AIR HANDLING UNIT SCHEDULE (CHILLED WATER COOLING COIL)

MARK	BASIS OF DESIGN	LOCATION	MIN. OUTDOOR AIR (CFM)	SUPPLY FAN TYPE/ CLASS	SUPPLY FAN CFM	SUPPLY FAN E.S.P. (in.WG)	SUPPLY FAN T.S.P. (in.WG)	SUPPLY FAN BHP	SUPPLY FAN HP	SUPPLY FAN FRPM	RETURN FAN CFM	RETURN FAN T.S.P./ E.S.P. (in.WG)	RETURN FAN BHP	RETURN FAN HP	RETURN FAN FRPM	CAPACITY TOT/SEN (MBH)	CHILLED WATER COOLING COIL GPM	ROWS/ FPI	EWT (°F)	LWT (°F)	EDB (°F)	EWB (°F)	LDB (°F)	LWB (°F)	FACE VEL. (FPM)	APD (°H20)	WPD (FT. H20)	MINIMUM BRANCH PIPE SIZE (IN.)	HEATING WATER COIL MIN. CAP. (MBH)	GPM	ROWS	FPI	EWT (°F)	LWT (°F)	EAT (°F)	LAT (°F)	FACE VEL. (FPM)	APD (°H20)	WPD (FT. H20)	MINIMUM BRANCH PIPE SIZE (IN.)	PRE-FILTER ASHRAE EFF. (%)	PRE-FILTER FACE VEL. (FPM)	PRE-FILTER INITIAL P.D. IN. WG.	PRE-FILTER FINAL P.D. IN. WG.	FINAL-FILTER ASHRAE EFF. (%)	FINAL-FILTER FACE VEL. (FPM)	FINAL-FILTER INITIAL P.D. IN. WG.	FINAL-FILTER FINAL P.D. IN. WG.	ELECTRICAL V/ø/HZ	ELECTRICAL MCOP	ELECTRICAL MCA	ELECTRICAL FLA	MAX. OPER. WT. (LBS.)	DIMENSION L X W X H (10)	REMARKS (2)
AC-5.1	TEMPTROL	MECH RM	2,250	PLENUM/ CLASS I	12,000	1.5	4.02	12.10	15	1500						390/316	77.8	8/7	45	55	77	63	53	52	500	0.79	8.61	2-1/2	422	28.9	1	8	180	150	28	68	498	0.08	2.77	1-1/2					MERV-13	500	0.5	1.25	460/3/60	50	33	21	5,100	~~148 X 72 X 65~~	1 2 3 4 5 6 7 8 9 11
AC-5.2	TEMPTROL	MECH RM	10,000	PLENUM/ CLASS II	20,000	1.5	4.27	20.52	25	1429						933/739	186.1	8/9	45	55	86	67	53	52	500	1.06	11.32	3	927	63.8	1	10	180	150	28	67	498	0.08	5.89	2					MERV-13	500	0.5	1.25	460/3/60	80	49	34	7,500	142 X 111 X 66	1 2 3 4 5 6 7 9 11
AC-5.3	TEMPTROL	MECH RM	1,100	PLENUM/ CLASS I	12,800	1.5	3.90	11.63	15	1050						395/367	78.74	6/10	45	55	76	63	53	52	500	0.80	6.55	2-1/2	289.7	19.8	1	8	180	150	28	68	498	0.08	4.63	1-1/2					MERV-13	500	0.5	1.25	460/3/60	50	33	21	5,500	~~148 X 83 X 60~~	1 2 3 4 5 6 7 8 9 11
AC-6.1	TEMPTROL	MECH RM	3,300	PLENUM/ CLASS II	28,100	1.5	4.00	(2)13.4	(2)15	1201						883/722	176.02	6/10	45	55	76	63	53	52	500	0.87	9.43	3	767.4	52.5	1	8	180	150	28	67	498	0.08	4.03	2					MERV-13	500	0.5	1.25	460/3/60	100	59	42	12,000	192 X 143 X 70	1 2 3 4 5 6 7 8 9 11

NOTES:
1. COPPER COILS/ALUMINUM FINS, STAINLESS STEEL CASING.
2. MIXING BOX WITH PREMIUM DAMPERS (OPPOSED BLADE FOR FRESH AIR; PARALLEL BLADE FOR RETURN AIR)
3. INTERIOR LINER WITH CORROSION PROTECTION COATING.
4. STAINLESS STEEL DRAIN PANS.
5. INSTALL ON 4" HIGH CONCRETE HOUSEKEEPING PAD
6. PROVIDE UNITS WITH VFDS AND INVERTER DUTY RATED MOTORS LABELED FOR USE WITH VFD.
7. INSTALL UNIT SMOKE DETECTOR FOR CODE REQUIRED SHUT-DOWN.
8. PROVIDE 0-100% MODULATING ECONOMIZER.
9. GALVANIZED DOUBLE WALL UNIT WITH R-13 INSULATION. ACCESS DOORS WITH HANDLES THROUGHOUT, VIEW WINDOWS ON ALL ACCESS DOOR. LEVEL II THERMAL BREAK.
10. AHU SELECTION SHALL HAVE PHYSICAL DIMENSION THAT FIT EXISTING MECHANICAL ROOM WITH ALLOWABLE ACCESS TO ALL ACCESS DOOR, COIL CONNECTIONS AND FAN CONTROLLER.
11. SEE DIVISION 25 SPECIFICATION FOR AIR FLOW MEASURING STATIONS (AFMS)

See RFI 138

SEE MSK-03

ASI-4
REF. SK2 & SK3

SPLIT-SYSTEM AIR CONDITIONING UNIT SCHEDULE

MARK	AREA SERVED	SEER	CAPACITY CLG/HTG (MBH)	OUTSIDE AIR (CFM)	INDOOR ("A") FAN-COIL UNIT MANUFACTURER AND MODEL #	CFM	SOUND (dB-A)	WEIGHT (LBS.)	ELECTRICAL FLA	MCA	VOLT	PH	HZ	MARK	OUTDOOR ("B") CONDENSING UNIT MANUFACTURER AND MODEL #	AMBIENT TEMP. (°F)	WEIGHT (LBS.)	ELECTRICAL MCA	MOCP	VOLT	PH	HZ	REMARKS
FC-5.1	TEL./DATA ROOM	13.4	24.0/0.0	0	MITSUBISHI PLA-A24AA	710	34	60	0.79	1.0	208	1	60	CU-5.1	MITSUBISHI PUY-A24NHA	95	100	18	30	208	1	60	SEE NOTES BELOW
FC-5.2	ELEVATOR MACHINE ROOM	16.0	22.0/23.2	0	MITSUBISHI MSZ-A24NA	570	49	40	0.76	1.0	208	1	60	CU-5.2	MITSUBISHI MUZ-A24NA	95	100	17	20	208	1	60	SEE NOTES BELOW
FC-5.3	ELEVATOR MACHINE ROOM	16.0	22.0/23.2	0	MITSUBISHI MSZ-A24NA	570	49	40	0.76	1.0	208	1	60	CU-5.3	MITSUBISHI MUZ-A24NA	95	100	17	20	208	1	60	SEE NOTES BELOW
FC-5.4	ELECTRICAL ROOM	13.0	11.6/0.0	0	MITSUBISHI MSY-A12WA	400	45	25	0.95	1.2	120	1	60	CU-5.4	MITSUBISHI MU-A12WA	95	100	16	20	120	1	60	SEE NOTES BELOW
FC-5.5	ELEVATOR MACHINE ROOM	16.0	22.0/23.2	0	MITSUBISHI MSZ-A24NA	570	49	40	0.76	1.0	208	1	60	CU-5.5	MITSUBISHI MUZ-A24NA	95	100	17	20	208	1	60	SEE NOTES BELOW

NOTES:
1. PROVIDE 30% FILTERS.
2. COORDINATE REFRIGERANT PIPING AND CONDENSATE DRAIN WITH OTHER TRADES.
3. DISCONNECT BY DIV. 26.
4. LOW AMBIENT CONTROLS.
5. UNITS SHALL INTERFACE WITH BMS WITH HARD WIRED THERMOSTAT.
6. R410A REFRIGERANT.
7. SEE 4/M6.2 FOR MOUNTING DETAILS.

ELEVATOR VENTS

MARK	MFR	MODEL	THROAT W x L	OUTER DIMENSIONS	LOUVER HIEGHT	SERVICE	OPERATING WEIGHT LBS	REMARKS
EV-1	GREENHECK	WIH	22 x 22	36 x 36	12.25	ELEVATOR – NORTH	50	SEE NOTES BELOW
EV-2	GREENHECK	WIH	22 x 22	36 x 36	12.25	ELEVATOR – SOUTH	50	SEE NOTES BELOW
EV-3	GREENHECK	WIH	22 x 22	36 x 36	12.25	ELEVATOR – EAST	50	SEE NOTES BELOW

NOTE:
1. PROVIDE INSECT SCREEN.
2. PROVIDE ROOF CURB.
3. PROVIDE INSULATED HOOD.

SEE RFI - 35

FIRE/SMOKE DAMPER AND VOLUME DAMPER SCHEDULE

MARK	MFR	MODEL	SLEEVE	U.L. RATING	REMARKS (1)
FSD	RUSKIN	FSD-60	17"	UL555/555S	1 2 3 4 5 8 (COMBINATION FIRE SMOKE DAMPER) (PROVIDE IN SUPPLY, RETURN, NON-HAZARDOUS EXHAUST DUCTS PENETRATING RATED PARTITIONS)
FSD	RUSKIN	FSD-36	17"	UL555/555S	1 2 3 4 6 8 (COMBINATION FIRE SMOKE DAMPER) (PROVIDE IN SUPPLY, RETURN, NON-HAZARDOUS EXHAUST DUCTS PENETRATING RATED PARTITIONS)
FSD	RUSKIN	DFSDR1	–	UL555/555S/555C	1 2 4 5 7 8 (COMBINATION FIRE SMOKE DAMPER) (PROVIDE IN SUPPLY, RETURN AND EXHAUST DIFFUSERS PENTETRATING RATED CEILINGS)
–	RUSKIN	MD-35	–		PROVIDE MINIMUM 2-INCH ELEVATED STAND-OFF PLATFORM FOR DAMPERS IN INSULATED SYSTEMS (MANUAL RECTANGULAR VOLUME DAMPER).
–	RUSKIN	MDRS25	–		PROVIDE MINIMUM 2-INCH ELEVATED STAND-OFF PLATFORM FOR DAMPERS IN INSULATED SYSTEMS (MANUAL ROUND VOLUME DAMPER).
–	RUSKIN	CD60	–		CONTROL DAMPER WITH ELECTRIC ACTUATOR.

NOTES:
1. TIE-IN TO BUILDING LIFE SAFETY SYTEM BY DIV. 28.
2. SMOKE LEAKAGE CLASS II, 1-1/2 HR. DAMPER
3. 120V ACTUATOR (POWER BY DIV. 26); PROVIDE END SWITCH
4. PROVIDE SMOKE DETECTORS WITHIN 5'-0" OF FSD. INSTALL QUANTITY AND IN LOCATION PER NFPA 72. PROVIDE SMOKE DETECTORS AS FURNISHED AND CONNECTED BY DIV 28 AND INSTALLED BY DIV 23
5. PROVIDE IN MEDIUM PRESSURE DUCTWORK.
6. PROVIDE IN LOW PRESSURE DUCTWORK.
7. SMOKE LEAKAGE CLASS 1, 1 HR. DAMPER
8. SMOKE DETECTOR FOR ACTIVATION OF SMOKE DAMPER IS TO BE PROVIDED BY FIRE ALARM CONTRACTOR AND INSTALLED AND WIRED TO THE DAMPER MOTOR BY THE MECHANICAL CONTRACTOR. SMOKE DETECTOR IS TO BE EXTERNALLY MOUNTED OUTSIDE DUCT AND FD/SD, FOR EAST ACCESS WITH SAMPLING TUBES

MSK-15

FAN SCHEDULE

MARK	MFR	MODEL	CFM	RPM	TSP	TYPE	BRAKE HP	ELECTRICAL HP	ELECTRICAL VOLT-ø	ELECTRICAL EMERG. POWER (Y/N)	SERVICE	OPERATING WEIGHT LBS	REMARKS
EF-5.1	GREENHECK	H-CUBE-300-75	11,200	905	1.50	UPBLAST CENTRIFUGAL	5.21	7-1/2	460/3	N	3RD FLR – KITCHEN HOOD	390	1 2 3 4 5 8
EF-5.2	GREENHECK	GB-121-4	855	931	0.3	ROOF CENTRIFUGAL	0.08	1/4	120/1	N	1ST FLR – TOILETS	70	1 2 3 4 5 6
EF-5.3	GREENHECK	GB-200-7	4,000	826	0.3	ROOF CENTRIFUGAL	0.68	3/4	460/3	N	3RD FLR – SERVERY	140	1 2 3 4 5 6
EF-5.4	GREENHECK	GB-220HP-10	4,310	831	0.55	ROOF CENTRIFUGAL	0.95	1	460/3	N	2ND FLR – TOILETS, EAST SIDE	160	1 2 3 4 5 6
EF-5.5	GREENHECK	GB-141-4	1,080	806	0.3	ROOF CENTRIFUGAL	0.11	1/4	120/1	N	3RD FLR – TOILETS	90	1 2 3 4 5 6
EF-6.1	COOK	490-ACEB	18,790	308	0.3	ROOF CENTRIFUGAL	2.4	3.0	460/3	N	1 1ST FLR RELIEF	600	1 2 3 4 5 6 7
EF-6.2	COOK	210-ACEB	4,650	850	0.3	ROOF CENTRIFUGAL	0.7	1.0	460/3	N	1 1ST FLR RELIEF	250	1 2 3 4 5 6 7
EF-6.3	COOK	210-ACEB	3,560	827	0.3	ROOF CENTRIFUGAL	0.5	1.0	460/3	N	1 1ST FLR RELIEF	250	1 2 3 4 5 6 7

NOTE:
1. PROVIDE THERMAL OVERLOAD PROTECTION AND PREMIUM EFFICIENCY MOTORS.
2. 5% BELT LOSS IS INCLUDED.
3. AMCA CERTIFIED FOR AIRFLOW AND SOUND.
4. SEE DETAIL 3/M6.2 FOR EXHAUST FAN MOUNTING.
5. PROVIDE ROOF CURB AND TIE-DOWNS
6. PROVIDE BIRDSCREEN AND DAMPER.
7. PROVIDE VFD/MOTOR STARTER WITH MANUAL BYPASS TO MODULATE WITH ASSOCIATED AC TO MAINTAIN SPACE PRESSURIZATION.
8. TYPE 1 GREASE HOOD EXHAUST FAN, UL 762 LISTED.

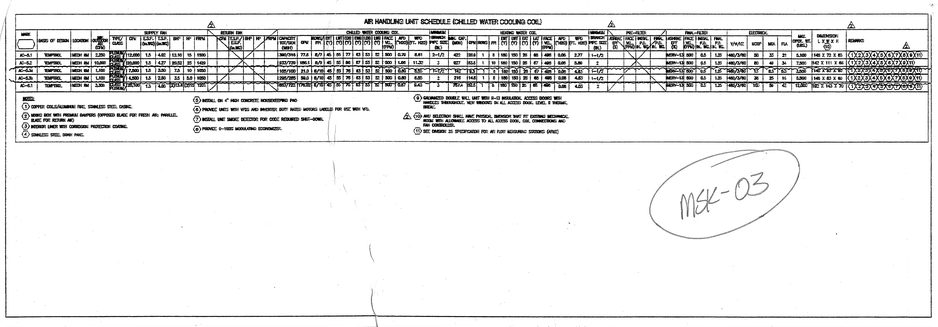
DIFFUSER, GRILLE AND REGISTER SCHEDULE

MARK	MFR	MODEL	SIZE	NECK	FINISH	SERVICE	BORDER	MATERIAL	REMARKS
CD-1	TITUS	PSS	24"X24"	SEE FLOOR PLANS	WHITE	SUPPLY	COORD. W/ RCP	STEEL	1 2
CD-2	ACUTHERM	THERMA-FUSER	24"x24"	SEE FLOOR PLANS	WHITE	SUPPLY	COORD. W/ RCP	STEEL	1 2
CD-3	TITUS	PSS	12"x12"	SEE FLOOR PLANS	WHITE	SUPPLY	COORD. W/ RCP	STEEL	1 2
SD-1	TITUS	CT-581	SEE FLOOR PLANS	SEE FLOOR PLANS	WHITE	SUPPLY	COORD. W/ RCP	STEEL	1 2
CR-1	TITUS	PAR	24"X24"	SEE FLOOR PLANS	WHITE	RETURN	COORD. W/ RCP	STEEL	1 2
SR-1	TITUS	CT-581	SEE FLOOR PLANS	SEE FLOOR PLANS	WHITE	RETURN	COORD. W/ RCP	STEEL	1 2
CE-1	TITUS	PAR	12"X12"	SEE FLOOR PLANS	WHITE	EXHAUST	COORD. W/ RCP	STEEL	1 2

NOTE:
1. COORDINATE EXACT LOCATION WITH LIGHTS, SPRINKLER HEADS, AND ARCHITECTURAL REFLECTED CEILING PLAN.
2. USE BORDER TYPE 2 FOR SURFACE MOUNT IN HARD CEILINGS, BORDER TYPE 3 FOR LAY-IN.

RFI-40

AIR HANDLING UNIT SCHEDULE (CHILLED WATER COOLING COIL)



NOTES:
1. COPPER COILS/ALUMINUM FINS, STAINLESS STEEL CASING.
2. MIXING BOX WITH PREMIUM DAMPERS (OPPOSED BLADE FOR FRESH AIR; PARALLEL BLADE FOR RETURN AIR)
3. INTERIOR LINER WITH CORROSION PROTECTION COATING.
4. STAINLESS STEEL DRAIN PANS.
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10. AHU SELECTION SHALL HAVE PHYSICAL DIMENSION THAT FIT EXISTING MECHANICAL ROOM WITH ALLOWABLE ACCESS TO ALL ACCESS DOOR, COIL CONNECTIONS AND FAN CONTROLLER.
11. SEE DIVISION 25 SPECIFICATION FOR AIR FLOW MEASURING STATIONS (AFMS)

MSK-03

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Title: AIR HANDLING UNIT SCHEDULE (CHILLED WATER COOLING ONLY)
Project Name: CANADA COLLEGE – BUILDINGS 5 & 6 RENOVATIONS
4200 FARM HILL BOULEVARD
REDWOOD CITY, CA 94061
FILE NO. 43-C1 APPL. 01-110074

REGISTERED PROFESSIONAL ENGINEER HORMOZ L. JANSSENS No. 030802 Exp. 12-31-2010 MECHANICAL STATE OF CALIFORNIA
Date Signed: 5/2/10

PROJECT 2007-0731
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Revision: DRAWING2.MK.1
Date 05/11/10
Scale NO SCALE
Project Number 07013
Drawing Number MSK-03

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ENGINEER: REGISTERED PROFESSIONAL ENGINEER HORMOZ L. JANSSENS No. 030802 Exp. 12-31-2010 MECHANICAL STATE OF CALIFORNIA

12/2/09

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REVISION HISTORY

	REMARKS	DATE
1	ADDENDUM NO. 1	09/18/09
2	ADDENDUM NO. 2	11/06/09
3	ADDENDUM NO. 3	12/04/09

DRAWING STATUS

		DATE
●	DSA PLAN CHECK	08/29/08
●	DSA BACK CHECK	01/22/09
●	BIDDING (BID #86593)	09/18/09
○	CONSTRUCTION	

FILE NO. 41-C1

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
01- 110074
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DATE:____

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8/04

BUILDINGS 5 & 6 RENOVATIONS

San Mateo County Community College District

BID ADDENDA

APPROVED
DIV OF THE STATE ARCHITECT
AC. TM FILS. AC SS. JG
APPL NO. 110074 DATE 5/20/10

CAÑADA COLLEGE

4200 Farm Hill Boulevard
Redwood City, CA 94061

MECHANICAL EQUIPMENT SCHEDULES

Date 08/29/08
Scale AS NOTED
Project Number 07013
Drawing Number M4.1