convenience Outlet: Convenience Outlet balancing of air distribution. Dampers may or may not be shown on the drawings. Phase: Controls Display: TD7 Factory Installed Controls Display: TD7 Factory Installed CD Cooling Controls: Reliatel Cooling Controls: Reliatel Unless otherwise noted, ductwork shall be constructed of G-60 galvanized sheet metal in accordance with ASTM A-525 and A-527. ductwork shall be constructed Condensate Overflow Switch: Condensate Overflow Switch Condensate Overflow Switch: Condensate Overflow Switch 04.22.2024 and reinforced according to SMACNA HVAC Duct Construction Standards, latest edition for pressure rating listed above. Maximum joint length shall be 5'-0". all Supply Discharge Air Sensor (FLD) Supply Discharge Air Sensor (FLD) Drawn By transverse connecting joints shall be standing drive pocket lock or ductmate construction. 2 inch Double Wall Construction 2 inch Double Wall Construction Stainless Steel Drip Pan Stainless Steel Drip Pan DUST CONTROL DUCT: Checked By Blower HP - 3 Blower HP - 2 N/A Blower RPM - 1733 Blower RPM - 1948 Supply Fan - ANPA 18 Supply Fan - ANPA 16 Sheet Number: DUCT DIMENSIONS Unit Amps - FLA: 121 Amps Unless otherwise noted, duct dimensions shown on drawings shall be clear inside dimensions of insulated duct or acoustically lined duct. Unit Amps - FLA: 102.6 Amps Min Circuit Ampacity - MCA: 133.3 Amps Min Circuit Ampacity - MCA: 112.8 Amps Maximum Fuse Size - MFS: 175 Amps Maximum Fuse Size - MFS: 150 Amps Flexible duct not longer than 6 ft. shall be allowed to connect rigid duct to diffusers where concealed above ceilings. Flexible round duct shall be equal to flexmaster acoustic type 5, with trilaminate reinforced interior liner bonded to a galvanized helix and fire retardant polyethylene cuter liner. Thermal conductance shall meet the latest requirements of the International Energy Code. HVAC SPECIFICATIONS

