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AIR OUTLET SCHEDULE		
CODE	MODEL	DESCRIPTION
CSD-1	PSS	PERFORATED PLATE CEILING SUPPLY DIFFUSER WITH ADJUSTABLE "STAR PATTERN" DEFLECTORS IN NECK AND BORDER TYPE 3 FOR LAY-IN CEILING.
CSD-2	TDC	LOUVER FACED CEILING SUPPLY DIFFUSER WITH TYPE 1 BORDER FOR SURFACE MOUNTING IN GYP BOARD CEILING WITH OR WITHOUT GLUED-ON ACOUSTICAL TILE AND OBD.
CSD-3	TDC	LOUVER FACED CEILING SUPPLY DIFFUSER WITH DROPPED FACED TYPE 5 BORDER FOR SURFACE MOUNTING IN GYP BOARD CEILING WITH ADJACENT SURFACE MOUNTED LIGHT FIXTURES.
CSD-4	ACUTHERM THERMA-FUSER TF-HC	SELF-CONTAINED THERMALLY POWERED VAV CEILING SUPPLY DIFFUSER AUTOMATIC CHANGEOVER.
CRG-1/CEG-1/CER-1	PAR	PERFORATED PLATE CEILING RETURN/EXHAUST REGISTER WITH BORDER TYPE 3 FOR LAY-IN CEILING AND BORDER TYPE 1 FOR GYP. BOARD. OMIT OBD AT GRILLE.
WSR-1/WSG-1	300 RS	DOUBLE DEFLECTION BAR FACED WALL SUPPLY REGISTER WITH ADJUSTABLE FRONT AND BACK BLADES. FRONT BLADES TO BE VERTICAL. OMIT OBD AT GRILLE.
WSG-2/WRG-2	SERIES 1700	REVERSIBLE CORE/NARROW BLADE WALL SUPPLY/REGISTER WITH HORIZONTAL FRONT BLADES AND VERTICAL MODEL 07 ADJUSTABLE BACK BLADES. OMIT OBD AT GRILLE.
WRR-1/WRG-1	350 RL	SINGLE DEFLECTION BAR FACED WALL RETURN REGISTER WITH 45° FIXED HORIZONTAL FRONT BLADES. OMIT OBD AT GRILLE.
WRR-2	SERIES 1700	SAME AS WSR-2 EXCEPT WITHOUT ADJUSTABLE BACK BLADES.
CER-2/CEG-2/CRG-2	350 RL	SINGLE DEFLECTION BAR FACED CEILING EXHAUST/RETUREN REGISTER WITH 45° FIXED BLADES. OMIT OBD AT GRILLE.

NOTES: (1) COORDINATE FRAME TYPES WITH ACTUAL CEILING BEING PROVIDED. SEE ARCHITECTURAL REFLECTED CEILING PLANS - VERIFY WITH GENERAL CONTRACTOR.
(2) U.O.N. ALL AIR OUTLETS TO BE STEEL CONSTRUCTION WITH OFF-WHITE FINISH. INTERIOR OF PERFORATED PLATE MODELS TO BE FLAT BLACK.
(3) ALL OUTLETS FOR LAY-IN TYPE CEILING SHALL BE PROVIDED WITH MIN. 2 EARTHQUAKE TABS - CONTRACTOR TO SECURE TO ROOF JOINTS WITH MIN. 12 GA. WIRE.

MISCELLANEOUS EQUIPMENT SCHEDULE	
SYM	DESCRIPTION
GRH	GREENHECK "FABRICATION" GRAVITY INTAKE HOOD WITH TAPERED BOTTOM TO MATCH ROOF SLOPE. 1/2" MESH BIRD SCREEN. BDD AND MIN. 12" HIGH ROOF CURB WITH WOOD NAILER AND NO CANT. NECK SIZES: GRH-A: 12X24, GRH-B: 12X30, GRH-C: 14X36. MAX. 50 LBS. SEE DTL 2/M2.2 FOR ANCHORAGE.
GRH	GREENHECK "FABRICATION" GRAVITY RELIEF HOOD WITH TAPERED BOTTOM TO MATCH ROOF SLOPE. 1/2" MESH BIRD SCREEN. BDD AND MIN. 12" HIGH ROOF CURB WITH WOOD NAILER AND NO CANT. NECK SIZES: GRH-A: 14X24, GRH-B: 14X30, GRH-C: 14X36. MAX. 50 LBS. SEE DTL 2/M2.2 FOR ANCHORAGE.
HK	BELL & GOSSETT MODEL P18-21-TLA PLATE AND FRAME HEAT EXCHANGER. 392.016 BTUH TOTAL CAPACITY WITH 24.0 GPM OF 180 FWT/150 FWT @ 2.12 PSI PRESSURE DROP ON HEATING SOURCE SIDE AND 21.0 GPM OF 170.2 FWT/158.0 FWT @ 1.67 PSI PRESSURE DROP ON BUILDING SIDE. PROVIDE WITH 2" CONNECTION SIZES. 350 LBS OPER. WT. SEE DTL 7/M2.1 FOR ANCHORAGE.
DSS	CARRIER DUCTLESS SPLIT SYSTEM HEAT PUMP "HIGH WALL" INDOOR FAN COIL UNIT MODEL 400NE NOMINAL 2 TON - 23,200 BTUH TOTAL COOLING/10.4 EER AND 21,400 BTUH HEATING/2.90 COP AT ARI CONDITIONS. 0.53 FLA FAN, 0.86 TOTAL UNIT MCA AT 208/230 VOLT - 14 POWER. PROVIDE WITH LOW AMBIENT TEMPERATURE CONTROLS, COAKGASE HEATER AND SIX VIBREX MODEL ICG-EQ 3/4" THICK NEOPRENE ISOLATION PADS WITH BOLT HOLES AND NEOPRENE WASHERS FOR THRU BOLTING. OPERATING WEIGHT: 175 LBS.
DSS	CARRIER DUCTLESS SPLIT SYSTEM HEAT PUMP OUTDOOR CONDENSING UNIT MODEL 38B024 NOMINAL 2 TON. 11.7 RLA/61.0 LRA COMPRESSOR, 0.70 FLA FAN, 15.3 TOTAL UNIT MCA AT 208/230 VOLT - 14 POWER. PROVIDE WITH LOW AMBIENT TEMPERATURE CONTROLS, COAKGASE HEATER AND SIX VIBREX MODEL ICG-EQ 3/4" THICK NEOPRENE ISOLATION PADS WITH BOLT HOLES AND NEOPRENE WASHERS FOR THRU BOLTING. OPERATING WEIGHT: 175 LBS.
DX	TRANE MODEL TWE036C SPLIT-SYSTEM CONVERTIBLE DIRECT EXPANSION FAN COIL UNIT. 1000 CFM @ 0.50" ESP. PROVIDE WITH TAY (SHIPPED LOOSE), ONE 20"X20"X1" THICK TA FILTER, ONE 1/2 HP 3 SPEED FAN MOTOR (3.3 FLA AT 208V-14 POWER), VIBREX MODEL RMXA-1C SPRING HANGERS WITH 1" DEFLECTION SPRINGS AND NEOPRENE CUPS AND CONDENSATE DRAIN PAN WITH BOTH PRIMARY AND SECONDARY CONNECTIONS. PROVIDE ADDITIONAL CONTROL COMPONENTS AND WIRING AS REQUIRED TO CONNECT THE CONTROLS FOR THE NEW DX FAN COIL UNITS WITH THEIR ASSOCIATED FOUR PIPE FAN COIL UNITS CURRENT DDC CONTROLLER SUCH THAT THE NEW DX FAN COIL UNITS BECOME AN ADDITIONAL STAGE OF COOLING FOR THE FOUR PIPE FAN COIL UNITS AND NO ADDITIONAL SPACE SENSORS ARE ADDED (SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS). OPERATING WEIGHT: 120 LBS.
CU	TRANE MODEL 21TR030A 1200 SEER 2-1/2 TON HIGH EFFICIENCY SPLIT-SYSTEM CONDENSING UNIT. PROVIDE WITH FOUR VIBREX MODEL ICG-EQ 3/4" THICK NEOPRENE ISOLATION PADS WITH BOLT HOLES AND NEOPRENE WASHERS FOR THRU BOLTING. 13.5 RLA/72.5 LRA COMPRESSOR, 0.9 FLA CONDENSER FAN, 18.0 TOTAL MCA/30 MOCP AT 208V-14 POWER. OPERATING WEIGHT: 160 LBS.

FAN COIL UNIT SCHEDULE																							
CODE	MODEL	SUPPLY FAN DATA				COOLING COIL				HEATING COIL				ELECTRICAL		FILTERS		MINIMUM ACOUSTICAL PLENUM SIZES (5)		WEIGHT LBS.	REMARKS		
		CFM	ESP (1)	MIN OA	BHP	TOTAL MBH (2)	SEN MBH (2)	EAT 'F DB WB	ROWS	GPM (2)(3)	MBH	EAT 'F	ROWS	GPM (4)	HP	VOLTS/Ø	QTY.	SIZE IN.	TYPE			SUPPLY	RETURN
FCU-1	BCHB-036	1200	0.75"	450	0.477	37.54	31.82	79.1 64.0	4	6.30	50.6	57.4	1	3.45	3/4	120/1	2	20X20	2" PM	16X14X 14'-0"	32X16X 8'-0"	275	(10) 1A
FCU-2	BCHB-036	1200	0.75"	450	0.477	37.54	31.82	79.1 64.0	4	6.30	56.6	57.4	2	1.61	3/4	120/1	2	20X20	2" PM	16X14X 10'-0"	32X16X 8'-0"	275	(10)
FCU-3	BCHB-036	1000	0.75"	450	0.348	38.92	33.06	80.0 64.5	4	6.20	41.8	54.4	1	1.83	1/2	120/1	2	20X20	2" PM	14X14X 8'-0"	32X14X 11'-0"	275	(10)
FCU-4	BCHB-024	800	0.55"	225	0.304	23.81	20.31	78.1 63.5	4	5.40	44.0	63.2	2	2.14	1/2	120/1	2	12X24	2" PM	14X14X 8'-0"	20X14X 8'-0"	230	(10)
FCU-5	BCHB-024	800	0.65"	200	0.282	21.28	19.76	77.5 62.5	4	4.50	28.1	62.2	1	1.58	1/2	120/1	2	12X24	2" PM	14X14X 5'-0"	20X14X 8'-0"	230	(10)
FCU-6	BCHB-018	600	0.55"	180	0.315	18.41	15.32	78.3 63.5	4	5.00	24.8	62.4	1	4.41	1/2	120/1	2	12X24	2" PM	14X14X 6'-0"	12X12X 8'-0"	200	(10)
FCU-7	BCHB-054	1800	0.90"	450	0.667	51.75	45.08	77.8 63.5	4	12.60	53.3	62.2	1	1.75	3/4	120/1	4	16X20	2" PM	20X16X 12'-0"	32X14X 10'-0"	325	(10)
FCU-8	BCHB-036	1200	1.00"	300	0.533	27.29	27.29	77.8 63.0	4	3.61	31.0	62.2	1	0.84	3/4	120/1	2	20X20	2" PM	16X14X 8'-0"	32X16X 8'-0"	275	(10)
FCU-9	BCHB-018	600	0.75"	200	0.370	20.81	18.02	82.3 64.5	4	5.97	26.0	46.0	1	2.19	1/2	120/1	2	12X24	2" PM	14X14X 6'-0"	12X12X 8'-0"	200	(10)

NOTES: (1) EXTERNAL STATIC PRESSURES DO NOT INCLUDE HC, CC OR FILTER PRESSURE DROPS.
(2) COOLING COIL CAPACITIES DO NOT INCLUDE ADDITIONAL CAPACITY FOR FAN MOTOR HEAT. FLOW RATES INCLUDE THIS CAPACITY.
(3) CHILLED WATER FLOW RATES BASED ON 42°FWT AND MAXIMUM OF 10' PD.
(4) HEATING HOT WATER FLOW RATES BASED ON 170°FWT AND MAXIMUM 10' PD.
(5) SIZES GIVEN FOR LINED PLENUMS ARE NET CLEAR OF 1" AL.
(6) ALL UNITS SHALL BE PROVIDED WITH DDC CONTROLS BY SEIBE - SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
(7) ALL UNITS SHALL BE SHUT-DOWN FOR SMOKE FROM TOTAL-COVERAGE SMOKE DETECTION SYSTEM (CMC SECTION 605 EXCEPTION NO.1).
(8) PROVIDE ALL UNITS WITH MANUFACTURER'S ECONOMIZER MIXING BOX WITH ANGLED FILTER TRACK AND VIBREX MODEL RMXA-1C SPRING HANGERS WITH 1" DEFLECTION SPRINGS AND NEOPRENE CUPS.
(9) SEE DETAIL 5/M2.1 FOR SUPPORT, BRACING AND OTHER REQUIREMENTS.
(10) RESIZE ASSOCIATED CHILLED WATER CONTROL VALVE AS REQUIRED TO PROVIDE A MAXIMUM PRESSURE DROP OF 10' (4.3 PSI).

WT TERMINAL BOX SCHEDULE					
CODE	CFM SETTING		DUCT CONNECTION		REMARKS
	MAX.	MIN.	INLET (INCHES)	OUTLET (INCHES)	
WT 7-0	1100	0	14"	-	BY - PASS DAMPER (2)
WT 7-1	850	150	10"	-	CLASS/LAB WEST 1A
WT 7-2	825	250	12"	-	CLASS/LAB 40 EAST
WT 7-3	305	200	14"	-	VEST. 36, MEN'S 35 (5)

NOTES: (1) WT TERMINAL BOXES SHALL BE TRUS MODEL DESIGNED WITH VELOCITY SENSORS LESS ACTUATOR AND BALANCE OF CONTROLS. ACTUATOR AND REMAINING CONTROLS TO BE SEIBE.
(2) BY-PASS DAMPER - 110V, 1Ø POWER CONNECTION REQUIRED FOR EACH. CONTROLS CONTRACTOR TO PROVIDE LOW VOLTAGE CONTROLS TRANSFORMER(S) AT BY-PASS BOX TO PROVIDE POWER TO EACH ZONE BOX ON SAME AS UNIT SYSTEM.
(3) INLET DUCT SIZE TO BE EQUAL TO BOX INLET CONNECTION SIZE IF 4'-0" OR SHORTER - ONE SIZE LARGER (BUT NOT LARGER THAN OUTLET DUCT SIZE ON PLAN) IF LONGER THAN 4'-0" - PROVIDE ADDITIONAL TRANSITION DUCT.
(4) PROVIDE DUCT TRANSITION AT BOX OUTLET AS REQUIRED TO TRANSITION TO OUTLET DUCT SIZE SHOWN ON PLAN.
(5) PROVIDE ROOM TEMPERATURE SENSOR WITH BLANK COVER (NO OVERRIDE BUTTON, TEMP. ADJUSTMENT KNOB OR READ OUT). ALL OTHERS TO HAVE CAMPUS STANDARD ACCESSORIES - VERIFY WITH CAMPUS FACILITIES DEPARTMENT.

COOLED CHILLER SCHEDULE														
CODE	TONS (1) REFRIG	MODEL	ELEC DATA 460V/3Ø				COND		EVAPORATOR				OPER WT #	
			COMPRESSOR	COND. FAN	MCA	MFS	EAT 'F	GPM	EWT 'F	LWT 'F	ΔT 'F	FOULING FACTOR		
CH-1	20.0	CGAF-C20	QTY. (EA)	FLA (EA)	LRA (EA)	QTY. (EA)	FLA (EA)	90	50	51.8	42	(10' MAX)	0.00025	2091

NOTES: (1) AT ARI CONDITIONS. (2) SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. (3) SEE DETAIL 8/M2.1 FOR ANCHORAGE. (4) PROVIDE WITH VIBREX MODEL PRSRSR THRU-BOLT NEOPRENE VIBRATION PADS.

PUMP SCHEDULE										
CODE	GPM	TDH FT	TYPE & SIZE	BHP	MOTOR HP	SERVICE	LOCATION	VOLTS/PH/Hz	OPER WT#	REMARKS
P1	50.0	53	IN-LINE SERIES 80 1-1/2 X 1-1/2 X 9-1/2	1.4	2.0	CHILLED WATER	MECH. RM. 33	460/3/60	200	(2)(3)
P2	21.0	50	IN-LINE SERIES 80 1-1/2 X 1-1/2 X 7 1/8	0.7	1.5	HEATING WATER	MECH. RM. 33	460/3/60	175	(2)(3)

NOTE: (1) PUMP SELECTION BASED ON 1750 RPM. (2) PROVIDE WITH VIBREX MODEL RMXA-1C SPRING HANGERS WITH 1" DEFLECTION SPRINGS AND NEOPRENE CUPS. (3) SEE DETAIL 6/M2.1 FOR SUPPORT AND BRACING.

EXPANSION TANK SCHEDULE								
CODE	SYSTEM SERVED	MODEL & SIZE	DIMENSION DIA X HT	TANK VOL GALLONS	ACCEPTANCE VOL. GALS.	INITIAL PRESS PSIG	FINAL PRESS PSIG	OPER WT#
ET-1	CHILLED WATER	NLA 35	12 x 25	10.0	10.0	15	45	130
ET-2	HEATING WATER	NLA 35	12 x 25	10.0	10.0	15	45	130

NOTES: (1) PROVIDE WITH CALIFORNIA CODE SIGHT GLASS AND ASME STAMP. (2) REPLACEABLE BLADDER TYPE. (3) SEE DETAIL 1/M2.2 FOR ANCHORAGE.

EXHAUST FAN SCHEDULE										
CODE	TYPE AND MODEL	FAN CFM	S.P. (°C)	MOTOR (1)		SONES	SERVICE	CONTROL	OPER WT #	REMARKS
				BHP	HP					
EF-1	ROOFTOP CENT GB-90	300	0.50	0.09	1/4	7.0	ADM. RESTROOMS	(5) FCU-6	75	-
EF-2	ROOFTOP CENT G-80-G	200	0.25	<0.032	1/30	<5.4	MEN'S TOILET 26	(5) FCU-2	50	(3)RELOCATED
EF-3	ROOFTOP CENT G-80-G	200	0.25	<0.032	1/30	<5.4	MEN'S TOILET 26	(5) FCU-2	50	(3)RELOCATED
EF-4	ROOFTOP CENT G-90-G	350	0.25	<0.041	1/25	<5.5	CONF. RM. 17	WALL SWITCH	50	(3)
EF-5	ROOFTOP CENT G-90-G	350	0.25	<0.041	1/25	<5.5	CONF. RM. 17	WALL SWITCH	50	(3)
EF-6	ROOFTOP CENT G-90-G	250	0.25	<0.041	1/25	<5.5	WOMEN'S TOILET 30	(5) FCU-1	50	(3)
EF-7	ROOFTOP CENT G-85-G	300	0.25	0.035	1/30	5.2	CLASS/LAB RESTROOMS	(5) FCU-7	50	(3)
EF-8R	ROOFTOP CENT GB-120	1200	0.25	0.13	1/4	8.3	OUTDOOR STORAGE 29	LINE VOLTAGE T'STAT	75	(3)
EF-11	ROOFTOP CENT G-80-G	200	0.25	<0.032	1/30	<5.4	MEN'S TOILET 26	(5) FCU-2	50	(3)
EF-12	ROOFTOP CENT G-75-G	150	0.25	<0.020	1/50	<3.6	CUSTODIAN 34	EMS	50	(3)
EF-13	ROOFTOP CENT G-90-G	350	0.25	<0.041	1/25	<5.5	MECHANICAL 33	TSTAT.	50	(3)

NOTES: (1) ALL FANS TO BE 120V/1Ø. (2) SEE DETAIL 2/M2.2 FOR ANCHORAGE. (3) DIRECT DRIVE FAN - PROVIDE MANUFACTURER'S SOLID STATE SPEED CONTROL TO BE MOUNTED INSIDE FAN MOTOR HOUSING. (4) ALL FANS TO BE PROVIDED WITH MIN. 12" HIGH MANUFACTURER'S PREFAB CURB WITH WOOD NAILER AND LESS CANT. (5) INTERLOCK WITH; (VIA EMS)

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REVISIONS: 1-12

NO.	DATE	REASON	BY
1	06/14/02	CHANGE REQUEST	DA
2	07/01/02	CHANGE REQUEST	DA
3	03/17/03	CHANGE REQUEST #19	DA
4	05/20/03	CHANGE REQUEST #20	DA

SEAL: [Professional Engineer Seal]

CONSULTANT: MECHANICAL DESIGN STUDIO inc
1777 Oakland Blvd., Suite 210
Walnut Creek, California 94596
Tel: 925-210-0100
Tel: 925-210-0144
www.mds-b.com
PROJECT # 23018.00

ARCHITECT: CIANFICHI ARCHITECTURE • PLANNING
30 ANNE COURT
WALNUT CREEK, CA 94598
TEL: (925) 256-8638
FAX: (925) 256-8652

PROJECT: CHILD DEVELOPMENT CENTER CANADA COLLEGE

STAMP: APPROVED DIV. OF THE STATE ARCHITECT
AO: AG, FLS, ED, SS, SC
APPL NO. 103579 DATE 6.16.03

APPL. NUMBER: KEY PLAN

SHEET TITLE: SCHEDULES

DRAWN BY: JAW/LK PROJECT NO: 304-99
CHECKED BY: DA DATE: JULY 3, 2000
APPL NO.: SHEET: M0.2r
DATA NO.: NO. OF:

AS-BUILTS