EQUIPMENT SCHEDULE

The following equipment forms the basis of design for this project. In accordance with the Specifications, Section 21 05 01, any alternate equipment that meets or exceeds the performance, quality or design intent of that specified within will be accepted. It is the contractors sole responsibility to ensure that any product they propose to use meets the requirements of the project in full as detailed under Section 21 05 01.

DEDICATED DX COOLING UNITS (AC-1, AC-2, AC-3, and AC-4): Unit shall be complete with R-410A refrigerant, all mounting hardware, auto air swing vanes, super quiet operation, filter, pre-charged refrigerant line set and microprocessor controls. Unit shall be complete with condensate pump mounted within drain pan of unit. Pump to be wired with unit. Condensing units to be located on ground in courtyard

Air Conditioning Unit AC-1 (CER 414): Daikin McQuay Model FHQ42MVJU, ceiling suspended room air conditioner. SEER: 13.8, EER: 9.5. Unit shall be rated at 11.9 kW (40.5 MBH) of cooling with a space temperature of 26 Deg.C. (80 Deg.F.) and an ambient condition of (95 Deg.F). Unit shall provide 9.4 kW (32.0 MBH) of cooling with a space temperature of 22 Deg.C. (72 Deg.F.). Power shall be 208-230V/60/1 phase. Unit fan shall supply 330 l/s on low speed, 400 l/s on high speed.

Outdoor Condensing Unit CU-1 (Matched to AC-1): Daikin McQuay Model RZR42PVJU cooling only. Power shall be 208-230V/60/1 phase. Maximum fuse: 30 Amps, Min. circuit ampacity: 27.. Unit shall carry a 6-year compressor warranty. Compressor shall be variable speed scroll. Unit shall be complete with optional controls and equipment for low ambient operation to -40 deg. Celsius including wind guards. Unit to be installed in courtyard on ground level as indicated in drawings and mounted stand complete with rubber isolating pads. Stand to lift unit a minimum of 610mm off ground. Stand to be mounted on 100-mm thick concrete pad(s).

Air Conditioning Unit AC-2, AC-3, AC-4 (IT 356, 419, 432): Daikin McQuay Model FAQ18PVJU, wall mounted room air conditioner. SEER: 18.6, EER: 12.7. Unit shall be rated at 5.3 kW (18 MBH) of cooling with a space temperature of 26 Deg.C. (80 Deg.F.) and an ambient condition of (95 Deg.F). Unit shall provide 4.2 kW (14.2 MBH) of cooling with a space temperature of 22 Deg.C. (72 Deg.F.). Power shall be 208-230V/60/1 phase. Unit fan shall supply 221 l/s on low speed, 300 l/s on high speed.

Outdoor Condensing Unit CU-2, CU-3, and CU-4 (Matched to AC-2, AC-3 and AC-4 respectively): Daikin McQuay Model RZR18PVJU cooling only. Power shall be 208-230V/60/1 phase. Maximum fuse: 20 Amps, Min. circuit ampacity: 16.5. Unit shall carry a 6-year compressor warranty. Compressor shall be variable speed scroll. Unit shall be complete with optional controls and equipment for low ambient operation to -40 deg. Celsius including wind guards. Mount unit on ground as indicated in drawings on rubber isolating pads and 50-mm thick concrete pad(s).

PUMPS (Self sensing In-line VFD): Pumps shall be Taco Model SKV centrifugal type with mechanical seals compatible with glycol. Cast iron construction for space heating/cooling. In-line pumps shall be supported from the floor with pipe stands or supported from structure with hangers. Pumps to be complete with matched variable speed self sensing pump controller.

P-1a - P-1b (Fan Coil Chilled Water Loop): SKV 3013, 15.75 l/s (249 GPM) flow at 224 kPa (75') head. Non-Overload Motor: 7.5 kW (10 HP), 208V/60/3 phase, 1760 RPM. Min. Efficiency: 60%. Pumps to be complete with Self Sensing VFD controller matched to pump and remotely mounted on wall, electrical contractor to wire from controller to VFD and from VFD to motor.

EXHAUST FANS - Inline: Cook Model TDB duct mounted belt driven dual fan single motor centrifugal cabinet fans.. Motor to be heavy duty TEFC type with permanently lubricated sealed ball bearings and furnished at the specified voltage and phase. DWDI centrifugal forward curved type, constructed of plated steel AMCA rated for air and sound performance. Units shall be installed complete with flexible duct connections. Contractor to install aluminum backdraft damper in discharge duct. Suspend units from structure with spring isolation hangers.

EF-1 (Observation 364): Model 8-TDB, 1160 RPM, 990 l/s (2100 cfm) airflow at 187 Pa (0.75") static pressure. Motor: ¼ HP, 208V/60/3 phase. Balance fan to 990 L/s (2100 CFM). To be controlled from EMCS through local low voltage activation.

EXHAUST FANS - Cabinet: Housings to be lined with 13 mm thick acoustic insulation. Motor to be mounted on resilient elastic grommets. Fan shall have forward curved centrifugal wheel AMCA rated for air and sound performance. Units shall be installed complete with flexible duct connections. Fans shall be provided with aluminum backdraft damper on discharge. Units not operating from local speed dial shall be complete with factory wired and installed solid state speed control for air balancing (this is not a disconnect). Suspend fans from structure with spring isolation hangers. Design is based on the following fans:

EF-2 (Printing Room - 422): Greenheck Model CSP-A410, 1000 RPM, 102 l/s (217 cfm) airflow at 124 Pa (0.5") static pressure. Motor: 135 Watts, 115V/60/1 phase. Unit to be complete with Greenheck Brick Vent BVE-128 with a maximum pressure drop of 0.07". Balance fan to 108 L/s (230 CFM). Unit to be controlled from local speed dial..

EF-3 (Staff Room - 417): Greenheck Model CSP-A410, 1000 RPM, 102 l/s (217 cfm) airflow at 124 Pa (0.5") static pressure. Motor: 135 Watts, 115V/60/1 phase. Unit to be complete with RD-8 round duct collar and Greenheck Brick Vent BVE-128 with a maximum pressure drop of 0.07". Balance fan to 114 L/s (243 CFM). Unit to be controlled from local speed dial.

EF-4 (Elevator Equipment Room): Cook Model GN-1000, 1100 RPM, 821 l/s (1741 cfm) airflow at 124 Pa (0.5") static pressure. Motor: 373 Watts, 115V/60/1 phase. Unit to be complete with Cook Brick Vent BV-8 with a maximum pressure drop of 0.07". Balance fan to 674 L/s (1430 CFM). Unit to be controlled from EMCS through low voltage reverse acting thermostat. Maximum sound: 6.7 sones.

FAN COIL: Daikin McQuay Thinline exposed horizontal fan coil complete with blow through cooling coil, forward curved inline DWDI duct blower with ECM motor, and low-voltage interface for EMCS including three speed settings. Unit to be complete with filtered inlet section with replaceable filter media and 12mm internal insulation throughout unit. Suspend unit from structure and coordinate unit location with ceilings and sound treatment ensuring that service door can drop down through ceiling with only removal of t-bar cross pieces, refer to drawings. Refer to detailed equipment schedules on this drawing for performance requirements and electrical information.

RADIATION TYPE A: Existing steam radiant fin to remain. Clean and comb fins. Install new slope top wall mounted radiation cabinet cover as shown or noted on drawings, 450 mm in height. Installation to be complete with hangers, isolators, end caps, filler plates. Cabinet to be field measured to accommodate existing riser locations and be coordinated with new walls. Cover to be complete with baked enamel finish with custom colour selected by Architect (all cabinets of this type shall be the same colour). Note that prime coat and field finish paint will not be accepted.

RADIATION TYPE B: New steam radiant fin and cabinet, existing valving to remain as is. Install new slope top wall mounted radiation cabinet cover as shown or noted on drawings, 450 mm in height. Installation to be complete with hangers, isolators, end caps, filler plates. Cabinet to be field measured to accommodate existing riser locations and be coordinated with new walls. Cover to be complete with baked enamel finish with custom colour selected by Architect (all cabinets of this type shall be the same colour). Note that prime coat and field finish paint will not be accepted.Output: 2.09 kW/m(2180 Btuh/ft) at 18 Deg.C. (65 Deg.F.) Air Temp

RADIATION TYPE C: New steam radiant fin and cabinet complete with new valving. Install new slope top wall mounted radiation cabinet cover as shown or noted on drawings, 450 mm in height. Installation to be complete with hangers, isolators, end caps, filler plates. Cover to be complete with baked enamel finish with custom colour selected by Architect (all cabinets of this type shall be the same colour). Note that prime coat and field finish paint will not be accepted.Output: 2.09 kW/m(2180 Btuh/ft) at 18 Deg.C. (65 Deg.F.) Air Temp

EXPANSION TANK #1 (Fan Coil Chilled Water Loop): Amtrol, or approved equal, Model 400-L, 400 litre total volume, 400 liter acceptance volume, 600 mm diameter x 1675 mm high. Unit to be floor mounted on integral floor stand. Installation to be complete with isolation valve and drain valve piped to floor drain.

AIR SEPARATOR: Bell & Gossett Model R, or approved equal, tangential type air separator complete with strainer. Unit to be line size, WPT connectors, complete with blow down connection and drain valve, and Amtrol Model 720 automatic air eliminator.

SIDE STREAM FILTERS: Filterite Model LM010 replaceable media side stream filter, complete with sight glass and one case of thirty 20 micron cartridges and one case of thirty 5 micron cartridges.

SYSTEM FILL SF-1: Hydronic system feeder shall be AXIOM INDUSTRIES LTD. Model SF100. System shall include 208 litre (55 US gallon) storage/mixing tank with cover; pump suction hose with inlet strainer; pressure pump with thermal cut-out; integral pressure switch; integral check valve; cord and plug; pre-charged accumulator tank with EPDM diaphragm; manual diverter valve for purging air and agitating contents of storage tank; pressure regulating valve adjustable (35 - 380 KPa; 5 - 55 psig) complete with pressure gauge; integral replaceable strainer; built-in check valve; union connection; 12 mm (½") x 900 mm (36") long flexible connection hose with check valve; low level pump cut-out. Pressure pump shall be capable of running dry without damage. Power supply 115/60/1 0.7 A. Unit shall be completely pre-assembled and certified by a recognized testing agency to CSA standard C22.2 No 68. Unit to be complete with Low Level Alarm Panel c/w Remote Monitoring Dry Contacts and Selectable Audible Alarm.

FIRE EXTINGUISHER CABINETS: National Fire Equipment Ltd., Model 102RS-SS semi-recessed cabinet of 0.76mm painted steel tub and 1.57mm stainless steel door and frame with full length semi-concealed piano hinge and 5mm clear glass, Units to be complete with 2.3 kg ABC dry chemical fire extinguisher.

WALL HUNG FIRE EXTINGUISHERS: 4.5 kg ABC dry chemical fire extinguisher complete with wall bracket.

WALL HUNG CO2 FIRE EXTINGUISHERS: 4.5 kg BC carbon dioxide fire extinguisher complete with wall bracket.

FIRE DAMPERS: ULC listed types as noted on drawings. Dampers to be installed in strict accordance with manufacturer's recommendations and authorities having jurisdiction.

TRIPLE DUTY VALVE: Triple duty valves will not be permitted.

CIRCUIT BALANCE VALVES: Armstrong sized for flow required, installed in accordance with manufacturer's recommendations.

FLOW LIMITING VALVE: Automatic flow limiting valve complete with isolation valve, and gauge ports. If valve is to be installed on supply side (depends on valve purchased), valve may include wye strainer indicated in schematics. If flow limiting valve is to be installed on Return Side (depends on valve purchased), separate wye strainer must be purchased for system. Units to be sized based on flow requirements and installed as per manufacturer's recommendations.

GRILLES & DIFFUSERS:

S-1: E.H. Price Model SPD 600x600, square plaque diffuser complete with equalizing grid, T-bar installation. Finish: off white baked enamel.

S-2: E.H. Price Model 520D, double deflection grille, surface mount, concealed fastening, flat 32 mm border with steel balancing damper. Front blades parallel to long dimension. Finish: off white baked enamel.

S-3: E.H. Price Model SDGE extruded aluminum spiral duct register. Duct mounted spiral duct register to be double deflection type with front blades parallel to the long dimension. Register to be complete with an adjustable air scoop and gaskets to seal grille to duct. Contractor to set blades to 0 degree vertical deflection, 22 degree horizontal deflection. Finish: Custom baked enamel paint colour as selected by architect.

S-4: E.H. Price Model SDGE extruded aluminum spiral duct register. Duct mounted spiral duct register to be double deflection type with front blades parallel to the long dimension. Register to be complete with an adjustable air scoop and gaskets to seal grille to duct. Contractor to set blades to 0 degree vertical deflection, 45 degree horizontal deflection Finish: Custom baked enamel paint colour as selected by architect.

S-5: E.H. Price Model SPD 300x300, square plaque diffuser complete with equalizing grid, T-bar installation. Finish: off white baked enamel.

S-6: E.H. Price Model MSPG perforated steel maximum security grille complete with front operated opposing blade damper. Finish: Custom baked enamel paint colour as selected by architect.

S-7: E.H. Price Model 22 double deflection grille, surface mount, concealed fastening, flat 32 mm border with steel balancing damper. Front blades parallel to long dimension. Finish: off white baked enamel. Contractor to set blades to 0 degree vertical deflection, 22 degree horizontal deflection Finish: Custom baked enamel paint colour as selected by architect.

S-8: E.H. Price Model SPD 600x600, square plaque diffuser complete with equalizing grid, T-bar installation and 90° sectorizing baffle. Finish: off white baked enamel.

R-1: E.H. Price Model 80 eggcrate grille, surface mount with flat 32 mm border and countersunk screws. Finish: off white baked enamel.

R-2: E.H. Price Model 80 eggcrate grille, T-bar installation. Finish: off white baked enamel.

R-3: E.H. Price Model SDGE extruded aluminum spiral duct register. Duct mounted spiral duct register to be double deflection type with front blades parallel to the long dimension. Register to be complete with an adjustable air scoop and gaskets to seal grille to duct. Contractor to set blades to 0 degree vertical deflection, 45 degree horizontal deflection Finish: Custom baked enamel paint colour as selected by architect.

T-1: E.H. Price Model 80 eggcrate grille, surface mount with flat 32 mm border and countersunk screws. Finish: off white baked enamel.

E-1: E.H. Price Model MSPG perforated steel maximum security grille complete with front operated opposing blade damper. Finish: Custom baked enamel paint colour as selected by architect.

E-2: E.H. Price Model 530D, double deflection grille, surface mount, concealed fastening, flat 32 mm border with steel balancing damper. Front blades parallel to long dimension. Finish: off white baked enamel.

E-3: E.H. Price Model 530, double deflection grille, surface mount, concealed fastening, flat 32 mm border. Front blades parallel to long dimension. Finish: off white baked enamel.

HEAT EXCHANGER HX-1 (Fan Coil Chilled Water Loop): TACO Model PF 82-189-4-NH single wall nitrile gasketed stainless steel (304) multi-plate heat exchanger with 220 plates. Plant Side: 40% propylene glycol at 7.2 deg.C. (45 deg.F EWT), 12.8 deg.C. (55 deg.F LWT), 17.1 l/s (270.3 GPM) flow rate, and 14.6 kPa (4.9') pressure drop. Cold Side: 100% water at 13.9 deg.C. (57 deg.F) EWT, 8.33 deg.C. (47 deg.F) LWT, 15.7 l/s (248.9 gpm) flow rate at 8.2 kPa (2.75') pressure drop. Heat exchanged to be 366 kW (1250 MBH). Connection Sizes: 150MM (6").

LOUVERS: Price, or approved equal, Model DE635, extruded aluminum construction, 150 mm thick, 35 deg., 2mm blades and jambs. Jamb mounting as required and coordinated with contractor. Louvers shall be complete with aluminum bird-screen. Confirm size on site. Louver blank off colour to match louver. Finish shall be baked enamel, colour as selected by Architect.

LEGEND

CHW	DOMESTIC COLD HARD WATER
HSW	DOMESTIC HOT SOFT WATER
D	EQUIPMENT DRAIN LINE
P	PUMPED DRAIN LINE
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
G.CHWS	GLYCOL CHILLED WATER SUPPLY
G.CHWR	GLYCOL CHILLED WATER RETURN
LIQD	REFRIGERANT LIQUID LINES
SUCT	REFRIGERANT SUCTION LINES
STEAM	LOW PRESSURE STEAM
COND	LOW PRESSURE STEAM CONDENSATE
AIR	COMPRESSED AIR
GAS	NATURAL GAS
SAN	SANITARY WASTE – ABOVE GRADE
SAN–BELOW	SANITARY WASTE – BELOW GRADE
VENT	SANITARY VENT
STORM	STORM DRAIN – ABOVE GRADE
	ISOLATION VALVE
	BALL VALVE
	GLOBE VALVE
	CHECK VALVE (WITH FLOW DIRECTION)
	TWO–WAY AUTOMATIC CONTROL VALVE
	THREE–WAY AUTOMATIC CONTROL VALVE
	HOSE BIBB C/W ISOLATION, CAP & CHAIN
	WYE STRAINER
	CIRCUIT BALANCE VALVE
	AUTOMATIC FLOW RESTRICTOR
	UNION
	FLEX CONNECTER
	CLEANOUT
	FLOOR DRAIN
	ROOF DRAIN
	PIPE DOWN
	PIPE UP
	PRESSURE GAUGE/SENSOR
	TEMPERATURE GAUGE/SENSOR
	EXISTING SUPPLY LINES TO REMAIN, SHOWN SOLID LIGHT WEIGHT.
	EXISTING RETURN LINES TO REMAIN, SHOWN DASHED LIGHT WEIGHT.
	EXISTING ABOVE GRADE SAN AND STORM LINES TO REMAIN, SHOWN DASHED LIGHT WEIGHT.
	EXISTING BELOW GRADE SAN AND STORM LINES TO REMAIN, SHOWN DASHED LIGHT WEIGHT.
	EXISTING LINES TO BE REMOVED OR RELOCATED AS NOTED, SHOWN DOTTED HEAVY WEIGHT.
300#	PIPE AND ROUND DUCT SIZE
600X300	RECTANGULAR DUCT SIZE
600/300	OVAL DUCT SIZE
M	MOTORIZED DAMPER
FD	FIRE DAMPER
	90° ELBOW, PROVIDE TURNING VANES AS SPECIFIED, VANES ARE NOT SHOWN ON DRAWINGS
	MANUAL BALANCING DAMPER
	INTERNALLY INSULATED DUCT
	EXTERNALLY INSULATED DUCT, UNLESS SPECIFICALLY NOTED OTHERWISE
	EXISTING DUCT TO REMAIN, SHOWN SOLID LIGHT WEIGHT
	EXISTING DUCT TO BE RELOCATED OR REMOVED, SHOWN DOTTED HEAVY WEIGHT
	SUPPLY DUCT UP OR SECTION
	SUPPLY DUCT DOWN
	RETURN DUCT UP OR SECTION
	RETURN DUCT DOWN
	EXHAUST DUCT UP OR SECTION
	EXHAUST DUCT DOWN
	FIRE EXTINGUISHER IN CABINET
	FIRE EXTINGUISHER C/W WALL BRACKET
	TEMPERATURE SENSOR/THERMOSTAT
CW	F&T TRAP (UNLESS NOTED OTHERWISE)
WC-1	PLUMBING FIXTURE AND TYPE: WC=WATER CLOSET, L=LAVATORY, UR=URINAL, FD=FLOOR DRAIN, DF=DRINKING FOUNTAIN, MS=MOP SINK, S=SINK
S/A	SUPPLY AIR
R/A	RETURN AIR
E/A	EXHAUST AIR
O/A	OUTDOOR AIR

FAN COIL SCHEDULE

Name	Location	Room Serving	Electrical 115V (MCA)	Fan Coil Size	Low Speed Balance to (L/s)	Medium Speed Balance to (L/s)	High Speed Balance to (L/s)
FC-301	356	306	4.2	4	79	139	198
FC-302	305	305, 307	5.8	8	140	245	350
FC-303	309	309	3.5	2	34	60	85
FC-304	312	310-314	4.2	4	86	150	214
FC-305	316	315, 316	6	6	89	156	223
FC-306	356	318	6	6	103	181	258
FC-307	319	319	3.5	2	48	83	119
FC-308	321	320-322	4.2	4	82	144	206
FC-309	323	323, 325	4.2	4	84	146	209
FC-310	330	330, 334, 335	5.8	8	129	225	322
FC-311	332	331-333	4.2	4	74	130	186
FC-312	349	336, 349	9.1	10	171	299	427
FC-313	337	337	3.5	2	46	81	115
FC-314	340	340-347	9.1	10	152	266	380
FC-315	348	348	3.5	2	28	48	69
FC-316	360	360	3.5	2	40	71	101
FC-317	373	361, 373	6	6	123	215	307
FC-318	362	362	5.8	8	139	244	348
FC-319	364	364	3.5	2	35	61	87
FC-320	372	365-371	9.1	10	170	297	424
FC-321	372	372	9.1	10	160	279	399
FC-401	432	406	4.2	4	79	139	198
FC-402	407	407	6	6	126	220	314
FC-403	408	408	10.9	12	301	526	752
FC-404	409	409	5.8	8	132	231	330
FC-405	432	410	6	6	110	193	276
FC-406	411	411	4.2	4	83	145	207
FC-407	412	412	3.5	2	53	92	132
FC-408	413	414	6	6	96	168	240
FC-409	417	417	3.5	2	45	78	112
FC-410	420	420	3.5	2	34	59	84
FC-411	422	422	3.5	2	46	81	116
FC-412	423	423	10.9	12	276	483	690
FC-413	423	423-425	10.9	12	276	483	690
FC-414	437	437	10.9	12	285	498	712
FC-415	438	438	10.9	12	276	483	690
FC-416	441	439	10.9	12	233	408	583
FC-417	440	440	10.9	12	276	483	690

SCHEDULE OF FAN COIL SIZES

Unit											Chilled Water Cooling Coil (100 % Water)												Sound Data at Maximum Air Flow							
			Electrical			Supply Fan					EAT		LAT										Sound Power dB at Frequency Listed							
TAG	Model	Size	Voltage	MCA	MROPD	Air Flow CFM	ESP inH2O	Motor Power	Motor Type	Wheel Size	Filters Type	EDB °F	EWB °F	LDB °F	LWB °F	Face Area ft²	FPI	Rows	Total Capacity Btu/hr	Total Sensible Btu/hr	Entering Water Temp °F	Leaving Water Temp °F	Fluid Flow Rate gpm	Fluid type	Glycol PCT	WPD ft H2O		125	250	500	1000	2000	4000	8000
FC-size 2	FCHC102	02	115/60/1	3.5	6.3	329	0.50	1/3	ECM	6.0 in x 8.0 in	1 in MERV 8	75.0	64.0	57.3	56.8	0.7	12	4	7239	6378	47.0	57.0	1.4	Water	0%	0.9	Ducted Discharge	48.1	50	48.2	49.1	45	38.6	35.1
																											Casing Radiated	51.6	53	52.7	51.9	47.5	39.1	34.2
FC size 3	FCHC103	03	115/60/1	3.9	7.0	393	0.50	1/3	ECM	6.0 in x 8.0 in	1 in MERV 8	75.0	64.0	57.4	56.9	1.1	12	4	8571	7542	47.0	57.0	1.7	Water	0%	1.2	Ducted Discharge	49.8	48.9	45.6	47.7	43.6	36.2	34.5
																											Casing Radiated	49.7	48.8	47	49.4	45.8	38.7	35.2
FC-size 4	FCHC104	04	115/60/1	4.2	7.6	459	0.50	1/3	ECM	6.0 in x 8.0 in	1 in MERV 8	75.0	64.0	55.8	55.6	1.4	12	4	11965	9834	47.0	57.0	2.3	Water	0%	2.3	Ducted Discharge	51.1	49.4	47.9	49.2	41.5	34.4	32.7
																											Casing Radiated	54.4	54.1	53.6	50.3	44	35.9	33.5
FC-size 6	FCHC106	06	115/60/1	6.0	10.8	670	0.50	1/3	ECM	6.0 in x 8.0 in	1 in MERV 8	75.0	64.0	56.6	55.7	2.1	12	4	16756	13603	47.0	57.1	3.3	Water	0%	5.4	Ducted Discharge	51.8	50.4	52.5	50.5	47.7	41.4	35.2
																											Casing Radiated	58.5	58.5	59.8	59	59	54.7	47.2	40.7
FC-size 8	FCHC108	08	115/60/1	5.8	10.4	770	0.50	1/3	ECM	6.0 in x 8.0 in	1 in MERV 8	75.0	64.0	56.1	55.3	2.5	12	4	20122	15915	47.0	57.0	4.0	Water	0%	8.3	Ducted Discharge	57.4	57.7	57.1	49.4	46.3	40	35.2
																											Casing Radiated	61.7	59.7	60	61	55.4	47.2	40.4
FC-size 10	FCHC110	10	115/60/1	9.1	16.7	1124	0.50	1/3	ECM	6.0 in x 8.0 in	1 in MERV 8	75.0	64.0	55.9	55.2	3.1	12	4	29577	23515	47.0	57.0	5.9	Water	0%	5.8	Ducted Discharge	64.4	63.9	65.1	64.4	60.4	43.3	37.2
																											Casing Radiated	58.2	58	59.5	58.3	53.4	44.9	37.6
FC-size 12	FCHC112	12	115/60/1	10.9	21.8	1464	0.50	1/3	ECM	6.0 in x 8.0 in	1 in MERV 8	75.0	64.0	56.1	55.0	3.8	12	4	36425	30248	47.0	57.1	7.8	Water	0%	11.0	Ducted Discharge	60.8	55.2	54	50.7	40.7	45.7	42
																											Casing Radiated	65.4	63.7	63.4	62.6	59.5	53.9	48.2

GENERAL MECHANICAL NOTES

– COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.

– RUN PIPING AS HIGH AS POSSIBLE TO ALLOW MAXIMUM CLEARANCES.

– ALL PLUMBING PIPING BRANCH LINES ARE 1/2"ø (12mm) UNLESS NOTED OTHERWISE.

– ALL FLOOR DRAINS TO BE 3"ø (75mm).

– EXPOSED PIPING SANITARY SHALL BE CAST IRON.

– PLUMBING VENTING AS PER LOCAL CODES AND REQUIREMENTS.

– INSTALL MANUAL AIR VENTS WITH BALL VALVES AT ALL HIGH POINTS IN CLOSED LOOP SYSTEM PIPING (FAN COIL CHILLED WATER PIPING).

– ALL RUNOUTS TO FAN COILS, 3/4"ø (19mm) UNLESS NOTED OTHERWISE.

– REFER TO DETAILS AND SCHEMATICS FOR EQUIPMENT CONNECTIONS.

– ALL DUCTWORK SHOWN DOUBLE LINE INSIDE PERIMETER OF DUCT IS TO BE COMPLETE WITH 1" (25mm) INTERNAL INSULATION. EXPOSED DUCTWORK IN SPACE BEING SERVED TO BE UNINSULATED. ALL OTHER DUCTWORK IS TO BE C/W 1" (25mm) EXTERNAL INSULATION. SIZES INCLUDE INTERNAL INSULATION WHERE APPLICABLE.

– ALL FITTINGS ON INTERNALLY INSULATED DUCTWORK ARE TO BE C/W INTERNAL INSULATION. ALL OTHERS ARE TO BE EXTERNALLY INSULATED.

– ALL SUPPLY AIR AND EXHAUST AIR BRANCH DUCTS TO GRILLES AND DIFFUSERS ARE TO BE C/W BALANCE DAMPERS IN BRANCH DUCT NEAR MAIN.

– ALL EXHAUST FANS AND FAN COILS ARE TO BE SUSPENDED FROM STRUCTURE ON THREADED ROD C/W SPRING ISOLATORS.

– RUN DUCTS AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCES, DISTRIBUTION DUCTS SHOWN IN SECTION TO ROUTE AT ELEVATION INDICATED.

– PROVIDE ACCESS DOORS FOR ACCESS TO ALL MOTORIZED DAMPERS, FIRE DAMPERS, CONTROL DEVICES, AND TO FACILITATE DUCT CLEANING.

– PROVIDE TURNING VANES IN ALL MITERED DUCT ELBOWS EXCEPT WHEN SPECIFICALLY NOTED AS SOUND ATTENUATING TRANSFER AIR DUCTS.

– CONTRACTOR SHALL ENSURE REFRIGERANT PIPE SIZES FOR DEDICATED DIRECT EXPANSION COOLING SYSTEMS MEET THE MANUFACTURERS REQUIREMENTS FOR THE EQUIPMENT BEING INSTALLED. AS SPECIFIED, CONDENSING UNITS ARE TO BE INSTALLED ON THE GROUND AND REFRIGERANT PIPING WILL BE ROUTED OVER A SIGNIFICANT DISTANCE AND ELEVATION CHANGE.

– AS NOTED IN THE SPECIFICATIONS, THERE MAY BE ASBESTOS ON THE ELBOWS OF STEAM AND CONDENSATE PIPING LOCATED WITHIN BULKHEADS. CONTRACTOR SHALL FOLLOW PROCEDURES NOTED WHEN SUSPECT MATERIAL IS UNCOVERED.

– THE CONTRACTOR SHALL VERIFY PRIOR TO INSTALLING CEILING THAT LOCATION OF FAN COILS IS COORDINATED BETWEEN ALL TRADES TO ENSURE FAN COILS WILL BE SERVICEABLE THROUGH CEILING. FAN COIL LOCATIONS SHALL PERMIT SERVICE HATCH TO DROP DOWN THROUGH CEILING. NO T–BAR MAINS STAYS SHALL BE INSTALLED BELOW FAN COIL. REMOVAL OF SECONDARY STAYS TO ACCOMPLISH ACCESS IS PERMISSABLE AS SHOWN.

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0	ISSUED FOR TENDER	2014-01-17
Revision/ Revision	Description/Description	Date/Date

Client/client

Project title/Titre du projet

SHARED LEARNING FACILITY
REGINA, SK

Approved by/Approuve par

Designed by/Concept par
TKC

Drawn by/Dessine par
TKC/JJB

Project Manager/Administrateur de Projets
AC

Architectural and Engineering Resources Manager/
Ressources Architectural et de Directeur d'ingénierie

Client/client

Drawing title/Titre du dessin

EQUIPMENT SCHEDULES, LEGEND AND GENERAL NOTES

Project No./No. du projet	Sheet/Feuille	Revision no./ Le Révision no.
05/2013	M1-1	0

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