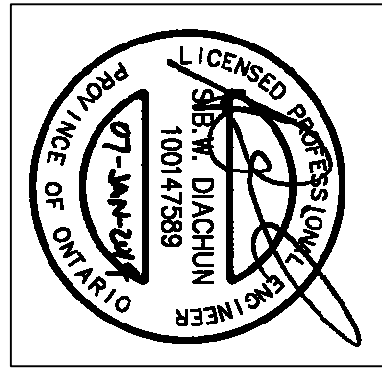


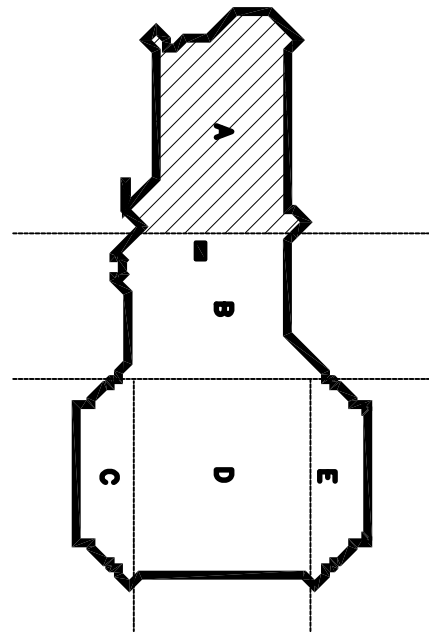


Smith Carter Architects
and Engineers
Incorporated
1000-1000
Windsor, Ontario
Canada N3T 6B8
F: 204.477.6346
www.smithcarter.com

Smith Carter
SC Proj #20-C-00061-00



stamp



Contractor to verify all dimensions
& conditions on site and immediately
notify the engineer of all discrepancies.

5	ISSUED FOR ADDENDUM No. 01				2013/12/20
4	ISSUED FOR 100% CONSTRUCTION DOCUMENTS				2013/10/16
3	ISSUED FOR 90% CONSTRUCTION DOCUMENTS (VOL. 2)				2013/08/29
2	ISSUED FOR 80% CONSTRUCTION DOCUMENTS (VOL. 1)				2013/06/16
1	ISSUED FOR 60% CONSTRUCTION DOCUMENTS (P&S)				2013/05/20
0	ISSUED FOR DESIGN DEVELOPMENT				2013/03/22
revisions	description				date

project
SIR FREDERICK BANTING
RESEARCH CENTRE
ANIMAL TO WET LAB CONVERSION

251 SIR FREDERICK BANTING WAY, ON

drawing

MECHANICAL SCHEDULES

Designed By	W. CURRIE	Concu par	
Date	(yyyy/mm/dd)		
Drawn By	W. CURRIE	Dessiné par	
Date	(yyyy/mm/dd)		
Reviewed By	S. DIACHUN	Examiné par	
Date	(yyyy/mm/dd)		
Approved By	S. DIACHUN	Approuvé par	
Date	(yyyy/mm/dd)		
Tender		Submission	
Project Manager	Administrateur de projets		
Project no.	R.044033.002	No. du projet	
Drawing no.	M602-X1	No. du dessin	

PUMP SCHEDULE

TAG	LOCATION	SERVICE	PUMP						MOTOR					
			FLOW RATE (L/s)	TOTAL HEAD (kPa)	FLUID TEMP. (C)	INLET (mm)	OUTLET (mm)	IMPELLER (mm)	MIN. EFF. (%)	NPSH REQD. (kPa)	RPM	BHP (bhp)	HP	NOTES
P-1A	PENTHOUSE	AHU GLYCOL HEATING COIL LOOP	17.9	119	82.2	127	127	178	74.4	14.2	1,750	4.1	7.5	1, 3, 4, 7
P-1B	PENTHOUSE	AHU GLYCOL HEATING COIL LOOP	17.9	119	82.2	127	127	178	74.4	14.2	1,750	4.1	7.5	1, 3, 4, 7
P-2A	PENTHOUSE	HOT WATER HEATING LOOP	9.6	149	80.0	76	76	241	64.0	11.9	1,750	3.0	5	1, 4, 7
P-2B	PENTHOUSE	HOT WATER HEATING LOOP	9.6	149	80.0	76	76	241	64.0	11.9	1,750	3.0	5	1, 4, 7
P-3	PENTHOUSE	GLYCOL HEAT RECLAIM SYSTEM PUMP	18.9	179	-1.1	102	102	102	241	67.1	1,750	6.8	10	3, 4, 7
P-4	PENTHOUSE	AH-LAB-1.3 HEATING COIL PUMP	8.7	104	82.2	76	76	178	80.0	14.9	1,750	-	3	1, 3, 4, 7
P-5	PENTHOUSE	AH-LAB-1.4 HEATING COIL PUMP	9.8	104	82.2	76	76	178	80.0	14.9	1,750	-	3	1, 3, 4, 7
P-6	PENTHOUSE	AH-LAB-1.3 COOLING COIL PUMP	19.6	104	6.7	102	102	279	69.0	14.9	1,750	-	5	1, 4, 7
P-7	PENTHOUSE	AH-LAB-1.4 COOLING COIL PUMP	21.8	104	6.7	102	102	279	69.0	14.9	1,750	-	5	1, 4, 7
P-8	PENTHOUSE	R.O. WATER SYSTEM CIRCULATING PUMP	1.5	388	21.1	32	32	127	69.0	-	3,450	-	2	7
P-FC-1	PENTHOUSE	FAN COIL FC-1 COOLING COIL PUMP	21.8	104	6.7	25	25	95	69.0	9.0	1,725	0.1	0.25	7
P-FC-2	PENTHOUSE	FAN COIL FC-2 COOLING COIL PUMP	21.8	104	6.7	25	25	92	69.0	8.9	1,725	0.1	0.25	7
GFP-1	PENTHOUSE	AHU GLYCOL HEATING COIL LOOP MAKE-UP	0.1	345	21.1	-	-	-	-	-	FRAC.	FRAC.	5.7	FRAC.
GFP-2	PENTHOUSE	GLYCOL HEAT RECLAIM SYSTEM MAKE-UP	0.1	345	21.1	-	-	-	-	-	FRAC.	FRAC.	5.7	FRAC.
BP-1A/B	PENTHOUSE	DOMESTIC WATER BOOSTER PUMP	1.3	414	21.1	32	25	156	42.3	14.9	3,500	1.7	3	6, 7

- NOTES:
1. PUMP AND MOTOR SUITABLE FOR INVERTER DUTY.
2. STANDBY DUTY.
3. PERFORMANCE BASED ON 50% PROPYLENE GLYCOL / 50% WATER WORKING FLUID.
4. VERTICAL IN-LINE PUMP.
5. PACKAGED HEAT TRANSFER FLUID MAKE-UP SYSTEM. REFER TO SPECIFICATION SECTION 23.25.14 "HVAC WATER TREATMENT - HEAT TRANSFER FLUID".
7. REFER ALSO TO SPECIFICATIONS.

PLUMBING FIXTURE SCHEDULE

TAG	TYPE	DESCRIPTION	DRAIN	TRAP	CONNECTIONS			NOTES
					CW	HV	WASTE	
WC-1	TOILET	VITREOUS CHINA, WALL HUNG, 4.8 LPE, WHITE, TOP SPUD, FLUSH VALVE OPERATED	100mm	INTERNAL	25mm	N/A	100mm	CW BATTERY POWER EXPOSED FLUSH VALVE w/ HANDSFREE AUTOMATIC OPERATION, FLOOR MOUNTED CARRIER, OPEN FRONT PLASTIC SEAT WITH COVER
WC-2	TOILET BARRIER FREE	VITREOUS CHINA, WALL HUNG, 4.8 LPE, WHITE, TOP SPUD, FLUSH VALVE OPERATED	100mm	INTERNAL	25mm	N/A	100mm	CW BATTERY POWER EXPOSED FLUSH VALVE w/ HANDSFREE AUTOMATIC OPERATION, FLOOR MOUNTED CARRIER, OPEN FRONT PLASTIC SEAT
UR-1	URINAL	VITREOUS CHINA, WALL HUNG, 0.5 LPE, WHITE, TOP SPUD, FLUSH VALVE OPERATED	50mm	EXTERNAL	19mm	N/A	50mm	CW BATTERY POWER EXPOSED FLUSH VALVE w/ HANDSFREE AUTOMATIC OPERATION, WALL HANGER
LAV-1	LAVATORY	VITREOUS CHINA, DROP-IN COUNTERTOP S.O.A.R. POWERED SENSOR ACTIVATED FAUCET, 1.9 LPM	38mm	EXTERNAL	13mm		38mm	CENTRE HOLE ONLY, DUEI, (SOLAR AND BATTERY) POWER, HANDSFREE AUTOMATIC OPERATION (45 SEC MAX), FLOOR MOUNTED CARRIER
LAV-2	LAVATORY BARRIER FREE	VITREOUS CHINA, WALL HUNG, WHITE, SOLAR POWERED SENSOR ACTIVATED FAUCET, 1.9 LPM	38mm	EXTERNAL	13mm		38mm	SHROUD/KNEE CONTACT GUARD, CENTRE HOLE ONLY, DUEI, (SOLAR AND BATTERY) POWER, HANDSFREE AUTOMATIC OPERATION (45 SEC MAX), FLOOR MOUNTED CARRIER
SK-1	SINK LAB BENCH	DECK MOUNTED ANTIMICROBIAL WATER FITTING, VACUUM BREAKER SPOUT, WRISTBLADE HANDLES	38mm	EXTERNAL	13mm		38mm	CHEMICAL RESISTANCE SATIN ANTIMICROBIAL FINISH, REMOVABLE SERATED HOSE NOZZLE, METAL WRISTBLADE HANDLES, CAST BODY P, TRAP WITH CLEAN OUT, GRID DRAIN LESS OVERFLOW
SK-2	SINK LAB BENCH	DECK MOUNTED ANTIMICROBIAL WATER FITTING, VACUUM BREAKER SPOUT, WRISTBLADE HANDLES	38mm	EXTERNAL	13mm		38mm	CHEMICAL RESISTANCE SATIN ANTIMICROBIAL FINISH, REMOVABLE TRAP WITH CLEAN OUT, GRID DRAIN LESS OVERFLOW
SH-1	SHOWER	SHOWERHEAD ARM & FLANGED, 5.7 LPM	38mm	EXTERNAL	13mm		38mm	BRASS MIXING VALVE
MS-1	MOP SERVICE BASIN	150mm (6") DEEP PRECAST TERRAZZO BASIN, CHROME PLATED WALL MOUNTED FAUCET, BLADE HANDLES	38mm	EXTERNAL	13mm		38mm	CW S.S. CAPS ON ALL CURBS, MOP BRACKET, FLAT S.S. STRAINER, QUICK DRAIN CONNECTORS, 200MM (8") CENTERS SINK FAUCET, PAUL HOOK SPOUT, VACUUM BREAKER & HOSE, S.S. HANGER
EW-1	EYE WASH	DECK MOUNTED 90° SWIVEL, THERMOSTATIC MIXING VALVE	N/A	N/A	13mm		N/A	CW FLIP TOP DUST COVERS, LOCKING TYPE, TEMPERATURE REGULATOR, BUILT IN COLD WATER BYPASS.
ES-1	EMERGENCY SHOWER	RECESSED, WALL MOUNTED EXPOSED SHOWER HEAD, TEMPERING VALVE W/ RECESSED S.S. CABINET	N/A	N/A	25mm		25mm	CW 250mm S.S. SHOWERHEAD, PANIC BAR & ESCUTCHEON, TEMPERING VALVE IN RECESSED S.S. CABINET W/ KEYS LOCK.
EWES-1	EMERGENCY EYEFACE WASH & SHOWER	RECESSED, WALL MOUNTED EXPOSED SHOWER HEAD, DRAIN PAN, TEMPERING VALVE W/ RECESSED S.S. CABINET	N/A	N/A	25mm		N/A	CW 250mm S.S. SHOWERHEAD, DRAIN PAN, PANIC BAR & ESCUTCHEON, TEMPERING VALVE IN RECESSED S.S. CABINET W/ KEYS LOCK.
NI-1	ACID NEUTRALIZATION TANK	UNDER-COUNTER ACID NEUTRALIZATION TANK	38mm	N/A	N/A		38mm	NEUTRALIZATION TANK, UNDER-COUNTER TYPE SHALL BE SEAMLESS, ROTATIONALLY-MODED HIGH DENSITY POLYETHYLENE WITH MINIMUM 6mm UNIFORM WALL THICKNESS. TANK SHALL BE FINISH WITH TOP OR SIDE INLET CONNECTION FIELD-ADAPTABLE FOR 38mm DRAIN LINE PIPE SIZE. TANK SHALL BE WATERIGHT UP TO 900mm HEAD AND CONTAIN AN INTERNAL, SEVER GAS TRAP. TANK SHALL BE GASKETED COVER WITH CAPTIVE HAND-THREAD HARDWARE.

DIFFUSER AND GRILLE SCHEDULE

TAG	ACCEPTABLE PRODUCT	MOUNTING	ACC.	NOTES
SA-A	1200x600 2 WAY PERFORATED FLUSH FACE RADIAL FLOW DIFFUSER	SEE DRAWINGS		
SA-B	600x600 2 WAY PERFORATED FLUSH FACE RADIAL FLOW DIFFUSER	SEE DRAWINGS		
SA-C	600x600 SQUARE PLAUKE FACE DIFFUSER	T-BAR		STANDARD BORDER, WHITE FINISH
SA-D	ROUND FIXED SUPPLY DIFFUSER (RESIDENTIAL STYLE)	SEE DRAWINGS		DESIGNER GRILLE, WHITE FINISH
SA-E	1200x600 HEPA FILTERED LAMINAR FLOW DIFFUSER	T-BAR	BD, LED, SPP	PROVIDE HEPA FILTER (REFER TO MFR)
SA-F	1200x600 2 WAY RADIAL FLOW DIFFUSER	T-BAR		
SA-G	600x600 2 WAY RADIAL FLOW DIFFUSER	T-BAR		
SA-H	1200x600 LAMINAR FLOW DIFFUSER	T-BAR		
SA-I	LOUVERED FACE DOUBLE DEFLECTION STEEL SUPPLY GRILLE	T-BAR	BD	STANDARD BORDER, WHITE FINISH
SA-J	600x600 LAMINAR FLOW DIFFUSER	T-BAR		
SA-K	300x300 SQUARE PLAUKE FACE DIFFUSER	T-BAR		STANDARD BORDER, WHITE FINISH
SA-L	600x600 HEPA FILTERED LAMINAR FLOW DIFFUSER	T-BAR	BD, LED, SPP	PROVIDE HEPA FILTER (REFER TO MFR)
SA-M	300x300 SQUARE PLAUKE FACE DIFFUSER	DRYWALL CEILING	BD	STANDARD BORDER, WHITE FINISH
EA-A	EGG CRATE FACE RETURN GRILLE	SEE DRAWINGS		STANDARD BORDER, WHITE FINISH
EA-B	LOUVERED FACE RETURN GRILLE	SEE DRAWINGS		STANDARD BORDER, WHITE FINISH
TA-A	EGG CRATE FACE TRANSFER GRILLE	SEE DRAWINGS		STANDARD BORDER, WHITE FINISH

- ACCESSORIES:
BD OPPOSED BLADE BALANCING DAMPER
LED LED (GREEN/YELLOW) FLOOR PRESSURE DROP STATUS INDICATION COMPLETE WITH DRY CONTACTS FOR MONITORING BY EMCS.
SPP STATIC PRESSURE PORT TO MEASURE FILTER PRESSURE DROP
- GENERAL NOTES:
1. REFER TO PLANS FOR QUANTITIES AND SIZES
2. CONFIRM CEILING MODULE SIZE PRIOR TO ORDERING LAV-IN TYPE GRILLES AND DIFFUSERS.
3. HEPA FILTER SHALL BE 99.99% EFFECTIVE ON 3 MICRON PARTICLES