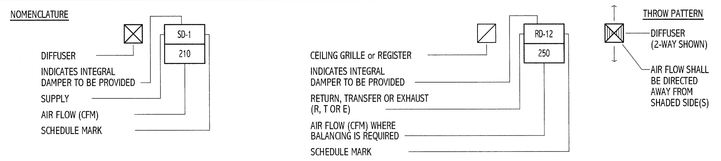
DIFFUSER AND GRILLE SCHEDULE



SIZING:
REFER TO PLANS FOR SIZES OF WALL AND DUCT-MOUNTED GRILLES AND REGISTERS. SIZES FOR DIFFUSERS & CEILING GRILLE/REGISTERS ARE GIVEN BELOW.

FACE SIZES AND BORDER STYLES:
FOR LAY-IN DIFFUSERS AND GRILLES PROVIDE LAY-IN STYLE BORDERS WITH NOMINAL FACE SIZE OF 24x24 IN. OR 48x24 IN. AS APPROPRIATE. IN OTHER TYPES OF CEILINGS, PROVIDE SURFACE MOUNT BORDERS WITH NOMINAL FACE SIZE 5 IN. GREATER THAN DIFFUSER NECK SIZE AND 2 IN. GREATER THAN GRILLE NECK SIZE.

MODEL:
DIFFUSER SELECTIONS BASED ON TITUS "MOD". SUPPLY SLOT DIFFUSERS BASED ON TITUS "TBD-10". SUPPLY SURFACE MOUNT DIFFUSERS BASED ON TITUS "272RL". RETURN AND EXHAUST GRILLES AND TRANSFER GRILLES BASED ON TITUS "23RL".

DAMPERS:
WHEN A DAMPER IS CALLED FOR IN NOMENCLATURE (SEE ABOVE) GRD MANUFACTURER SHALL PROVIDE AN OPPOSED BLADE DAMPER INTEGRAL WITH THE DIFFUSER OR GRILLE (REGISTER). WHEN AN INTEGRAL DAMPER IS NOT CALLED FOR, CONTRACTOR SHALL PROVIDE A DAMPER IN THE CONNECTING DUCT SERVING EACH DIFFUSER AND GRILLE.

DUCT CONNECTIONS:
PROVIDE CONNECTING DUCT BETWEEN MAIN DUCT AND CEILING GRILLE, REGISTER OR DIFFUSER. SIZE OF DUCT SHALL BE AS INDICATED BELOW, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. FOR ACOUSTICAL REASONS, 8 FEET OF FLEXIBLE DUCT MUST BE PROVIDED WHERE FLEXIBLE DUCT IS INDICATED ON THE DRAWINGS. PROVIDE A MINIMUM OF 12" OF STRAIGHT (VERTICAL) DUCT ABOVE CEILING DIFFUSERS OR FURNISH AN ENGINEERED (PRIOR) APPROVED PLENUM ABOVE DIFFUSERS.

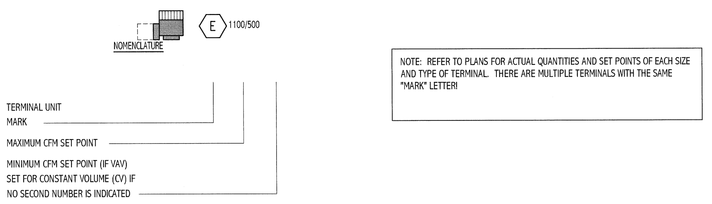
NOISE CRITERIA:
DIFFUSERS SHALL NOT EXCEED NOISE CRITERIA (NC) PER THE SPECIFIED PRODUCT'S TESTING STANDARDS.

CEILING COORDINATION:
REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR COORDINATION OF DIFFUSERS AND GRILLES WITH OTHER CEILING ELEMENTS. CONTRACTOR SHALL VERIFY CEILING TYPES IN ALL AREAS AND CONFIRM BORDER STYLES PRIOR TO ORDERING GRILLES, REGISTERS & DIFFUSERS. ALL REGISTERS, GRILLES & DIFFUSERS PAINTED WHITE UNLESS OTHER USE NOTED.

MARK	TYPE	NECK SIZE	NC	MAXIMUM DESIGN CFM	DUCT CONNECTION SIZE ROUND	DUCT CONNECTION SIZE SQUARE	REMARKS
S-1	LAY-IN DIFFUSER	6"x6"	<20	150	8"	8"x6"	
S-2	LAY-IN DIFFUSER	10"x10"	<20	340	10"	10"x8"	
S-3	LAY-IN DIFFUSER	12"x12"	25	600	12"	12"x10"	
S-4	LINEAR BAR DIFFUSER	6" O/AL	16	160	8"	-	(1) 1" SLOT, 4 FEET OF ACTIVE LENGTH (40 CFM/FT) (1)
S-5	LINEAR SLOT	6" O/AL	29	110	6"	-	(1) 1-1/2" SLOT, 2 FEET IN LENGTH WITH INSULATED PLENUM.
S-6	SURFACE MOUNT DIFFUSER	12"x8"	15	340	10"	10"x8"	
S-7	SURFACE MOUNT DIFFUSER	6x6	-	60	6"	6"x6"	
R-1	LAY-IN GRILLE	22"x10"	-	200	-	-	
R-2	LAY-IN GRILLE	22"x14"	-	270	-	-	
R-3	LAY-IN GRILLE	22"x22"	-	470	-	-	
R-4	SURFACE MOUNT GRILLE	12"x10"	-	100	-	-	
R-5	SURFACE MOUNT GRILLE	24"x10"	-	220	-	-	
R-6	SURFACE MOUNT GRILLE	30"x12"	-	330	-	-	
E-1	LAY-IN GRILLE	22"x10"	-	200	8"	10"x6"	

(1) LINEAR BAR DIFFUSER BASED ON TITUS "FL-10" WITH BORDER STYLE "22". PROVIDE INSULATED PLENUMS, MITERED CORNERS AND BLANK OFF AS INDICATED ON DRAWINGS. COORDINATE LINEAR BAR DIFFUSERS WITH ARCHITECTURAL DRAWINGS.

CV/VAV TERMINAL UNIT SCHEDULE



NOTE: REFER TO PLANS FOR ACTUAL QUANTITIES AND SET POINTS OF EACH SIZE AND TYPE OF TERMINAL. THERE ARE MULTIPLE TERMINALS WITH THE SAME "MARK" LETTER

BASIS OF DESIGN:
TRANE "VC" SERIES TERMINALS WITH FACTORY-INSTALLED CONTROLS FURNISHED BY CONTROLS SUBCONTRACTOR.

GENERAL REQUIREMENTS:
TERMINAL UNIT ASSEMBLY INCLUDES AIR VALVE, CONTROLLER AND HEATING COIL. TERMINAL UNIT SHALL BE ABLE TO OPERATE AT ANY POINT WITHIN THE SETPOINT RANGE INICATED BELOW. INITIALLY SET MAXIMUM AND MINIMUM CFM'S AT VALUES INDICATED ON THE PLANS FOR EACH INDIVIDUAL TERMINAL.

UPSTREAM DUCTWORK:
INLET SIZE INDICATED BELOW IS IN INCHES DIAMETER. PROVIDE CONNECTING DUCT (SAME CROSS SECTION AREA AS INLET) FROM INLET TO MEDIUM PRESSURE TRUNK DUCT. WHERE SPACE IS NOT AVAILABLE FOR ROUND DUCT, PROVIDE FLAT O/AL OR RECTANGULAR DUCT OF EQUAL OR GREATER CROSS SECTION AREA WITH NECESSARY TRANSITIONS.

DOWNSTREAM DUCTWORK:
PROVIDE OUTLET DUCT, SIZE INDICATED BELOW IN INCHES, FROM TERMINAL (OR SOUND ATTENUATOR) OUTLET TO THE POINT DOWNSTREAM THAT A DIFFERENT SIZE DUCT IS INDICATED ON PLAN. WHERE NECESSARY DUE TO SPACE RESTRICTIONS, PROVIDE DIFFERENT SHAPE DUCT WITH THE SAME CROSS SECTION AREA. PROVIDE ALL NECESSARY TRANSITIONS.

HEATING COIL:
ALL TERMINAL HEATING COILS SHALL BE LOCATED AT THE TERMINAL DISCHARGE AND SHALL BE BASED ON 160° E.W.T. AND 55° E.A.T. MAXIMUM COIL AIR PRESSURE DROP IS 0.35" WG., MAXIMUM WATER PRESSURE DROP IS 5.0 FT. NOTE THAT L.A.T. AND PRESSURE DROP SHALL BE BASED ON "DESIGN" CFM.

HEATING PIPING:
PROVIDE HEATING WATER SUPPLY AND RETURN PIPING, SIZE INDICATED BELOW, WITH SPECIFIED AUTOMATIC BALANCING PACKAGE, FROM COIL TO HEATING MAINS.

SOUND ATTENUATION:
SOUND POWER VALUES BELOW ARE THE MAXIMUM ALLOWED DISCHARGE SOUND POWER RATINGS AS CERTIFIED BY ARI (STANDARD 880-94) FOR OCTAVE BANDS 2, 4 AND 6 WHEN THE BARE TERMINAL (NO COIL OR SOUND ATTENUATOR) IS MEASURED AT DESIGN CFM WITH PRIMARY AIR AT 1.5" PRESSURE DROP. TO REDUCE NOISE LEVELS, SOUND ATTENUATION SHALL BE PROVIDED AS NOTED:

SA = FIELD-INSTALLED 3 FOOT SOUND ATTENUATOR (SEE SPECIFICATIONS) JUST DOWNSTREAM OF TERMINAL. MAX. PRESSURE DROP OF 0.15" AT DESIGN CFM. PROVIDE TRANSITIONS AS NECESSARY.

AL = FIELD-INSTALLED ACOUSTIC LINING IN THE DISCHARGE DUCT, MIN. LENGTH AS INDICATED BELOW UNLESS OTHERWISE INDICATED ON PLAN.

MARK	SETPOINT RANGE LOWEST MIN.	SETPOINT RANGE HIGHEST MAX.	TARGET CFM	INLET SIZE	OUTLET DUCT	HEATING COIL ROWS	HEATING COIL LAT	HEATING COIL G.P.M.	SOUND POWER 2	SOUND POWER 4	SOUND POWER 6	BRANCH PIPE SIZE	SOUND ATTENUATION	REMARKS
A	50	225	225	4	12x8	1	82	1.0	72	61	54	1/2"	NO	
B	80	500	400	6	12x8	1	77	1.5	74	62	52	1/2"	NO	
C	150	900	650	8	12x10	1	75	2.0	71	65	56	3/4"	NO	
D	230	1400	950	10	14x14	1	74	2.5	78	65	57	3/4"	NO	
E	330	2000	1200	12	16x14	1	79	1.5	75	67	59	3/4"	NO	
F	450	3000	1800	14	20x16	1	77	1.5	76	68	59	3/4"	NO	
G	150	900	650	8	12x10	2	100	3.0	71	65	56	3/4"	NO	

NOTES:

1. SEE G001 FOR PROJECT GENERAL NOTES
2. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

RADIANT CEILING PANEL SCHEDULE

TAG	BTU/LF	AVG. WATER TEMP.	DIM. (LxW)	TOTAL BTU	GPM	PASSES	NOTES:
RP	149	93	(2)	VARIES	0.5	2	(1)

NOTES: (1) LINEAR PANELS
(2) LENGTH = AS TAGGED ON DRAWING & WIDTH = 12"

FAN SCHEDULE

TAG	AIR FLOW (CFM)	SPD (IN.WG)	MOTOR SIZE	FRPM	SOUND (SONES)	ELECTRICAL (V/PH/HZ)	DESCRIPTION	TYPICAL UNIT MFG & MODEL NO.	NOTES
EF-1	1165	1.0	1/3	1623	11.6	120/1/60	CENTRIFUGAL ROOF MOUNTED	COOK 120 ACEB	(1)
EF-2	1940	1.0	3/4	1329	14.0	460/3/60	CENTRIFUGAL ROOF MOUNTED	COOK 150 ACEB	(1)
EF-3	250	0.25	1/6	1075	6.6	120/1/60	CENTRIFUGAL INLINE	COOK 80 SQ10D	

NOTES: PROVIDE MOTORIZED DAMPER

HUMIDIFIER SCHEDULE

TAG	SERVICE	OUTPUT PPH	NAT. GAS INPUT MBH	DUCT DIMENSIONS W (IN.)	DUCT DIMENSIONS H (IN.)	CFM	AIR TEMP (°F)	ABSORPTION (INCHES)	TUBE O.C.	MAX VEL FPM	WEIGHT (LBS)	EMERGENCY GENERATOR	TYPICAL UNIT MFG & MODEL NO.	NOTES:
H-1	AHU-1	225	300			27,500	52	18			975	YES	DRI-STEEM GTS 300	(1)
H-2	AHU-2	225	300			27,500	52	18			975	YES	DRI-STEEM GTS 300	(1)

NOTES: 1. PROVIDE OUTDOOR ENCLOSURE WITH HEATER, ULTRA-SORB DISPERSION GRID, HIGH LIMIT DUCT HUMIDISTAT, SAIL SWITCH, DRAIN COOLER, AND VAV COMPENSATING CONTROL.

EXPANSION TANK SCHEDULE

TAG	TANK VOLUME (GAL)	ACCEPT VOLUME (GAL)	MAX TEMP (°F)	MAX PRESS (PSI)	PRE-CHARGE (PSI)	SYSTEM CONN (INCH)	DIAM (INCH)	HEIGHT (INCH)	MOUNT	TYPICAL UNIT MFG & MODEL NO.
ET-1	370	370		125	12		36	104	FLOOR	TACO CA-1400
ET-2	37	37		125	12		20	46	FLOOR	TACO CA-140

NOTES:

PUMP SCHEDULE

TAG	FLOW (GPM)	HEAD (FEET)	SPEED (RPM)	EFF. (%)	MOTOR HP	ELECTRICAL (V/PH)	STYLE	SERVICE	TYPICAL UNIT MFG & MODEL NO.
HWP-1	58	5			1/6	120/1	INLINE	BOILER PUMP	TACO 1460
HWP-2	58	5			1/6	120/1	INLINE	BOILER PUMP	TACO 1460
HWP-3	58	40	1760	52	2.00	460/3	VI	HW PUMP	TACO KV 1507
HWP-4	58	40	1760	52	2.00	460/3	VI	HW PUMP	TACO KV 1507
HWP-5	46	5			1/6	120/1	INLINE	HW COIL PUMP	TACO 1460
HWP-6	37	5			1/6	120/1	INLINE	HW COIL PUMP	TACO 1460
HWP-7	143	10	1160	64	3/4	460/3	INLINE	DHW REHEAT PUMP	TACO KV 3007
CHWP-1	255	40	1760	76	5	460/3	VI	CHILLED WATER PUMP	TACO KV 3007
CHWP-2	255	40	1760	76	5	460/3	VI	CHILLED WATER PUMP	TACO KV 3007

NOTES:

BOILER SCHEDULE - HOT WATER

TAG	FUEL	BOILER HP	INPUT MBH	LWT (F)	EWT (F)	GROSS I.B.R. RATING MBH	NET I.B.R. RATING MBH	ELECTRICAL DATA HP	ELECTRICAL DATA VOLT/Ø	FLUE SIZE	OPERATING WT. LBS.	TYPICAL UNIT MFG AND MODEL NO.	NOTES:
B-1	NAT. GAS	30	1,000	140	110	960	870	335 W	120/1	8"Ø	2,279	CLEAVER BROOKS CLEARFIRE CFC-1000	
B-2	NAT. GAS	30	1,000	140	110	960	870	335 W	120/1	8"Ø	2,279	CLEAVER BROOKS CLEARFIRE CFC-1000	

NOTES: (1)

AIR-COOLED CHILLER SCHEDULE

TAG	NOM TON	CAPACITY (TONS)	GPM	GPM MIN.	% PROP GLYCOL	EWT °F	LWT °F	FLUID PD FT-WC	FOUL FACTOR	ELECTRICAL DATA KW	ELECTRICAL DATA VOLTS/Ø	KW/TON	EER	NPLV	OPERATING WEIGHT (LBS)	TYP. UNIT MANUF. & MODEL NO.	NOTES:
CH-1	150	140.1	314.7	145	35%	56.0	44.0	7.1	0.0001	163.4	460/3	1.167	10.28	0.822	12,500	AIRSTACK (4) ASP-30XZH2A MODULES	(1)

NOTES: (1) CHILLER SHALL BE DESIGNED FOR R-410a REFRIGERANT

REV.	DESCRIPTION	DATE
	ISSUED FOR G.M.P. & PERMITTING 4-3-09	

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144 Fore Street/P.O. Box 618
Portland, Maine 04104
tel. (207) 772-3846
fax. (207) 772-1070
www.smrtinc.com

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MECHANICAL SCHEDULES
SHEET TITLE:

SCALE:	AS NOTED	DATE:	
PROJECT MANAGER:	SLB	GRAPHIC SCALE:	0" 1"
JOB CAP/DRAWN:	TCM/DJL		
A/E OF RECORD:	TAC	SHEET No.	
SMRT CAD FILE:	M-601-08139		M-601
PROJECT No.	08139		

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