HORRY GEORGETOWN TECHNICAL COLLEGE

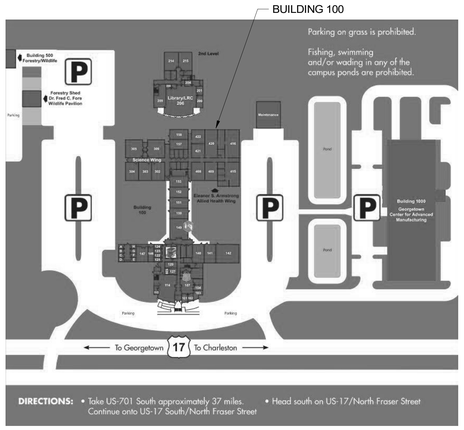
UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100

STATE PROJECT NUMBER: H59-6212-ML

4003 SOUTH FRASER ST.
GEORGETOWN, SC 29440

DWG
CONSULTING ENGINEERS
EMPLOYEE OWNED

LOCATION MAP



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SCOPE OF WORK

THE SCOPE OF WORK FOR THIS PROJECT INCLUDES THE DEMOLITION AND SUBSEQUENT REPLACEMENT OF ALL HVAC EQUIPMENT, CONTROLS, AND ASSOCIATED ELECTRICAL INSTALLED WITHIN THE BUILDING.

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
DWG, INC. CONSULTING ENGINEERS No.C03649

DWG CONSULTING ENGINEERS EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
4003 SOUTH FRASER ST.
GEORGETOWN, SC 29440
TITLE SHEET

REV

JOB No. H59-6212-ML
DATE: 06/6/2022
DRAWN BY: SPW
CHECKED BY: WDB
SHEET NUMBER
T000

MECHANICAL SYSTEMS
SEISMIC AND WIND REQUIREMENTS

PER IBC-2018/ASCE 7-16

A. PER THE 2018 INTERNATIONAL BUILDING CODE, MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND COMPONENTS, INCLUDING THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED FOR SEISMIC FORCES IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7-16.

B. EXTERIOR EQUIPMENT (INCLUDING ROOF CURBS, RAILS, SUPPORTS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH CHAPTER 26 TO 29 OF ASCE 7-16.

C. WHERE DESIGN FOR SEISMIC AND WIND LOADS IS REQUIRED, THE MORE DEMANDING FORCE MUST BE USED.

D. REFERENCE THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY, WIND SPEEDS, ETC.

E. USE THE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH COMPONENT.

F. FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL REGISTERED IN THE STATE THE JOB IS LOCATED. SUBMITTALS MUST INCLUDE STAMPED AND SIGNED DRAWINGS AND CALCULATIONS.

G. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE APPROVED SEISMIC SUBMITTAL.

H. SEISMIC RESTRAINTS FOR DUCTWORK, PIPING, CONDUIT, CABLE TRAYS AND BUS DUCT MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

MECHANICAL COMPONENT IMPORTANCE FACTOR (Ip) DESIGNATION	
Ip = 1.0	Ip = 1.5
• **ALL HVAC COMPONENTS EXCEPT AS NOTED IN Ip=1.5**	

SEISMIC DESIGN CATEGORIES D,E,F

		COMPONENT IMPORTANCE FACTOR (Ip)			
		1.0		1.5	
COMPONENT IDENTIFICATION		SEISMIC RESTRAINT REQUIREMENT	NOTES	SEISMIC RESTRAINT REQUIREMENT	NOTES
ROOF MOUNTED		RESTRAIN ALL	1	RESTRAIN ALL	-
FLOOR MOUNTED		RESTRAIN ALL	1, 2	RESTRAIN ALL	-
WALL MOUNTED		RESTRAIN ALL	1, 2	RESTRAIN ALL	-
COMPONENT SUPPORTS		RESTRAIN ALL	1	RESTRAIN ALL	-
SUSPENDED EQUIPMENT	INLINE W/ DUCT	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN.	3	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN.	3
	NOT INLINE W/ DUCT/PIPE	RESTRAIN ALL	1	RESTRAIN ALL	-
SUSPENDED DUCTILE PIPING (STEEL, ALUMINUM, COPPER, ETC.)		>3"	4	>1"	4
SUSPENDED NON DUCTILE PIPING (CAST IRON, PLASTIC, CERAMIC)		RESTRAIN ALL	4	RESTRAIN ALL	4
SUSPENDED PIPE ON TRAPEZE		RESTRAIN IF ANY PIPE ON TRAPEZE > 3" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE >	4	RESTRAIN IF ANY PIPE ON TRAPEZE > 1" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10	4
DUCTWORK		6 SQ.FT. AND LARGER AND >17 LBS/FT	4,5	6 SQ.FT. AND LARGER AND > 17 LBS/FT	4,5
MULTIPLE DUCTS ON TRAPEZE		RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT	4,5	RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT	4,3
COMPONENT CERTIFICATION		NOT REQUIRED	-	REQUIRED	6

NOTES:

1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF THE COMPONENT IS POSITIVELY ATTACHED TO THE STRUCTURE AND FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED WITH THE CENTER OF MASS LOCATED AT 4 FT. OR LESS ABOVE A FLOOR, IS POSITIVELY ATTACHED TO THE STRUCTURE AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
3. FLEXIBLE CONNECTIONS REQUIRED FOR PIPE CONNECTIONS ONLY.
4. RESTRAINT IS NOT REQUIRED IF THE PIPING / DUCTWORK IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUN IS 12 IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12 IN. OR LESS. WHERE ROD HANGERS ARE USED, THEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
5. ALL DUCTWORK , REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXPLOSIVE GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.
6. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.

MECHANICAL ABBREVIATIONS

ABBR	DESCRIPTION
(E)	EXISTING
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AH	AIR HANDLER
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
BHP	BRAKE HORSE POWER
BMS	BUILDING MANAGMENT SYSTEM
BOD	BASIS OF DESIGN
BOP	BOTTOM OF PIPE
CFM	CUBIC FEET PER MINUTE
CU	CONDENSING UNIT
DB	DECIBELS
DDC	DIRECT DIGITAL CONTROLS
DIA	DIAMETER
DRN	DRAIN
EA	EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
ESP	EXTERNAL STATIC PRESSURE
FD	FLOOR DRAIN
FD	FIRE DAMPER
FPM	FEET PER MINUTE
FRPM	FAN ROTATIONS PER MINUTE
FT	FEET
GPM	GALLONS PER MINUTE
HD	HUB DRAIN
HP	HEAT PUMP
HP	HORSEPOWER
IN	INCHES
LAT	LEAVING AIR TEMPERATURE
MBH	THOUSANDS OF BTU'S PER HOUR
MC	MECHANICAL CONTRACTOR
MD	MANUAL DAMPER
NC	NOISE CRITERIA
NO	NORMALLY OPEN
OA	OUTSIDE AIR
PD	PRESSURE DROP
PS	PIPE SUPPORT
RA	RETURN AIR
REFR	REFRIGERANT
RH	RELATIVE HUMIDITY
RM	REMOTE MONITOR
RPM	ROTATIONS PER MINUTE
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SF	SUPPLY FAN
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VFD	VARIABLE FREQUENCY DRIVE
VNT	VENT
W/	WITH
°F	DEGREES FAHRENHEIT

HVAC SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
X / Y	AIR TERMINAL TAG, X=TYPE MARK, Y=CFM		COMPONENT TO BE DEMOLISHED
	AIR TERMINAL DIFFUSER (CEILING MOUNTED)	X"x Y"	DUCTWORK (X" = WIDTH, Y" = HEIGHT)
	AIR TERMINAL RETURN GRILLE (CEILING MOUNTED)		TURNING VANES
T	THERMOSTAT		CONDENSING UNIT
SD	DUCT MOUNTED SMOKE DETECTOR (BY E.C.)		ROOFTOP UNIT
	EQUIPMENT CLEARANCE		FLEXIBLE DUCT CONNECTION
	MANUAL DAMPER		CONNECTION TO EXISTING SYSTEM
		M	MOTORIZED DAMPER

MECHANICAL CODES AND STANDARDS (WITH ALL SOUTH CAROLINA MODIFICATIONS)

CODE	DESCRIPTION
IBC (2018)	INTERNATIONAL BUILDING CODE
IECC (2009)	INTERNATIONAL ENERGY CONSERVATION CODE
IMC (2018)	INTERNATIONAL MECHANICAL CODE
NFPA 90A (2018)	STANDARD FOR THE INSTALLATION AIR-CONDITIONING & VENTILATING SYSTEMS
SMACNA (2005)	HVAC DUCT CONSTRUCTION STANDARDS MANUAL, THIRD EDITION

DESIGN CONDITIONS

SUMMER	OUTDOOR:	95F DB / 80F WB
	INDOOR:	75F DB / 50% RH
WINTER	OUTDOOR:	25F DB
	INDOOR:	70F DB / 50% RH

ALL HVAC CONTROLS IN THE BUILDING SHALL BE REPLACED WITH NEW DDC CONTROLS PROVIDED BY CMI, CONNECTED TO EXISTING CAMPUSWIDE INFRASTRUCTURE.

GENERAL HVAC NOTES

1. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT AND LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL INSTALLATION W/ THE STRUCTURE AND OTHER TRADES AND SHALL PROVIDE ADDITIONAL OFFSETS AND FITTINGS AS NECESSARY.
2. THE HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS SHALL COMPLY WITH THE THE CODES LISTED ON THIS SHEET AS WELL AS ALL LOCAL CODE OFFICIAL REQUIREMENTS. IN THE EVENT OF A CONFLICT BETWEEN CODES, THE MOST STRINGENT SHALL ALWAYS GOVERN.
3. DUCT DIMENSIONS ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
4. THE CONTRACTOR SHALL CHECK AND VERIFY ALL CLEARANCES PRIOR TO FABRICATION OR INSTALLATION OF EQUIPMENT, DUCTWORK, AND PIPING SYSTEMS. WHERE CONDITIONS REQUIRE A CHANGE IN DUCT OR PIPE ROUTING, NOTIFY THE ARCHITECT FOR AN ACCEPTABLE ALTERNATIVE METHOD. AVOID ROUTING DUCTWORK DIRECTLY OVER LIGHT FIXTURES, DIFFUSERS, AND OTHER CEILING MTD. DEVICES. LOCATE ALL MECHANICAL EQUIPMENT SO THAT FILTERS AND COMPONENTS REQUIRING ACCESS (SERVICE AND MAINTENANCE) ARE FULLY ACCESSIBLE.
5. PROVIDE CURVED RADIUS ELBOW AT FIRST SUPPLY & RETURN FITTING FOR ALL HVAC UNITS. PROVIDE TURNING VANES IN ALL 90 DEGREE ELBOWS IN ALL RECTANGULAR SUPPLY/RETURN/EXHAUST DUCT SYSTEMS. ANY OFFSETS REQUIRED IN DUCT SYSTEMS SHALL BE INSTALLED PER SMACNA 2005 3RD EDITION MANUAL . SHARP ANGLED TRANSITIONS OR OFFSETS 'WILL NOT BE ALLOWED'. PROVIDE DUCT ACCESS DOORS AS REQUIRED.
6. INSTALL ALL DUCT MOUNTED DEVICES (DAMPERS, ACCESS DOORS, ETC.) AND PIPING SPECIALTIES IN EASILY ACCESSIBLE LOCATIONS. ADVISE THE ARCHITECT IN ADVANCE OF INSTALLATION IF ACCESS WILL BE HINDERED SO AN ALTERNATE LOCATION CAN BE SELECTED.
7. ALL DUCT TAKE-OFFS SHALL BE INSTALLED AS SHOWN BY DETAILS ON THE PLANS WITH A MANUAL BALANCING DAMPER AT EVERY TAKE-OFF. WHERE DUCT RUN-OUT SIZE IS NOT SHOWN PROVIDE DUCT SAME SIZE AS GRILLE NECK SIZE. PRE-INSULATED FLEXIBLE DUCT MAY BE USED FOR FINAL CONNECTION TO SUPPLY GRILLES (MAX. LENGTH 5').
8. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH PRESCRIBED CLEARANCES FOR SERVICE AND MAINTENANCE. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF RECOMMENDED CLEARANCES ARE NOT POSSIBLE BEFORE INSTALLING EQUIPMENT.
9. ALL ROTATING MECHANICAL EQUIPMENT SHALL BE PROVIDED WITH VIBRATION ISOLATION. PROVIDE FLEXIBLE NEOPRENE DUCT CONNECTORS BETWEEN DUCTWORK AND ISOLATED MECHANICAL EQUIPMENT.
10. THE CONTRACTOR SHALL FIRESTOP ALL PENETRATIONS OF FIRE RATED WALLS/FLOORS/CEILINGS BY DUCTWORK PIPING, ETC., WITH U.L. LISTED FIRE STOPPING MATERIAL TO MAINTAIN FIRE RATING OF THE BARRIER.
11. SEISMIC PROTECTION OF EQUIPMENT, DUCTWORK, PIPING AND UTILITIES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16 OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION. ALL SEISMIC RESTRAINT AND BRACING SHALL BE SUBSTANTIATED BY MANUFACTURER'S SUBMITTALS PER THE SPECIFICATIONS. FOR ADDITIONAL INFORMATION, SEE 'MECHANICAL SYSTEMS SEISMIC AND WIND REQUIREMENTS' ON THIS SHEET. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF SEISMIC BRACING DEVICES WITH THE OWNER'S SEISMIC SPECIAL INSPECTOR. PROVIDE A MINIMUM OF SEVEN DAYS ADVANCE NOTICE OF INSTALLATION.
12. BALANCE ALL AIR DISTRIBUTION DEVICES, EXHAUST FANS, AND OUTSIDE AIR QUANTITIES AS SCHEDULED OR SHOWN ON THE DRAWINGS. PROVIDE MARKERS AT ALL DAMPER LOCATIONS SHOWING FULL OPEN/CLOSED POSITIONS AND DAMPER SETTING FOR REQUIRED AIRFLOW. PROVIDE FINAL TEST AND BALANCE REPORT ALONG W/ SCHEMATIC DRAWINGS SHOWING DIFFUSER LOCATION W/ DESIGN AND ACTUAL CFM. THE DIFFUSER TAGS ON THE DRAWINGS SHALL CORRESPOND TO THE DIFFUSER TAGS ON THE REPORT. THIS REPORT SHALL BE SUBMITTED BEFORE THE FINAL INSPECTION IS PERFORMED. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
13. ALL CONTROL WIRING, CONDUIT AND CONTROLS ACCESSORIES NECESSARY TO IMPLEMENT THE OUTLINED SEQUENCES OF OPERATION SHALL BE PROVIDED BY THE CONTROLS CONTRACTOR.
14. WIND LOAD PROTECTION OF ROOF MOUNTED EQUIPMENT AND DUCTWORK SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16 OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION. ALL WIND LOAD RESTRAINT AND BRACING SHALL BE SUBSTANTIATED BY MANUFACTURER'S SUBMITTALS PER THE SPECIFICATIONS.
15. ALL EXPOSED PIPING AND DUCTWORK SHALL BE PAINTED. COORDINATE W/ ARCHITECTURAL PLANS/SPECIFICATIONS FOR EXPOSED LOCATIONS AND PAINTING REQUIREMENTS.
16. SEE ARCHITECTURAL DOCUMENTS FOR ROOF PENETRATION AND FLASHING REQUIREMENTS.
17. WHERE "APPROXIMATELY" IS USED TO DEFINE INSTALLATION LOCATIONS, CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES TO VERIFY THERE ARE NO CONFLICTS PRIOR TO INSTALLATION AT DIMENSION LISTED.

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — DWG, INC. CONSULTING ENGINEERS No.C03649

SOUTH CAROLINA — WILLIAM DEAN BILLARD — 7/19/2022

DWG CONSULTING ENGINEERS EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN
BUILDING 100
4003 SOUTH FRASER ST. GEORGETOWN, SC 29440
HVAC NOTES & LEGENDS

REV

JOB No. H59-6212-ML
DATE: 7/19/2022
DRAWN BY: SJR
CHECKED BY: WDB
SHEET NUMBER

M001

PLOT DATE: 7/19/2022

ENERGY RECOVERY VENTILATOR SCHEDULE

TAG	SUPPLY FAN			EXHAUST FAN			ENTHALPY WHEEL				DX COOLING COIL CAPACITY				HEATING COIL CAPACITY		ELECTRIC HEATER		MANUFACTURER	MODEL NUMBER
							SUMMER SUPPLY		WINTER SUPPLY											
	EXTERNAL STATIC PRESSURE	SUPPLY AIRFLOW (CFM)	MAX HP	EXTERNAL STATIC PRESSURE	EXHAUST AIRFLOW (CFM)	MAX HP	EAT (DB/WB °F)	LAT (DB/WB °F)	EAT (DB/WB °F)	LAT (DB/WB °F)	TOTAL CAPACITY (MBH)	EAT (DB/WB °F)	LAT (DB/WB °F)	EER	CAPACITY (MBH)	LAT (°F)	KW	LAT		
ERV-9	0.75 in-wg	3945	3	0.50 in-wg	3945	3	95/78	81/67	27/22	59/49	----	----	----	----	----	----	----	----	SEMCO	FVTS-5000
ERV-11	0.10 in-wg	900	0.75	0.50 in-wg	900	0.75	95/78	79/66	27/22	62/51	----	----	----	----	----	----	----	----	SEMCO	SP-2200
RTU-8	0.75 in-wg	2400	3	0.40 in-wg	2281	1	95/75	81/67	22/19	58/49	132.8	81/67	49/48	14	93.1	90	22.5	87	Aaon, Inc.	RN-013-8-0-E609-132

NOTES:

1. REFER TO ELECTRICAL FOR VOLTAGE INFORMATION.
2. PROVIDE UNITS WITH CURB ADAPTER.
3. CONDENSER COILS SHALL BE FACTORY COATED WITH ELECTROFIN PROTECTIVE E-COATING.
4. PROVIDE WITH BACNET CONNECTION TO CAMPUS CONTROLS.

SPLIT SYSTEM AIR CONDITIONER SCHEDULE

TAG		AIR CAPACITY CFM		ESP INCHES WG	COOLING CAPACITY @ 95°F OA						HEATING CAPACITY @ 25°F OA	ELECTRIC HEAT KW	MINIMUM EFF @ AHRI COND (EER/SEER)	BASIS OF DESIGN	INDOOR MODEL	OUTDOOR MODEL
					TOTAL MBH	SENS MBH	ENTERING AIR		LEAVING AIR							
INDOOR	OUTDOOR	TOTAL	OA				DB °F	WB °F	DB °F	WB °F						
AH-1	HP-1	2500	NOTE 4	0.40	80.7	62.6	80.0 °F	67.0 °F	57.30 °F	56.7 °F	53.8	11.3	13.0 /	TRANE	TWE090	TWA072
AH-2	HP-2	1850	NOTE 4	0.40	57.3	43.3	80.0 °F	67.0 °F	58.00 °F	56.8 °F	37.9	7.2	12.0 / 14.5	TRANE	GAM5B0C60	4TWA4060
AH-3	HP-3	600	NOTE 4	0.30	18.5	13.6	80.0 °F	67.0 °F	58.70 °F	56.9 °F	11.3	2.9	12.5 / 15	TRANE	GAM5B0A18	4TWR5018
AH-4	HP-4	3500	NOTE 4	0.30	94.2	76.7	80.0 °F	67.0 °F	60.00 °F	58.5 °F	60.6	11.3	12.8 /	TRANE	TWE090	TWA090
AH-5	HP-5	1200	NOTE 4	0.30	35.3	26.9	80.0 °F	67.0 °F	58.90 °F	57.4 °F	23.6	5.8	12.5 / 15	TRANE	GAM5B0B36	4TWR5036
AH-6	HP-6	800	NOTE 4	0.30	24.3	19.3	80.0 °F	67.0 °F	57.30 °F	57.0 °F	16.1	3.6	12.5 / 15	TRANE	GAM5B0A24	4TWR5024
AH-7	HP-7	1500	NOTE 4	0.40	47.7	35.2	80.0 °F	67.0 °F	57.90 °F	56.5 °F	30.8	5.8	12.5 / 15	TRANE	GAM5B0C48	4TWR5048
AH-8	HP-8	1850	250	0.40	57.3	43.3	80.0 °F	67.0 °F	58.00 °F	56.8 °F	37.9	7.2	12.0 / 14.5	TRANE	GAM5B0C60	4TWA4060
AH-9	HP-9	760	190	0.40	24.1	18.8	80.0 °F	67.0 °F	56.80 °F	56.5 °F	16	2.9	12.5 / 15	TRANE	GAM5B0A24	4TWR5024
AH-10	HP-10	1000	200	0.30	29.1	22.3	80.0 °F	67.0 °F	59.00 °F	57.5 °F	19.1	3.6	12.5 / 15	TRANE	GAM5B0B30	4TWR5030
AH-11	HP-11	1000	200	0.30	29.1	22.3	80.0 °F	67.0 °F	59.00 °F	57.5 °F	19.1	3.6	12.5 / 15	TRANE	GAM5B0B30	4TWR5030
AH-13	HP-13	1200	300	0.30	35.3	26.9	80.0 °F	67.0 °F	58.90 °F	57.4 °F	23.6	5.8	12.5 / 15	TRANE	GAM5B0B36	4TWR5036
AH-15	HP-15	760	175	0.40	24.1	18.8	80.0 °F	67.0 °F	56.80 °F	56.5 °F	16	2.9	12.5 / 15	TRANE	GAM5B0A24	4TWR5024
AH-17	HP-17	1500	370	0.40	47.7	35.2	80.0 °F	67.0 °F	57.90 °F	56.5 °F	30.8	5.8	12.5 / 15	TRANE	GAM5B0C48	4TWR5048

NOTES:

1. REFER TO ELECTRICAL FOR VOLTAGE INFORMATION.
2. PROVIDE NEW CONDENSATE PUMP FOR AH-8.
3. HP-4 SHALL BE DUAL COMPRESSOR / DUAL CIRCUIT.
4. BALANCE OUTSIDE AIR TO EXISTING UNLESS NOTED OTHERWISE IN SCHEDULE.
5. PROVIDE UNITS WITH NEW REFRIGERANT LINE SETS.
6. PROVIDE THERMOSTAT CAPABLE OF CONNECTING TO EXTERNAL CONTROLLER.
7. INCLUDE AIR HANDLERS WITH FILTER RACK.
8. CONDENSER COILS SHALL BE FACTORY COATED WITH ELECTROFIN PROTECTIVE E-COATING.
9. PROVIDE UNITS AH-8, AH-9, AH-10, AH-13, AH-15, & AH-17 WITH BIPOLAR IONIZATION. BASIS OF DESIGN IS GLOBAL PLASMA SOLUTIONS MODEL NUMBER GPS-FC24-AC.

ROOFTOP UNIT SCHEDULE

TAG	AIR CAPACITY CFM		FAN MAX RPM	NOMINAL FAN HP	ESP INCHES WG	TSP INCHES WG	COOLING CAPACITY @ 95°F OA					HEATING CAPACITY @ 25°F OA				MINIMUM EFF @ AHRI COND (EER / SEER)	BASIS OF DESIGN	MODEL
							TOTAL MBH	SENS MBH	ENTERING AIR		LEAVING AIR							
	TOTAL	OA (MIN)							DB °F	WB °F	DB °F	WB °F	HEATING CAPACITY MBH	AUX HEAT KW	EAT °F	LAT °F			
RTU-1	1600	NOTE 6	953	1	0.40	0.57	49.9	38.4	80.0 °F	67.0 °F	56.4 °F	56.3 °F	32.8	4.5	70.0 °F	88.7 °F	12.3 / 14.3	TRANE	WSC048
RTU-2	1600	NOTE 6	953	1	0.40	0.57	49.9	38.4	80.0 °F	67.0 °F	56.4 °F	56.3 °F	32.8	4.5	70.0 °F	88.7 °F	12.3 / 14.3	TRANE	WSC048
RTU-3	800	NOTE 6	1050	0.33	0.25	0.50	24.8	18.6	80.0 °F	67.0 °F	55.0 °F	55.0 °F	15.5	3.8	70.0 °F	90.0 °F	12.0 / 14.0	TRANE	4WCC4024
RTU-4	800	NOTE 6	1050	0.33	0.25	0.50	24.8	18.6	80.0 °F	67.0 °F	55.0 °F	55.0 °F	15.5	3.8	70.0 °F	90.0 °F	12.0 / 14.0	TRANE	4WCC4024
RTU-5	1600	NOTE 6	953	1	0.40	0.57	49.9	38.4	80.0 °F	67.0 °F	56.4 °F	56.3 °F	32.8	4.5	70.0 °F	88.7 °F	12.3 / 14.3	TRANE	WSC048
RTU-6	1200	NOTE 6	791	0.75	0.40	0.49	39.4	29.4	80.0 °F	67.0 °F	55.6 °F	55.5 °F	24.2	4.5	70.0 °F	88.5 °F	12.1 / 14.3	TRANE	WSC036
RTU-7	1200	NOTE 6	791	0.75	0.40	0.49	39.4	29.4	80.0 °F	67.0 °F	55.6 °F	55.5 °F	24.2	4.5	70.0 °F	88.5 °F	12.1 / 14.3	TRANE	WSC036
RTU-11	3000	900	651	1	0.30	0.48	93.5	74.4	80.0 °F	67.0 °F	57.0 °F	56.9 °F	89.6	13.5	70.0 °F	97.6 °F	11.1 / 12.2	TRANE	WSC090

NOTES:

1. REFER TO ELECTRICAL FOR VOLTAGE INFORMATION.
2. PROVIDE UNITS WITH CURB ADAPTER.
3. PROVIDE RTU-11 WITH DRY BULB ECONOMIZATION WITH BAROMETRIC RELIEF.
4. CONDENSER COILS SHALL BE FACTORY COATED WITH ELECTROFIN PROTECTIVE E-COATING.
5. PROVIDE WITH BACNET CONNECTION TO CAMPUS CONTROLS.
6. OUTSIDE AIR FOR RTU-1, 2, 3, 4, 5, 6, & 7 IS PROVIDED BY RTU-8. REFER TO ENERGY RECOVERY VENTILATOR SCHEDULE.

WALL MOUNTED PACKAGED HEAT PUMP SCHEDULE

TAG	AIRFLOW (CFM)			EXTERNAL STATIC PRESSURE	SUPPLY FAN (HP)	OUTDOOR FAN (HP)	COOLING CAPACITY @ 95° F			HEATING CAPACITY		BASIS OF DESIGN	MODEL
	TOTAL SUPPLY	OA	EXHAUST AIRFLOW				TOTAL CAPACITY MBH	SENSIBLE CAPACITY MBH	EER	HEATING CAPACITY @ 25° F (MBH)	AUX. ELECTRIC HEAT (KW) @ 208V		
CHP-1	1,600 CFM	450 CFM	350	0.30 in-wg	0.5	0.5	46	34	11	28.1	6	MARVAIR	VAA2048
CHP-2	1,200 CFM	350 CFM	250	0.30 in-wg	0.5	0.5	41	31	12	26.6	6	MARVAIR	VDA2040
CHP-3	1,200 CFM	350 CFM	250	0.30 in-wg	0.5	0.5	41	31	12	26.6	6	MARVAIR	VDA2040
CHP-4	800 CFM	280 CFM	180	0.30 in-wg	0.5	0.5	23	18	12	16.3	6	MARVAIR	VDA2024
CHP-5	800 CFM	280 CFM	180	0.30 in-wg	0.5	0.5	23	18	12	16.3	6	MARVAIR	VDA2024
CHP-6	800 CFM	280 CFM	180	0.30 in-wg	0.5	0.5	23	18	12	16.3	6	MARVAIR	VDA2024
CHP-7	800 CFM	280 CFM	180	0.30 in-wg	0.5	0.5	23	18	12	16.3	6	MARVAIR	VDA2024
CHP-8	800 CFM	280 CFM	180	0.30 in-wg	0.5	0.5	23	18	12	16.3	6	MARVAIR	VDA2024
CHP-9	800 CFM	280 CFM	180	0.30 in-wg	0.5	0.5	23	18	12	16.3	6	MARVAIR	VDA2024
CHP-10	1,600 CFM	450 CFM	350	0.30 in-wg	0.5	0.5	46	34	11	28.1	6	MARVAIR	VAA2048
CHP-11	1,600 CFM	450 CFM	350	0.30 in-wg	0.5	0.5	46	34	11	28.1	6	MARVAIR	VAA2048

NOTES:

1. REFER TO ELECTRICAL FOR VOLTAGE INFORMATION.
2. PROVIDE UNITS WITH ERV, HOT GAS REHEAT, AND 2-STAGE COMPRESSOR.
3. RECONNECT UNIT TO EXISTING DUCTWORK WHERE APPLICABLE (FIELD VERIFY), OTHERWISE PROVIDE WITH PLENUM EXTENSION FOR SIDEWALL SUPPLY.
4. CONDENSER COILS SHALL BE FACTORY COATED WITH ELECTROFIN PROTECTIVE E-COATING.
5. PROVIDE THERMOSTAT CAPABLE OF CONNECTING TO EXTERNAL CONTROLLER.

LOUVER SCHEDULE

MARK	AIR PRESSURE DROP	AIR VELOCITY	CFM	DIMENSION FREE AREA	DIMENSION WIDTH	DIMENSION HEIGHT	BASIS OF DESIGN	MODEL
L-1	0.04 in-wg	448 FPM	150	0.34 SF	1' - 2"	1' - 0"	RUSKIN	EME520MD
L-2	0.04 in-wg	444 FPM	250	0.56 SF	1' - 6"	1' - 2"	RUSKIN	EME520MD
L-3	0.03 in-wg	422 FPM	190	0.45 SF	1' - 6"	1' - 0"	RUSKIN	EME520MD
L-4	0.04 in-wg	444 FPM	200	0.45 SF	1' - 6"	1' - 0"	RUSKIN	EME520MD
L-5	0.04 in-wg	472 FPM	300	0.64 SF	1' - 8"	1' - 2"	RUSKIN	EME520MD
L-6	0.04 in-wg	446 FPM	175	0.39 SF	1' - 4"	1' - 0"	RUSKIN	EME520MD
L-7	0.05 in-wg	485 FPM	370	0.76 SF	1' - 8"	1' - 4"	RUSKIN	EME520MD
L-8	0.04 in-wg	444 FPM	200	0.45 SF	1' - 6"	1' - 0"	RUSKIN	EME520MD

NOTES:

1. PAINT LOUVERS TO MATCH BUILDING EXTERIOR.
2. PROVIDE WITH BIRD SCREENS.

AIR DISTRIBUTION SCHEDULE

TAG	MOUNTING TYPE	NECK SIZE	FACE SIZE	DESCRIPTION	BASIS OF DESIGN	MODEL
Supply Air						
A	CEILING	6"Ø	12"x12"	PLAQUE FACE SUPPLY DIFFUSER	PRICE	ASPD
B	CEILING	8"Ø	24"x24"	PLAQUE FACE SUPPLY DIFFUSER	PRICE	ASPD
C	CEILING	10"Ø	24"x24"	PLAQUE FACE SUPPLY DIFFUSER	PRICE	ASPD
Return Air						
21	CEILING	22"x22"	24"x24"	PERFORATED FACE RETURN GRILLE	PRICE	APDDR

NOTES:

1. COORDINATE MOUNTING TYPE AND ACCESSORIES WITH CEILING GRID.
2. COORDINATE AIR DISTRIBUTION LOCATIONS WITH ALL OTHER TRADES.
3. AIR DISTRIBUTION TO BE ALUMINUM CONSTRUCTION WITH BAKED ENAMEL "WHITE" FINISH UNLESS NOTED OTHERWISE.
4. SURFACE MOUNTED AIR DISTRIBUTION DEVICES SHALL BE MOUNTED WITHOUT VISIBLE FASTENERS.

PLOT DATE: 7/19/2022

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — DWG, INC. CONSULTING ENGINEERS No.C03649

SOUTH CAROLINA — WILLIAM DEAN BILLARD — 7/19/2022

DWG CONSULTING ENGINEERS EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
4003 SOUTH FRASER ST. GEORGETOWN, SC 29440
HVAC SCHEDULES

REV

JOB No. H59-6212-ML

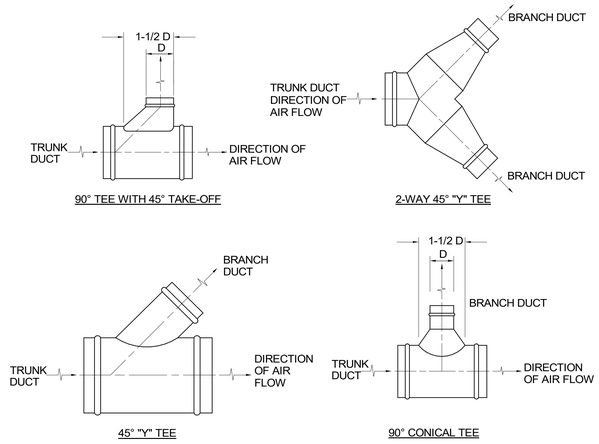
DATE: 7/19/2022

DRAWN BY: SJR

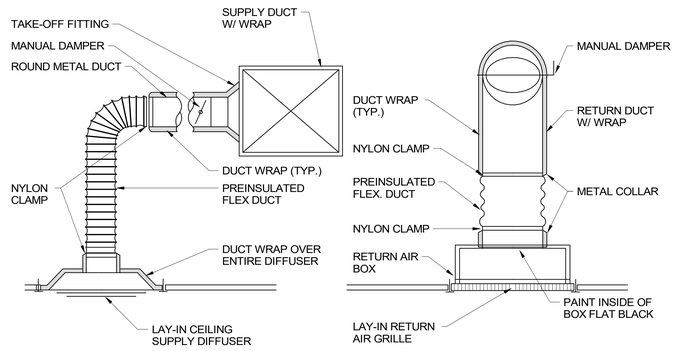
CHECKED BY: WDB

SHEET NUMBER

M002



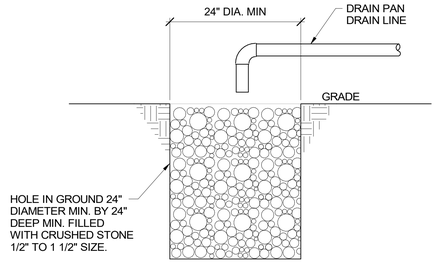
1 M003 ROUND DUCT BRANCH TAKE OFF DETAIL
NOT TO SCALE



NOTES:

1. INSTALL NYLON CLAMPS ON INNER FLEX DUCT LINER AND OUTER JACKET. TAPE ENDS OF PREINSULATED FLEX. DUCT AT THE DIFFUSER AND THE BRANCH DUCT CONNECTION.
2. RETURN AIR BOX SHALL BE MINIMUM 12" HIGH. RETURN DUCT MAY TAP INTO THE SIDE OF THE BOX A MINIMUM OF 6" ABOVE GRILLE.
3. PROVIDE YOUNG REGULATOR REMOTE DAMPER CONTROLLER FOR EACH DIFFUSER AND GRILLE LOCATED IN AREAS WITH INACCESSIBLE CEILINGS. LOCATE CONTROLLER IN A CONCEALED, ACCESSIBLE LOCATION.

2 M003 TYPICAL DIFFUSER/GRILLE INSTALLATION DETAIL
NOT TO SCALE

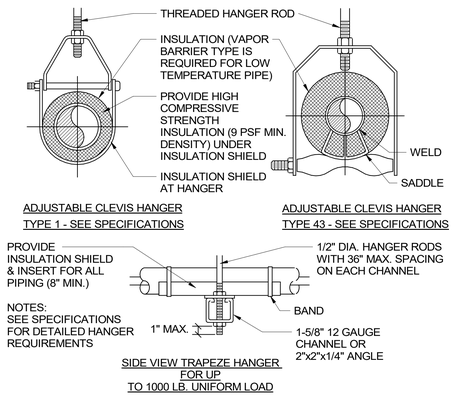


NOTES:

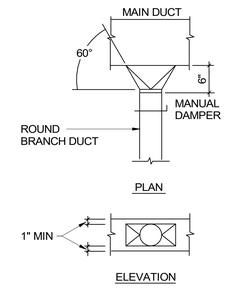
1. COVER WITH LANDSCAPE AFTER INSPECTION IS COMPLETED.
2. CONTRACTOR SHALL VERIFY THAT THE CONDENSATE DRAIN LINE IS IN WORKING ORDER BY RUNNING WATER DOWN THRU THE DRAIN LINE FROM THE POINT OF THE COIL CONNECTION PRIOR TO BURIAL.
3. DRAIN PAN DRAIN LINE SHALL TERMINATE 6" ABOVE FINISHED GRADE OVER TOP OF THE DRAIN PIT.

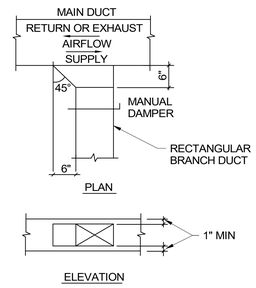
4 M003 CONDENSATE DRAIN PIT DETAIL
NOT TO SCALE

MAXIMUM PIPE/TUBING SUPPORT SPACING											
NOM. SIZE IN.	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8
PIPE FT.	7	7	7	9	10	11	12	14	16	17	19
TUBING FT.	5 FT	6	7	8	8	9	10	12	13	14	16
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.											



6 M003 MECHANICAL PIPE SUPPORT DETAIL
NOT TO SCALE





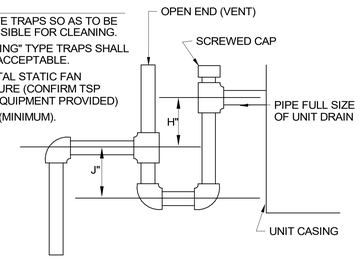
NOTES:

1. CONTRACTOR MAY SUBSTITUTE A MANUFACTURED FITTING FOR THE DETAILED TAKE-OFF ABOVE.
2. TAKE-OFFS IN MEDIUM PRESSURE DUCT SHALL HAVE AN OVERSIZED INTAKE.
3. SPIN-IN FITTINGS WITH INTEGRAL SCOOP AND DAMPER SHALL ONLY BE USED ON LOW PRESSURE DUCT.
4. FITTINGS SHALL BE SCREWED TO THE TRUNK DUCT AND SEALED WITH MASTIC. MASTIC TAPE IS NOT ACCEPTABLE, SEE SPECIFICATIONS.
5. IF VAV BOX IS LOCATED IN BRANCH DUCT, BALANCE DAMPER SHALL NOT BE INSTALLED IN TAKOFF FROM MAIN TRUNK DUCT.

3 M003 TYPICAL DUCT TAKE OFF INSTALLATION DETAIL
NOT TO SCALE

NOTES:

1. LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING.
2. "RUNNING" TYPE TRAPS SHALL BE UNACCEPTABLE.
3. H = TOTAL STATIC FAN PRESSURE (CONFIRM TSP WITH EQUIPMENT PROVIDED)
4. J = H/2 (MINIMUM).



5 M003 CONDENSATE DRAIN TRAP INSTALLATION DETAIL
NOT TO SCALE

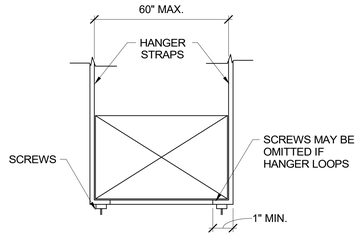


TABLE 4-1 RECTANGULAR DUCT HANGERS MINIMUM SIZE								
MAXIMUM HALF OF DUCT PERIMETER	PAIR AT 10 FT. SPACING		PAIR AT 8 FT. SPACING		PAIR AT 5 FT. SPACING		PAIR AT 4FT. SPACING	
	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD
P/2= 30"	1" X 22 GA.	10 GA. (.135")	1" X 22 GA.	10 GA. (.135")	1" X 22 GA.	12 GA. (.106")	1" X 22 GA.	12 GA. (.106")
P/2= 72"	1" X 18 GA.	3/8"	1" X 20 GA.	1/4"	1" X 22 GA.	1/4"	1" X 22 GA.	1/4"
P/2= 96"	1" X 16 GA.	3/8"	1" X 18 GA.	3/8"	1" X 20 GA.	3/8"	1" X 22 GA.	1/4"
P/2= 120"	1-1/2"X16GA.	1/2"	1" X 16 GA.	3/8"	1" X 18 GA.	3/8"	1" X 20 GA.	1/4"
P/2= 168"	1-1/2"X16GA.	1/2"	1-1/2"X16GA.	1/2"	1" X 16 GA.	3/8"	1" X 18 GA.	3/8"
P/2= 192"	NOT GIVEN	1/2"	1-1/2"X16GA.	1/2"	1" X 16 GA.	3/8"	1" X 16 GA.	3/8"
P/2=193" UP	SPECIAL ANALYSIS REQUIRED							

WHEN STRAPS ARE LAP JOINED, USE THESE MINIMUM FASTENERS	SINGLE HANGER MAXIMUM ALLOWABLE LOAD	
	STRAP	WIRE OR ROD (DIA.)
1" X 18,20,22 GA. - TWO #10 OR ONE 1/4" BOLT	1" X 22 GA. - 260 LBS.	1/4"-270 LBS.
1" X 16 GA. - TWO 1/4" DIA.	1" X 20 GA. - 320 LBS.	3/8"-680 LBS.
1-1/2" X 16 GA. -TWO 3/8" DIA.	1" X 18 GA. - 420 LBS.	1/2"-1250 LBS.
PLACE FASTENERS IN SERIES, NOT SIDE BY SIDE.	1" X 16 GA. - 700 LBS.	5/8"-2000 LBS.
	1-1/2 " X 16 GA. - 1100 LBS.	3/4"-3000 LBS.

7 M003 SUPPORT DETAIL
NOT TO SCALE

PLOT DATE: 7/19/2022

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
DWG, INC. CONSULTING ENGINEERS No.C03649

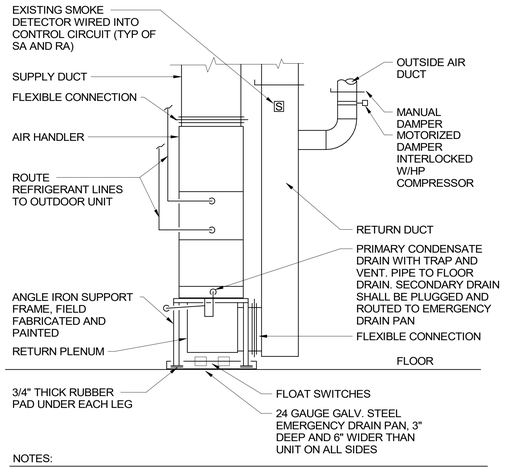
SOUTH CAROLINA
WILLIAM DEAN BILLARD
7/19/2022

DWG CONSULTING ENGINEERS EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
4003 SOUTH FRASER ST. GEORGETOWN, SC 29440
HVAC DETAILS

REV

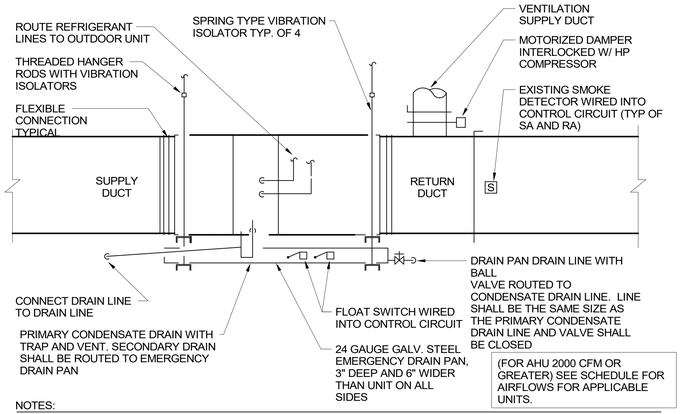
JOB No. H59-6212-ML
DATE: 7/19/2022
DRAWN BY: SJR
CHECKED BY: WDB
SHEET NUMBER
M003



NOTES:

1. MOTORIZED DAMPER SHALL BE INTERLOCKED W/ HEAT PUMP COMPRESSOR. DAMPER SHALL OPEN WHEN COMPRESSOR IS ENERGIZED AND CLOSE WHEN DE-ENERGIZED.

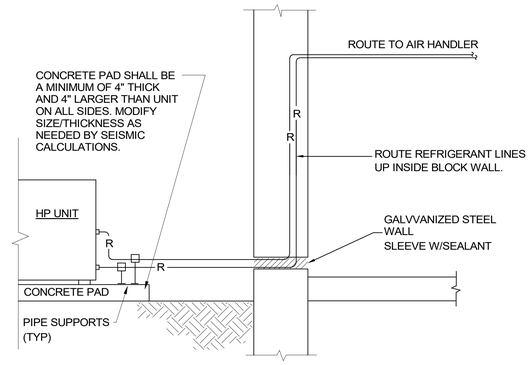
1 M004 VERTICAL AIR HANDLER INSTALLATION DETAIL
NOT TO SCALE



NOTES:

1. ROUTE DRAIN LINES AS INDICATED ON DRAWINGS. ALL DRAIN LINES SHALL SLOPE AT LEAST 1" PER 10 FT. CONTINUOUSLY. LINES SHALL NOT BE ALLOWED TO RUN ALONG THE CEILING STRUCTURE AND RISE UP AGAIN.
2. PROVIDE HANGING RODS FOR UNITS SUSPENDED FROM STRUCTURE AND SUSPEND EMERGENCY DRAIN PAN FROM UNIT.
3. SUPPORT EMERGENCY DRAIN PAN ON ANGLES OR STRUTS; PAN TO BE EASILY REMOVABLE FOR MAINTENANCE ACCESS

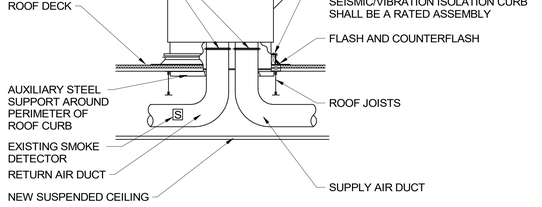
2 M004 HORIZONTAL AHU INSTALLATION DETAIL
NOT TO SCALE



NOTES:

1. ALL PIPING SHALL BE HARD DRAWN COPPER TUBING WITH SOLDERED JOINTS.
2. EXTERIOR INSULATION SHALL BE PROVIDED WITH ALUMINUM JACKET.

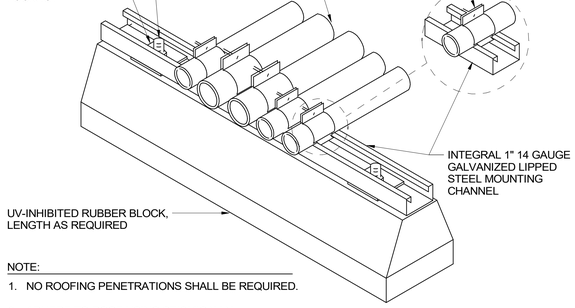
3 M004 HEAT PUMP INSTALLATION DETAIL
NOT TO SCALE



NOTES:

1. PROVIDE EQUIPMENT ROOF CURBS W/ INTEGRAL VIBRATION ISOLATION SPRINGS.
2. CURB SHALL BE FURNISHED BY EQUIPMENT MANUFACTURER AND SHALL BE INSTALLED AND FLASHED BY THE ROOFING CONTRACTOR.
3. ROOFTOP UNITS SHALL RE-USE EXISTING ROOF PENETRATIONS. PROVIDE UNITS WITH CURB ADAPTERS.
4. PROVIDE AND INSTALL 1/2" THICK DUCT LINER IN THE FIRST 10 FEET FROM UNIT ON SUPPLY AND RETURN DUCT. LINER SHALL BE FLEXIBLE ELASTOMERIC.

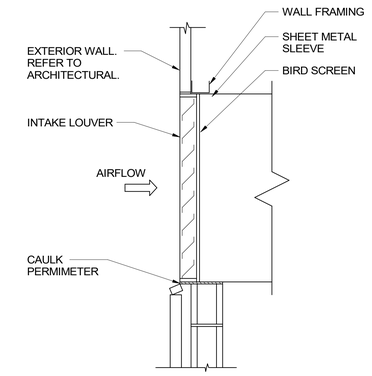
4 M004 ROOF TOP UNIT INSTALLATION DETAIL
NOT TO SCALE



NOTE:

1. NO ROOFING PENETRATIONS SHALL BE REQUIRED.
2. ADHERE TO ROOF USING SEISMICALLY APPROVED ADHESIVE. DESIGN PER SEISMIC ENGINEER.

5 M004 ROOF PIPING SUPPORT DETAIL
NOT TO SCALE



6 M004 INTAKE LOUVER (DUCTED) INSTALLATION DETAIL
NOT TO SCALE

PLOT DATE: 7/19/2022

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION DWG, INC. CONSULTING ENGINEERS No.C03649

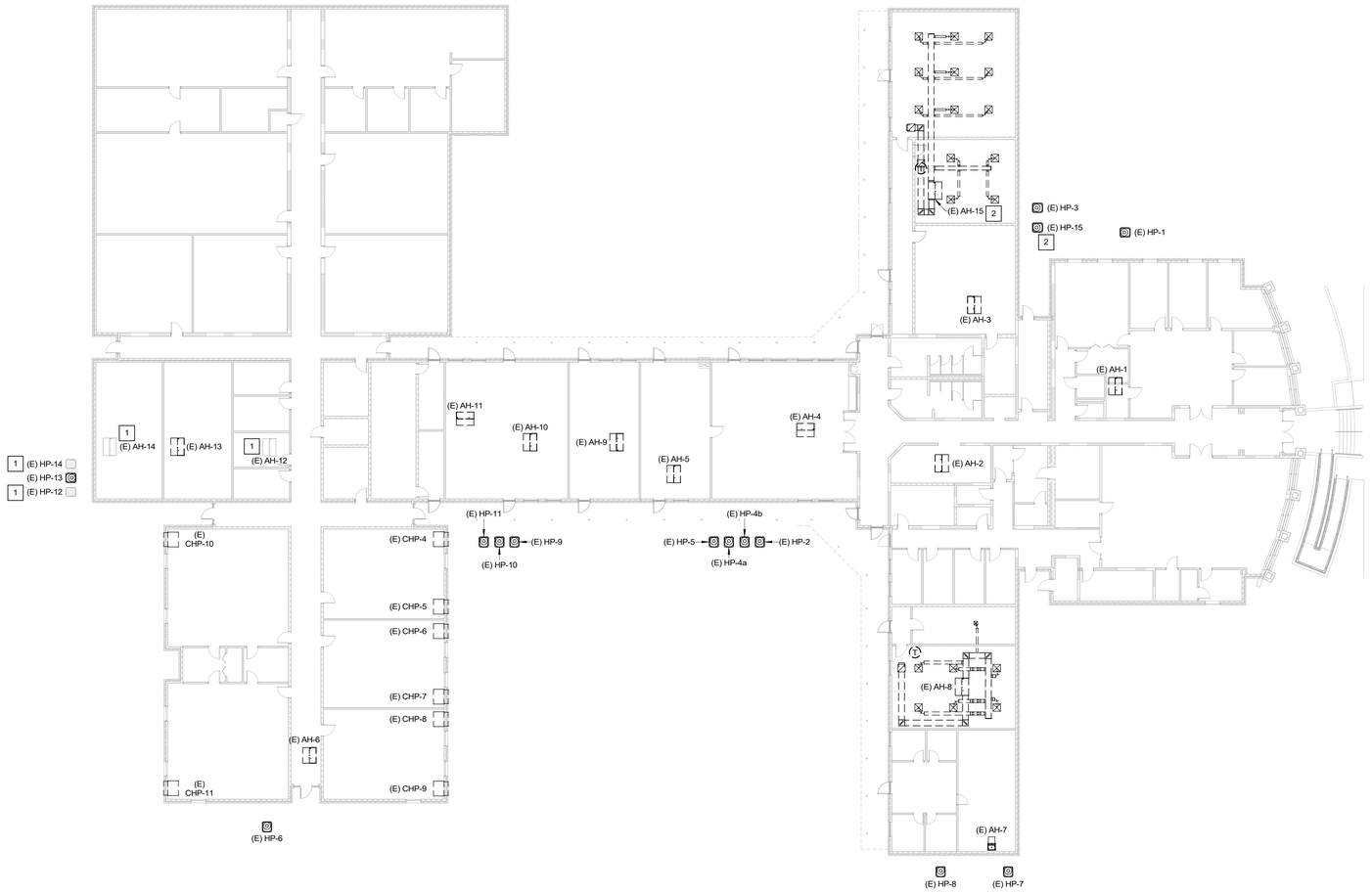
SOUTH CAROLINA WILLIAM DEAN BILLARD 7/19/2022

DWG CONSULTING ENGINEERS EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
4003 SOUTH FRASER ST. GEORGETOWN, SC 29440
HVAC DETAILS

REV

JOB No. H59-6212-ML
DATE: 7/19/2022
DRAWN BY: SJR
CHECKED BY: WDB
SHEET NUMBER
M004



1 MD101 FIRST FLOOR HVAC DUCTWORK DEMO PLAN
SCALE: 1/16" = 1'-0"

KEYNOTES

1 EXISTING HVAC UNIT TO REMAIN IN SERVICE.

2 (E)AH-15 & (E)HP-15 SHALL BE TURNED OVER TO BUILDING OWNER.

GENERAL NOTES

1. ALL REFRIGERANT SHALL BE CAPTURED FROM DEMOLISHED HVAC EQUIPMENT AND TURNED OVER TO BUILDING OWNER.
2. DEMOLISH EXISTING THERMOSTATS FOR HVAC EQUIPMENT BEING DEMOLISHED. CONTROL WIRING SHALL REMAIN TO BE REUSED FOR NEW THERMOSTAT IN RENOVATION.
3. DUCT ROUTING AND DIFFUSER LAYOUT ARE APPROXIMATE AND SHOWN FOR REFERENCE. FIELD VERIFY ROUTING AND DIFFUSER LOCATIONS.
4. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY CEILING TILES DAMAGED DURING DEMOLITION.
5. PERFORM AIRFLOW TEST OF OUTSIDE AIR PRIOR TO DEMOLITION OF HVAC EQUIPMENT.

N

GRAPHIC SCALE
0 8' 16' 32' 64'
Scale: 1/16" = 1'-0"

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
DWG, INC. CONSULTING ENGINEERS No.C03649

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
WILLIAM DEAN BILLARD, II
7/19/2022

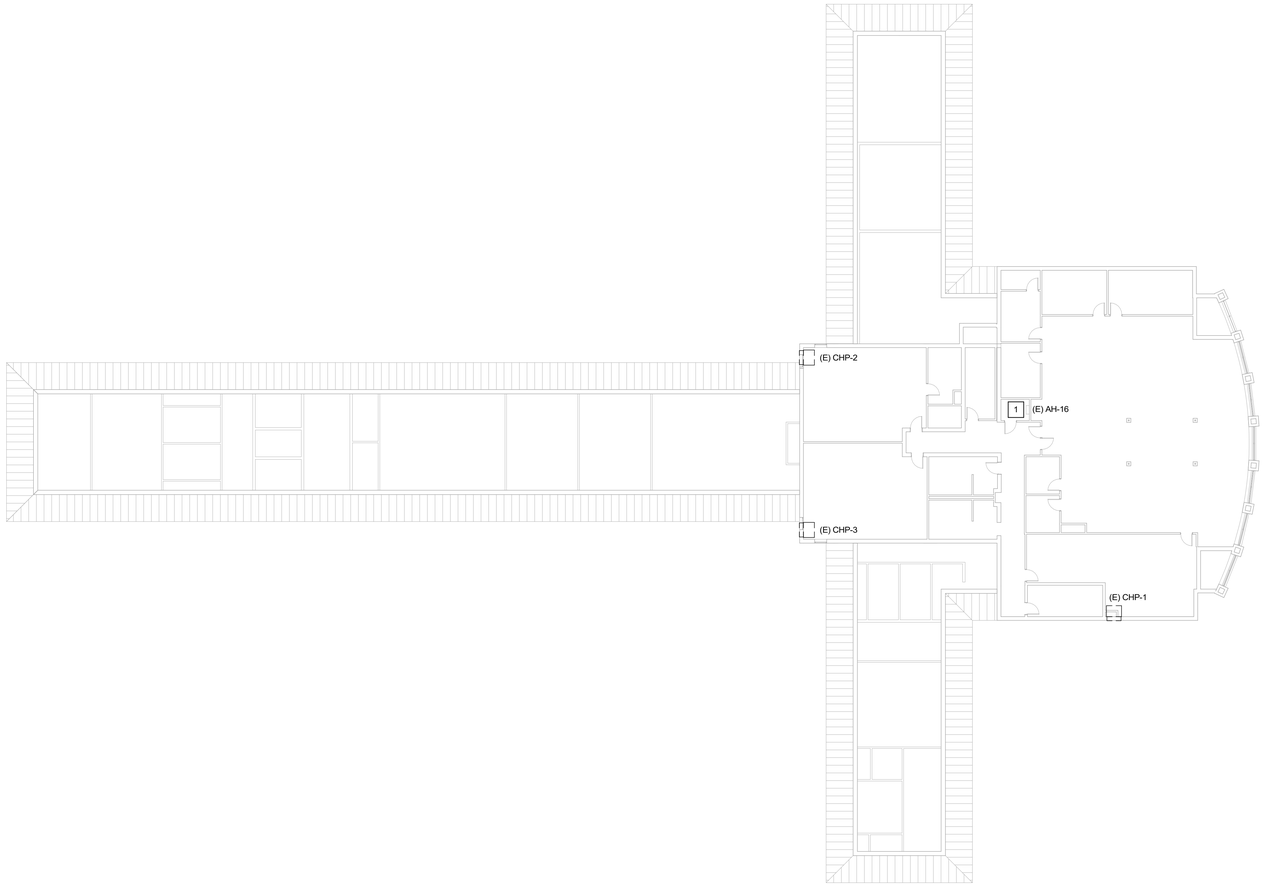
DWG CONSULTING ENGINEERS EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
4003 SOUTH FRASER ST. GEORGETOWN, SC 29440
FIRST FLOOR MECHANCIAL DEMOLITION PLAN

REV

JOB No.	H59-6212-ML
DATE:	7/19/2022
DRAWN BY:	SJR
CHECKED BY:	WDB
SHEET NUMBER	MD101

PLOT DATE: 7/19/2022



1 / MD201 SECOND FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/16" = 1'-0"

KEYNOTES

1 EXISTING HVAC UNIT TO REMAIN IN SERVICE.

GENERAL NOTES

1. ALL REFRIGERANT SHALL BE CAPTURED FROM DEMOLISHED HVAC EQUIPMENT AND TURNED OVER TO BUILDING OWNER.
2. DEMOLISH EXISTING THERMOSTATS FOR HVAC EQUIPMENT BEING DEMOLISHED. CONTROL WIRING SHALL REMAIN TO BE REUSED FOR NEW THERMOSTAT IN RENOVATION.
3. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY CEILING TILES DAMAGED DURING DEMOLITION.
4. PERFORM AIRFLOW TEST OF OUTSIDE AIR PRIOR TO DEMOLITION OF HVAC EQUIPMENT.

N

GRAPHIC SCALE
0 8' 16' 32' 64'
Scale: 1/16" = 1'-0"

SOUTH CAROLINA
DWG, INC.
CONSULTING ENGINEERS
No.C03649
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
WILLIAM DEAN BILLARD, II
7/19/2022

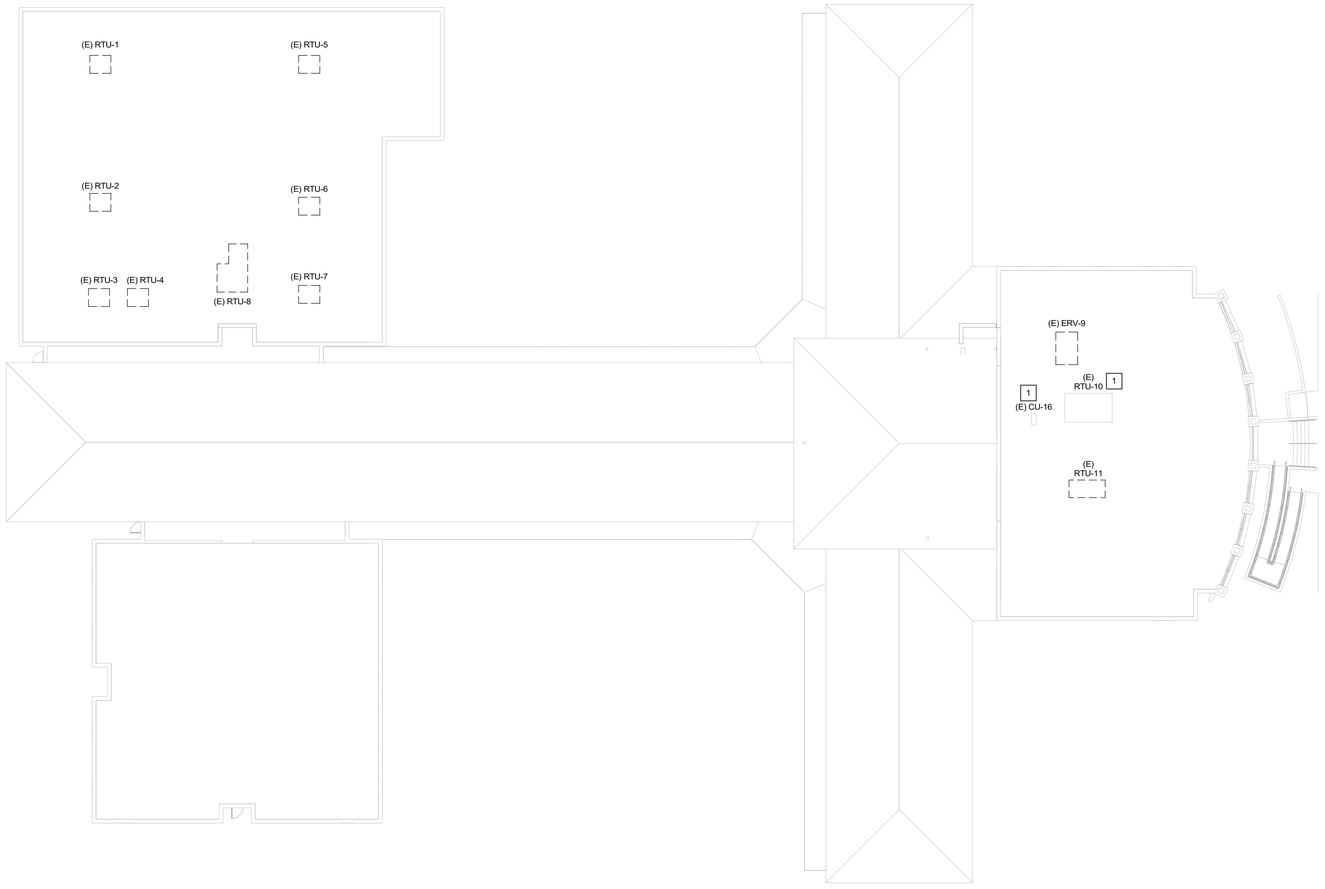
DWG
CONSULTING ENGINEERS
EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
4003 SOUTH FRASER ST. GEORGETOWN, SC 29440
SECOND FLOOR MECHANICAL DEMOLITION PLAN

REV

JOB No.	H59-6212-ML
DATE:	7/19/2022
DRAWN BY:	SJR
CHECKED BY:	WDB
SHEET NUMBER	MD201

PLOT DATE: 7/19/2022



1 / MD301 ROOF MECHANICAL DEMOLITION PLAN
SCALE: 1/16" = 1'-0"

KEYNOTES

1 EXISTING HVAC UNIT TO REMAIN IN SERVICE.

GENERAL NOTES

1. ALL REFRIGERANT SHALL BE CAPTURED FROM DEMOLISHED HVAC EQUIPMENT AND TURNED OVER TO BUILDING OWNER.
2. DEMOLISH EXISTING THERMOSTATS FOR HVAC EQUIPMENT BEING DEMOLISHED. CONTROL WIRING SHALL REMAIN TO BE REUSED FOR NEW THERMOSTAT IN RENOVATION.
3. PERFORM AIRFLOW TEST OF OUTSIDE AIR PRIOR TO DEMOLITION OF HVAC EQUIPMENT.

N

GRAPHIC SCALE
0 8' 16' 32' 64'
Scale: 1/16" = 1'-0"

SOUTH CAROLINA
DWG, INC.
CONSULTING
ENGINEERS
No.C03649
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
WILLIAM DEAN BILLARD, II
7/19/2022

DWG
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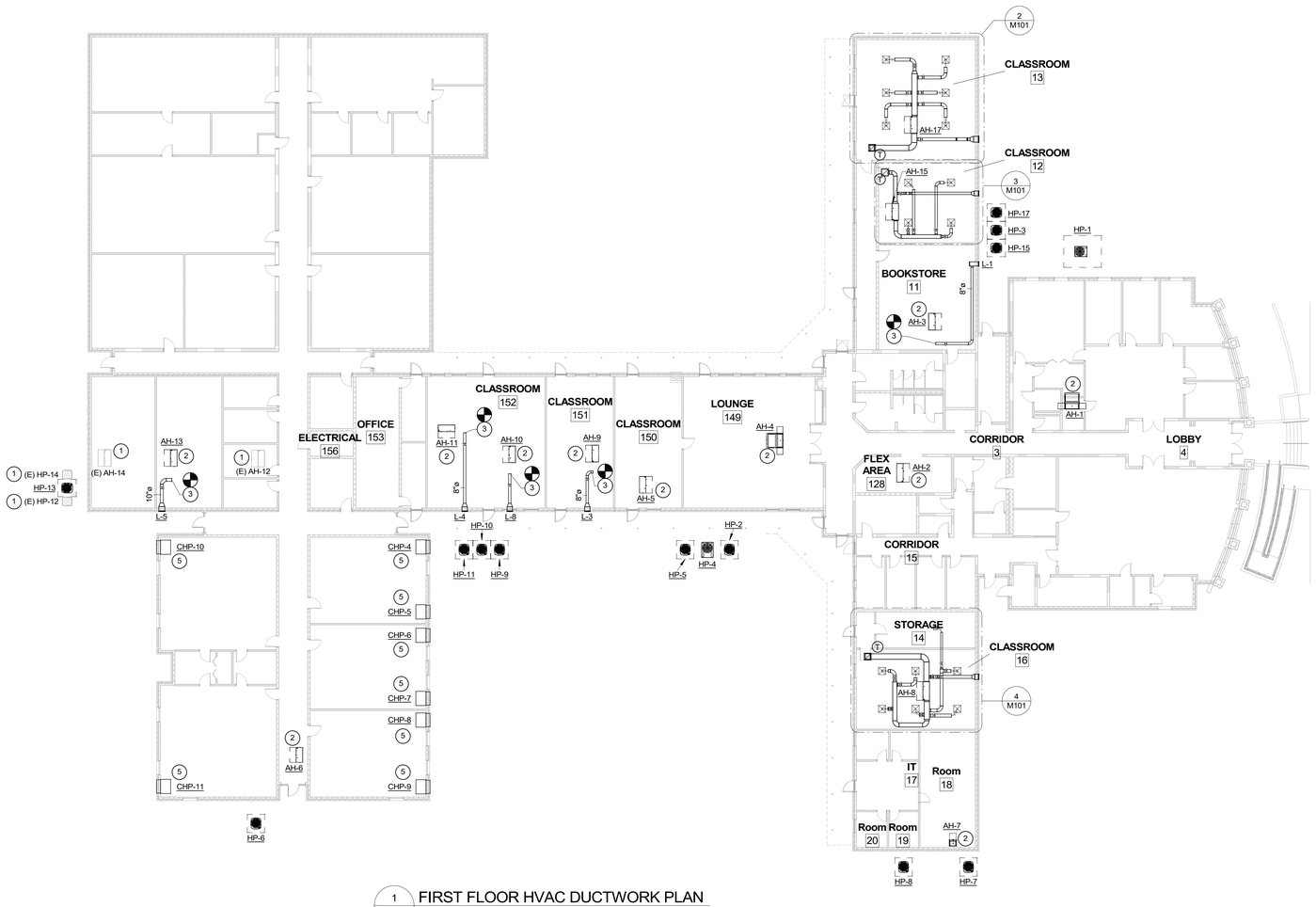
EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
4003 SOUTH FRASER ST. GEORGETOWN, SC 29440
ROOF MECHANICAL DEMOLITION PLAN

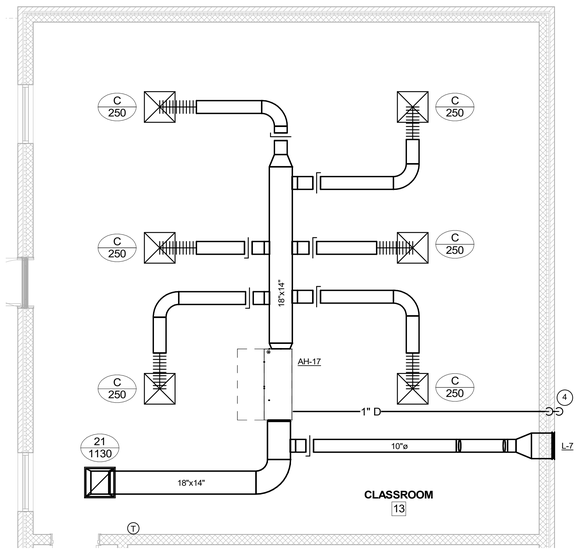
REV

JOB No.	H59-6212-ML
DATE:	7/19/2022
DRAWN BY:	SJR
CHECKED BY:	WDB
SHEET NUMBER	MD301

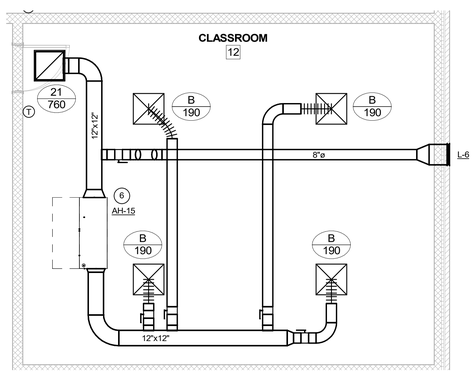
PLOT DATE: 7/19/2022



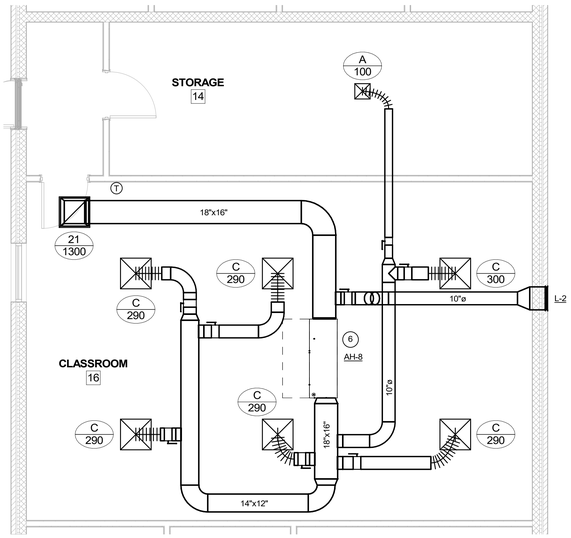
1 M101 FIRST FLOOR HVAC DUCTWORK PLAN
SCALE: 1/16" = 1'-0"



2 M101 FIRST FLOOR MECHANICAL RENOVATION PLAN - CALLOUT 1
SCALE: 1/4" = 1'-0"



3 M101 FIRST FLOOR MECHANICAL RENOVATION PLAN - CALLOUT 2
SCALE: 1/4" = 1'-0"



4 M101 FIRST FLOOR MECHANICAL RENOVATION PLAN - CALLOUT 3
SCALE: 1/4" = 1'-0"

KEYNOTES

1. EXISTING HVAC UNIT TO REMAIN IN SERVICE.
2. RECONNECT TO EXISTING SUPPLY DUCT, RETURN DUCT, OUTSIDE AIR DUCT (IF APPLICABLE), AND CONDENSATE LINE.
3. CONNECT NEW OUTSIDE AIR DUCT TO EXISTING RETURN DUCT.
4. DROP TO CONDENSATE DRAIN PIT. REFER TO DETAIL.
5. ROUTE 1" CONDENSATE PIPE TO EXTERIOR.
6. RECONNECT TO EXISTING CONDENSATE LINE.

GENERAL NOTES

1. DUCT ROUTING AND DIFFUSER LAYOUT ARE APPROXIMATE. FIELD VERIFY ROUTING AND ALIGN DIFFUSERS TO CEILING GRID.
2. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY CEILING TILES DAMAGED DURING RENOVATION.
3. NEW THERMOSTATS SHALL BE REPLACED IN THE SAME LOCATION AS EXISTING WITH NEW HVAC EQUIPMENT.

N

GRAPHIC SCALE
0 8' 16' 32' 64'
Scale: 1/16" = 1'-0"

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
DWG, INC. CONSULTING ENGINEERS No.C03649

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
WILLIAM DEAN BILLARD, II
7/19/2022

DWG CONSULTING ENGINEERS EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
4003 SOUTH FRASER ST. GEORGETOWN, SC 29440
FIRST FLOOR MECHANICAL RENOVATION PLAN

REV

JOB No. H59-6212-ML
DATE: 7/19/2022
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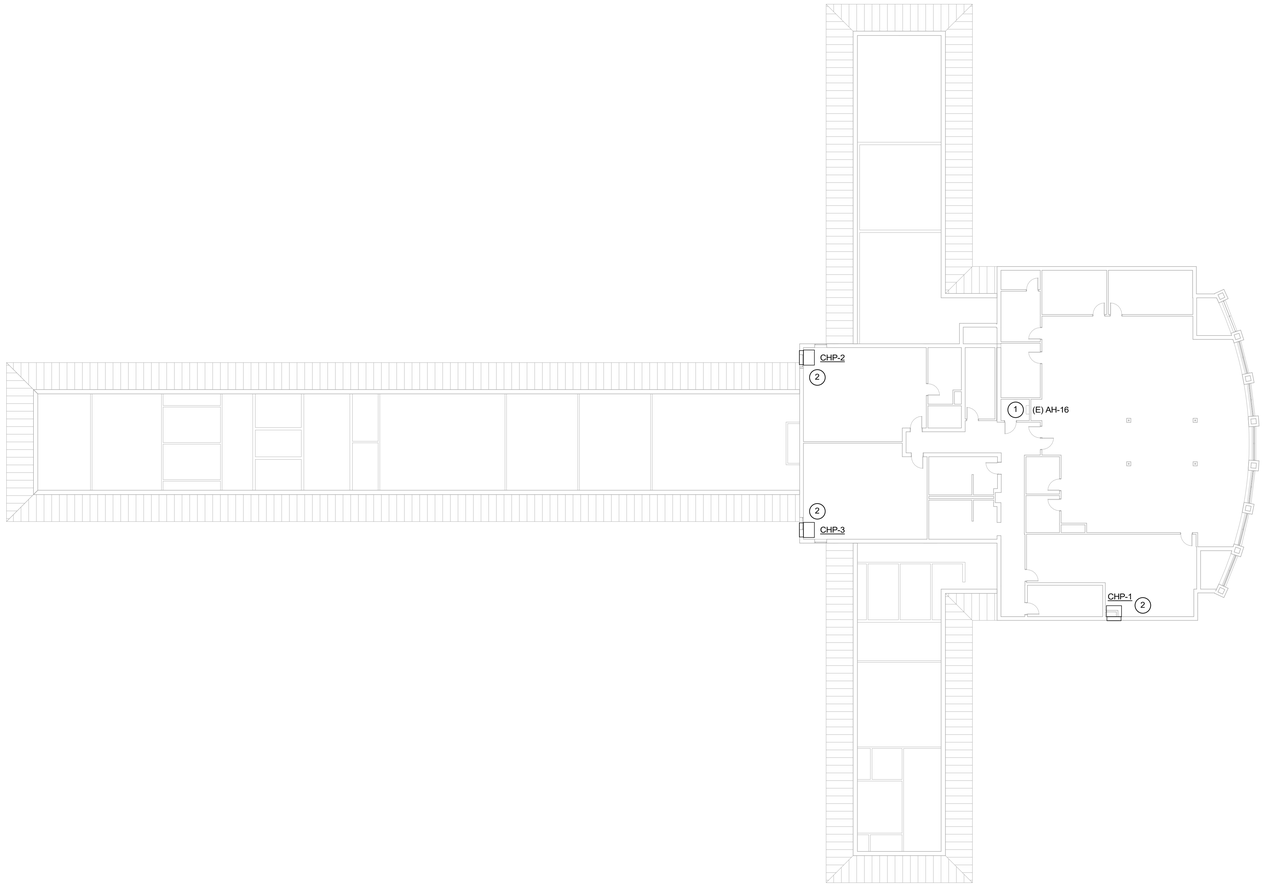
SHEET NUMBER
M101

PLOT DATE: 7/19/2022



1 / M201 SECOND FLOOR MECHANICAL RENOVATION PLAN
SCALE: 1/16" = 1'-0"

KEYNOTES

1. EXISTING HVAC UNIT TO REMAIN IN SERVICE.
2. RECONNECT TO EXISTING SUPPLY DUCT AND CONDENSATE LINE.

GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY CEILING TILES DAMAGED DURING RENOVATION.
2. NEW THERMOSTATS SHALL BE REPLACED IN THE SAME LOCATION AS EXISTING WITH NEW HVAC EQUIPMENT.

N

GRAPHIC SCALE
0 8' 16' 32' 64'
Scale: 1/16" = 1'-0"

SOUTH CAROLINA
DWG, INC.
CONSULTING ENGINEERS
No.C03649
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
WILLIAM DEAN BILLARD, II
7/19/2022

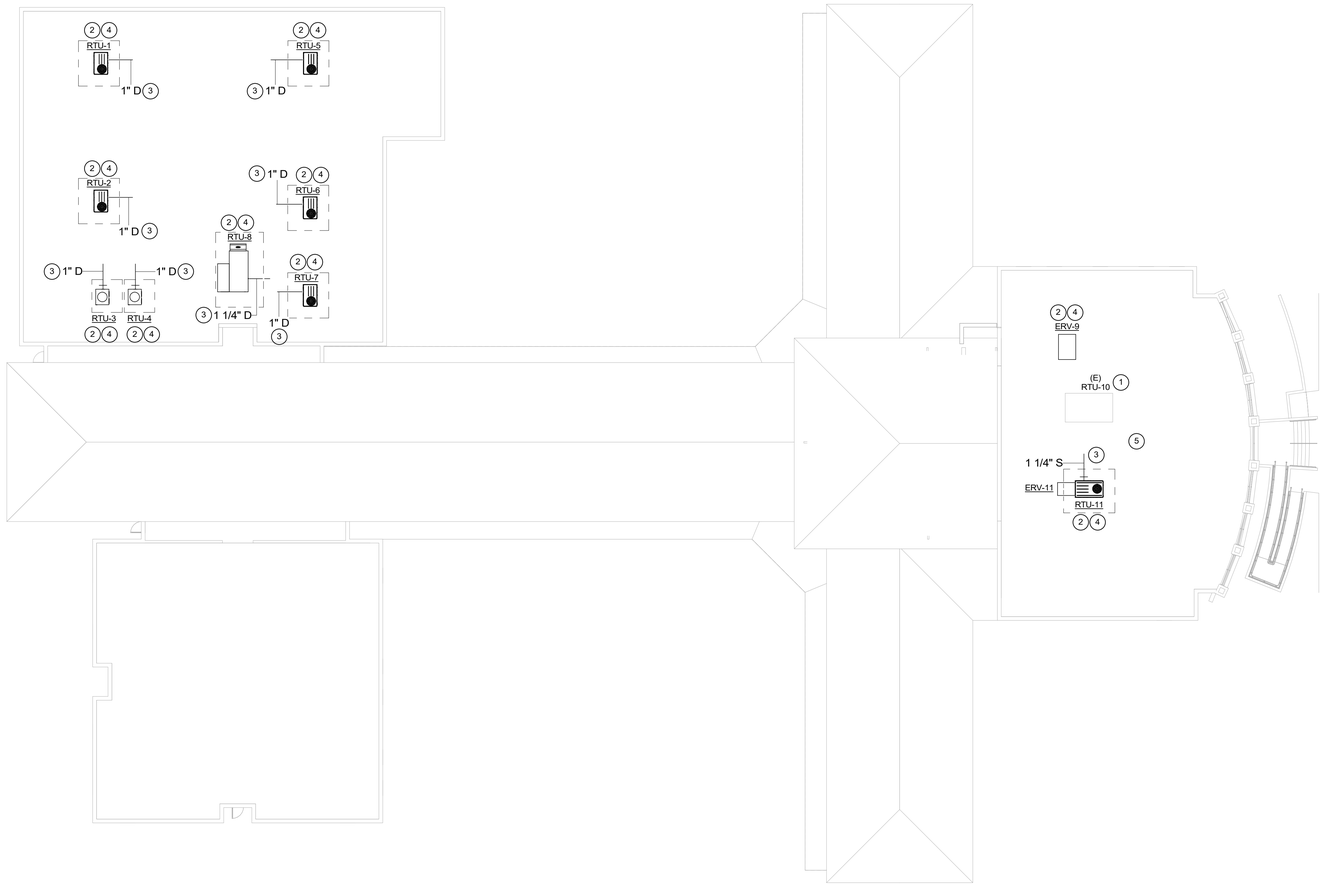
DWG
CONSULTING ENGINEERS
EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
4003 SOUTH FRASER ST. GEORGETOWN, SC 29440
SECOND FLOOR MECHANICAL RENOVATION PLAN

REV

JOB No.	H59-6212-ML
DATE:	7/19/2022
DRAWN BY:	SJR
CHECKED BY:	WDB
SHEET NUMBER	M201

PLOT DATE: 7/19/2022



1 M301 ROOF MECHANICAL RENOVATION PLAN
SCALE: 1/16" = 1'-0"

KEYNOTES

1. EXISTING HVAC UNIT TO REMAIN IN SERVICE.
2. RECONNECT TO EXISTING SUPPLY DUCT AND RETURN DUCT.
3. ROUTE CONDENSATE TO NEAREST ROOF DRAIN.
4. PROVIDE UNIT WITH CURB ADAPTER.
5. EXISTING SATELLITE DISH TO REMAIN.

GENERAL NOTES

1. THERMOSTATS SHALL BE REPLACED IN THE SAME LOCATION AS EXISTING WITH NEW HVAC EQUIPMENT.

N

GRAPHIC SCALE
0 8' 16' 32' 64'
Scale: 1/16" = 1'-0"

SOUTH CAROLINA
DWG, INC.
CONSULTING ENGINEERS
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CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
WILLIAM DEAN BILLARD, II
7/19/2022

DWG
CONSULTING ENGINEERS
EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
4003 SOUTH FRASER ST. GEORGETOWN, SC 29440
ROOF MECHANICAL RENOVATION PLAN

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PLOT DATE: 7/19/2022

ELECTRICAL SYSTEMS SEISMIC REQUIREMENTS

PER IBC-2018/ASCE 7-16

A. PER THE 2018 INTERNATIONAL BUILDING CODE, MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND COMPONENTS, INCLUDING THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED FOR SEISMIC FORCES IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7-16.

B. EXTERIOR EQUIPMENT (INCLUDING ROOF CURBS, RAILS, SUPPORTS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH CHAPTER 26 TO 29 OF ASCE 7-16.

C. WHERE DESIGN FOR SEISMIC AND WIND LOADS IS REQUIRED, THE MORE DEMANDING FORCE MUST BE USED.

D. REFERENCE THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY, WIND SPEEDS, ETC.

E. USE THE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH COMPONENT.

F. FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL REGISTERED IN THE STATE THE JOB IS LOCATED. SUBMITTALS MUST INCLUDE STAMPED AND SIGNED DRAWINGS AND CALCULATIONS.

G. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE APPROVED SEISMIC SUBMITTAL.

H. SEISMIC RESTRAINTS FOR DUCTWORK, PIPING, CONDUIT, CABLE TRAYS AND BUS DUCT MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

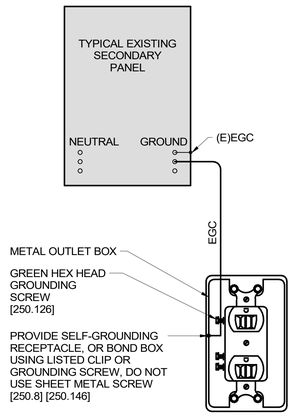
ELECTRICAL COMPONENT IMPORTANCE FACTOR (Ip) DESIGNATION			
Ip = 1.0	Ip = 1.5		
• ALL ASSOCIATED ELECTRICAL WORK UNLESS NOTED OTHERWISE	• EMERGENCY LIGHTS	• EXIT LIGHTS	• FIRE ALARM

SEISMIC DESIGN CATEGORIES D,E,F

	COMPONENT IMPORTANCE FACTOR (Ip)			
	1.0		1.5	
COMPONENT IDENTIFICATION	SEISMIC RESTRAINT REQUIREMENT	NOTES	SEISMIC RESTRAINT REQUIREMENT	NOTES
ROOF MOUNTED	RESTRAIN ALL	1	RESTRAIN ALL	-
FLOOR MOUNTED	RESTRAIN ALL	1,2	RESTRAIN ALL	-
WALL MOUNTED	RESTRAIN ALL	1,2	RESTRAIN ALL	-
COMPONENT SUPPORTS	RESTRAIN ALL	1	RESTRAIN ALL	-
SUSPENDED EQUIPMENT	RESTRAIN ALL	1	RESTRAIN ALL	-
SINGLE CONDUIT	RESTRAIN IF ≥ 2.5"	3	RESTRAIN IF ≥ 2.5"	3
CABLE TRAY/BUS DUCT TRAPEZED CONDUIT	DO NOT DELETE ON TRAPEZE ≥ 2.5". RESTRAIN IF TOTAL WEIGHT OF SUSPENDED COMPONENT > 10 LBS/FT	3	RESTRAIN IF ANY CONDUIT ON TRAPEZE ≥ 2.5". RESTRAIN IF TOTAL WEIGHT OF SUSPENDED COMPONENT > 10 LBS/FT	3
COMPONENT CERTIFICATION	NOT REQUIRED	-	REQUIRED	5
PENDANT, LAY-IN AND CAN LIGHTS	REQUIRED	4	REQUIRED	4

NOTES:

1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF THE COMPONENT IS POSITIVELY ATTACHED TO THE STRUCTURE AND FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED WITH THE CENTER MASS AT 4' OR LESS ABOVE A FLOOR, IS POSITIVELY ATTACHED TO THE STRUCTURE, AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.
3. RESTRAINT IS NOT REQUIRED IF THE CONDUIT IS SUPPORTED BY HANGERS AND EACH HANGER IN THE RUN IS 12" IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12" IN. OR LESS. WHERE ROD HANGERS ARE USED, THEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
4. THE RESTRAINT OF PENDANT, LAY-IN AND CAN LIGHTS IS ADDRESSED IN ASTM C636 AND E580.
5. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.



GROUNDING LEGEND		
ABBR.	DESCRIPTION	SIZE
EGC	EQUIPMENT GROUNDING CONDUCTOR	*
*	SIZE PER TABLE 250.122.	

GROUNDING NOTES:

1. NUMBERS IN BRACKETS REFER TO SPECIFIC SECTIONS OF THE NATIONAL ELECTRICAL CODE.
2. ALL UNDERGROUND OR OTHERWISE INACCESSIBLE GROUND CONNECTIONS AND SPLICES SHALL BE EXOTHERMICALLY WELDED [250.68].
3. GROUND ELECTRODE FOR SEPARATELY DERIVED SYSTEMS SHALL BE THE NEAREST METAL WATER PIPE OR STRUCTURAL METAL. IF EITHER IS NOT AVAILABLE, PROVIDE GROUNDING CONDUCTOR BACK TO MAIN GROUND BUS AT SERVICE ENTRANCE.
4. PROVIDE A GROUND WIRE IN ALL CONDUITS.
5. EARTH SHALL NOT BE USED AS THE SOLE GROUND RETURN PATH FOR ANY EQUIPMENT POWERED UNDER THIS PROJECT. OTHERWISE OVERCURRENT PROTECTION MIGHT NOT WORK, OR IT MIGHT CAUSE POWER QUALITY PROBLEMS.
6. NO ALUMINUM SHALL BE USED FOR GROUNDING WORK WITHOUT THE SPECIFIC WRITTEN PERMISSION OF THE ENGINEER. EXCEPTION: ALUMINUM BUILDING STRUCTURAL MATERIALS SHALL BE BONDED WITH LISTED ALUMINUM EQUIPMENT WITH ALUMINUM TO COPPER CONNECTORS FOR ROUTING COPPER EGC'S.
7. ALL METAL ENCLOSURES AND RACEWAYS SHALL BE BONDED TO GROUND [250.86]. FOR CIRCUITS OVER 250V PROVIDE BOND PER [250.97], STANDARD LOCKNUTS ARE NOT ACCEPTABLE.
8. PROVIDE EGC CONNECTED TO ANY JUNCTION BOX WHERE SPLICE IS MADE [250.148].
9. PROVIDE BOND TO EXPOSED METAL ON ALL MOTORS, PUMPS, AND LIGHTING FIXTURES PER [250.112].

4 / E001 GROUNDING DETAIL
NOT TO SCALE

GENERAL ELECTRICAL NOTES

1. BRANCH CIRCUIT WIRING FOR 20A CIRCUITS SHALL BE SIZED PER WIRE SIZING CHART. WHERE CONDUCTOR AND RACEWAY SIZE ARE SHOWN AT HOMERUN, SUCH SIZE SHALL BE USED FOR THE ENTIRE CIRCUIT. EXCEPTION: FINAL CONNECTION TO DEVICES IN OUTLET BOXES IS NOT REQUIRED TO BE LARGER THAN #12.
2. RACEWAYS SHALL BE INSTALLED CONCEALED IN NEW WALL CONSTRUCTION, ABOVE CEILINGS, BELOW FLOOR AND IN OTHER CAVITIES TO THE GREATEST EXTENT POSSIBLE. EXPOSED RACEWAYS MAY BE USED IN UNFINISHED SPACES, WHERE EXPLICITLY NOTED ON PLANS AND WHERE APPROVED BY THE ARCHITECT AND ENGINEER. LAY OUT EXPOSED RACEWAYS TO MINIMIZE THE NUMBER OF VERTICAL RUNS.
3. FEEDER CONDUITS AND BRANCH CIRCUITS ROUTING SHALL COMPLY WITH DETAILS ON DRAWINGS AND SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES BEFORE AND DURING CONSTRUCTION.
4. A FIRESTOP SYSTEM SHALL BE USED TO SEAL ALL PENETRATIONS OF ELECTRICAL CONDUITS AND CABLES THROUGH FIRE-RATED PARTITIONS. THE FIRESTOP SYSTEM SHALL CONSIST OF A FIRE-RATED CAULK TYPE SUBSTANCE AND HIGH TEMPERATURE FIBER INSULATION BY STI OR APPROVED EQUAL. ONLY METAL CONDUIT SHALL BE USED TO PENETRATE FIRE-RATED PARTITIONS. SEE ARCHITECTURAL DRAWINGS FOR ALL LOCATIONS OF FIRE-RATED WALLS.
5. THE USE OF MC CABLE IS NOT ALLOWED, UNLESS NOTED OTHERWISE.
6. PROVIDE A LISTED EXPANSION/DEFLECTION FITTING FOR ALL CONDUIT CROSSING EXPANSION JOINTS PER NEC 300.4.H. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPANSION JOINTS.
7. WHEREVER THE WORD "PROVIDE" IS USED ON THE ELECTRICAL DRAWINGS, IT SHALL BE INFERRED TO MEAN "FURNISH AND INSTALL", UNLESS NOTED OTHERWISE.
8. REFER TO THE ARCHITECTURAL DRAWINGS FOR PROJECT PHASING.

GENERAL DEMOLITION NOTES

1. ALL ELECTRICAL EQUIPMENT TO BE REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIALS UNTIL RELEASED BY THE OWNER'S PROJECT MANAGER. MATERIALS THAT THE OWNER'S PROJECT MANAGER CHOOSES TO RETAIN SHALL BE DELIVERED BY THE CONTRACTOR TO A LOCATION DESIGNATED BY THE PROJECT MANAGER. ALL OTHER MATERIALS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.

GENERAL EXISTING CONDITION NOTES

1. AREAS OF WORK EXIST FOR THIS PROJECT WHICH WERE NOT ACCESSIBLE OR HAD LIMITED ACCESS DURING DESIGN. AS SUCH, CONTRACTOR SHALL VERIFY ALL UTILITIES IN AREA OF WORK BEFORE DEMOLITION OF ANY SERVICE. ANY ELECTRICAL COMPONENTS NOT SHOWN SHALL BE IDENTIFIED AND THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED AS SOON AS POSSIBLE. NO ELECTRICAL REWORK SHALL BE COMMENCED WITHOUT COORDINATION OF BOTH ARCHITECT AND ENGINEER. WHERE INFORMATION SHOWN ON THESE DRAWINGS CONFLICTS WITH VERIFIED FIELD CONDITIONS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER.
2. IN AREAS WHERE THE EXISTING CEILINGS ARE NOT SLATED TO BE REPLACED, THE CONTRACTOR SHALL WORK THROUGH THE EXISTING CEILINGS (SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR AREA OF WORK). THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY DAMAGED TILE OR GRID THAT IS A RESULT OF THEIR WORK. ALL WORK PERFORMED ABOVE EXISTING CEILINGS SHALL BE PERFORMED AFTER HOURS AND SCHEDULED WITH THE OWNER IN ADVANCE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A FIRESTOP SYSTEM IN ALL PENETRATIONS OF FIRE-RATED FLOORS AND WALLS CREATED BY THE REMOVAL OF EXISTING ELECTRICAL CONDUIT OR CABLES, AS WELL AS THOSE CREATED BY NEWLY INSTALLED CONDUITS AND SLEEVES.
4. WHERE INSTALLATION REQUIRES CUTTING OR DRILLING OF THE EXISTING FLOOR SLAB, THE CONTRACTOR SHALL X-RAY THE EXISTING SLAB PRIOR TO WORK TO ENSURE THAT NO EXISTING UTILITIES OR STRUCTURAL ELEMENTS IN THE SLAB WILL BE COMPROMISED BY THE WORK. NOTIFY THE A/E OF ANY CONFLICTS THAT WILL REQUIRE RELOCATING THE PROPOSED SLAB WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGED UTILITIES OR STRUCTURAL ELEMENTS CAUSED BY THE SLAB DEMOLITION.
5. SUPPORT ALL EXISTING CONDUITS AND JUNCTION BOXES ABOVE THE CEILING IN THE CONSTRUCTION AREA PER NEC.
6. REMOVE ALL ABANDONED CONDUIT, WIRE AND CABLES ABOVE THE CEILING IN THE CONSTRUCTION AREA.
7. PROVIDE JUNCTION BOX COVERS ON ALL EXISTING JUNCTION BOXES ABOVE THE CEILING IN THE CONSTRUCTION AREA.
8. SUPPORT ALL EXISTING CABLES ABOVE THE CEILING IN THE CONSTRUCTION AREA.

GENERAL HVAC CONTROLS CONDUIT NOTES

1. PROVIDE CONDUIT FOR HVAC CONTROL CIRCUITS AS REQUIRED TO INTERCONNECT HVAC UNIT TO CONTROL CIRCUITS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR AND CONTROLS PROVIDER TO DETERMINE SCOPE OF CONDUITS REQUIRED FOR HVAC CONTROLS. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUIT. COORDINATE POINTS OF CONNECTION WITH DIVISION 23. PROVIDE PULL CORD IN ALL EMPTY CONDUITS. SEE MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL HVAC EQUIPMENT (AHU, HP, CU, RTU, DUCT SMOKE DETECTORS, VAV, FCU, THERMOSTATS, ETC).
2. THESE DOCUMENTS MAY NOT INCLUDE ENTIRE ELECTRICAL INFRASTRUCTURE REQUIRED TO SUPPORT THE BUILDING AUTOMATION SYSTEM. COORDINATE WITH BAS PROVIDER ON ALL NECESSARY INFRASTRUCTURE FOR A COMPLETE AND WORKING SYSTEM.

GENERAL FIRE ALARM SYSTEM NOTES

1. THERE IS NOT FIRE ALARM SCOPE OF WORK ASSOCIATED WITH THIS PROJECT. ALL HVAC UNITS ARE BEING REPLACED IN KIND AND IT IS ASSUMED EXISTING DUCT MOUNTED SMOKE DETECTORS ARE CURRENTLY INSTALLED IN ALL DUCTWORK WHERE REQUIRED BY UNIT CFM. IF EXISTING DUCT MOUNTED SMOKE DETECTORS ARE TEMPORARILY REMOVED/REINSTALLED DURING UNIT REPLACEMENT OR ARE ALTERED IN ANY WAY, THE EXISTING FIRE ALARM SYSTEM SHALL BE RECERTIFIED UPON COMPLETION OF WORK.

ELECTRICAL ABBREVIATIONS	
ABBR	DESCRIPTION
(E)	EXISTING
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
BAS	BUILDING AUTOMATION SYSTEM
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
BOD	BOTTOM OF DEVICE
CBB	COMMUNICATIONS BACKBOARD
cd	CANDELA
CGB	COMMUNICATIONS GROUNDING BUSBAR
CLG	CEILING
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FDS	FUSED DISCONNECT SWITCH
GBB	GROUND BUSBAR
GFCI	GROUND-FAULT CIRCUIT-INTERRUPTING
GFI	GROUND-FAULT INTERRUPTING
GP	GENERAL PURPOSE
HP	HEAT PUMP
ICP	IRRIGATION CONTROL PANEL
IG	ISOLATED GROUND
J-BOX	JUNCTION BOX
KW	KILOWATTS
MCGB	MAIN COMMUNICATIONS GROUNDING BUSBAR
NEC	NATIONAL ELECTRICAL CODE
NFDS	NON-FUSED DISCONNECT SWITCH
OC	ON CENTER
RTU	ROOF TOP UNIT
UNO	UNLESS NOTED OTHERWISE
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER
CONTROL PANELS	**DESCRIPTION**
BMS	BUILDING MANAGEMENT (AUTOMATION) SYSTEM

POWER AND TELECOMMUNICATIONS SYMBOL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	
ⓅX	JUNCTION BOX (WALL MOUNTED) "X" INDICATES JUNCTION BOX TYPE	▬	PANELBOARD - BRANCH, SURFACE MOUNTED
ⓅX	JUNCTION BOX (CEILING MOUNTED) "X" INDICATES JUNCTION BOX TYPE	▬	PANELBOARD - BRANCH, FLUSH MOUNTED
⊓	DISCONNECT SWITCH (FUSIBLE OR NON-FUSIBLE)	⊠	TRANSFORMER
■	SWITCHBOARD		

ELECTRICAL CODES AND STANDARDS (WITH ALL SOUTH CAROLINA MODIFICATIONS)	
CODE	DESCRIPTION
IBC (2018)	INTERNATIONAL BUILDING CODE
IECC (2009)	INTERNATIONAL ENERGY CONSERVATION CODE
IFC (2018)	INTERNATIONAL FIRE CODE
NFPA 70 (2017)	NATIONAL ELECTRICAL CODE
NFPA 72 (2016)	NATIONAL FIRE ALARM AND SIGNALING CODE

WIRE SIZING CHART 20 AMP BRANCH CIRCUITS	
DISTANCE, 120V	MINIMUM WIRE SIZE
0 - 90 FEET	#12 AWG
90 - 230 FEET	#10 AWG
230 - 446 FEET	#8 AWG
DISTANCE, 277V	MINIMUM WIRE SIZE
0 - 209 FEET	#12 AWG
209 - 533 FEET	#10 AWG
533 - 1033 FEET	#8 AWG

LINE LEGEND	
SYMBOL	DESCRIPTION
———	EXISTING TO REMAIN
———	NEW CONSTRUCTION
– – – – –	DEMOLISH

EQUIPMENT CONNECTION SCHEDULE

	UNIT I.D.	VOLTS	# OF POLES	LOAD (VA)	BRANCH CIRCUIT WIRING	DISCONNECT / STARTER	CIRCUIT BREAKER
	ERV						
	ERV-9	208 V	3	7997	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	35A
	ERV-11	208 V	2	3744	2#10, 1#10G, 3/4"C	NFDS 30/2/4X	25A
	RTU-8	208 V	3	28100	3#3, 1#8G, 1-1/4"C	NFDS 100/3/4X	100A
	PHP						
	CHP-1	208 V	3	17148	3#8, 1#10G, 3/4"C	NFDS 60/3/1	50A
	CHP-2	208 V	3	17220	3#8, 1#10G, 3/4"C	NFDS 60/3/1	50A
	CHP-3	208 V	3	17220	3#8, 1#10G, 3/4"C	NFDS 60/3/1	50A
	CHP-4	208 V	3	12861	3#8, 1#10G, 3/4"C	NFDS 60/3/1	40A
	CHP-5	208 V	3	12861	3#8, 1#10G, 3/4"C	NFDS 60/3/1	40A
	CHP-6	208 V	3	12861	3#8, 1#10G, 3/4"C	NFDS 60/3/1	40A
	CHP-7	208 V	3	12861	3#8, 1#10G, 3/4"C	NFDS 60/3/1	40A
	CHP-8	208 V	3	12861	3#8, 1#10G, 3/4"C	NFDS 60/3/1	40A
	CHP-9	208 V	3	12861	3#8, 1#10G, 3/4"C	NFDS 60/3/1	40A
	CHP-10	208 V	3	17148	3#8, 1#10G, 3/4"C	NFDS 60/3/1	50A
	CHP-11	208 V	3	17148	3#8, 1#10G, 3/4"C	NFDS 60/3/1	50A
	ROOFTOP UNITS						
	RTU-1	208 V	3	15491	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	50A
	RTU-2	208 V	3	15491	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	50A
	RTU-3	208 V	2	5408	3#10, 1#10G, 3/4"C	NFDS 30/2/4X	30A
	RTU-4	208 V	2	5408	3#10, 1#10G, 3/4"C	NFDS 30/2/4X	30A
	RTU-5	208 V	3	15491	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	50A
	RTU-6	208 V	3	15131	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	50A
	RTU-7	208 V	3	15131	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	50A
	RTU-11	208 V	3	30622	3#3, 1#8G, 1-1/4"C	NFDS 100/3/4X	100A
	SPLIT SYSTEMS						
	AH-1	208 V	3	13171	3#8, 1#10G, 3/4"C	NFDS 60/3/1	50A
1	AH-2	208 V	2	11024	2#6, 1#10G, 3/4"C	NFDS 60/2/1	60A
	AH-3	208 V	2	5980	2#10, 1#10G, 3/4"C	NFDS 30/2/1	25A
	AH-4	208 V	3	13171	3#8, 1#10G, 3/4"C	NFDS 60/3/1	50A
	AH-5	208 V	2	6614	2#8, 1#10G, 3/4"C	NFDS 60/2/1	40A
	AH-6	208 V	2	4180	2#10, 1#10G, 3/4"C	NFDS 30/2/1	25A
	AH-7	208 V	2	7009	2#8, 1#10G, 3/4"C	NFDS 60/2/1	45A
	AH-8	208 V	2	11024	2#6, 1#10G, 1"C	NFDS 60/2/1	60A
	AH-9	208 V	2	3452	2#10, 1#10G, 3/4"C	NFDS 30/2/1	25A
	AH-10	208 V	2	4180	2#10, 1#10G, 3/4"C	NFDS 30/2/1	25A
	AH-11	208 V	2	4180	2#10, 1#10G, 3/4"C	NFDS 30/2/1	25A
	AH-13	208 V	2	6614	2#8, 1#10G, 3/4"C	NFDS 60/2/1	40A
	AH-15	208 V	2	3452	2#10, 1#10G, 3/4"C	NFDS 30/2/1	25A
	AH-17	208 V	2	7508	2#8, 1#10G, 3/4"C	NFDS 60/2/1	45A
	HP-1	208 V	3	10808	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	50A
	HP-2	208 V	3	7565	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	35A
	HP-3	208 V	2	2496	2#12, 1#12G, 3/4"C	NFDS 30/2/4X	20A
	HP-4	208 V	3	11528	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	40A
	HP-5	208 V	2	3744	2#10, 1#10G, 3/4"C	NFDS 30/2/4X	30A
	HP-6	208 V	2	2912	2#10, 1#10G, 3/4"C	NFDS 30/2/4X	25A
	HP-7	208 V	2	4992	2#8, 1#10G, 3/4"C	NFDS 60/2/4X	40A
	HP-8	208 V	3	7565	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	35A
	HP-9	208 V	2	2912	2#10, 1#10G, 3/4"C	NFDS 30/2/4X	25A
	HP-10	208 V	2	3536	2#10, 1#10G, 3/4"C	NFDS 30/2/4X	25A
	HP-11	208 V	2	3536	2#10, 1#10G, 3/4"C	NFDS 30/2/4X	25A
	HP-13	208 V	2	3744	2#10, 1#10G, 3/4"C	NFDS 30/2/4X	30A
	HP-15	208 V	2	2912	2#10, 1#10G, 3/4"C	NFDS 30/2/4X	25A
	HP-17	208 V	2	4576	2#8, 1#10G, 3/4"C	NFDS 60/2/4X	35A

EQUIPMENT CONNECTION SCHEDULE GENERAL NOTES:

1. ALL HVAC UNITS IN THIS SCHEDULE ARE INTENDED TO REPLACE THE EXISTING HVAC UNIT IN THE SAME LOCATION. EXISTING CONDUIT AND CONDUCTORS SHALL REMAIN AND BE EXTENDED IN KIND TO NEW DISCONNECT LOCATION. IF EXISTING CONDUCTOR/CONDUIT OR CIRCUIT BREAKER SIZES SHOWN ON THIS SCHEDULE DIFFER IN THE FIELD, NOTIFY ENGINEER FOR DIRECTION. REFER TO ADDITIONAL NOTES ON RENOVATION DRAWINGS.

EQUIPMENT CONNECTION SCHEDULE KEY NOTES:

1. THIS AIR HANDLER REPLACES AN EXISTING 3 PHASE AIR HANDLER AND WILL REQUIRE A NEW CIRCUIT. DEMOLISH EXISTING CIRCUIT BACK TO SOURCE PANELBOARD AND PROVIDE NEW CIRCUIT.

SOUTH CAROLINA — DWG, INC. CONSULTING ENGINEERS No.C03649 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — No. 17614 — 6/6/2022 — PHILIP M. DALPIAZ, JR.

DWG CONSULTING ENGINEERS EMPLOYEE OWNED

UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
4003 SOUTH FRASER ST.
GEORGETOWN, SC 29440

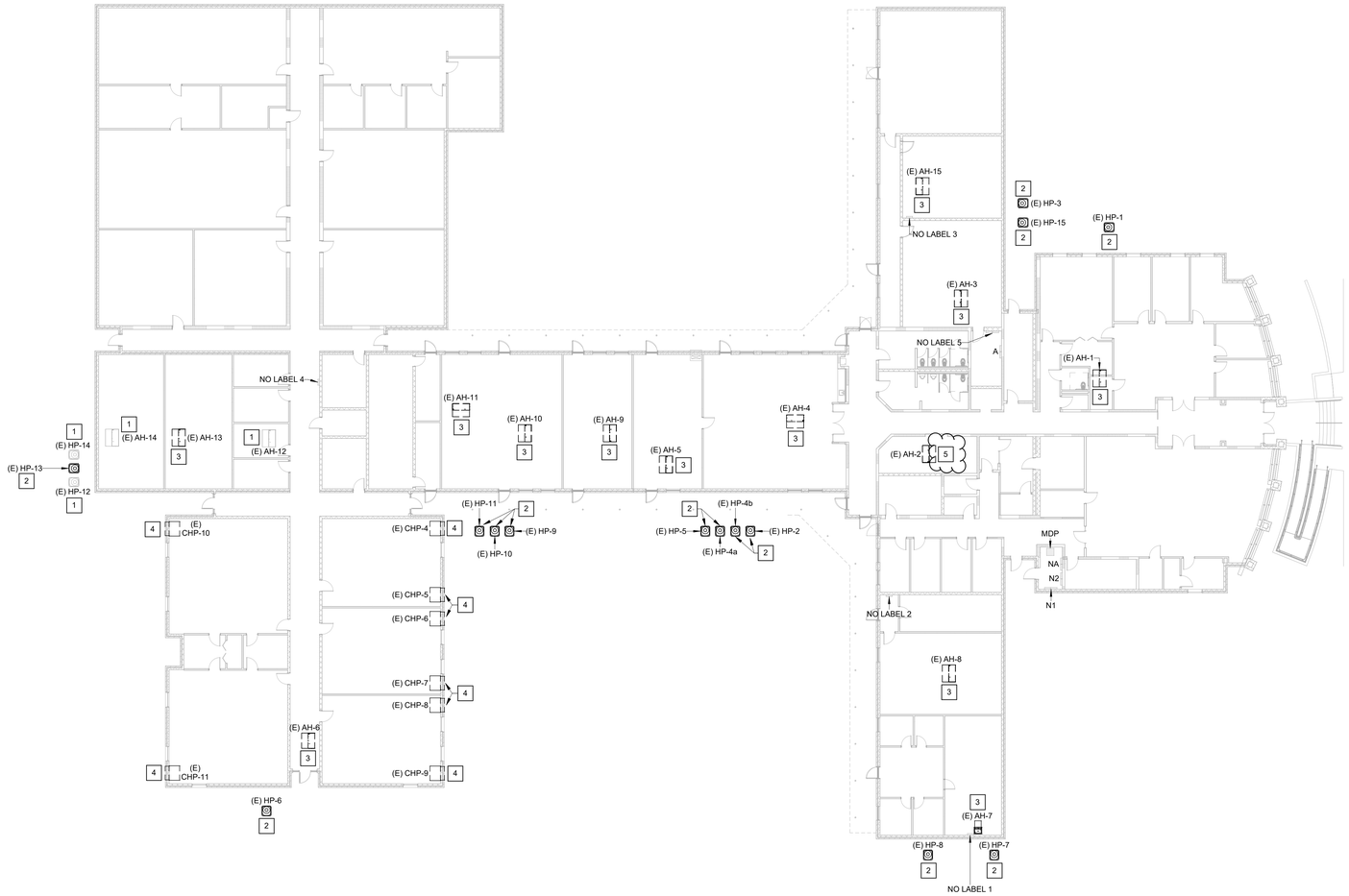
ELECTRICAL NOTES

REV

JOB No. H59-6212-ML
DATE: 6/6/2022
DRAWN BY: SPW
CHECKED BY: PMD
SHEET NUMBER

E001

PLOT DATE: 6/6/2022



1 ED101 FIRST FLOOR ELECTRICAL DEMOLITION PLAN
SCALE: 1/16" = 1'-0"

KEYNOTES

1. EXISTING HVAC UNIT SHALL REMAIN AND BE REUSED.
2. EXISTING HEAT PUMP AND ASSOCIATED DISCONNECT SWITCH SHALL BE DISCONNECTED AND REMOVED. EXISTING WIRING AND CONDUIT SHALL REMAIN FOR REUSE AND SUBSEQUENT RECONNECTION TO NEW HVAC EQUIPMENT.
3. EXISTING AIR HANDLER AND ASSOCIATED DISCONNECT SWITCH SHALL BE DISCONNECTED AND REMOVED. EXISTING WIRING AND CONDUIT SHALL REMAIN FOR REUSE AND SUBSEQUENT RECONNECTION TO NEW HVAC EQUIPMENT.
4. EXISTING PACKAGED WALL MOUNTED HEAT PUMP AND ASSOCIATED DISCONNECT SWITCH SHALL BE DISCONNECTED AND REMOVED. EXISTING WIRING AND CONDUIT SHALL REMAIN FOR REUSE AND SUBSEQUENT RECONNECTION TO NEW HVAC EQUIPMENT.
5. EXISTING AIR HANDLER AND ASSOCIATED DISCONNECT SWITCH SHALL BE DISCONNECTED AND REMOVED. PULL WIRING BACK TO SOURCE. EXISTING UNUSED CONDUIT MAY BE ABANDONED IN PLACE.

GENERAL NOTES

1. ALL EXISTING CONDITIONS SHOWN ARE BASED ON A COMBINATION OF AS-BUILT DRAWINGS AND SITE OBSERVATIONS AND SHALL BE VERIFIED WITH ACTUAL FIELD CONDITIONS.

GRAPHIC SCALE
0 8' 16' 32' 64'
Scale: 1/16" = 1'-0"

SOUTH CAROLINA
DWG, INC.
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CERTIFICATE OF AUTHORIZATION

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No. 17614
6/6/2022
PHILIP M. DALPIAZ, JR.
REGISTERED PROFESSIONAL ENGINEER

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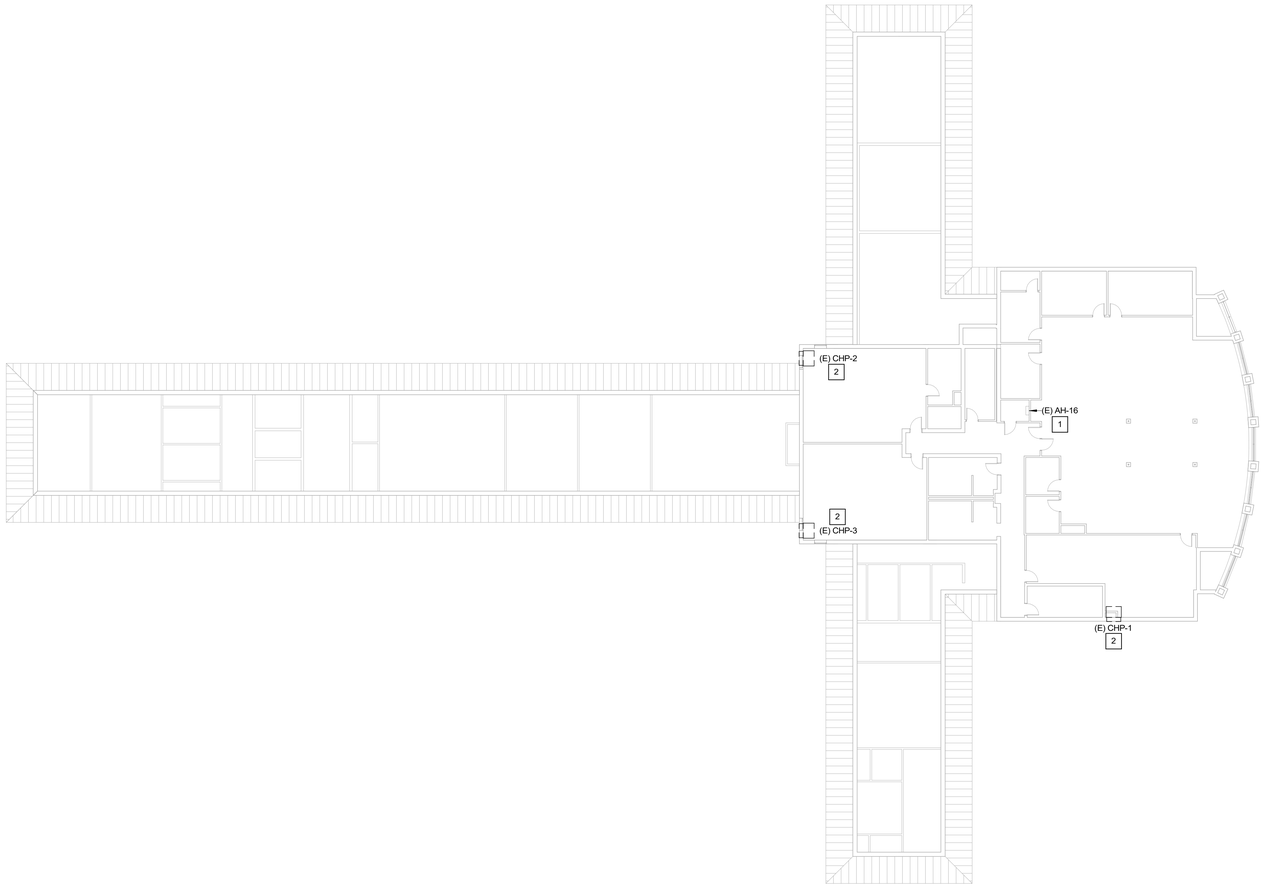
BUILDING 100
4003 SOUTH FRASER ST.
GEORGETOWN, SC 29440

FIRST FLOOR ELECTRICAL DEMOLITION PLAN

REV

JOB No.	H59-6212-ML
DATE:	6/6/2022
DRAWN BY:	SPW
CHECKED BY:	PMD
SHEET NUMBER	ED101

PLOT DATE: 6/6/2022



1 / ED201 SECOND FLOOR ELECTRICAL DEMOLITION PLAN
SCALE: 1/16" = 1'-0"

KEYNOTES

1 EXISTING HVAC UNIT SHALL REMAIN AND BE REUSED.

2 EXISTING PACKAGED WALL MOUNTED HEAT PUMP AND ASSOCIATED DISCONNECT SWITCH SHALL BE DISCONNECTED AND REMOVED. EXISTING WIRING AND CONDUIT SHALL REMAIN FOR REUSE AND SUBSEQUENT RECONNECTION TO NEW HVAC EQUIPMENT.

GENERAL NOTES

1. ALL EXISTING CONDITIONS SHOWN ARE BASED ON A COMBINATION OF AS-BUILT DRAWINGS AND SITE OBSERVATIONS AND SHALL BE VERIFIED WITH ACTUAL FIELD CONDITIONS.

N

GRAPHIC SCALE
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Scale: 1/16" = 1'-0"

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PHILIP M. DALPIAZ, JR.
REGISTERED PROFESSIONAL ENGINEER

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CONSULTING ENGINEERS
EMPLOYEE OWNED

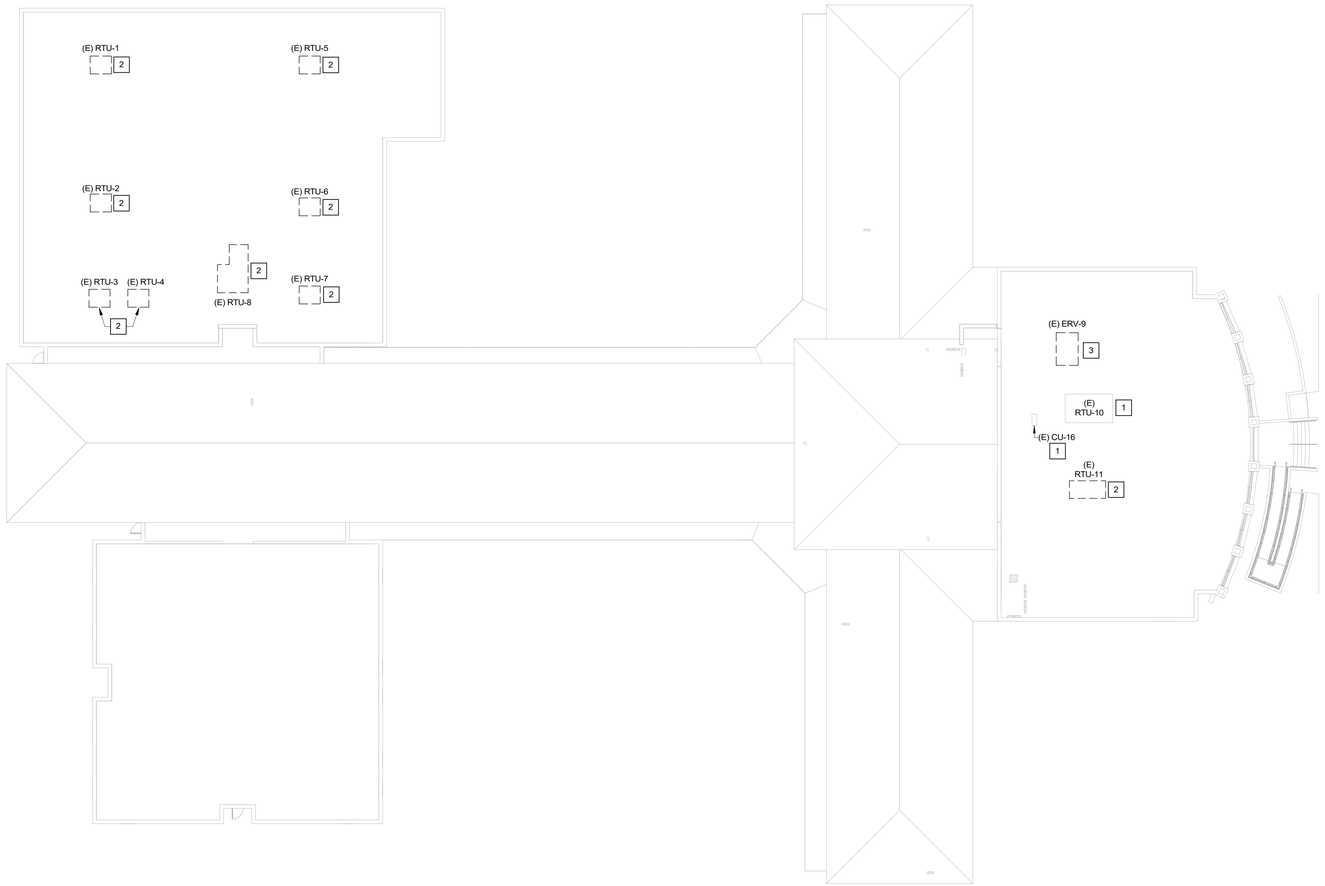
UPGRADE AND REPLACE HVAC UNITS ON GEORGETOWN BUILDING 100
400 SOUTH FRASER ST.
GEORGETOWN, SC 29440

SECOND FLOOR ELECTRICAL DEMOLITION PLAN

REV

JOB No.	H59-6212-ML
DATE:	6/6/2022
DRAWN BY:	SPW
CHECKED BY:	PMD
SHEET NUMBER	ED201

PLOT DATE: 6/6/2022



1 ED301 ROOF ELECTRICAL DEMOLITION PLAN
SCALE: 1/16" = 1'-0"

KEYNOTES

1 EXISTING HVAC UNIT SHALL REMAIN AND BE REUSED.

2 EXISTING ROOFTOP UNIT AND ASSOCIATED DISCONNECT SWITCH SHALL BE DISCONNECTED AND REMOVED. EXISTING WIRING AND CONDUIT SHALL REMAIN FOR REUSE AND SUBSEQUENT RECONNECTION TO NEW HVAC EQUIPMENT.

3 EXISTING ERV AND ASSOCIATED DISCONNECT SWITCH SHALL BE DISCONNECTED AND REMOVED. EXISTING WIRING AND CONDUIT SHALL REMAIN FOR REUSE AND SUBSEQUENT RECONNECTION TO NEW HVAC EQUIPMENT.

GENERAL NOTES

1. ALL EXISTING CONDITIONS SHOWN ARE BASED ON A COMBINATION OF AS-BUILT DRAWINGS AND SITE OBSERVATIONS AND SHALL BE VERIFIED WITH ACTUAL FIELD CONDITIONS.

N

GRAPHIC SCALE
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Scale: 1/16" = 1'-0"

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EMPLOYEE OWNED

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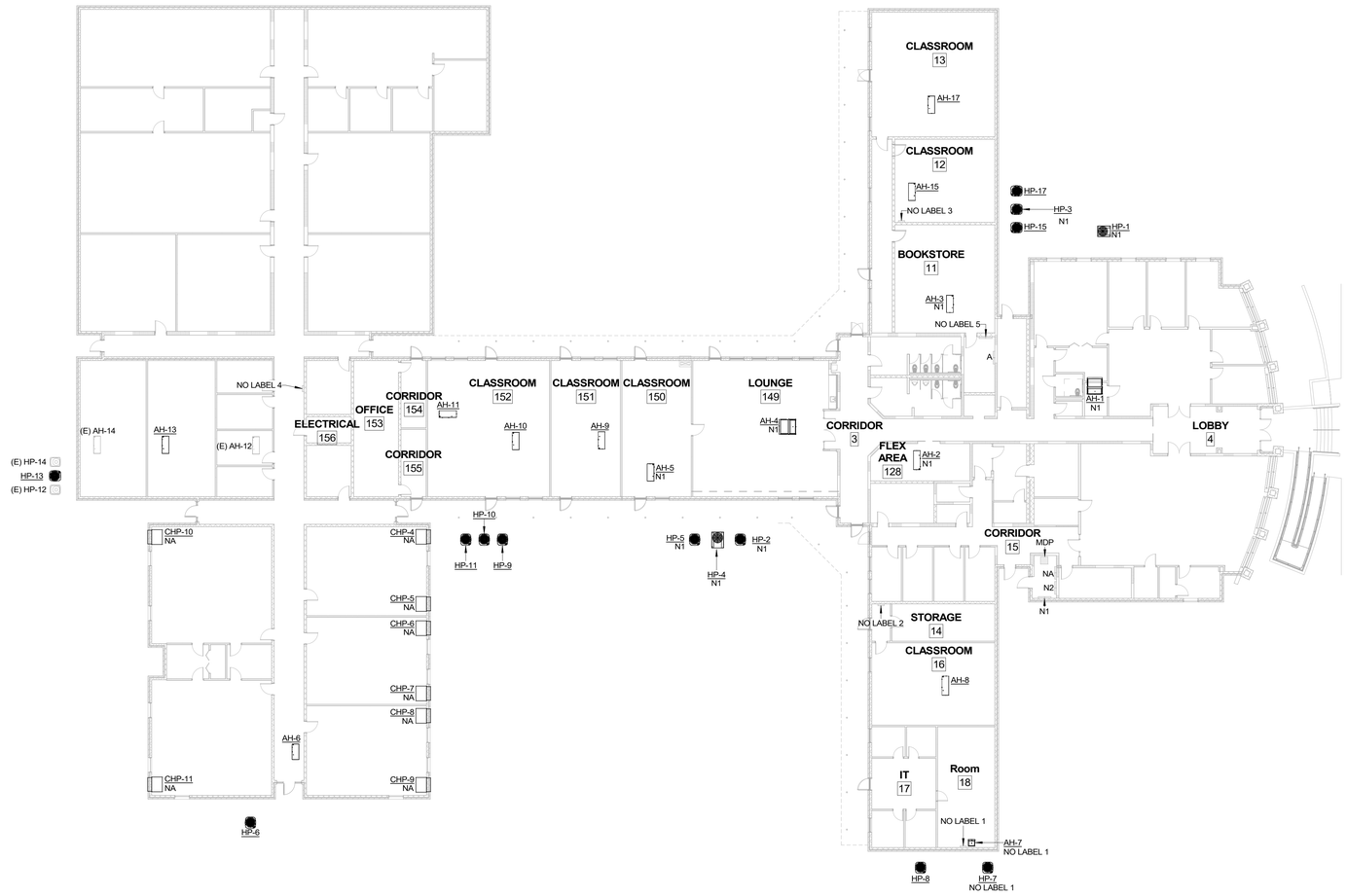
GEORGETOWN, SC 29440

ROOF ELECTRICAL DEMOLITION PLAN

REV

JOB No.	H59-6212-ML
DATE:	6/6/2022
DRAWN BY:	SPW
CHECKED BY:	PMD
SHEET NUMBER	ED301

PLOT DATE: 6/6/2022



1 / E101 FIRST FLOOR ELECTRICAL RENOVATION PLAN

SCALE: 1/16" = 1'-0"

KEYNOTES

GENERAL NOTES

1. ALL EXISTING CONDITIONS SHOWN ARE BASED ON A COMBINATION OF AS-BUILT DRAWINGS AND SITE OBSERVATIONS AND SHALL BE VERIFIED WITH ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL MAKE MINOR MODIFICATIONS SUCH AS LOCATION AS REQUIRED BY ACTUAL FIELD CONDITIONS. ANY MAJOR DISCREPENCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
2. CONTRACTOR SHALL LOCATE SOURCE OF EXISTING CIRCUITS FEEDING ALL HVAC UNITS SHOWN. VERIFY EXISTING CONDUIT AND CONDUCTORS ARE OF ADEQUATE SIZE TO FEED NEW HVAC UNITS. IN THE EVENT THAT LARGER CONDUIT/CONDUCTOR SIZES ARE REQUIRED, ROUTE NEW CIRCUIT TO HVAC UNIT LOCATION FROM SOURCE PANELBOARD AND REPLACE EXISTING CIRCUIT BREAKER IN EXISTING PANELBOARDS FEEDING THESE UNITS PER THE EQUIPMENT CONNECTION SCHEDULE.
3. WHERE KNOWN, PANELBOARD DESIGNATIONS SERVING THAT SERVED DEMOLISHED HVAC UNITS ARE PROVIDED ADJACENT TO NEW EQUIPMENT ANNOTATIONS. VERIFY ACTUAL PANELBOARD ORIGINATION AND CIRCUIT BREAKER LOCATION WITHIN PANELBOARD WITH ACTUAL FIELD CONDITIONS. WHERE NO PANELBOARD DESIGNATIONS ARE SHOWN, CONTRACTOR SHALL LOCATE SOURCE PER NOTE 3.
4. ALL PANELBOARDS SHOWN ARE EXISTING.
5. FIELD MODIFICATIONS TO EXISTING PANEL SCHEDULES HAVE MADE IT DIFFICULT TO VERIFY WITH CERTAINTY WHICH HVAC UNIT IS SERVED FROM WHICH CIRCUIT BREAKER IN ALL PANELBOARDS. CONTRACTOR SHALL TEST EACH CIRCUIT SERVING HVAC UNITS BEING REPLACED AND VERIFY CONDUIT, CONDUCTOR, AND BREAKER SIZING IS APPROPRIATE FOR NEW HVAC UNITS REPLACING THOSE BEING DEMOLISHED. NOTIFY ENGINEER OF DEVIATIONS FROM DRAWINGS.

N

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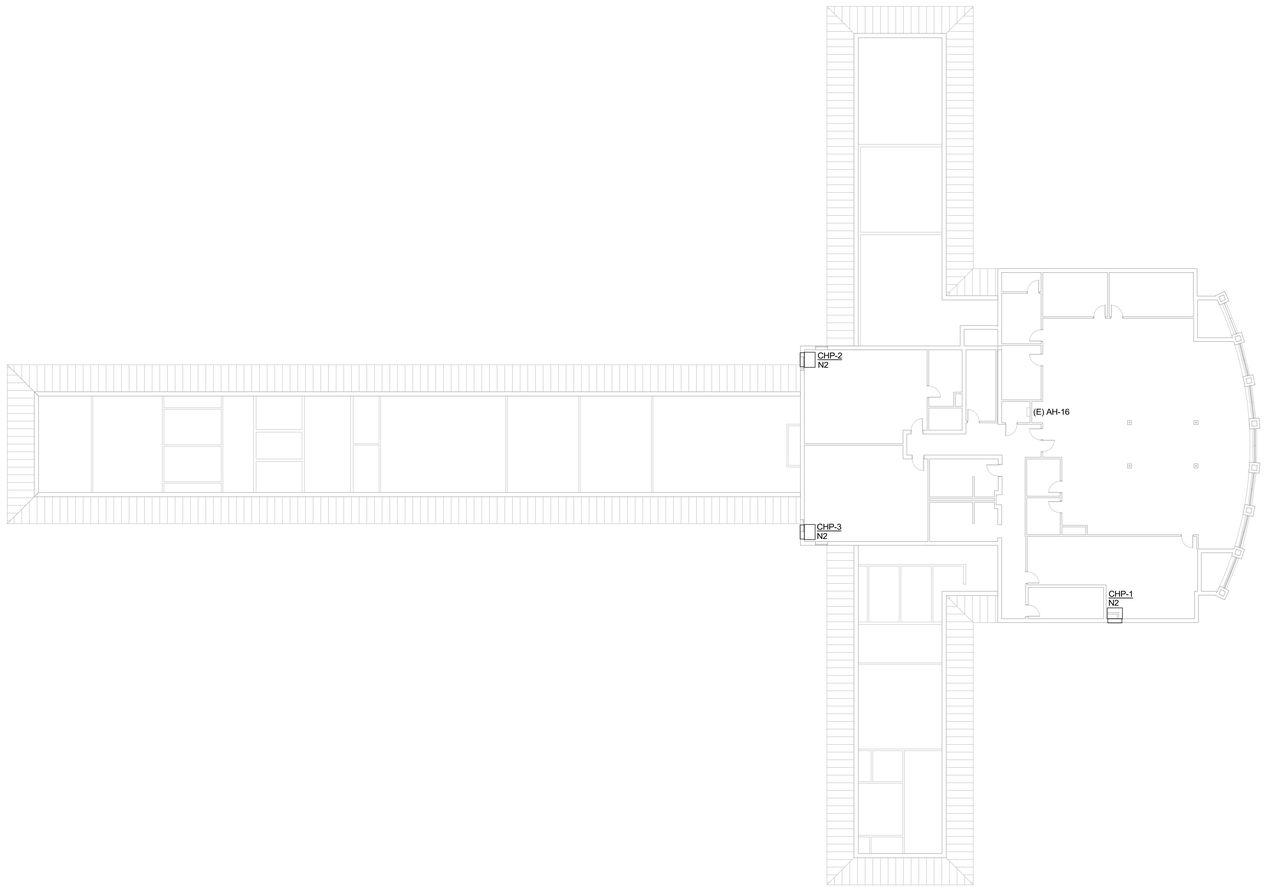
GEORGETOWN, SC 29440

FIRST FLOOR ELECTRICAL RENOVATION PLAN

REV

JOB No.	H59-6212-ML
DATE:	6/6/2022
DRAWN BY:	SPW
CHECKED BY:	PMD
SHEET NUMBER	E101

PLOT DATE: 6/6/2022



1 / E201 SECOND FLOOR ELECTRICAL RENOVATION PLAN
SCALE: 1/16" = 1'-0"

KEYNOTES

GENERAL NOTES

1. ALL EXISTING CONDITIONS SHOWN ARE BASED ON A COMBINATION OF AS-BUILT DRAWINGS AND SITE OBSERVATIONS AND SHALL BE VERIFIED WITH ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL MAKE MINOR MODIFICATIONS SUCH AS LOCATION AS REQUIRED BY ACTUAL FIELD CONDITIONS. ANY MAJOR DISCREPENCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
2. CONTRACTOR SHALL LOCATE SOURCE OF EXISTING CIRCUITS THAT FEED ALL NEW HVAC UNITS SHOWN. VERIFY EXISTING CONDUIT AND CONDUCTORS ARE OF ADEQUATE SIZE TO FEED NEW HVAC UNITS. IN THE EVENT THAT LARGER CONDUIT/CONDUCTOR SIZES ARE REQUIRED, ROUTE NEW CIRCUIT TO HVAC UNIT LOCATION FROM SOURCE PANELBOARD AND REPLACE EXISTING CIRCUIT BREAKER IN EXISTING PANELBOARDS FEEDING THESE UNITS PER THE EQUIPMENT CONNECTION SCHEDULE.
3. WHERE KNOWN, PANELBOARD DESIGNATIONS SERVING DEMOLISHED HVAC UNITS ARE PROVIDED ADJACENT TO NEW EQUIPMENT ANNOTATIONS. VERIFY ACTUAL PANELBOARD ORIGINATION AND CIRCUIT BREAKER LOCATION WITHIN PANELBOARD WITH ACTUAL FIELD CONDITIONS. WHERE NO PANELBOARD DESIGNATIONS ARE SHOWN, CONTRACTOR SHALL LOCATE SOURCE PER NOTE 3.
4. ALL PANELBOARDS SHOWN ARE EXISTING.
5. FIELD MODIFICATIONS TO EXISTING PANEL SCHEDULES HAVE MADE IT DIFFICULT TO VERIFY WITH CERTAINTY WHICH HVAC UNIT IS SERVED FROM WHICH CIRCUIT BREAKER IN ALL PANELBOARDS. CONTRACTOR SHALL TEST EACH CIRCUIT SERVING HVAC UNITS BEING REPLACED AND VERIFY CONDUIT, CONDUCTOR, AND BREAKER SIZING IS APPROPRIATE FOR NEW HVAC UNITS REPLACING THOSE BEING DEMOLISHED. NOTIFY ENGINEER OF DEVIATIONS FROM DRAWINGS.

N

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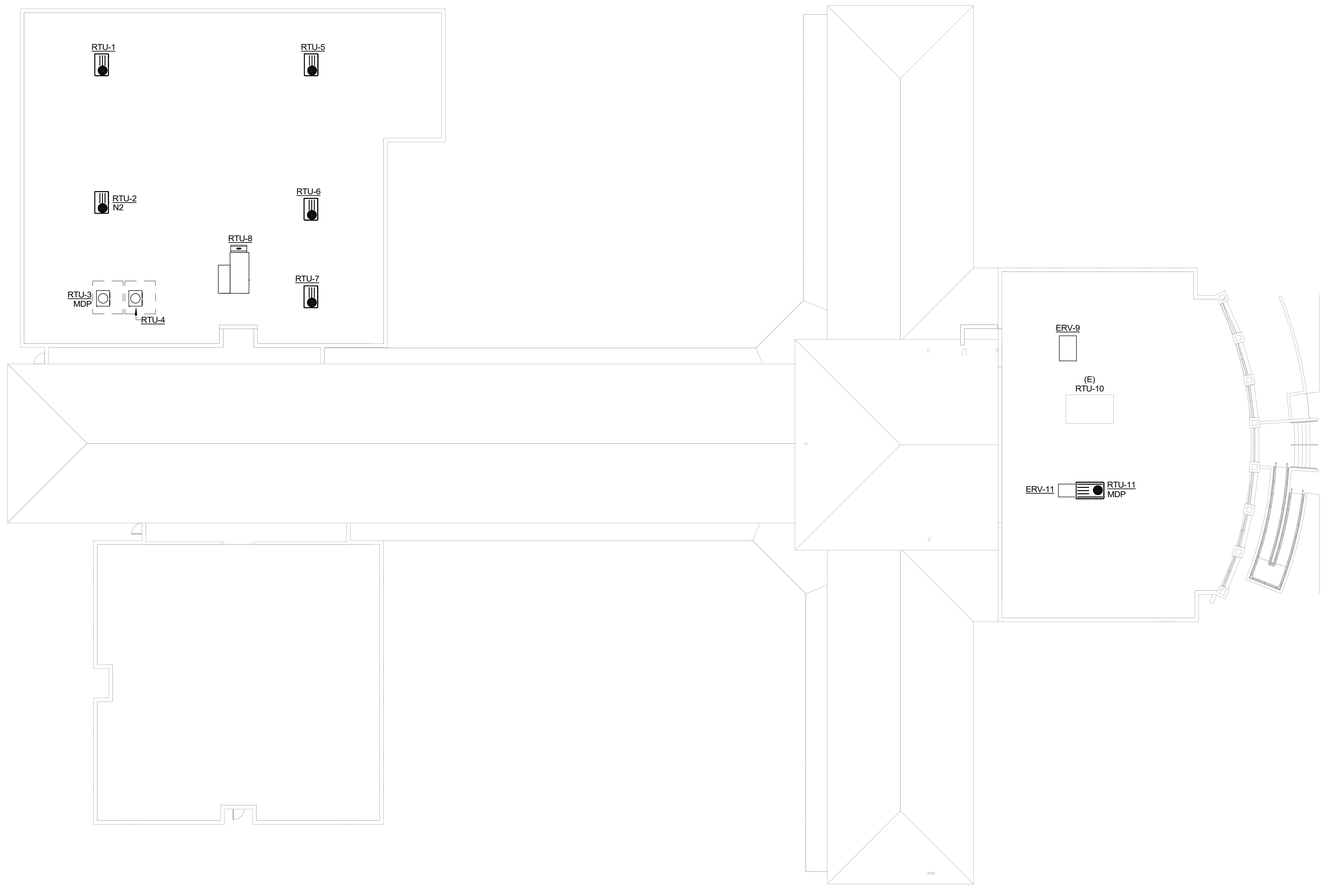
GEORGETOWN, SC 29440

SECOND FLOOR ELECTRICAL RENOVATION PLAN

REV	
JOB No.	H59-6212-ML
DATE:	6/6/2022
DRAWN BY:	SPW
CHECKED BY:	PMD
SHEET NUMBER	E201

PLOT DATE: 6/6/2022



1 / E301 ROOF ELECTRICAL RENOVATION PLAN
SCALE: 1/16" = 1'-0"

KEYNOTES

GENERAL NOTES

1. ALL EXISTING CONDITIONS SHOWN ARE BASED ON A COMBINATION OF AS-BUILT DRAWINGS AND SITE OBSERVATIONS AND SHALL BE VERIFIED WITH ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL MAKE MINOR MODIFICATIONS SUCH AS LOCATION AS REQUIRED BY ACTUAL FIELD CONDITIONS. ANY MAJOR DISCREPENCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
2. ALL RTU-# UNITS BEING REPLACED SHALL BE WIRED THROUGH ROOF CURB. SEAL UNUSED ROOF PENETRATIONS FROM PREVIOUS CONDUIT AND CONTROLS FEEDS WHERE APPLICABLE.
3. CONTRACTOR SHALL LOCATE SOURCE OF EXISTING CIRCUITS THAT FEED ALL NEW HVAC UNITS SHOWN. VERIFY EXISTING CONDUIT AND CONDUCTORS ARE OF ADEQUATE SIZE TO FEED NEW HVAC UNITS. IN THE EVENT THAT LARGER CONDUIT/CONDUCTOR SIZES ARE REQUIRED, ROUTE NEW CIRCUIT TO HVAC UNIT LOCATION FROM SOURCE PANELBOARD AND REPLACE EXISTING CIRCUIT BREAKER IN EXISTING PANELBOARDS FEEDING THESE UNITS PER THE EQUIPMENT CONNECTION SCHEDULE.
4. WHERE KNOWN, PANELBOARD DESIGNATIONS SERVING DEMOLISHED HVAC UNITS ARE PROVIDED ADJACENT TO NEW EQUIPMENT ANNOTATIONS. VERIFY ACTUAL PANELBOARD ORIGINATION AND CIRCUIT BREAKER LOCATION WITHIN PANELBOARD WITH ACTUAL FIELD CONDITIONS. WHERE NO PANELBOARD DESIGNATIONS ARE SHOWN, CONTRACTOR SHALL LOCATE SOURCE PER NOTE 3.
5. LIQUID TIGHT FLEXIBLE METAL CONDUIT ASSOCIATED WITH EXISTING CIRCUITS SERVING NEW HVAC UNITS SHALL BE REPLACED.
6. FIELD MODIFICATIONS TO EXISTING PANEL SCHEDULES HAVE MADE IT DIFFICULT TO VERIFY WITH CERTAINTY WHICH HVAC UNIT IS SERVED FROM WHICH CIRCUIT BREAKER IN ALL PANELBOARDS. CONTRACTOR SHALL TEST EACH CIRCUIT SERVING HVAC UNITS BEING REPLACED AND VERIFY CONDUIT, CONDUCTOR, AND BREAKER SIZING IS APPROPRIATE FOR NEW HVAC UNITS REPLACING THOSE BEING DEMOLISHED. NOTIFY ENGINEER OF DEVIATIONS FROM DRAWINGS.

N

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ROOF ELECTRICAL RENOVATION PLAN

REV

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SHEET NUMBER	E301

PLOT DATE: 6/6/2022