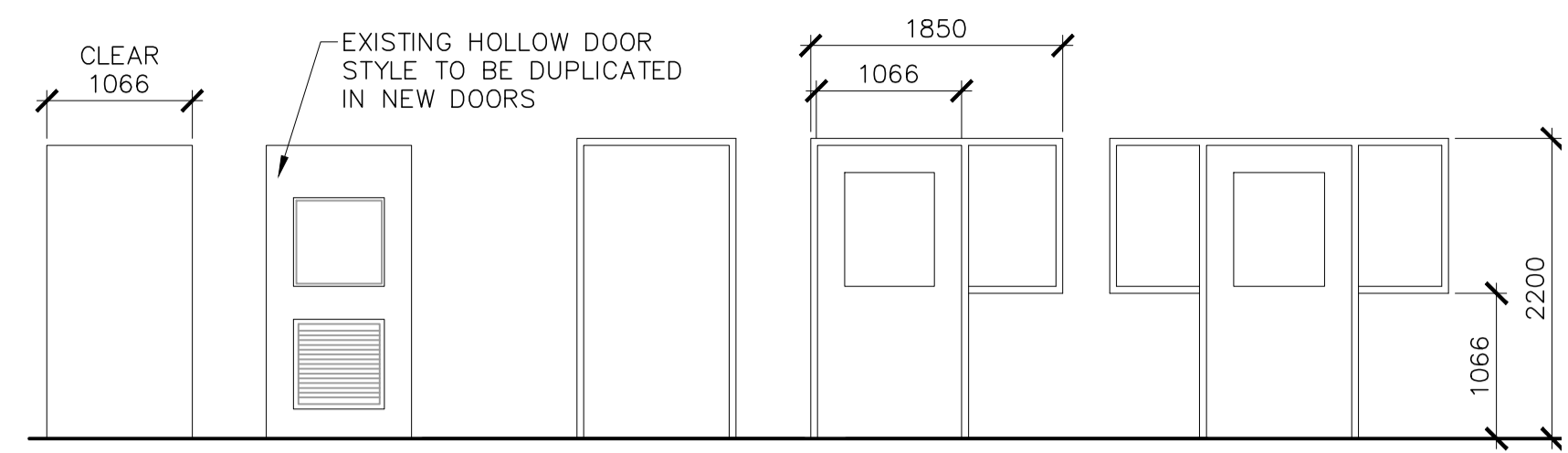
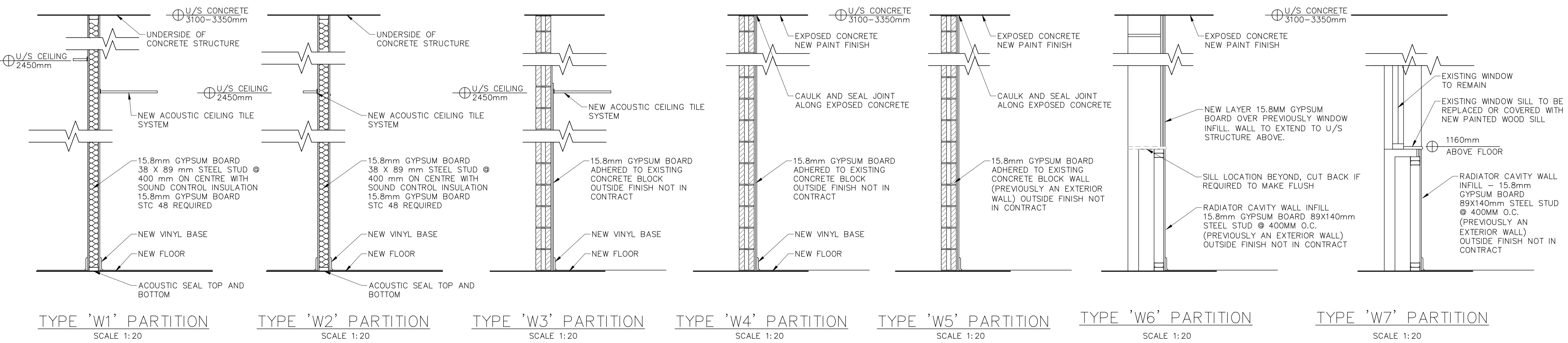
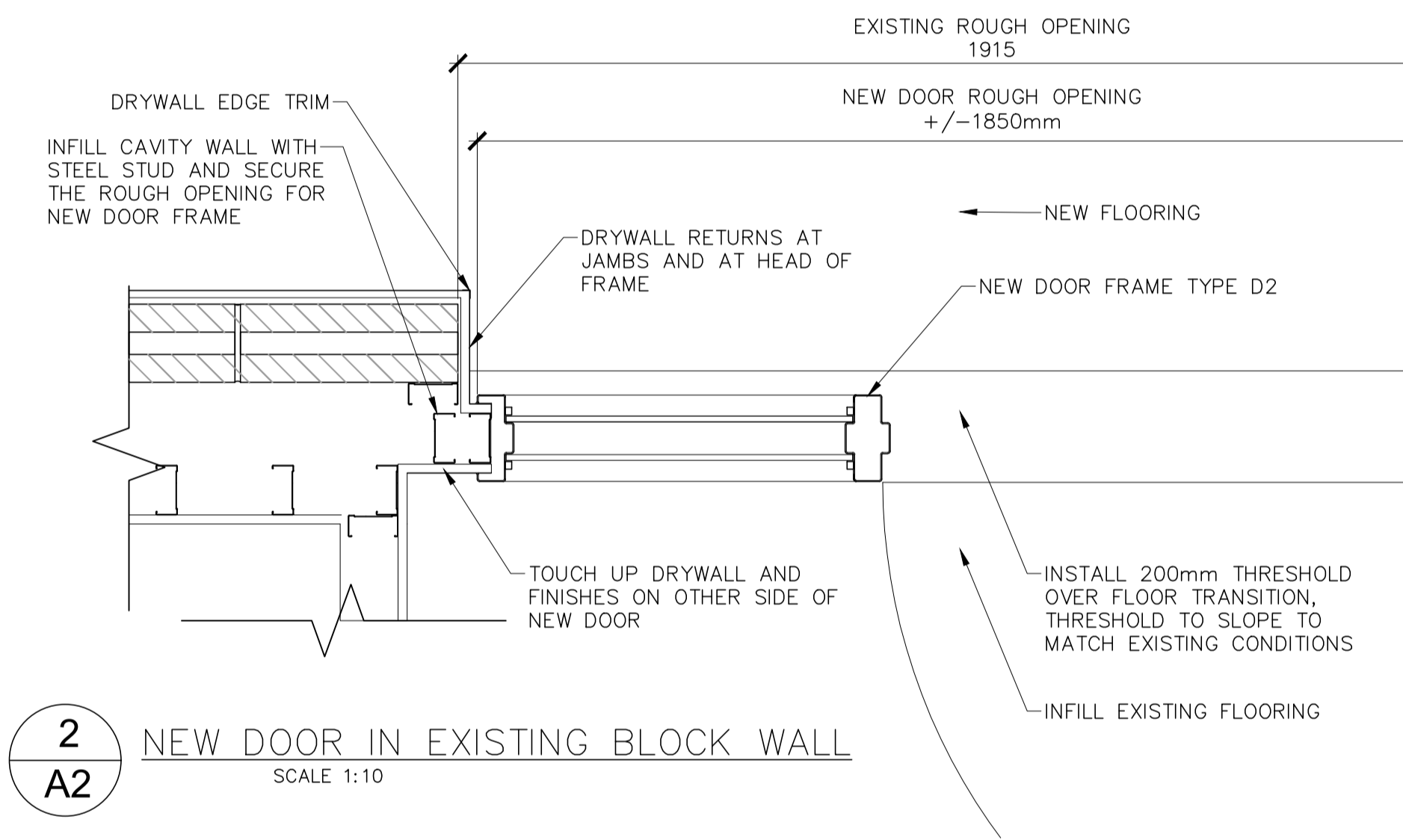
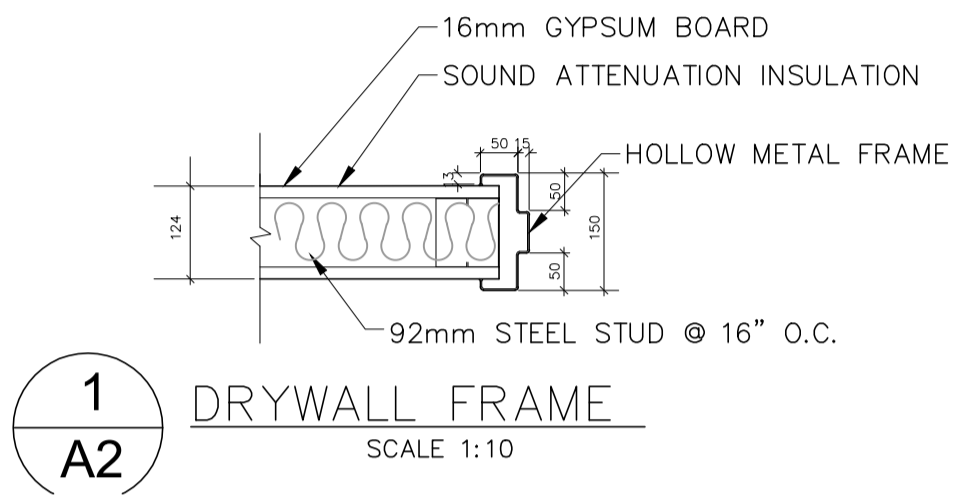


DOOR SCHEDULE																				REV 0	
DOOR NUMBER	LOCATION		DOOR							FRAME							LEGEND / NOTES				
	FROM ROOM NUMBER	TO ROOM NUMBER	DIRECTION	SIZE			GLASS	STC RATING	DOOR STYLE	MATERIAL	FINISH	DETAILS								LOCK FUNCTION (PMM)	CLOSURE
	THICKNESS	WIDTH		HEIGHT	FRAME TYPE NO.	WALL TYPE						MATERIAL	FIRE/ULC RATING	THROAT SIZE	FINISH	HARDWARE SET					
216	218	CORR	LHR	E	1066	2150	TP	-	B	WD	ST	E	W4	HM	0	E	PT	1	F07	E	EXISTING DOOR AND FRAME TO REMIAN, UPGRADE HARDWARE
217	218	266	RHR	45	1066	2150	TP	-	B	WD	ST	1	W5	HM		150	PT	4	F07		SEE DETAIL FOR WALL TYPE W5
218	218	CORR	LHR	E	1066	2150	TP	-	B	WD	ST	E	W4	HM	0	E	PT	1	F07	E	EXISTING DOOR AND FRAME TO REMAIN, UPGRADE HARDWARE
219	218	226A	LHR	45	1066	2150	TP	-	B	WD	ST	1	W2	HM		150	PT	5	F15		
224	224	CORR	LHR	E	1066	E	TP	-	B	WD	ST	E	W4	HM	0	E	PT	1	F07	E	EXISTING DOOR AND FRAME TO REMAIN, UPGRADE HARDWARE
224A	224	226A	RHR	45	915	2150	-	-	A	WD	ST	1	W1	HM		150	PT	3	F04		
224B	224	226	LHR	45	915	2150	TP	-	B	WD	ST	1	W2	HM		150	PT	2	F04		
225	226	CL1	RHR	E	E	E	-	-	A	WD	ST	E	W3	HM	0	E	PT	6	F01	E	EXISTING DOOR AND FRAME TO REMAIN, UPGRADE HARDWARE
226	226	CORR	LHR	E	1066	2150	TP	-	B	WD	ST	E	W4	HM	0	E	PT	1	F07	E	EXISTING DOOR AND FRAME TO REMAIN, UPGRADE HARDWARE
226B	226	226A	RHR	45	915	2150	TP	-	B	WD	ST	1	W1	HM		150	PT	2	F04		

LEGEND	ROOM FINISH SCHEDULE													REMARKS						
	LABORATORY	OFFICE	OFFICE	PACKING RM	CLOSET	ALCOVE 1	ALCOVE 2	VESTIBULE	ROOM NO.	FLOOR			WALLS			DOOR/FRAME		CEILING		
										MATERIAL	FINISH	COLOR	MATERIAL		FINISH	COLOR	MATERIAL	FINISH	MATERIAL	FINISH
CONC. CONCRETE	LABORATORY	218	CONC	LINOLEUM	CONC/GB	PT	HM	PT	CONC	PT	3098/3353									
PT. PAINT	OFFICE	224	CONC	LINOLEUM	CONC/GB	PT	HM	PT	ACT	ACT	2450									
ST CLEAR STAIN	OFFICE	226	CONC	LINOLEUM	CONC/GB	PT	HM	PT	ACT	ACT	2450									
HM HOLLOW METAL	PACKING RM	226A	CONC	LINOLEUM	CONC/GB	PT	HM	PT	ACT	ACT	2750									
CBK CONCRETE BLOCK	CLOSET	226B	CONC	LINOLEUM	CONC/GB	PT	HM	PT	ACT	ACT	2387									
GB GYPSUM WALL BOARD	ALCOVE 1	218	CONC	LINOLEUM	CONC/GB	PT	HM	PT	ACT	ACT	2387									
ACT ACOUSTIC CEILING TILE	ALCOVE 2	218	CONC	LINOLEUM	CONC/GB	PT	HM	PT	ACT	ACT	2387									
LIN LINOLEUM	VESTIBULE	218	CONC	LINOLEUM	CONC/GB	PT	HM	PT	ACT	ACT	2450									
NA NOT APPLICABLE																				
E EXISTING																				



DOOR STYLES SCALE 1:50
FRAME TYPE STYLES SCALE 1:50



Client
National Research Council Canada / Conseil national de recherches Canada

Contractor must verify all dimensions on the job and report any discrepancy to consultant before proceeding with the work.
All drawings and specifications are instruments of service and the property of the consultant and must be returned at the completion of the work.

Prints issued to

Particulars	No.	Date	By
ISSUE FOR TENDER	0	27/11/18	TM

Particulars No. Date By

Revisions to drawing drawing are superseded.

Consultant
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North Sign
NORTH

Stamp
LICENSED ARCHITECT
STEPHANIE HOWE-MORRIS
NS/PEA ASSOCIATION OF ARCHITECTS

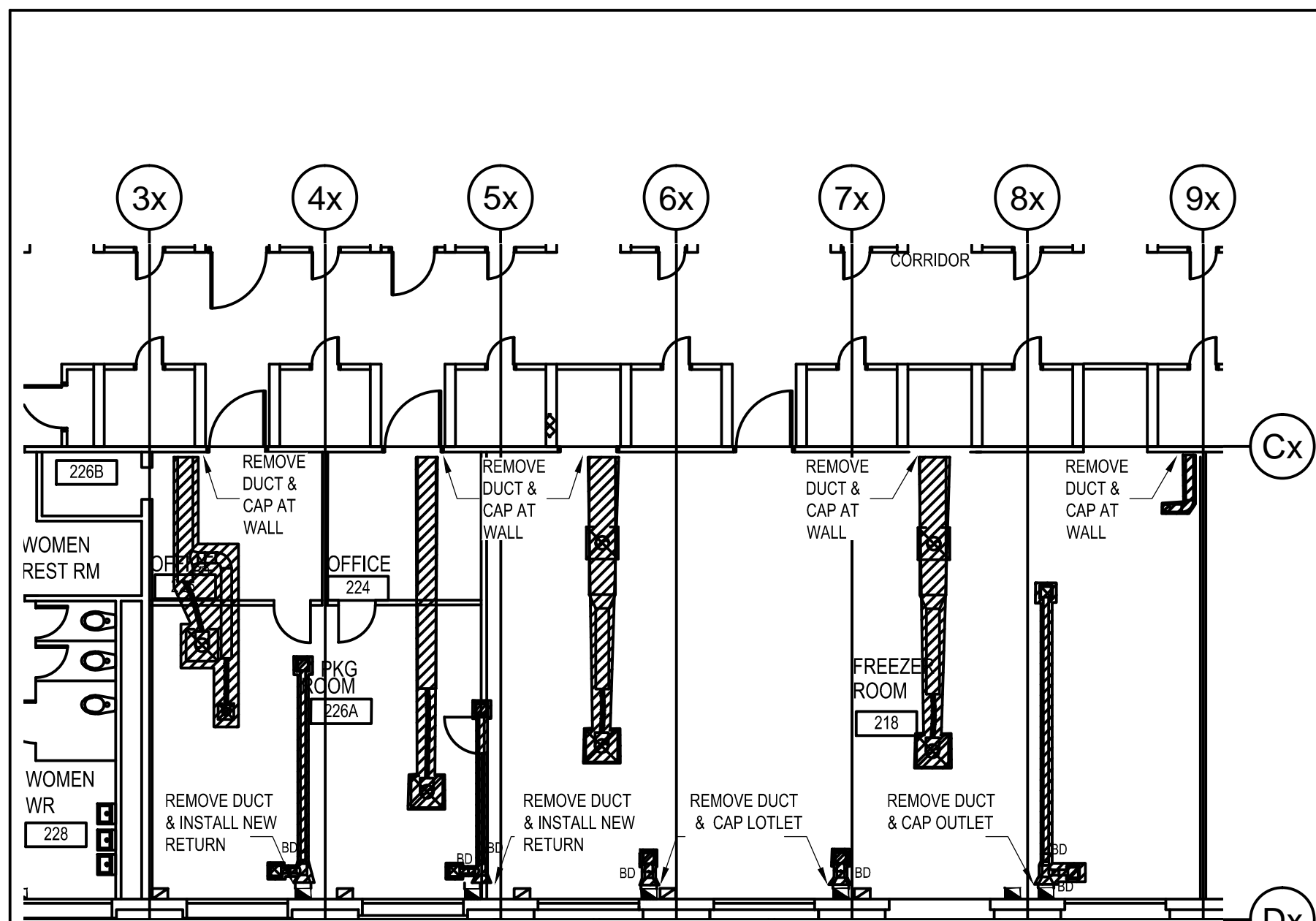
Project title
National Research Council
Halifax (HFx)

Energy Performance Contract

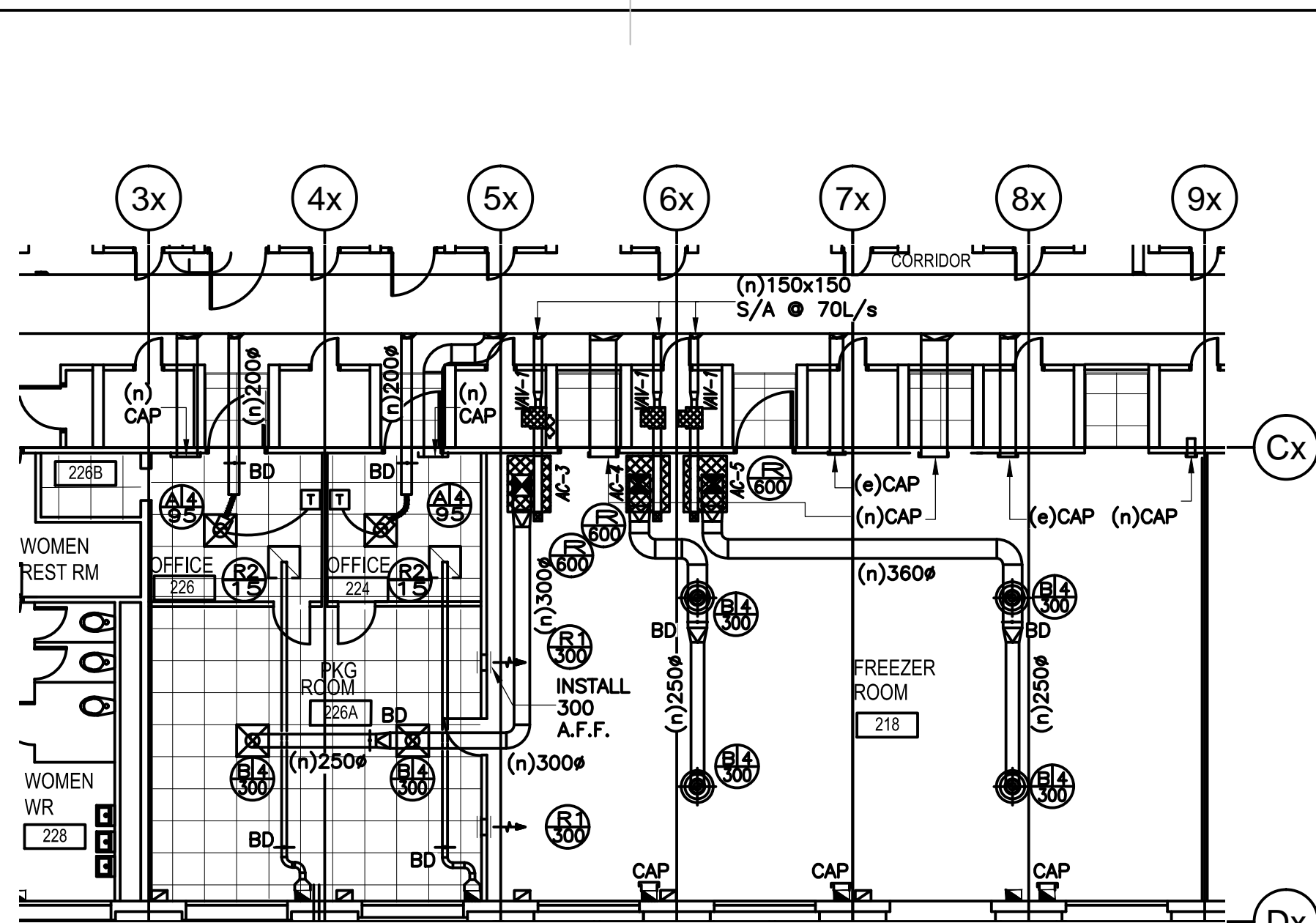
1411 Oxford Street
Halifax, NS B3H 3Z1

Project number	Checked by	Scale
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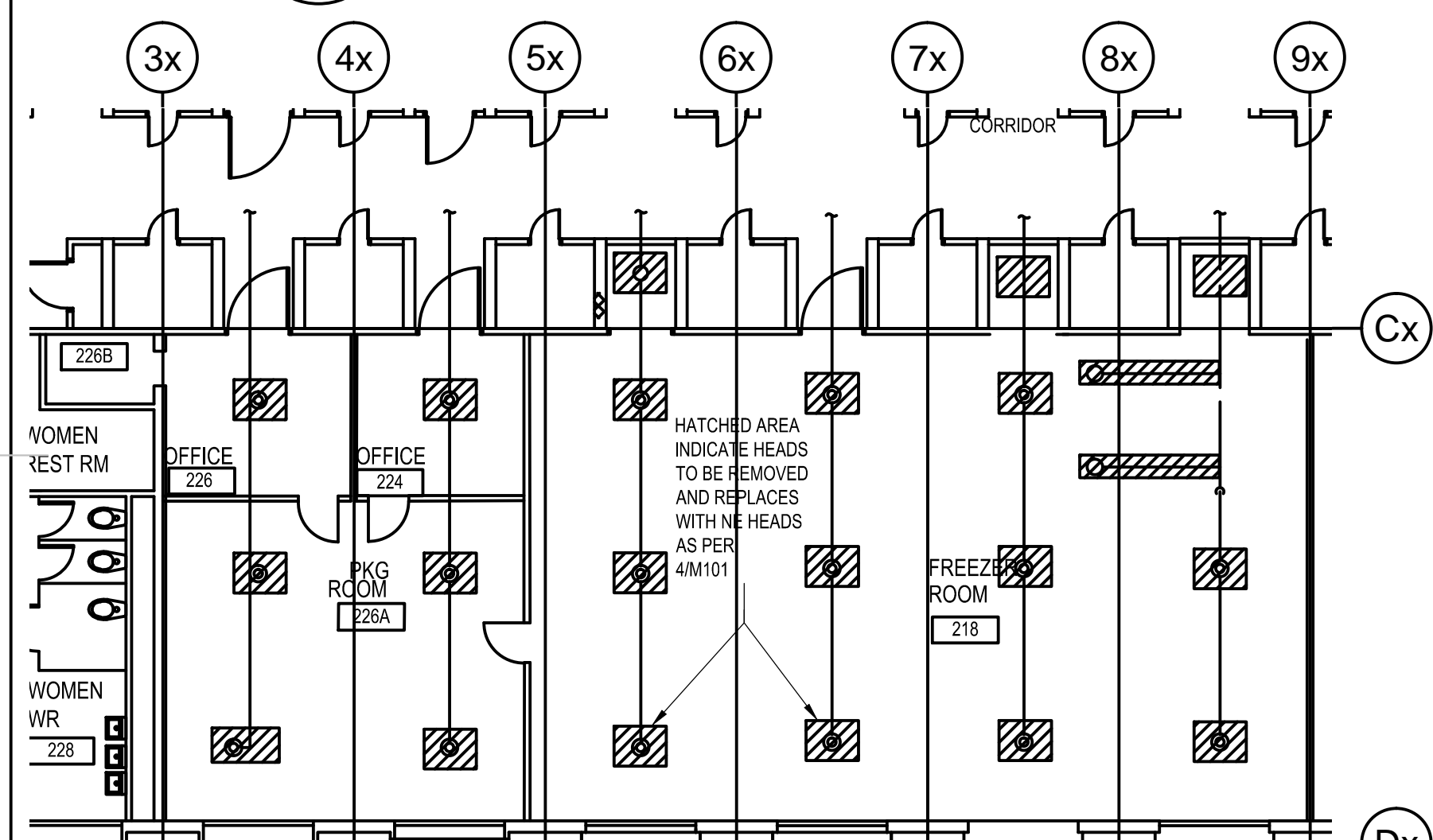
Sheet title	Drawing no.
FLOOR PLANS & NOTES	A02



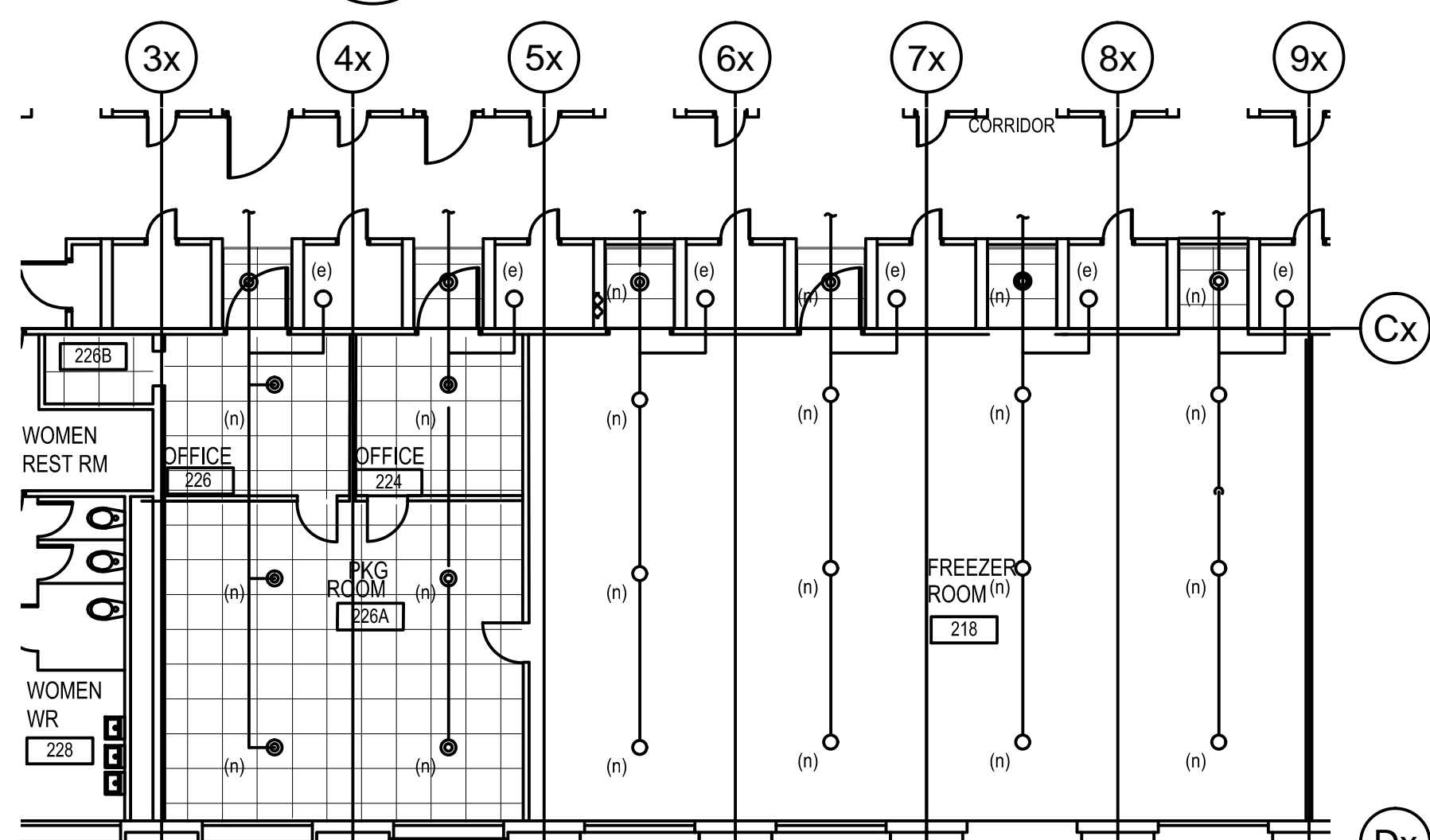
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M101 1:100



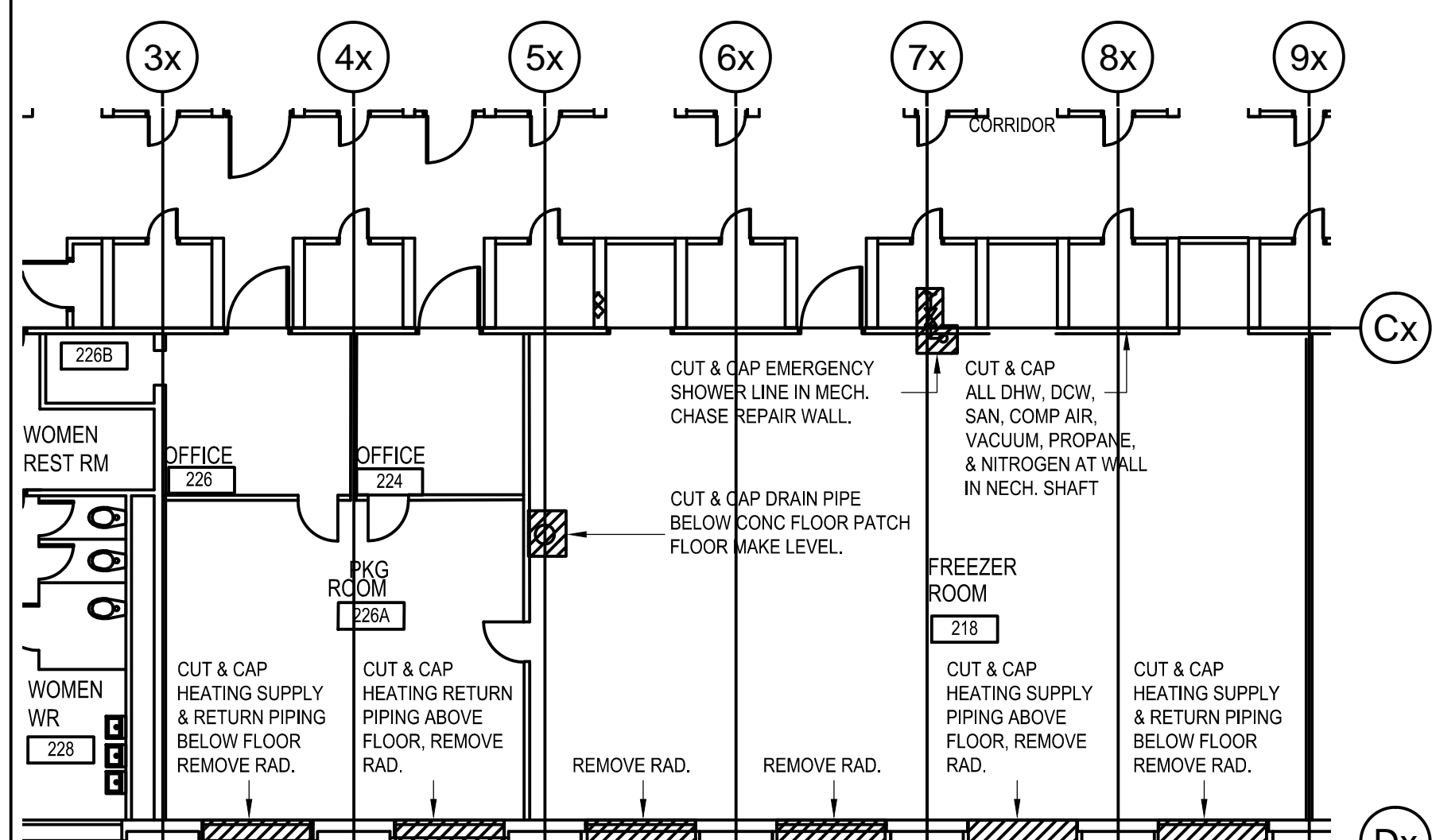
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M101 1:100



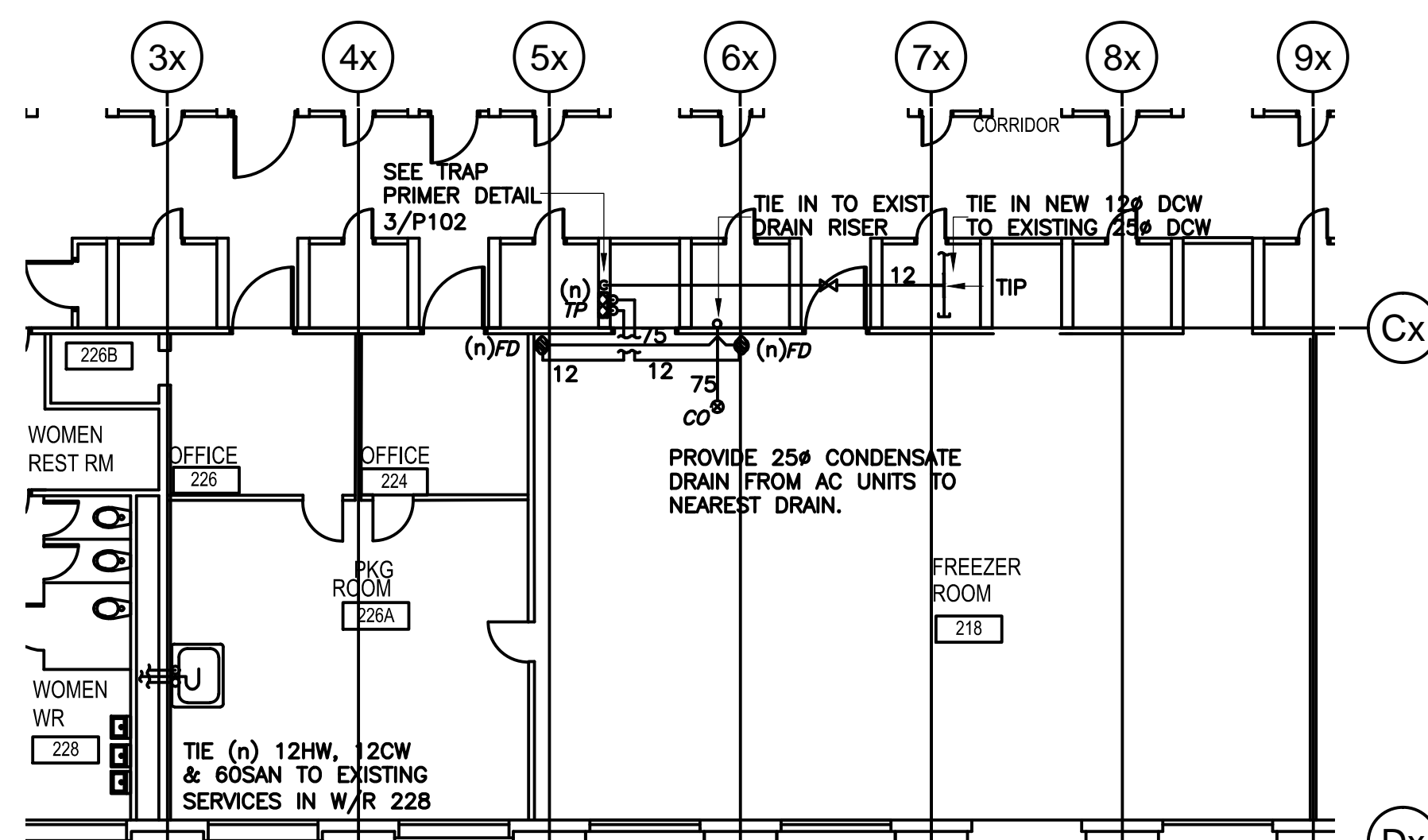
3 DEMO SPRINKLER
M101 1:100



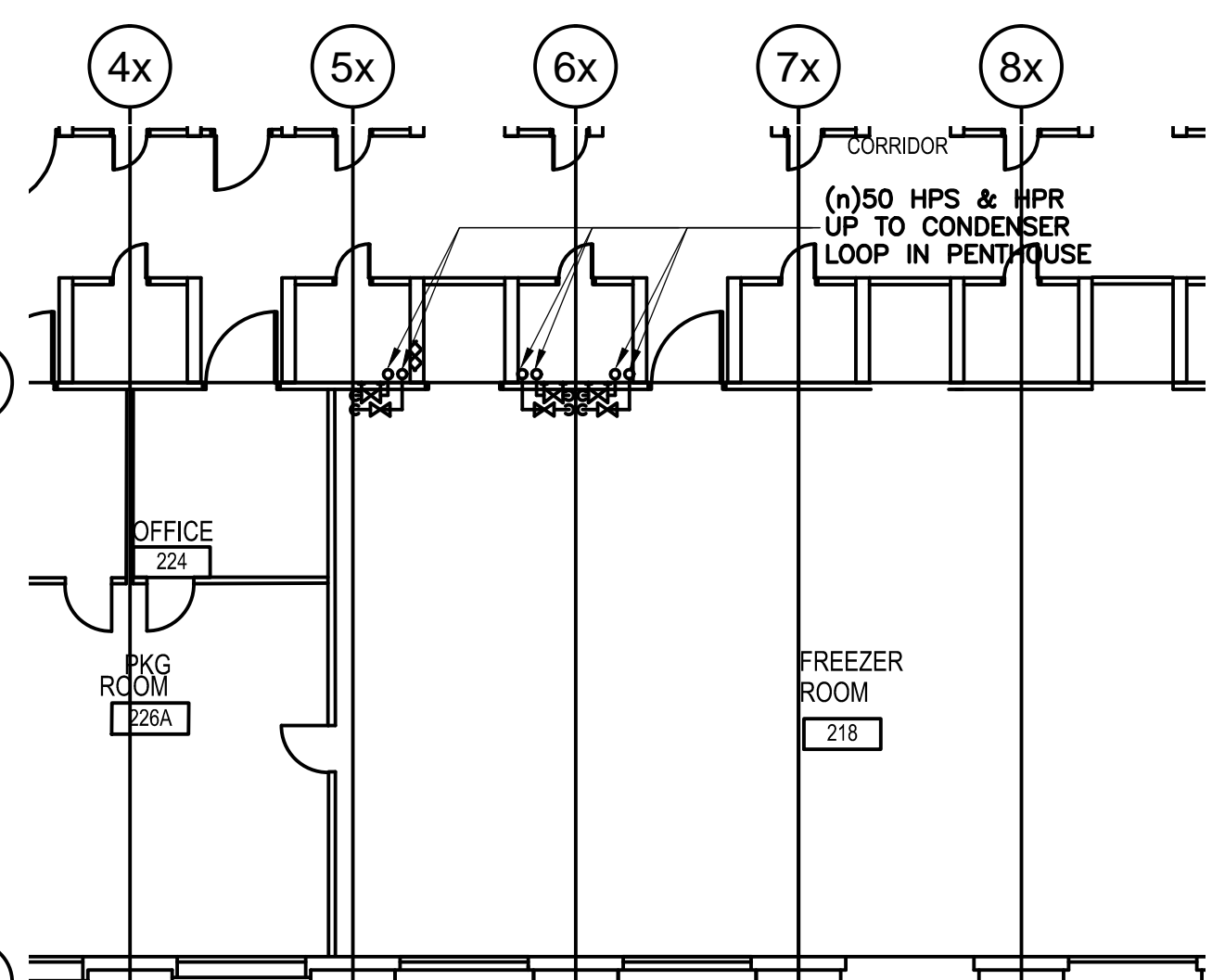
4 NEW SPRINKLER
M101 1:100



5 DEMO PLUMBING/HEATING
M101 1:100



6 NEW PLUMBING
M101 1:100



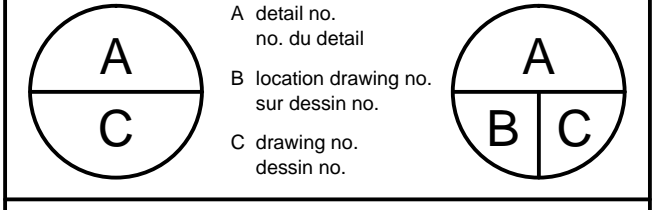
7 NEW A/C PIPING
M101 1:100

- GENERAL NOTES:**
- THE DESIGN PLANS DO NOT SHOW ALL OF THE EXISTING PIPING, DUCTWORK AND/OR EQUIPMENT.
 - ALL MATERIALS NOT SHOWN TO BE REMOVED AND DISPOSED OF THAT ARE DAMAGED THROUGHOUT THE COURSE OF WORK SHALL BE REPLACED WITHOUT ADDITIONAL COMPENSATION PROVIDED. ANY DAMAGES TO EXISTING FINISHES (FOR EXAMPLE, FLOORS, CEILINGS / ROOFS OR WALLS) SHALL BE REPAIRED BY THE MECHANICAL CONTRACTOR TO MATCH THE EXISTING FINISHES. ALL REPAIR WORK SHALL BE COMPLETED BY AN APPROPRIATE TRADESPERSON.
 - IT IS ASSUMED THAT ALL EXISTING PIPING, DUCTWORK AND/OR EQUIPMENT BEING RETAINED IS SAFE AND ADEQUATE. SHOULD THE CONTRACTOR DISCOVER ANY FAULTY, DETERIORATED OR OTHERWISE QUESTIONABLE MATERIAL, EQUIPMENT OR WORKMANSHIP, THEY SHALL NOTIFY THE CONSULTANT FOR FURTHER INSTRUCTIONS.
 - THE CONTRACTOR SHALL CONFIRM AND DETERMINE EXACT PIPING, DUCTWORK AND EQUIPMENT LOCATIONS, SIZES AND ELEVATIONS ON-SITE.
 - LOCATE DISTRIBUTION SYSTEMS, EQUIPMENT AND MATERIALS TO PROVIDE MINIMUM INTERFERENCE AND MAXIMUM USEABLE SPACE. ALL ADJUSTMENTS OR RE-ROUTING OF THE MECHANICAL, ELECTRICAL, AND SPRINKLER SYSTEMS REQUIRED TO AVOID CONFLICT AND PROVIDE ADEQUATE SPACE FOR SERVICING AND REMOVAL OF EQUIPMENT SHALL BE MADE AT THE EXPENSE OF THE RELEVANT CONTRACTOR.
 - CONNECT ALL UNIT COMPONENTS AS WELL AS DUCTWORK, AND CONTROLS SERVICING UNIT, INCLUDING, BUT NOT NECESSARILY LIMITED TO, ALL MISCELLANEOUS EXHAUST ACCESSORIES, HANGERS, AND SUPPORTS.
 - ALL SPRINKLER WORK TO BE DONE IN ACCORDANCE TO THE LATEST ADOPTED EDITION OF NFPA 13.
 - ENSURE ALL EXISTING CAPPED DUCTWORK AND EXISTING NEWLY CAPPED DUCTWORK IS COMPLETELY SEALED AND AIR TIGHT.

SPRINKLER LEGEND	
SYMBOL	DESCRIPTION
—	EXIST. BRANCH LINE
(n) ●	NEW PENDENT HEAD
(n) ○	NEW UPRIGHT HEAD
⊗	EXIST. HEAD TO BE REMOVED

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

revisions	description	date
3	ISSUED FOR TENDER	23/11/18
2	ISSUED FOR 100% REVIEW	08/11/18
1	ISSUED FOR REVIEW	22/10/18



project: **FREEZER RENOVATION**

1411 OXFORD STREET, HALIFAX N.S.

drawing: **EAST WING LEVEL 2 MECHANICAL PLANS**

Designed By	G.S.M.	01 8 18
Date	2018-11-23	(yyyy/mm/dd)
Drawn By	B.W.S.	01 1 18
Date	2018-11-23	(yyyy/mm/dd)
Reviewed By	G.S.M.	01 1 18
Date	2018-11-23	(yyyy/mm/dd)
Approved By	G.S.M.	01 1 18
Date	2018-11-23	(yyyy/mm/dd)
Tender	Submission	
Project Manager	Administrateur de projets	
W.O. no.	5605	D.T. no.
Drawing no.	M-101	No. du dessin

WATER SOURCE HEAT PUMP UNIT SCHEDULE

No UNIT	SERVING	MANUF.	MODEL	AIR FLOW (L/S)		COOLING										SUPPLY FAN			SOUND ATTENUATION LEVELS (dB)								ELECTRICAL		
				R/A	S/A	AIR EDB/EMB (°C)	DX LDB/LWB (°C)	EWI (°C)	LWT (°C)	TOT.CAP (kw)	SENS (kw)	EER	COIL PD (pa)	REFRIG. TYPE	COIL SIZE (mm)	TYPE	DIA (mm)	HP	SPEED (RPM)	63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	MCA	VOLTS/PH
AC-3	226A	ENGINEERED AIR	UPEW31	600	600	23.9/16.9	12.3/10.8	23.8	32.8	11.11	7.93	12.2	110.8	R-410A	444x500x13	ROUND COIL	230	1	1487	63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	18.9	208/3
AC-4	218	ENGINEERED AIR	UPEW31	600	600	23.9/16.9	12.3/10.8	23.8	32.8	11.11	7.93	12.2	110.8	R-410A	444x500x13	ROUND COIL	230	1	1487	80	79	76	73	73	72	69	67	18.9	208/3
AC-5	218	ENGINEERED AIR	UPEW31	600	600	23.9/16.9	12.3/10.8	23.8	32.8	11.11	7.93	12.2	110.8	R-410A	444x500x13	ROUND COIL	230	1	1487									18.9	208/3

NOTES: EACH AC UNIT TO BE c/w 30% EFF. 25mm PLEATED FILTER, 25mm FILTER RACK, 75mm PLENUM RATED HOSE SUPPLY & RETURN (Min. 600mm LONG/EA.), MANUAL BALL VALVES, BALANCING VALVE, 2-WAY, 2 POSITION MOTORIZED WATER SOLENOID CONTROL VALVE, VIBRATION ISOLATORS AS REQUIRED. ELECTRICAL DISCONNECTS FOR ALL UNITS BY ELECTRICAL CONTRACTOR. UNIT DIMENSIONS ARE CRITICAL AND MUST NOT BE EXCEEDED.

DIFFUSER / GRILLE SCHEDULE

DESIGNATION	MANUF.	MODEL	NECK	FACE	AIR CAP. /s	COMMENTS
A	EH PRICE	MOD PPD1	150#	600x600	0-95	DUCT MOUNTED c/w OBD COOLING DIFFUSER
B	EH PRICE	RCDE	250#	350#	0-300	DUCT MOUNTED c/w OBD
R1	EH PRICE	SDGER/A	-	900x150	0-300	DUCT MOUNTED; c/w OBD
R2	EH PRICE	PCFD	150#	600x600	0-15	DUCT MOUNTED; c/w OBD

S/A DESIGNATION: A14 - AIR PATTERN R/A DESIGNATION: R1 - AIR PATTERN
AIR CAPACITY: 100 - AIR CAPACITY

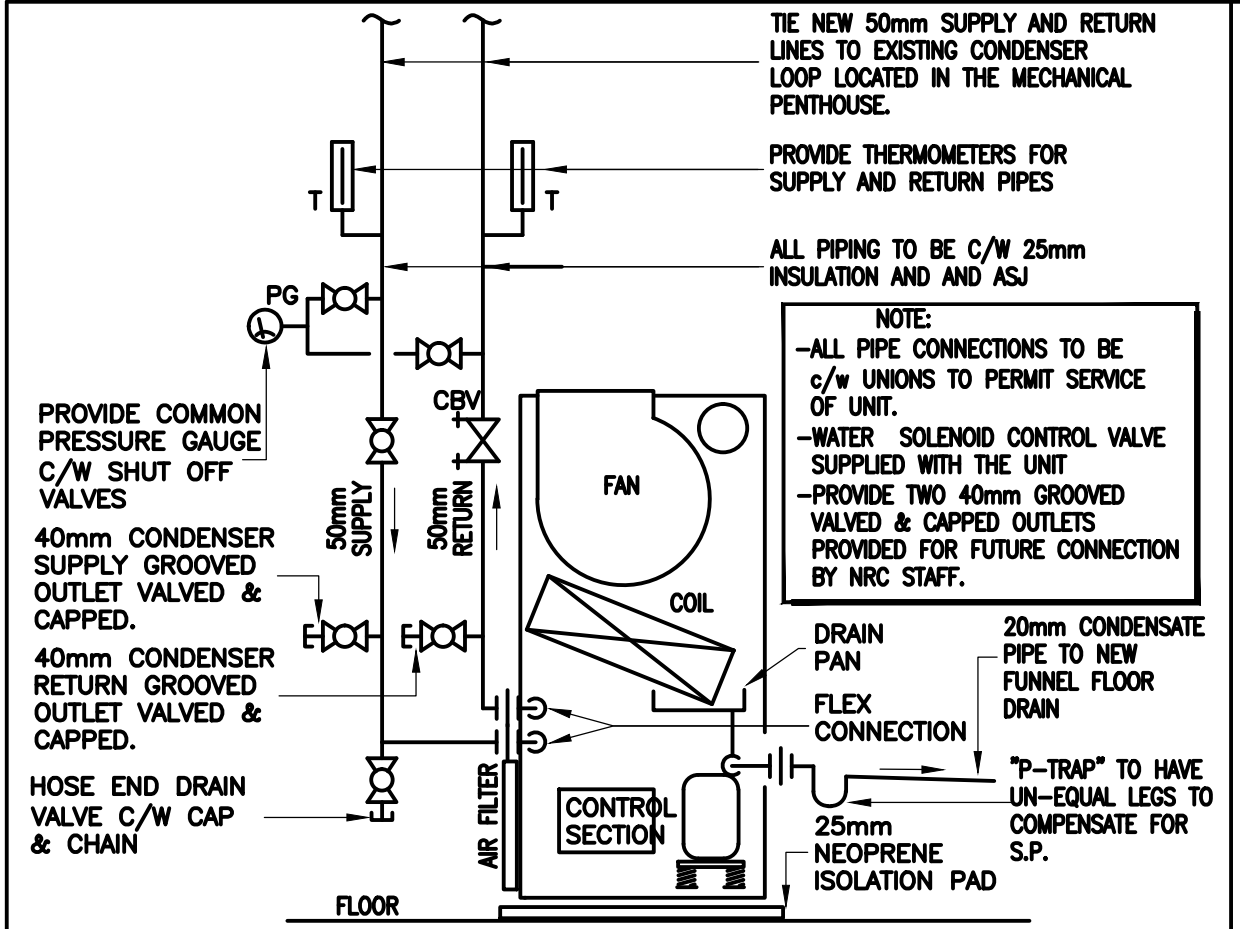
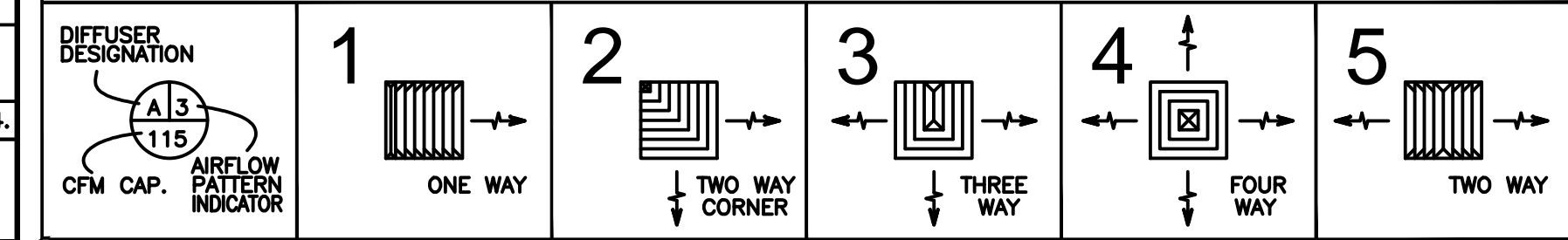
VAV BOX SCHEDULE

DESIG.	MANUF.	MODEL	INLET DIA. mm	OUTLET SIZE mm	DESIGN (L/s)	S.P. (Pa)	UNOCC. POSITION	COMMENTS
VAV-1	EH PRICE	SDV 5000	100	150x150	70	70	0	SEE NOTES 1,2,3,4.

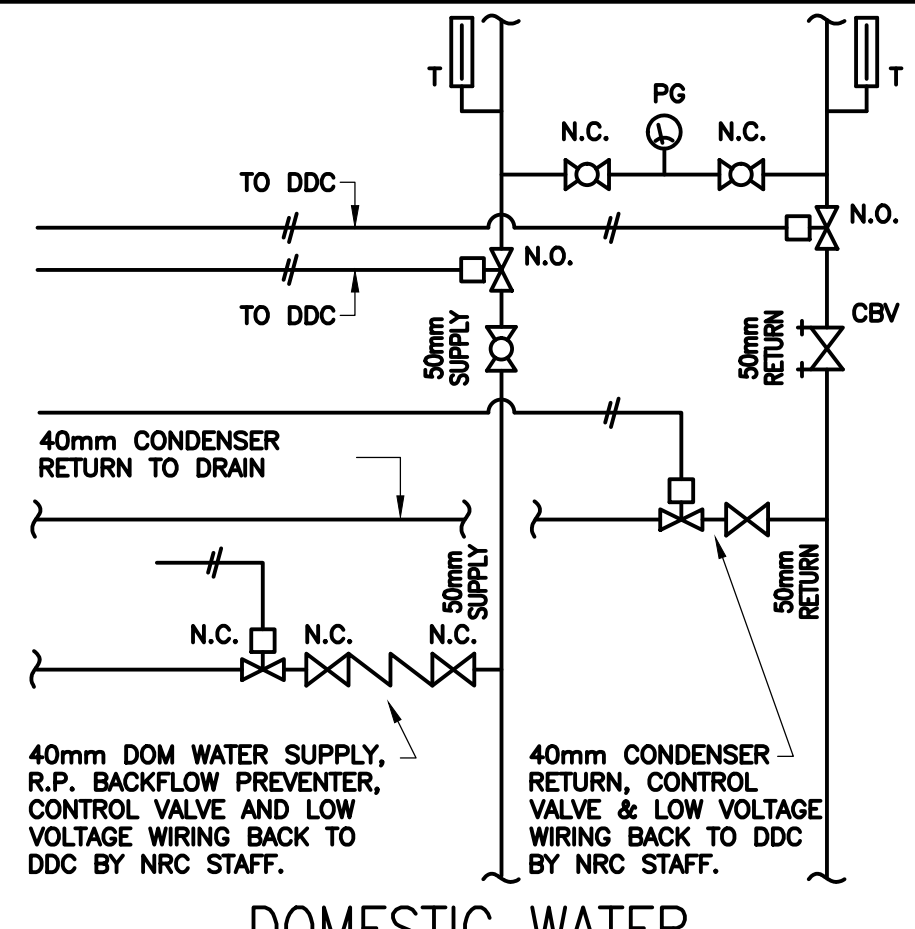
ABBREVIATIONS: SP - STATIC PRESSURE
VAV - VARIABLE AIR VOLUME

NOTES: 1 - SIEMENS PRESSURE INDEPENDENT CONTROLLER.
2 - CONTROLS ENCLOSURE SHROUD BY MFG.
3 - 75mm THICK FIBER-FREE FOAM INSULATION.
4 - UNIT C/W SP300 MULTI-POINT FLOW SENSOR.

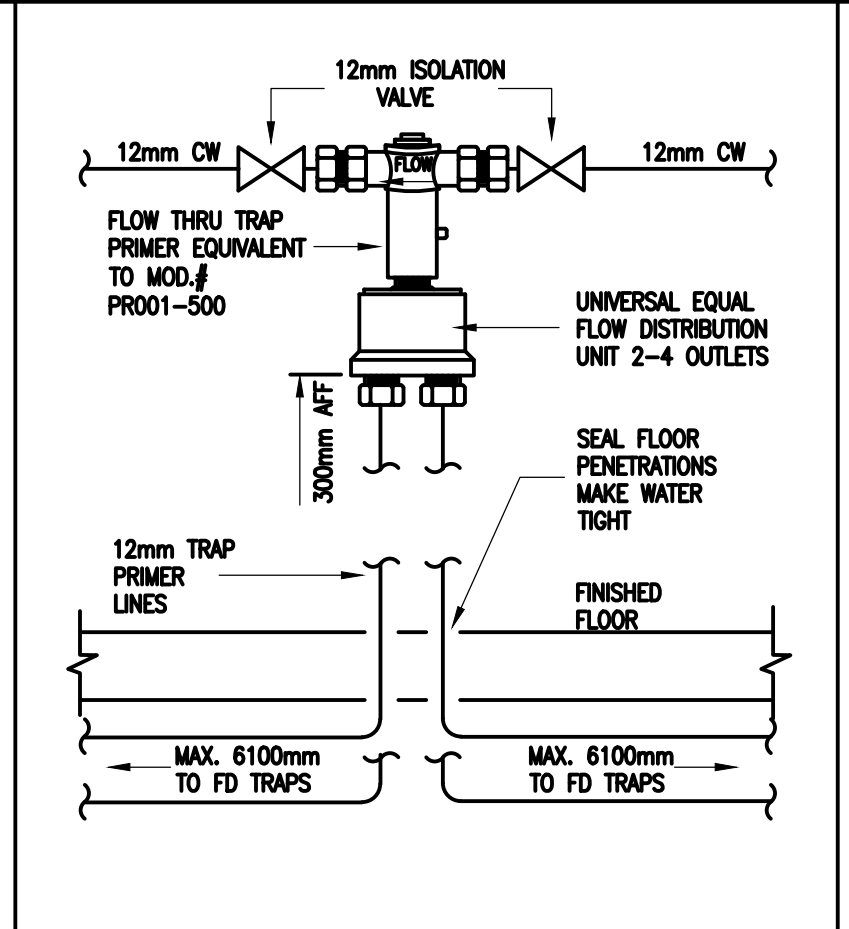
S/A AIRFLOW PATTERNS



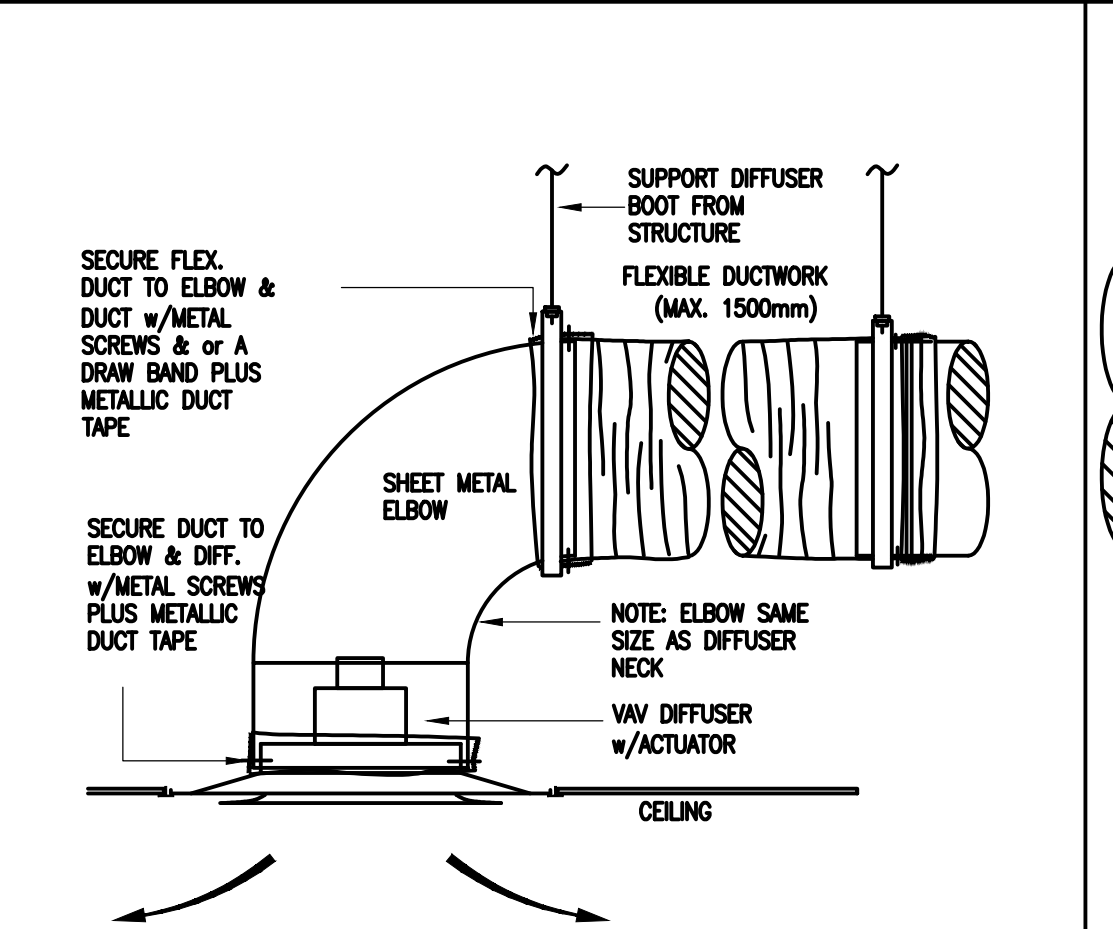
1 WATER COOLED AC UNIT
M-102 N.T.S. (FLOOR MOUNTED)



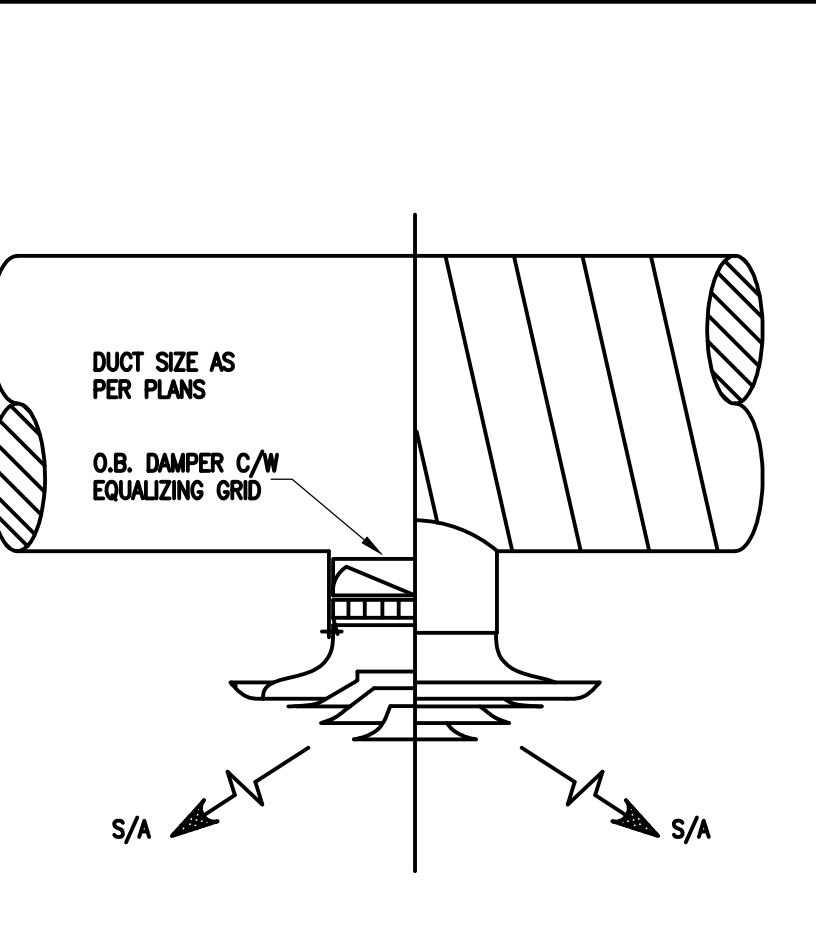
2 DOMESTIC WATER BYPASS CONTROLS
M-102 N.T.S.



3 TRAP PRIMER
M-102 N.T.S.



4 VAV DIFF. FLEX CONNECTION
M-102 N.T.S. (ROOMS 224 & 226 ONLY)



5 ROUND DIFFUSER
M-102 N.T.S.

LEGEND

TAG	SYMBOL	CONTROL POINT	POWER	DESCRIPTION
SF	(Symbol)	-	-	A/C UNIT, PROVIDED BY MECHANICAL CONTRACTOR
M	(Symbol)	-	E	3 PHASE MOTOR, PROVIDED BY MECHANICAL CONTRACTOR
DI	(Symbol)	-	E	LV CONTROL POINT (DIGITAL IN), PROVIDED BY CONTROLS CONTRACTOR
AO	(Symbol)	-	E	LV CONTROL POINT (ANALOG OUT), PROVIDED BY CONTROLS CONTRACTOR
W	(Symbol)	-	E	ELECTRICAL WIRING (2 WIRE), PROVIDED BY CONTROLS CONTRACTOR
W	(Symbol)	-	E	ELECTRICAL WIRING (3 WIRE), PROVIDED BY CONTROLS CONTRACTOR
RC	(Symbol)	SENSOR	E	LV ROOM HEAT PUMP UNIT CONTROLLER, PROVIDED BY CONTROLS CONTRACTOR
TX	(Symbol)	SENSOR	E	LV DUCT AIR TEMPERATURE SENSOR, PROVIDED BY CONTROLS CONTRACTOR
TR	(Symbol)	-	E	ELECTRICAL TRANSFORMER 120V-24V, PROVIDED BY CONTROLS CONTRACTOR
V	(Symbol)	VALVE	E	LV 2-WAY MODULATING CONTROL VALVE, SUPPLIED BY EQUIPMENT MFG.
D	(Symbol)	-	-	LOW LEAKAGE DAMPER O.B.D., PROVIDED BY CONTROLS CONTRACTOR
M	(Symbol)	-	E	LV ELECTRIC DAMPER MOTOR, PROVIDED BY CONTROLS CONTRACTOR
CS	(Symbol)	STATUS	E	- ELECTRICAL CURRENT SENSOR, PROVIDED BY CONTROLS CONTRACTOR

SEQUENCE

THE A/C CONTROLLER, PROVIDED WITH EACH UNIT, CONTROLS THE COOLING AND FAN OPERATION. THE BUILDING AUTOMATION SYSTEM WILL CONTROL THE GENERAL OPERATIONAL PARAMETERS OF THE A/C UNIT THROUGH A PROGRAMMABLE THERMOSTAT / CONTROLLER, PROVIDED BY THE CONTROLS CONTRACTOR, INCLUDING THE FAN OPERATION, COOLING STAGE, PROVIDE AN ALARM OUTPUT AND PROVIDE A MANUAL OVERRIDE FUNCTION. THE BUILDING AUTOMATION SYSTEM WILL ALSO CONTROL AND OPERATION OF THE OUTDOOR AIR DAMPERS OR VAV BOXES TO THE WATER SOURCE A/C UNITS. THE UNIT CONTROLLER SHALL CONTROL THE SOURCE-WATER TWO-POSITION CONTROL VALVES.

ROOM TEMPERATURE SENSOR(S) PROVIDE SPACE TEMPERATURE INPUT INTO UNIT CONTROLLER. THE SENSORS SHALL HAVE LOCAL ADJUSTMENT OF SET-POINTS LOCKED OUT AT THE LOCAL SENSOR AND BE ONLY ADJUSTABLE BY PASSWORD THROUGH THE BUILDING AUTOMATION SYSTEM.

OCCUPIED/UNOCCUPIED STATUS SHALL BE DETERMINED FROM A SCHEDULE ESTABLISHED FOR EACH SPACE.

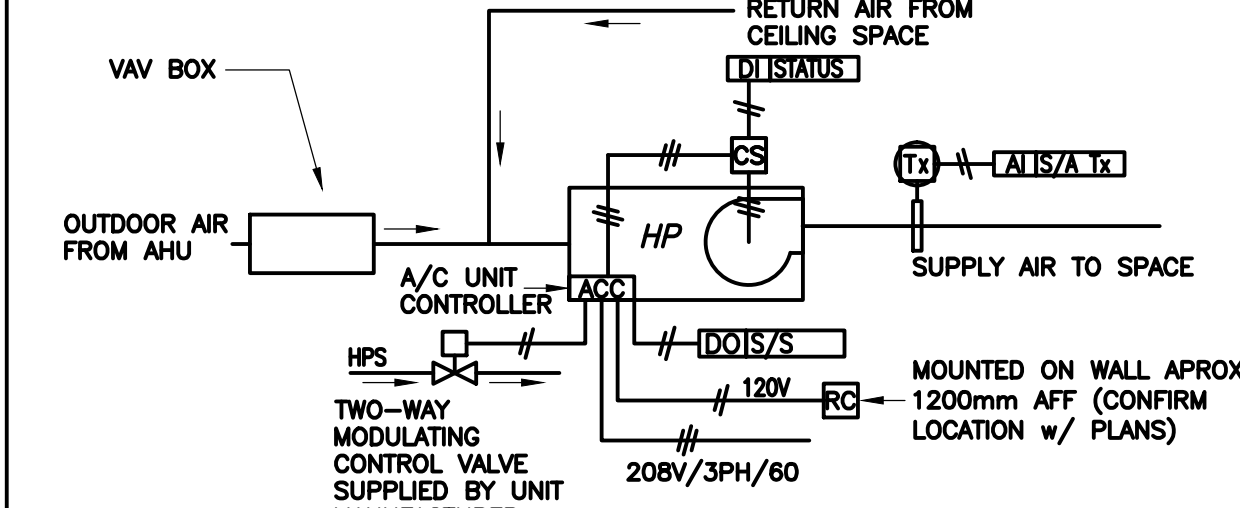
DURING THE OCCUPIED PERIOD THE OUTDOOR AIR DAMPER IS OPEN AND THE A/C UNIT FAN RUNS CONTINUOUSLY. ON A CALL FOR COOLING, THE COMPRESSOR CYCLES ON IN THE COOLING MODE.

DURING THE UNOCCUPIED MODE, THE HEAT PUMP OUTSIDE AIR DAMPER IS CLOSED COMPLETELY.

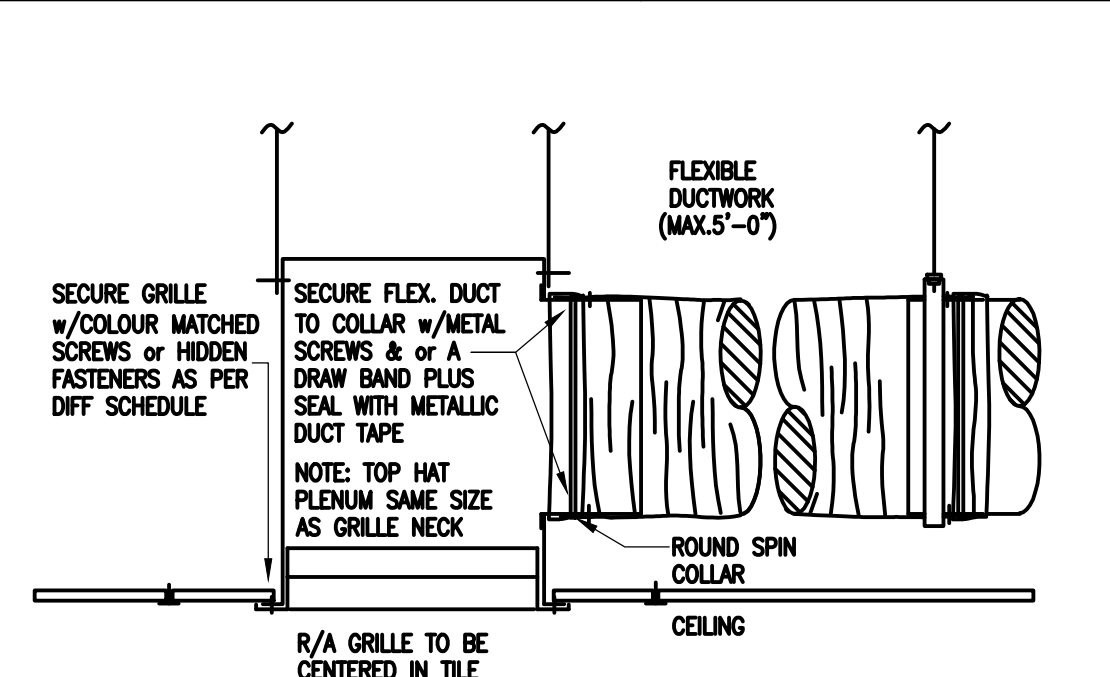
THE HEAT PUMP CONTROLLER IS PROGRAMMED AND TESTED WITH ALL OF THE LOGIC REQUIRED TO MONITOR AND CONTROL THE UNIT, INCLUDING, BUT NOT NECESSARILY LIMITED TO THE FOLLOWING:

- ENABLE COOLING TO MAINTAIN SET-POINT BASED ON ROOM TEMPERATURE SENSOR;
- ENABLE FAN AND COMPRESSOR OPERATION;
- MONITOR ALL EQUIPMENT PROTECTION CONTROLS AND PROVIDE AN ALARM IF OUTSIDE OF NORMAL OPERATING RANGE;
- MONITOR ROOM AND DISCHARGE AIR TEMPERATURES AND PROVIDE AN ALARM IF OUTSIDE OF NORMAL OPERATING RANGE;
- MONITOR LEAVING WATER TEMPERATURE;
- RELAYS STATUS OF ALL VITAL UNIT FUNCTIONS.

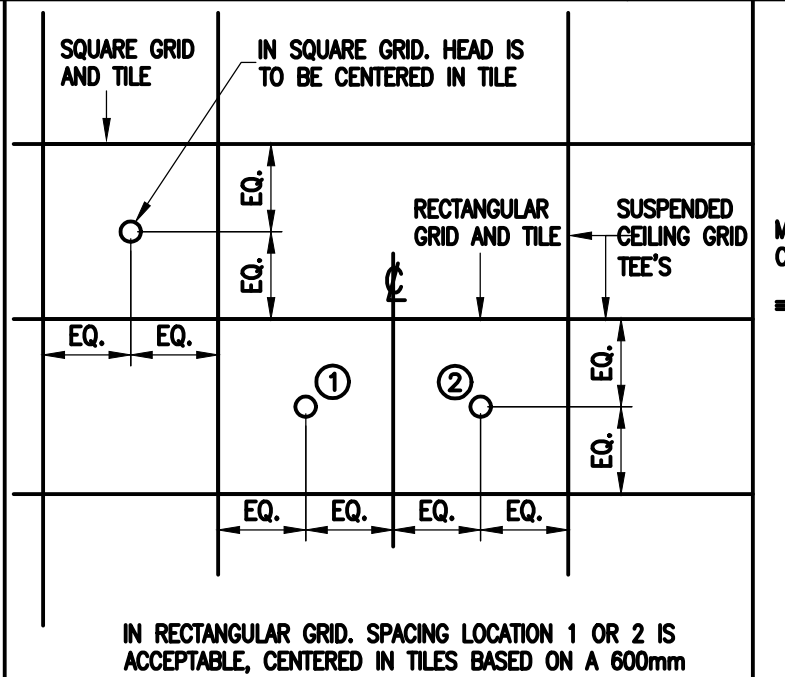
THE UNIT CONTROLLER WILL INCLUDE A DISCHARGE AIR SENSOR TO BE FIELD INSTALLED BY THE CONTROLS CONTRACTOR. ZONE TEMPERATURE ALARMS WILL BE GENERATED WITHIN THE BUILDING AUTOMATION SYSTEM IF THE SPACE TEMPERATURE GOES BELOW 50 DEGREES FAHRENHEIT AND ABOVE 85 DEGREES FAHRENHEIT.



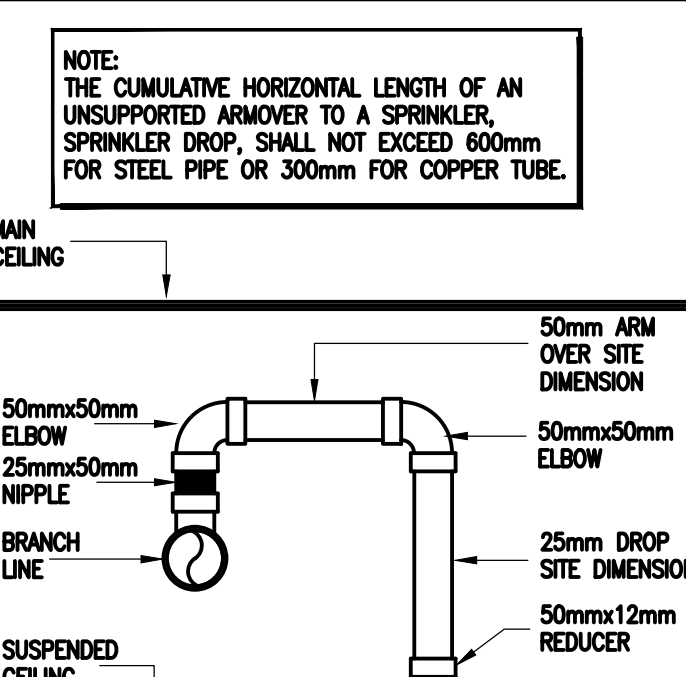
9 WATER COOLED A/C UNIT
M-102 N.T.S.



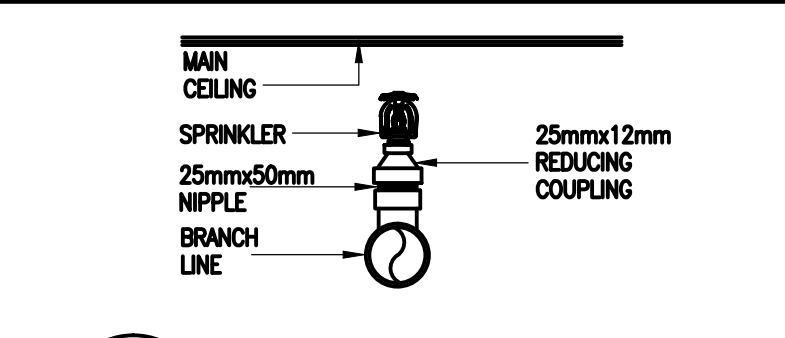
6 RETURN GRILL CONNECTION
M-102 N.T.S.



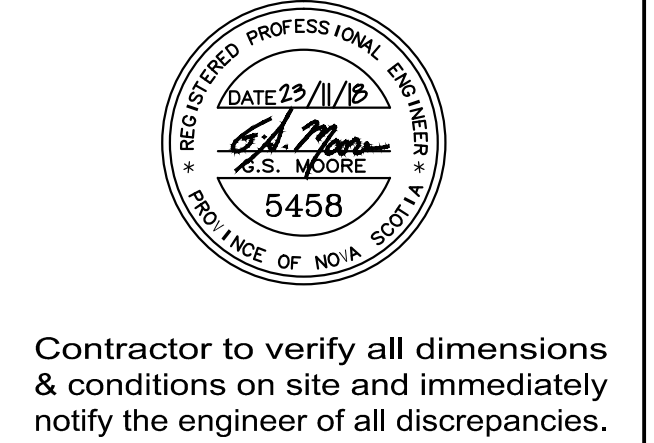
7 HEAD LOCATION
M-102 N.T.S.



8 TYP. ARM OVER
M-102 N.T.S.



9 TYP. UPRIGHT HEAD
M-102 N.T.S.



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

revisions	description	date
3	ISSUED FOR TENDER	23/11/16
2	ISSUED FOR 100% REVIEW	08/11/16
1	ISSUED FOR REVIEW	22/10/16

A	B	C
detail no.	no. du detail	
location drawing no.	sur dessin no.	
drawing no.	dessin no.	

FREEZER RENOVATION

1411 OXFORD STREET, HALIFAX N.S.

EAST WING LEVEL 2 MECHANICAL PLANS

Designed By	G.S.M.	01/08/16
	2018-11-23	(yyyy/mm/dd)
Drawn By	B.W.S.	01/08/16
	2018-11-23	(yyyy/mm/dd)
Reviewed By	G.S.M.	08/11/16
	2018-11-23	(yyyy/mm/dd)
Approved By		01/11/16
		(yyyy/mm/dd)

Project Manager: Administrateur de projets
W.O. no.: D.T. no.
5605

Drawing no.: No. du dessin
M-101



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

revisions	description	date
3	ISSUED FOR TENDER	23/11/18
2	ISSUED FOR 100% REVIEW	08/11/18
1	ISSUED FOR REVIEW	22/10/18

A	A detail no.
C	no. du detail
B	B location drawing no.
C	sur dessin no.
B	C drawing no.
C	dessin no.

project project

FREEZER RENOVATION

1411 OXFORD STREET, HALIFAX N.S.

drawing dessin

ELECTRICAL DEMOLITION LEVEL 2 EAST WING

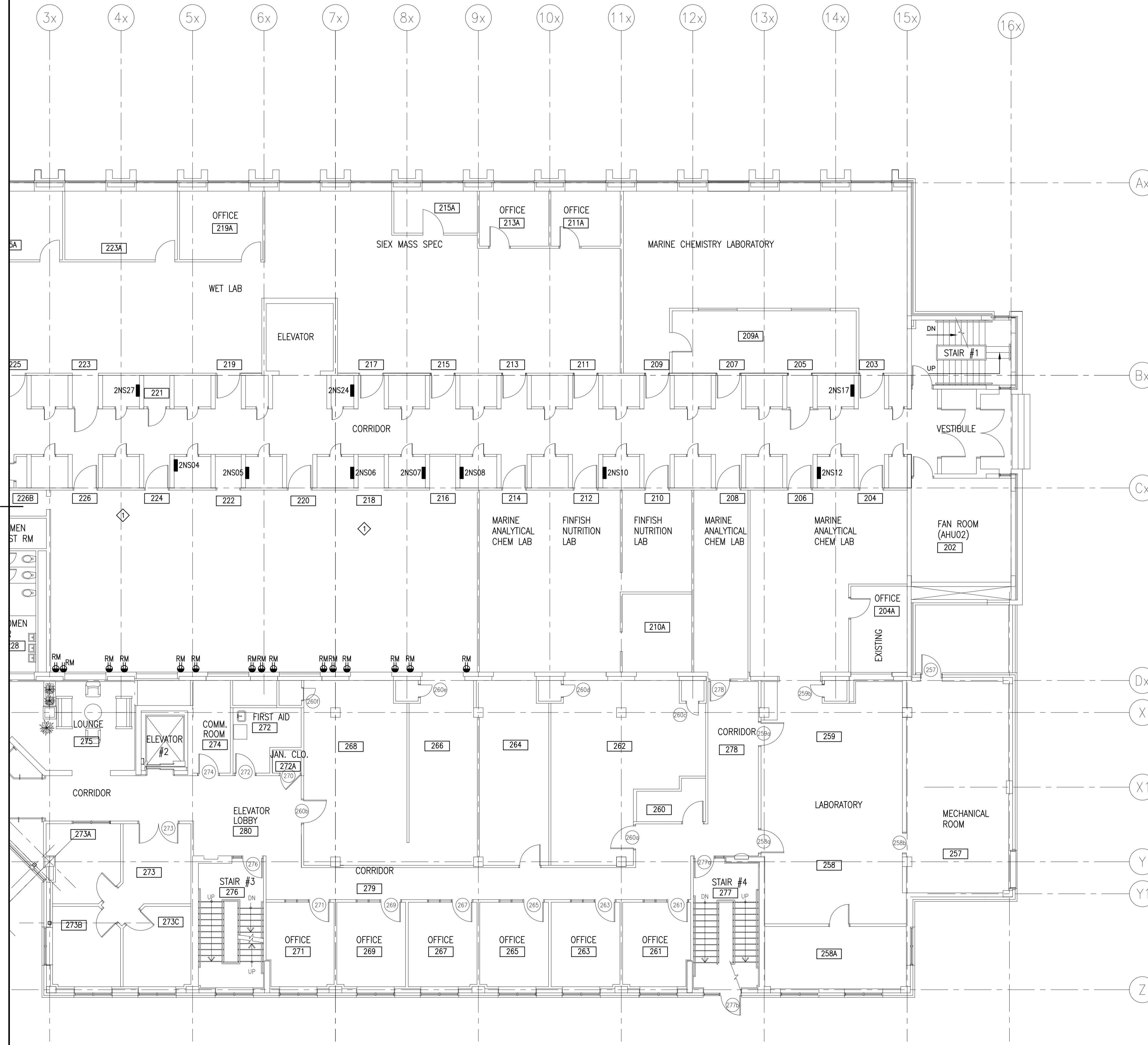
Designed By	B.DOUCET	Conçu par	
Date	2018-11-23	(yyyy/mm/dd)	
Drawn By	B.DOUCET	Dessiné par	
Date	2018-11-23	(yyyy/mm/dd)	
Reviewed By	R.G.ROCKETT	Examiné par	
Date	2018-11-23	(yyyy/mm/dd)	
Approved By		Approuvé par	
Date		(yyyy/mm/dd)	
Tender		Soumission	

Project Manager Administrateur de projets
 W.O. no. D.T. no.

5605

Drawing no. No. du dessin

E-101



ELECTRICAL LEGEND

- LINE VOLTAGE WIRING AS PER SPECIFICATIONS, RUN 2#12+#12BOND-16mmEMT MINIMUM. WHERE 3-PHASE CIRCUITS SHARE A COMMON NEUTRAL, THE COMMON NEUTRAL CONDUCTOR SHALL BE #10AWG.
- LOW VOLTAGE WIRING AS PER SPECIFICATIONS (2#14LVT+14BOND-16mmEMT MINIMUM.)
- LED LUMINAIRES ON CIRCUIT "2" FROM PANEL "101". LUMINAIRE TYPE "2" AS PER LUMINAIRE SCHEDULE.
- ⊞ SINGLE POLE SWITCH, FLUSH WALL MOUNTED 1220mm A.F.F., UNLESS INDICATED OTHERWISE. VOLTAGE RATING OF SWITCHES SHALL BE AS INDICATED BY THE CIRCUIT DESCRIPTION.
- ⊞ DIMMER FLUSH WALL MOUNTED 1220mm A.F.F. EQUAL TO ACUITY nLIGHT CAT. NO.: nPODM-DX-IV
- ⊞ DUAL TECHNOLOGY OCCUPANCY SENSOR, CEILING MOUNTED EQUAL TO ACUITY nLIGHT CAT. NO.: nCM-PDT-9
- ⊞ TWO DUPLEX U-GROUND RECEPTACLES MOUNTED WITHIN A COMMON BACKBOX 450mm A.F.F. WITH A COMMON STAINLESS STEEL COVERPLATE, UNLESS INDICATED OTHERWISE.
- ⊞ 5-20R, 120V DUPLEX U-GROUND IVORY RECEPTACLE WALL MOUNTED 450mm A.F.F. WITH STAINLESS STEEL COVERPLATE, UNLESS INDICATED OTHERWISE.
- ⊞ 5-20R, 120V DUPLEX U-GROUND IVORY RECEPTACLE WALL MOUNTED 1220mm A.F.F. WITH STAINLESS STEEL COVERPLATE, UNLESS INDICATED OTHERWISE.
- ⊞ 6-20R, 208V DUPLEX U-GROUND SINGLE PHASE RECEPTACLE WALL MOUNTED 1220mm A.F.F. WITH STAINLESS STEEL COVERPLATE, UNLESS INDICATED OTHERWISE.
- ▽ SINGLE DATA/SINGLE VOICE OUTLET, CONSISTING OF A 100mm SQUARE BACKBOX COMPLETE WITH A SINGLE GANG TILE RING, CATEGORY 6a RJ-45 JACKS AND FACEPLATE, FLUSH WALL MOUNTED 450mm A.F.F., UNLESS INDICATED OTHERWISE.
- ⊞ PULL BOX, JUNCTION BOX, DIRECT CONNECTION, OR EQUIPMENT AS INDICATED ON THE DRAWINGS.
- ⊞ 347/600V AND 120/208V PANELS, SURFACE MOUNTED.
- ⊞ 347/600V AND 120/208V PANELS, FLUSH MOUNTED.
- ⊞ TOL MANUAL STARTER WITH THERMAL OVERLOAD PROTECTION AND PILOT LIGHT, WALL MOUNTED 1220mm A.F.F., UNLESS INDICATED OTHERWISE.
- ⊞ COMBINATION STARTER AS DETAILED ON THE DRAWINGS.
- ⊞ DISCONNECT SWITCH AS DETAILED ON THE DRAWINGS.

- DEFINITIONS:**
- A.F.F. - ABOVE THE FINISHED FLOOR.
 - GFCI - GROUND FAULT CIRCUIT INTERRUPT
 - RP - REPLACE EXISTING DEVICE OR EQUIPMENT. TURN OVER DEVICE OR EQUIPMENT TO OWNER. EXISTING ASSOCIATED SERVICES TO BE REUSED.
 - S - SURFACE MOUNTED
 - RM - REMOVE EXISTING DEVICE OR EQUIPMENT. TURN OVER DEVICE OR EQUIPMENT TO OWNER. REMOVE WIRING BACK TO SOURCE.
 - C - CEILING MOUNTED
- *** DOTTED INDICATES DEVICES EXISTING TO REMAIN UNLESS INDICATED OTHERWISE

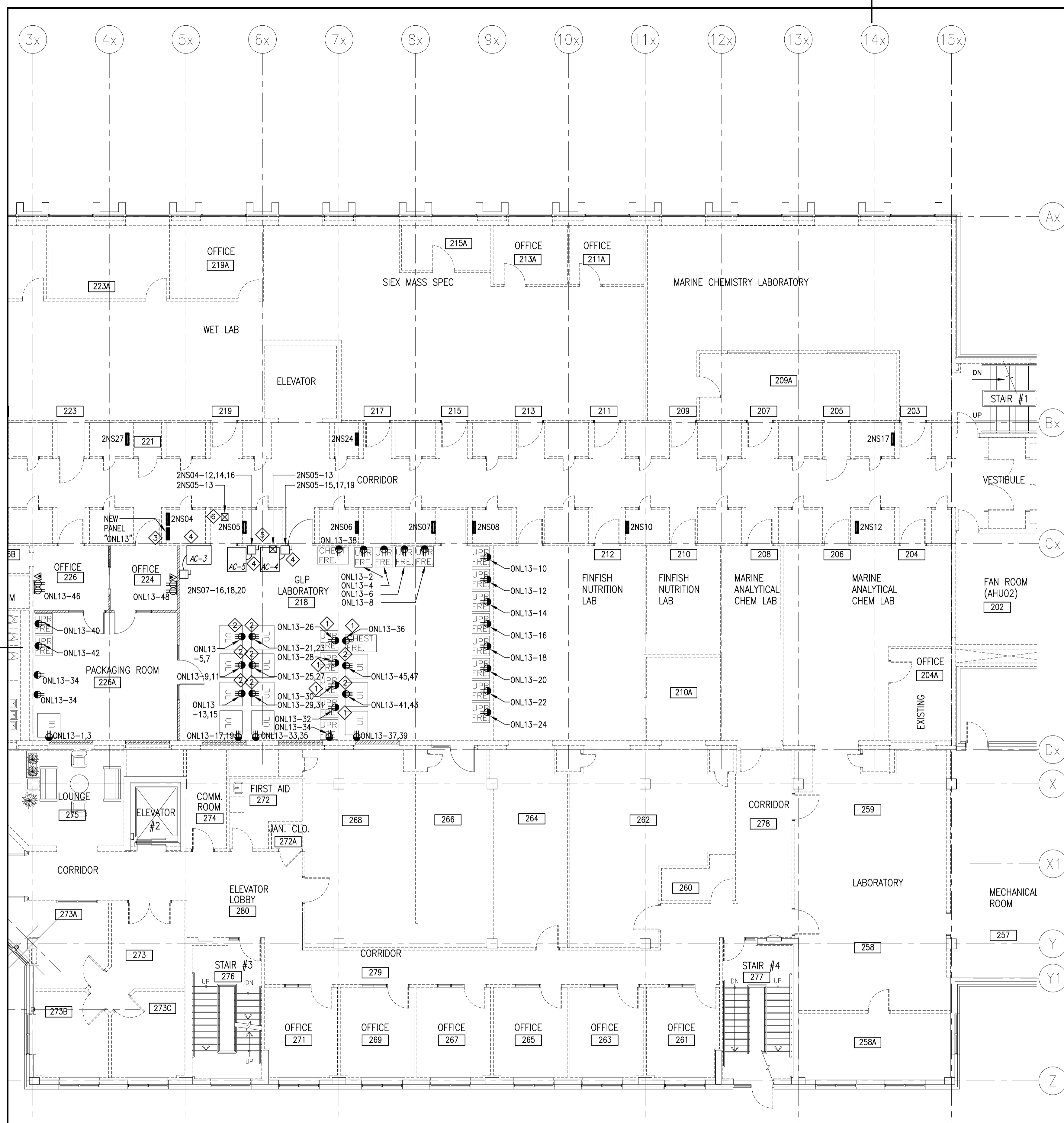
ELECTRICAL NOTES:

INDICATED BY THE ◊ SYMBOL ON THE DRAWINGS. (I.E. ◊ INDICATES NOTE 1)

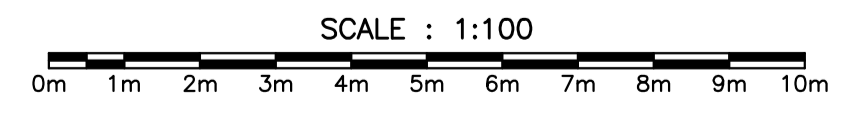
NOTE 1: EXISTING REDUNDANT COMMUNICATIONS WIRING EXPOSED IN OPEN CEILING SPACE TO BE REMOVED BACK TO SOURCE. CONTRACTOR TO REMOVE AND REINSTATE CEILINGS TO ALLOW REMOVAL OF SERVICES. CONTRACTOR RESPONSIBLE TO MAKE GOOD ALL FINISHES AND SERVICES TO ALLOW FOR THE REMOVAL OF COMMUNICATIONS WIRING BACK TO SOURCE.

LEVEL 2 DEMOLITION LAYOUT





LEVEL 2 POWER & COMMUNICATIONS LAYOUT

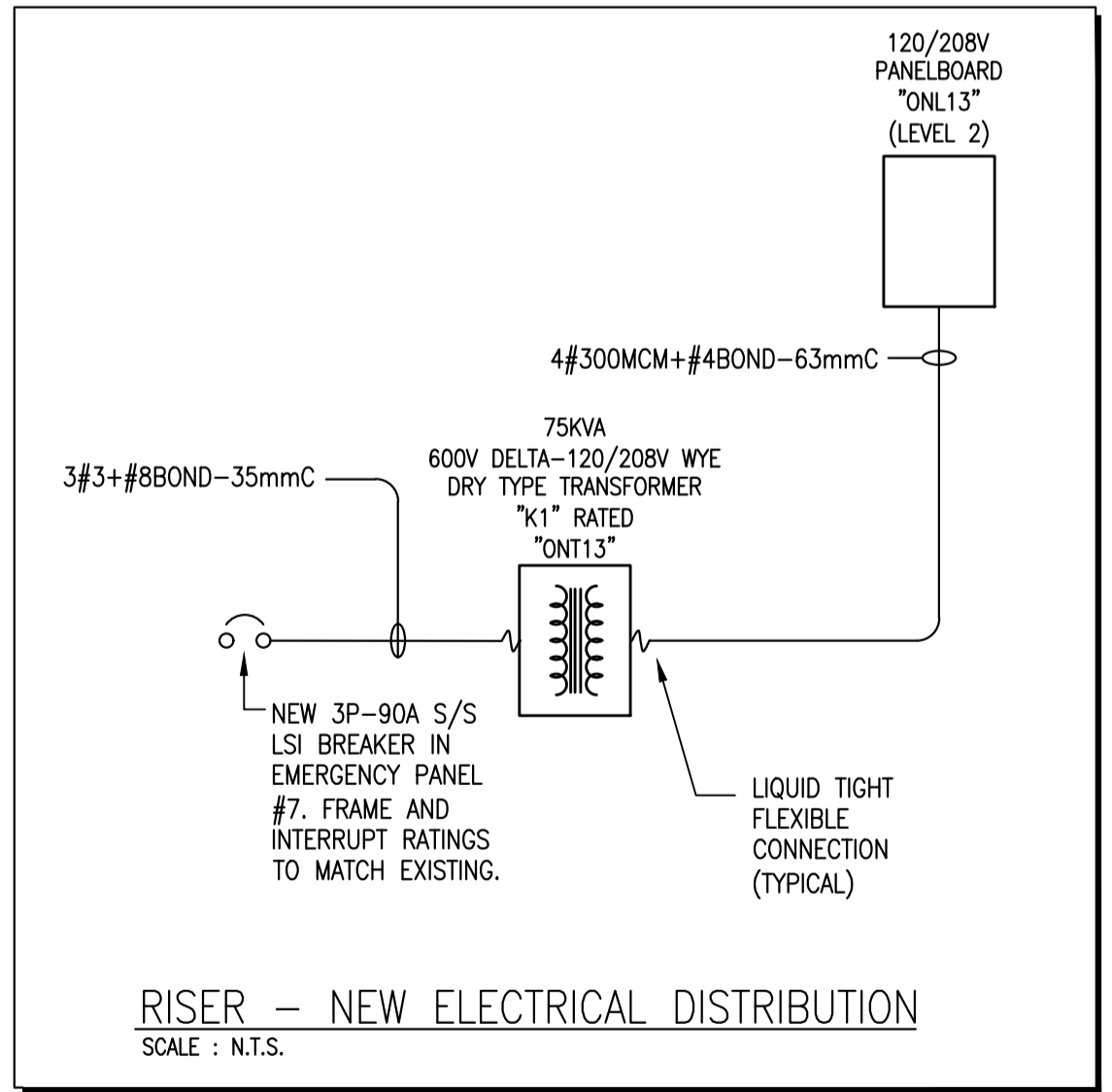


Panel:	"ONL13"	Mounting:	Surface					
Location:	Level 2	Feeder:	Refer to Drawing					
Type:	Siemens P2C66ML400A	Frame:	BL					
Rating:	400A 120/208 V 3Ph. 4W.							
No.	Brk.	Description	Load	Phase	Load	Description	Brk.	No.
1	20/2P	Upright Freezer	1,250	A	600	Upright Fridge	15/1P	2
3			1,250	B	600	Upright Fridge	15/1P	4
5	20/2P	Upright Freezer	1,250	C	600	Upright Fridge	15/1P	6
7			1,250	A	600	Upright Fridge	15/1P	8
9	20/2P	Upright Freezer	1,250	B	600	Upright Fridge	15/1P	10
11			1,250	C	600	Upright Fridge	15/1P	12
13	20/2P	Upright Freezer	1,250	A	600	Upright Fridge	15/1P	14
15			1,250	B	600	Upright Fridge	15/1P	16
17	20/2P	Upright Freezer	1,250	C	600	Upright Fridge	15/1P	18
19			1,250	A	600	Upright Fridge	15/1P	20
21	20/2P	Upright Freezer	1,250	B	600	Upright Fridge	15/1P	22
23			1,250	C	600	Upright Fridge	15/1P	24
25	20/2P	Upright Freezer	1,250	A	600	Upright Fridge	15/1P	26
27			1,250	B	600	Upright Fridge	15/1P	28
29	20/2P	Upright Freezer	1,250	C	600	Upright Fridge	15/1P	30
31			1,250	A	600	Upright Fridge	15/1P	32
33	20/2P	Upright Freezer	1,250	B	600	Upright Fridge	15/1P	34
35			1,250	C	600	Chest Freezer	15/1P	36
37	20/2P	Upright Freezer	1,250	A	600	Upright Fridge	15/1P	38
39			1,250	B	600	Upright Fridge	15/1P	40
41	20/2P	Upright Freezer	1,250	C	600	Upright Fridge	15/1P	42
43			1,250	A	600	Upright Fridge	15/1P	44
45	20/2P	Upright Freezer	1,250	B	400	Recept. Office Space	15/1P	46
47			1,250	C	400	Recept. Office Space	15/1P	48
49	15/1P	Lighting for GLP Laboratory and Office	1,440	A		Spare	15/1P	50
51	15/1P	Spare		B		Spare	15/1P	52
53	15/1P	Spare		C		Spare	15/1P	54
55	15/1P	Spare		A		Spare	15/1P	56
57				B			15/1P	58
59				C			15/1P	60
61				A			15/1P	62
63				B			15/1P	64
65				C			15/1P	66
Phase "A" Total kVA			16.24	Phase "C" Total kVA			14.60	
Phase "B" Total kVA			14.60	Total kVA				

Notes:
 * -- Indicates Breaker To Be Complete With Handle Locking Device.

ELECTRICAL NOTES:

- INDICATED BY THE \diamond SYMBOL ON THE DRAWINGS. (I.E. \diamond INDICATES NOTE 1)
- NOTE 1: SUPPLY AND INSTALL A 5-20R RECEPTACLE IN COMPLETE OVER FLOOR RACEWAY EQUAL TO LEGRAND CAT NO. OFRBC-8. TO SUPPORT CIRCUITING AS INDICATED ON THE ELECTRICAL DRAWINGS.
- NOTE 2: SUPPLY AND INSTALL A 6-20R RECEPTACLE IN COMPLETE OVER FLOOR RACEWAY EQUAL TO LEGRAND CAT NO. OFRBC-8. TO SUPPORT CIRCUITING AS INDICATED ON THE ELECTRICAL DRAWINGS.
- NOTE 3: REMOVE REDUNDANT CONDUIT TO ACCOMMODATE MOUNTING OF NEW PANEL.
- NOTE 4: PROVIDE AND INSTALL A NEW 3P-30A BREAKER AND A 3P-30A DISCONNECT SWITCH EQUIVALENT TO PASS & SEYMOUR #7813-P MOUNTED ADJACENT TO A/C UNIT. FEEDER TO BE 3#10+1#12B-21mm CONDUIT, FINAL CONNECTION TO USE LIQUID TIGHT FLEXIBLE CONDUIT. CIRCUIT AS INDICATED.
- NOTE 5: PROVIDE A 120V CIRCUIT FOR TRAP PRIMER CONNECTION, EXACT LOCATION TO BE COORDINATED WITH THE MECHANICAL CONTRACTOR.
- NOTE 6: PROVIDE A 120V CIRCUIT FOR VAV BOX CONNECTION, EXACT LOCATION TO BE COORDINATED WITH THE MECHANICAL CONTRACTOR.



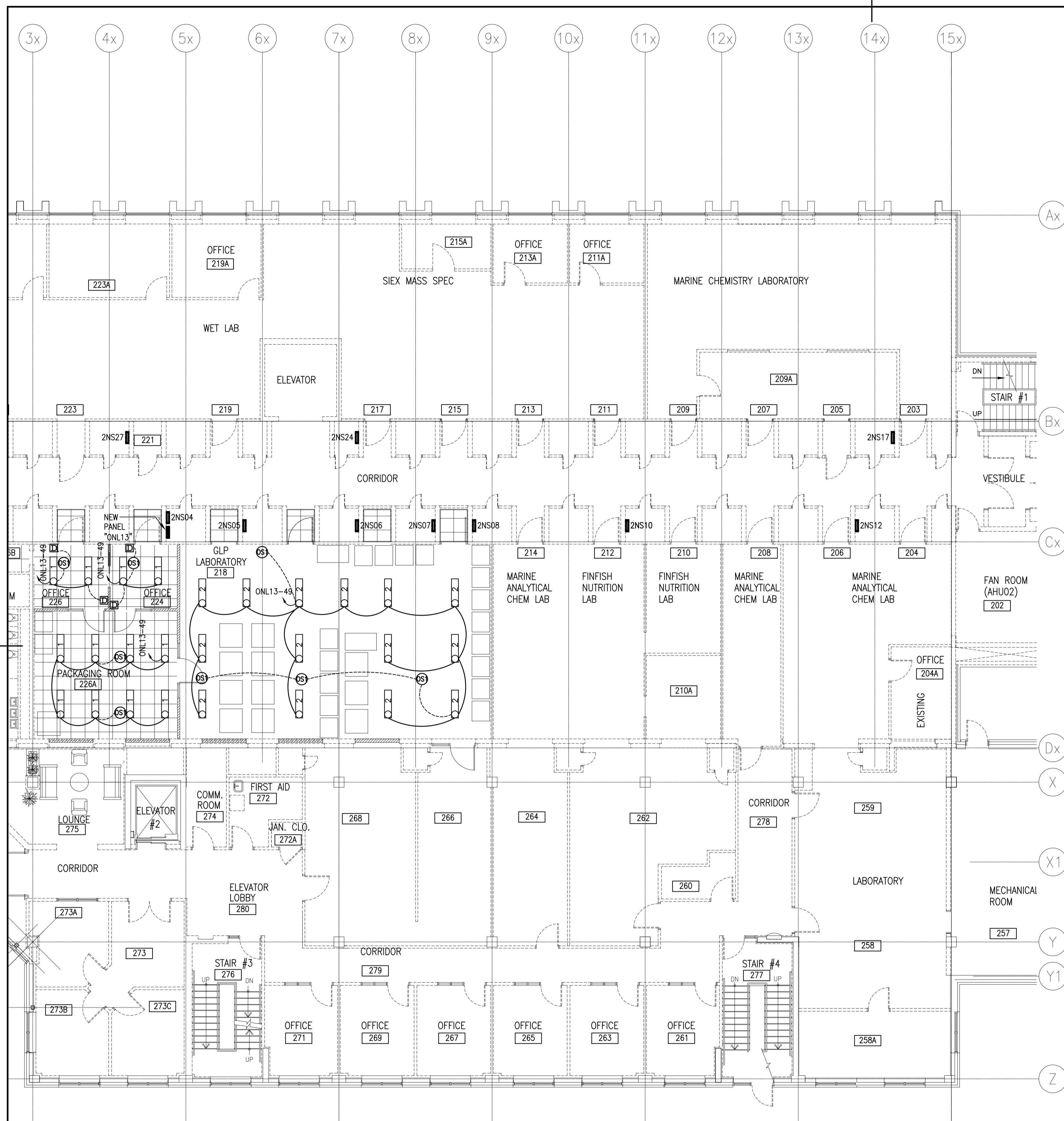
RISER - NEW ELECTRICAL DISTRIBUTION
 SCALE : N.T.S.

National Research Council Canada / Conseil national de recherches Canada
 Administrative Services and Property Management Branch / Division des services administratifs et gestion de l'immobilier
NRC - CNRC
onsa F.C. O'Neill Scriven & Assoc's Limited Consulting Engineers
 701 Spring Street, Suite 200, Halifax, NS B3H 2Z2
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 341 Torrens Street, Moncton, New Brunswick, E1A 5G1
 Tel: (506) 852-8000 Fax: (506) 852-8221
 Tel: (800) 383-5733 Fax: (800) 383-5733

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

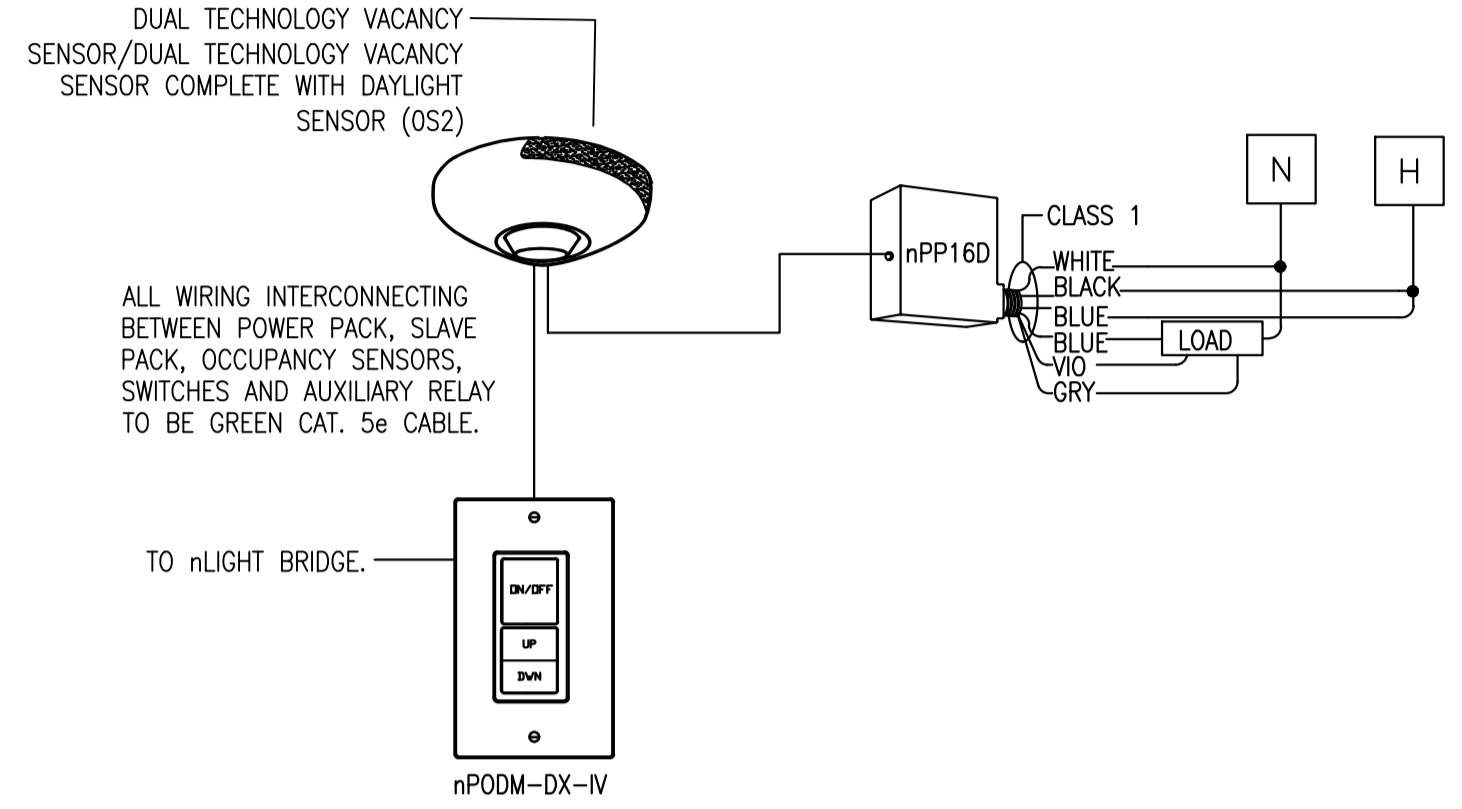
 3 ISSUED FOR TENDER 23/11/18
 2 ISSUED FOR 100% REVIEW 08/11/18
 1 ISSUED FOR REVIEW 22/10/18

project project
FREEZER RENOVATION
 1411 OXFORD STREET, HALIFAX N.S.
 drawing dessin
ELECTRICAL PLAN LEVEL 2 POWER AND COMMS
 Designed By B.DOUCET Conçu par
 Date 2018-11-23 (yyyy/mm/dd)
 Drawn By B.DOUCET Dessiné par
 Date 2018-11-23 (yyyy/mm/dd)
 Reviewed By R.G.ROCKETT Examiné par
 Date 2018-11-23 (yyyy/mm/dd)
 Approved By Approved par
 Date (yyyy/mm/dd)
 Tender Soumission
 Project Manager Administrateur de projets
 W.O. no. 5605 D.T. no.
 Drawing no. E-103 No. du dessin



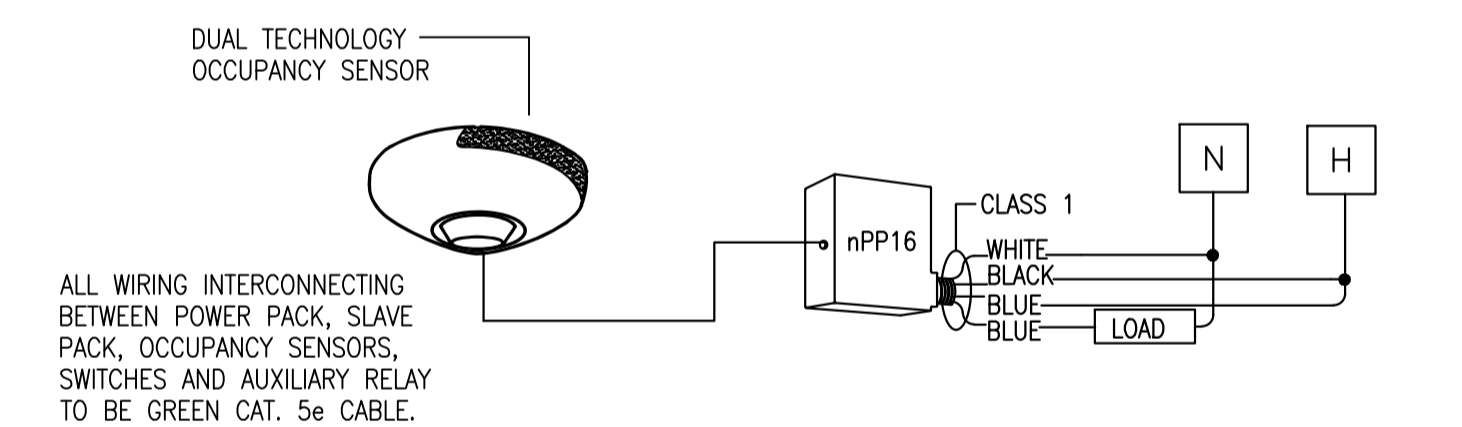
LEVEL 2 LIGHTING LAYOUT
SCALE : 1:100
0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

INITIAL SETTINGS:
 1. OCCUPANCY SENSOR AND LOW VOLTAGE SWITCH SET AND WIRED FOR MANUAL ON / AUTO OFF OPERATION.
 2. OCCUPANCY TIME DELAY SET TO SHUT LIGHTS OFF AFTER 10 MINUTES OF INACTIVITY.
 3. OCCUPANT CAN ADJUST LIGHT LEVEL USING THE RAISE / LOWER BUTTONS.
 4. IF THE OCCUPANT USES THE LOW VOLTAGE SWITCH TO SHUT THE LIGHTS OFF, THE LIGHTS WILL REMAIN OFF UNTIL THE OCCUPANCY SENSOR DOES NOT DETECT MOTION (EITHER PIR OR MICROPHONIC) FOR 10 MINUTES. AFTER 10 MINUTES, THE SYSTEM RETURNS TO ITS NORMAL MODE OF MANUAL ON / AUTO OFF.



LIGHTING CONTROLS – DIMMING AND OCCUPANCY
SCALE : N.T.S. **1 E104**

INITIAL SETTINGS:
 1. OCCUPANCY SENSOR AND LOW VOLTAGE SWITCH SET AND WIRED FOR AUTO ON / AUTO OFF OPERATION.
 2. OCCUPANCY TIME DELAY SET TO SHUT LIGHTS OFF AFTER 10 MINUTES OF INACTIVITY.



LIGHTING CONTROLS – SWITCH AND OCCUPANCY
SCALE : N.T.S. **2 E104**

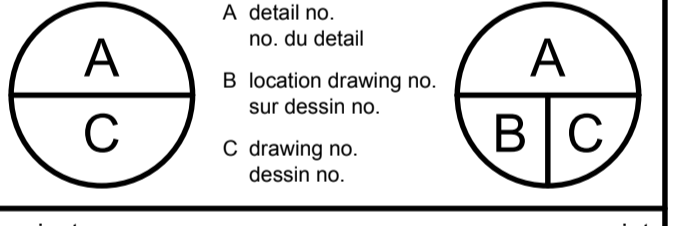
LIGHTING CONTROL SYSTEM NOTES

- PART NUMBERS SHOWN ARE FROM ACUITY BRANDS nLIGHT UNLESS OTHERWISE INDICATED. SYSTEMS FROM LEVITON, LUTRON, AND WATTSTOPPER ARE ACCEPTABLE PROVIDED THEY CAN COMPLY WITH THE DESIGN.
- CIRCUITING IS AS INDICATED ON FLOOR PLAN.
- REFER TO FLOOR PLAN FOR NUMBER OF SENSORS AND SWITCHES.
- LIGHTING CONTROL WIRING IS DIAGRAMMATIC ONLY TO SHOW INTENT OF THE LIGHTING CONTROL SYSTEM. FINAL WIRING CONFIGURATIONS ARE TO CONFORM WITH THE MANUFACTURER'S PUBLISHED DATA AND SITE SPECIFIC SHOP DRAWINGS, RISERS AND WIRING DIAGRAMS.



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

revisions	description	date
3	ISSUED FOR TENDER	23/11/18
2	ISSUED FOR 100% REVIEW	08/11/18
1	ISSUED FOR REVIEW	22/10/18



FREEZER RENOVATION

1411 OXFORD STREET, HALIFAX N.S.
 drawing / dessin

ELECTRICAL PLAN LEVEL 2 LIGHTING

Designed By	B.DOUCET	Conçu par	
Date	2018-11-23	(yyyy/mm/dd)	
Drawn By	B.DOUCET	Dessiné par	
Date	2018-11-23	(yyyy/mm/dd)	
Reviewed By	R.G.ROCKETT	Examiné par	
Date	2018-11-23	(yyyy/mm/dd)	
Approved By		Approuvé par	
Date		(yyyy/mm/dd)	
Tender		Soumission	
Project Manager		Administrateur de projets	
W.O. no.		D.T. no.	
	5605		
Drawing no.		No. du dessin	
	E-104		