

### EXISTING VAV TERMINAL UNIT SCHEDULE

ID	MANUFACTURER	MODEL NO.	INLET SIZE	COOLING AIRFLOW		HEATING AIRFLOW		REMARKS
				MAX	MIN	MAX	MIN	
(EX) VAV-DD-1-2	TEMPMASTER	SK	10	490 CFM	230 CFM	490 CFM	230 CFM	
(EX) VAV-SD-1-1	TEMPMASTER	HW	6	360 CFM	90 CFM			
(EX) VAV-SD-1-3	TEMPMASTER	HW	10	965 CFM	245 CFM			
(EX) VAV-SD-1-4	TEMPMASTER	HW	6	550 CFM	140 CFM			

**NOTES:**  
1. EXISTING TO REMAIN VAV TERMINAL UNIT INFORMATION PROVIDED FOR TEST AND BALANCE CONTRACTOR. MAX. AND MIN. VALUES TO BE REBALANCED. ALL OTHER SET POINTS TO REMAIN.

### (ADD ALT #3) ELECTRIC HEATER SCHEDULE

ID	MANUFACTURER	MODEL NO.	TYPE	HEATING ELEMENT	MCKCF	VOLT	PH	ACCESSORIES
EH-1	RUNTAL	PED-120D	BASEBOARD	0.4 KW	20.0 A	120 V	1	A,B,C,D
EH-2	RUNTAL	PED-120D	BASEBOARD	0.4 KW	20.0 A	120 V	1	A,B,C,D
EH-3	RUNTAL	PED-120D	BASEBOARD	0.4 KW	20.0 A	120 V	1	A,B,C,D
EH-4	RUNTAL	PED-120D	BASEBOARD	0.4 KW	20.0 A	120 V	1	A,B,C,D
EH-5	QMARK	AWH315GF	RECESSED WALL	1.5 KW	20.0 A	120 V	1	A,B,E

**ELECTRIC HEATER SCHEDULE NOTES:**  
1. SET THERMOSTAT SETPOINT AT 65°F. (CONFIRM WITH NCSU FACILITY STAFF)

**ELECTRIC UNIT HEATER ACCESSORIES:**  
A. DISCONNECT SWITCH  
B. BUILT IN THERMOSTAT  
C. FLOOR-MOUNTED PEDESTAL KIT  
D. 36" HEATER LENGTH  
E. RECESSED WALL-MOUNTING FRAME

### GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

ID	DESCRIPTION	MANUFACTURER	MODEL	MATERIAL	FACE		NECK	NOTES
					SIZE	SIZE		
A	PLAQUE FACE DIFFUSER	PRICE	ASPD	ALUMINUM	24x24	6		
B	PLAQUE FACE DIFFUSER	PRICE	ASPD	ALUMINUM	24x24	8		
C	PLAQUE FACE DIFFUSER	PRICE	ASPD	ALUMINUM	24x24	10		
D	DOUBLE DEFLECTION GRILLE	PRICE	620/5	ALUMINUM	---	---		
E	DUCT MOUNTED DBL. DEFLECTION	PRICE	SDGE	STEEL	17x3			
F	LOUVERED GRILLE	PRICE	630	ALUMINUM				

### LINEAR SLOT DIFFUSER SCHEDULE

ID	DESCRIPTION	MANUF.	MODEL	MATERIAL	WIDTH	QTY	SLOT LENGTH	PLENUM SIZE	NECK SIZE	NOTES
G	LINEAR SLOT DIFFUSER	PRICE	SDS	ALUMINUM	0.75	1	3'-0"	6		PROVIDE MUD-IN FRAME FOR SURFACE MOUNT
H	LINEAR SLOT DIFFUSER	PRICE	SDS	ALUMINUM	0.75	1	4'-0"	6		PROVIDE MUD-IN FRAME FOR SURFACE MOUNT

**NOTES:**  
1. ALL CEILING MOUNTED DEVICES SHALL BE FINISHED WITH AN ENAMEL WHITE FINISH. ALL GRILLES AND DIFFUSERS MOUNTED IN GYP. CEILINGS OR WALLS SHALL BE PROVIDED WITH A FAINT-GRIP COATING AND SHALL BE PAINTED FINAL FINISH COLOR PER ARCHITECTS DIRECTION.  
2. ALL DEVICES SHALL BE FINISHED WITH FRAMES SUITABLE FOR TYPE OF INSTALLATION REQUIRED.  
3. ALL LINEAR DIFFUSERS IN LAY-IN CEILINGS SHALL BE FINISHED WITH END CAPS. ALL LINEAR DIFFUSERS IN REAR WALL CEILINGS SHALL BE FINISHED WITH END BORDERS.  
4. AIR TERMINALS LABELED 'EX' ON FLOOR PLAN ARE EXISTING TO REMAIN. AIR TERMINALS LABELED 'RE' ARE EXISTING TO BE RELOCATED. AIR TERMINALS LABELED 'RM' ARE EXISTING TO BE REMOVED.

### EQUIVALENT MANUFACTURERS LISTING

LISTING OF MANUFACTURER'S NAME DOES NOT GUARANTEE APPROVAL. ALL EQUIPMENT MUST MEET OR EXCEED QUALITY AND CAPACITIES OF SPECIFIED EQUIPMENT. FINAL APPROVAL WILL BE BASED ON EQUIPMENT SUBMITTALS. ANY MANUFACTURER NOT LISTED BUT WISHING TO BID THIS PROJECT SHALL SUBMIT A WRITTEN REQUEST A MINIMUM OF 7 DAYS PRIOR TO BID DATE OR AS INDICATED IN THE SPECIFICATIONS. PRIOR APPROVAL IS REQUIRED FOR ALL MANUFACTURERS NOT LISTED.

(ALPHABETICAL ORDER)

**AIR DISTRIBUTION:** CARNES, METAL-AIRE, NAILOR, PRICE, TITUS, TUTTLE & BAILEY, KRUEGER  
**ELECTRIC WALL/UNIT HEATERS:** BERKO, MARKEE, MODINE, RUNTAL, QMARK  
**FANS:** COOK, GREENHECK, PENN, TWIN CITY  
**GRILLES:** GREENHECK, RUSKIN, SAFE-AIR, POTTORFF  
**SERIAL DUCTWORK:** EASTERN SHEET METAL, MAT, UNITED MCGILL, HAMLIN

**NOTE:**  
ALL COST ASSOCIATED WITH SUBSTITUTED EQUIPMENT TO COMPLY WITH BASIS OF DESIGN, INCLUDING PROVIDING MAINTENANCE ACCESS, CLEARANCE, PIPING, SHEET METAL, ELECTRICAL REWIRING, AND MOVEMENT OF SYSTEM COMPONENTS, BUILDING ALTERATIONS, ETC., SHALL BE INCLUDED IN THE ORIGINAL BIDDING. NO ADDITIONAL COST ASSOCIATED WITH SUBSTITUTED EQUIPMENT WILL BE APPROVED DURING CONSTRUCTION AND ALL COSTS WILL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

### EXHAUST FAN SCHEDULE

ID	LOCATION	EX CLASSIFICATION	MANUFACTURER	MODEL	TYPE	CFM	DRIVE TYPE	FAN RPM	SONES	ELECTRICAL DATA		CONTROL TYPE
										WATTS	VOLTAGE-PHASED	
EF-1			GREENHECK	CSP-A	INLINE	1000	DIRECT	1035	2.2	368		2

**EXHAUST FAN SCHEDULE ACCESSORIES:**  
A. DISCONNECT SWITCH  
B. GRAVITY DRAFT DAMPER  
C. MOTORIZED GRAVITY DRAFT DAMPER  
D. MOTOR AB, ROOF CURB  
E. ELECTRICAL LINE  
F. ALUMINUM CEILING LINE  
G. HANGING BRACKET  
H. WALL MOUNTING COLLAR  
I. R.C.C. GIRTS ROOF CAP (FLAT ROOF) OR RJ ROOF CAP (PITCHED ROOF)  
J. WALL MOUNTING COLLAR  
K. WELT GUARD

**EXHAUST FAN SCHEDULE CONTROLS:**  
1. WALL MOUNTED THERMOSTAT (REVERSE ACTING, SET FOR 80°)  
2. INTERLOCK WITH ROOM LIGHT SWITCH (FAN SHALL OPERATE WHEN LIGHT IS ON IF ANY ROOM IS SERVED BY FAN)  
3. WALL MOUNTED ON/OFF SWITCH WITH IDENTIFICATION LABEL  
4. WALL MOUNTED MUSHROOM PUSH BUTTON SWITCH/STARTER WITH IDENTIFICATION LABEL  
5. CONTROLLED BY BUILDING AUTOMATION SYSTEM  
6. CONTINUOUS OPERATION

**EXHAUST FAN SCHEDULE NOTES:**  
1. ALL FANS SHALL BE UL LISTED AND LABELED AND SHALL BE AMCA CERTIFIED FOR SOUND AND AIR FLOW. ALL FANS INSTALLED INSIDE, ABOVE, OR ADJACENT TO OCCUPIED SPACES SHALL HAVE A MAXIMUM 9.0 INLET SONE LEVEL.  
2. PROVIDE ALL DIRECT DRIVE FANS WITH SPEED CONTROLLERS.

### 2018 NCMC VENTILATION CALCULATIONS

NO.	LOCATION	Occupancy Category	Area, Sq Ft	Number of People, Pz	Outdoor Airflow Rate Per Person, Rp	Outdoor Airflow Rate Per Unit Area, Ra	Breathing Zone Outdoor Airflow, Voz	Zone Air Distribution Effectiveness, Ez	Required Outdoor Air Intake Flow, Vint	Comments
E1100	OPEN SEATING LOBBY	Multipurpose assembly	520 SF	4	5.0 CFM	0.06 CFM/SF	51 CFM	0.8	64 CFM	
E1100A	OPEN SEATING	Multipurpose assembly	79 SF	4	5.0 CFM	0.06 CFM/SF	25 CFM	0.8	31 CFM	
E1100B	OPEN SEATING LOBBY	Multipurpose assembly	308 SF	12	5.0 CFM	0.06 CFM/SF	76 CFM	0.8	96 CFM	
VAV-DD-1-2			906 SF						193 CFM	
I1102	OPEN SEATING, READING RM	Multipurpose assembly	1286 SF	50	5.0 CFM	0.06 CFM/SF	338 CFM	0.8	410 CFM	
I102A	COFF/DESKTOPS	Libraries	219 SF	6	5.0 CFM	0.12 CFM/SF	59 CFM	0.8	73 CFM	
E1100-2	CIRCULATION	Corridors	Redundant Space	0	0.0 CFM	0.06 CFM/SF		0.8		
E1100D	CORRIDOR	Corridors	182 SF	0	0.0 CFM	0.06 CFM/SF	11 CFM	0.8	14 CFM	
VAV-DD-16 AND VAV-DD-17			1727 SF						497 CFM	
I1113	OPEN SEATING	Multipurpose assembly	205 SF	6	5.0 CFM	0.06 CFM/SF	42 CFM	0.8	53 CFM	
I114	ELEC	Electrical equipment rooms	44 SF	0	0.0 CFM	0.06 CFM/SF	3 CFM	0.8	3 CFM	
VAV-SD-1-1			249 SF						56 CFM	
I1110	TEAM RM	Conference/meeting	141 SF	6	5.0 CFM	0.06 CFM/SF	38 CFM	0.8	48 CFM	
I1111	FOOD STORAGE	Occupiable storage rooms for dry materials	184 SF	0	5.0 CFM	0.06 CFM/SF	11 CFM	0.8	14 CFM	
E1100G-1	OPEN SEATING	Multipurpose assembly	119 SF	6	5.0 CFM	0.06 CFM/SF	37 CFM	0.8	46 CFM	
VAV-SD-1-2			436 SF						105 CFM	
I104A-1	ASK US DESK-1	Office space	199 SF	3	5.0 CFM	0.06 CFM/SF	27 CFM	0.8	34 CFM	
I104B	OFFICE	Office space	98 SF	1	5.0 CFM	0.06 CFM/SF	11 CFM	0.8	14 CFM	
I105	STACKS	Libraries	295 SF	2	5.0 CFM	0.12 CFM/SF	35 CFM	0.8	45 CFM	
E1100G	NORTH CORRIDOR	Corridors	Redundant Space	0	0.0 CFM	0.06 CFM/SF		0.8		
E1100G-2	OPEN SEATING	Multipurpose assembly	44 SF	2	5.0 CFM	0.06 CFM/SF	13 CFM	0.8	16 CFM	
VAV-SD-1-3			557 SF						108 CFM	
I106	FOOD SERVICE	Office space	199 SF	2	5.0 CFM	0.06 CFM/SF	22 CFM	0.8	27 CFM	
I105A	CAFE	Coffee stations	241 SF	2	5.0 CFM	0.06 CFM/SF	24 CFM	0.8	31 CFM	
VAV-SD-1-4			440 SF						58 CFM	
			TOTAL:						1929 CFM*	

\* CONTRACTOR TO ENSURE O.A INTAKE AND S.A PERCENTAGE PROVIDED BY CENTRAL AIR HANDLER TO AREA OF WORK MEETS REQUIRED VENTILATION.

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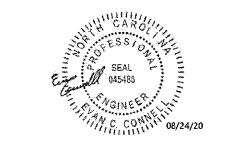
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Jordan Hall Library Renovation  
Watson Tate Savory  
NCSU Jordan Hall



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