MECHANICAL DEMOLITION NOTES

1. THE MECHANICAL CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER. REMOVE ALL EQUIPMENT, DUCTWORK, SUPPORTS, CONTROLS, ACCESSORIES, ETC..., AND MECHANICAL ITEMS MADE OBSOLETE BY THESE ALTERATIONS AS SHOWN IN THE MECHANICAL DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN, HOWEVER, THIS CONTRACTOR SHALL REMOVE ANY MECHANICAL WORK AS REQUIRED BY THE CONSTRUCTION OR AS DIRECTED BY THE OWNER OR THE ENGINEER. SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID.
2. SCHEDULING OF DEMOLITION - COORDINATE SCHEDULING OF MECHANICAL DEMOLITION WORK WITH THE OWNER AND GENERAL CONTRACTOR SO AS TO MINIMIZE DISRUPTION OF THE OWNER'S USE OF THE FACILITIES AND MAINTAIN THE CONSTRUCTION SEQUENCE OF THE GENERAL CONTRACTOR. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INSTRUCTIONS CONCERNING PHASING AND SEQUENCE OF WORK.
3. EXISTING MECHANICAL SYSTEMS - VERIFY CONDITION OF EXISTING MECHANICAL SYSTEMS TO BE REUSED SO THAT COMPLETE, FULLY OPERATIONAL AND RELIABLE SYSTEMS ARE OBTAINED AT THE COMPLETION OF THE WORK. NOTIFY ARCHITECT OF ANY SYSTEMS FOUND TO BE OF QUESTIONABLE CONDITION.
4. ALL EXISTING MECHANICAL EQUIPMENT AND DEVICES SHALL REMAIN UNLESS SPECIFICALLY NOTED TO BE REMOVED.
5. DEMOLISHED MATERIALS - UNLESS SPECIFICALLY REQUESTED BY THE OWNER, ALL DEMOLISHED MECHANICAL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
6. CUTTING AND PATCHING - PERFORM CUTTING AND PATCHING FOR MECHANICAL WORK SO AS TO MINIMIZE DAMAGE TO CEILINGS, FLOORS AND WALLS. REFER TO ARCHITECTURAL DRAWINGS AND GENERAL SPECIFICATIONS SECTIONS FOR SPECIFIC RESPONSIBILITIES REGARDING CUTTING AND PATCHING.
7. THESE DRAWINGS ARE COMPILED BY THE ARCHITECT FROM THE OWNER'S AS-BUILT RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DUCTWORK, EQUIPMENT LOCATIONS, DIMENSIONS AND ALL FIELD CONDITIONS AFFECTING HIS WORK.
8. WHERE MECHANICAL SYSTEMS PASS THROUGH THE DEMOLITION AREAS TO SERVE OTHER PORTIONS OF THE PREMISES, THEY SHALL REMAIN OR BE SUITABLY RELOCATED AND THE SYSTEM RESTORED TO NORMAL OPERATION. ADVISE THE ARCHITECT IMMEDIATELY IF SUCH CONDITIONS ARE UNCOVERED BEFORE PROCEEDING WITH ADDITIONAL WORK.
9. PROTECT ALL EXISTING LIFE SAFETY SYSTEMS, FIRE ALARM AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ARCHITECT IN WRITING OF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED MAINTAINING SERVICE.
10. SURVEY THE EFFECTED AREAS BEFORE SUBMITTING A BID AS ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DEPICTED ON THE DRAWINGS AND SOME UNUSUAL CONDITIONS EXIST.
11. IF ANY UNUSUAL STRUCTURAL OR ARCHITECTURAL CONDITIONS ARE ENCOUNTERED DURING DEMOLITION, CONTACT THE ARCHITECT.
12. REMOVE AIR CONDITIONING, REFRIGERATION, AND OTHER EQUIPMENT CONTAINING REFRIGERANTS WITHOUT RELEASING CHLOROFLUOROCARBON REFRIGERANTS TO THE ATMOSPHERE IN ACCORDANCE WITH THE CLEAN AIR ACT AMENDMENT OF 1990. RECOVER ALL REFRIGERANTS PRIOR TO REMOVING AIR CONDITIONING, REFRIGERATION, AND OTHER EQUIPMENT CONTAINING REFRIGERANTS AND DISPOSE OF IN ACCORDANCE WITH THE PARAGRAPH ENTITLED "DISPOSAL OF OZONE DEPLETING SUBSTANCE (ODS)." TURN IN SALVAGED CLASS I ODS REFRIGERANTS AS SPECIFIED IN PARAGRAPH, "SALVAGED MATERIALS AND EQUIPMENT."

MECHANICAL GENERAL NOTES:

1. ALL MECHANICAL WORK SHALL BE IN STRICT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND STANDARDS.
2. ALL DIMENSIONS AND ELEVATIONS FOR NEW EQUIPMENT, DUCTWORK, PIPING AND APPARATUS ARE APPROXIMATE AND ARE ONLY FOR CONTRACTOR'S GUIDANCE. CONTRACTOR SHALL SUBMIT DIMENSIONS AND ELEVATIONS VERIFIED IN THE FIELD. DUCTWORK AND PIPING INDICATED ON THE DRAWINGS, SECTIONS AND PROSPECTIVE VIEWS ARE SHOWN DIAGRAMMATICALLY. DUCT AND PIPE ELEVATIONS IN EXACT LOCATIONS SHALL BE DETERMINED BY THE INSTALLING CONTRACTOR AND DETAILED ON THE SHOP DRAWINGS.
3. ALL DUCT DIMENSIONS INDICATED ON PLAN ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR MUST ACCOUNT FOR THE THICKNESS OF EXTERIOR INSULATION WHEN DETERMINING INSTALLATION CLEARANCES.
4. THE CONTRACTOR SHALL TEMPORARILY COVER ALL EXPOSED DUCT AND PIPE OPENINGS WITH A NON-COMBUSTIBLE MATERIAL, AND SEAL THEM AIR TIGHT TO PREVENT CONTAMINATION OF THE RESPECTIVE SYSTEMS DURING CONSTRUCTION.
5. CONTRACTOR SHALL REMOVE AND DISPOSE OF OFFSITE ALL DEMOLISHED WORK IN ACCEPTABLE AND SAFE MANNER AND SHALL KEEP ALL NON-WORK AREAS CLEAN AND SAFE.
6. ALL EXISTING EQUIPMENT AND CONNECTIONS THAT NEED TO BE TEMPORARILY DEMOLISHED FOR RIGGING AND / OR INSTALLATION SHALL BE REINSTALLED AND BROUGHT BACK TO ORIGINAL CONDITIONS PRIOR TO TEMPORARY REMOVAL.
7. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

MECHANICAL LEGEND

	CEILING EXHAUST AIR GRILLE
	CEILING RETURN AIR / TRANSFER AIR GRILLE
	CEILING SUPPLY AIR DIFFUSER / GRILLE
C	CONDENSATE PIPING
(X)C	CONDENSATE PIPING - EXISTING
AIR TYPE DESIGNATOR / AIRFLOW, CFM	DIFFUSER / REGISTER / GRILLE TAG
	EXTENT OF DEMOLITION
FD	FIRE DAMPER
	INDICATES TO DEMOLISH
	MANUAL VOLUME DAMPER
M	MOTORIZED DAMPER
	POINT OF CONNECTION
R	REFRIGERANT LINE-SET PIPING
(X)R	REFRIGERANT LINE-SET PIPING - EXISTING
	RETURN, EXHAUST OR TRANSFER AIR FLOW
	SUPPLY AIR FLOW
T	THERMOSTAT / TEMPERATURE SENSOR
TH	T-STAT / HUMIDISTAT OR TEMP/HUMIDITY SENSOR

NOTE: ALL ITEMS LISTED MAY NOT BE USED IN THIS PROJECT.

FIRE RATED WALL LEGEND

	1 HOUR RATED WALL
(X)	1 HOUR RATED WALL - EXISTING

PROJECT PHASING NOTE:

THIS PROJECT WILL BE BUILT IN PHASES. REFER TO ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS.

MECHANICAL SUMMARY (EXISTING BUILDING ONLY)

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

CLIMATE ZONE	3A - WARM/HUMID
WINTER DRY BULB:	23 °F
SUMMER DRY BULB	93 °F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	70 °F
SUMMER DRY BULB	75 °F
RELATIVE HUMIDITY	60°RH*
	*DESIGN- NOT CONTROLLED
BUILDING HEATING LOAD:	409.4 MBH
BUILDING COOLING LOAD:	1137.7 MBH
MECHANICAL SPACING CONDITIONING SYSTEM	
UNITARY	
DESCRIPTION OF UNIT:	SEE SCHEDULES
HEATING EFFICIENCY:	SEE SCHEDULES
COOLING EFFICIENCY:	SEE SCHEDULES
SIZE CATEGORY OF UNIT:	SEE SCHEDULES
BOILER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
CHILLER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
LIST EQUIPMENT EFFICIENCIES:	SEE SCHEDULES

MECHANICAL SUMMARY (ADDITION ONLY)

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

CLIMATE ZONE	3A - WARM/HUMID
WINTER DRY BULB:	23 °F
SUMMER DRY BULB	93 °F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	70 °F
SUMMER DRY BULB	75 °F
RELATIVE HUMIDITY	60°RH*
	*DESIGN- NOT CONTROLLED
BUILDING HEATING LOAD:	187.3 MBH
BUILDING COOLING LOAD:	455.1 MBH
MECHANICAL SPACING CONDITIONING SYSTEM	
UNITARY	
DESCRIPTION OF UNIT:	SEE SCHEDULES
HEATING EFFICIENCY:	SEE SCHEDULES
COOLING EFFICIENCY:	SEE SCHEDULES
SIZE CATEGORY OF UNIT:	SEE SCHEDULES
BOILER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
CHILLER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
LIST EQUIPMENT EFFICIENCIES:	SEE SCHEDULES

ABBREVIATIONS

TERM	ABBREVIATION	TERM	ABBREVIATION
ABOVE FINISHED FLOOR	AFF	INCH OF WATER GAUGE	INWG
ABOVE GROUND	AG	INDOOR UNIT	IDU
ABOVE SEA LEVEL	ASL	IRON PIPE SIZE	IPS
ACROSS THE LINE	ACL	KILOVOLT-AMP	KVA
AIR ADMITTANCE VALVE	AAV	KILOWATT	KW
AIR CONDITION(-ING, -ED)	AIR COND	KILOWATT HOUR	KWH
AIR-HANDLING UNIT	AHU OR AH	LEAVING AIR TEMPERATURE	LAT
AIR FLOW MEASURING STATION	AFMA	LEAVING WATER TEMPERATURE	LWT
AMBIENT	AMB	LENGTH	LG
AMPERE (AMP, AMPS)	AMP	LINEAR FEET	LF
ANALOG INPUT	AI	MAXIMUM	MAX
ANALOG OUTPUT	AO	MAXIMUM OVERCURRENT PROTECTION	MOCP
AND	&	MEDIUM-PRESSURE STEAM	MPS
APPARATUS DEW POINT	ADP	MILES PER HOUR	MPH
APPROXIMATE	APPROX	MINIMUM	MIN.
ARCHITECT	ARCH	MINIMUM CIRCUIT AMPERES	MCA
ATMOSPHERE	ATM	MINUTE	MIN
AVERAGE	AVG	MANUFACTURER	MFR
BRAKE HORSEPOWER	BHP	MOTOR CONTROL CENTER	MCC
BROWN & SHARPE WIRE GAGE	B&S	NOISE CRITERIA	NC
BRITISH THERMAL UNIT	BTU	NON-STANDARD PART LOAD	NPLV
BRITISH THERMAL UNIT PER HOUR	MBH	NORMALLY OPEN	NO
1000 BRITISH THERMAL UNIT	MBH	NORMALLY CLOSED	NC
BUILDING	BLDG	NOT APPLICABLE	N/A
BUILDING AUTOMATION SYSTEM	BAS	NOT IN CONTRACT	N I C
CELSIUS	°C	NOT TO SCALE	NTS
CHILLED WATER RETURN	CHWR	NUMBER	NO
CHILLED WATER SUPPLY	CHWS	ON CENTER	OC
COEFFICIENT, VALVE FLOW	CV	OUNCE	OZ
COEFFICIENT OF PERFORMANCE FACTOR	COP	OUTDOOR UNIT	ODU
COMPRESSOR	COMP	OUTSIDE AIR	OA
CONCRETE	CONC	PACKAGE UNIT	PU
CONDENS(-ER, -ING, -ATION)	COND	PACKAGE TERMINAL AIR CONDITIONER	PTAC
CONNECTION	CONN	PARTS PER MILLION	PPM
CONTINUATION	CONT	PERCENT	%
COOLING LOAD	CLG LOAD	PHASE	PH
CUBIC FEET	CU FT	POUNDS	LBS
CUBIC INCH	CU IN	POUNDS PER SQUARE FOOT	PSF
CUBIC FEET PER MINUTE	CFM	POWER VENTILATOR	PV
CFM, STANDARD CONDITIONS	SCFM	PRESSURE	PRESS
DECIBEL	DB	PRESSURE REDUCING VALVE	PRV
DEGREE	DEG OR °	PRESSURE SAFETY VALVE	PSV
DEDICATED OUTDOOR AIR SYSTEM	DOAS	PUMPED CONDENSATE	PC
DEGREES FAHRENHEIT	DEG. F	QUANTITY	QTY
DETAIL	DET	RATED LOAD AMPS	RLA
DEW-POINT TEMPERATURE	DPT	RECIRCULATE	RECIRC
DIAMETER	DIA	REDUCED PRESSURE BACKFLOW PREVENTER	RPZ
DIAMETER, INSIDE	ID	REFRIGERANT (12, 22, ETC.)	R22, R410
DIAMETER, OUTSIDE	OD	REFRIGERANT LIQUID	RL
DIFFERENCE OR DELTA	DIFF	REFRIGERANT SUCTION	RS
DIGITAL INPUT	DI	REQUIRED	REQD OR REQ'D
DIGITAL OUTPUT	DO	RELATIVE HUMIDITY	RH
DOMESTIC HOT WATER	DHW	RETURN AIR	RA
DOMESTIC HOT WATER RECIRCULATION	DHWR	REVOLUTIONS PER MINUTE	RPM
DRY-BULB TEMPERATURE	DBT	REVOLUTIONS PER SECOND	RPS
DUCTLESS SPLIT SYSTEM AIR HANDLER	DAH	ROOF VENTILATOR	RV
DUCTLESS SPLIT SYSTEM HEAT PUMP	DHP	ROOF TOP UNIT	RTU
ENERGY EFFICIENCY RATING	ERR	SAFETY FACTOR	SF
EFFICIENCY	EFF	SEASONAL ENERGY EFFICIENCY RATIO	SEER
ELECTRIC UNIT HEATER	EUH	SECOND	S
ELEVATION	EL	SHADING COEFFICIENT	SC
ENTERING	ENT	SPECIFICATION	SPEC
ENTERING WATER TEMPERATURE	EWT	SQUARE	SQ
ENTERING AIR TEMPERATURE	EAT	STANDARD	STD
EXISTING	(X)	STATIC PRESSURE	SP
EXTERNAL AMBIENT TEMPERATURE	EAT	SUPPLY	SPLY
EXTERNAL STATIC PRESSURE	ESP	SUPPLY AIR	SA
EXHAUST AIR	EA	TEMPERATURE	TEMP
EXHAUST FAN	EF	TEMPERATURE DIFFERENCE	TD
FACE VELOCITY	FVEL	THERMOSTAT	T STAT
FAHRENHEIT	°F	TONS OF REFRIGERATION	TONS
FEET PER MINUTE	FPM	TO BE DETERMINED	TBD
FEET PER SECOND	FPS	TOP OF STEEL	TOS
FLOOR	FLR	TOTAL DYNAMIC HEAD	TDH
FOOT OR FEET	FT	TYPICAL	TYP
FRESH AIR	FA	U-FACTOR	U
FULL LOAD AMPS	FLA	UNDER GROUND	UG
GAGE OR GAUGE	GA	UNLESS OTHERWISE NOTED	UON
GALLONS	GAL	UNIT HEATER - ELECTRIC	UH
GALLONS PER HOUR	GPH	VARIABLE AIR VOLUME	VAV
GALLONS PER MINUTE	GPM	VARIABLE FREQUENCY DRIVE	VFD
GALLONS PER DAY	GPD	VELOCITY	VEL
GRAINS	GR	VENTILATION, VENT	VENT
HEAD	HD	VENT THRU ROOF	VTR
HEAT EXCHANGER	HX	VERTICAL	VERT
HEATING AND VENTILATION UNIT	HV	VOLT	V
HEATING, VENTILATION AND AIR CONDITIONING	HVAC	VOLT AMPERE	VA
HEIGHT	HGT	VOLUME	VOL
HERTZ	HZ	WATER PRESSURE DROP	WPD
HIGH DENSITY POLYPROPYLENE	HDPE	WATER GAUGE	WG
HIGH-PRESSURE STEAM	HPS	WATT	W
HORSEPOWER, HEAT PUMP	HP	WATT-HOUR	WH
HOT WATER COIL	HWC	WITH	W/
HOUR(S)	HR	WEIGHT	WT
HUMIDITY, RELATIVE	RH	WET BULB	WB
INTEGRATED PART LOAD VALUES	IPLV	YARD	YD
INCH	IN.	YEAR	YR

NOTE: ALL ABBREVIATIONS MAY NOT BE USED IN PROJECT.

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Legends, Notes, Summaries and Abbreviations

Rev.	Date	Notes

M0.1

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VENTILATION SUMMARY DOAS5

SYSTEM/SPACE NAME	AIR HANDLER		SUPPLY AIR (CFM)	SPACE FLOOR AREA (FT^2)	AREA OUTDOOR AIR RATE (CFM/FT^2)	TIME AVERAGED OCCUPANCY (OCCUPANTS)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	BREATHING ZONE OUTDOOR AIR (CFM)	AIR DISTRIBUTION EFFECTIVENESS	SPACE OUTDOOR AIR (CFM)	SPACE VENTILATION EFFICIENCY	OUTDOOR AIR DELIVERED (CFM)
		Mult.	**(Vpz)**	**(Az)**	**(Ra)**	**(Pz)**	**(Rp)**	**(Vbz)**	**(Ez)**	**(Voz)**	**(Evz)**	
DOAS5 (HP9, HP10, HP11, HP12)												
300 VESTIBULE	AH900	1	176	68	0.06	0	0	4	0.8	5	1.003	0
300A CORRIDOR	AH900	1	535	202	0.06	0	0	12	0.8	15	1.004	0
301 OFFICE	AH901	1	274	113	0.06	1	5	12	0.8	15	0.978	15
302 OFFICE	AH902	1	276	124	0.06	1	5	12	0.8	16	0.976	15
303 OFFICE	AH903	1	172	125	0.06	1	5	13	0.8	16	0.941	15
304 OFFICE	AH904	1	173	125	0.06	1	5	13	0.8	16	0.942	15
305 OFFICE	AH905	1	173	125	0.06	1	5	13	0.8	16	0.942	15
306 OFFICE	AH906	1	173	125	0.06	1	5	13	0.8	16	0.942	15
307 OFFICE	AH907	1	173	125	0.06	1	5	13	0.8	16	0.942	15
308 OFFICE	AH908	1	173	125	0.06	1	5	13	0.8	16	0.942	15
309 SERVER	AH909	1	74	85	0	0	0	0	0.8	0	1.032	0
310 OFFICE	AH910	1	290	174	0.06	1	5	15	0.8	19	0.966	15
340 OPEN OFFICE	AH911	1	603	860	0.06	12	5	112	0.8	140	0.801	110
336 OFFICE	AH912	1	180	127	0.06	1	5	13	0.8	16	0.944	15
338 OFFICE	AH913	1	178	123	0.06	1	5	12	0.8	15	0.945	15
339 OFFICE	AH914	1	178	123	0.06	1	5	12	0.8	15	0.945	15
341 OFFICE	AH915	1	178	123	0.06	1	5	12	0.8	15	0.945	15
342 OFFICE	AH916	1	178	123	0.06	1	5	12	0.8	15	0.945	15
303A CORRIDOR	AH917	1	25	142	0.06	0	0	9	0.8	11	0.606	0
334 VESTIBULE	AH917	1	189	89	0	0	0	0	0.8	0	1.032	0
336A CORRIDOR	AH917	1	94	543	0.06	0	0	33	0.8	41	0.599	30
337 STORAGE	AH917	1	15	86	0	0	0	0	0.8	0	1.032	0
343 OFFICE	AH918	1	178	123	0.06	1	5	12	0.8	15	0.945	15
344 OFFICE	AH919	1	216	178	0.06	1	5	16	0.8	20	0.941	15
345 OFFICE	AH920	1	197	125	0.06	1	5	13	0.8	16	0.953	15
346 OFFICE	AH921	1	197	126	0.06	1	5	13	0.8	16	0.952	15
306A CORRIDOR	AH922	1	114	656	0.06	0	0	39	0.8	49	0.600	40
311 VESTIBULE	AH922	1	180	89	0.06	0	0	5	0.8	7	0.995	0
312 OFFICE	AH1000	1	290	174	0.06	1	5	15	0.8	19	0.966	15
314 OFFICE	AH1001	1	173	125	0.06	1	5	13	0.8	16	0.942	15
316 OFFICE	AH1002	1	173	125	0.06	1	5	13	0.8	16	0.942	15
318 OFFICE	AH1003	1	173	125	0.06	1	5	13	0.8	16	0.942	15
319 OFFICE	AH1004	1	173	125	0.06	1	5	13	0.8	16	0.942	15
319A CORRIDOR	AH1005	1	90	521	0.06	0	0	31	0.8	39	0.598	35
313 CUSTODIAL	AH1005	1	17	102	0	0	0	0	0.8	0	1.032	0
317 ELECTRICAL	AH1005	1	19	110	0	0	0	0	0.8	0	1.032	0
320 OFFICE	AH1006	1	173	125	0.06	1	5	13	0.8	16	0.942	15
321 OFFICE	AH1007	1	262	176	0.06	1	5	16	0.8	19	0.958	15
322 OFFICE	AH1008	1	143	120	0.06	1	5	12	0.8	15	0.925	15
323 OFFICE	AH1009	1	143	116	0.06	1	5	12	0.8	15	0.928	15
326 OFFICE	AH1010	1	249	187	0.06	1	5	16	0.8	20	0.951	15
324A CORRIDOR	AH1011	1	12	70	0.06	0	0	4	0.8	5	0.595	0
324 VESTIBULE	AH1011	1	137	71	0.06	0	0	4	0.8	5	0.993	0
328A CORRIDOR	AH1011	1	80	462	0.06	0	0	28	0.8	35	0.599	30
329 MENS	AH1011	1	39	225	0	0	0	0	0.8	0	1.032	0
333 WOMENS	AH1011	1	39	225	0	0	0	0	0.8	0	1.032	0
327 OFFICE	AH1012	1	192	182	0.06	1	5	16	0.8	20	0.928	15
328 OFFICE	AH1013	1	178	123	0.06	1	5	12	0.8	15	0.945	15
330 OFFICE	AH1014	1	178	123	0.06	1	5	12	0.8	15	0.945	15
331 OFFICE	AH1015	1	178	123	0.06	1	5	12	0.8	15	0.945	15
332 OFFICE	AH1016	1	145	123	0.06	1	5	12	0.8	15	0.925	15
315 COPY/PRINT	AH1017	1	95	139	0.06	0.5	5	11	0.8	14	0.889	0
325 OPEN OFFICE	AH1018	1	308	465	0.06	6	5	58	0.8	72	0.797	60
400 OFFICE	AH1100	1	222	106	0.06	1	5	11	0.8	14	0.968	15
401 OFFICE	AH1101	1	223	115	0.06	1	5	12	0.8	15	0.965	15
402 OFFICE	AH1102	1	219	103	0.06	1	5	11	0.8	14	0.968	15
403 OFFICE	AH1103	1	173	125	0.06	1	5	13	0.8	16	0.942	15
404 OFFICE	AH1104	1	172	125	0.06	1	5	13	0.8	16	0.941	15
405 OFFICE	AH1105	1	172	125	0.06	1	5	13	0.8	16	0.941	15
406 OFFICE	AH1106	1	172	125	0.06	1	5	13	0.8	16	0.941	15
407 OFFICE	AH1107	1	172	125	0.06	1	5	13	0.8	16	0.941	15
408 OFFICE	AH1108	1	172	125	0.06	1	5	13	0.8	16	0.941	15
409 SERVER	AH1109	1	15	85	0	0	0	0	0.8	0	1.032	0
410 OFFICE	AH1110	1	245	168	0.06	1	5	15	0.8	19	0.955	15
411 BREAK AREA	AH1111	1	199	174	0.06	0	5	10	0.8	13	0.966	0
434 OFFICE	AH1112	1	177	123	0.06	1	5	12	0.8	15	0.945	15
436 OFFICE	AH1113	1	177	123	0.06	1	5	12	0.8	15	0.945	15
438 OFFICE	AH1114	1	177	123	0.06	1	5	12	0.8	15	0.945	15
439 OFFICE	AH1115	1	177	123	0.06	1	5	12	0.8	15	0.945	15
441 OFFICE	AH1116	1	177	123	0.06	1	5	12	0.8	15	0.945	15
442 OFFICE	AH1117	1	177	123	0.06	1	5	12	0.8	15	0.945	15
443 OFFICE	AH1118	1	177	122	0.06	1	5	12	0.8	15	0.945	15
444 OFFICE	AH1119	1	205	178	0.06	1	5	16	0.8	20	0.936	15
446 OFFICE	AH1120	1	93	123	0.06	1	5	12	0.8	15	0.866	15
447 OFFICE	AH1121	1	93	126	0.06	1	5	13	0.8	16	0.863	15
400A CORRIDOR	AH1122	1	889	304	0.06	0	0	18	0.8	23	1.006	0
406A CORRIDOR	AH1123	1	143	828	0.06	0	0	50	0.8	62	0.598	30
437 STORAGE	AH1124	1	15	86	0	0	0	0	0.8	0	1.032	0
438A CORRIDOR	AH1124	1	59	339	0.06	0	0	20	0.8	25	0.601	30
446A CORRIDOR	AH1124	1	16	94	0.06	0	0	6	0.8	7	0.591	0
445 OPEN OFFICE	AH1125	1	400	561	0.06	8	5	74	0.8	92	0.802	75
440 CONFERENCE	AH1126	1	159	299	0.06	6	5	48	0.8	60	0.655	50
412 OFFICE	AH1200	1	245	168	0.06	1	5	15	0.8	19	0.955	15
414 OFFICE	AH1201	1	172	124	0.06	1	5	12	0.8	16	0.942	15
416 OFFICE	AH1202	1	172	125	0.06	1	5	13	0.8	16	0.941	15
418 OFFICE	AH1203	1	172	125	0.06	1	5	13	0.8	16	0.941	15
419 OFFICE	AH1204	1	172	125	0.06	1	5	13	0.8	16	0.941	15
420 OFFICE	AH1205	1	172	125	0.06	1	5	13	0.8	16	0.941	15
421 OFFICE	AH1206	1	259	176	0.06	1	5	16	0.8	19	0.957	15
422 OFFICE	AH1207	1	146	139	0.06	1	5	13	0.8	17	0.918	15
423 OFFICE	AH1208	1	146	139	0.06	1	5	13	0.8	17	0.918	15
424 OFFICE	AH1209	1	241	174	0.06	1	5	15	0.8	19	0.952	15
426 OFFICE	AH1210	1	177	123	0.06	1	5	12	0.8	15	0.945	15
427 OFFICE	AH1211	1	177	123	0.06	1	5	12	1.8	7	0.993	15
428 OFFICE	AH1212	1	177	123	0.06	1	5	12	2.8	4	1.007	15
430 OFFICE	AH1213	1	177	123	0.06	1	5	12	3.8	3	1.014	15
431 OFFICE	AH1214	1	177	123	0.06	1	5	12	4.8	3	1.017	15
432 OFFICE	AH1215	1	177	123	0.06	1	5	12	5.8	2	1.020	15
415 COPY/PRINT	AH1216	1	92	122	0.06	0.5	5	10	6.8	1	1.016	0
425 OPEN OFFICE	AH1217	1	383	465	0.06	8	5	68	7.8	9	1.009	70
429 MENS	AH1218	1	39	225	0	0	0	0	8.8	0	1.032	0
433 WOMENS	AH1218	1	39	225	0	0	0	0	9.8	0	1.032	0
SOUTH ATTIC SPACE	AH1219	1	880	4382	0	0	0	0	10.8	0	1.032	0
413 CUSTODIAL	AH1220	1	20	118	0	0	0	0	11.8	0	1.032	0
417 ELECTRICAL	AH1220	1	19	110	0	0	0	0	12.8	0	1.032	0
418A CORRIDOR	AH1220	1	90	519	0.06	0	0	31	13.8	2	1.007	30
422A CORRIDOR	AH1221	1	20	115	0.06	0	0	7	14.8	0	1.009	0
428A CORRIDOR	AH1221	1	72	414	0.06	0	0	25	15.8	2	1.010	30
MECHANICAL MEZZANINE	AH1222	1	483	1257	0	0	0	0	16.8	0	1.032	0
435 LOBBY	AH1223	1	268	789	0.06	0	0	47	17.8	3	1.022	50
NORTH ATTIC SPACE	AH1224	1	693	3186	0	0	0	0	0.8	0	1.032	0
TOTALS			**20,745**					**1,654**			**0.59**	**1,705**

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Addition Ventilation Summary

Rev.	Date	Notes

M0.2

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VENTILATION SUMMARY DOAS1

SYSTEM/SPACE NAME	AIR HANDLER	SUPPLY AIR (CFM)	SPACE FLOOR AREA (FT²)	AREA OUTDOOR AIR RATE (CFM/FT²)	TIME AVERAGED OCCUPANCY (OCCUPANTS)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	BREATHING ZONE OUTDOOR AIR (CFM)	AIR DISTRIBUTION EFFECTIVENESS	SPACE OUTDOOR AIR (CFM)	SPACE VENTILATION EFFICIENCY	OUTDOOR AIR DELIVERED (CFM)
		(Vpz)	**(Az)**	**(Ra)**	**(Pz)**	**(Rp)**	**(Vbz)**	**(Ez)**	**(Voz)**	**(Evz)**	
DOAS1 (HP3, HP4, HP8)											
100B - VESTIBULE	AH301	281	75	0.06	0	0	5	0.8	6	1.042	5
100 - LOBBY_W	AH301	1114	861	0.06	6	5	82	0.8	102	0.970	85
101 - CONFERENCE	AH302	388	469	0.06	4	5	48	0.8	60	1	60
102 - OFFICE	AH303	89	183	0.06	1	5	16	0.8	20	1	20
103 - OFFICE	AH304	224	194	0.06	1	5	17	0.8	21	1	20
104 - OFFICE	AH305	350	221	0.06	1	5	18	0.8	23	1	20
105 - OFFICE	AH306	237	173	0.06	1	5	15	0.8	19	1	20
108 - OFFICE	AH307	235	161	0.06	1	5	15	0.8	18	1	20
107 - COPY MAIL CENTER	AH308	161	137	0.06	0	0	8	0.8	10	1	10
107A - OFFICE	AH309	63	135	0.06	1	5	13	0.8	16	1	20
106 - CONFERENCE	AH310	183	286	0.06	6	5	47	0.8	59	1	60
137 - ELECTRIC	AH311	270	46	0	0	0	0	0.8	0	1	0
138 OFFICE	AH312	120	174	0.06	1	5	15	0.8	19	1	20
136 - OFFICE	AH313	194	175	0.06	1	5	16	0.8	19	1	20
134 - OFFICE	AH314	177	135	0.06	1	5	13	0.8	16	1	20
132 - OFFICE	AH315	198	169	0.06	1	5	15	0.8	19	1	20
101A HALL	AH316	63	165	0.06	0	0	10	0.8	12	0.931	15
102A - CORR	AH316	80	258	0.06	0	0	15	0.8	19	0.886	25
108A - CORR.	AH316	80	235	0.06	0	0	14	0.8	18	0.907	20
109 - MEN	AH316	75	207	0	0	0	0	0.8	0	1.128	0
110 - WOMEN	AH316	75	217	0	0	0	0	0.8	0	1.128	0
133 - JANITOR	AH316	12	34	0	0	0	0	0.8	0	1.128	0
133A - CORR.	AH316	71	229	0.06	0	0	14	0.8	17	0.886	20
135 - STORAGE	AH316	12	65	0.06	0	5	4	0.8	5	0.721	5
114A - CORR.	AH316	36	177	0.06	0	0	11	0.8	13	0.759	20
112A - CORR.	AH316	36	137	0.06	0	0	8	0.8	10	0.842	15
111 - KITCHENETTE	AH316	112	120	0.06	0	5	7	0.8	9	1.047	10
111A - OFFICE	AH317	235	161	0.06	1	5	15	0.8	18	1	20
115 - IT	AH401	169	103	0.06	1	5	11	0.8	14	1	0
118 - OFFICE	AH402	216	150	0.06	1	5	14	0.8	18	1	20
120 - OFFICE	AH403	210	149	0.06	1	5	14	0.8	17	1	20
122 - OFFICE	AH404	210	147	0.06	1	5	14	0.8	17	1	20
123 - OFFICE	AH405	265	218	0.06	1	5	18	0.8	23	1	25
113 - DATA	AH406	455	66	0	0	0	0	0.8	0	1	0
125 - OFFICE	AH407	127	140	0.06	1	5	13	0.8	17	1	20
126 - OFFICE	AH408	127	141	0.06	1	5	13	0.8	17	1	20
127 - OFFICE	AH409	246	218	0.06	1	5	18	0.8	23	1	25
128 - OFFICE	AH410	178	141	0.06	1	5	13	0.8	17	1	20
129 - OFFICE	AH411	178	141	0.06	1	5	13	0.8	17	1	20
130 - OFFICE	AH412	183	147	0.06	1	5	14	0.8	17	1	20
119 - PLAN RM & PRINT.	AH413	186	226	0.06	0	0	14	0.8	17	1.077	20
125A - CORR.	AH413	89	261	0.06	0	0	16	0.8	20	0.973	20
116 - HALL	AH413	24	111	0.06	0	0	7	0.8	8	0.847	10
131 - LAUNDRY	AH413	91	73	0.12	0	0	9	0.8	11	1.073	15
128A - CORR.	AH413	20	260	0.06	0	0	16	0.8	20	0.846	20
117 - RECEPTION	AH413	132	245	0.06	2	5	25	0.8	31	0.960	35
125 CORR N	AH413	12	140	0.06	0	0	8	0.8	11	0.870	5
121 - CONF. & DOCS.	AH414	208	311	0.06	4	5	39	0.8	48	1	50
116A - VESTIBULE	AH415	128	96	0.06	0	0	6	0.8	7	1	10
116 - WAITING	AH415	171	375	0.06	3	5	38	0.8	47	1	50
201A - CAMERA RM	AH801	323	106	0.06	1	5	11	0.8	14	1	15
202 - WAITING	AH802	402	325	0.06	3	5	35	0.8	43	1	45
219 - COUNCIL CONF.	AH803	412	391	0.06	6	5	53	0.8	67	1	70
203 - OFFICE	AH804	245	173	0.06	1	5	15	0.8	19	1	15
204 - OFFICE	AH805	239	162	0.06	1	5	15	0.8	18	1	15
205 - OFFICE	AH806	235	155	0.06	1	5	14	0.8	18	1	15
207 - OFFICE	AH807	244	172	0.06	1	5	15	0.8	19	1	15
208 - SERVER	AH808	513	122	0	0	0	0	0.8	0	1	0
202 CORRIDOR	AH809	157	241	0.06	0	0	14	0.8	18	0.966	20
204A - CORR.	AH809	86	251	0.06	0	0	15	0.8	19	0.862	20
206 - JAN.	AH809	37	58	0	0	0	0	0.8	0	1.081	0
211A - CORR.	AH809	67	197	0.06	0	0	12	0.8	15	0.861	15
216 - COPY/VAULT	AH809	212	152	0.06	0	5	9	0.8	11	1.027	10
216A - CORR.	AH809	145	225	0.06	0	0	14	0.8	17	0.965	20
220A - CORR.	AH809	120	201	0.06	0	0	12	0.8	15	0.955	15
221 - MEN	AH809	100	132	0	1	0	0	0.8	0	1.081	0
222 - WOMEN	AH809	101	136	0	1	0	0	0.8	0	1.081	0
224A CORR.	AH809	80	135	0.06	0	0	8	0.8	10	0.955	10
212 - CORR	AH809	92	216	0.06	0	0	13	0.8	16	0.905	20
209 - ELECTRIC	AH810	308	58	0	0	0	0	0.8	0	1	0
210 - OFFICE	AH811	264	186	0.06	1	5	16	0.8	20	1	20
211 - CONFERENCE	AH812	192	178	0.06	3	5	26	0.8	32	1	45
224 - MECH ACCESS	AH813	61	130	0	0	0	0	0.8	0	1	0
213 - OFFICE	AH814	304	211	0.06	1	5	18	0.8	22	1	20
214 - OFFICE	AH815	238	127	0.06	1	5	13	0.8	16	1	20
217 - OFFICE	AH816	270	175	0.06	1	5	16	0.8	19	1	20
218 - OFFICE	AH817	239	131	0.06	1	5	13	0.8	16	1	20
220 - OFFICE	AH818	240	132	0.06	1	5	13	0.8	16	1	20
114 - STAIR	AH819	133	275	0	0	0	0	0.8	0	1	0
223 - STAIR	AH819	267	275	0	0	0	0	0.8	0	1	0
Totals		**15,122**					**1,142**			**0.72**	**1,500**

VENTILATION SUMMARY DOAS2

SYSTEM/SPACE NAME	AIR HANDLER	SUPPLY AIR (CFM)	SPACE FLOOR AREA (FT²)	AREA OUTDOOR AIR RATE (CFM/FT²)	TIME AVERAGED OCCUPANCY (OCCUPANTS)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	BREATHING ZONE OUTDOOR AIR (CFM)	AIR DISTRIBUTION EFFECTIVENESS	SPACE OUTDOOR AIR (CFM)	SPACE VENTILATION EFFICIENCY	OUTDOOR AIR DELIVERED (CFM)
		(Vpz)	**(Az)**	**(Ra)**	**(Pz)**	**(Rp)**	**(Vbz)**	**(Ez)**	**(Voz)**	**(Evz)**	
DOAS2 (HP7)											
201B - COUNCIL CHAMBERS	AH701	6050	3068	0.06	201	5	1189.08	0.8	1486.35	1	1500
Totals		**6,050**					**1,189**			**1**	**1,500**

VENTILATION SUMMARY DOAS3

SYSTEM/SPACE NAME	AIR HANDLER	SUPPLY AIR (CFM)	SPACE FLOOR AREA (FT²)	AREA OUTDOOR AIR RATE (CFM/FT²)	TIME AVERAGED OCCUPANCY (OCCUPANTS)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	BREATHING ZONE OUTDOOR AIR (CFM)	AIR DISTRIBUTION EFFECTIVENESS	SPACE OUTDOOR AIR (CFM)	SPACE VENTILATION EFFICIENCY	OUTDOOR AIR DELIVERED (CFM)
		(Vpz)	**(Az)**	**(Ra)**	**(Pz)**	**(Rp)**	**(Vbz)**	**(Ez)**	**(Voz)**	**(Evz)**	
DOAS3 (HP1, HP2)											
162B - SPRINKLER	AH101	125	120	0	0	0	0	0.8	0	1	0
162A - ELECTRIC	AH102	369	179	0	0	0	0	0.8	0	1	0
162 - SALLYPORT	AH103	452	567	0	0	0	0	0.8	0	1	0
163 - BOOKING	AH104	300	396	0.06	3	5	39	0.8	48	0.946	65
163A - TOILET	AH104	59	74	0	0	0	0	0.8	0	1.108	0
163B - INTERVIEW	AH105	111	148	0.06	2	5	19	0.8	24	1	40
164 - OBSERVATION	AH106	28	110	0.06	1	5	12	0.8	15	1	30
146B - CORR.	AH107	48	157	0.06	0	0	9	0.8	12	0.918	30
151A - CORR.	AH107	107	340	0.06	0	0	20	0.8	26	0.925	40
159 - JANITOR	AH107	18	52	0	0	0	0	0.8	0	1.163	0
160 - WOMEN	AH107	33	64	0	1	0	0	0.8	0	1.163	0
161A - CORR.	AH107	122	394	0.06	0	0	24	0.8	30	0.921	50
161 - MEN	AH108	33	65	0	1	0	0	0.8	0	1.146	0
165 - ARMORY	AH108	59	116	0.06	0	5	7	0.8	9	0.998	15
166A - CORR.	AH108	160	497	0.06	0	0	30	0.8	37	0.913	55
167 - PATROL BRIEF	AH109	1106	590	0.06	7	5	70	0.8	88	1	120
166 EVIDENCE PROC.	AH110	63	120	0.06	1	5	12	0.8	15	1	20
156 ARMORY	AH111	53	204	0.12	0	0	24	0.8	31	1	50
168 EVIDENCE PROC.	AH112	76	229	0.06	1	5	19	0.8	23	1	35
169 - WOMENS LOCKER	AH113	336	297	0	2	0	0	0.8	0	1	25
171 - MENS LOCKER	AH114	571	448	0	3	0	0	0.8	0	1	35
170 EVIDENCE PROCESSI	AH115	76	222	0.06	1	5	18	0.8	23	1	40
168A EVIDENCE	AH116	60	372	0.12	0	5	45	0.8	56	1	80
168B HIGH VALUE EVIDEN	AH117	16	106	0.12	0	5	13	0.8	16	1	25
155 - LIEUTENANT	AH118	142	171	0.06	1	5	15	0.8	19	1	25
150 - CRIME PREV.	AH119	134	138	0.06	1	5	13	0.8	17	1	25
151 - BIKE OFF.	AH120	137	154	0.06	1	5	14	0.8	18	1	25
153 - EVID/UNIF. OFFICE	AH121	134	145	0.06	1	5	14	0.8	17	1	25
154 - STREET CRIME	AH122	138	159	0.06	1	5	15	0.8	18	1	25
100 - LOBBY_S	AH201	1114	803	0.06	6	5	78	0.8	98	0.971	130
100A - VESTIBULE	AH201	300	75	0.06	0	0	5	0.8	6	1.040	15
100 - LOBBY_NE	AH202	1095	997	0.06	12	5	120	0.8	150	0.957	195
100C - VESTIBULE	AH202	266	138	0.06	0	0	8	0.8	10	1.055	15
139 - ELEV. MACH.	AH203	449	98	0.06	0	0	6	0.8	7	1	15
142 - BREAK RM	AH204	1868	970	0.06	10	5	108	0.8	135	1	185
143 - WEIGHT RM	AH205	832	613	0.06	10	20	237	0.8	296	1	390
140 - MEN	AH206	18	65	0	0	0	0	0.8	0	1.079	0
141 - WOMEN	AH206	18	64	0	0	0	0	0.8	0	1.079	0
141A - CORR.	AH206	53	190	0.06	0	0	11	0.8	14	0.810	25
144/144A - MEN LKR/BTH	AH206	108	219	0	3	0	0	0.8	0	1.079	0
145/145A - WMEN LKR/BTH	AH206	92	220	0	2	0	0	0.8	0	1.079	0
147 - INTERVW & REPORT	AH207	80	155	0.06	2	5	19	0.8	24	0.778	35
147A - TOILET	AH207	18	45	0	0	0	0	0.8	0	1.079	0
149 - STORAGE	AH208	18	43	0.12	0	0	5	0.8	6	0.721	15
172 - DATA	AH209	455	66	0	0	0	0	0.8	0	1	0
148 - RECPTION	AH210	144	164	0.06	2	5	20	0.8	25	1	30
148 - RECORDS	AH211	122	150	0.06	0	5	9	0.8	11	1	25
146 - WAITING	AH212	173	310	0.06	2	5	29	0.8	36	1	45
Totals		**12,289**					**1,087**			**0.72**	**2,000**

VENTILATION SUMMARY DOAS4

SYSTEM/SPACE NAME	AIR HANDLER	SUPPLY AIR (CFM)	SPACE FLOOR AREA (FT²)	AREA OUTDOOR AIR RATE (CFM/FT²)	TIME AVERAGED OCCUPANCY (OCCUPANTS)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	BREATHING ZONE OUTDOOR AIR (CFM)	AIR DISTRIBUTION EFFECTIVENESS	SPACE OUTDOOR AIR (CFM)	SPACE VENTILATION EFFICIENCY	OUTDOOR AIR DELIVERED (CFM)
		(Vpz)	**(Az)**	**(Ra)**	**(Pz)**	**(Rp)**	**(Vbz)**	**(Ez)**	**(Voz)**	**(Evz)**	
DOAS4 (HP5, HP6)											
241A - CORR.	AH501	342	378	0.06	0	0	23	0.8	28	1.010	25
245 - STORAGE	AH501	47	48	0	0	0	0	0.8	0	1.093	0
247A - CORR.	AH501	70	105	0.06	0	0	6	0.8	8	0.981	10
250A - WAITING	AH501	237	347	0.06	3	5	36	0.8	45	0.904	40
232 - MEN	AH502	53	66	0	1	0	0	0.8	0	1.069	0
233 - WOMEN	AH502	54	67	0	1	0	0	0.8	0	1.069	0
237 - COPY & STOR.	AH502	214	158	0.06	0	5	9	0.8	12	1.013	10
237A - CORR.	AH502	192	314	0.06	0	0	19	0.8	24	0.946	20
253A - CORR.	AH502	259	411	0.06	0	0	25	0.8	31	0.950	30
244 - OFFICE	AH503	262	181	0.06	1	5	16	0.8	20	1	20
243 - OFFICE	AH504	136	172	0.06	1	5	15	0.8	19	1	20
246 - OFFICE	AH505	368	182	0.06	1	5	16	0.8	20	1	20
247 - OFFICE	AH506	272	173	0.06	1	5	15	0.8	19	1	20
248 - ELECTRIC	AH507	315	61	0	0	0	0	0.8	0	1	0
249 - OFFICE	AH508	297	220	0.06	1	5	18	0.8	23	1	25
253A - OFFICE	AH509	282	198	0.06	1	5	17	0.8	21	1	25
250 - OFFICE	AH510	107	133	0.06	1	5	13	0.8	16	1	15
251 - OFFICE	AH511	104	124	0.06	1	5	12	0.8	16	1	15
253 - OPEN OFFICE	AH512	865	575	0.06	8	5	75	0.8	93	1	95
254 - OFFICE	AH513	261	153	0.06	1	5	14	0.8	18	1	20
255 - OFFICE	AH514	281	210	0.06	1	5	18	0.8	22	1	20
256 - STAIR	AH515	175	278	0	0	0	0	0.8	0	1	0
174 - STAIR	AH515	128	278	0	0	0	0	0.8	0	1	0
242 - OFFICE	AH516	151	190	0.06	1	5	16	0.8	21	1	20
241 - OFFICE	AH517	116	159	0.06	1	5	15	0.8	18	1	20
252 - SERVER	AH518	481	78	0	0	0	0	0.8	0	1	0
235 - MECH ACCESS	AH519	90	164	0	0	0	0	0.8	0	1	0
240 - STAIR	AH520	234	243	0	0	0	0	0.8	0	1	0
158 - STAIR	AH520	114	232	0	0	0	0	0.8	0	1	0
239 - CONFERENCE	AH521	472	282	0.06	4	5	37	0.8	46	1	45
236 - OFFICE	AH522	183	162	0.06	1	5	15	0.8	18	1	20
234 - OFFICE	AH523	184	163	0.06	1	5	15	0.8	18	1	20
231 - OFFICE	AH524	177	147	0.06	1	5	14	0.8	17	1	20
225 EAST TRNG CNCLOVRFLW	AH525	1208	906	0.06	15	5	129	0.8	162	1	160
200B - CONFERENCE	AH601	906	193	0.06	8	5	52	0.8	64	1	65
200A - LOBBY	AH602	2701	1476	0.06	12	5	149	0.8	186	1	185
200B - LOBBY	AH603	1075	852	0.06	13	3	84	0.8	105	0.991	110
200C - LOBBY	AH603	525	449	0.06	12	3	57	0.8	71	0.953	60
201 - VESTIBULE	AH603	111	177	0.06	0	0	11	0.8	13	0.969	10
225 WEST TRNG CNCLOVRFLW	AH604	1502	936	0.06	15	5	131	0.8	164	0.980	140
225A - STORAGE	AH604	91	168	0.06	0	5	10	0.8	13	0.950	15
226 - SERVING KITCHEN	AH605	499	221	0.06	2	5	23	0.8	29	1	30
227 - WOMEN	AH606	119	207	0	3	0	0	0.8	0	1.053	0
227A - CORR.	AH606	162	276	0.06	0	0	17	0.8	21	0.925	20
227B - CORR.	AH606	134	192	0.06	0	0	12	0.8	14	0.945	20
228 - MEN	AH606	119	207	0	3	0	0	0.8	0	1.053	0
200A CONF.	AH607	346	254	0.06	8	5	55	0.8	69	1	70
225 EAST SUPPLEMENTAL	AH608	567	906	0	0	0	0	0.8	0	1	0
225 WEST SUPPLEMENTAL	AH609	567	936	0	0	0	0	0.8	0	1	0
230 - OFFICE	AH610	185	166	0.06	1	5	15	0.8	19	1	20
230A - OFFICE	AH611	132	166	0.06	1	5	15	0.8	19	1	20
Totals		**18,472**					**1,217**			**0.90**	**1,500**

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

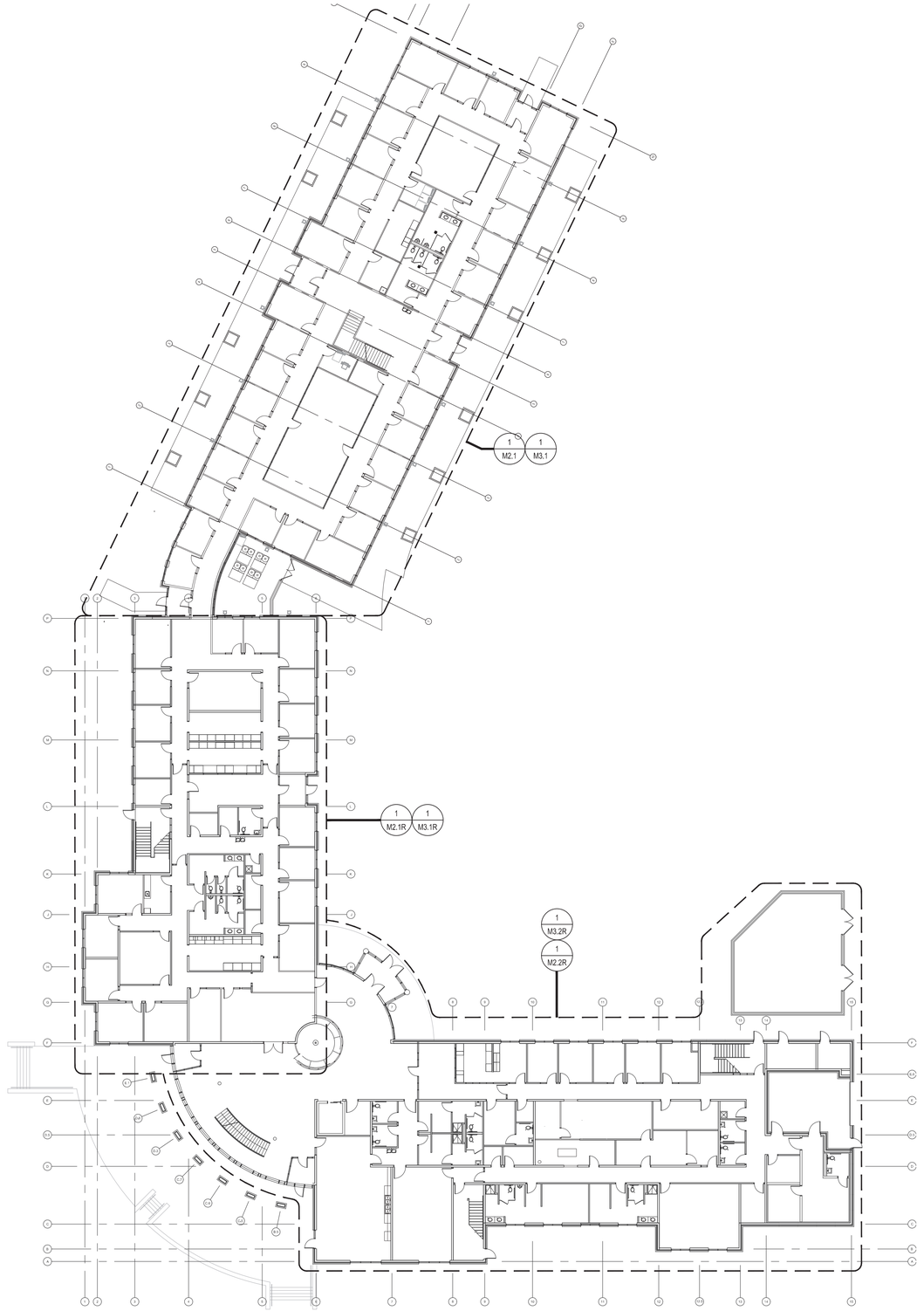
Issue Date: February 23, 2024

Mechanical Ventilation Summaries

Rev.	Date	Notes

M0.2R

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1 **FIRST FLOOR KEY PLAN**
1" = 20'-0"

PLAN NORTH

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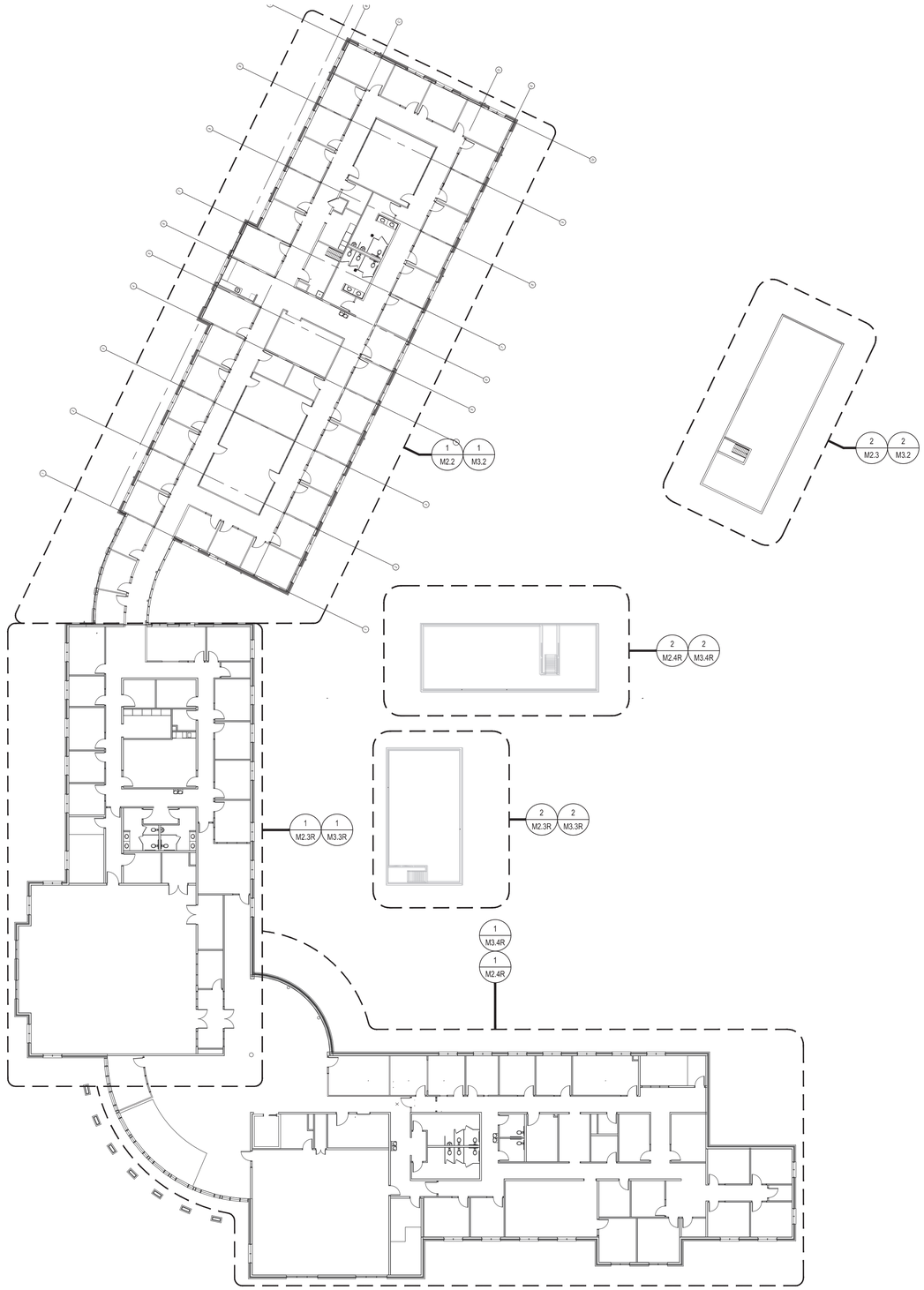
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Mechanical HVAC First Floor Key Plan New Work

Rev.	Date	Notes

M1.1

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1 **SECOND FLOOR PLAN**
1" = 20'-0"
0 20 40

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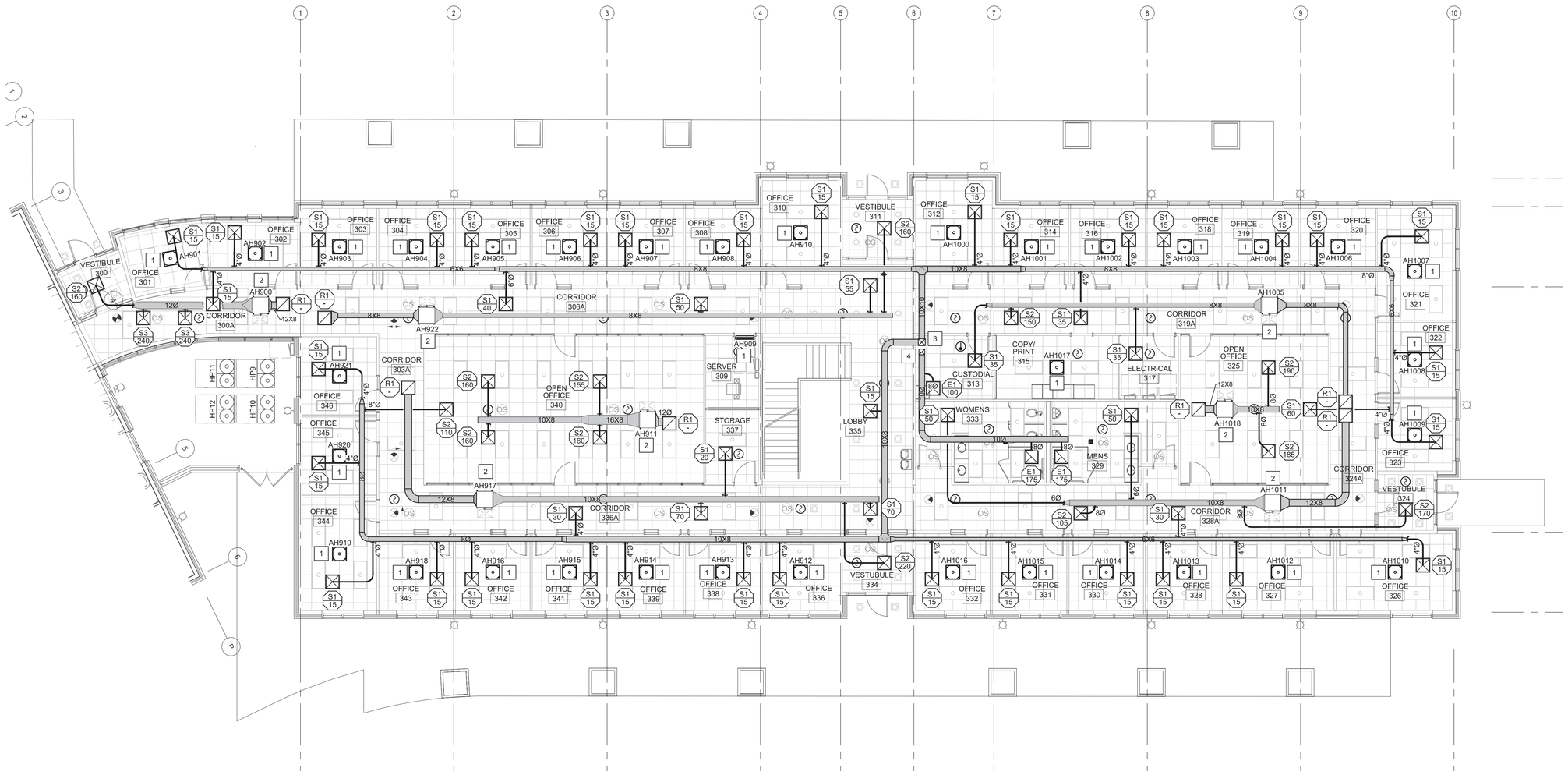
Rev.	Date	Notes

M1.2

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KEYED NOTES - NEW WORK

1. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
3. VENTILATION AIR DUCT (12" X 12") ROUTED UP THROUGH CEILING EN ROUTE TO MECHANICAL MEZZANINE ABOVE.
4. EXHAUST AIR DUCT (10" X 10") ROUTED UP THROUGH CEILING EN ROUTE TO MECHANICAL MEZZANINE ABOVE.



1 **FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

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02/21/2024

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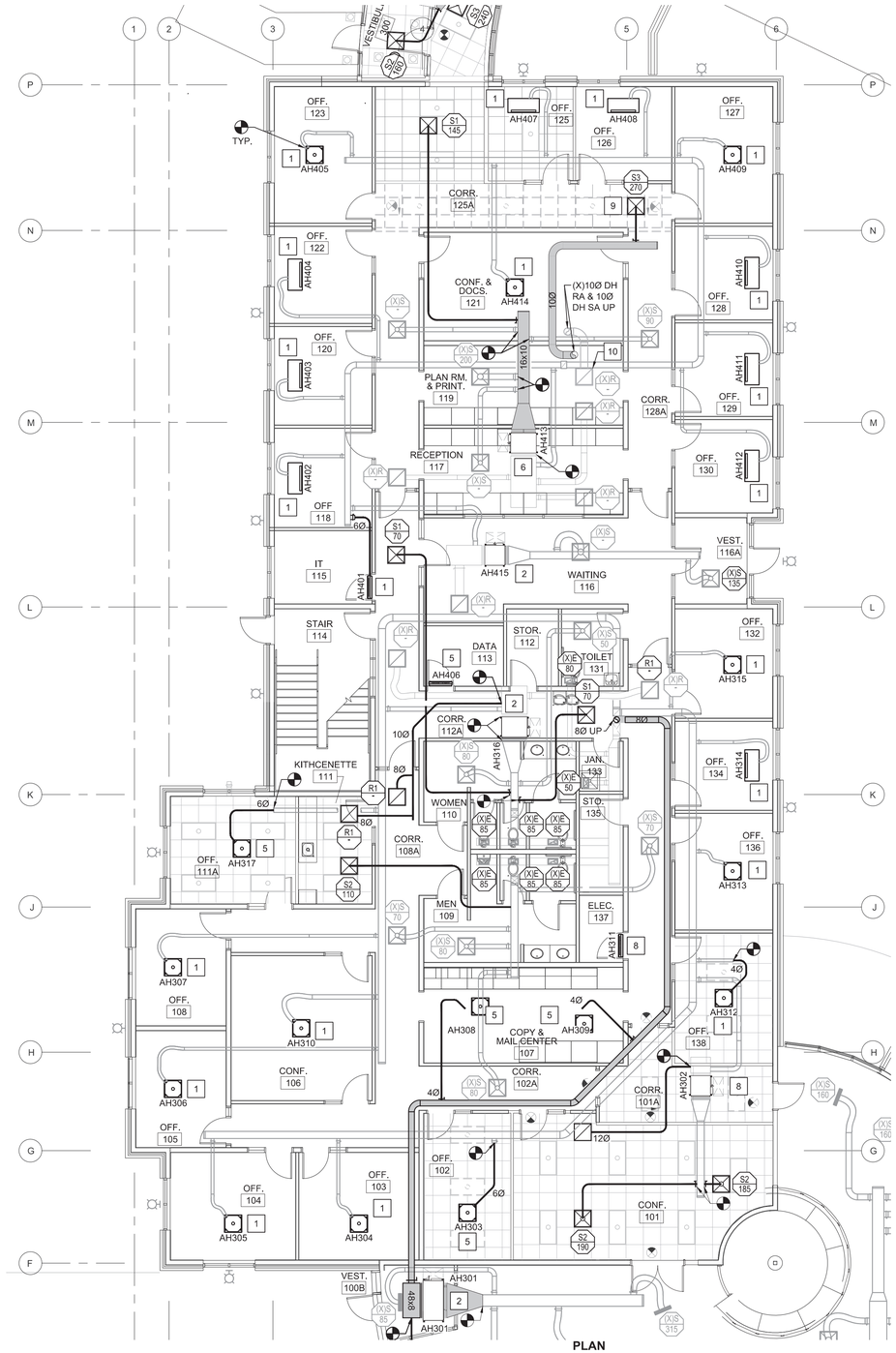
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Mechanical HVAC Addition First Floor Enlarged Plan

Rev.	Date	Notes

M2.1

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1 ENLARGED FLOOR PLAN

1/8" = 1'-0"

0 4' 8' 16'

KEYED NOTES - NEW WORK

1. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING FA DUCTWORK (IF APPLICABLE) AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
3. NOT USED
4. INSTALL NEW POWER VENTILATOR. ROUTE EXHAUST DUCTWORK TO NEW SIDEWALL LOUVER.
5. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES, INSTALL NEW FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING FA DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
6. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
7. NOT USED
8. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
9. INSTALL NEW SA DIFFUSER FOR EXISTING DEHUMIDIFIER. ROUTE NEW DUCTWORK AS INDICATED ON PLANS
10. EXISTING RA GRILLE FOR EXISTING DEHUMIDIFIER.

NOTE: ALL NOTES MAY NOT BE USED ON THIS SHEET.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER JOHN O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical HVAC First Floor Enlarged Plans

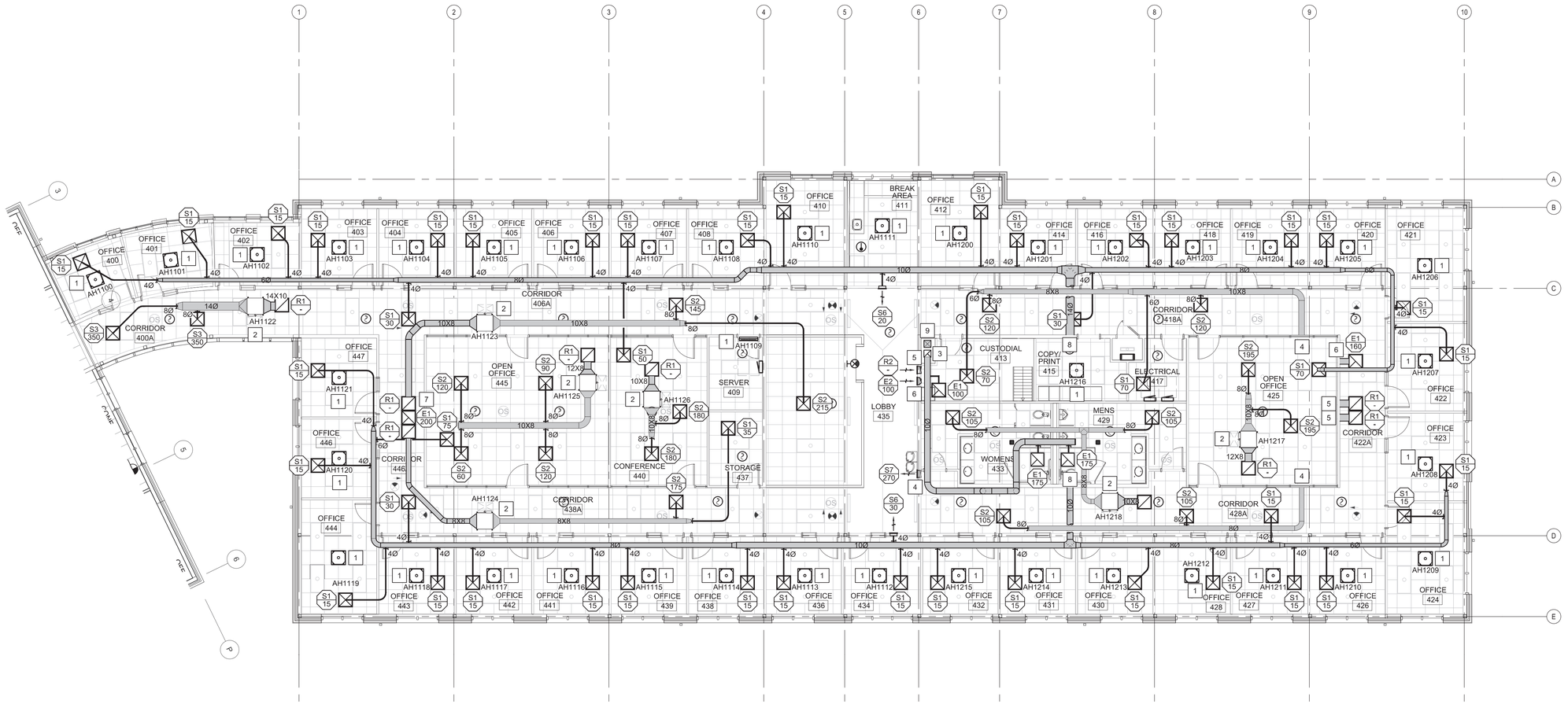
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M2.1R

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KEYED NOTES - NEW WORK

1. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
3. EXHAUST AIR DUCTWORK FROM SECOND FLOOR RESTROOMS MANIFOLDS INTO 12" X 12" EXHAUST AIR RISER OVERHEAD. RISER TRANSITIONS TO 10" X 10" BELOW MANIFOLD AND CONTINUES THROUGH FLOOR TO FIRST FLOOR.
4. SUPPLY AIR CONTINUED INTO MECHANICAL MEZZANINE, SEE 2/M2.3 FOR CONTINUATION.
5. RETURN AIR CONTINUED INTO MECHANICAL MEZZANINE, SEE 2/M2.3 FOR CONTINUATION.
6. EXHAUST AIR CONTINUED INTO MECHANICAL MEZZANINE, SEE 2/M2.3 FOR CONTINUATION.
7. EXHAUST AIR DUCT CONTINUES UP INTO ATTIC SPACE, SEE 1/M2.3 FOR CONTINUATION.
8. VENTILATION AIR FROM MEZZANINE, SEE 2/M2.3 FOR CONTINUATION.
9. VENTILATION AIR DUCTWORK RISER (12" X 12") CONTINUES THROUGH 413 CUSTODIAL.



1 SECOND FLOOR PLAN - NEW WORK

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

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Construction Drawings

Issue Date: February 23, 2024

Mechanical HVAC Addition Second Floor Enlarged Plan

Rev.	Date	Notes

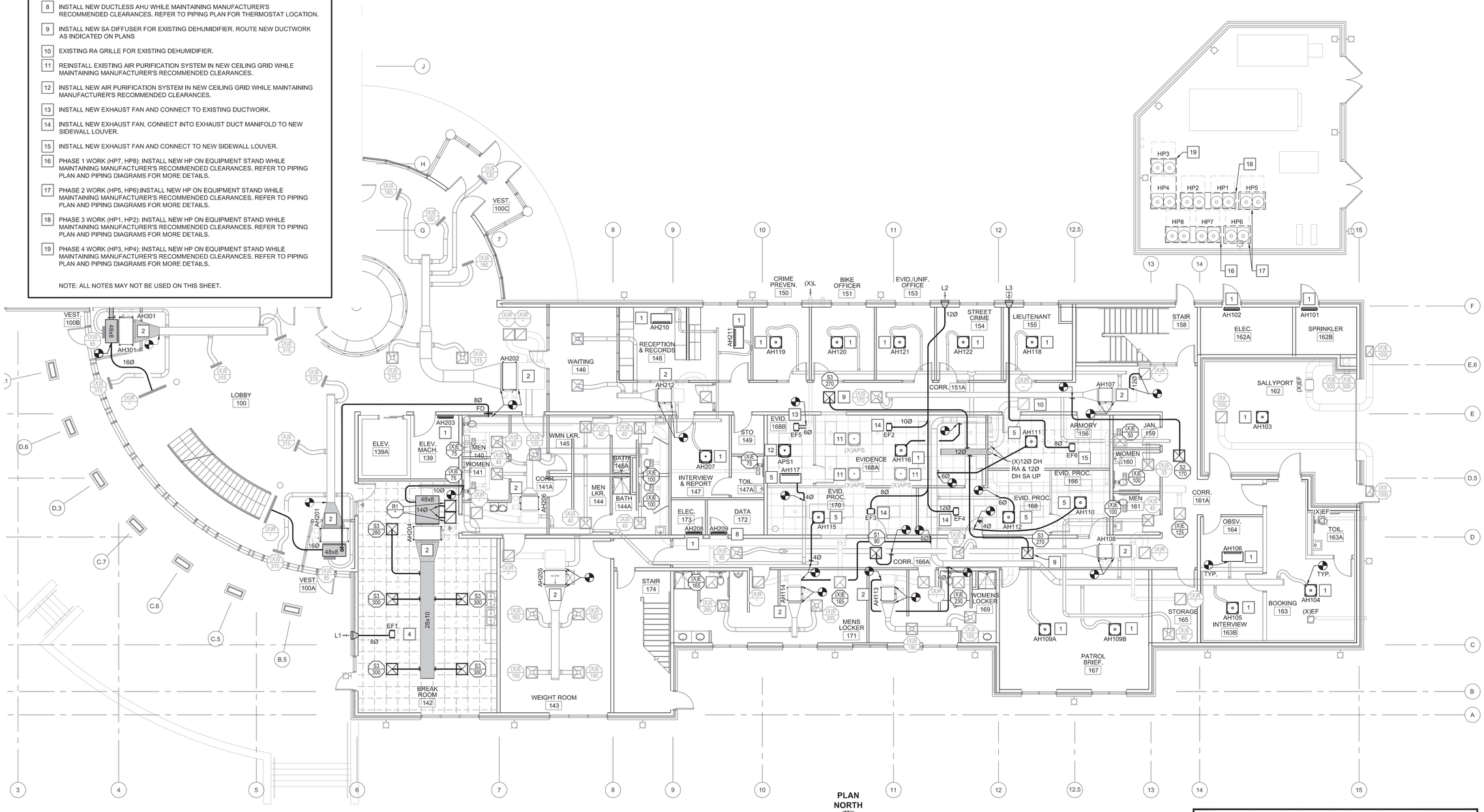
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KEYED NOTES - NEW WORK

1. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING FA DUCTWORK (IF APPLICABLE) AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
3. NOT USED
4. NOT USED.
5. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING FA DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
6. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
7. NOT USED.
8. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
9. INSTALL NEW SA DIFFUSER FOR EXISTING DEHUMIDIFIER. ROUTE NEW DUCTWORK AS INDICATED ON PLANS
10. EXISTING RA GRILLE FOR EXISTING DEHUMIDIFIER.
11. REINSTALL EXISTING AIR PURIFICATION SYSTEM IN NEW CEILING GRID WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
12. INSTALL NEW AIR PURIFICATION SYSTEM IN NEW CEILING GRID WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
13. INSTALL NEW EXHAUST FAN AND CONNECT TO EXISTING DUCTWORK.
14. INSTALL NEW EXHAUST FAN, CONNECT INTO EXHAUST DUCT MANIFOLD TO NEW SIDEWALL LOUVER.
15. INSTALL NEW EXHAUST FAN AND CONNECT TO NEW SIDEWALL LOUVER.
16. PHASE 1 WORK (HP7, HP8): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN AND PIPING DIAGRAMS FOR MORE DETAILS.
17. PHASE 2 WORK (HP5, HP6):INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN AND PIPING DIAGRAMS FOR MORE DETAILS.
18. PHASE 3 WORK (HP1, HP2): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN AND PIPING DIAGRAMS FOR MORE DETAILS.
19. PHASE 4 WORK (HP3, HP4): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN AND PIPING DIAGRAMS FOR MORE DETAILS.

NOTE: ALL NOTES MAY NOT BE USED ON THIS SHEET.



1 **ENLARGED FLOOR PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

Leland Town Hall Addition & Renovations

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Construction Drawings

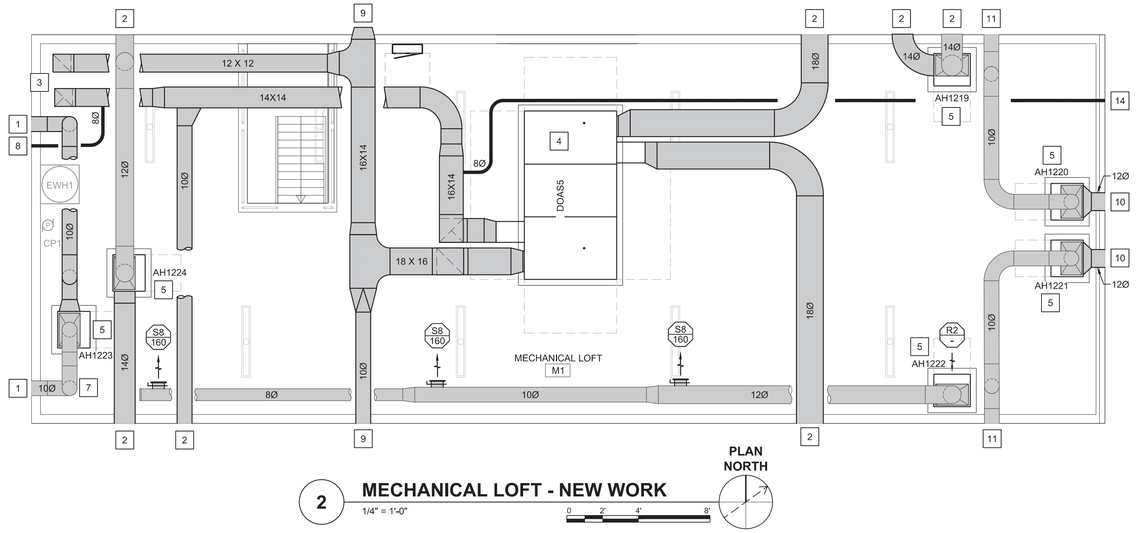
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Mechanical HVAC First Floor Enlarged Plans

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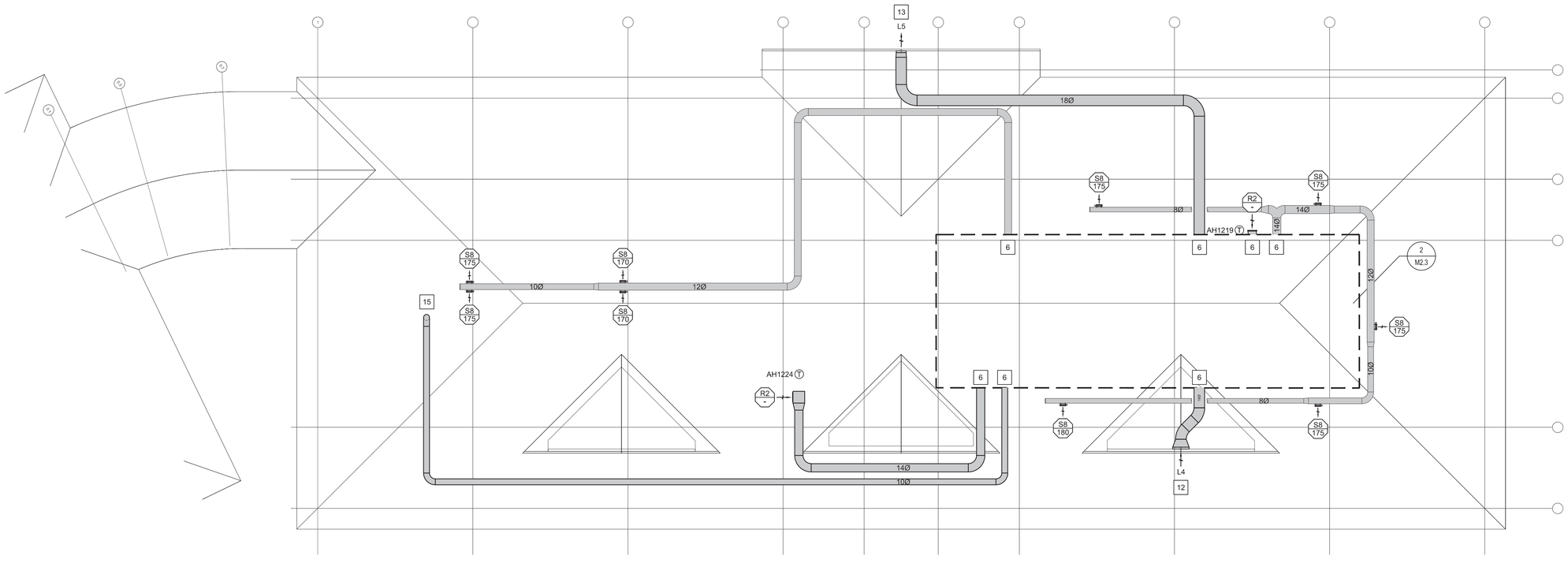
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2 **MECHANICAL LOFT - NEW WORK**
1/4" = 1'-0"

PLAN NORTH



1 **ATTIC PLAN - NEW WORK**
1/8" = 1'-0"

PLAN NORTH

KEYED NOTES - NEW WORK

1. SUPPLY AND RETURN GRILLES MOUNTED HIGH IN 435 LOBBY SPACE DIRECTLY ON OTHER SIDE OF WALL FROM MECHANICAL LOFT, SEE 1/M2.2 FOR CONTINUATION.
2. DUCTWORK CONTINUED INTO ATTIC SPACE, SEE 1/M2.3 FOR CONTINUATION.
3. VENTILATION AIR AND EXHAUST AIR DOWN THROUGH CUSTODIAN 413 EN ROUTE TO FIRST FLOOR ABOVE CEILING SPACE.
4. INSTALL DOAS AIR HANDLER ON CONCRETE HOUSEKEEPING PAD WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
5. INSTALL AIR HANDLER ON CONCRETE HOUSEKEEPING PAD WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
6. DUCTWORK CONTINUED THROUGH WALL INTO MECHANICAL MEZZANINE, SEE 2/M2.3 FOR CONTINUATION.
7. INSTALL BALANCE DAMPER IN SUPPLY DUCT RISER.
8. EXHAUST DUCTWORK CONTINUES TO EXHAUST GRILLE MOUNTED HIGH IN 435 LOBBY, SEE 1/M2.2 FOR CONTINUATION.
9. VENTILATION AIR CONTINUED INTO SECOND FLOOR ABOVE CEILING SPACE, SEE 1/M2.2 FOR CONTINUATION.
10. RETURN AIR CONTINUED INTO SECOND FLOOR ABOVE CEILING SPACE, SEE 1/M2.2 FOR CONTINUATION.
11. SUPPLY AIR CONTINUED INTO SECOND FLOOR ABOVE CEILING SPACE, SEE 1/M2.2 FOR CONTINUATION.
12. OUTSIDE AIR INTAKE LOUVER IN DORMER LOCATED BEHIND TRIANGULAR ARCHITECTURAL LOUVER SELECTED BY ARCHITECT, BLANK OFF UNUSED PORTION OF ARCHITECTURAL LOUVER.
13. EXHAUST RELIEF LOUVER IN DORMER LOCATED BEHIND CIRCULAR ARCHITECTURAL LOUVER SELECTED BY ARCHITECT, BLANK OFF UNUSED PORTION OF ARCHITECTURAL LOUVER.
14. EXHAUST DUCTWORK CONTINUED INTO SECOND FLOOR ABOVE CEILING SPACE, SEE 1/M2.2 FOR CONTINUATION.
15. EXHAUST DUCT TURNS DOWN INTO SECOND FLOOR ABOVE CEILING SPACE, SEE 1/M2.2 FOR CONTINUATION.

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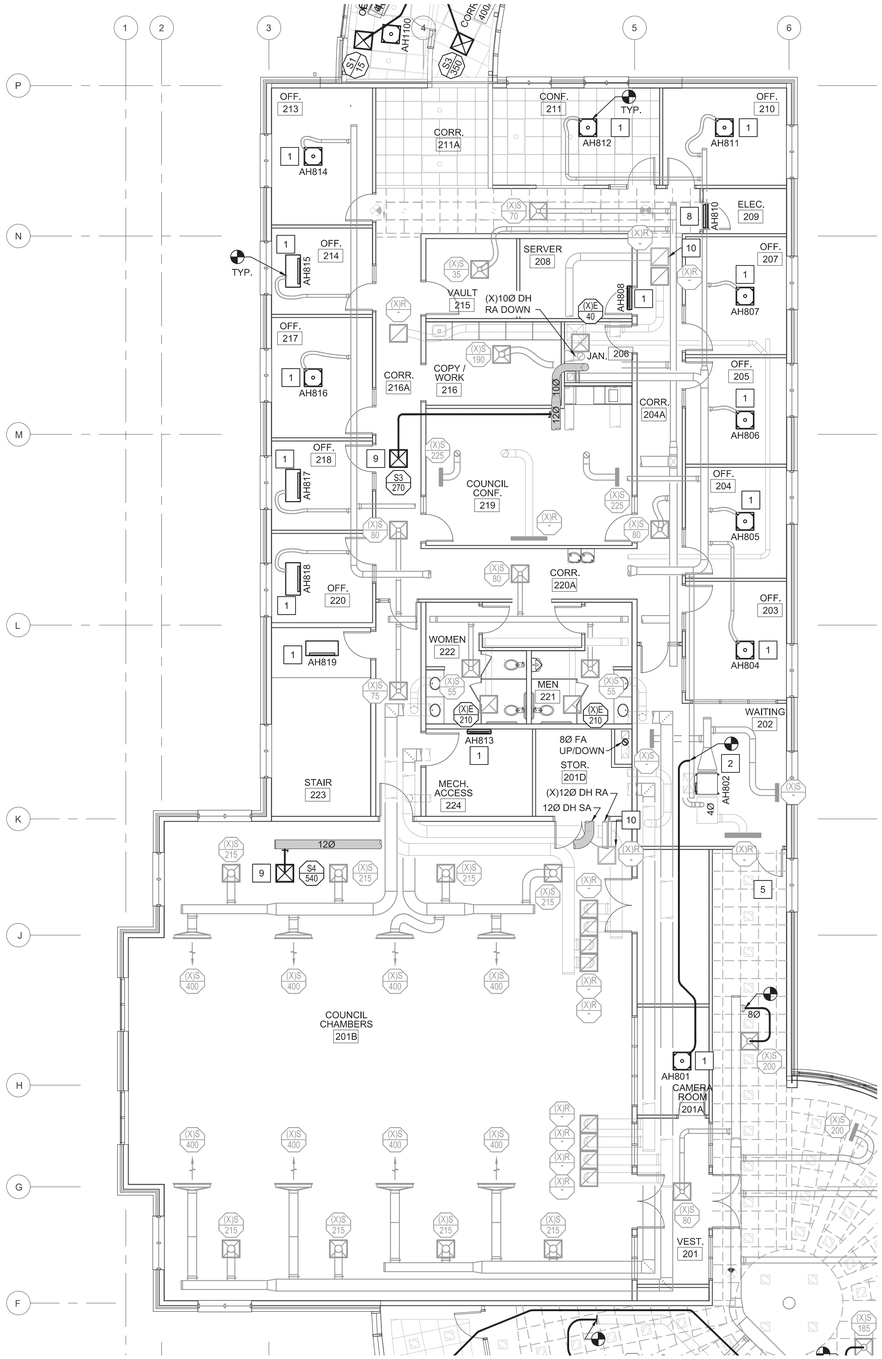
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Mechanical HVAC Addition Attic & Loft Enlarged Plans

Rev.	Date	Notes

M2.3

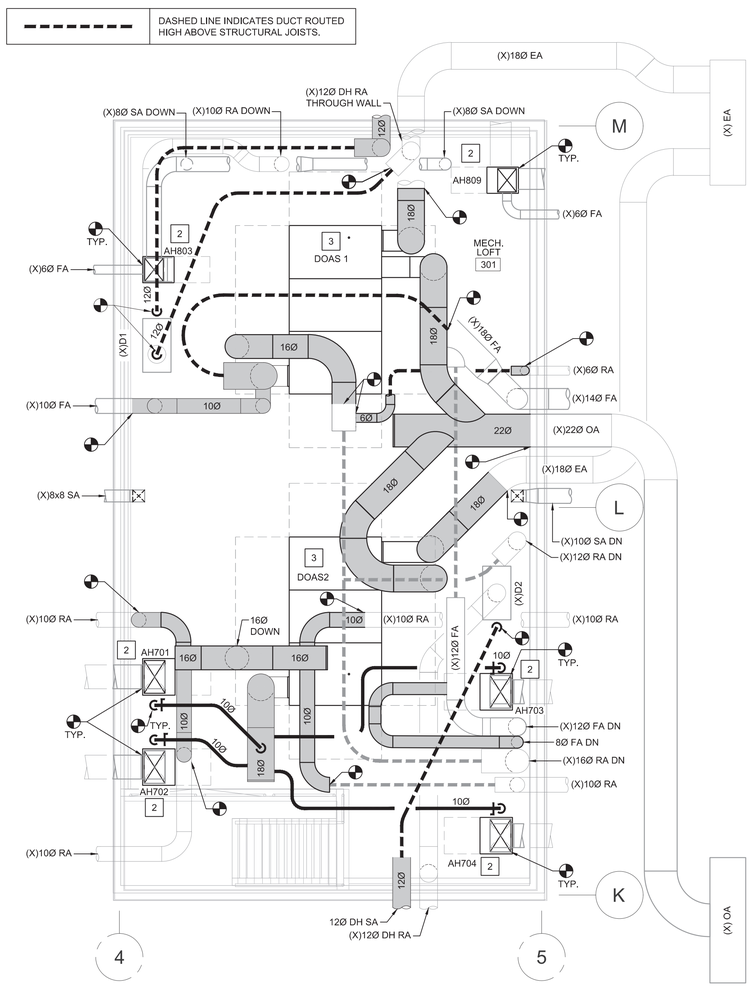
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1 ENLARGED FLOOR PLAN

1/8" = 1'-0"

PLAN NORTH



2 ENLARGED FLOOR PLAN - 301 MECH. LOFT

1/4" = 1'-0"

PLAN NORTH

KEYED NOTES - NEW WORK

1. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING FA DUCTWORK (IF APPLICABLE) AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
3. INSTALL NEW DOAS ON NEW CONCRETE PAD WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. CONNECT TO EXISTING OA, FA, EA, AND RA DUCT AS INDICATED ON PLANS.
4. NOT USED.
5. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING FA DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
6. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
7. NOT USED.
8. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
9. INSTALL NEW SA DIFFUSER FOR EXISTING DEHUMIDIFIER. ROUTE NEW DUCTWORK AS INDICATED ON PLANS
10. EXISTING RA GRILLE FOR EXISTING DEHUMIDIFIER.

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical HVAC Second Floor & Loft Enlarged Plans

Rev.	Date	Notes

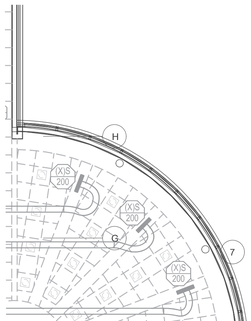
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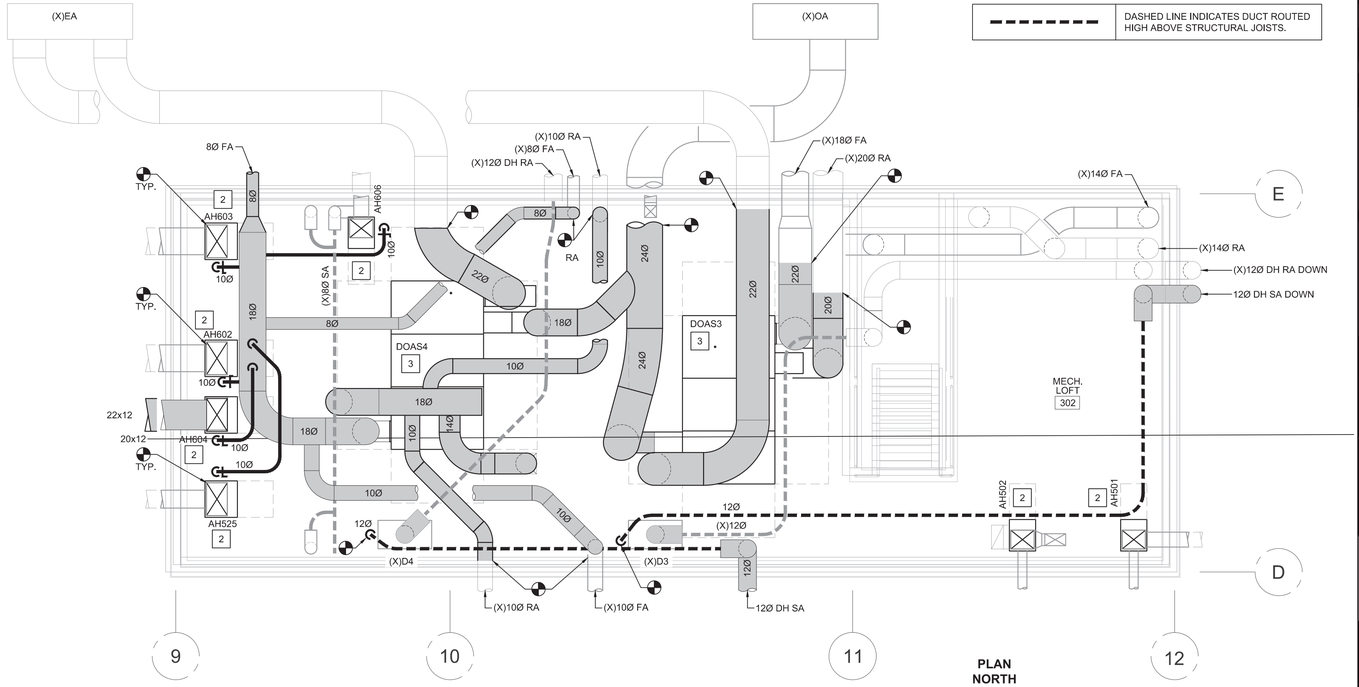
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KEYED NOTES - NEW WORK

1. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING FA DUCTWORK (IF APPLICABLE) AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
3. INSTALL NEW DOAS ON NEW CONCRETE PAD WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. CONNECT TO EXISTING OA, FA, EA, AND RA DUCT AS INDICATED ON PLANS.
4. NOT USED.
5. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING FA DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
6. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
7. NOT USED.
8. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
9. INSTALL NEW SA DIFFUSER FOR EXISTING DEHUMIDIFIER. ROUTE NEW DUCTWORK AS INDICATED ON PLANS
10. EXISTING RA GRILLE FOR EXISTING DEHUMIDIFIER.

NOTE: ALL NOTES MAY NOT BE USED ON THIS SHEET.





2 ENLARGED FLOOR PLAN - 302 MECH. LOFT

1/4" = 1'-0"

0 2' 4' 8'

PLAN NORTH

1 ENLARGED FLOOR PLAN

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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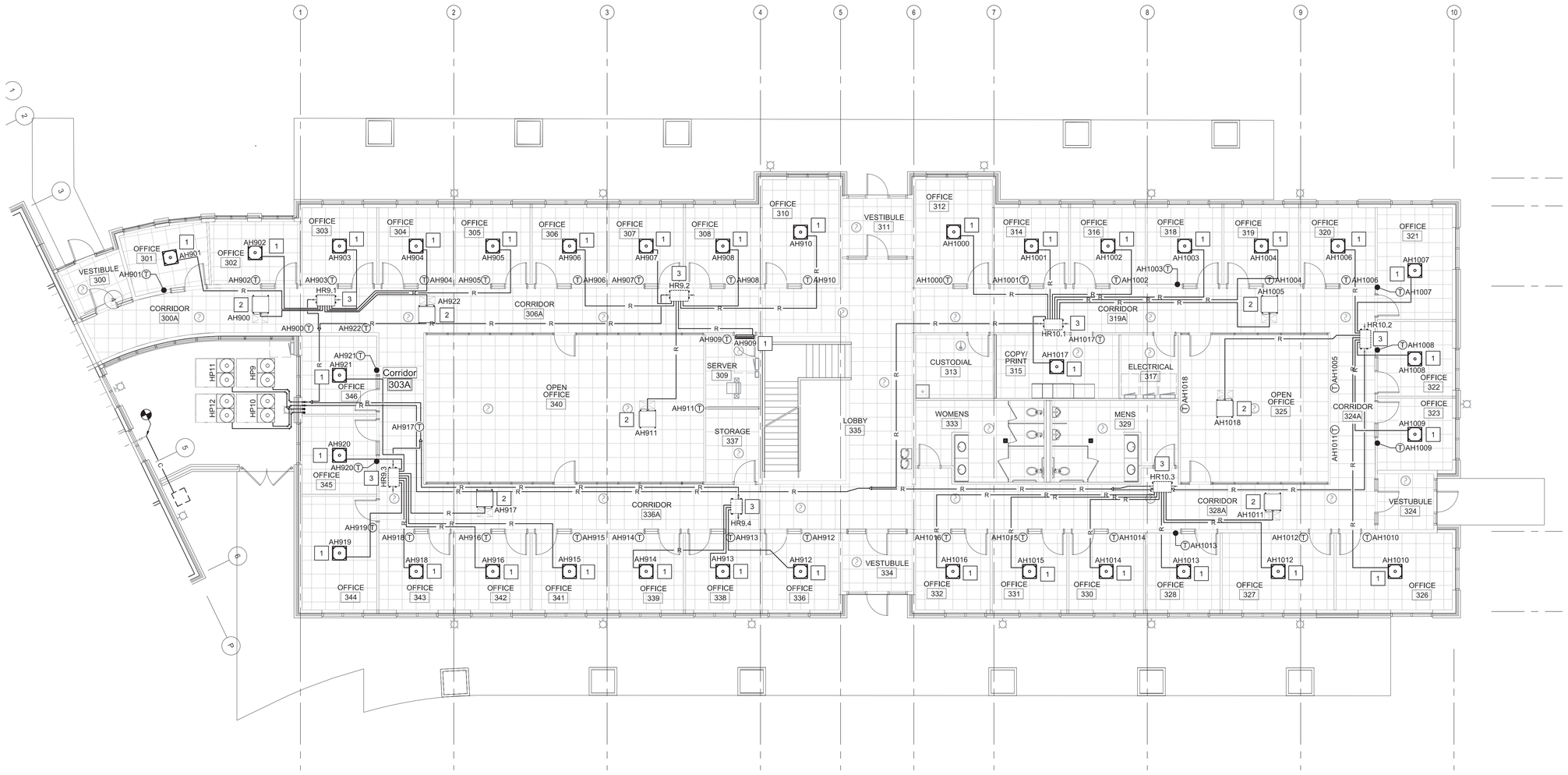
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GENERAL NOTE

1. REFER TO PLUMBING DRAWING P1.3 FOR CONDENSATE ROUTING.

KEYED NOTES - NEW WORK

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1 **FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

PLAN NORTH

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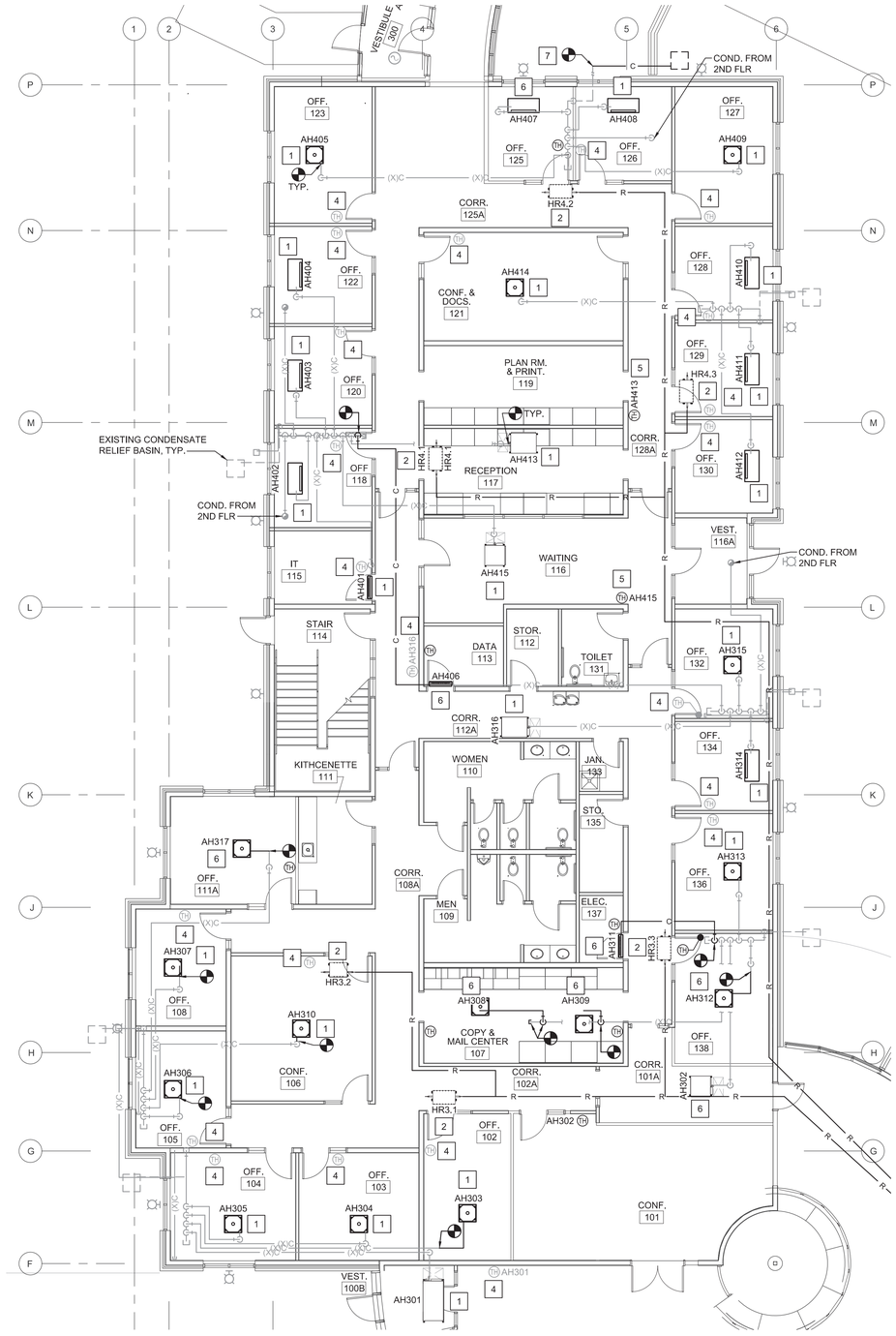
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Mechanical Piping First Floor Enlarged Plans

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M3.1

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1 ENLARGED FLOOR PLAN

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0 4' 8' 16'

PLAN NORTH

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7. INSTALL RELOCATED CONDENSATE RELIEF BASIN AND EXTEND EXISTING CONDENSATE PIPING AS INDICATED.

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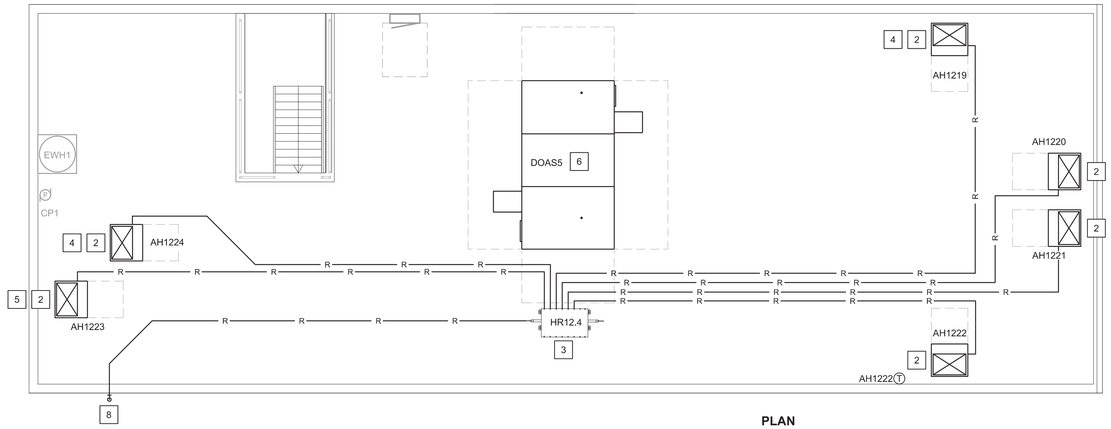
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GENERAL NOTE

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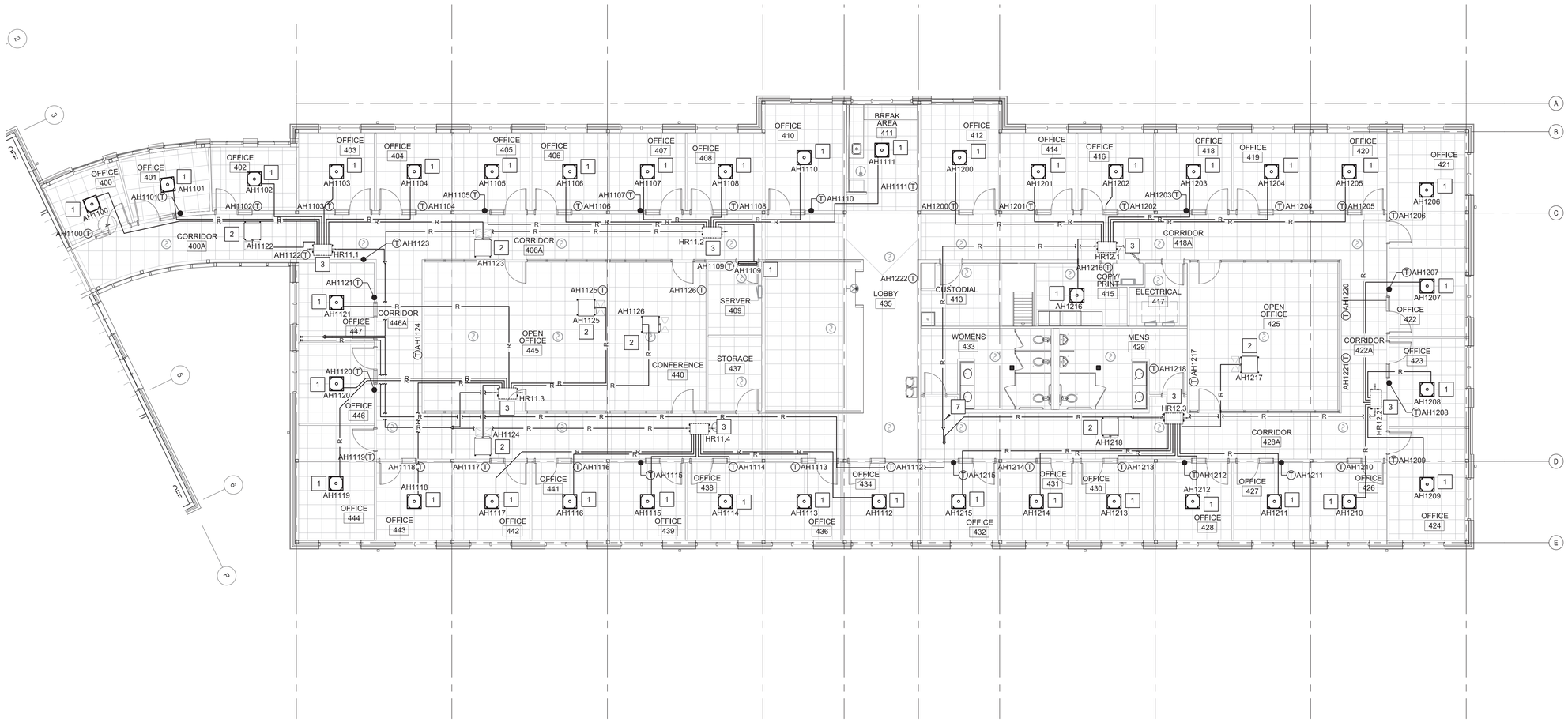
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4. THERMOSTAT FOR DUCTED AHU INSTALLED IN ATTIC SPACE NEAR UNIT RETURN GRILLE, SEE 1/M2.3 FOR LOCATION.
5. THERMOSTAT FOR DUCTED AHU INSTALLED IN 435 LOBBY AT 4' ABOVE FINISHED FLOOR, SEE 1/M3.2 FOR LOCATION.
6. INSTALL DOAS AIR HANDLER ON CONCRETE HOUSEKEEPING PAD WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
7. REFRIGERANT LINESET CONTINUED UP AND INTO THE MECHANICAL LOFT, SEE 2/M3.2 FOR CONTINUATION.
8. REFRIGERANT LINESET CONTINUED DOWN INTO ABOVE-CEILING SPACE, SEE 1/M3.2 FOR CONTINUATION.



PLAN NORTH

2 MECHANICAL LOFT - NEW WORK
1/4" = 1'-0"
0 2' 4' 8'



PLAN NORTH

1 SECOND FLOOR PLAN - NEW WORK
1/8" = 1'-0"
0 4' 8' 16'

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M3.2

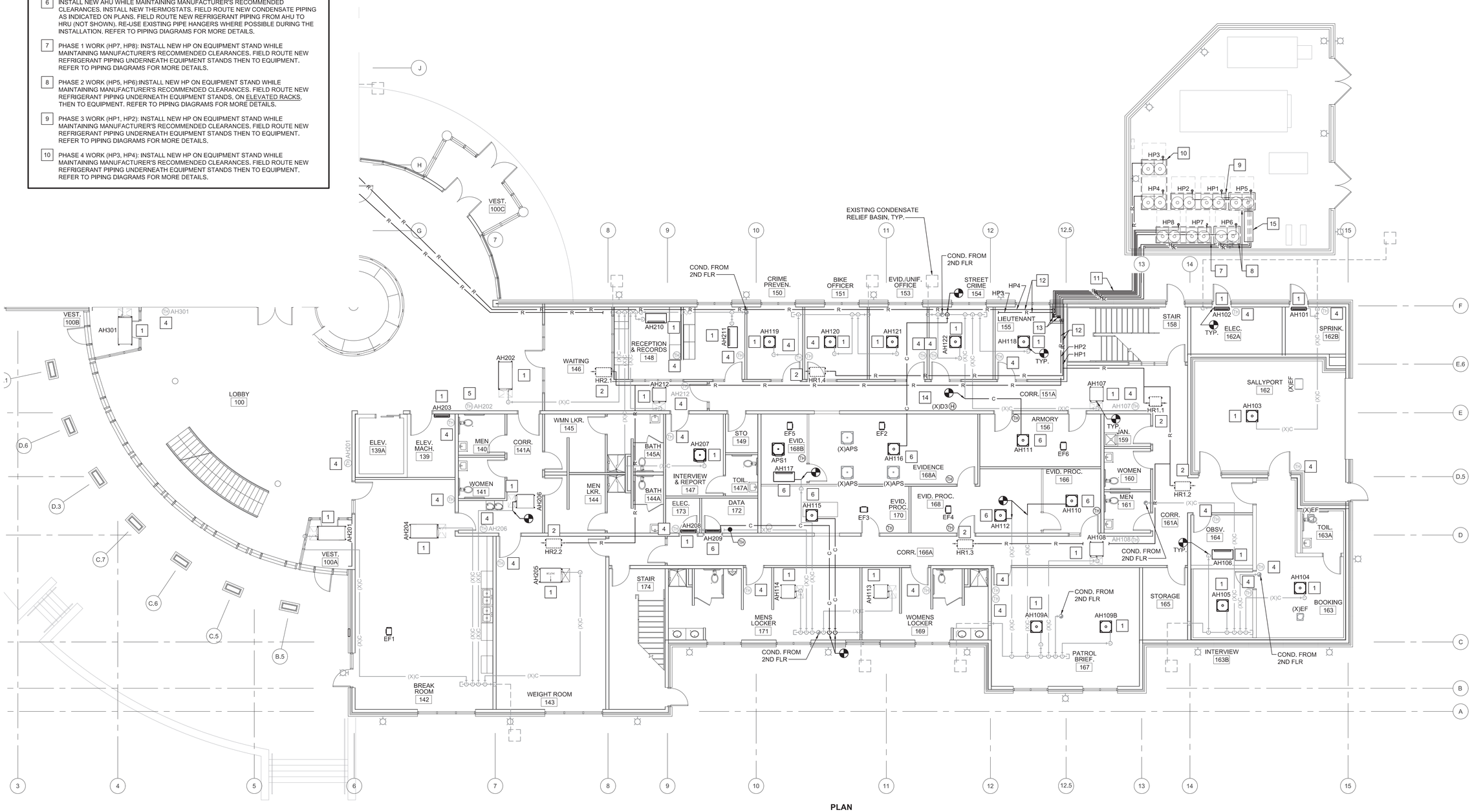
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7. PHASE 1 WORK (HP7, HP8): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. FIELD ROUTE NEW REFRIGERANT PIPING UNDERNEATH EQUIPMENT STANDS THEN TO EQUIPMENT. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
8. PHASE 2 WORK (HP5, HP6):INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. FIELD ROUTE NEW REFRIGERANT PIPING UNDERNEATH EQUIPMENT STANDS. ON ELEVATED RACKS, THEN TO EQUIPMENT. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
9. PHASE 3 WORK (HP1, HP2): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. FIELD ROUTE NEW REFRIGERANT PIPING UNDERNEATH EQUIPMENT STANDS THEN TO EQUIPMENT. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
10. PHASE 4 WORK (HP3, HP4): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. FIELD ROUTE NEW REFRIGERANT PIPING UNDERNEATH EQUIPMENT STANDS THEN TO EQUIPMENT. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.

KEYED NOTES - NEW WORK

11. ROUTE REFRIGERANT PIPING FROM THE MECHANICAL YARD TO THE EXISTING CHASE IN ROOM 155 EITHER RE-USING EXISTING, OR IN A NEW ABOVE GROUND CHASE. WEATHER PROOF ALL PENETRATIONS, SEAL WEATHER TIGHT.
12. ROUTE HP1, HP2, HP3, HP4 REFRIGERANT PIPING IN CHASE TO ABOVE THE 1ST FLOOR CEILING BEFORE ROUTING TO NEW HRU'S.
13. ROUTE HP5, HP6, HP7, HP8 REFRIGERANT PIPING UP TO ABOVE THE 2ND FLOOR CEILING.
14. INSTALL NEW HUMIDISTAT FOR EXISTING DEHUMIDIFIER. HUMIDISTAT TO INTERLOCK WITH DEHUMIDIFIER. DEHUMIDIFIER WILL ONLY RUN WHEN RELATIVE HUMIDITY IS OVER 55%.
15. PROVIDE AND INSTALL METAL PLATFORM TO PROTECT REFRIGERANT PIPING AND ALLOW PERSONNEL TO SAFELY STEP OVER PIPING. PLATFORM TO HAVE REMOVABLE TOP TO ACCESS PIPING.



1 **ENLARGED FLOOR PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

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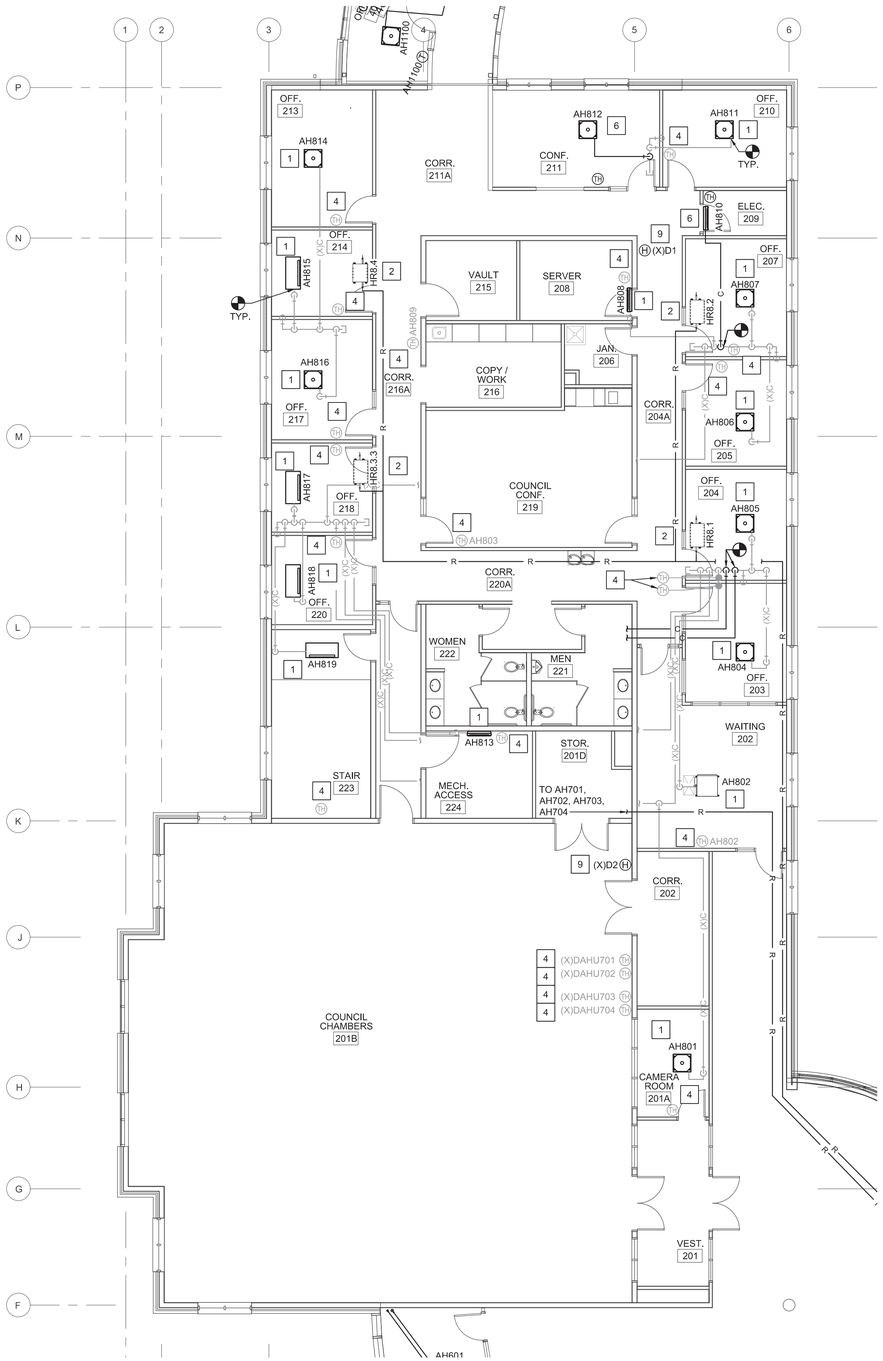
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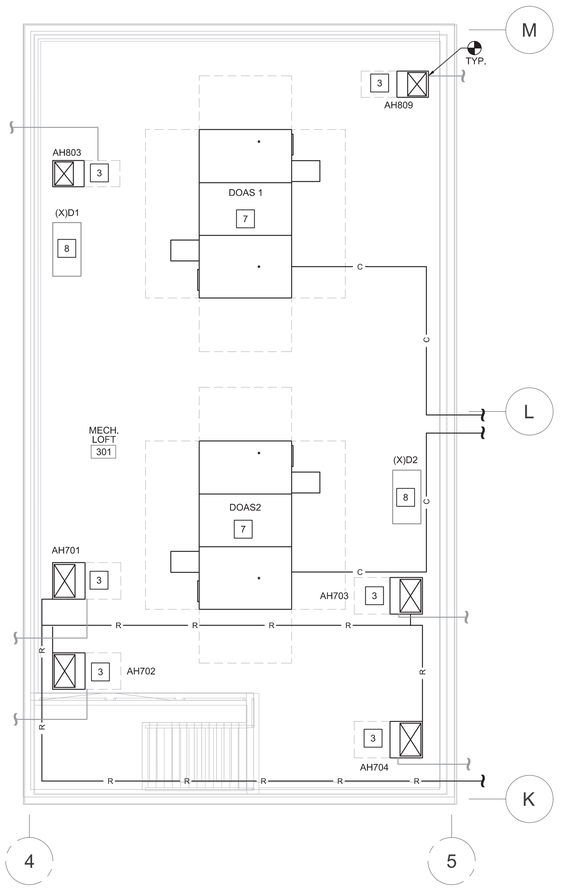
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1/8" = 1'-0"
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PLAN NORTH



2 **ENLARGED FLOOR PLAN - 301 MECH. LOFT**
1/4" = 1'-0"
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8. EXISTING DEHUMIDIFIER TO REMAIN. INSTALL NEW STANDALONE HUMIDISTAT AT LOCATION SHOWN ON PLANS.
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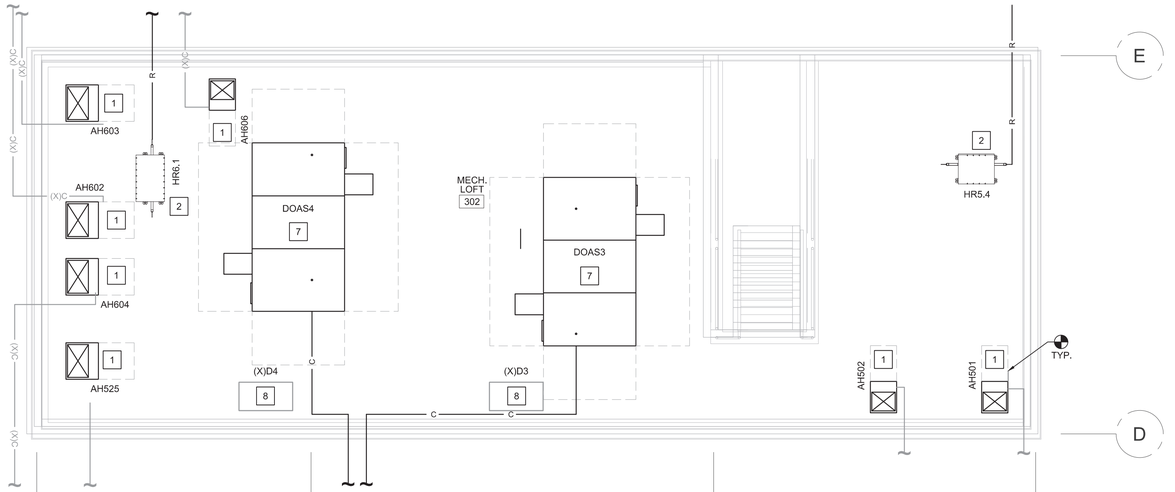
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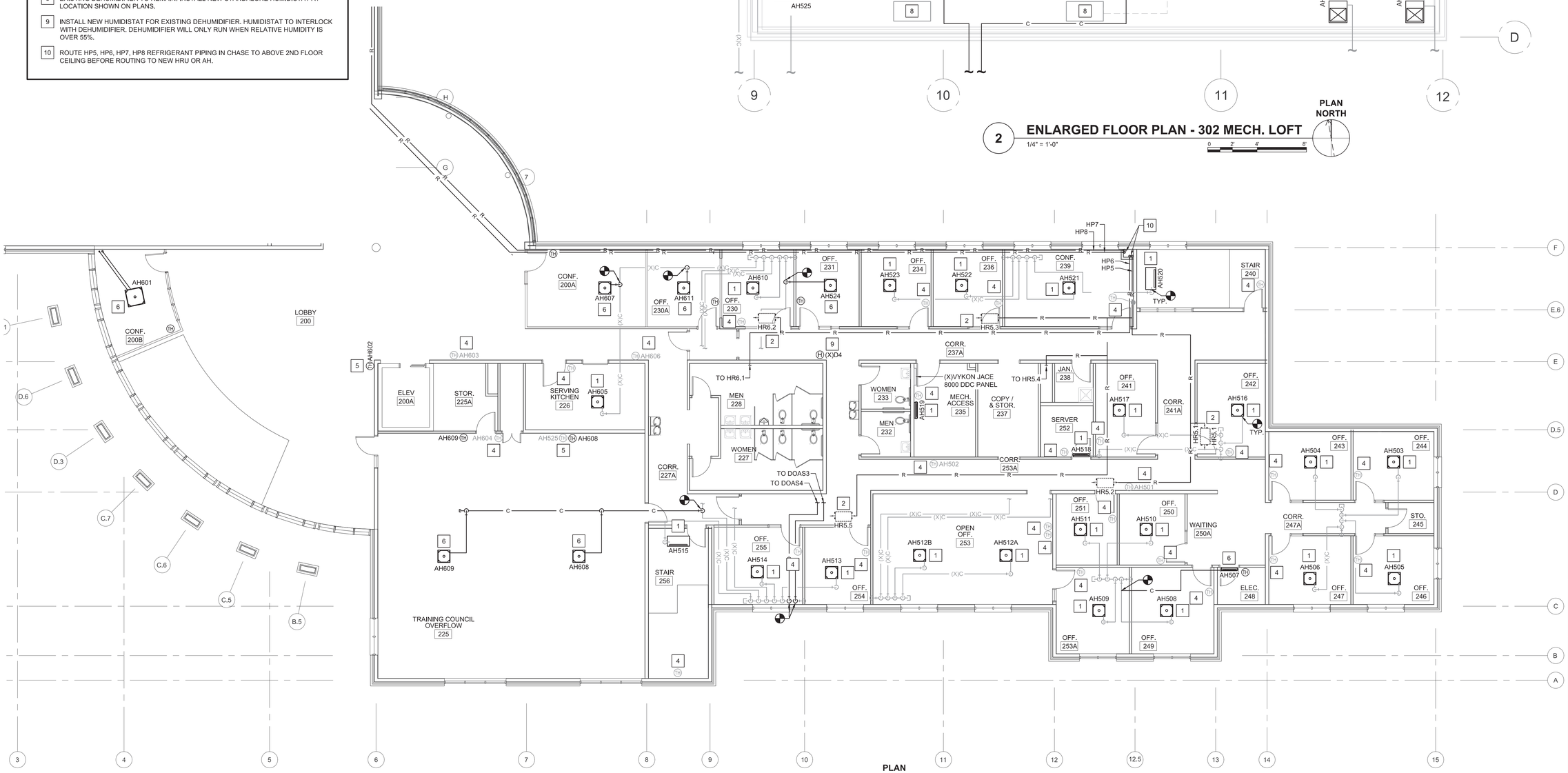
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5. INSTALL RELOCATED THERMOSTAT, CONNECT TO NEW AHU.
6. INSTALL NEW AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW THERMOSTATS. FIELD ROUTE NEW CONDENSATE PIPING AS INDICATED ON PLANS. FIELD ROUTE NEW REFRIGERANT PIPING FROM AHU TO HRU (NOT SHOWN). RE-USE EXISTING PIPE HANGERS WHERE POSSIBLE DURING THE INSTALLATION. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
7. INSTALL NEW DOAS ON NEW CONCRETE PAD WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. FIELD ROUTE NEW CONDENSATE TO DISCHARGE AT AN EXISTING CONDENSATE HEADER IN CLOSE PROXIMITY.
8. EXISTING DEHUMIDIFIER TO REMAIN. INSTALL NEW STANDALONE HUMIDISTAT AT LOCATION SHOWN ON PLANS.
9. INSTALL NEW HUMIDISTAT FOR EXISTING DEHUMIDIFIER. HUMIDISTAT TO INTERLOCK WITH DEHUMIDIFIER. DEHUMIDIFIER WILL ONLY RUN WHEN RELATIVE HUMIDITY IS OVER 55%.
10. ROUTE HP5, HP6, HP7, HP8 REFRIGERANT PIPING IN CHASE TO ABOVE 2ND FLOOR CEILING BEFORE ROUTING TO NEW HRU OR AH.



2 ENLARGED FLOOR PLAN - 302 MECH. LOFT
1/4" = 1'-0"
PLAN NORTH



1 ENLARGED FLOOR PLAN
1/8" = 1'-0"
PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Piping Second Floor & Loft Enlarged Plans

Rev.	Date	Notes

M3.4R

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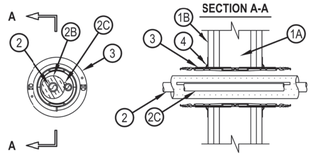
System No. W-L-8085

WL 8085

CLASSIFIED C UL US

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 and 2 Hr (See Item 1)	F Rating — 1 and 2 Hr (See Item 1)
T Rating — 0 and 3/4 Hr (See Item 1)	FT Rating — 0 and 3/4 Hr (See Item 1)
	FH Rating — 1 and 2 Hr (See Item 1)
	FTH Rating — 0 and 3/4 Hr (See Item 1)



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described within the individual U300, U400 or V400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:
   A. Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* — Nom 5/8 in. (16 mm) thick gypsum board as specified in the individual Wall and Partition Design. Opening in gypsum board to be max 2-1/2 in. (64 mm) diam for 2 in. (51 mm) device and max 4-1/2 in. (114 mm) diam for 4 in. (102 mm) device.
   The hourly F, FH Rating of the firestop system is dependent upon the hourly rating of the wall in which it is installed. The T, FT and FTH Rating is 0 and 3/4 hr for 1 and 2 hr rated wall assemblies, respectively.
2. Air Conditioning (AC) Line Sets — AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The AC line sets shall be rigidly supported on both sides of the floor or wall assembly.
   2A. Metallic Penetrants — A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a nom diam greater than 3/4 in. (19 mm). The following types and sizes of through penetrants may be used:
      A. Steel Pipe — Nom 1 in. (25 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
      B. Iron Pipe — Nom 1 in. (25 mm) diam (or smaller) cast or ductile iron pipe.
      C. Copper Pipe — Nom 1 in. (25 mm) diam (or smaller) Regular (or heavier) copper pipe.
      D. Copper Tube — Nom 1 in. (25 mm) diam (or smaller) Type L (or heavier) copper tube.
   2B. Tube Insulation - Plastics# — Nom 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1 in. (25 mm) diam pipe or tube in each AC line set. The space between the insulated and uninsulated pipes or tubes within each AC line set shall be 0 in. (point contact).
   See Plastics# (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 945VA may be used.
   2C. Cable — One 4 pair No. 18 AWG (or smaller) thermostat cable with polyvinyl chloride (PVC) insulation and jacket materials may be installed with each AC line set.

HILTI Hilti Firestop Systems

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System No. W-L-8085

WL 8085

3. Firestop Device* — Firestop device consists of a corrugated steel tube with an inner plastic housing, intumescent material rings, tightly twisted inner fabric smoke seal, flanges and gasketing material (not shown). Firestop device to be installed in accordance with the accompanying installation instructions. Device slid into wall such that ends project an equal distance from the approximate centerline of the wall assembly. The annular space between the device and the periphery of the opening shall be nom 0 in. (point contact). Device provided with flanges that are spun clockwise onto device threads, over gasketing material butting tightly to both sides of wall. As an alternate to gasket material, sealant (Item 4) may be used.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 653 and CP 653 BA 2" Speed Sleeve, CP 653 and CP 653 BA 4" Speed Sleeve, CFS-SL GA L Speed Sleeves, CP 653 4" BA ILS and CFS-SL GA L ILS Speed Sleeve
   The CFS-SL GA L and CFS-SL GA L ILS Speed Sleeves shall only be used in wall thickness of 8 in. (203 mm) or greater.
4. Fill, Void or Cavity Material* - Sealant — As an alternate to gasket material (see Item 3), min 1/2 in. (13 mm) thickness of fill material applied within the annulus between firestop device and wall, flush with both surfaces of wall, and an additional 1/4 in. (6 mm) bead applied around periphery of device.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE MAX Intumescent Sealant or CP 606 Sealant

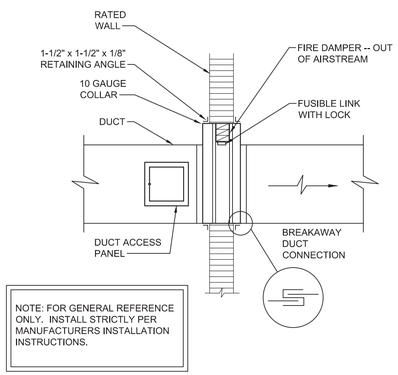
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI Hilti Firestop Systems

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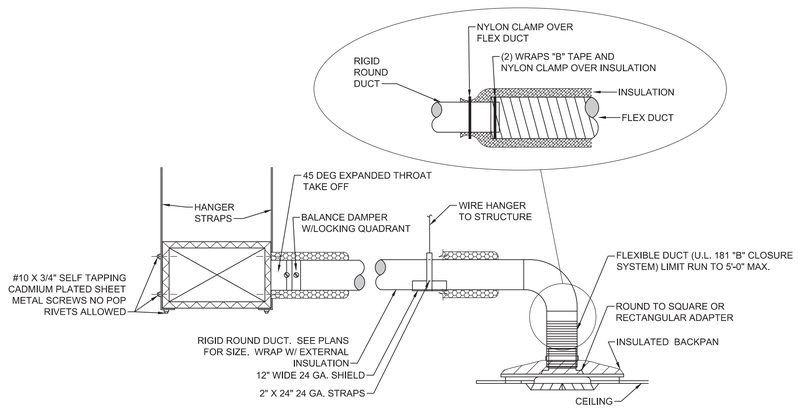
3 1 AND 2 HOUR FIRE PENETRATION DETAIL

NOT TO SCALE



2 FIRE DAMPER DETAIL

NOT TO SCALE



1 TYPICAL DIFFUSER CONNECTION DETAIL

NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 ROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Details

Rev.	Date	Notes

M5.1

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VARIABLE REFRIGERANT FLOW AIR HANDLER SCHEDULE

DRAWING CODE	SPACE SERVED	HEAT RECOVERY UNIT	OUTDOOR UNIT	ASSOCIATED ERV/DOAS UNIT	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	INDOOR UNIT CONFIGURATION	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	SUPPLY AIRFLOW MAX (CFM)	OUTSIDE AIR AIRFLOW (CFM)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
													VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)			
AH901	301 OFFICE	SEE DIAGRAM				ARNU073TRD4		CASSETTE 4WAY	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH902	302 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH903	303 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH904	304 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH905	305 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH900	MULTIPLE SPACES	SEE DIAGRAM				ARNU183M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	19.1	13.9	640-390	5		2.00	15	70	1-4,8,9	B,C
AH922	MULTIPLE SPACES	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	50		2.00	15	70	1-4,8,9	B,C
AH906	306 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH907	307 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH908	308 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH909	309 SERVER	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	-		0.31	15	25	1-4,8,9	B,D,E
AH910	310 OFFICE	SEE DIAGRAM	HP9	DOAS5	LG	ARNU073TRD4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20	208/1/60	0.25	15	29	1-4,8,9	B,C
AH911	340 OPEN OFFICE	SEE DIAGRAM				ARNU183M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	19.1	13.9	640-390	140		2.00	15	70	1-4,8,9	B,C
AH917	MULTIPLE SPACES	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	10		2.00	15	70	1-4,8,9	B,C
AH918	MULTIPLE SPACES	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH919	344 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH920	345 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH921	346 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH915	341 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH916	342 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH912	336 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH913	338 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH914	339 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1000	312 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1001	314 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1017	315 COPY/PRINT	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1002	316 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1003	318 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1004	319 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1005	319A CORRIDOR	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	40		2.00	15	70	1-4,8,9	B,C
AH1006	320 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1007	321 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1008	322 OFFICE	SEE DIAGRAM	HP10	DOAS5	LG	ARNU053TRD4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15	208/1/60	0.25	15	29	1-4,8,9	B,C
AH1009	323 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1018	325 OPEN OFFICE	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	70		2.00	15	70	1-4,8,9	B,C
AH1010	326 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1011	MULTIPLE SPACES	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	5		2.00	15	70	1-4,8,9	B,C
AH1012	327 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1013	328 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1014	330 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1015	331 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1016	332 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1100	400 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1101	401 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1102	402 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1103	403 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1104	404 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1122	400A CORRIDOR	SEE DIAGRAM				ARNU243M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	24.2	27.3	703-555	25		2.00	15	70	1-4,8,9	B,C
AH1123	406A CORRIDOR	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	60		2.00	15	70	1-4,8,9	B,C
AH1105	405 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1106	406 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1107	407 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1108	408 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1109	409 SERVER	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	-		0.31	15	25	1-4,8,9	B,D,E
AH1110	410 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1111	411 BREAK AREA	SEE DIAGRAM	HP11	DOAS5	LG	ARNU053TRD4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15	208/1/60	0.25	15	29	1-4,8,9	B,C
AH1124	MULTIPLE SPACES	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	-		2.00	15	70	1-4,8,9	B,C
AH1126	440 CONFERENCE	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	60		2.00	15	70	1-4,8,9	B,C
AH1118	443 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1119	444 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1125	445 OPEN OFFICE	SEE DIAGRAM				ARNU123M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	12.3	13.6	392	60		2.00	15	56	1-4,8,9	B,C
AH1120	446 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	10		0.25	15	29	1-4,8,9	B,C
AH1121	447 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	10		0.25	15	29	1-4,8,9	B,C
AH1112	434 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1113	436 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1114	438 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1115	439 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1116	441 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1117	442 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C

NOTES:
1. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2. PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3. PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4. REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5. NOT USED.
6. NOT USED.
7. NOT USED.
8. CERTIFIED FACTORY STARTUP.
9. INTEGRATE INTO EXISTING CONTROL SYSTEM. PROVIDE EMAIL NOTIFICATION OF ALARMS.

ACCESSORIES:
- A NOT USED.
- B NEW WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY. LG MODEL # CRC2.
- C BUILT-IN CONDENSATE LIFT MECHANISM
- D PROVIDE ASPEN PUMPS MINI BLANC CONDENSATE PUMP OR APPROVED EQUAL.
- E PROVIDE PLASTIC COVER FOR ALL EXPOSED REFRIGERANT PIPING.

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mcgill Shaping Communities Together

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 ROY O. GRADY
02/23/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Schedules

Rev.	Date	Notes

M6.1

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100% OUTSIDE AIR - DX AIR SOURCE HEAT PUMP WITH ENERGY RECOVERY (PART 1 OF 2)

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	OUTSIDE AIR	RETURN/ EXHAUST AIR	PERCENT OA	ESP	SUMMER DESIGN DAY - HOT																		
								ER WHEEL - DEHUMIDIFICATION										DX COIL - COOLING						REHEAT				
								OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP				COIL SUPPLY AIR TEMP				TOTAL	SENS	UNIT SUPPLY AIR TEMP				CAPACITY
				CFM	CFM	%	IN. H2O	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH	MBH	DB °F	WB °F	RH %	DP °F	MBH
DOAS1	UNITED COOLAIR	AAH200G#ASTA1	-	1500	1200	100	1.0	97.0	79.0	45.7	72.6	75.0	62.5	49.8	55.0	81.4	68.4	51.8	62.0	53.5	52.6	94.3	51.9	139.0	70.5	75.0	61.0	44.5	51.9	35.3
DOAS2	UNITED COOLAIR	AAH200G#ASTA1	-	1500	1200	100	1.0	97.0	79.0	45.7	72.6	75.0	62.5	49.8	55.0	81.4	68.4	51.8	62.0	53.5	52.6	94.3	51.9	139.0	70.5	75.0	61.0	44.5	51.9	35.3
DOAS3	UNITED COOLAIR	AAH200G#ASTA1	-	2000	1600	100	1.0	97.0	79.0	45.7	72.6	75.0	62.5	49.8	55.0	82.0	68.9	51.8	62.5	53.6	53.1	97.2	52.8	182.5	93.8	75.0	61.4	45.9	52.8	47.0
DOAS4	UNITED COOLAIR	AAH200G#ASTA1	-	1500	1380	100	1.0	97.0	79.0	45.7	72.6	75.0	62.5	49.8	55.0	80.0	67.2	52.0	60.8	51.6	50.9	95.4	50.3	145.6	73.6	75.0	60.2	41.9	50.3	38.4

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
2 ENTHALPY ENERGY RECOVERY WHEEL
3 ECM FANS - SUPPLY AND EXHAUST
4 SOLID DOUBLE WALL LINER W/ 1" THERMAL / ACCOUSTIC FIBERGLASS INSULATION
5 SUBCOOLING COIL FOR INCREASED EFFICIENCY
6 STAINLESS STEEL DRAIN PANS - EVAPORATOR AND CONDENSER
7 BUILT-IN PRESSURE TRANSDUCERS FOR AIRFLOW MEASUREMENT

NOTES:
8 2" MERV 13 PLEATED THROWAWAY SUPPLY FILTER
9 2" MERV 8 PLEATED THROWAWAY RETURN FILTER
10 QUICK-CONNECT REFRIGERANT FITTINGS TO SHIP SPLIT; FIELD ASSEMBLED
11 ISOLATED ELECTRICAL CONTROL BOX
12 MICROPROCESSOR W/ BUILT-IN DISPLAY INTERFACE AND BACNET
13 MODULATING HOT GAS REHEAT

100% OUTSIDE AIR - DX AIR SOURCE HEAT PUMP WITH ENERGY RECOVERY (PART 2 OF 2)

DRAWING CODE	SUMMER DESIGN DAY - HUMID																				WINTER DESIGN DAY																ELECTRICAL										WEIGHT	NOTES	ACCESSORIES
	ER WHEEL - DEHUMIDIFICATION												DX COIL - COOLING						REHEAT				ER WHEEL - HEATING								HEATING																	
	OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP				COIL SUPPLY AIR TEMP				TOTAL	SENS	UNIT SUPPLY AIR TEMP				CAPACITY	OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP				UNIT SUPPLY AIR TEMP				CAPACITY	VOLTAGE	SUPPLY FAN MOTOR		EXHAUST FAN MOTOR		COMP RESSOR			ERW (EACH)	ERW QTY	UNIT MCA	UNIT MOP			
	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH	MBH	DB °F	WB °F	RH %	DP °F	MBH	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH	V-PH-HZ	KW	AMPS	KW	AMPS	LRA	RLA	AMPS		AMPS	AMPS	LBS		
DOAS1	84.0	78.6	79.0	76.8	75.0	62.5	49.8	55.0	77.6	68.4	62.9	64.0	52.5	51.9	96.3	51.5	139.8	51.1	75.0	60.7	43.7	51.5	37.0	23.0	19.2	53.1	10.0	70.0	51.5	25.0	32.6	56.4	43.4	31.1	26.9	75.0	51.9	16.3	26.9	96.7	460-3-60	4.4	6.0	4.4	6.0	62.0	9.7	0.18	2	24.5	30.0	2,000	1-13	-
DOAS2	84.0	78.6	79.0	76.8	75.0	62.5	49.8	55.0	77.6	68.4	62.9	64.0	52.5	51.9	96.3	51.5	139.8	51.1	75.0	60.7	43.7	51.5	37.0	23.0	19.2	53.1	10.0	70.0	51.5	25.0	32.6	56.4	43.4	31.1	26.9	75.0	51.9	16.3	26.9	96.7	460-3-60	4.4	6.0	4.4	6.0	62.0	9.7	0.18	2	24.5	30.0	2,000	1-13	-
DOAS3	84.0	78.6	79.0	76.8	75.0	62.5	49.8	55.0	77.8	68.8	63.9	64.6	52.7	52.5	98.5	52.3	183.4	67.6	75.0	61.1	45.1	52.3	48.9	23.0	19.2	53.1	10.0	70.0	51.5	25.0	32.6	55.1	42.5	31.7	26.3	75.0	51.8	15.8	26.3	128.2	460-3-60	4.4	6.0	4.4	6.0	100.0	12.8	0.18	2	28.4	40.0	2,000	1-13	-
DOAS4	84.0	78.6	79.0	76.8	75.0	62.5	49.8	55.0	77.0	67.3	60.8	62.5	50.6	50.2	97.4	49.9	146.2	54.1	75.0	60.0	41.3	49.9	40.1	23.0	19.2	53.1	10.0	70.0	51.5	25.0	32.6	59.5	45.3	29.4	28.1	75.0	52.3	17.2	28.1	98.0	460-3-60	4.4	6.0	4.4	6.0	62.0	9.7	0.18	2	24.5	30.0	2,000	1-13	-

ACCESSORIES: N/A.

POWER VENTILATOR SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	FAN TYPE	FAN WHEEL	SERVICE	DRIVE TYPE	DAMPER	MOTOR ENCLOSURE	CAPACITIES			ELECTRICAL							SONES	WEIGHT (LBS.)	NOTES	ACCESSORIES
										AIRFLOW (CFM)	ESP (IN. WG.)	FAN RPM	MOTOR TYPE	MOTOR SIZE (W)	V/PH/HZ	FLA	MCA	MOCP					
EF1	GREENHECK	SP-A125	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	100	0.25	1,053	PSC	18	120/1/60	0.2	-	-		0.5	17	1,2	A
EF2	GREENHECK	SP-A190	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	175	0.30	1,400	PSC	49	120/1/60	0.5	-	-		1.5	17	1,2	A
EF3	GREENHECK	SP-A125	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	100	0.30	1,100	PSC	20	120/1/60	0.2	-	-		0.8	17	1,2	A
EF4	GREENHECK	SP-A125	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	100	0.30	1,100	PSC	20	120/1/60	0.2	-	-		0.8	17	1,2	A
EF5	GREENHECK	SP-A125	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	50	0.25	1,053	PSC	18	120/1/60	0.2	-	-		0.5	17	1,3,4,5	A,B
EF6	GREENHECK	SP-A200	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	200	0.29	900	PSC	44	120/1/60	0.5	-	-		1.5	24	1,3,4,5	A,B

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 CONTROLLED VIA ON/OFF SWITCH. REFER TO ELECTRICAL PLANS.
3 CONTINUOUS OPERATION.
4 REFER TO CONTROL DIAGRAMS.
5 CONTROLS TO INCLUDE MEANS OF MONITORING PROPER FUNCTION OF FAN.

ACCESSORIES:
A UNIT MOUNTED SPEED CONTROLLER
B SAIL SWITCH

AIR PURIFICATION SYSTEM SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	MOUNTING	DIMENSIONS (L x W x H) (IN)	CABINET MATERIAL	SERVICE	CAPACITIES	ELECTRICAL				SOUND (dBA)	WEIGHT (LBS.)	NOTES	ACCESSORIES
								AIRFLOW (CFM)	MOTOR TYPE	V/PH/HZ	FLA	MOCP				
APS1	ABATEMENT TECHNOLOGIES	HEPA-CARE, HC500CD	HEALTHY AIR, HONEYWELL	CEILING	22.9 x 22.9 x 16.3	ALUMINUM	CIRCULATION	200 - 500	ECM	120/1/60	6.0	15	35 - 59	50	1,2,3,4	A,B,C,D
(X)APS1	ACTIVE AIR SOLUTIONS	AAS-300	-	CEILING	23.8 x 23.8 x 16	-	CIRCULATION	100 - 300	-	120/1/60	-	-	-	65	-	-

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 CONTROLS TO INCLUDE MEANS OF MONITORING PROPER FUNCTION OF FAN.
3 SUSPENDS INTO 2' x 2' DROP CEILING GRID.
4 HINGED FRONT DOOR.

ACCESSORIES:
A VAPOR-LOCK PREFILTER, HC1802CF. THIS IS A HIGH CAPACITY ACTIVATED CARBON FILTER AND REPLACES THE STANDARD 2" PARTICULATE PRE-FILTER.
B HEPA FILTER.
C UV400C-PT, CEILING MOUNTED AIR DISINFECTION MODULE.
D WALL MOUNTED LCD TOUCH SCREEN CONTROL PANEL BOX.

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	SERVICE	NECK SIZE (IN.)	MODULE SIZE (IN.)	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	6Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S2	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	8Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S3	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	10Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S4	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	12Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	-
S5	PRICE	LBP-16B	METALAIRE, TITUS	LINEAR BAR GRILLES	SUPPLY	10Ø	36 X 4	ALUMINUM	WHITE	CEILING SURFACE	1	-
R1	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	22 X 22	24 X 24	ALUMINUM	WHITE	T-BAR	1	-

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 DUCT BRANCH CONNECTION SIZE TO BE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS NOTED OTHERWISE ON PLANS.

ACCESSORIES:
A VOLUME DAMPER

LOUVER SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	FRAME	DESCRIPTION	MATERIAL	LOUVER DEPTH	SIZE (W X H)	SERVICE	AIRFLOW	PERFORMANCE RATINGS			NOTES	ACCESSORIES
												FREE AREA	S.P. LOSS	WATER PENETRATION		
								(IN.)	(IN.)		(CFM)	(SF)	(IN. H20)	(OZ./SF)		
L1	RUSKIN	EME3625DFL-HP	VENT PRODUCTS, POTTORFF	FIXED	CHANNEL	VERTICAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	3	12 X 12	EXHAUST	100	0.29	0.02	0.00	1,2	A
L2	RUSKIN	EME3625DFL-HP	VENT PRODUCTS, POTTORFF	FIXED	CHANNEL	VERTICAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	3	16 X 16	EXHAUST	375	0.63	0.06	0.00	1,2	A
L3	RUSKIN	EME3625DFL-HP	VENT PRODUCTS, POTTORFF	FIXED	CHANNEL	VERTICAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	3	16 X 16	EXHAUST	200	0.63	0.02	0.00	1,2	A

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLOR AND GLOSS.

ACCESSORIES:
A BIRD SCREENING (MATERIAL TO MATCH LOUVER MATERIAL)

VARIABLE REFRIGERANT FLOW OUTDOOR UNIT SCHEDULE

DRAWING CODE	INDOOR UNIT(S)	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	COOLING		HEATING		MIN IEER (SEER)	MIN COP (HSPF)	ELECTRICAL			REFRIGERANT			WEIGHT (LBS)	NOTES	ACCESSORIES
					TOTAL (MBH)	OAT (°F)	TOTAL (MBH)	OAT (°F)			VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)	TYPE	CAPACITY - ODU (LBS)	CAPACITY - SYSTEM (EST) (LBS)			
HP1	SEE AHU SCHEDULE	LG	ARUM144DTE5	TRANE, DAIKIN	144.0	92.0	162.0	23.0	28.6	3.8	460/3/60	26.4	35	R410A	26.5	53.1	670	1-7	A,B,C,D
HP2	SEE AHU SCHEDULE	LG	ARUM168DTE5	TRANE, DAIKIN	168.0	92.0	189.0	23.0	25.4	3.6	460/3/60	28.4	35	R410A	26.5	43.6	670	1-7	A,B,C,D
HP3	SEE AHU SCHEDULE	LG	ARUM144DTE5	TRANE, DAIKIN	144.0	92.0	162.0	23.0	28.6	3.8	460/3/60	26.4	35	R410A	26.5	45.9	670	1-7	A,B,C,D
HP4	SEE AHU SCHEDULE	LG	ARUM121DTE5	TRANE, DAIKIN	119.7	92.0	135.0	23.0	29.6	4.0	460/3/60	18.4	25	R410A	23.2	43.4	535	1-7	A,B,C,D
HP5	SEE AHU SCHEDULE	LG	ARUM192DTE5	TRANE, DAIKIN	192.0	92.0	216.0	23.0	25.9	3.8	460/3/60	35.7	50	R410A	30.9	64.6	670	1-7	A,B,C,D
HP6	SEE AHU SCHEDULE	LG	ARUM192DTE5	TRANE, DAIKIN	192.0	92.0	216.0	23.0	25.9	3.8	460/3/60	35.7	50	R410A	30.0	50.8	670	1-7	A,B,C,D
HP7	SEE AHU SCHEDULE	LG	ARUM144DTE5	TRANE, DAIKIN	144.0	92.0	162.0	23.0	28.6	3.8	460/3/60	26.4	35	R410A	26.5	36.0	670	1-7,8	A,B,C,D
HP8	SEE AHU SCHEDULE	LG	ARUM168DTE5	TRANE, DAIKIN	168.0	92.0	189.0	23.0	25.4	3.6	460/3/60	28.4	35	R410A	26.5	52.0	670	1-7	A,B,C,D

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3 PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4 REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5 CERTIFIED FACTORY STARTUP.
6 CONTROL CONTRACTOR TO MAP IN POINTS FROM VRS TO BUILDING AUTOMATION SYSTEM.
7 INTEGRATE INTO EXISTING CONTROL SYSTEM. PROVIDE EMAIL NOTIFICATION OF ALARMS. IF ALTERNATE MANUFACTURER IS USED, SYSTEM CONTROLLER AND ALL THERMOSTATS MUST BE REPLACED.
8 HEAT PUMP SYSTEM, NOT A HEAT RECOVERY SYSTEM. NO HEAT RECOVERY BOXES NEEDED.

ACCESSORIES:
A SEACOAST COATING PROTECTION ON OUTDOOR UNIT.
B PROVIDE (2) CENTAL CONTROLLERS PACS5A000 WITH BACNET INTERFACE.
C MOUNT OUTDOOR VRF UNIT ON QUICK-SLING EQUIPMENT STANDS OR APPROVE EQUAL. STANDS TO BE ANCHORED TO CONCRETE AND VRF UNITS TO BE ANCHORED TO STANDS.
D PROVIDE ICM CONTOLS LINE VOLTAGE MONITOR ICM450A+ OR EQUAL AND CONTACTOR TO MONITOR PHASE AND VOLTAGE

VARIABLE REFRIGERANT FLOW HEAT RECOVERY UNIT SCHEDULE

DRAWING CODE	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ASSOCIATED OUTDOOR UNIT	ALTERNATE APPROVED MFRS	POWER INPUT (RATED) COOLING (KW)	POWER INPUT (RATED) HEATING (KW)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
							VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)			
HR1.1	LG	PRHR043A	HP1	TRANE, DAIKIN	0.040	0.037	208/1/60	1.0	15	50	1,2	A
HR1.2	LG	PRHR083A	HP1	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR1.3	LG	PRHR063A	HP1	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR1.4	LG	PRHR083A	HP1	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR2.1	LG	PRHR083A	HP2	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR2.2	LG	PRHR063A	HP2	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR3.1	LG	PRHR083A	HP3	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR3.2	LG	PRHR043A	HP3	TRANE, DAIKIN	0.040	0.037	208/1/60	1.0	15	50	1,2	A
HR3.3	LG	PRHR083A	HP3	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR4.1	LG	PRHR063A	HP4	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR4.2	LG	PRHR083A	HP4	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR4.3	LG	PRHR063A	HP4	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR5.1	LG	PRHR083A	HP5	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR5.2	LG	PRHR063A	HP5	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR5.3	LG	PRHR063A	HP5	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR5.4	LG	PRHR043A	HP5	TRANE, DAIKIN	0.040	0.037	208/1/60	1.0	15	50	1,2	A
HR5.5	LG	PRHR063A	HP5	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR6.1	LG	PRHR063A	HP6	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR6.2	LG	PRHR083A	HP6	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR8.1	LG	PRHR083A	HP8	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR8.2	LG	PRHR083A	HP8	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR8.3	LG	PRHR063A	HP8	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR8.4	LG	PRHR043A	HP8	TRANE, DAIKIN	0.040	0.037	208/1/60	1.0	15	50	1,2	A

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 IF ALTERNATE MANUFACTURER IS USED, CONTRACTOR SHALL PROVIDE CONDENSATE DRAINS.

ACCESSORIES:
A SUCTION AND LIQUID LINES SERVICE ISOLATION VALVES FOR ALL PORTS.

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Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Schedules

Rev.	Date	Notes

M6.1R

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VARIABLE REFRIGERANT FLOW AIR HANDLER SCHEDULE

DRAWING CODE	SPACE SERVED	HEAT RECOVERY UNIT	OUTDOOR UNIT	ASSOCIATED ERV/DOAS UNIT	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	INDOOR UNIT CONFIGURATION	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	SUPPLY AIRFLOW MAX (CFM)	OUTSIDE AIR AIRFLOW (CFM)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
													VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)			
AH1200	412 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1201	414 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1216	415 COPY/PRINT	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	10		0.25	15	29	1-4,8,9	B,C
AH1202	416 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1203	418 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1204	419 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1205	420 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1206	421 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1207	422 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1208	423 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1209	424 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1210	426 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1217	425 OPEN OFFICE	SEE DIAGRAM	HP12	DOAS5	LG	ARNU123M1A4	TRANE, DAIKIN	HORIZONTAL DUCTED - MEDIUM STATIC	12.3	13.6	392	85	208/1/60	2.00	15	56	1-4,8,9	B,C
AH1211	427 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1212	428 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1218	429 MENS	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	-		2.00	15	70	1-4,8,9	B,C
AH1213	430 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1214	431 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1215	432 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1220	MULTIPLE SPACES	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	-		1.40	15	130	1-4,8,9	B
AH1221	MULTIPLE SPACES	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	10		1.40	15	130	1-4,8,9	B
AH1224	MULTIPLE SPACES	SEE DIAGRAM				ARNU243NJA4		MULTI-POSITION AIR HANDLER	24.0	27.0	710-480	-		1.40	15	130	1-4,8,9	B
AH1222	MECHANICAL MEZZANINE	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	-		1.40	15	130	1-4,8,9	B
AH1219	NORTH ATTIC SPACE	SEE DIAGRAM				ARNU183NJA4		MULTI-POSITION AIR HANDLER	18.0	20.0	579	-		1.40	15	117	1-4,8,9	B
AH1223	435 LOBBY	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	40		1.40	15	130	1-4,8,9	B

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3 PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4 REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5 NOT USED.
6 NOT USED.
7 NOT USED.
8 CERTIFIED FACTORY STARTUP.
9 INTEGRATE INTO EXISTING CONTROL SYSTEM. PROVIDE EMAIL NOTIFICATION OF ALARMS.

ACCESSORIES:
A NOT USED.
B NEW WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY. LG MODEL # CRC2.
C BUILT-IN CONDENSATE LIFT MECHANISM
D PROVIDE ASPEN PUMPS MINI BLANC CONDENSATE PUMP OR APPROVED EQUAL.
E PROVIDE PLASTIC COVER FOR ALL EXPOSED REFRIGERANT PIPING.

VARIABLE REFRIGERANT FLOW OUTDOOR UNIT SCHEDULE

DRAWING CODE	INDOOR UNIT(S)	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	COOLING		HEATING		MIN IEER (SEER)	MIN COP (HSPF)	ELECTRICAL			REFRIGERANT			WEIGHT (LBS)	NOTES	ACCESSORIES
					TOTAL (MBH)	OAT (°F)	TOTAL (MBH)	OAT (°F)			VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)	TYPE	CAPACITY - ODU (LBS)	CAPACITY - SYSTEM (EST) (LBS)			
HP9	SEE AHU SCHEDULE	LG	ARUM144BTE5	TRANE, DAIKIN	144.0	92.0	162.0	23.0	28.6	3.8	208/3/60	51.1	70	R410A	26.5	23.8	639	1-4,8,9,10	A,B,C,D
HP10	SEE AHU SCHEDULE	LG	ARUM121BTE5	TRANE, DAIKIN	119.7	92.0	135.0	23.0	29.6	4.0	208/3/60	30.9	40	R410A	23.2	19.7	507	1-4,8,9,10	A,B,C,D
HP11	SEE AHU SCHEDULE	LG	ARUM216BTE5	TRANE, DAIKIN	216.0	92.0	243.0	23.0	24.8	3.5	208/3/60	60.3	80	R410A	37.5	28.3	666	1-4,8,9,10	A,B,C,D
HP12	SEE AHU SCHEDULE	LG	ARUM168BTE5	TRANE, DAIKIN	168.0	92.0	189.0	23.0	25.4	3.6	208/3/60	53.6	70	R410A	26.5	30.7	639	1-4,8,9,10	A,B,C,D

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3 PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4 REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5 NOT USED.
6 NOT USED.
7 NOT USED.
8 CERTIFIED FACTORY STARTUP.
9 CONTROL CONTRACTOR TO MAP IN POINTS FROM VRS TO BUILDING AUTOMATION SYSTEM.
10 INTEGRATE INTO EXISTING CONTROL SYSTEM.

ACCESSORIES:
A SEACOAST COATING PROTECTION ON OUTDOOR UNIT.
B PROVIDE (2) CENTAL CONTROLLERS PACS5A000 WITH BACNET INTERFACE.
C MOUNT OUTDOOR VRF UNIT ON QUICK-SLING EQUIPMENT STANDS OR APPROVE EQUAL. STANDS TO BE ANCHORED TO CONCRETE AND VRF UNITS TO BE ANCHORED TO STANDS.
D PROVIDE ICM CONTOLS LINE VOLTAGE MONITOR ICM450A+ OR EQUAL AND CONTACTOR TO MONITOR PHASE AND VOLTAGE

VARIABLE REFRIGERANT FLOW HEAT RECOVERY UNIT SCHEDULE

DRAWING CODE	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ASSOCIATED OUTDOOR UNIT	ALTERNATE APPROVED MFRS	POWER INPUT (RATED) COOLING (KW)	POWER INPUT (RATED) HEATING (KW)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
							VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)			
HR9.1	LG	PRHR083A	HP9	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR9.2	LG	PRHR083A	HP9	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR9.3	LG	PRHR083A	HP9	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR9.4	LG	PRHR043A	HP9	TRANE, DAIKIN	0.040	0.037	208/3/60	1.0	15	50	1,2	A
HR10.1	LG	PRHR083A	HP10	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR10.2	LG	PRHR083A	HP10	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR10.3	LG	PRHR083A	HP10	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR11.1	LG	PRHR083A	HP11	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR11.2	LG	PRHR083A	HP11	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR11.3	LG	PRHR083A	HP11	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR11.4	LG	PRHR083A	HP11	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR12.1	LG	PRHR083A	HP12	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR12.2	LG	PRHR063A	HP12	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR12.3	LG	PRHR083A	HP12	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR12.4	LG	PRHR083A	HP12	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A

NOTES:
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 ROY O. GRADY 02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Schedules

Rev.	Date	Notes

M6.2

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VARIABLE REFRIGERANT FLOW AIR HANDLER SCHEDULE

DRAWING CODE	SPACE SERVED	HEAT RECOVERY UNIT	OUTDOOR UNIT	ASSOCIATED ERV/DOAS UNIT	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	INDOOR UNIT CONFIGURATION	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	SUPPLY AIRFLOW MAX (CFM)	OUTSIDE AIR AIRFLOW (CFM)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
													VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)			
AH101	162B - SPRINKLER	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	-		0.31	15	25	1 - 6	A,D,E
AH102	162A - ELECTRIC	SEE DIAGRAM				ARNU093SJS4		WALL MOUNTED	9.6	10.9	275-210	-		0.31	15	25	1 - 6	A,D,E
AH103	162 - SALLYPORT	SEE DIAGRAM				ARNU123TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	12.3	13.6	305-245	-		0.25	15	50	1 - 6	A,C
AH104	163 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU093TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	9.6	10.9	280-250	65		0.25	15	50	1 - 6	A,C
AH105	163B - INTERVIEW	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	40		0.25	15	45	1 - 6	A,C
AH106	164 - OBSERVATION	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	30		0.23	15	55	1 - 6	A,C
AH107	160 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	120		2.00	15	70	1 - 6	A
AH108	161 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	70		2.00	15	70	1 - 6	A
AH109A	167 - PATROL BRIEF	SEE DIAGRAM				ARNU153TQD4		CEILING CASSETTE - 4 WAY (2' X 2')	15.4	17.1	390-330	60		0.25	15	50	1 - 6	A,C
AH109B	167 - PATROL BRIEF	SEE DIAGRAM				ARNU153TQD4		CEILING CASSETTE - 4 WAY (2' X 2')	15.4	17.1	390-330	60		0.25	15	50	1 - 6	A,C
AH110	166 EVIDENCE PROC.	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	B,C
AH111	156 ARMORY	SEE DIAGRAM	HP1	DOAS3	LG	ARNU053TRD4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	50	208/1/60	0.25	15	45	1 - 6	B,C
AH112	168 EVIDENCE PROC.	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	35		0.25	15	45	1 - 6	B,C
AH113	169 - WOMENS LOCKER	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	25		2.00	15	70	1 - 6	A
AH114	171 - MENS LOCKER	SEE DIAGRAM				ARNU153M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	15.4	17.1	570-330	35		2.00	15	70	1 - 6	A
AH115	170 EVIDENCE PROCESSI	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	40		0.25	15	45	1 - 6	B,C
AH116	168A EVIDENCE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	80		0.25	15	45	1 - 6	B,C
AH117	168B HIGH VALUE EVIDEN	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	25		0.23	15	55	1 - 6	B,C
AH118	155 - LIEUTENANT	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	25		0.25	15	45	1 - 6	A,C
AH119	150 - CRIME PREV.	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	25		0.25	15	45	1 - 6	A,C
AH120	151 - BIKE OFF.	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	25		0.25	15	45	1 - 6	A,C
AH121	153 - EVID/UNIF. OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	25		0.25	15	45	1 - 6	A,C
AH122	154 - STREET CRIME	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	25		0.25	15	45	1 - 6	A,C
AH201	100 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU363M2A4		HORIZONTAL DUCTED - MEDIUM STATIC	36.2	40.6	1030-676	145		2.90	15	100	1 - 6	A
AH202	100 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU363M2A4		HORIZONTAL DUCTED - MEDIUM STATIC	36.2	40.6	1030-676	210		2.90	15	100	1 - 6	A
AH203	139 - ELEV. MACH.	SEE DIAGRAM				ARNU123SJS4		WALL MOUNTED	12.3	13.6	300-240	15		0.31	15	25	1 - 6	A,D,E
AH204	142 - BREAK RM	SEE DIAGRAM				ARNU483M3A4		HORIZONTAL DUCTED - MEDIUM STATIC	48.1	54.2	1480-918	185		3.10	15	110	1 - 6	A
AH205	143 - WEIGHT RM	SEE DIAGRAM				ARNU243M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	24.2	27.3	703-555	390		2.00	15	70	1 - 6	A
AH206	140 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM	HP2	DOAS3	LG	ARNU093M1A4	TRANE, DAIKIN	HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	25	208/1/60	2.00	15	70	1 - 6	A
AH207	147 - INTERVW & REPORT	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	35		0.25	15	45	1 - 6	A,C
AH208	149 - STORAGE	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	15		0.31	15	25	1 - 6	A,D,E
AH209	172 - DATA	SEE DIAGRAM				ARNU123SJS4		WALL MOUNTED	12.3	13.6	300-240	-		0.31	15	25	1 - 6	B,D,E
AH210	148 - RECPTION	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	30		0.23	15	55	1 - 6	A,C
AH211	148 - RECORDS	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	25		0.23	15	55	1 - 6	A,C
AH212	146 - WAITING	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	45		2.00	15	70	1 - 6	A
AH301	100 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU363M2A4		HORIZONTAL DUCTED - MEDIUM STATIC	36.2	40.6	1030-676	90		2.90	15	100	1 - 6	A
AH302	101 - CONFERENCE	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	60		2.00	15	70	1 - 6	A
AH303	102 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH304	103 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH305	104 - OFFICE	SEE DIAGRAM				ARNU093TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	9.6	10.9	280-250	20		0.25	15	50	1 - 6	A,C
AH306	105 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH307	108 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH308	107 - COPY MAIL CENTER	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	10		0.25	15	45	1 - 6	B,C
AH309	107A - OFFICE*	SEE DIAGRAM	HP3	DOAS1	LG	ARNU053TRD4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20	208/1/60	0.25	15	45	1 - 6	B,C
AH310	106 - CONFERENCE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	60		0.25	15	45	1 - 6	A,C
AH311	137 - ELECTRIC	SEE DIAGRAM				ARNU073SJS4		WALL MOUNTED	7.5	8.5	255-210	-		0.31	15	25	1 - 6	B,D,E
AH312	138 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	B,C
AH313	136 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH314	134 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH315	132 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH316	110 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU183M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	19.1	13.9	640-390	130		2.00	15	70	1 - 6	A
AH317	111A - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	B,C
AH401	115 - IT	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	-		0.31	15	25	1 - 6	A,D,E
AH402	118 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH403	120 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH404	122 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH405	123 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	25		0.25	15	45	1 - 6	A,C
AH406	113 - DATA	SEE DIAGRAM				ARNU123SJS4		WALL MOUNTED	12.3	13.6	300-240	-		0.31	15	25	1 - 6	B,D,E
AH407	125 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH408	126 - OFFICE	SEE DIAGRAM	HP4	DOAS1	LG	ARNU073TUD4	TRANE, DAIKIN	CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20	208/1/60	0.23	15	55	1 - 6	A,C
AH409	127 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	25		0.25	15	45	1 - 6	A,C
AH410	128 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH411	129 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH412	130 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH413	119 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU153M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	15.4	17.1	570-330	125		2.00	15	70	1 - 6	A
AH414	121 - CONF. & DOCS.	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	50		0.25	15	45	1 - 6	A,C
AH415	116 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	60		2.00	15	70	1 - 6	A

NOTES:
1. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2. PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3. PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4. REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5. CERTIFIED FACTORY STARTUP.
6. INTEGRATE INTO EXISTING CONTROL SYSTEM. PROVIDE EMAIL NOTIFICATION OF ALARMS. IF ALTERNATE MANUFACTURER IS USED, SYSTEM CONTROLLER AND ALL THERMOSTATS MUST BE REPLACED.
7. HEAT PUMP SYSTEM, NOT A HEAT RECOVERY SYSTEM. NO HEAT RECOVERY BOXES NEEDED.

ACCESSORIES:
A. EXISTING WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY TO REMAIN. LG MODEL # CRC1+
B. NEW WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY. LG MODEL # CRC2.
C. BUILT-IN CONDENSATE LIFT MECHANISM
D. PROVIDE ASPEN PUMPS MINI BLANC CONDENSATE PUMP OR APPROVED EQUAL.
E. PROVIDE PLASTIC COVER FOR ALL EXPOSED REFRIGERANT PIPING.

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

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M6.2R

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100% OUTSIDE AIR - DX AIR SOURCE HEAT PUMP WITH ENERGY RECOVERY (PART 1 OF 2)

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	OUTSIDE AIR	RETURN/ EXHAUST AIR	PERCENT OA	ESP	SUMMER DESIGN DAY - HOT																					
								ER WHEEL - DEHUMIDIFICATION												DX COIL - COOLING						REHEAT			
				OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP														UNIT SUPPLY AIR TEMP			
								DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	COIL SUPPLY AIR TEMP				TOTAL	SENS				CAPACITY
				CFM	CFM	%	IN. H2O	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH	MBH	DB °F	WB °F	RH %	DP °F	MBH
DOAS5	UNITED COOLAIR	AAH200G#ASTA1	-	1700	1360	100	1.0	97.0	79.0	45.7	72.6	75.0	62.5	49.8	55.0	81.5	68.5	51.8	62.1	51.4	50.9	97.1	50.6	164.8	83.8	75.0	60.3	42.3	50.6	44.0

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
2 ENTHALPY ENERGY RECOVERY WHEEL
3 ECM FANS - SUPPLY AND EXHAUST
4 SOLID DOUBLE WALL LINER W/ 1" THERMAL / ACCOUSTIC FIBERGLASS INSULATION
5 SUBCOOLING COIL FOR INCREASED EFFICIENCY
6 STAINLESS STEEL DRAIN PANS - EVAPORATOR AND CONDENSER
7 BUILT-IN PRESSURE TRANSDUCERS FOR AIRFLOW MEASUREMENT

NOTES:
8 2" MERV 13 PLEATED THROWAWAY SUPPLY FILTER
9 2" MERV 8 PLEATED THROWAWAY RETURN FILTER
10 QUICK-CONNECT REFRIGERANT FITTINGS TO SHIP SPLIT; FIELD ASSEMBLED
11 ISOLATED ELECTRICAL CONTROL BOX
12 MICROPROCESSOR W/ BUILT-IN DISPLAY INTERFACE AND BACNET
13 MODULATING HOT GAS REHEAT

100% OUTSIDE AIR - DX AIR SOURCE HEAT PUMP WITH ENERGY RECOVERY (PART 2 OF 2)

DRAWING CODE	SUMMER DESIGN DAY - HUMID																				WINTER DESIGN DAY																ELECTRICAL												WEIGHT	NOTES	ACCESSORIES
	ER WHEEL - DEHUMIDIFICATION								DX COIL - COOLING						REHEAT				ER WHEEL - HEATING								HEATING																											
	OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP				COIL SUPPLY AIR TEMP				TOTAL	SENS	UNIT SUPPLY AIR TEMP				CAPACITY		OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP				UNIT SUPPLY AIR TEMP				CAPACITY		VOLTAGE	SUPPLY FAN MOTOR		EXHAUST FAN MOTOR		COMPRESSOR		ERW (EACH)	ERW QTY	UNIT MCA	UNIT MOP				
	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH	MBH	DB °F	WB °F	RH %	DP °F	MBH		DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH		V-PH-HZ	KW	AMPS	KW	AMPS	LRA	RLA	AMPS		AMPS	AMPS	LBS			
DOAS5	84.0	78.6	79.0	76.8	75.0	62.5	49.8	55.0	77.7	68.6	63.3	64.2	50.6	50.3	98.4	50.1	165.3	63.4	75.0	60.1	41.6	50.1	45.5		23.0	19.2	53.1	10.0	70.0	51.5	25.0	32.6	55.9	43.0	31.3	26.7	75.0	51.9	16.1	26.7	109.4		230-3-60	4.4	13.7	4.4	13.7	191.0	27.6	0.40	2	62.7	90.0	2,000		1-13	-

ACCESSORIES: N/A.

LOUVER SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	FRAME	DESCRIPTION	MATERIAL	LOUVER DEPTH	SIZE (W X H)		SERVICE	AIRFLOW	PERFORMANCE RATINGS			NOTES	ACCESSORIES
													FREE AREA	S.P. LOSS	WATER PENETRATION		
								(IN.)	(IN.)			(CFM)	(SF)	(IN. H20)	(OZ./SF)		
L4	RUSKIN	EME3625DFLHP	VENT PRODUCTS, POTTORFF	FIXED	CHANNEL	VERTICAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	3-1/8"	28 X 24		INTAKE	1,700	2.09	0.10	0.00	1,2,3	-
L5	RUSKIN	EME3625DFLHP	VENT PRODUCTS, POTTORFF	FIXED	CHANNEL	VERTICAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	3-1/8"	17 X 17		EXHAUST	1,360	0.73	0.55	N/A	1,2,3	-

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 LOUVER TO BE INSTALLED BEHIND ARCHITECTURAL LOUVER SELECTED BY ARCHITECT.
3 FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLOR AND GLOSS.

ACCESSORIES: A N/A.

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	SERVICE	NECK SIZE (IN.)	MODULE SIZE (IN.)	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	6Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S2	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	8Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S3	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	10Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S6	PRICE	610	METALAIRE, TITUS	FIXED FACE GRILLE	SUPPLY	8 X 4	10 X 6	ALUMINUM	WHITE	WALL SURFACE	1,2	A
S7	PRICE	610	METALAIRE, TITUS	LINEAR BAR GRILLES	SUPPLY	10 X 8	12 X 10	ALUMINUM	WHITE	WALL SURFACE	1,2	A
S8	PRICE	610	METALAIRE, TITUS	LINEAR BAR GRILLES	SUPPLY	10 X 8	12 X 10	ALUMINUM	WHITE	DUCT SURFACE	1,2	A
R1	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	22 X 22	24 X 24	ALUMINUM	WHITE	T-BAR	1	-
R2	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	12 X 8	14 X 10	ALUMINUM	WHITE	WALL SURFACE	1	-
E1	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	22 X 22	24 X 24	ALUMINUM	WHITE	T-BAR	1	A
E2	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	8 X 6	10 X 8	ALUMINUM	WHITE	WALL SURFACE	1	A

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 DUCT BRANCH CONNECTION SIZE TO BE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS NOTED OTHERWISE ON PLANS.

ACCESSORIES: A VOLUME DAMPER

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

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VARIABLE REFRIGERANT FLOW AIR HANDLER SCHEDULE

DRAWING CODE	SPACE SERVED	HEAT RECOVERY UNIT	OUTDOOR UNIT	ASSOCIATED ERV/DOAS UNIT	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	INDOOR UNIT CONFIGURATION	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	SUPPLY AIRFLOW MAX (CFM)	OUTSIDE AIR AIRFLOW (CFM)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
													VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)			
AH501	245 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM	HP5	DOAS4	LG	ARNU243NJA4	TRANE, DAIKIN	MULTI-POSITION AIR HANDLER	24.0	27.0	710-480	75	208/1/60	1.40	15	130	1 - 6	A
AH502	237 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU243NJA4		MULTI-POSITION AIR HANDLER	24.0	27.0	710-480	60		1.40	15	130	1 - 6	A
AH503	244 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH504	243 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH505	246 - OFFICE	SEE DIAGRAM				ARNU093TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	9.6	10.9	280-250	20		0.25	15	50	1 - 6	A,C
AH506	247 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH507	248 - ELECTRIC	SEE DIAGRAM				ARNU073SJS4		WALL MOUNTED	7.5	8.5	255-210	-		0.31	15	25	1 - 6	B,D,E
AH508	249 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	25		0.25	15	45	1 - 6	A,C
AH509	253A - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	25		0.25	15	45	1 - 6	A,C
AH510	250 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	45	1 - 6	A,C
AH511	251 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	45	1 - 6	A,C
AH512A	253 - OPEN OFFICE	SEE DIAGRAM				ARNU123TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	12.3	13.6	305-245	50		0.25	15	50	1 - 6	A,C
AH512B	253 - OPEN OFFICE	SEE DIAGRAM				ARNU123TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	12.3	13.6	305-245	45		0.25	15	50	1 - 6	A,C
AH513	254 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH514	255 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH515	256 - STAIR	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	-		0.23	15	55	1 - 6	A,C
AH516	242 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH517	241 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH518	252 - SERVER	SEE DIAGRAM				ARNU123SJS4		WALL MOUNTED	12.3	13.6	300-240	-		0.31	15	25	1 - 6	A,D,E
AH519	235 - MECH ACCESS	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	-		0.31	15	25	1 - 6	A,D,E
AH520	240 STAIRS - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	-		0.23	15	55	1 - 6	A,C
AH521	239 - CONFERENCE	SEE DIAGRAM				ARNU123TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	12.3	13.6	305-245	45		0.25	15	50	1 - 6	A,C
AH522	236 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH523	234 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH524	231 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH525	225 EAST TRNG CNCLOVRFLW	SEE DIAGRAM				ARNU303NJA4		MULTI-POSITION AIR HANDLER	30.0	34.0	880-630	160		1.40	15	130	1 - 6	A
AH601	200B - CONFERENCE	SEE DIAGRAM	HP6	DOAS4	LG	ARNU243TNA4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (3' X 3')	24.2	27.3	740-600	65	208/1/60	0.71	15	85	1 - 6	B,C
AH602	200A - LOBBY	SEE DIAGRAM				ARNU543NKA4		MULTI-POSITION AIR HANDLER	54.0	60.0	1475-1260	185		2.25	15	180	1 - 6	A
AH603	200 - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU483NKA4		MULTI-POSITION AIR HANDLER	48.0	54.0	1402-999	180		2.25	15	180	1 - 6	A
AH604	225 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU423NKA4		MULTI-POSITION AIR HANDLER	42.0	46.0	1250-999	155		2.25	15	180	1 - 6	A
AH605	226 - SERVING KITCHEN	SEE DIAGRAM				ARNU153TQD4		CEILING CASSETTE - 4 WAY (2' X 2')	15.4	17.1	390-330	30		0.25	15	50	1 - 6	A,C
AH606	227 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	40		1.40	15	130	1 - 6	A
AH607	200A CONF.	SEE DIAGRAM				ARNU093TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	9.6	10.9	280-250	70		0.25	15	50	1 - 6	A,C
AH608	225 EAST SUPPLEMENTAL	SEE DIAGRAM				ARNU153TQD4		CEILING CASSETTE - 4 WAY (2' X 2')	15.4	17.1	390-330	-		0.25	15	50	1 - 6	B,C
AH609	225 WEST SUPPLEMENTAL	SEE DIAGRAM				ARNU153TQD4		CEILING CASSETTE - 4 WAY (2' X 2')	15.4	17.1	390-330	-		0.25	15	50	1 - 6	B,C
AH610	230 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH611	230A - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH701	201B - COUNCIL CHAMBERS	SEE DIAGRAM	HP7	DOAS2	LG	ARNU423NKA4	TRANE, DAIKIN	MULTI-POSITION AIR HANDLER	42.0	46.0	1250-999	375	208/1/60	2.25	15	180	1 - 7	A
AH702	201B - COUNCIL CHAMBERS	SEE DIAGRAM				ARNU423NKA4		MULTI-POSITION AIR HANDLER	42.0	46.0	1250-999	375		2.25	15	180	1 - 7	A
AH703	201B - COUNCIL CHAMBERS	SEE DIAGRAM				ARNU423NKA4		MULTI-POSITION AIR HANDLER	42.0	46.0	1250-999	375		2.25	15	180	1 - 7	A
AH704	201B - COUNCIL CHAMBERS	SEE DIAGRAM				ARNU423NKA4		MULTI-POSITION AIR HANDLER	42.0	46.0	1250-999	375		2.25	15	180	1 - 7	A
AH801	201A - CAMERA RM	SEE DIAGRAM	HP8	DOAS1	LG	ARNU093TRD4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (2' X 2')	9.6	10.9	280-250	20	208/1/60	0.25	15	50	1 - 6	A,C
AH802	202 - WAITING	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	45		2.00	15	70	1 - 6	A
AH803	219 - COUNCIL CONF.	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	70		1.40	15	130	1 - 6	A
AH804	203 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH805	204 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	45	1 - 6	A,C
AH806	205 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	45	1 - 6	A,C
AH807	207 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	45	1 - 6	A,C
AH808	208 - SERVER	SEE DIAGRAM				ARNU153SJS4		WALL MOUNTED	15.4	17.1	370-240	-		0.31	15	25	1 - 6	A,D,E
AH809	221 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU303NJA4		MULTI-POSITION AIR HANDLER	30.0	34.0	880-630	120		1.40	15	130	1 - 6	A
AH810	209 - ELECTRIC	SEE DIAGRAM				ARNU073SJS4		WALL MOUNTED	7.5	8.5	255-210	-		0.31	15	25	1 - 6	B,D,E
AH811	210 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH812	211 - CONF	SEE DIAGRAM				ARNU123TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	12.3	13.6	305-245	45		0.25	15	50	1 - 6	B,C
AH813	224 - MECH ACCESS	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	-		0.31	15	25	1 - 6	A,D,E
AH814	213 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH815	214 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH816	217 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH817	218 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH818	220 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH819	223 STAIRS - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	-		0.23	15	55	1 - 6	A,C

NOTES:
1. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2. PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3. PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4. REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5. CERTIFIED FACTORY STARTUP.
6. INTEGRATE INTO EXISTING CONTROL SYSTEM. PROVIDE EMAIL NOTIFICATION OF ALARMS. IF ALTERNATE MANUFACTURER IS USED, SYSTEM CONTROLLER AND ALL THERMOSTATS MUST BE REPLACED.
7. HEAT PUMP SYSTEM, NOT A HEAT RECOVERY SYSTEM. NO HEAT RECOVERY BOXES NEEDED.

ACCESSORIES:
- A EXISTING WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY TO REMAIN. LG MODEL # CRC1+
- B NEW WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY, LG MODEL # CRC2.
- C BUILT-IN CONDENSATE LIFT MECHANISM
- D PROVIDE ASPEN PUMPS MINI BLANC CONDENSATE PUMP OR APPROVED EQUAL.
- E PROVIDE PLASTIC COVER FOR ALL EXPOSED REFRIGERANT PIPING.

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02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Schedules

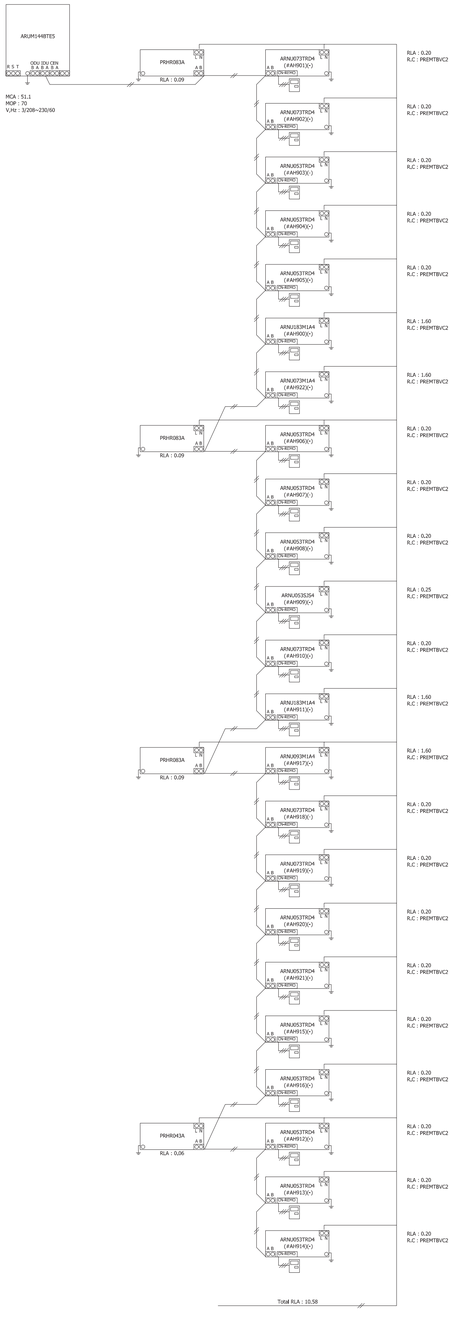
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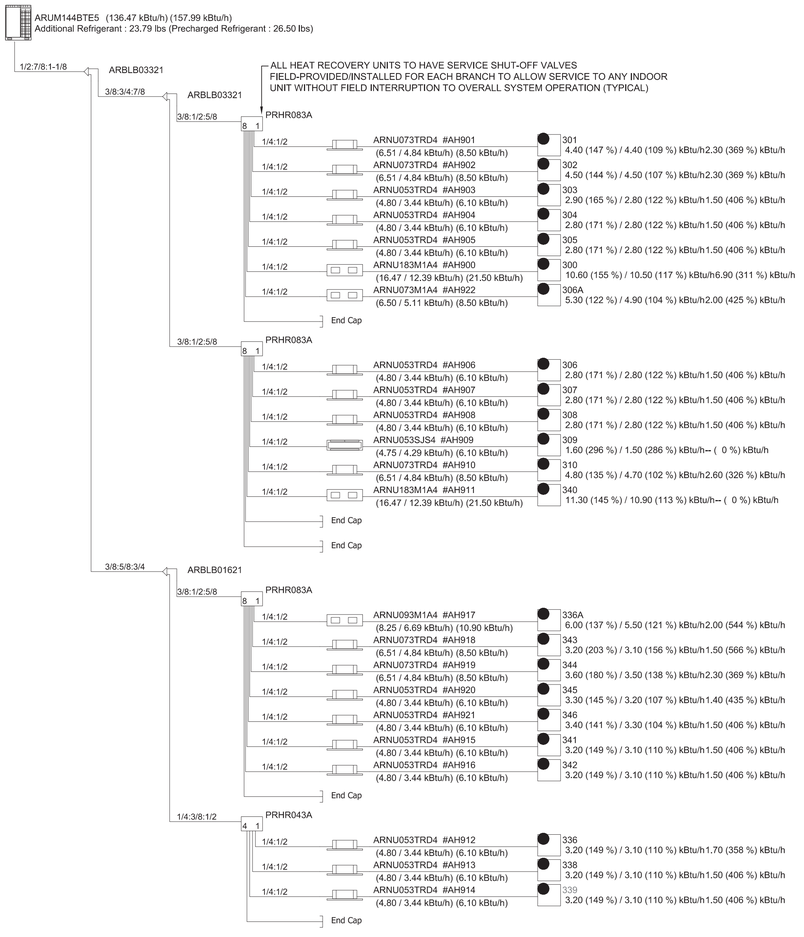
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Power line(Outdoor unit)
Power line(Indoor unit / HR unit)
Communication line (ODU-IDU / ODU-ODU) : Twisted, Stranded and shielded AWG 18 x 2C
Communication line (ODU-CEN) : Twisted, Stranded and shielded AWG 18 x 2C
Communication line(Remote controller) : Twisted and stranded AWG 22 x 3C
Ground shield wire at ODU only
Note : Polarity matters: Always connect 'A' to 'A' and 'B' to 'B'



1 VRF SYSTEM SCHEMATIC - HP9
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP9
NOT TO SCALE

NOTE: VRF SYSTEM SCHEMATIC SHOWN IS FOR REFERENCE ONLY AND IS FOR BASIS OF DESIGN MANUFACTURER. IF APPROVED ALTERNATE MANUFACTURER IS USED THE SYSTEM SCHEMATIC AND RECOMMENDED INSTALLATION REQUIREMENTS SHOULD BE FOLLOWED AND APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER. APPROVED ALTERNATE MANUFACTURERS CAN BE FOUND IN EQUIPMENT SCHEDULES.

NOTE: PIPING LENGTHS NOT SHOWN ON THESE DIAGRAMS. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR DETERMINING PIPING LENGTHS USING MOST DIRECT ROUTING WHILE MAINTAINING ACCEPTABLE CONCEALMENT. PIPE ROUTING SHALL BE APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

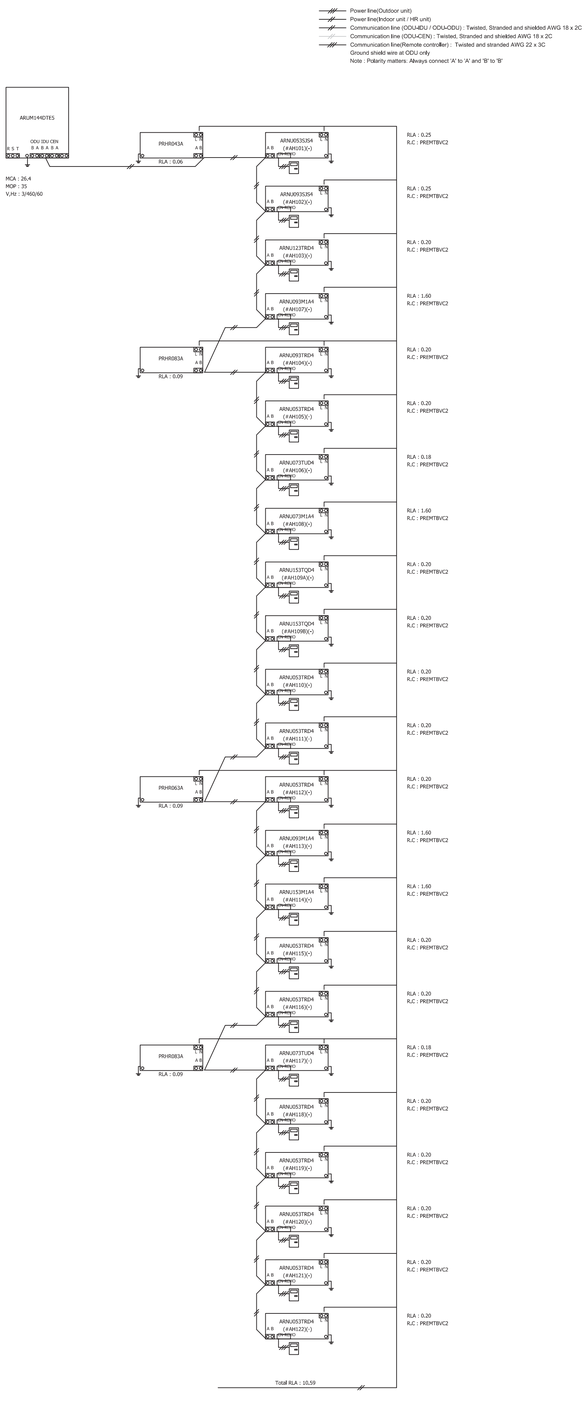
Mechanical VRF System Schematic & Piping Diagram

Rev.	Date	Notes

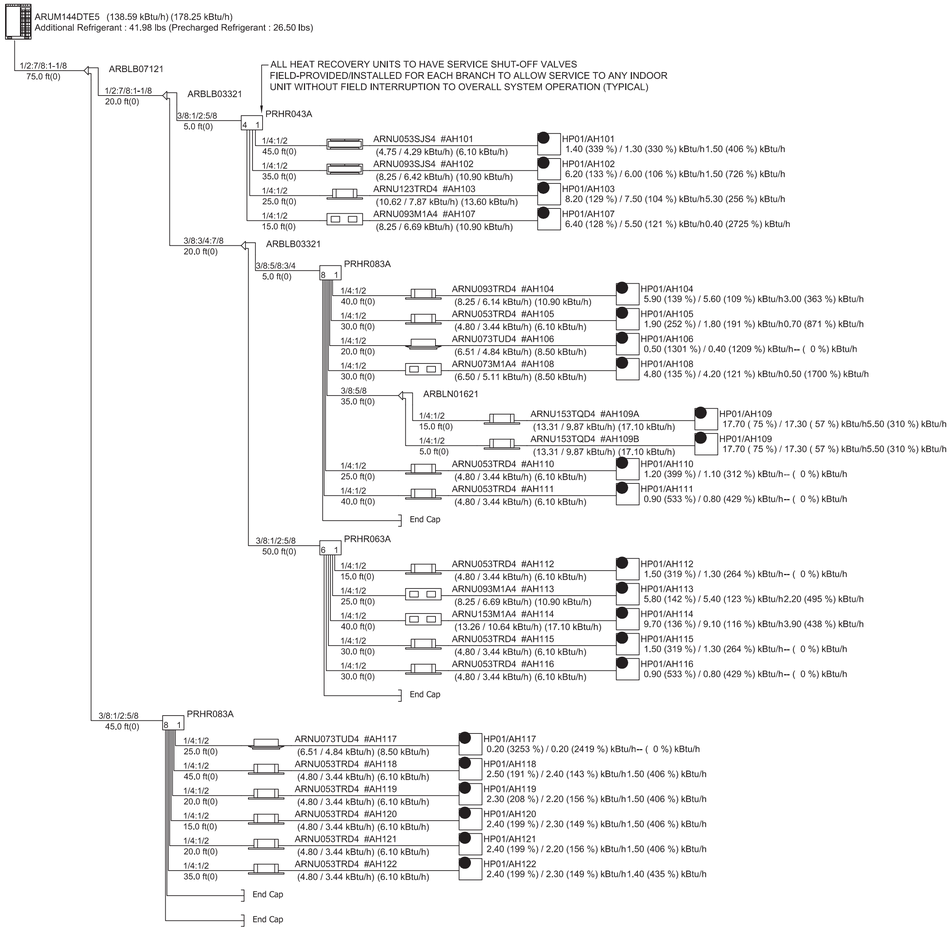
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Note :
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Refer to the most up-to-date submittal sheets for applicable electrical data.
.



1 VRF SYSTEM SCHEMATIC - HP1
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP1
NOT TO SCALE

NOTE: VRF SYSTEM SCHEMATIC SHOWN IS FOR REFERENCE ONLY AND IS FOR BASIS OF DESIGN MANUFACTURER. IF APPROVED ALTERNATE MANUFACTURER IS USED THE SYSTEM SCHEMATIC AND RECOMMENDED INSTALLATION REQUIREMENTS SHOULD BE FOLLOWED AND APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER. APPROVED ALTERNATE MANUFACTURERS CAN BE FOUND IN EQUIPMENT SCHEDULES.

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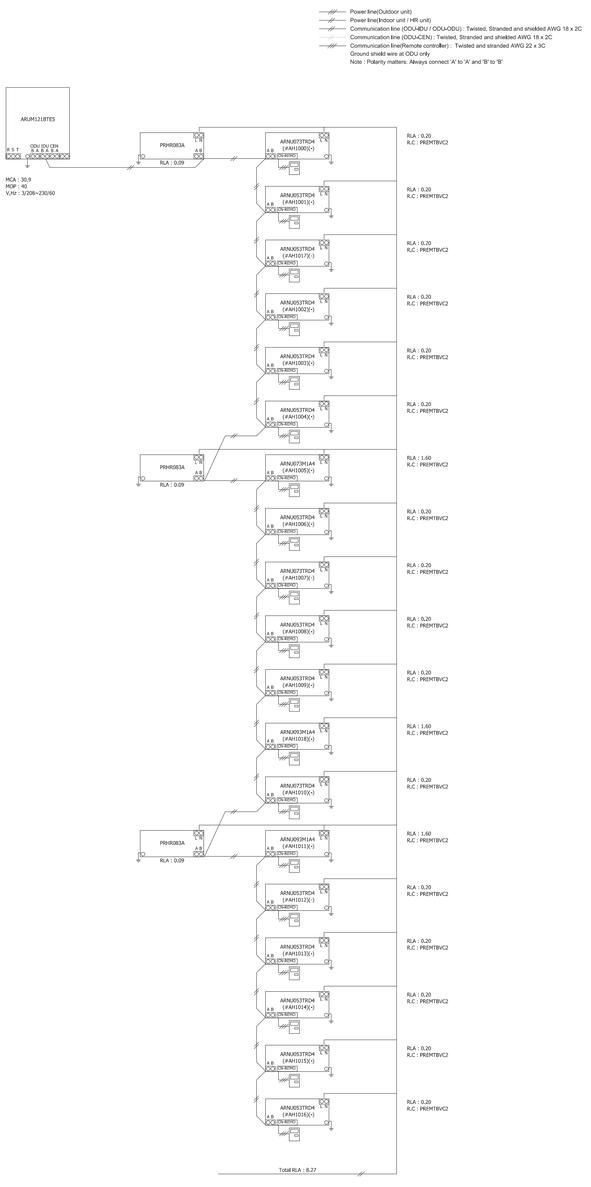
Mechanical VRF System Schematic & Piping Diagram

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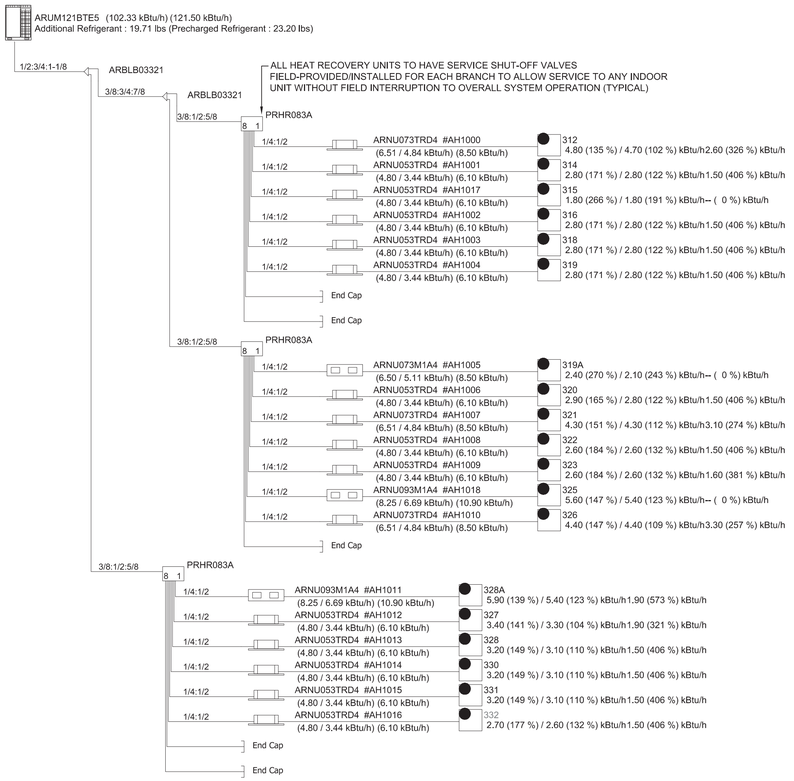
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.



1 **VRF SYSTEM SCHEMATIC - HP10**
NOT TO SCALE



2 **VRF PIPING DIAGRAM - HP10**
NOT TO SCALE

NOTE: VRF SYSTEM SCHEMATIC SHOWN IS FOR REFERENCE ONLY AND IS FOR BASIS OF DESIGN MANUFACTURER. IF APPROVED ALTERNATE MANUFACTURER IS USED THE SYSTEM SCHEMATIC AND RECOMMENDED INSTALLATION REQUIREMENTS SHOULD BE FOLLOWED AND APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER. APPROVED ALTERNATE MANUFACTURERS CAN BE FOUND IN EQUIPMENT SCHEDULES.

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SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

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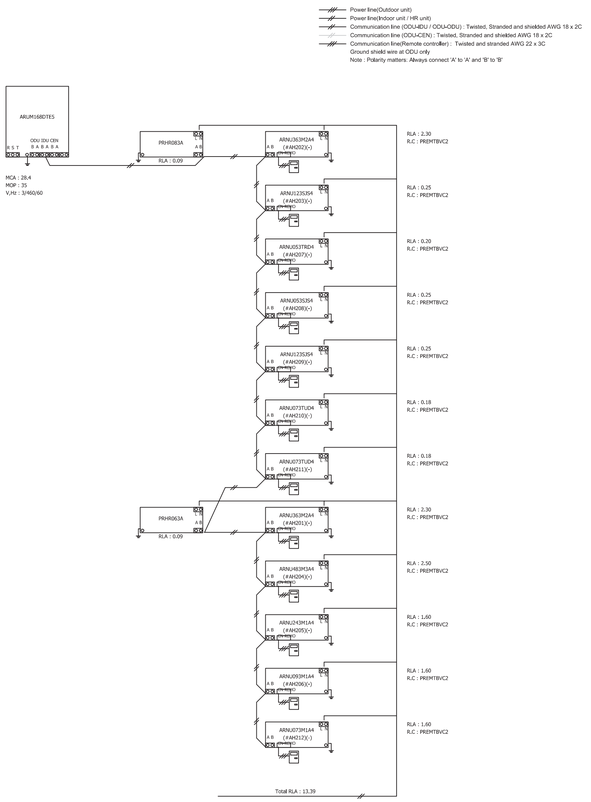
Mechanical VRF System Schematic & Piping Diagram

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M7.2

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.



1 VRF SYSTEM SCHEMATIC - HP2
NOT TO SCALE

2 VRF PIPING DIAGRAM - HP2
NOT TO SCALE

NOTE: VRF SYSTEM SCHEMATIC SHOWN IS FOR REFERENCE ONLY AND IS FOR BASIS OF DESIGN MANUFACTURER. IF APPROVED ALTERNATE MANUFACTURER IS USED THE SYSTEM SCHEMATIC AND RECOMMENDED INSTALLATION REQUIREMENTS SHOULD BE FOLLOWED AND APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER. APPROVED ALTERNATE MANUFACTURERS CAN BE FOUND IN EQUIPMENT SCHEDULES.

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02/21/2024

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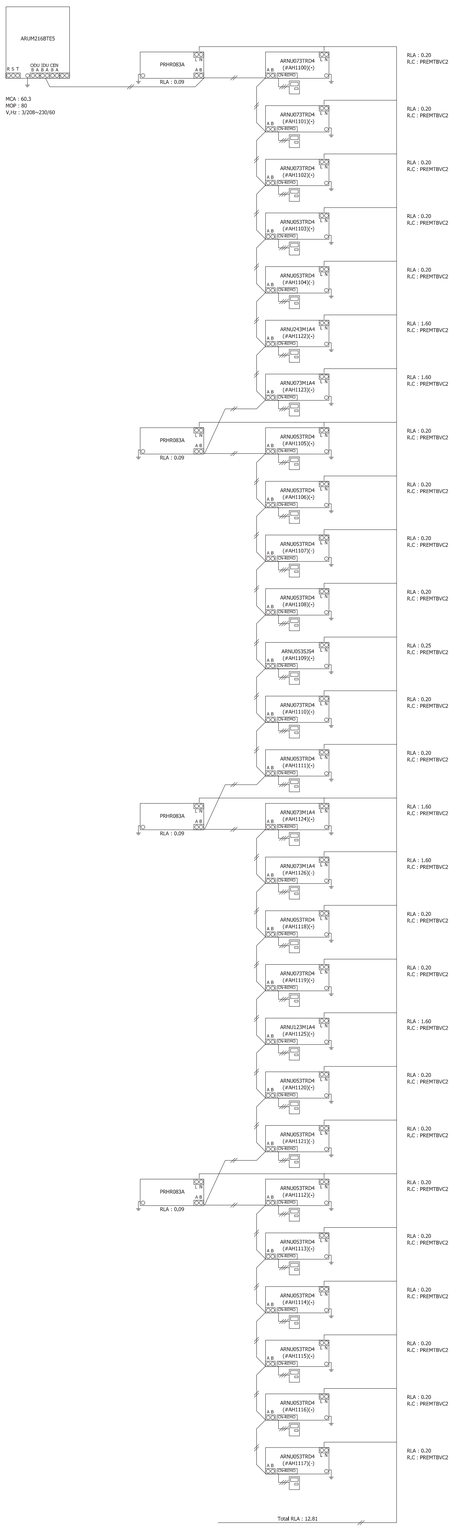
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Mechanical VRF System Schematic & Piping Diagram

Rev.	Date	Notes

M7.2R

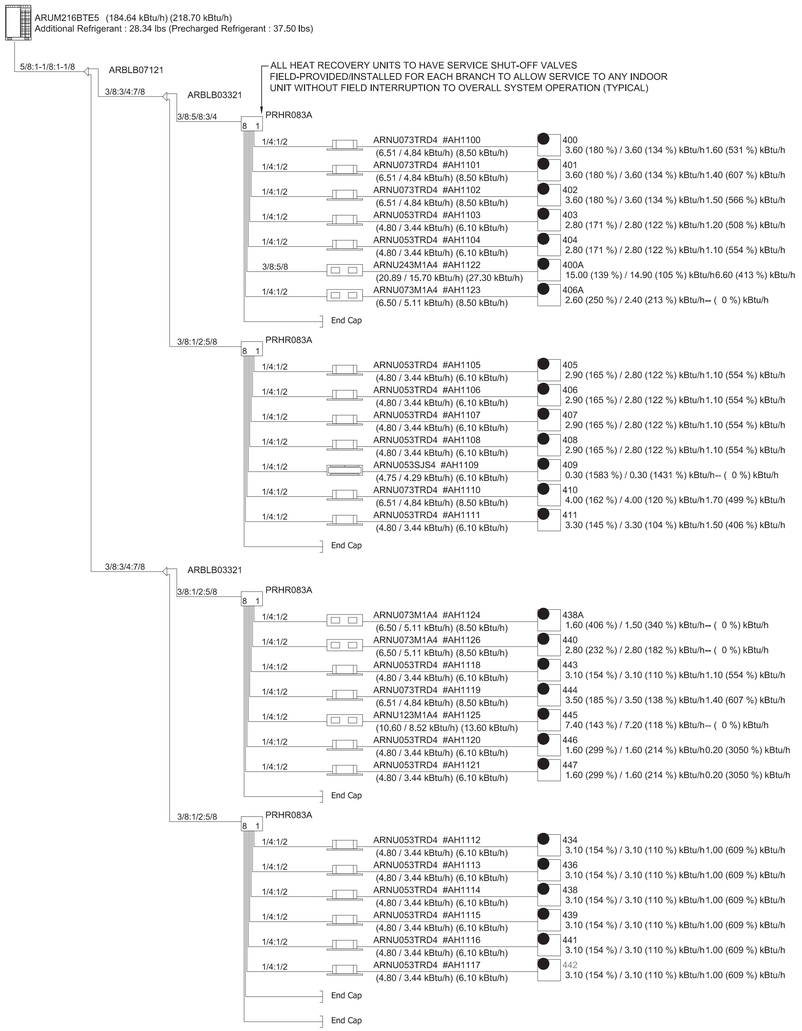
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- Power line(Outdoor unit)
- Power line(Indoor unit / HR unit)
- Communication line (ODU-IDU / ODU-ODU) : Twisted, Stranded and shielded AWG 18 x 2C
- Communication line (ODU-CEN) : Twisted, Stranded and shielded AWG 18 x 2C
- Communication line(Remote controller) : Twisted and stranded AWG 22 x 3C
- Ground shield wire at ODU only
- Note : Polarity matters: Always connect 'A' to 'A' and 'B' to 'B'

1 VRF SYSTEM SCHEMATIC - HP11
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP11
NOT TO SCALE

NOTE: VRF SYSTEM SCHEMATIC SHOWN IS FOR REFERENCE ONLY AND IS FOR BASIS OF DESIGN MANUFACTURER. IF APPROVED ALTERNATE MANUFACTURER IS USED THE SYSTEM SCHEMATIC AND RECOMMENDED INSTALLATION REQUIREMENTS SHOULD BE FOLLOWED AND APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER. APPROVED ALTERNATE MANUFACTURERS CAN BE FOUND IN EQUIPMENT SCHEDULES.

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SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

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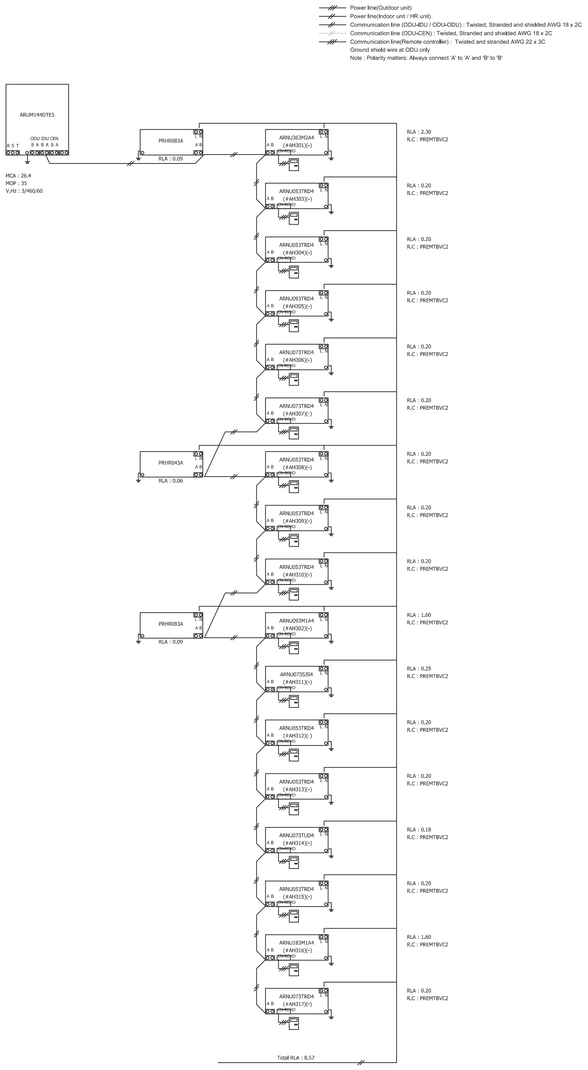
Mechanical VRF System Schematic & Piping Diagram

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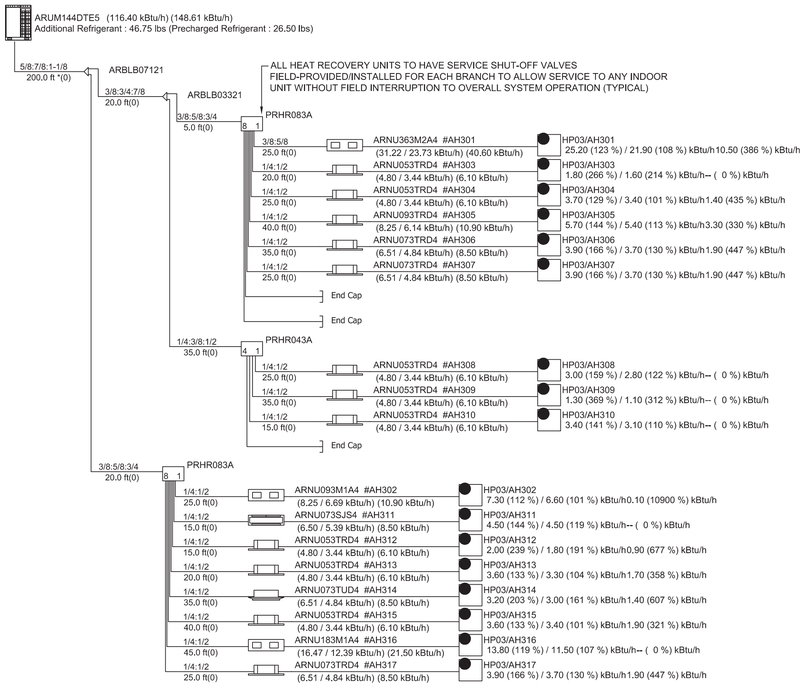
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.



1 VRF SYSTEM SCHEMATIC - HP3
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP3
NOT TO SCALE

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02/21/2024

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Leland, NC 28451

Construction Drawings

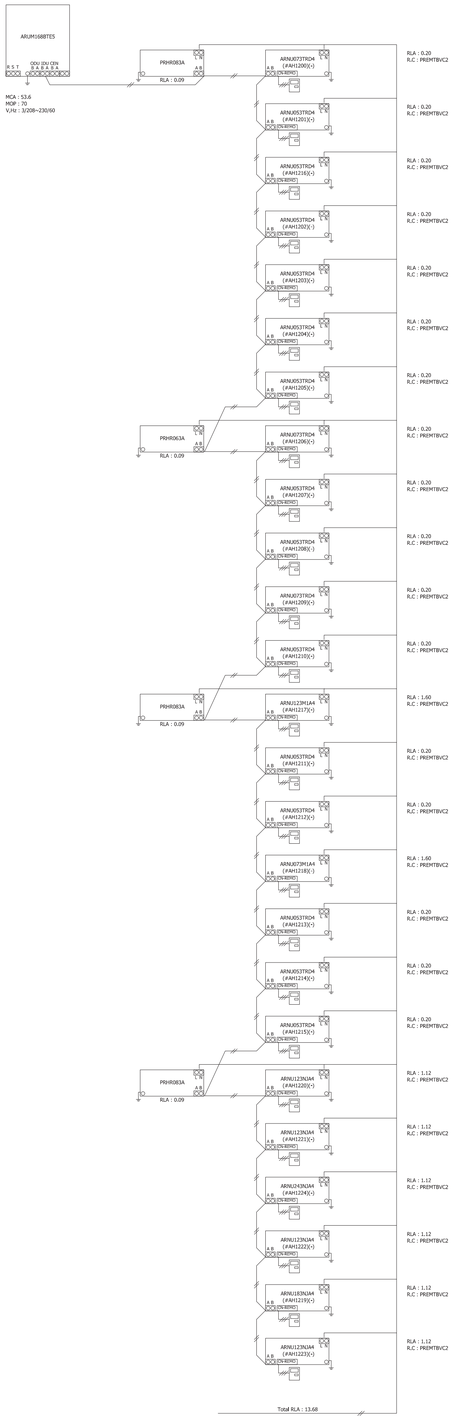
Issue Date: February 23, 2024

Mechanical VRF System Schematic & Piping Diagram

Rev.	Date	Notes

M7.3R

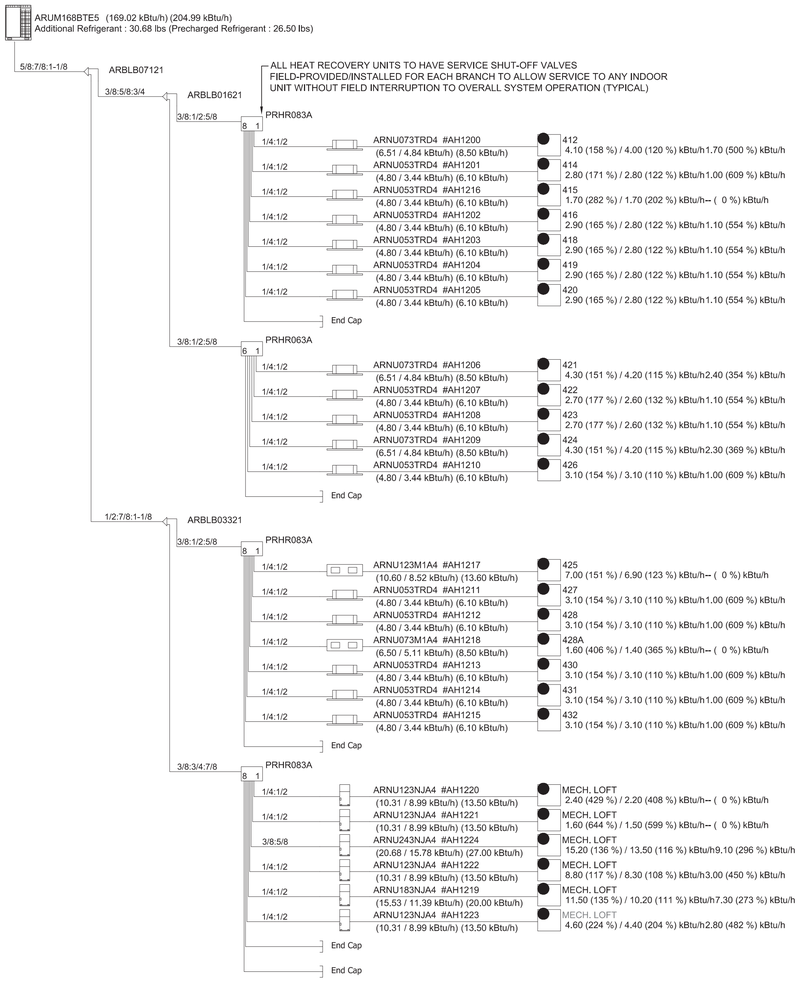
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Power line(Indoor unit / HR unit)
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Communication line(Remote controller) : Twisted and stranded AWG 22 x 3C
Ground shield wire at ODU only
Note : Polarity matters; Always connect 'A' to 'A' and 'B' to 'B'.

1 VRF SYSTEM SCHEMATIC - HP12
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP12
NOT TO SCALE

NOTE: VRF SYSTEM SCHEMATIC SHOWN IS FOR REFERENCE ONLY AND IS FOR BASIS OF DESIGN MANUFACTURER. IF APPROVED ALTERNATE MANUFACTURER IS USED THE SYSTEM SCHEMATIC AND RECOMMENDED INSTALLATION REQUIREMENTS SHOULD BE FOLLOWED AND APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER. APPROVED ALTERNATE MANUFACTURERS CAN BE FOUND IN EQUIPMENT SCHEDULES.

NOTE: PIPING LENGTHS NOT SHOWN ON THESE DIAGRAMS. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR DETERMINING PIPING LENGTHS USING MOST DIRECT ROUTING WHILE MAINTAINING ACCEPTABLE CONCEALMENT. PIPE ROUTING SHALL BE APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 TROY O. GRADY 02/23/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

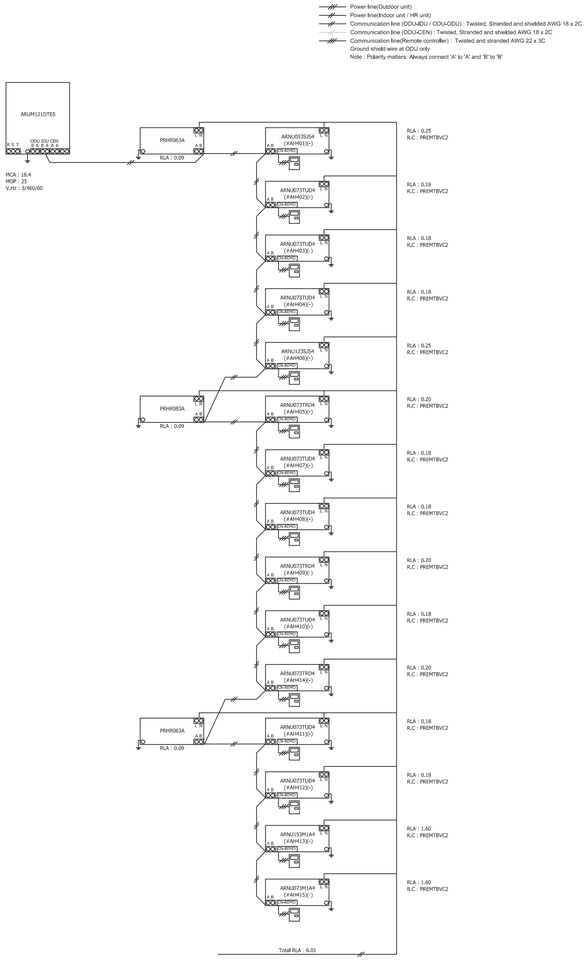
Mechanical VRF System Schematic & Piping Diagram

Rev.	Date	Notes

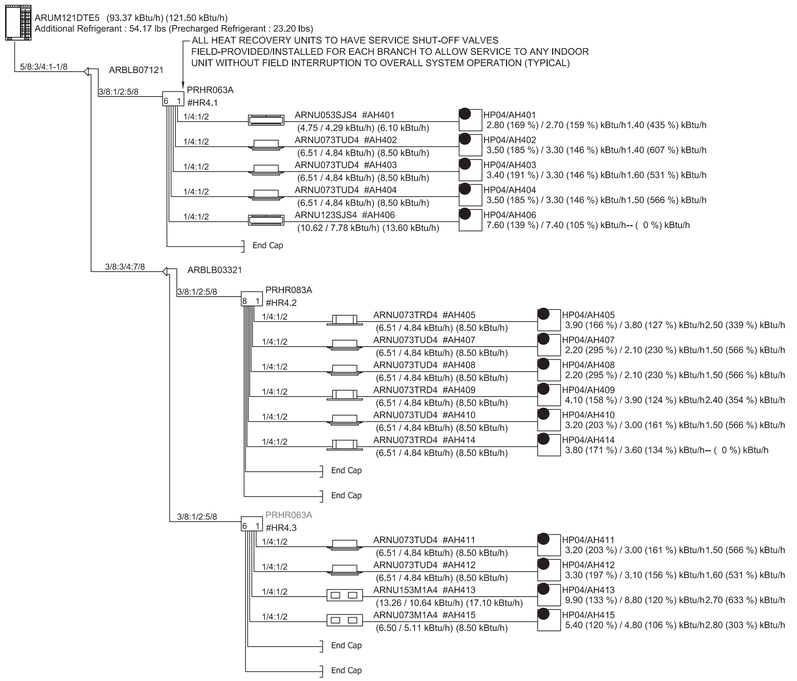
M7.4

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1 VRF SYSTEM SCHEMATIC - HP4
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP4
NOT TO SCALE

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02/21/2024

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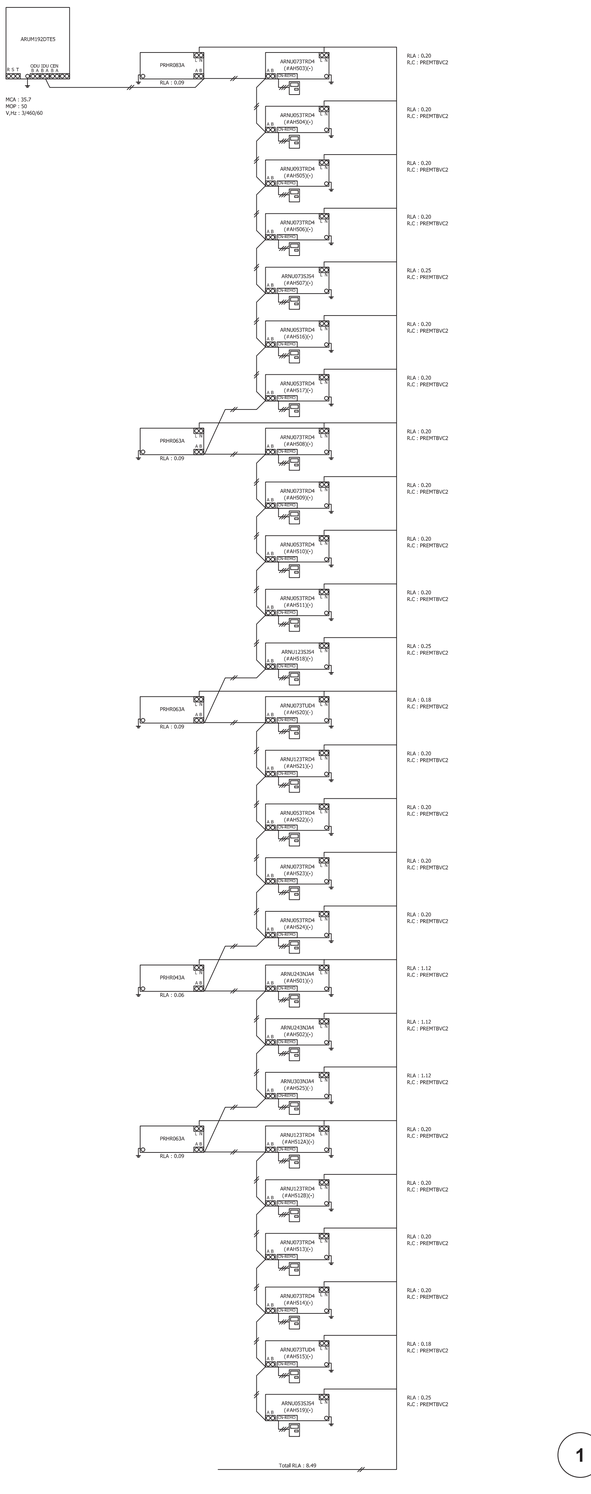
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Rev.	Date	Notes

M7.4R

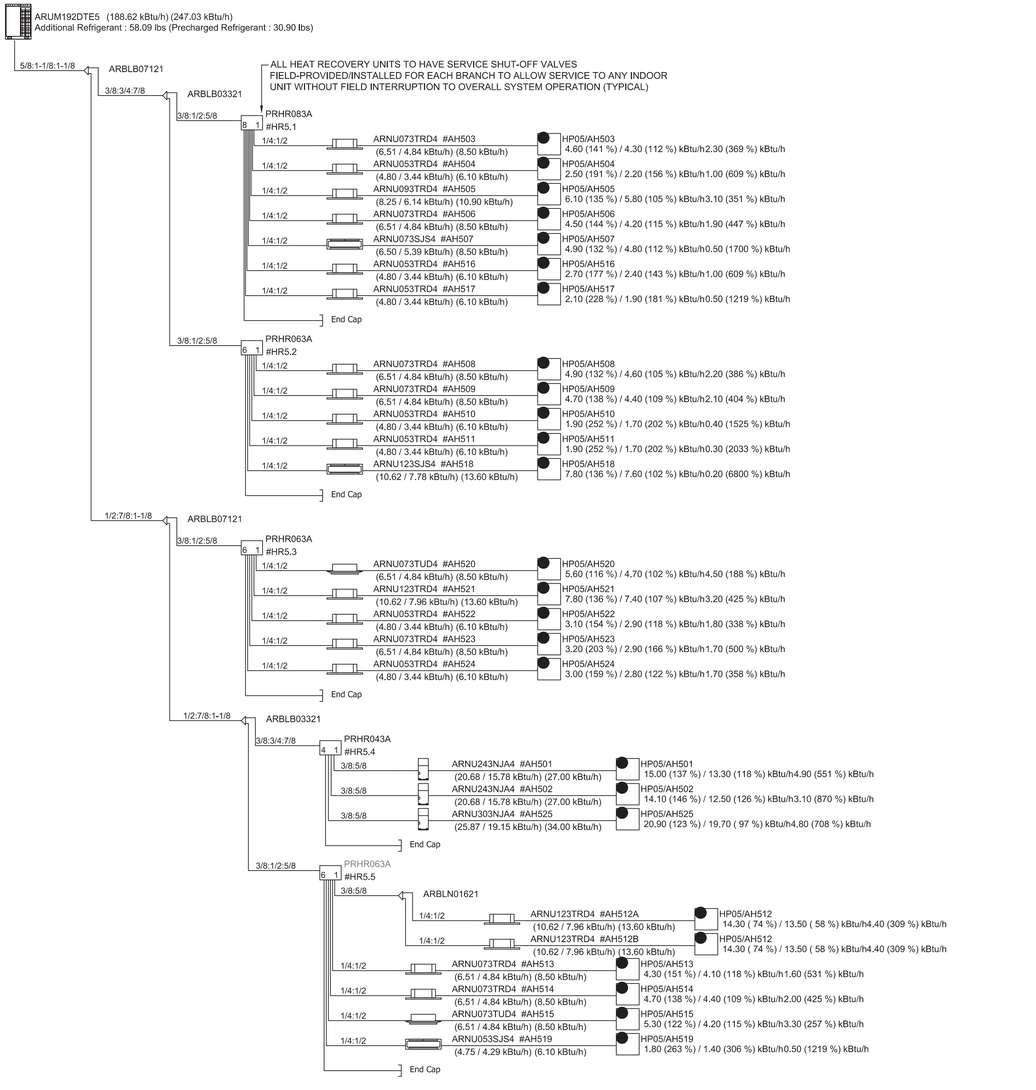
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1 VRF SYSTEM SCHEMATIC - HP5

NOT TO SCALE



2 VRF PIPING DIAGRAM - HP5

NOT TO SCALE

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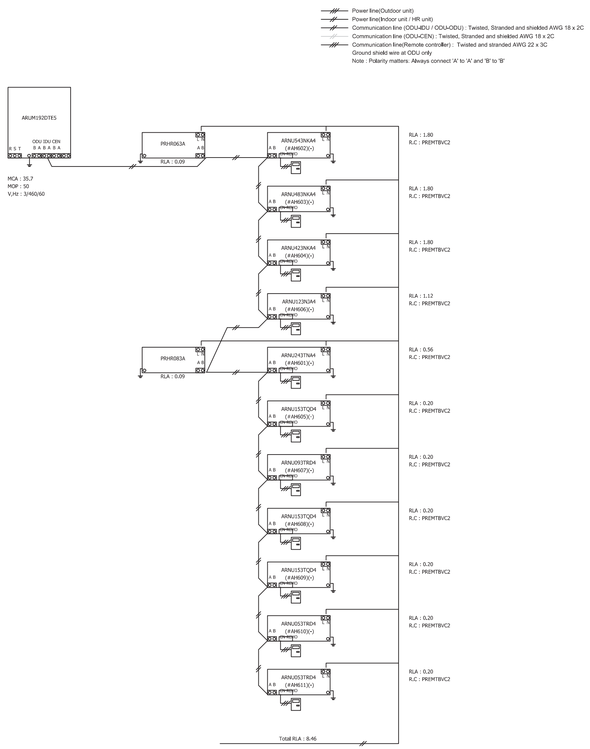
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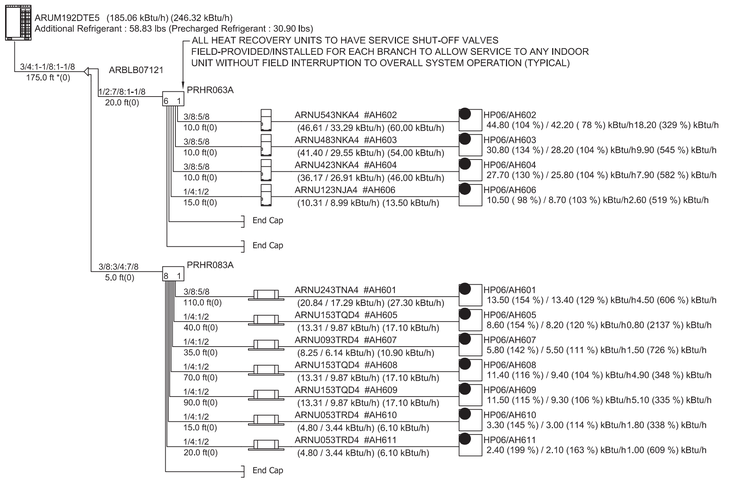
M7.5R

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1 VRF SYSTEM SCHEMATIC - HP6
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP6
NOT TO SCALE

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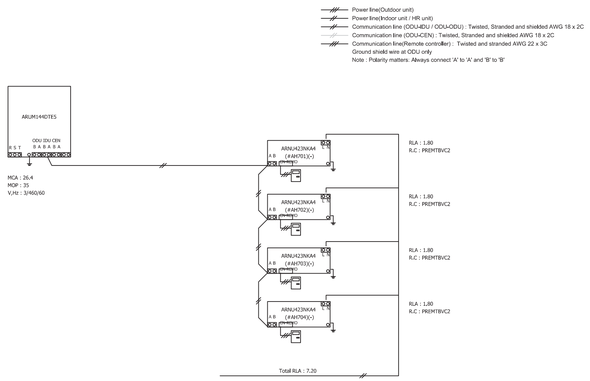
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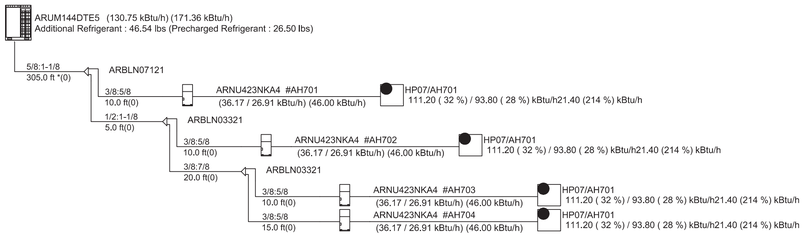
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1 VRF SYSTEM SCHEMATIC - HP7
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP7
NOT TO SCALE

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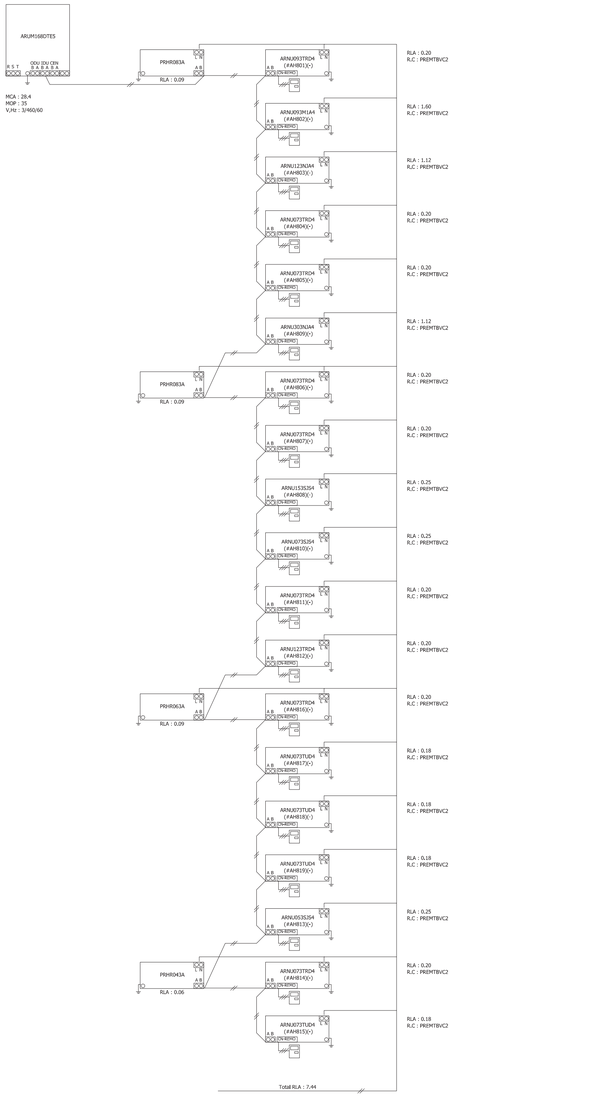
Rev.	Date	Notes

M7.7R

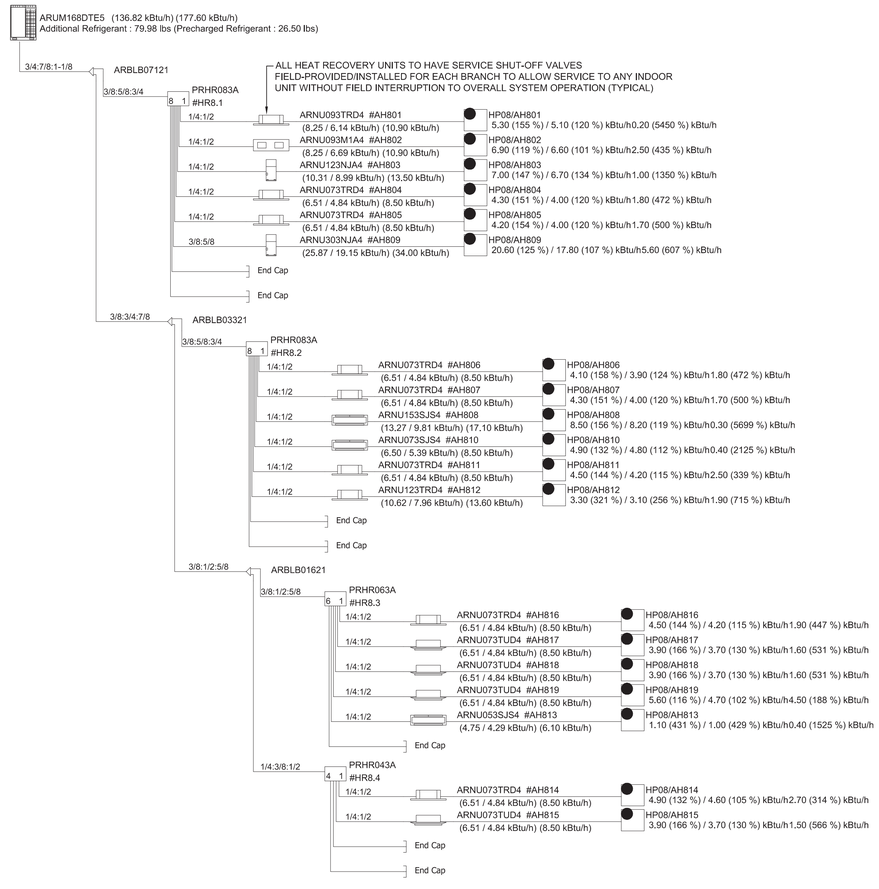
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Note : Polarity matters: Always connect 'A' to 'A' and 'B' to 'B'



1 VRF SYSTEM SCHEMATIC - HP8
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP8
NOT TO SCALE

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02/21/2024

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M7.8R

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HEAT PUMP INDOOR AIR HANDLER WALL AND CEILING CASSETTES

EACH INDOOR UNIT SHALL BE SCHEDULED ON BY THE BMS SYSTEM AT THE OCCUPIED TIMES DEFINED BY THE OWNER.

THE INDOOR UNITS SHALL BE SET TO AUTO MODE DURING OCCUPIED TIMES. DURING UNOCCUPIED TIMES THE INDOOR UNITS SHALL BE SET TO HEAT OR COOL BASED ON OUTSIDE AIR ENTHALPY CONDITIONS.

THE BMS SHALL SET THE OCCUPIED AND UNOCCUPIED TEMPERATURE SET-POINTS BASED ON THE OWNER'S REQUEST. TEMPERATURE SET-POINTS MAY BE CHANGED AT THE RC (REMOTE CONTROLLER) INSTALLED IN THE SPACE.

THE BMS SHALL SEND PROHIBIT COMMANDS FOR PROHIBITING THE MODE BUTTON AT THE LOCAL REMOTE CONTROLLER IN THE SPACE DURING OCCUPIED AND UNOCCUPIED TIMES.

THE BMS SHALL SEND PROHIBIT COMMANDS FOR PROHIBITING THE ON/OFF BUTTON AT THE LOCAL REMOTE CONTROLLER IN THE SPACE DURING OCCUPIED TIMES ONLY. THE BMS SHALL SEND PERMIT COMMANDS FOR PERMITTING THE ON/OFF BUTTON AT THE LOCAL REMOTE CONTROLLER IN THE SPACE DURING UNOCCUPIED TIMES TO ALLOW FOR SETBACK OVERRIDE.

DURING UNOCCUPIED TIMES THE BMS SHALL SEND THE OFF COMMAND TO THE INDOOR UNIT AT THE START OF UNOCCUPIED TIMES AND EVERY TWO HOURS THEREAFTER TO REINFORCE THE SETBACK CONDITIONS. THE BMS SHALL MONITOR THE ROOM TEMPERATURE AT THE REMOTE CONTROLLER IN THE SPACE AND COMMAND THE UNIT ON IF THE OWNER SPECIFIED NIGHT SETBACK LIMITS ARE EXCEED. THE BMS SHALL SEND THE COOL MODE COMMAND WHEN THE TEMPERATURE UPPER LIMIT IS EXCEEDED OR THE HEAT MODE COMMAND WHEN THE TEMPERATURE LOWER LIMIT IS EXCEEDED. THE BMS SHALL SEND THE TEMPERATURE UPPER OR LOWER LIMIT AS THE SPACE TEMPERATURE SET-POINT DURING UNOCCUPIED TIME. THE BMS SHALL MONITOR BUILDING HUMIDITY SEND THE DRY MODE COMMAND WHEN THE HUMIDITY UPPER LIMIT IS EXCEEDED.

ASSOCIATED UNITS SHALL SHUT DOWN UPON CONDENSATE HIGH LIMIT SWITCH ACTIVATION.

CONTRACTOR TO COORDINATE WITH OWNER'S IT CONTRACTOR TO ACCESS EMAIL SERVER TO FACILITATE AUTOMATICALLY GENERATED EMAIL ALARM NOTIFICATIONS.

OCCUPANCY SCHEDULE AND TEMPERATURE SETPOINTS

OCCUPIED TIMES MONDAY THRU FRIDAY 8:00AM THRU 5:00PM (ADJ)

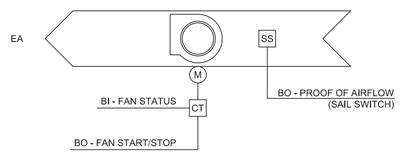
		OCCUPIED	UNOCCUPIED
COOLING SETPOINT	(ADJ)	75°F	85°F
HEATING SETPOINT	(ADJ)	70°F	55°F

HEAT PUMP INDOOR AIR HANDLER CASSETTES POINTS LIST

	SOFTWARE POINTS		FUNCTIONS			ALARMS		
INDOOR UNIT CONTROL POINT DESCRIPTION	NETWORK VARIABLE INPUT	NETWORK VARIABLE OUTPUT	SCHEDULE	TREND	DISPLAY	HIGH LIMIT	LOW LIMIT	ABNORMALITY
ON/OFF	x		x	x				
SET MODE	x		x	x				
SET TEMPERATURE	x		x	x	x			
PROHIBIT ON/OFF AT REMOTE CONTROLLER	x		x	x	x			
PROHIBIT MODE AT REMOTE CONTROLLER	x		x	x	x			
ON/OFF STATUS		x		x	x			
MODE STATE		x		x	x			
ROOM TEMPERATURE		x		x	x	x	x	
ROOM HUMIDITY		x		x	x	x		
FAN SPEED STATE		x			x			
ADDRESS OF UNIT IN ERROR		x		x	x			
ALARM SIGNAL		x		x	x			x
ERROR CODE		x		x	x			x
CONDENSATE HIGH LIMIT		x		x	x	x		

1 AIR HANDLER CASSETTES CONTROL

NOT TO SCALE



POWER VENTILATOR POINTS LIST

	HARDWARE POINTS				SOFTWARE POINTS						
POINT NAME	AI	AO	BI	BO	AV	BV	LOOP	SCHED	TREND	ALARM	SHOW ON GRAPHIC
FAN STATUS			X						X		X
FAN START/STOP				X					X		X
PROOF OF AIRFLOW (SAIL SWITCH)				X						X	X
FAN FAILURE										X	
FAN IN HAND										X	

POWER VENTILATOR SEQUENCE OF OPERATION

POWER VENTILATOR - CONTINUOUS OPERATION

FAN SHALL RUN CONTINUOUSLY.

FAN STATUS:
THE CONTROLLER SHALL MONITOR THE FAN STATUS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- PROOF OF AIRFLOW: COMMANDED ON, BUT AIRFLOW NOT DETECTED.

2 POWER VENTILATOR CONTROLS (EF5 AND EF6)

NOT TO SCALE

GENERAL NOTE

CONTROLS CONTRACTOR MUST INTEGRATE NEW HVAC EQUIPMENT INTO EXISTING DDC SYSTEM. PROVIDE ALL DEVICES AS NEEDED TO PROVIDE A FULLY FUNCTIONAL SYSTEM.

DOAS SEQUENCE OF OPERATIONS

DESCRIPTION: DEDICATED OUTSIDE AIR SYSTEM UNIT SUPPLYING 100% OUTDOOR AIR DIRECTLY TO SPACE, WITH DX COOLING, HOT GAS REHEAT, DX HEATING, ENTHALPY WHEEL AND FIXED PLATE ENERGY RECOVERY HEAT EXCHANGER. DOAS OEM CONTROLLER SHALL COMMUNICATE BACNET POINTS TO BAS FOR MONITORING, ADJUSTMENT AND/OR ALARMS.

UNIT START/STOP CONTROL: START/STOP SHALL BE SCHEDULED ON BY THE BAS SYSTEM AT THE OCCUPIED TIMES DEFINED BY THE OWNER. THE SYSTEM IS ON WHEN ALL ENABLE POINTS ARE SET TO THE ON POSITION.

SET POINTS SHALL BE AS FOLLOWS UNLESS MODIFIED BY USER:

SUPPLY AIR TEMPERATURE:	73°F (ADJ)
OUTDOOR AIR DEHUMIDIFICATION DEW POINT TEMPERATURE:	55°F (ADJ)
OUTDOOR AIR REHEAT TEMPERATURE:	68°F (ADJ)

DAMPER OPERATION: DURING SYSTEM STARTUP, THE OPTIONAL OUTDOOR DAMPER CONTROL SHALL ENERGIZE WITH A 120 SECOND (ADJ.) TIME DELAY STANDARD. AS AN OPTION PROOF BY DAMPER END SWITCH SHALL PROVE DAMPER IS OPEN. ONCE THE DAMPER DELAY HAS ELAPSED OR OPTIONAL END SWITCH IS CLOSED, THE SUPPLY FAN IS ENERGIZED TO PROVIDE AIR FLOW.

SUPPLY AND EXHAUST FAN OPERATION, AIRFLOW SET POINT: THE DESIRED CFM AT EACH FAN WHEEL CAN BE ADJUSTED INDIVIDUALLY UNDER THE SET POINTS MENU. THE ECM FANS WILL ADJUST BASED ON FACTORY INSTALLED PRESSURE SENSORS TO MAINTAIN THE AIRFLOW SET POINT.

DEHUMIDIFICATION MODE: DEHUMIDIFICATION IS BASED ON THE ENTERING OUTDOOR AIR DEW POINT AND SUPPLY AIR DEW POINT SET POINT. IF THE OUTDOOR AIR DEW POINT IS GREATER THAN THE SUPPLY AIR DEW POINT SET POINT, DEHUMIDIFICATION MODE IS ACTIVE. DURING DEHUMIDIFICATION MODE, THE VARIABLE SPEED COMPRESSOR WILL RAMP BASED ON TOTAL DEHUMIDIFICATION DEMAND. TOTAL DEHUMIDIFICATION DEMAND IS CALCULATED BASED ON THE DEW POINT AT THE OUTLET OF THE EVAPORATOR COIL AND THE SUPPLY AIR DEW POINT 55°F (ADJ.). DEHUMIDIFICATION TAKES PRIORITY OVER COOLING AND HEATING MODES.

REHEAT MODE: DURING DEHUMIDIFICATION MODE, IF THE SUPPLY AIR TEMPERATURE FALLS BELOW THE REHEAT SET POINT, THE HOT GAS REHEAT VALVE WILL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE BASED ON THE REHEAT SET POINT.

COOLING MODE: COOLING MODE IS ACTIVE WHEN THERE IS NO DEHUMIDIFICATION DEMAND, AND THE SUPPLY AIR TEMPERATURE IS GREATER THAN THE SUPPLY COOLING SET POINT. THE VARIABLE SPEED COMPRESSOR WILL RAMP BASED ON COOLING DEMAND. COOLING DEMAND IS CALCULATED BASED ON THE SUPPLY AIR TEMPERATURE AND THE SUPPLY COOLING SET POINT.

HEAT PUMP MODE: HEAT PUMP MODE IS ACTIVE WHEN THERE IS NO DEHUMIDIFICATION DEMAND, AND THE SUPPLY AIR TEMPERATURE FALLS BELOW THE SUPPLY HEATING SET POINT. DURING HEAT PUMP MODE, THE COMPRESSOR WILL MODULATE TO MAINTAIN THE ADJUSTABLE SUPPLY HEATING SET POINT.

ENERGY RECOVERY WHEEL: THE ENERGY RECOVERY WHEEL WILL BE ENERGIZED ANYTIME THE COMPRESSOR IS ON.

SAFETIES: COMPRESSOR HIGH DISCHARGE PRESSURE, COMPRESSOR LOW SUCTION PRESSURE, CONDENSATE OVERFLOW, DIRTY FILTER DETECTION, LOSS OF AIRFLOW, FIRE/SMOKE DETECTION.

NOTIFICATIONS: CONTRACTOR TO COORDINATE WITH OWNER'S IT CONTRACTOR TO ACCESS EMAIL SERVER TO FACILITATE AUTOMATICALLY GENERATED EMAIL ALARM NOTIFICATIONS.

DEDICATED OUTSIDE AIR SYSTEM POINTS LIST

	SOFTWARE POINTS		FUNCTIONS			ALARMS		
INDOOR UNIT CONTROL POINT DESCRIPTION	NETWORK VARIABLE INPUT	NETWORK VARIABLE OUTPUT	SCHEDULE	TREND	DISPLAY	HIGH LIMIT	LOW LIMIT	ABNORMALITY
ON/OFF	x		x	x	x			
OUTSDIE AIR DAMPER		x		x	x			
OUTSDIE AIR DAMPER STATUS		x		x	x			x
SUPPLY AIR TEMPERATURE	x			x	x	x	x	
SUPPLY AIR DEWPOINT	x			x	x	x		
OUTSIDE AIR TEMPERATURE	x			x	x			
OUTSIDE AIR DEWPOINT	x			x	x			
ON/OFF STATUS		x		x	x			
SUPPLY FAN STATUS		x			x			x
COOLING DEMAND		x		x	x			
HOT GAS REHEAT DEMAND		x		x	x			
HEAT PUMP HEATING DEMAND		x		x	x			

3 DEDICATED OUTDOOR AIR SYSTEM CONTROLS

NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 JOHN O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

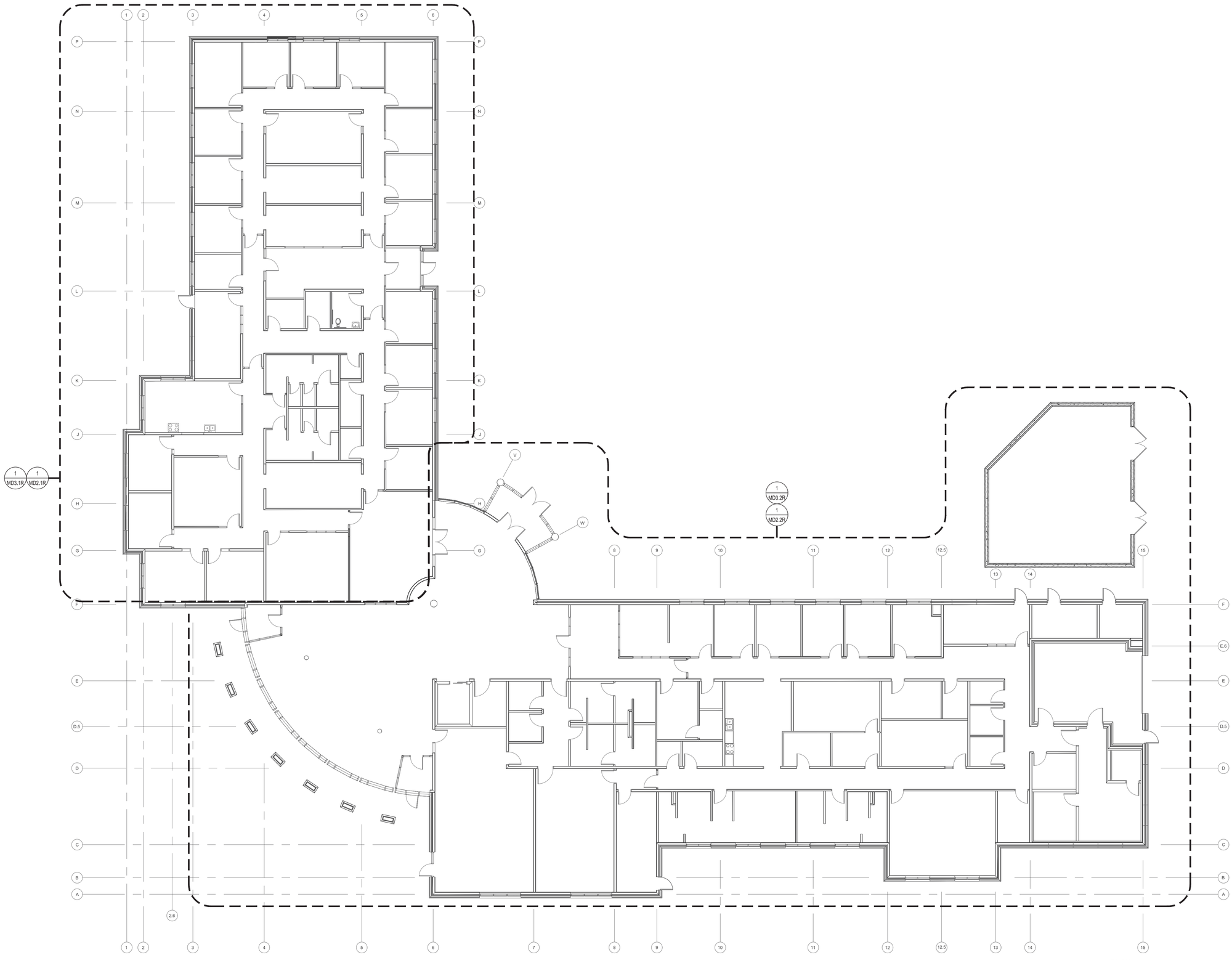
Issue Date: February 23, 2024

Mechanical Controls

Rev.	Date	Notes

M8.1

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SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **FIRST FLOOR PLAN**
3/32" = 1'-0"
0 5' 10' 20'

PLAN NORTH

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02/21/2024

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102 Town Hall Drive
Leland, NC 28451

Construction Drawings

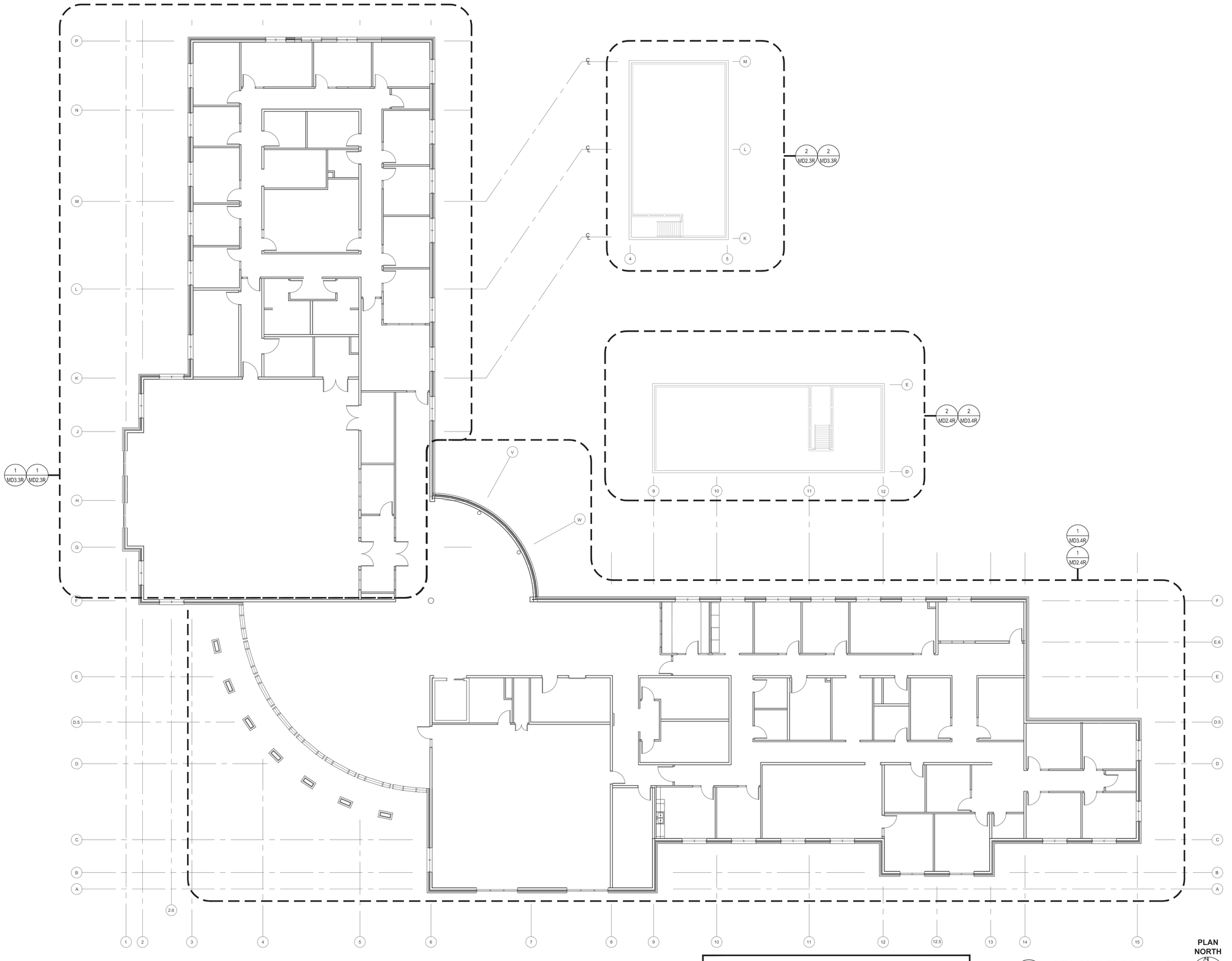
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Mechanical Demolition First Floor Plan

Rev.	Date	Notes

MD1.1R

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1 **SECOND FLOOR PLAN**

3/32" = 1'-0"

0 5' 10' 20'

PLAN NORTH

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02/21/2024

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102 Town Hall Drive
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Construction Drawings

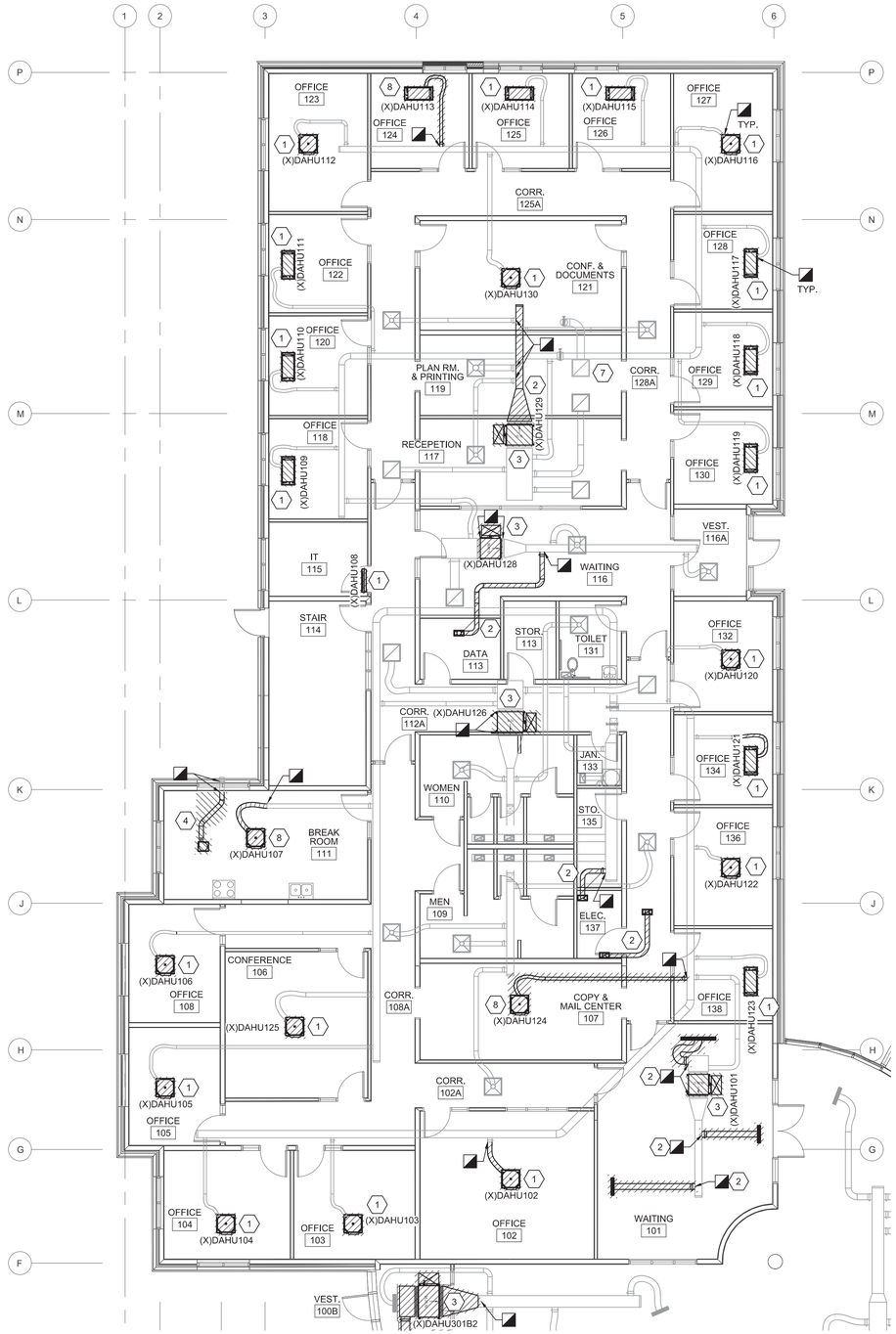
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Mechanical Demolition Second Floor Plan

Rev.	Date	Notes

MD1.2R

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KEYED NOTES - DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING DUCTLESS DAHU. PROTECT EXISTING FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
2. REMOVE AND DISPOSE OF EXISTING DUCTWORK TO EXTENT SHOWN ON PLANS. PATCH DUCT AND INSULATION AS NECESSARY.
3. REMOVE AND DISPOSE OF EXISTING DUCTED AHU. PROTECT EXISTING SA, RA, AND FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
4. REMOVE AND DISPOSE OF EXISTING EXTERIOR WALL CAP, EXHAUST FAN, DUCTWORK, HANGERS AND SUPPORTS UP TO THE EXTERIOR WALL. CAP REMAINING DUCT ON EITHER SIDE OF EXTERIOR WALL. SEE ARCHITECTURAL WALL OPENING DETAIL FOR MORE INFORMATION.
5. NOT USED.
6. NOT USED.
7. EXISTING TO REMAIN - RA GRILLE FOR EXISTING DEHUMIDIFIER.
8. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, HANGERS, SUPPORTS, ETC.
9. REMOVE AND DISPOSE OF EXISTING DUCTED AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, DUCTWORK, HANGERS, SUPPORTS, ETC.

NOTE: ALL NOTES MAY NOT BE USED ON THIS SHEET.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Demo. HVAC First Floor Enlarged Plans

Rev.	Date	Notes

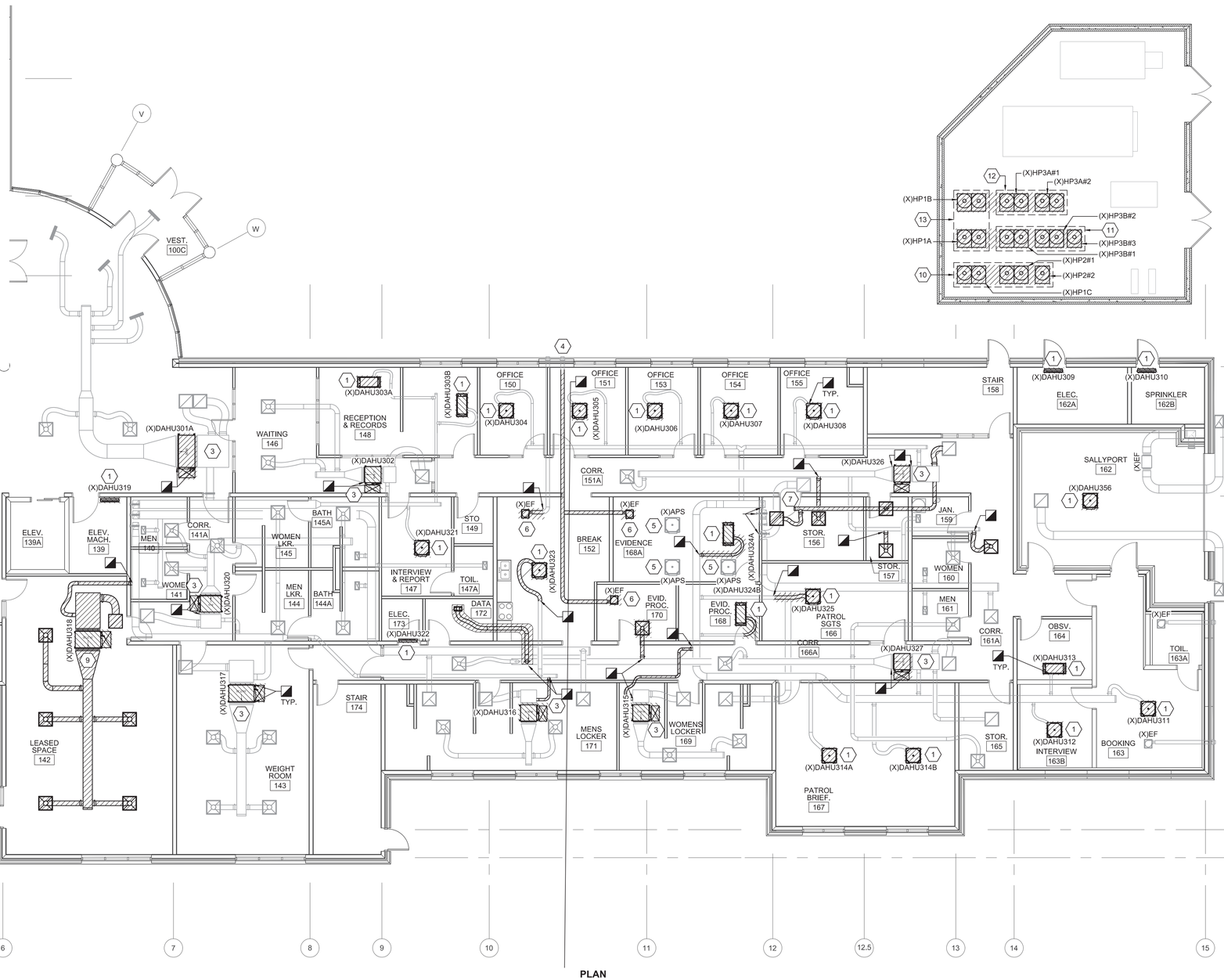
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KEYED NOTES - DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING DUCTLESS DAHU. PROTECT EXISTING FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
2. REMOVE AND DISPOSE OF EXISTING DUCTWORK TO EXTENT SHOWN ON PLANS. PATCH DUCT AND INSULATION AS NECESSARY.
3. REMOVE AND DISPOSE OF EXISTING DUCTED AHU. PROTECT EXISTING SA, RA, AND FA DUCTWORK TO THE EXTENT SHOWN ON PLANS, PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
4. REMOVE AND DISPOSE OF EXISTING EXTERIOR WALL CAP, EXHAUST FAN, DUCTWORK, HANGERS AND SUPPORTS UP TO THE EXTERIOR WALL. CAP REMAINING DUCT ON EITHER SIDE OF EXTERIOR WALL. SEE ARCHITECTURAL WALL OPENING DETAIL FOR MORE INFORMATION.
5. RELOCATE EXISTING AIR PURIFICATION SYSTEM (APS) IN NEW CEILING GRID.
6. REMOVE AND DISPOSE OF EXISTING EF AND ASSOCIATED DUCTWORK TO THE EXTENT INDICATED ON PLANS.
7. EXISTING TO REMAIN - RA GRILLE FOR EXISTING DEHUMIDIFIER.
8. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, HANGERS, SUPPORTS, ETC.
9. REMOVE AND DISPOSE OF EXISTING DUCTED AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, DUCTWORK, HANGERS, SUPPORTS, ETC.
10. PHASE 1 WORK (HP1C, HP2#1, HP2#2): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
11. PHASE 2 WORK (HP3B#1, HP3B#2, HP3B#3): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
12. PHASE 3 WORK (HP3A#1, HP3A#2): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
13. PHASE 4 WORK (HP1A, HP1B): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.

NOTE: ALL NOTES MAY NOT BE USED ON THIS SHEET.



1 ENLARGED FLOOR PLAN
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

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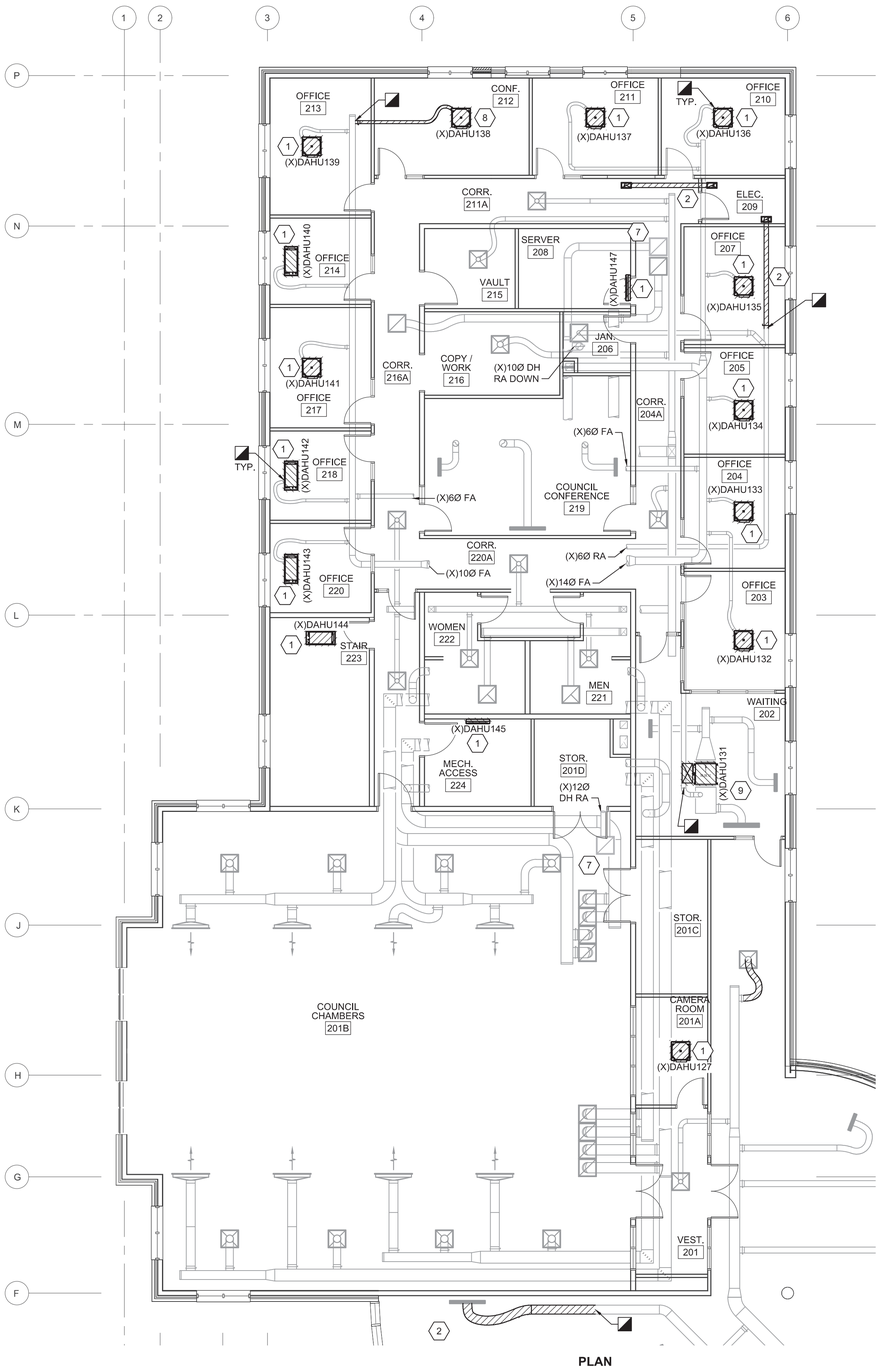
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Mechanical Demo. HVAC First Floor Enlarged Plans

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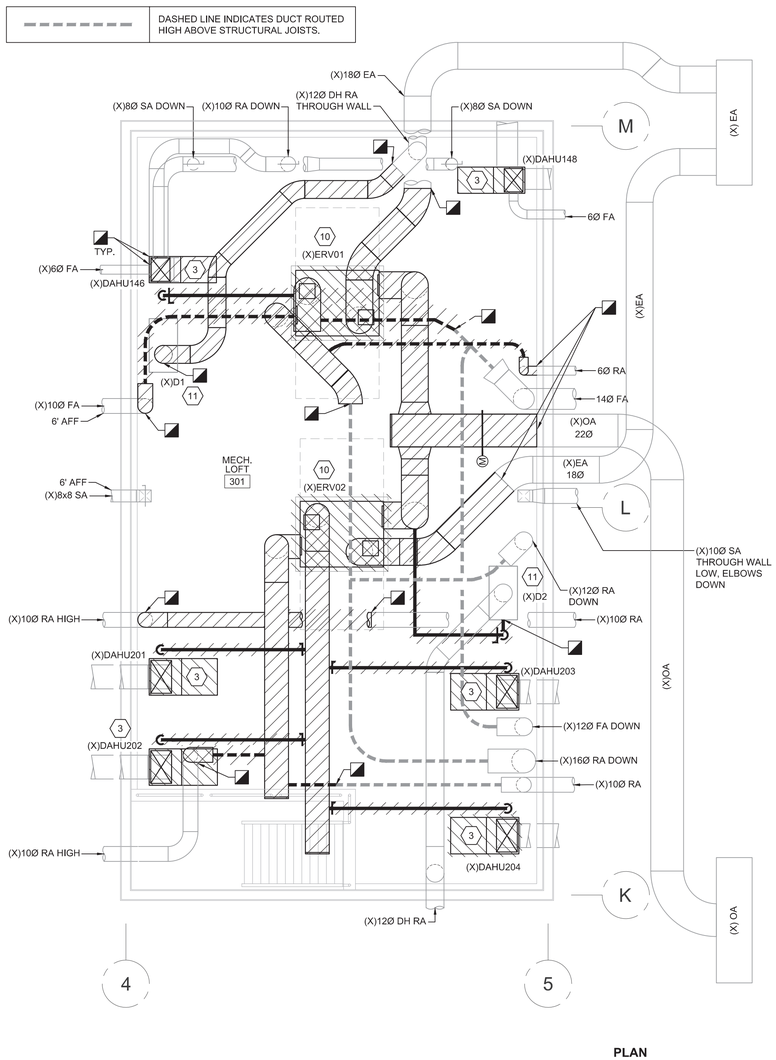


1 **ENLARGED FLOOR PLAN**

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH



2 **ENLARGED FLOOR PLAN - 301 MECH. LOFT**

1/4" = 1'-0"

0 2' 4' 8'

PLAN NORTH

KEYED NOTES - DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING DUCTLESS DAHU. PROTECT EXISTING FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
2. REMOVE AND DISPOSE OF EXISTING DUCTWORK TO EXTENT SHOWN ON PLANS. PATCH DUCT AND INSULATION AS NECESSARY.
3. REMOVE AND DISPOSE OF EXISTING DUCTED AHU. PROTECT EXISTING SA, RA, AND FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
4. NOT USED.
5. NOT USED.
6. NOT USED.
7. EXISTING TO REMAIN - RA GRILLE FOR EXISTING DEHUMIDIFIER.
8. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, HANGERS, SUPPORTS, ETC.
9. REMOVE AND DISPOSE OF EXISTING DUCTED AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, DUCTWORK, HANGERS, SUPPORTS, ETC.
10. DEMOLISH EXISTING ERV AND ALL ASSOCIATED FA, RA, EA AND OA DUCTWORK TO EXTENT SHOWN.
11. THE EXISTING DEHUMIDIFIER'S WILL REMAIN IN PLACE AND OPERATE INDEPENDENTLY TO HELP DEHUMIDIFY THE BUILDING BY PULLING AIR FROM THE BUILDING RUNNING IT THROUGH THE DEHUMIDIFIER AND DUMPING BACK OUT INTO THE BUILDING. DEMOLISH EXISTING DUCTWORK TO THE EXTENT SHOWN ON PLANS.

NOTE: ALL NOTES MAY NOT BE USED ON THIS SHEET.

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102 Town Hall Drive
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Issue Date: February 23, 2024

Mechanical Demo. HVAC Second Floor & Loft Enlarged Plans

Rev.	Date	Notes

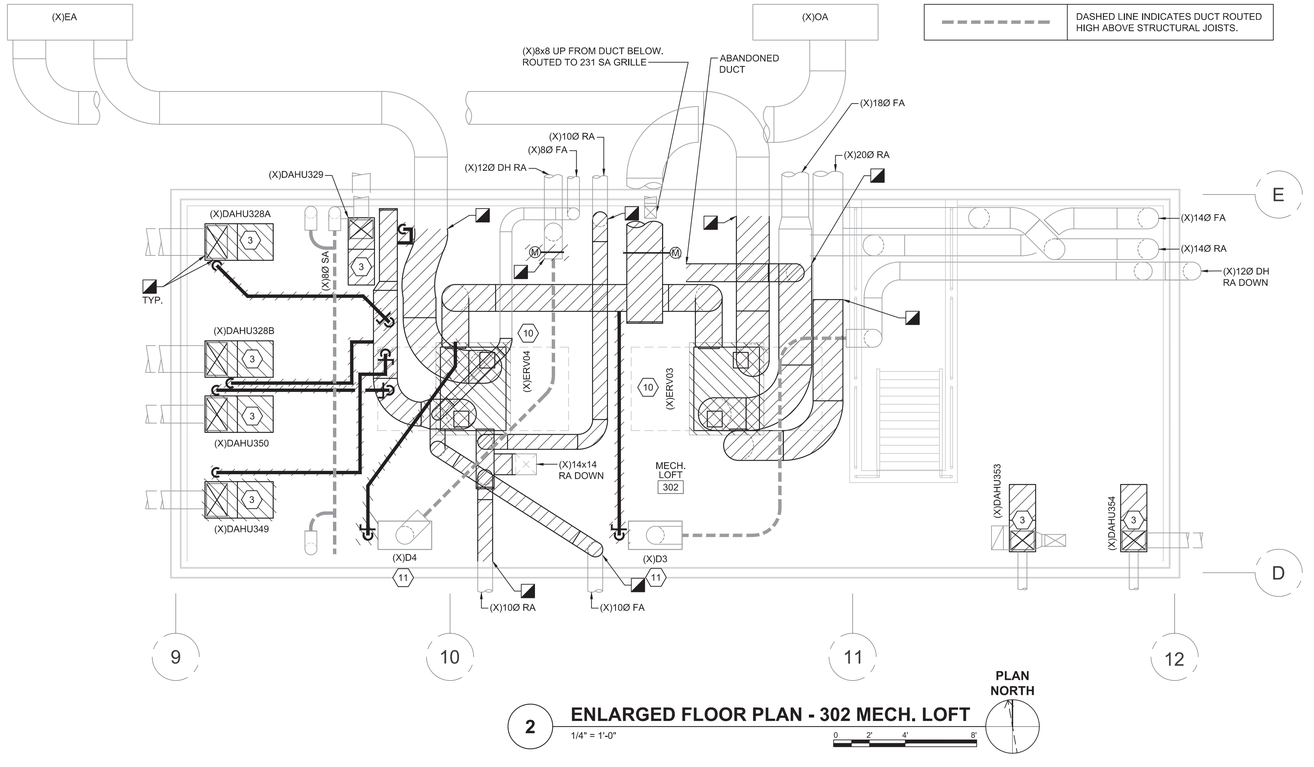
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KEYED NOTES - DEMOLITION

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3. REMOVE AND DISPOSE OF EXISTING DUCTED AHU. PROTECT EXISTING SA, RA, AND FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
4. PREPARE EXISTING SA DIFFUSER TO BE RELOCATED IN NEW CEILING GRID.
5. PREPARE EXISTING RA GRILLE TO BE RELOCATED IN NEW CEILING GRID.
6. NOT USED.
7. EXISTING TO REMAIN - RA GRILLE FOR EXISTING DEHUMIDIFIER.
8. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, HANGERS, SUPPORTS, ETC.
9. REMOVE AND DISPOSE OF EXISTING DUCTED AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, DUCTWORK, HANGERS, SUPPORTS, ETC.
10. DEMOLISH EXISTING ERV AND ALL ASSOCIATED FA, RA, EA AND OA DUCTWORK TO EXTENT SHOWN.
11. THE EXISTING DEHUMIDIFIER'S WILL REMAIN IN PLACE AND OPERATE INDEPENDENTLY TO HELP DEHUMIDIFY THE BUILDING BY PULLING AIR FROM THE BUILDING RUNNING IT THROUGH THE DEHUMIDIFIER AND DUMPING BACK OUT INTO THE BUILDING. DEMOLISH EXISTING DUCTWORK TO THE EXTENT SHOWN ON PLANS.

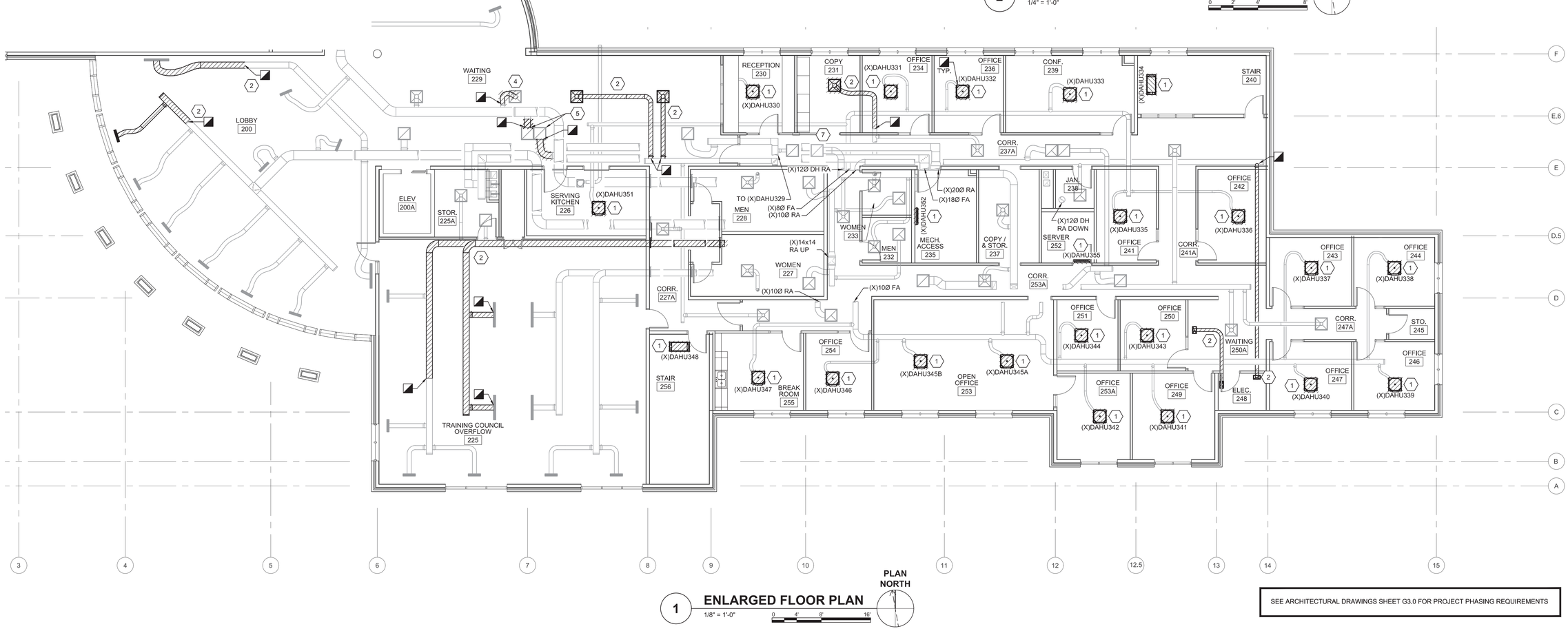
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2 ENLARGED FLOOR PLAN - 302 MECH. LOFT

1/4" = 1'-0"

PLAN NORTH



1 ENLARGED FLOOR PLAN

1/8" = 1'-0"

PLAN NORTH

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02/21/2024

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Construction Drawings

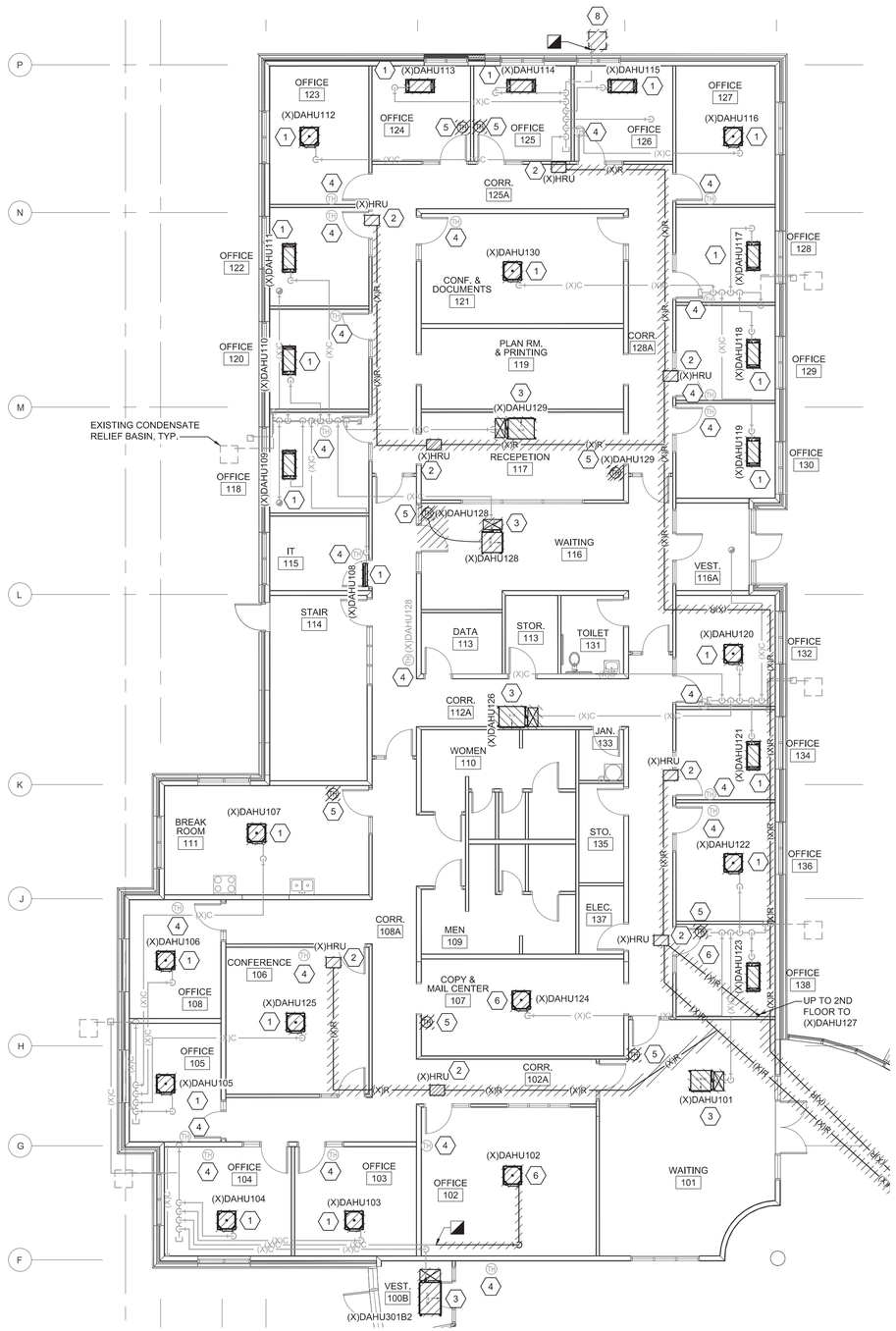
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Mechanical Demo. HVAC Second Floor & Loft Enlarged Plans

Rev.	Date	Notes

MD2.4R

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1 **ENLARGED FLOOR PLAN**

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

KEYED NOTES - DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU INCLUDING REFRIGERANT PIPING (NOT SHOWN) FROM AHU TO HRU. M.C. TO LEAVE REFRIGERANT PIPING HANGERS WHERE APPLICABLE TO RE-USE FOR NEW PIPING. PROTECT EXISTING CONDENSATE PIPING, HANGERS, SUPPORTS AND THERMOSTAT FOR CONNECTION TO NEW AHU.
2. REMOVE AND DISPOSE OF EXISTING HRU, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, CONTROLS, ETC. M.C. TO LEAVE REFRIGERANT PIPING HANGERS WHERE APPLICABLE TO RE-USE FOR NEW REFRIGERANT PIPING.
3. REMOVE AND DISPOSE OF EXISTING DUCTED AHU INCLUDING REFRIGERANT PIPING (NOT SHOWN) FROM AHU TO HRU, M.C. TO LEAVE REFRIGERANT PIPING HANGERS WHERE APPLICABLE TO RE-USE FOR NEW PIPING.PROTECT EXISTING CONDENSATE PIPING, HANGERS, SUPPORTS AND THERMOSTAT FOR CONNECTION TO NEW AHU.
4. EXISTING THERMOSTAT TO REMAIN IN PLACE TO USE WITH NEW AHU.
5. REMOVE AND DISPOSE OF EXISTING THERMOSTAT. CUT AND PATCH WALL AS REQUIRED. SOME THERMOSTATS CAN BE RELOCATED. REFER TO NEW WORK PLANS FOR THOSE LOCATIONS.
6. REMOVE AND DISPOSE OF EXISTING AHU IN IT'S ENTIRETY INCLUDING BUT NOT LIMITED TO, REFRIGERANT PIPING, THERMOSTAT, CONTROLS, HANGERS, SUPPORTS, ETC.
7. REMOVE AND DISPOSE OF EXISTING HRU IN IT'S ENTIRETY INCLUDING BUT NOT LIMITED TO, REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
8. RELOCATE EXISTING CONDENSATE BASIN TO LOCATION INDICATED ON NEW WORK PLANS. EXTEND EXISTING CONDENSATE PIPING TO NEW LOCATION. REPLACE BASIN IF CONDITION IS UNSATISFACTORY.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

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102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Demo. Piping First Floor Enlarged Plans

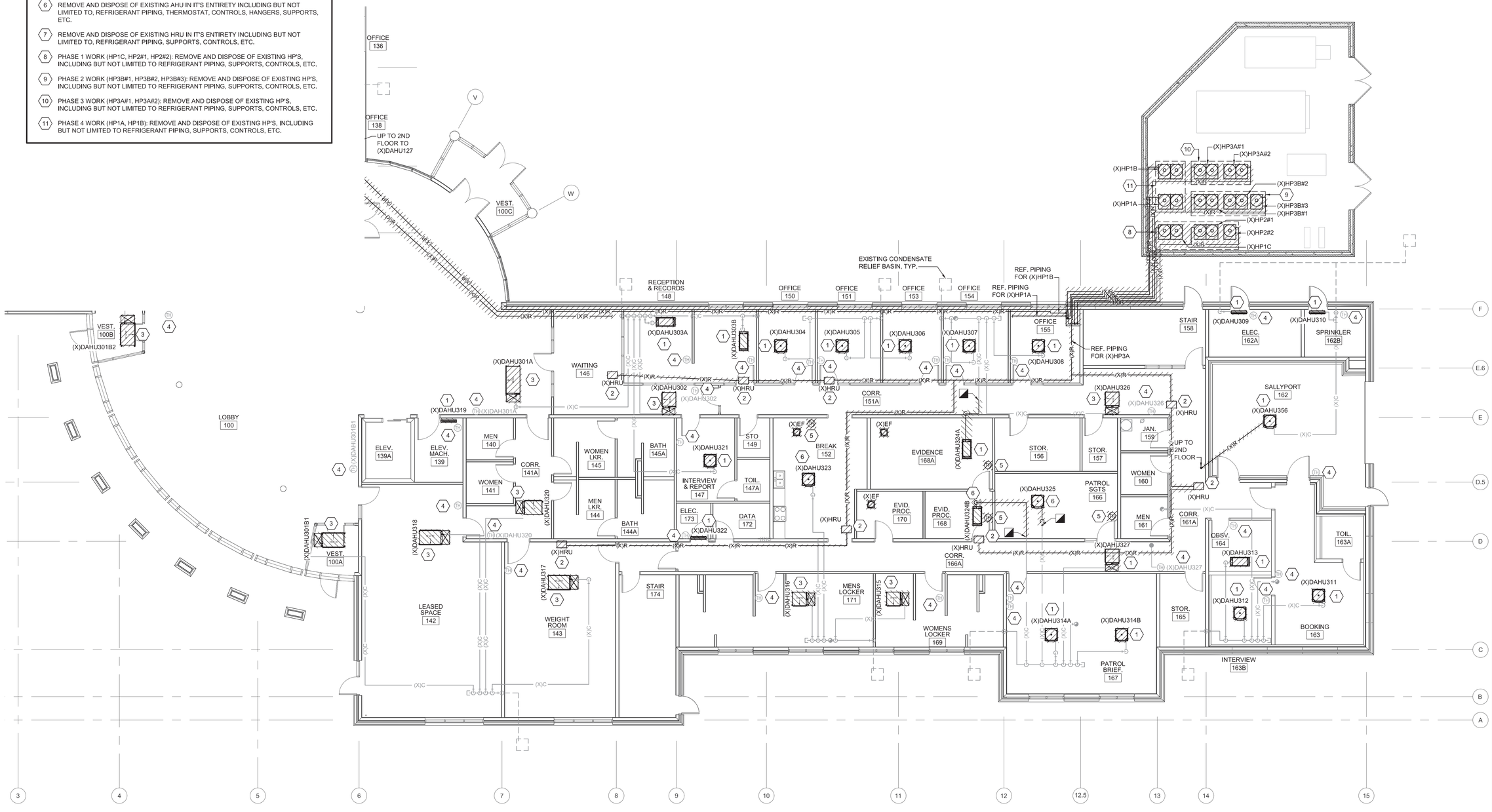
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MD3.1R

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KEYED NOTES - DEMOLITION

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7. REMOVE AND DISPOSE OF EXISTING HRU IN IT'S ENTIRETY INCLUDING BUT NOT LIMITED TO, REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
8. PHASE 1 WORK (HP1C, HP2#1, HP2#2): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
9. PHASE 2 WORK (HP3B#1, HP3B#2, HP3B#3): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
10. PHASE 3 WORK (HP3A#1, HP3A#2): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
11. PHASE 4 WORK (HP1A, HP1B): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.



1 **ENLARGED FLOOR PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA REGISTERED PROFESSIONAL SEAL 043801 ENGINEER ROBERT O. GRADY 02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

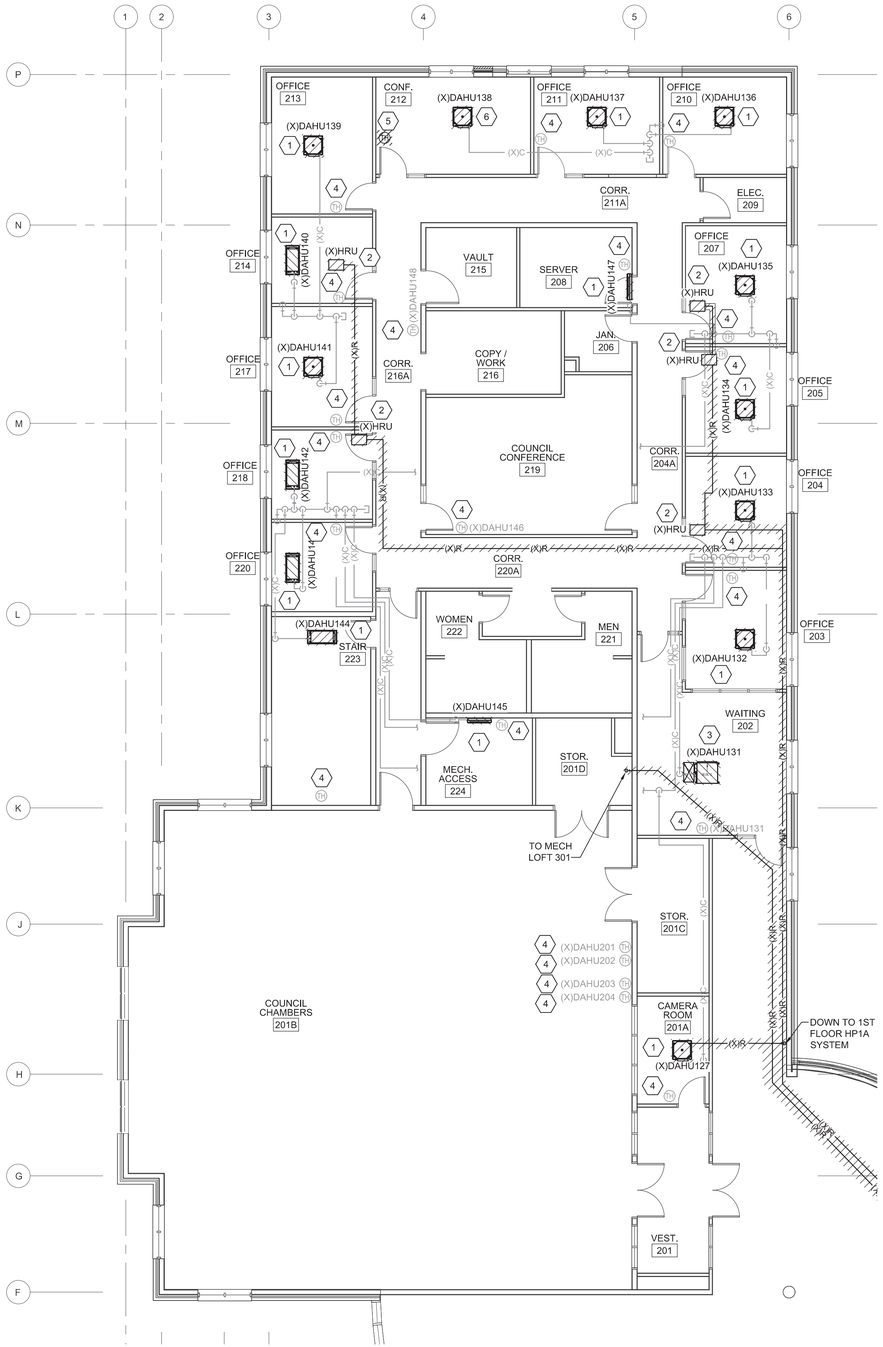
Issue Date: February 23, 2024

Mechanical Demo. Piping First Floor Enlarged Plans

Rev.	Date	Notes

MD3.2R

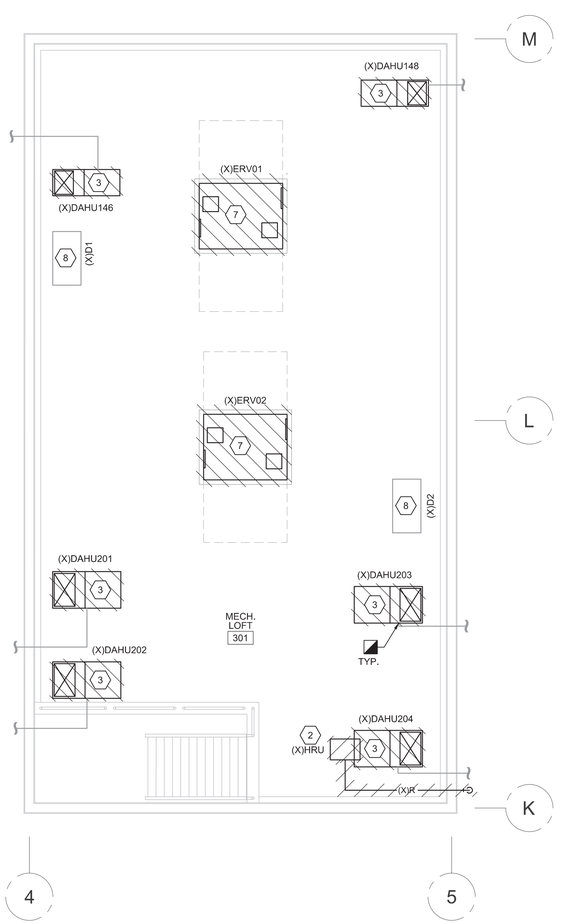
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1 **ENLARGED FLOOR PLAN**

1/8" = 1'-0"

PLAN NORTH



2 **ENLARGED FLOOR PLAN - 301 MECH. LOFT**

1/4" = 1'-0"

PLAN NORTH

KEYED NOTES - DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU INCLUDING REFRIGERANT PIPING (NOT SHOWN) FROM AHU TO HRU. M.C. TO LEAVE REFRIGERANT PIPING HANGERS WHERE APPLICABLE TO RE-USE FOR NEW PIPING. PROTECT EXISTING CONDENSATE PIPING, HANGERS, SUPPORTS AND THERMOSTAT FOR CONNECTION TO NEW AHU.
2. REMOVE AND DISPOSE OF EXISTING HRU, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, CONTROLS, ETC. M.C. TO LEAVE REFRIGERANT PIPING HANGERS WHERE APPLICABLE TO RE-USE FOR NEW REFRIGERANT PIPING.
3. REMOVE AND DISPOSE OF EXISTING DUCTED AHU INCLUDING REFRIGERANT PIPING (NOT SHOWN) FROM AHU TO HRU, M.C. TO LEAVE REFRIGERANT PIPING HANGERS WHERE APPLICABLE TO RE-USE FOR NEW PIPING.PROTECT EXISTING CONDENSATE PIPING, HANGERS, SUPPORTS AND THERMOSTAT FOR CONNECTION TO NEW AHU.
4. EXISTING THERMOSTAT TO REMAIN IN PLACE TO USE WITH NEW AHU.
5. REMOVE AND DISPOSE OF EXISTING THERMOSTAT, CUT AND PATCH WALL AS REQUIRED. SOME THERMOSTATS CAN BE RELOCATED. REFER TO NEW WORK PLANS FOR THOSE LOCATIONS.
6. REMOVE AND DISPOSE OF EXISTING AHU IN IT'S ENTIRETY INCLUDING BUT NOT LIMITED TO, REFRIGERANT PIPING, THERMOSTAT, CONTROLS, HANGERS, SUPPORTS, ETC.
7. REMOVE AND DISPOSE OF EXISTING ERV INCLUDING BUT NOT LIMITED TO, THERMOSTAT, CONTROLS, SUPPORTS, ETC. PREPARE AREA FOR INSTALLATION OF NEW DOAS.
8. EXISTING DEHUMIDIFIER TO REMAIN. DEMOLISH DUCTWORK TO EXTENT INDICATED ON PLANS.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

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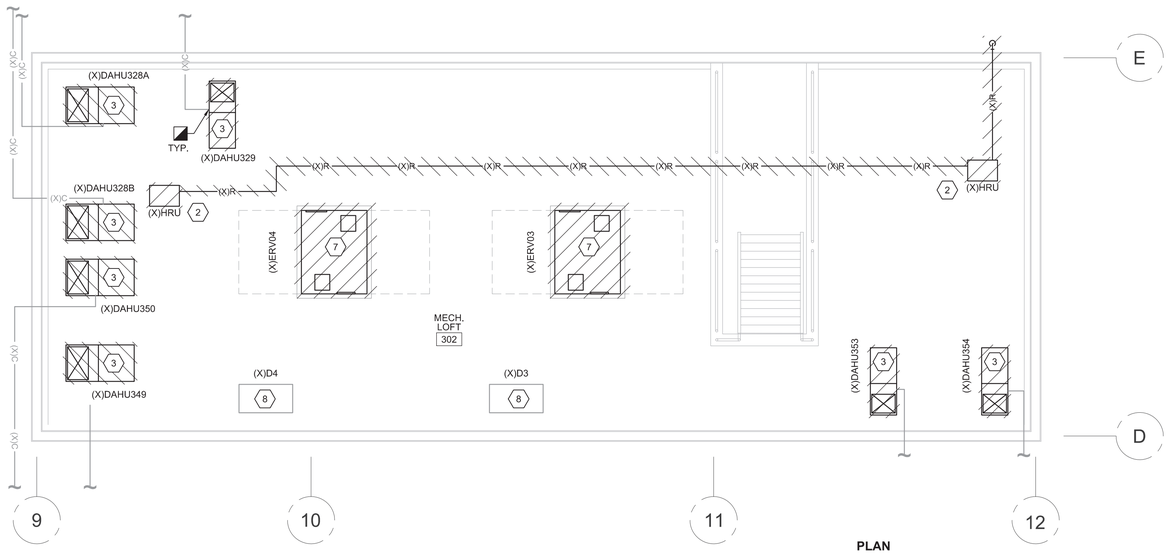
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MD3.3R

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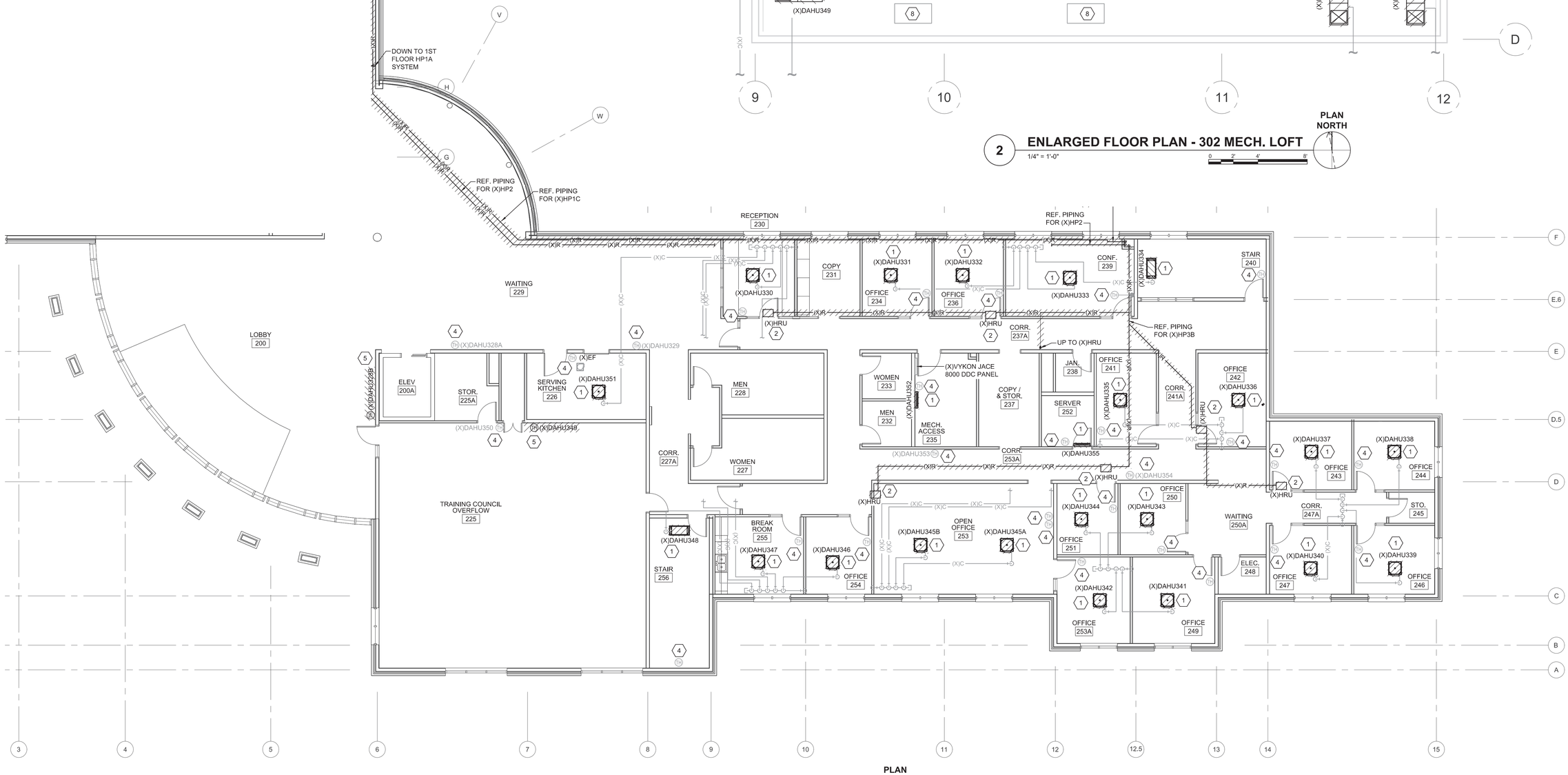
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