

DIFFUSER / REGISTER SCHEDULE								
UNIT NO	FACE SIZE IN	NECK SIZE IN	MAX PRESSURE DROP IN WC	MAX NOISE CRITERIA	CFM RANGE	TYPE	BASIS OF DESIGN	NOTES
S-2	24x24	8 Ø	0.10	25	101-250	4-WAY LAY-IN CEILING DIFFUSER	PRICE SCD	1,2,3
S-3	24x24	10Ø	0.10	25	251-400	4-WAY LAY-IN CEILING DIFFUSER	PRICE SCD	1,2,3
S-4	24x24	12 Ø	0.10	25	401-650	4-WAY LAY-IN CEILING DIFFUSER	PRICE SCD	1,2,3
S-5	36x6	36x6	0.10	25	400-800	HIGH CAPACITY DRUM LOUVER	PRICE HCD	2
S-6	24x24	12 Ø	0.10	25	400-650	4-WAY LAY-IN CEILING DIFFUSER	PRICE SCD	1,2,3,5,10
S-7	9x9	9x9	0.10	25	151-275	LOUVERED FACE CEILING DIFFUSER	PRICE SMD	
S-8	24x24	12x12	0.10	25	276-500	LOUVERED FACE CEILING DIFFUSER	PRICE SMD	1,2,3,9
S-9	7Ø	7Ø	0.60	25	0-175	SWIVEL JET NOZZLE	PRICE JNA	3,6
S-10	60x9	10 Ø	0.10	25	400-450	LINEAR SLOT DIFFUSER W/ PLENUM	PRICE SBD1100	11,12
R-1	24x24	6 Ø	0.10	25	0-100	PERFORATED RETURN GRILLE	PRICE PDDR	1,2,3
R-2	24x24	8 Ø	0.12	25	101-250	PERFORATED RETURN GRILLE	PRICE PDDR	1,2,3
R-3	24x24	10Ø	0.12	25	251-400	PERFORATED RETURN GRILLE	PRICE PDDR	1,2,3
R-4	24x24	12 Ø	0.13	25	401-600	PERFORATED RETURN GRILLE	PRICE PDDR	1,2,3
R-5	24x24	15 Ø	0.11	25	601-855	PERFORATED RETURN GRILLE	PRICE PDDR	1,2,3
R-6	48x14	48x14	0.10	25	1820	LOUVERED RETURN GRILLE	PRICE 530D	2,3,5,7,8
R-7	48x18	48x18	0.10	25	2690	HEAVY DUTY GYM RETURN GRILLE	PRICE 96	2,3,5,7,8
R-8	8x6	8x6	0.10	25	0-100	LOUVERED RETURN GRILLE	PRICE 530	2,3,4,5,7,8
E-1	24x24	6 Ø	0.10	25	0-100	PERFORATED EXHAUST GRILLE	PRICE PDDR	1,2,3
E-2	24x24	8 Ø	0.12	25	101-250	PERFORATED EXHAUST GRILLE	PRICE PDDR	1,2,3
E-3	24x24	10Ø	0.12	25	251-400	PERFORATED EXHAUST GRILLE	PRICE PDDR	1,2,3
E-4	24x24	12 Ø	0.13	25	401-600	PERFORATED EXHAUST GRILLE	PRICE PDDR	1,2,3
E-5	8x6	8x6	0.10	25	0-100	LOUVERED EXHAUST GRILLE	PRICE 530	2,3,7,8
E-6	12x8	12x8	0.10	25	101-300	LOUVERED EXHAUST GRILLE	PRICE 530	2,3,4,5,7,8
E-7	24x24	15 Ø	0.11	25	601-855	PERFORATED EXHAUST GRILLE	PRICE PDDR	1,2,3,4,5
T-1	24x24	6 Ø	0.10	25	0-100	PERFORATED TRANSFER GRILLE	PRICE PDDR	1,2,3
T-2	24x24	8 Ø	0.10	25	101-225	PERFORATED TRANSFER GRILLE	PRICE PDDR	1,2,3
T-3	24x24	10Ø	0.10	25	226-355	PERFORATED TRANSFER GRILLE	PRICE PDDR	1,2,3
T-4	16x8	16x8	0.10	25	0-150	HEAVY-DUTY GYM TRANSFER GRILLE	PRICE 96	2,3,7,8
T-5	12x8	8x6	0.10	25	101-300	LOUVERED TRANSFER GRILLE	PRICE 530	2,3,4,5,7,8
T-6	28x12	28x12	0.05	25	785	LOUVERED TRANSFER GRILLE	PRICE 530	2,7,8

NOTES:
1. FOR INSTALLATION IN T-BAR CEILING.
2. STEEL CONSTRUCTION.
3. PROVIDE TRANSITION FROM DUCTWORK TO DIFFUSER / GRILLE.
4. SURFACE MOUNTED.
5. PROVIDE WITH INTEGRAL OPPOSED BLADE DAMPER.
6. ALUMINUM CONSTRUCTION.

7. 3/4" BLADE SPACING, 45-DEG DEFLECTION
8. BLADES PARALLEL TO LONG DIMENSION
9. TWO-WAY THROW
10. COLOR SHALL BE BLACK
11. PROVIDE WITH INTEGRAL BALANCING DAMPER
12. 1" BLADE SPACING W/ ADJUSTABLE DISCHARGE AIR PATTERN

VAV TERMINAL UNIT SCHEDULE								
UNIT NO	SERVES	PRIMARY CFM		INLET SIZE INCHES	APD @ MAX AIRFLOW IN WC	HOT WATER COIL		NOTES
		MAX	MIN			MBH	GPM	
VAV-4-1	A03 MAIN OFFICE & A05 CORR	680	320	10Ø	0.25	10.4	2.1	1,2,3
VAV-4-2	A04 WORK/VOL ROOM	310	155	8Ø	0.25	5.0	1.0	1,2,3
VAV-4-3	A06 ASSISTANT PRINCIPAL	185	100	6Ø	0.25	3.2	0.7	1,2,3
VAV-4-4	A07 PRINCIPAL	185	100	6Ø	0.25	3.2	0.7	1,2,3
VAV-4-5	A08 SMALL CONFERENCE	295	150	8Ø	0.25	4.9	1.0	1,2,3
VAV-4-6	A11 NURSE	475	250	10Ø	0.25	8.1	1.6	1,2,3
VAV-4-7	A17 OFFICE & A21 WAITING	325	150	8Ø	0.25	4.9	1.0	1,2,3
VAV-4-8	A18 OFFICE	190	100	6Ø	0.25	3.2	0.7	1,2,3
VAV-4-9	A19 OFFICE	335	165	8Ø	0.25	5.4	1.1	1,2,3
VAV-4-10	A23 TECH	385	200	8Ø	0.25	6.4	1.3	1,2,3
VAV-4-11	A24 SMALL CONFERENCE	310	155	8Ø	0.25	5.0	1.0	1,2,3
VAV-4-12	B19 LIBRARY & B19A OFFICE	2845	1415	16Ø	0.25	45.8	9.5	1,2,3
VAV-5-1	C02 3-5 FLS	985	460	12Ø	0.25	14.9	3.0	1,2,3
VAV-5-2	C03 K-2 FLS	880	460	12Ø	0.25	14.9	3.0	1,2,3
VAV-5-3	C04 OT/PT	585	330	10Ø	0.25	10.7	2.2	1,2,3
VAV-5-4	C05 SPEECH	505	330	10Ø	0.25	10.7	2.2	1,2,3

NOTES:
1. SELECTION BASED ON TRANE TERMINAL UNITS; OUTLET AND INLET SIZES INDICATED ARE BASED ON THIS MFR. VARIATIONS IN INLET AND OUTLET SIZES WHICH PROVIDE COMPARABLE PERFORMANCE ARE ACCEPTABLE.
2. UNLESS NOTED OTHERWISE, SIZE COILS FOR 120° EWT, 10° WTD, AND 3.0 FT OR LESS WPD.
3. UNLESS NOTED OTHERWISE, VAV TERMINALS PROVIDED SHALL HAVE A MAXIMUM NOISE CRITERIA OF 30.
4. PROVIDE CO2 CONTROL. REFER TO CONTROL DIAGRAM.
5. ZONE HEATING BY FIN RADIATION. REFER TO CONTROL DIAGRAM.

CONTROL VALVE SCHEDULE										
CONTROL VALVE	EQUIPMENT	LOCATION	SERVICE	TYPE	ACTION	FAIL POSITION	GPM	WPD (PSI)		NOTES
								MIN	MAX	
V-1	AHU-1	MECH D13	HTG	2-WAY	MODULATING	OPEN	SEE NOTES	2	5	1,2
V-2	AHU-2	MECH D13	HTG	2-WAY	MODULATING	OPEN	SEE NOTES	2	5	1,2
V-3	AHU-3	MECH D13	HTG	2-WAY	MODULATING	OPEN	SEE NOTES	2	5	1,2
V-4	AHU-4	MECH D13	HTG	2-WAY	MODULATING	OPEN	SEE NOTES	2	5	1,2
V-5	AHU-5	MECH D13	HTG	2-WAY	MODULATING	OPEN	SEE NOTES	2	5	1,2
V-6	AHU-6	MECH D13	HTG	2-WAY	MODULATING	OPEN	SEE NOTES	2	5	1,2
V-7	AHU-7	MECH C10	HTG	3-WAY	MODULATING	FLOW TO COIL	SEE NOTES	2	5	1,2,3
V-8	AHU-8	MECH D20	HTG	3-WAY	MODULATING	FLOW TO COIL	SEE NOTES	2	5	1,2,3
V-9	RADIANT LOOP	BOILER A33	RADIANT HTG	3-WAY	MODULATING	LAST POSITION				3
V-10	TYP VAV	VARIES	HTG	2-WAY	MODULATING	LAST POSITION	SEE NOTES			4
V-11	TYP CAV	VARIES	HTG	2-WAY	MODULATING	LAST POSITION	SEE NOTES			5
V-12	TYP RADIANT MANIFOLD	VARIES	HTG	2-WAY	2-POSITION	OPEN	SEE NOTES			6

NOTES:
1. REFER TO AIR HANDLING UNIT SCHEDULE FOR FLOW VALUES.
2. PROVIDE SPRING RETURN.
3. PROVIDE MIXING VALVE.
4. REFER TO VAV TERMINAL UNIT SCHEDULE FOR QUANTITY OF VALVES AND ASSOCIATED FLOWS.
5. REFER TO CAV TERMINAL UNIT SCHEDULE FOR QUANTITY OF VALVES AND ASSOCIATED FLOWS.
6. REFER TO RADIANT FLOOR HEATING SCHEDULE FOR QUANTITY OF VALVES AND ASSOCIATED FLOWS.

CAV TERMINAL UNIT SCHEDULE									
UNIT NO	SERVES	AIRFLOW CFM		INLET SIZE INCHES	APD @ MAX AIRFLOW IN WC	HOT WATER COIL		NOTES	
		MAX	MIN			MBH	GPM		
CAV-1-1	A30A OFFICE	50	50	4Ø	0.1	N/A	N/A	1,2,3	
CAV-6-1	B18 PRE-KINDERGARTEN	455	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-6-2	B17 PRE-KINDERGARTEN	455	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-6-3	B16 KINDERGARTEN	470	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-6-4	B15 KINDERGARTEN	470	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-6-5	B09 READ 180	135	75	6Ø	0.1	N/A	N/A	1,2,3	
CAV-6-6	B08 LIT INTERV	135	75	6Ø	0.1	N/A	N/A	1,2,3	
CAV-6-7	B06 BOOK & B07 TEST	120	75	6Ø	0.1	N/A	N/A	1,2,3	
CAV-6-8	B05 ELL	215	75	6Ø	0.1	N/A	N/A	1,2,3	
CAV-6-9	B04 K-2 RESOURCE	450	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-6-10	B03 KINDERGARTEN	470	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-6-11	B02 KINDERGARTEN	470	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-6-12	B14 CORRIDOR	175	175	6Ø	0.1	N/A	N/A	1,2,3	
CAV-6-13	B10 MAKER SPACE	475	475	10Ø	0.1	N/A	N/A	1,2,3	
CAV-6-14	B11 MUSIC	480	125	10Ø	0.1	N/A	N/A	1,2,3	
CAV-7-1	C17 CORRIDOR	325	325	8Ø	0.1	N/A	N/A	1,2,3	
CAV-7-2	C18 2ND GRADE	450	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-7-3	C19 2ND GRADE	450	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-7-4	C20 WORK ROOM	145	75	6Ø	0.1	N/A	N/A	1,2,3	
CAV-7-5	C21 SMALL GROUP	140	75	6Ø	0.25	5.0	1.0	1,2,3	
CAV-7-6	C22 1ST GRADE	455	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-7-7	C27 1ST GRADE	450	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-7-8	C16 2ND GRADE	450	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-7-9	C15 SMALL GROUP	140	75	6Ø	0.25	5.0	1.0	1,2,3	
CAV-7-10	C14 2ND GRADE	450	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-7-11	C13 1ST GRADE	450	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-7-12	C12 SMALL GROUP	140	75	6Ø	0.25	5.0	1.0	1,2,3	
CAV-7-13	C11 1ST GRADE	450	115	10Ø	0.1	N/A	N/A	1,2,3	
CAV-7-14	C09 BOOK STOR / C08 CUSTODIAN	440	440	10Ø	0.1	N/A	N/A	1,2,3	
CAV-7-15	C07 SPANISH / C06 CORRIDOR	540	540	10Ø	0.1	N/A	N/A	1,2,3	
CAV-7-16	B20 ART	1100	1100	12Ø	0.1	N/A	N/A	1,2,3	
CAV-8-1	D01 ELL	220	50	6Ø	0.1	N/A	N/A	1,2,3	
CAV-8-2	D02 TESTING & D03 SPEECH	270	65	6Ø	0.1	N/A	N/A	1,2,3	
CAV-8-3	D04 5TH GRADE	450	95	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-4	D05 SMALL GROUP	280	45	6Ø	0.1	N/A	N/A	1,2,3	
CAV-8-5	D07 5TH GRADE	450	100	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-6	D08 STAFF	260	60	6Ø	0.1	N/A	N/A	1,2,3	
CAV-8-7	D12 CORRIDOR	500	500	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-8	D14 5TH GRADE	450	100	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-9	D15 SMALL GROUP	280	40	6Ø	0.1	N/A	N/A	1,2,3	
CAV-8-10	D17 5TH GRADE	450	100	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-11	D18 3-5 RESOURCE	450	90	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-12	D22 4TH GRADE	450	100	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-13	D23 SMALL GROUP	140	20	6Ø	0.1	2.5	0.5	1,2,3	
CAV-8-14	D24 4TH GRADE	450	100	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-15	D25 3RD GRADE	450	100	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-16	D26 SMALL GROUP	140	20	6Ø	0.1	2.5	0.5	1,2,3	
CAV-8-17	D27 3RD GRADE	450	100	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-18	D28 CORRIDOR	500	500	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-19	D29 3RD GRADE	450	100	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-20	D30 3RD GRADE	450	100	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-21	D31 SMALL GROUP	145	35	6Ø	0.1	N/A	N/A	1,2,3	
CAV-8-22	D32 SMALL GROUP	140	30	6Ø	0.1	N/A	N/A	1,2,3	
CAV-8-23	D33 4TH GRADE	460	110	10Ø	0.1	N/A	N/A	1,2,3	
CAV-8-24	D39 4TH GRADE	460	105	10Ø	0.1	N/A	N/A	1,2,3	

NOTES:
1. BOX SELECTIONS ARE BASED ON TRANE TERMINAL UNITS. OUTLET AND INLET SIZES SHOWN ON PLANS ARE BASED ON THIS MFR. VARIATIONS IN INLET AND OUTLET SIZES WHICH PROVIDE COMPARABLE PERFORMANCE ARE ACCEPTABLE.
2. UNLESS OTHERWISE NOTED, VAV TERMINALS PROVIDED SHALL HAVE A MAXIMUM NOISE CRITERIA OF 30.
3. UNLESS OTHERWISE NOTED, SIZE COILS FOR 120° EWT AND 10° WTD AND 2.0 FT OR LESS WPD.
4. PROVIDE CO2 CONTROL. REFER TO CONTROL DIAGRAM.

DESIGN CONDITIONS SCHEDULE					
LOCATION	INDOOR COOLING DESIGN TEMP °F	OUTDOOR COOLING DESIGN DB/WB °F	INDOOR HEATING DESIGN TEMP °F	OUTDOOR HEATING DESIGN TEMP °F	NOTES
TYPICAL CLASSROOM	N/A	86/71	68	-3	
GYMNASIUM	N/A	86/71	68	-3	1
CAFETERIA	N/A	86/71	68	-3	
CORRIDORS/LOBBY	N/A	86/71	68	-3	
MAIN OFFICES	76	86/71	68	-3	2
LIBRARY	76	86/71	68	-3	
OT/PT/FLS	76	86/71	68	-3	3

NOTES:
1. RELATIVE HUMIDITY IN THE GYMNASIUM SHALL NOT FALL BELOW 35% RH.
2. MAIN OFFICES INCLUDES SPACES SERVED BY AHU-4.
3. OT/PT/FLS INCLUDES SPACES SERVED BY AHU-5.

GENERAL SHEET NOTE

NOTE ON BASIS OF DESIGN

PRODUCTS OF OTHER MANUFACTURERS ARE ACCEPTABLE IF THEY MEET THE OPERATIONAL REQUIREMENTS INDICATED. ANY ADJUSTMENTS TO DUCTING, PIPING, WIRING OR CONFIGURATION DUE TO THE SELECTION OF A MANUFACTURER OTHER THAN THAT LISTED AS THE BASIS OF DESIGN WILL BE ACCOMPLISHED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO PORTLAND PUBLIC SCHOOLS.

RADIANT FLOOR HEATING SCHEDULE							
ROOM NO	ROOM NAME	TOTAL RADIANT LOAD					