

**NOTES**

- PROVIDE ALL MATERIALS AND LABOR FOR COMPLETE AND PROPERLY FUNCTIONING MECHANICAL SYSTEMS. WARRANTY ALL WORK AND ALL MATERIALS, EQUIPMENT AND DEVICES FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE.
- WORK SHALL CONFORM TO OR MEET THE REQUIREMENTS OF THE MOST CURRENT EDITION OF:
  - A: INTERNATIONAL MECHANICAL CODE – 2015
  - B: SMACNA
  - C: ASHRAE
  - D: ALL FEDERAL, STATE AND LOCAL CODES AND ORDINANCES WHICH APPLY TO THIS WORK.
- DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO BE SCALED FOR DIMENSIONS.
- ALL MATERIALS, EQUIPMENT AND DEVICES SHALL MEET THE REQUIREMENTS OF UL WHERE UL STANDARDS ARE ESTABLISHED FOR THOSE ITEMS. ALL ITEMS SHALL BE CLASSIFIED BY UL AS SUITABLE FOR THE PURPOSE USED.
- ALL ITEMS SHALL BE NEW AND ALL MATERIALS/EQUIPMENT/DEVICES SHALL BE CURRENT PRODUCTS BY MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS.
- COORDINATE LOCATION OF MECHANICAL WORK WITH OTHER TRADES TO AVOID CONFLICTS AND INTERFERENCES.
- INSTALL ALL EQUIPMENT AND MATERIAL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN, PRINTED INSTRUCTIONS AND RECOMMENDATIONS.
- PROVIDE OWNER WITH CERTIFICATES OF FINAL INSPECTIONS AND ACCEPTANCE FROM AUTHORITY HAVING JURISDICTION.
- MAKE CONNECTIONS FROM MECHANICAL EQUIPMENT TO DUCTWORK USING FLEXIBLE DUCT CONNECTIONS.
- ALL EQUIPMENT, PIPE AND DUCTWORK ABOVE CEILING SHALL BE SUPPORTED FROM BUILDING STRUCTURE ABOVE.
- DUCT SIZES INDICATED ARE NET FREE INSIDE DIMENSIONS OF RECTANGULAR METAL DUCT. AT CONTRACTOR'S OPTION, EQUIVALENT SIZE ROUND DUCT MAY BE USED.
- PROVIDE FLOAT SWITCH IN ALL SECONDARY DRAIN PANS TO SHUT OFF UNITS WHEN DRAINS BECOME OBSTRUCTED.
- FURNISH AND INSTALL ALL MANUAL DAMPERS INDICATED ON DRAWINGS OR NECESSARY TO PROPERLY DISTRIBUTE AND BALANCE AIR. ALL INACCESSIBLE VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE CONCEALED DAMPER ACTUATORS.
- BALANCE SYSTEM TO AIR FLOWS SHOWN ON FLOOR PLAN. PROVIDE THIRD PARTY TEST AND BALANCE REPORT TO ENGINEER FOR APPROVAL.
- WHERE PIPES PENETRATE FIRE RATED WALLS, FLOORS OR CEILING, SEAL OPENING AROUND PIPES WITH U.L. LISTED FIRE STOPPING MATERIAL TO MAINTAIN THE FIRE RATING OF THE WALL, FLOOR OR CEILING IN ACCORDANCE WITH U.L. LISTED DESIGN. SUBMIT U.L. DESIGN FOR FIRE RATED PENETRATIONS SEALS TO ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO START OF WORK.
- ALL BUILDING PENETRATIONS SHALL BE COORDINATED WITH ARCHITECT. SEE ARCHITECTURAL DRAWINGS FOR PENETRATION DETAILS.
- PROVIDE SEISMIC RESTRAINTS IN ACCORDANCE WITH IBC 2015. SUBMIT SHOP DRAWINGS FOR APPROVAL.
- ALL CONDENSATE PIPING SHALL BE INSULATED WITH 3/4" THICK CLOSED CELL EPDM ELASTOMERIC THERMAL INSULATION AS MANUFACTURED BY AEROCEL. ALL REFRIGERANT PIPING SHALL BE INSULATED WITH 1 1/2" THICK CLOSED CELL EPDM ELASTOMERIC THERMAL INSULATION AS MANUFACTURED BY AEROCEL.
- ALL DUCTWORK SHALL BE INSULATED WITH 3" THICK FIBERGLASS DUCTWRAP WITH FOIL FACE (OWENS CORNING TYPE 75 OR APPROVED EQUAL).
- ALL DUCTWORK SHALL BE GALVANIZED STEEL. ALL JOINTS AND SEAMS SHALL BE CLEANED, COATED AND SEALED WITH MASTIC OR MASTIC TAPE PRIOR TO APPLYING THE EXTERNAL INSULATION.
- ALL SPIRAL DUCTWORK SHALL BE DOUBLE WALL WITH 1" THICK INSULATION. SIZES LISTED ARE NET FREE INSIDE DIAMETER. PROVIDE E.H. GUSTAFSON OR APPROVED EQUAL.
- SMOKE DETECTORS SHALL BE PROVIDED BY FIRE ALARM CONTRACTOR, INSTALLED BY THE MECHANICAL CONTRACTOR, AND WIRED BY THE FIRE ALARM CONTRACTOR TO THE FIRE ALARM SYSTEM ONLY. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTROL WIRING BETWEEN AHU AND DETECTOR FOR UNIT SHUTDOWN.
- ALL MATERIALS LOCATED WITHIN THE PLENUM SHALL BE PLENUM RATED.

**LEGEND**

- ☒ SUPPLY AIR (S.A.) AHU AIR HANDLING UNIT
- ☒ RETURN AIR (R.A.) CD CONDENSATE
- ☒ EXHAUST AIR (E.A.) D DOWN
- MANUAL VOLUME DAMPER (VD) H HEAT PUMP
- ⊕ THERMOSTAT O.A. OUTSIDE AIR
- ⊙ SMOKE DETECTOR REFRIG. REFRIGERANT
- ⊗ MOTORIZED DAMPER ACTUATOR RG RETURN AIR GRILL
- TURNING VANE TYP. TYPICAL
- ⊙ POINT OF CONNECTION TO EXISTING FD FIRE DAMPER (1-1/2 HOUR)
- ⊙ TFD THIN LINE FIRE DAMPER (1-1/2 HOUR)
- A/### AIR DEVICE MARK/CFM AD DUCT ACCESS DOOR
- A.F.F. ABOVE FINISH FLOOR
- A.F.G. ABOVE FINISH GRADE

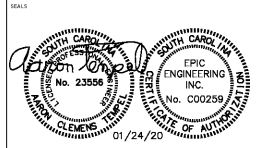
FAN SCHEDULE					
MARK	EF-1	EF-2	EF-3	EF-4	EF-5
FAN TYPE	CEILING CABINET EXHAUST	CEILING CABINET EXHAUST	CEILING CABINET EXHAUST	CEILING CABINET EXHAUST	ROOF MOUNTED EXHAUST
AIR QUANTITY – CFM	225	225	225	225	400
EXT. S.P. – IN. W.G.	0.250	0.250	0.250	0.250	0.100
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
SONES (MAXIMUM)	5.5	5.5	5.5	5.5	2.4
MOTOR – HP (WATTS)	(103)	(103)	(103)	(103)	1/4
ELECTRICAL – V/ø/Hz	120/1/60	120/1/60	120/1/60	120/1/60	120/1/60
MANUFACTURER	COOK	COOK	COOK	COOK	COOK
MODEL NO.	GC-188	GC-188	GC-188	GC-188	101C17DEC
NOTES	1,2,3	1,2,3	1,2,3	1,2,3	3,4
NOTES: 1. PROVIDE A UNIT MOUNTED DISCONNECT SWITCH, WHITE PLASTIC GRILLE, FAN MOUNTED SPEED CONTROLLER, BACKDRAFT DAMPER AND GEMINI ISOLATOR KIT. 2. CONTROL WITH VACANCY SENSOR. 3. PROVIDE COOK OR APPROVED EQUAL BY GREENHECK OR TWIN CITY. 4. PROVIDE WITH WALL MOUNTED LINE VOLTAGE THERMOSTAT, FAN MOUNTED SPEED CONTROLLER, GRAVITY BACKDRAFT DAMPER, ALUMINUM BIRDSCREEN AND A 14" ROOF CURB W/CANT AND TRAY.					

EXHAUST HOOD SCHEDULE				
MARK	TYPE	CFM	S.P. IN. W.G.	MANUFACTURER AND MODEL NO.
GH-1	GRAVITY	563	0.08	COOK MODEL 12PR
NOTES: PROVIDE WITH 14" ROOF CURB W/CANT, ALUMINUM BIRD AND INSECT SCREEN.				

OUTSIDE AIR INTAKE HOOD SCHEDULE				
MARK	TYPE	CFM	S.P. IN. W.G.	MANUFACTURER AND MODEL NO.
GH-2	GRAVITY	300	0.08	COOK MODEL 8PR
GH-3	GRAVITY	300	0.08	COOK MODEL 8PR
GH-4	GRAVITY	400	0.08	COOK MODEL 12PR
NOTES: PROVIDE GH-2 AND GH-3 WITH 14" ROOF CURB W/CANT, ALUMINUM BIRD AND INSECT SCREEN. PROVIDE GH-4 WITH 14" ROOF CURB W/CANT AND DAMPER TRAY, ALUMINUM BIRD AND INSECT SCREENS AND A MOTORIZED DAMPER (115V).				

AIR DEVICE SCHEDULE							
MARK	TYPE	NECK SIZE	FACE SIZE	AIR – PATTERN	MAX. NC	NOTES	MANUFACTURER AND MODEL NO.
A	CEILING SUPPLY	6"	12X12	4-WAY	25	1,2,3,4	NAILOR_MODEL_ARNSA-06-S FOR SURFACE MOUNTING
B	CEILING SUPPLY	8"	12X12	4-WAY	25	1,2,3,4	NAILOR_MODEL_ARNSA-08-S FOR SURFACE MOUNTING
C	CEILING SUPPLY	10"	20X20	4-WAY	25	1,2,3,4	NAILOR_MODEL_ARNSA-10-S FOR SURFACE MOUNTING
D	CEILING SUPPLY	12"	24X24	4-WAY	25	1,2,3,4	NAILOR_MODEL_ARNSA-12-S FOR SURFACE MOUNTING
E	CEILING SUPPLY	6"	24X24	4-WAY	25	1,2,3,4	NAILOR_MODEL_ARNSA-06-L FOR T-BAR LAY-IN CEILINGS
F	CEILING SUPPLY	8"	24X24	4-WAY	25	1,2,3,4	NAILOR_MODEL_ARNSA-08-L FOR T-BAR LAY-IN CEILINGS
G	CEILING SUPPLY	10"	24X24	4-WAY	25	1,2,3,4	NAILOR_MODEL_ARNSA-10-L FOR T-BAR LAY-IN CEILINGS
H	CEILING SUPPLY	12"	24X24	4-WAY	25	1,2,3,4	NAILOR_MODEL_ARNSA-12-L FOR T-BAR LAY-IN CEILINGS
I	CEILING SUPPLY	14"	24X24	4-WAY	25	1,2,3,4	NAILOR_MODEL_ARNSA-14-L FOR T-BAR LAY-IN CEILINGS
J	DUCT MOUNTED SUPPLY	12x6	14x8	2-WAY	25	1,2,3,4	NAILOR MODEL 51DHC-DEX
K	DUCT MOUNTED SUPPLY	16x8	18x10	2-WAY	25	1,2,3,4	NAILOR MODEL 51DHC-DEX
L	DUCT MOUNTED SUPPLY	24x8	26x10	2-WAY	25	1,2,3,4	NAILOR MODEL 51DHC-DEX
M	SIDEWALL SUPPLY	12x6	14x8	4-WAY	25	1, 6	NAILOR MODEL 51DV-OA FOR SIDE WALL
N	SIDEWALL SUPPLY	16x8	18x10	4-WAY	25	1, 6	NAILOR MODEL 51DV-OA FOR SIDE WALL
O	SIDEWALL SUPPLY	24x8	26x10	4-WAY	25	1, 6	NAILOR MODEL 51DV-OA FOR SIDE WALL
RG	CEILING RETURN	18X18	24X24	–	25	2,3,4	NAILOR_MODEL_51PR-L FOR SURFACE MOUNTING
RG1	CEILING RETURN	8X8	24X24	–	25	2,3,4	NAILOR_MODEL_51PR-L FOR T-BAR LAY-IN CEILINGS
RG2	CEILING RETURN	12X12	24X24	–	25	2,3,4	NAILOR_MODEL_51PR-L FOR T-BAR LAY-IN CEILINGS
RG3	CEILING RETURN	20X20	24X24	–	25	2,3,4	NAILOR_MODEL_51PR-L FOR T-BAR LAY-IN CEILINGS
RG4	SIDEWALL RETURN	36X22	38X24	–	25	2,3	NAILOR MODEL 5155H FOR SIDE WALL
NOTES: 1. PROVIDE WITH OPPOSED BLADE DAMPER. 2. PROVIDE WITH ALUMINUM CONSTRUCTION AND STANDARD FINISH. 3. PROVIDE NAILOR OR APPROVED EQUAL BY HART & COOLEY, PRICE, METALAIRE OR TITUS. 4. PROVIDE SQUARE TO ROUND TRANSITION AS NECESSARY.							

LOUVER SCHEDULE								
MARK	TYPE	FACE SIZE (W x H)	FREE AREA (SQFT)	AIR VELOCITY (FPM)	PRESSURE DROP (IN. W.G.)	WATER PENETRATION (OZ./SQFT)	NOTES	MANUFACTURER AND MODEL NO.
L-1	EXHAUST	16"x7.75"	0.34	900	0.125	0.01	1,2,3,4	NAILOR MODEL 16BVC
NOTES: 1. PROVIDE WITH A INSECT SCREEN. 2. PROVIDE WITH ALUMINUM CONSTRUCTION AND STANDARD FINISH. 3. COLOR BY ARCHITECT. PROVIDE SELECTION OPTIONS. 4. PROVIDE NAILOR OR EQUAL BY POTTORFF, RUSKIN, UNITED AIR, NCA, CSI, OR AMERICAN WARMING AND VENTILATING.								



THE OPPORTUNITY CENTER  
8570 RIVERS AVE N CHARLESTON, SC

SHEET ISSUE:  
01/14/2020 Window Set  
01/24/2020 Panel/84 Set

PRINCIPAL IN CHARGE: ACT  
PROJECT ENGINEER: ACT  
DRAWN BY: RAD

SHEET TITLE:  
NOTES, LEGEND,  
SCHEDULES

PROJ. NO. MFS 017348.00

SHEET NO.  
M001