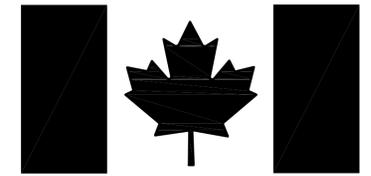


FISHERIES AND OCEANS CANADA / PECHES ET OCEANS CANADA



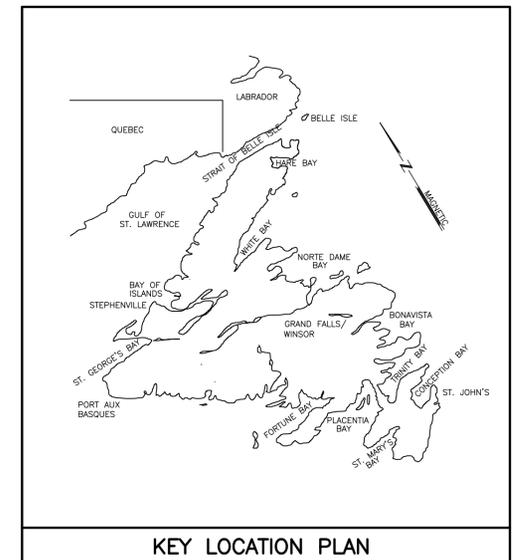
Canada

PROJECT TITLE P-18 LAB RENOVATION

PROJECT NO : F6879-189222

ISSUED FOR TENDER

DATE: NOV 14.18



KEY LOCATION PLAN

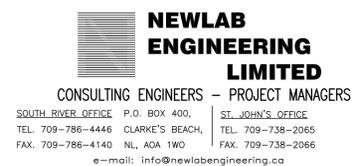
CLIENT/OWNER:

Fisheries and Oceans Canada
Pêches et Océans Canada
Real Property Services Immobiliers

PRIME CONSULTANTS:

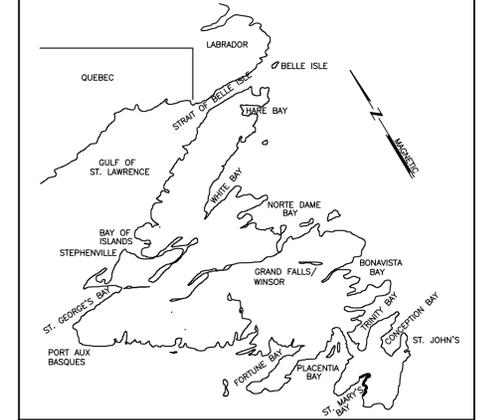


SUB CONSULTANTS:



DRAWING LIST:

No.	TITLE
01N1009A087A01	PARTIAL PLAN AND CABINET ELEVATIONS
01N1009A087A02	PARTIAL PLAN AND CABINET ELEVATIONS
01N1009A087H01	PART FLOOR PLANS MECHANICAL LAYOUTS
01N1009A087H02	MECHANICAL DETAILS
01N1009A087E01	PART FLOOR PLANS - ELECTRICAL LAYOUTS
01N1009A087E02	ELECTRICAL SCHEDULES AND DETAILS
01N1009A087E03	PART FLOOR PLANS - ELECTRICAL DEMOLITION



KEY LOCATION PLAN

PRIME CONSULTANT
COREC ENGINEERING INC.
 MECHANICAL & ELECTRICAL CONSULTANT
 57 PIPPY PLACE ST. JOHN'S, NL CANADA A1B 4B8
 TEL: 709-732-8613 FAX: 709-732-6919

SUB CONSULTANT
NEWLAB ENGINEERING LIMITED
 CONSULTING ENGINEERS - PROJECT MANAGERS
 SOUTH RIVER OFFICE P.O. BOX 400, ST. JOHN'S OFFICE
 TEL. 709-786-4446 CLARKE'S BEACH, TEL. 709-738-2065
 FAX. 709-786-4140 NL, AOA 1W0 FAX. 709-738-2066
 e-mail: info@newlabengineering.ca

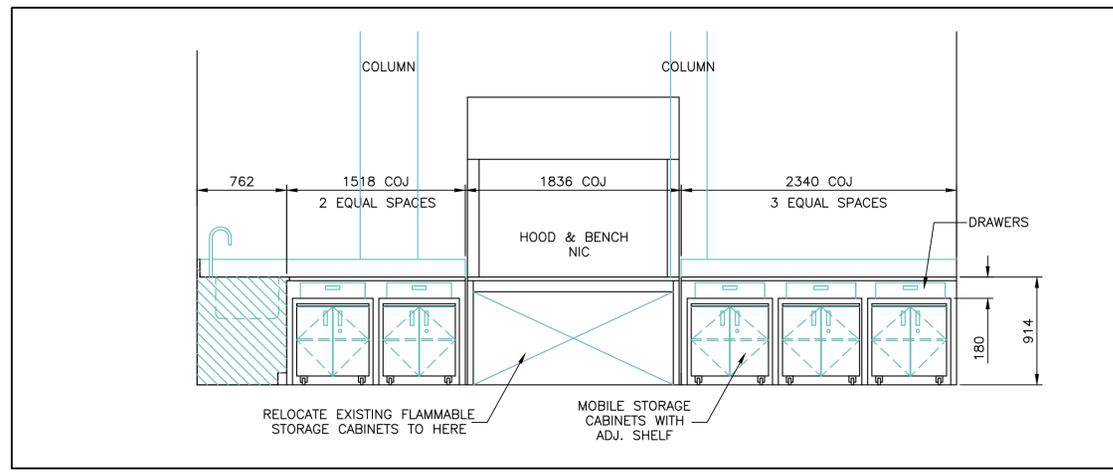
PROVINCE OF NEWFOUNDLAND PERMIT HOLDER CLASS "A"
 This Permit Allows
 NEWLAB ENGINEERING LIMITED
 91366
 To practice Professional Engineering in Newfoundland and Labrador.
 Permit No. as issued by APEON 02011 which is valid for the year 2018.

RO	ISSUED FOR TENDER	NOV/14 2018
revisions		date
project		projct

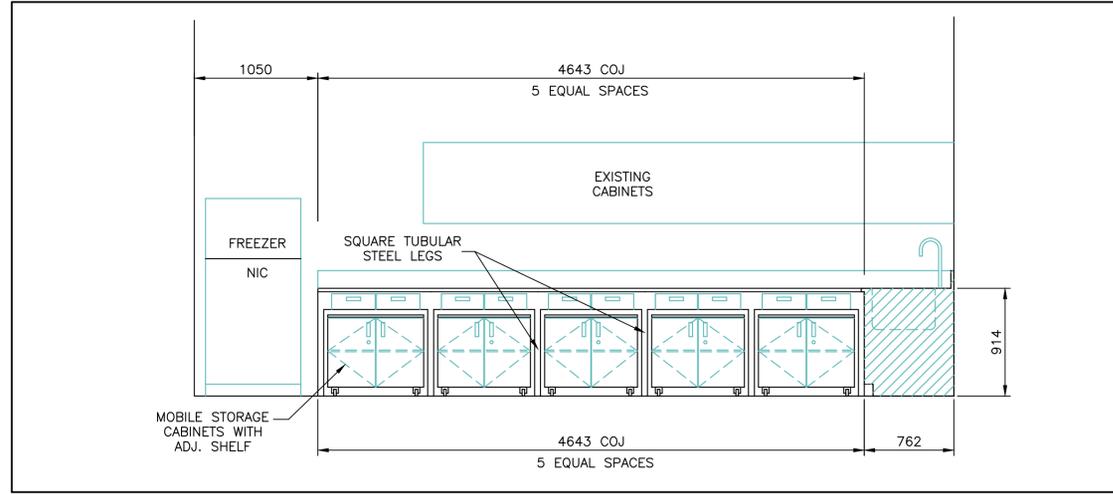
P-18 LAB RENOVATION

PARTIAL PLAN AND CABINET ELEVATIONS

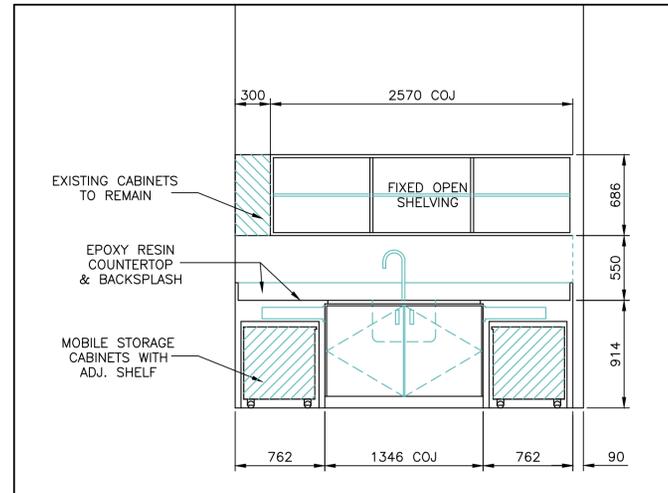
designed	R.B.	conçu
date	OCTOBER 2018	
drawn	S.L.	dessiné
date	OCTOBER 2018	
approved	R.B.	approuvé
date	NOVEMBER 2018	
Tender		Soumission
PWGSC Project Manager		Administrateur de projets TPSGC
project number		no. du projet
	F6879-189222	
drawing no.		no. du dessin
	01N1009A087A01	



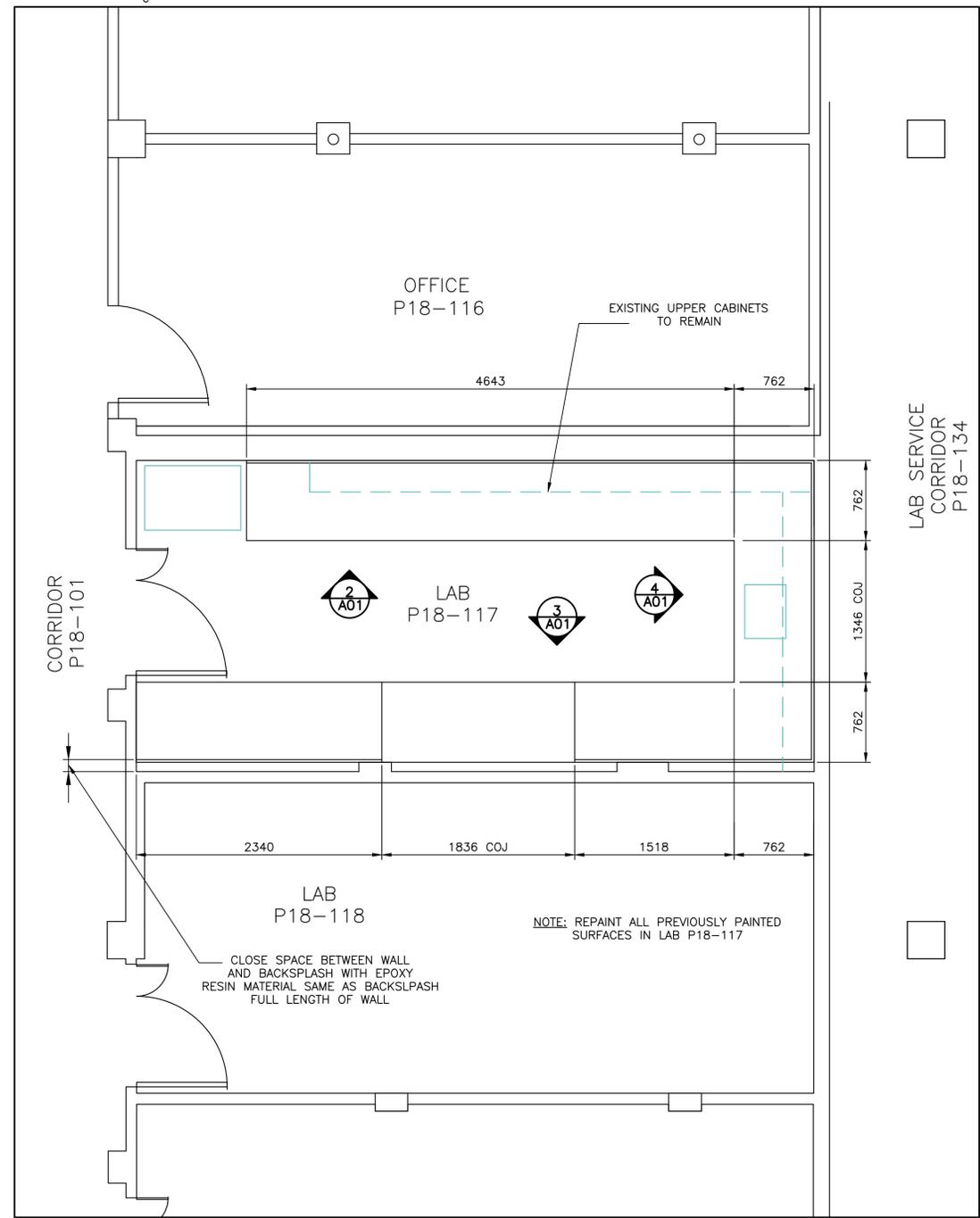
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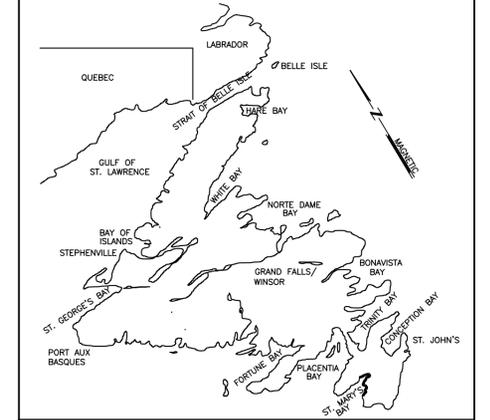
CABINET ELEVATION
 SCALE = 1:30



CABINET ELEVATION
 SCALE = 1:30



PARTIAL FLOOR PLAN - P18
 SCALE = 1:30



PRIME CONSULTANT
COREC ENGINEERING INC.
 MECHANICAL & ELECTRICAL CONSULTANT
 57 PIPPY PLACE ST. JOHN'S, NL CANADA A1B 4R8 TEL: 709-732-8613 FAX: 709-732-6919

SUB CONSULTANT
NEWLAB ENGINEERING LIMITED
 CONSULTING ENGINEERS - PROJECT MANAGERS
 SOUTH RIVER OFFICE P.O. BOX 400, ST. JOHN'S OFFICE
 TEL. 709-786-4446 CLARKE'S BEACH, TEL. 709-738-2065
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 e-mail: info@newlabengineering.ca

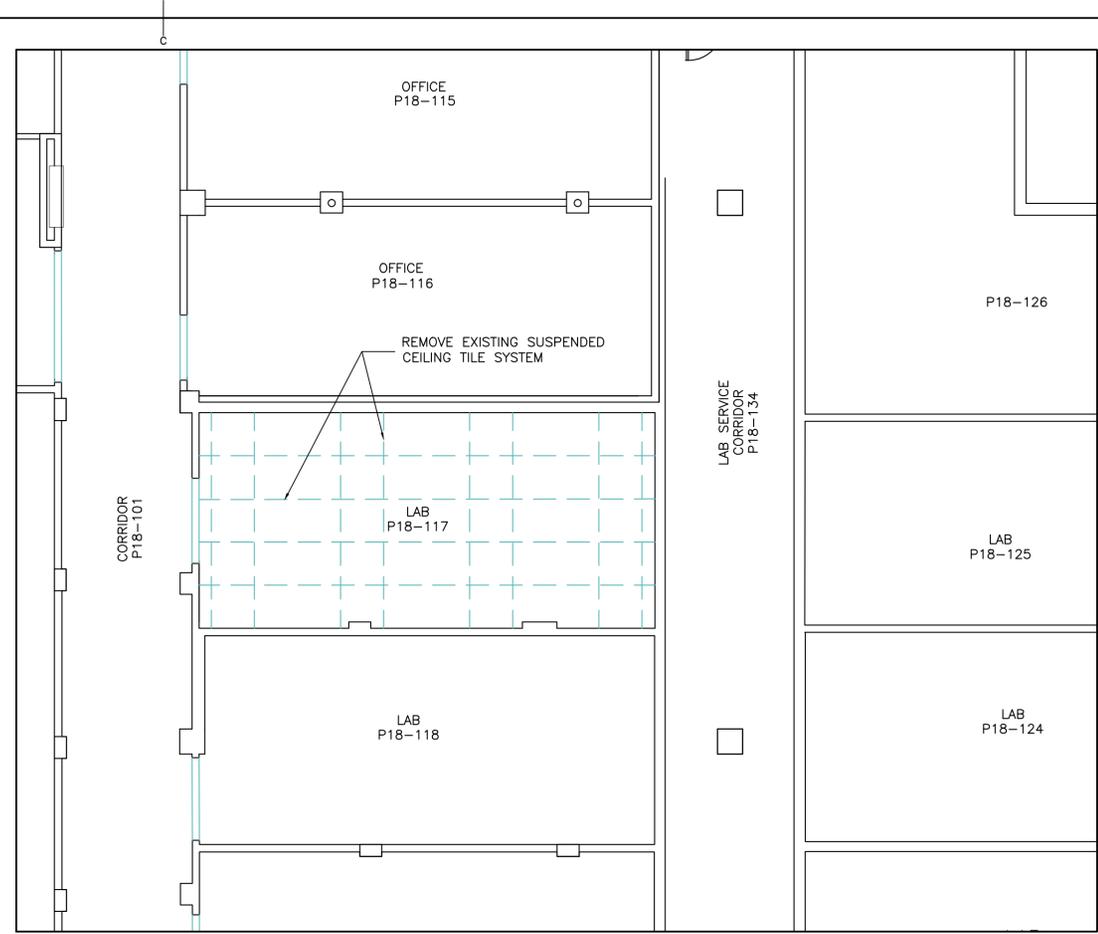
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revisions		date
project		projet

P-18 LAB RENOVATION

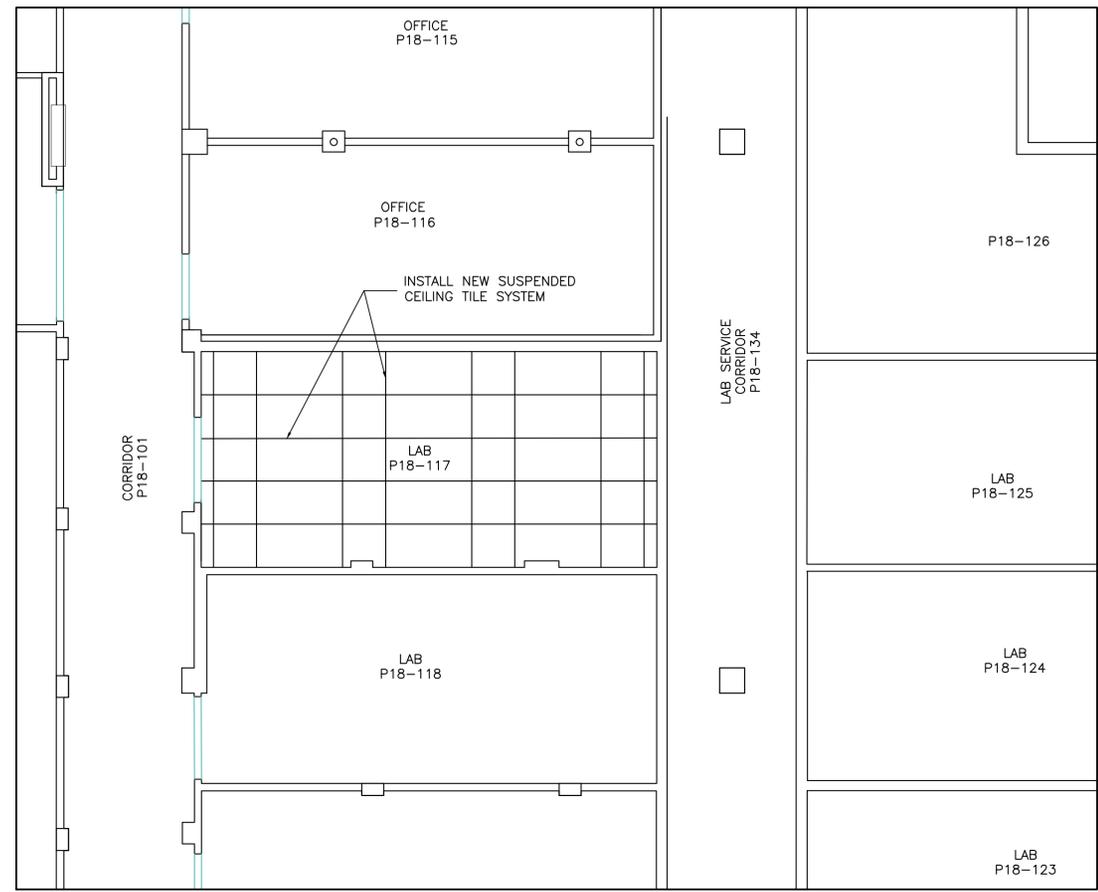
PARTIAL PLAN AND CABINET ELEVATIONS

designed	R.B.	conçu
date	OCTOBER 2018	
drawn	S.L.	dessiné
date	OCTOBER 2018	
approved	R.B.	approuvé
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Tender		Soumission
PWGSC Project Manager		Administrateur de projets TPSGC
project number		no. du projet
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drawing no.		no. du dessin
	01N1009A087A02	



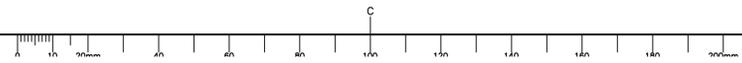
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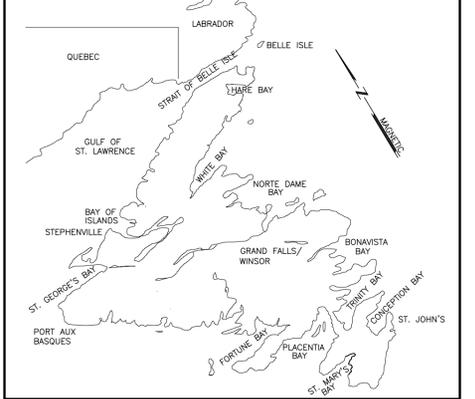
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A02



PARTIAL REFLECTED CEILING PLAN - NEW CONDITIONS
 SCALE = 1:50

2
A02



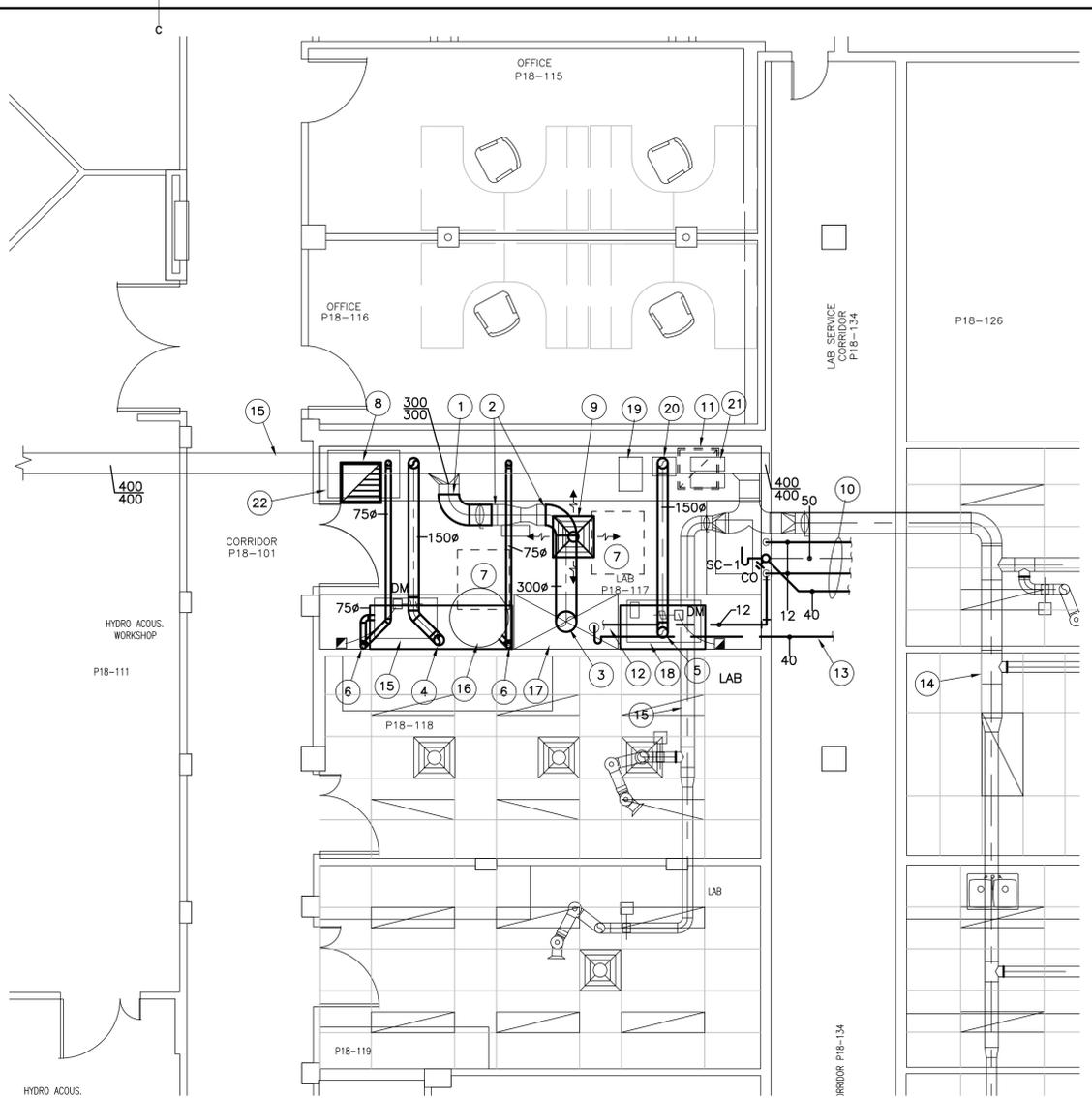
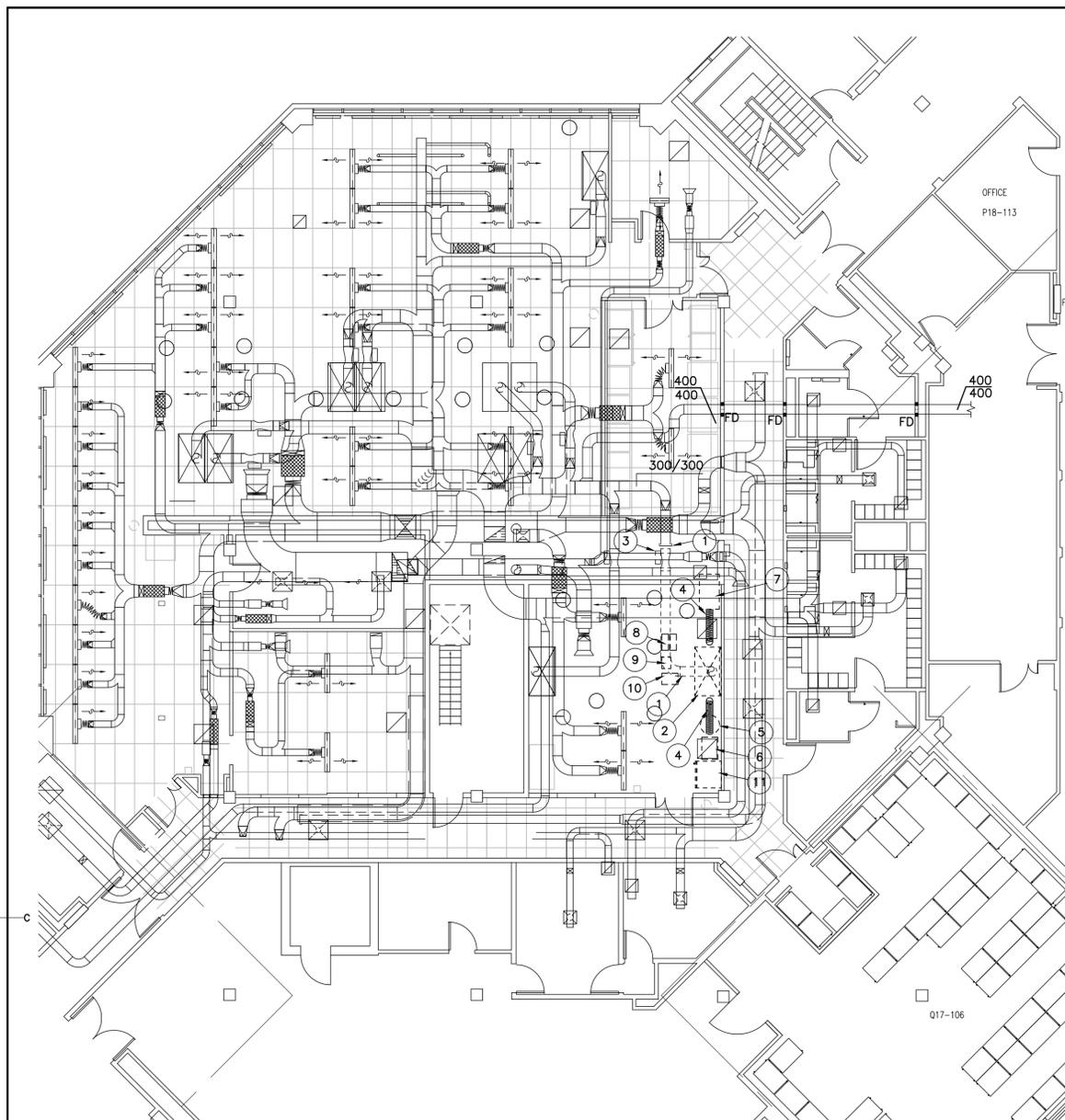


KEY LOCATION PLAN

PRIME CONSULTANT
COREC ENGINEERING INC.
 MECHANICAL & ELECTRICAL CONSULTANT
 57 PIPPY PLACE ST. JOHN'S, NL CANADA A1B 4H8
 TEL: 709-722-8813 FAX: 709-722-6910

SUB CONSULTANT
NEWLAB ENGINEERING LIMITED
 CONSULTING ENGINEERS - PROJECT MANAGERS
 SOUTH RIVER OFFICE P.O. BOX 400, ST. JOHN'S OFFICE
 TEL: 709-786-4446 CLARKE'S BEACH, TEL: 709-738-2065
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PROVINCE OF NEWFOUNDLAND
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 MIRC: 03823
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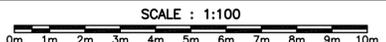
- DRAWING NOTES:**
- EXISTING DUCTWORK TO BE REMOVED AND CAPPED AS INDICATED. REMOVE ALL DUCTWORK, FITTINGS, HANGAR SUPPORTS, ETC.
 - EXISTING FUME HOOD TO BE REMOVED AND RELOCATED. THIS CONTRACTOR TO COORDINATE WITH OWNER & RELOCATE TO NEW AREA. FOR NEW LOCATION SEE NEW LAYOUT THIS DRAWING. ALL SERVICES SERVING HOOD SHALL BE CAPPED IN CEILING SPACE AS TO CONCEAL. DOMESTIC WATER, SANITARY, NITROGEN, CONTROLS, ETC.
 - EXISTING VENTURI VALVE TO BE REMOVED AND RELOCATED. FOR NEW LOCATION SEE NEW LAYOUT THIS DRAWING.
 - EXISTING 75mmØ FLEXIBLE HOSE TO BE RELOCATED WITH EQUIPMENT. ENSURE MAIN DUCTWORK IS PATCHED.
 - TISSUE PROCESSOR TO BE RELOCATED. THIS CONTRACTOR TO COORDINATE WITH OWNER AND RELOCATE TO NEW AREA.
 - EMBEDDING STATION TO BE RELOCATED. THIS CONTRACTOR TO COORDINATE WITH OWNER AND RELOCATE TO NEW AREA.
 - AUTO-STRAINER TO BE RELOCATED. THIS CONTRACTOR TO COORDINATE WITH OWNER AND RELOCATE TO NEW AREA.
 - SLIDE WARMERS TO BE RELOCATED. THIS CONTRACTOR TO COORDINATE WITH OWNER AND RELOCATE TO NEW AREA.
 - WATER BATH TO BE RELOCATED. THIS CONTRACTOR TO COORDINATE WITH OWNER AND RELOCATE TO NEW AREA.
 - MICROTOME TO BE RELOCATED. THIS CONTRACTOR TO COORDINATE WITH OWNER AND RELOCATE TO NEW AREA.
 - FRIDGE TO BE RELOCATED. THIS CONTRACTOR TO COORDINATE WITH OWNER AND RELOCATE TO NEW AREA.

- GENERAL NOTES:**
- WORK SCHEDULE SHALL BE APPROVED BY OWNER. AFTER HOURS WORK WILL BE REQUIRED AS NOT TO INTERRUPT THE NORMAL OPERATION OF THE BUILDING.
 - CONTRACTOR SHALL BE RESPONSIBLE TO COVER ALL EXISTING EQUIPMENT DURING WORK AND CLEAN UP AT THE END OF EACH WORK DAY. WORK SPACE SHALL BE CLEANED TO "LIKE FOUND" WORK CONDITIONS.
 - ALL DUCTWORK SHALL BE 316 STAINLESS STEEL ALL WELDED DUCT. SPIRAL SHALL BE 316 ALL WELDED STAINLESS STEEL AS WELL.
 - PRESSURE TEST ALL NEW DUCTWORK INSTALLED.
 - EXISTING LAB VENTILATION SHALL BE UPDATED UTILIZING THE FOLLOWING COMPANIES. BALANCING SHALL BE COMPLETED BY CON-TEST AND EXISTING LAB CONTROL SOFTWARE SHALL BE UPDATED BY REGULVAR. THIS CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT BOTH CONTRACTORS & ALLOW FOR 1 SITE VISIT FROM EACH CONTRACTOR (VISIT FROM EACH CONTRACTOR SHALL BE AT THE SAME TIME) TO COMPLETE THE REQUIRED SOFTWARE UPDATE AND BALANCING.
 - THIS CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL NECESSARY CUTTING AND PATCHING TO INSTALL DUCTWORK AS SHOWN. ANY CUTTING AND PATCHING BELOW CEILING SHALL BE PATCHED AND PAINTED TO MATCH EXISTING. ALL DEMISING WALLS REQUIRED TO BE CUT SHALL BE SEALED FOLLOWING INSTALLATION OF SERVICES.
 - PROVIDE ANY FITTINGS AND ALL OFFSETS REQUIRED TO AVOID EXISTING SERVICES TO ROUTE DUCTWORK IN GENERAL LOCATION SHOWN ON THE PLANS.
 - EXISTING BUILDING CONTROLS IS ALTERNON. EXISTING BUILDING CONTROL SHALL BE UPDATED.
 - CONTRACTOR SHALL TAKE CARE & RELOCATE ALL EQUIPMENT IDENTIFIED FROM ROOM ABOVE IN P16 TO P18-117. CARE SHALL BE TAKEN DURING RELOCATION & CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE NO EQUIPMENT IS DAMAGED.

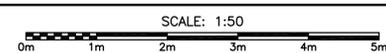
- DRAWING NOTES CONT:**
- NEW SANITARY DRAIN, PLUMBING VENT, HOT AND COLD WATER PIPING, CONNECT TO EXISTING PIPING IN THIS AREA.
 - EXISTING RETURN GRILLE AND DUCTWORK TO BE REMOVED. EXISTING RETURN DUCT TO BE CAPPED & RESEALED.
 - NEW 12mmØ C. WATER PIPING, MAKE CONNECTION AS REQUIRED TO RELOCATE FUME HOOD CUP SINK.
 - 40mmØ SANITARY DRAIN FROM HOOD CUP SINK, CONNECT TO EXISTING SANITARY PIPING IN THIS AREA.
 - EXISTING DUCTWORK TO REMAIN. (TYPICAL)
 - NEW LOCATION FOR EMBEDDING STATION. THIS CONTRACTOR TO RELOCATE EQUIPMENT TO NEW LOCATION.
 - NEW LOCATION FOR TISSUE PROCESSOR. THIS CONTRACTOR TO RELOCATE EQUIPMENT TO NEW LOCATION.
 - NEW LOCATION FOR EXISTING FUME HOOD. THIS CONTRACTOR TO RELOCATE EQUIPMENT TO NEW LOCATION.
 - NEW LOCATION FOR AUTO-STRAINER. THIS CONTRACTOR TO RELOCATE EQUIPMENT TO NEW LOCATION.
 - NEW LOCATION FOR MICROTOME. THIS CONTRACTOR TO RELOCATE EQUIPMENT TO NEW LOCATION.
 - NEW LOCATION FOR WATER BATH. THIS CONTRACTOR TO RELOCATE EQUIPMENT TO NEW LOCATION.
 - NEW LOCATION FOR SLIDE WARMERS. THIS CONTRACTOR TO RELOCATE EQUIPMENT TO NEW LOCATION.
 - NEW LOCATION FOR REFRIGERATOR. THIS CONTRACTOR TO RELOCATE EQUIPMENT TO NEW LOCATION.

- DRAWING NOTES:**
- CONNECT NEW DUCTWORK TO EXISTING CAPPED DUCTWORK IN THIS APPROXIMATE LOCATION. EXACT LOCATION TO BE DETERMINED ON SITE.
 - EXISTING RELOCATED VENTURI VALVE TRANSITION NEW DUCT TO MAKE CONNECTION TO VALVE. RELOCATED VALVE & HOOD SHALL BE TIED INTO EXISTING CONTROL SYSTEM. REFER TO CONTROL SCHEMATIC. PROVIDE ANY & ALL CONTROLS AS REQUIRED TO TIE INTO EXISTING ALTERNON CONTROL SYSTEM.
 - EXISTING EXHAUST HOOD TRANSITION NEW DUCT TO MAKE CONNECTION TO HOOD.
 - CONNECT NEW 150mmØ EXHAUST DUCT FROM NEW APPROX. 2085mm VENT HOOD (H-1) TO EXISTING 400/400 EXHAUST DUCT C/W MOTORIZED DAMPER - SEE DETAIL
 - CONNECT NEW 150mmØ EXHAUST DUCT FROM NEW APPROX. 1250mm VENT HOOD (H-2) TO EXISTING 400/400 EXHAUST DUCT C/W MOTORIZED DAMPER - SEE DETAIL
 - CONNECT NEW 75mmØ EXHAUST DUCT FROM LAB EQUIPMENT TO EXISTING 400/400 EXHAUST DUCT. CONFIRM LOCATION OF CONNECTION ON SITE. PROVIDE STAINLESS STEEL TRANSITIONS AS REQUIRED. CONNECT TO RELOCATED FLEX SERVING EQUIPMENT.
 - ABANDONED A/C UNIT & DUCTWORK IN CEILING SPACE AT THIS APPROXIMATE LOCATION TO BE REMOVED AND DISPOSED OF.
 - RETURN GRILLE TO BE REMOVED & REINSTALLED IN NEW CEILING. PROVIDE EXTRA SUPPORTS FOR GRILLE/DUCT ABOVE CEILING.
 - SUPPLY GRILLE TO BE REMOVED, CLEANED & REINSTALLED IN NEW CEILING. CONTRACTOR TO MEASURE THE AIRFLOW BEFORE REMOVING AND RE-BALANCE AIRFLOW TO MEASURED READING AFTER BEING REINSTALLED.

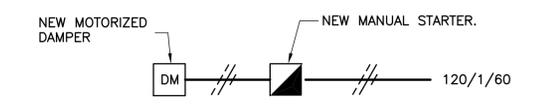
PART FLOOR PLAN - MECHANICAL LAYOUT



PART FLOOR PLAN - MECHANICAL LAYOUT

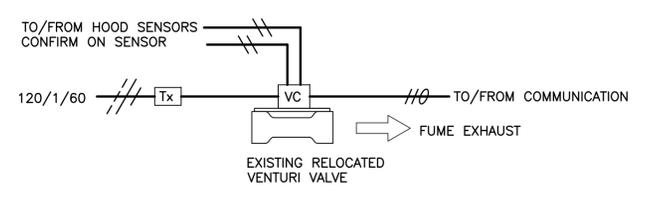


RD	ISSUED FOR TENDER	NOV.14 2018
revisions		date
project		projct
P-18 LAB RENOVATION		
drawing		dessin
PART FLOOR PLANS MECHANICAL LAYOUTS		
designed	H.F.	conçu
date	AUGUST 2018	
drawn	S.D.	dessiné
date	AUGUST 2018	
approved	H.F.	approuvé
date	AUGUST 2018	
Tender		Soumission
PWGSC Project Manager		Administrateur de projets TPSGC
project number		no. du projet
	F6879-189222	
drawing no.		no. du dessin
	01N1009A087H01	



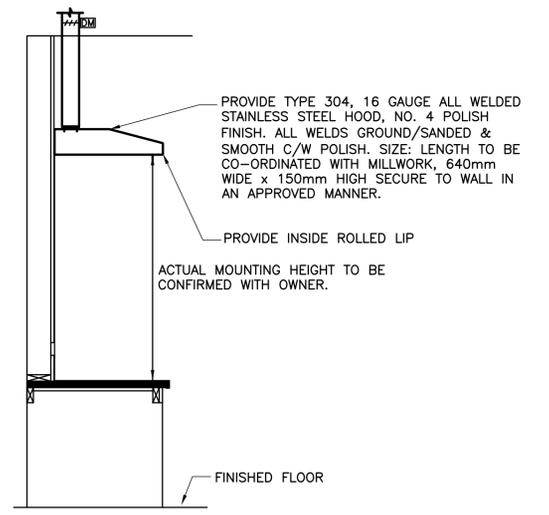
CONTROL SCHEMATIC

SCALE: N.T.S.



FUME HOOD CONTROL SCHEMATICS

SCALE: N.T.S.



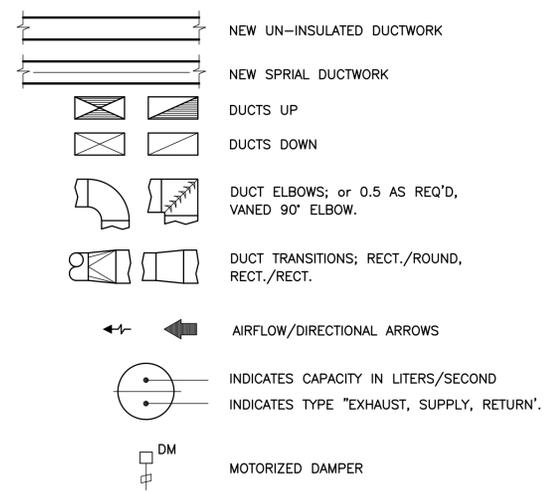
TYP. FAB HOOD DETAIL

SCALE: N.T.S.

3
H2

MECHANICAL LEGEND

VENTILATION

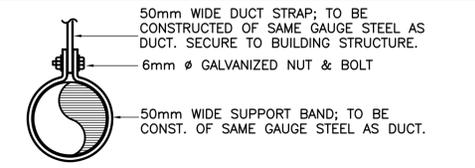


CONTROLS

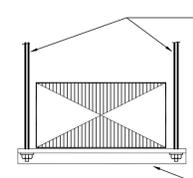
- Tx 120/24 CONTROLS TRANSFORMER, SIZED TO SUIT LOAD.
 - DM NEW 2-POSITION MOTORIZED DAMPER C/W STEEL DAMPER TO SUIT DUCT.
 - NEW MANUAL STARTER SHALL BE COMPLETE WITH ON/OFF & PILOT LIGHT.
- NOTES:**
- EXISTING CONTROLS ALTERNATE. NEW CONTROLS SHALL BE ALTERNATE & SHALL TIE INTO EXISTING.
 - ALL WIRING 50 V AND UNDER BY MECHANICAL CONTRACTOR.

FUME HOOD TAG NO.	TYPE	WIDTH (mm)	EXHAUST DUCT SIZE (mm)	AT HOOD EXHAUST OUTLET			SERVICES			STORAGE * BELOW	DRAIN REQUIRED (CUP SINK)	AUDIBLE AIRFLOW ALARM
				MAX. I/s	MIN. I/s	S.P.(Pa)	DCW	C/A	N ₂			
EXISTING F-8	VAV	1500	300	450	125	62	Y	Y	Y	FLAMMABLE	Y	Y

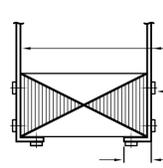
* COORDINATE CABINET SIZES AND TYPES WITH ARCHITECTURAL DRAWINGS.



ROUND DUCT



RECTANGLE DUCT



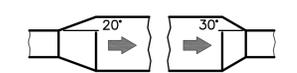
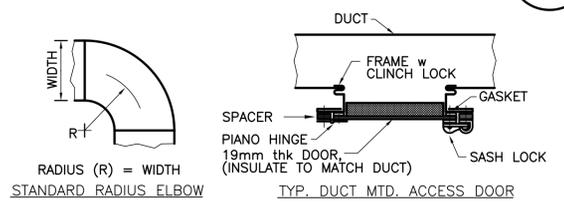
RECTANGLE DUCT (UP TO 300mm)

NOTE:
ALL HANGER RODS TO BE SECURELY FASTENED TO BLDG. STRUCTURE.

TYP. DUCT SUPPORT DETAILS

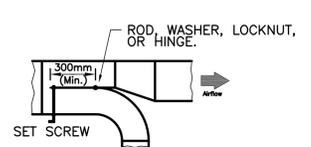
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1
H2

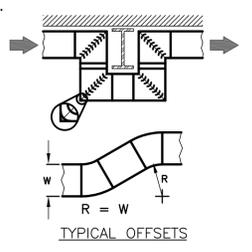


NOTES:
20 DEG. Max. ON DIVERGING AIRFLOW,
30 DEG. Max. ON CONVERGING AIRFLOW.

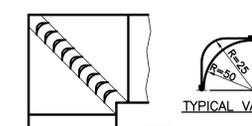
TYPICAL TRANSITIONS



TYPICAL SPLITTER DAMPER

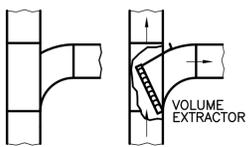


TYPICAL OFFSETS



NOTES:
VANE SPACING,
30mm (SMALL ELBOW)
60mm (LARGE ELBOW)

TYPICAL VANED ELBOWS



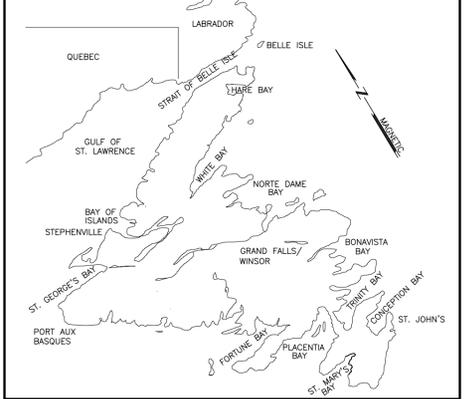
TYPICAL 'TEE' CONNECTIONS

NOTES:
1. ALL DUCTWORK CONSTRUCTION SHALL CONFORM TO SMACNA LOW AND/OR HIGH VELOCITY DUCT STANDARDS AS REQUIRED.
2. NOT ALL CONDITIONS SHOWN ABOVE MAY APPLY TO THIS JOB. COORDINATE ON-SITE.

TYP. DUCT CONSTRUCTION STANDARDS

SCALE: N.T.S.

2
H2



KEY LOCATION PLAN

PRIME CONSULTANT
COREC ENGINEERING INC.
MECHANICAL & ELECTRICAL CONSULTANT
57 PIPPY PLACE ST. JOHN'S, NL CANADA A1B 4H8
TEL: (709) 722-8813 FAX: (709) 722-0910

SUB CONSULTANT
NEWLAB ENGINEERING LIMITED
CONSULTING ENGINEERS - PROJECT MANAGERS
SOUTH RIVER OFFICE P.O. BOX 400, ST. JOHN'S OFFICE
TEL. 709-786-4446 CLARKE'S BEACH, TEL. 709-738-2065
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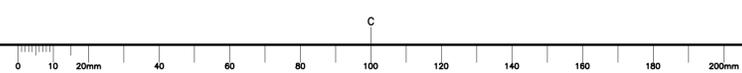
PROVINCE OF NEWFOUNDLAND
pegli PERMIT HOLDER This Permit Allows
CORE ENGINEERING INC. MIRC: 03823
To practice Professional Engineering in Newfoundland and Labrador, Permit No. as issued by PEGNL D0209 which is valid for the year 2018.
REGISTERED PROFESSIONAL ENGINEER
HAROLD E. FOWLER
SIGNATURE: Harold Fowler
DATE: Nov 14/18
PROVINCE OF NEWFOUNDLAND

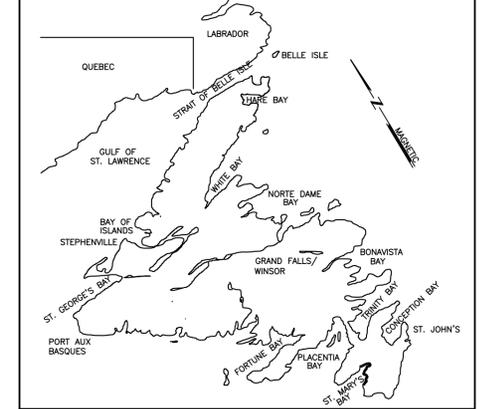
RO	ISSUED FOR TENDER	NOV.14 2018
revisions		date
project		projct

P-18 LAB RENOVATION

MECHANICAL DETAILS

designed	H.F.	conçu
date	AUGUST 2018	
drawn	S.D.	dessiné
date	AUGUST 2018	
approved	H.F.	approuvé
date	AUGUST 2018	
Tender		Soumission
PWGS&C Project Manager		Administrateur de projets TPSGC
project number	F6879-189222	no. du projet
drawing no.	01N1009A087H02	no. du dessin





KEY LOCATION PLAN

PRIME CONSULTANT CORE PROJECT #18-2901
COREC ENGINEERING INC.
 MECHANICAL & ELECTRICAL CONSULTANT
 57 PIPPY PLACE ST. JOHN'S, NL CANADA A1B 4E8 TEL: (709) 722-8813 FAX: (709) 722-0910

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 SOUTH RIVER OFFICE P.O. BOX 400, ST. JOHN'S OFFICE
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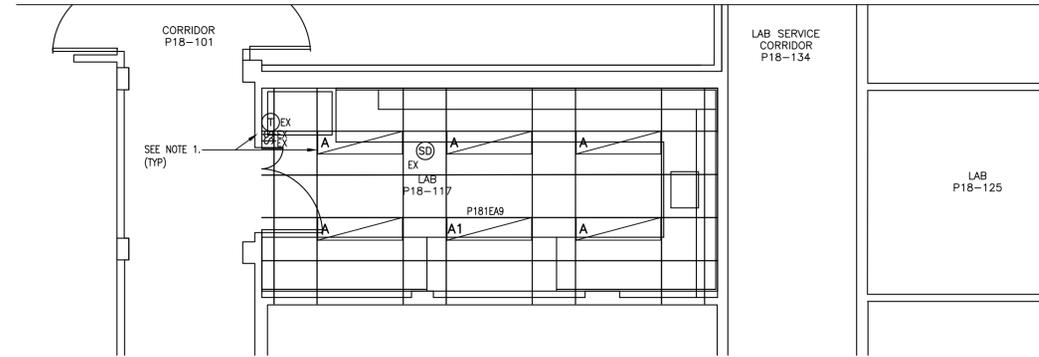
PROVINCE OF NEWFOUNDLAND PERMIT HOLDER
pegnl
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 MIRC: 04696
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revisions		date
project		projct

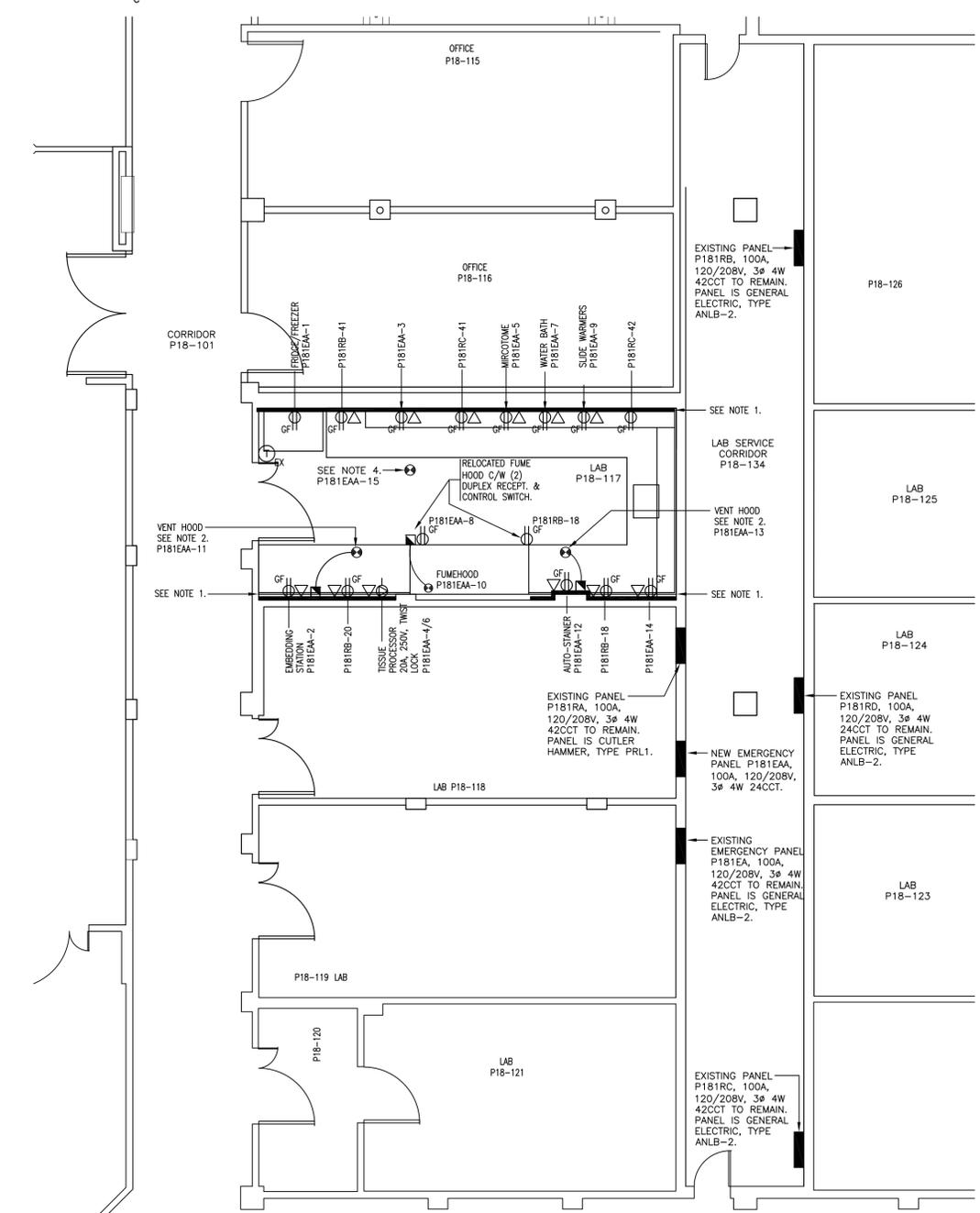
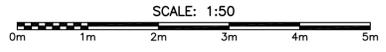
P18 LAB RENOVATION

drawing		dessin
designed	G.T.	conçu
date	AUG 2018	
drawn	B.H.	dessiné
date	AUG 2018	
approved	G.T.	approuvé
date	NOV 2018	
Tender		Soumission
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PWGSC Project Manager		Administrateur de projets TPSGC
project number		no. du projet
	F6879-189222	
drawing no.		no. du dessin
	01N1009A087E01	



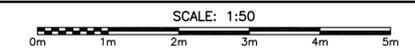
- LEGEND**
- EXISTING FLUORESCENT LIGHTING FIXTURE.
 - TYPE 'A' LIGHT FIXTURE TO BE DAY-BRITE #1TG32835-4-FS-02F-347 LED, 3200 LUMENS, 347V. CONFIRM VOLTAGE PRIOR TO ORDERING FIXTURES.
 - EMERGENCY LIGHTING, TYPE 'A1' LIGHT FIXTURE TO BE DAY-BRITE #1TG32835-4-FS-02F-UNV LED, 3200 LUMENS, 120V. CONFIRM VOLTAGE PRIOR TO ORDERING FIXTURES.
 - 15A, 120V TOGGLE SWITCH
- NOTES**
- CONNECT NEW LIGHTING FIXTURES TO EXISTING LIGHTING BRANCH CIRCUITS AND CONTROLS UNLESS OTHERWISE NOTED. REROUTE/EXTEND WIRING AND CONDUIT AS REQUIRED.
- SUBSCRIPTS**
- EX - EXISTING TO REMAIN.
 ER - EXISTING TO BE REMOVED.
 DM - DAMPER MOTOR ELECTRICAL CONNCTION

PART FLOOR PLAN - REVISED CEILING LAYOUT



- LEGEND**
- MANUAL STARTER.
 - ELECTRICAL CONNECTION TO EQUIPMENT.
 - DUPLEX RECEPTACLE, GF DENOTE GROUND FAULT RECEPTACLE
 - DATA OUTLET RUN 21mm CONDUIT TO ACCESSIBLE CEILING SPACE
 - SMOKE DETECTOR
 - THERMOSTAT
 - 15A, 120V TOGGLE SWITCH
 - SPECIAL PURPOSE OUTLET
 - CLOCK
- NOTES**
- WIREMOLD TO BE LEGRAND 4000 SERIES C/W ALL DIVIDERS, COVERS, FACEPLATES, END PLATES, FITTINGS AND OUTLETS TO SUIT LAYOUT AS INDICATED OR APPROVED EQUAL WIREMOLD MOUNTED HEIGHT TO BE COORDINATE ON SITE WITH COUNTER HEIGHT, EQUIPMENT & OWNER REPRESENTATIVE PRIOR TO ROUGH-IN. REFER TO DETAIL 1, DRAWING 01N1009A090E02.
 - VENTILATION HOOD C/W ILLUMINATED START/STOP SWITCH.
 - THE BUILDING REQUIRES 4 HOUR FIRE WATCH AFTER HOT WORK AND ALL HOT WORK MUST HAVE A PERMIT FROM BUILDING OWNER PRIOR TO STARTING.
 - PROVIDE 120V CONNECTION TO RELOCATE VENTURI VALVE.
- GENERAL NOTES**
- A. ALL RECEPTACLES ON EMERGENCY POWER TO BE RED IN COLOR.
- SUBSCRIPTS**
- EX - EXISTING TO REMAIN.
 ER - EXISTING TO BE REMOVED.
 DM - DAMPER MOTOR ELECTRICAL CONNCTION
 GF - DENOTES GROUND FAULT

PART FLOOR PLAN - REVISED ELECTRICAL LAYOUT



EXISTING PANEL 'P181EA'									
PANEL SCHEDULE									
TYPE CIRCUIT BREAKER TYPE									
RATING 120/208V, 3ø, 4W, 100A									
MANUFACTURER GENERAL ELECTRIC, TYPE ANLB-2.									
MINIMUM INTERRUPTING CAPACITY 10,000									
CIRCUIT DESCRIPTION	LOAD	WIRE SIZE	BRKR. SIZE	CIRCUIT NO.	BRKR. SIZE	WIRE SIZE	LOAD	CIRCUIT DESCRIPTION	
EXISTING			15	1 2	15			EXISTING	
SPARE			30	3 4	15			EXISTING	
EXISTING			15	5 6	15			EXISTING	
EXISTING			15	7 8	20			EXISTING	
EXISTING			15	9 10	15			EXISTING	
EXISTING			15	11 12	15			EXISTING	
EXISTING			20	13 14	20			EXISTING	
EXISTING			20	15 16	20			EXISTING	
EXISTING			20	17 18	20			EXISTING	
EXISTING			20	19 20	20			EXISTING	
EXISTING			20	21 22	15			EXISTING	
EXISTING			15	23 24	15			EXISTING	
EXISTING			15	25 26	15			EXISTING	
EXISTING			15	27 28	15			EXISTING	
EXISTING			15	29 30	15			EXISTING	
EXISTING			15	31 32	15			EXISTING	
EXISTING			15	33 34	40	8		'P181EAA'	
EXISTING			15	35 36	40	8			
EXISTING			15	37 38	40	8			
EXISTING			15	39 40	30			EXISTING	
EXISTING			15	41 42	30			EXISTING	

REMARKS:
 * DISCONNECT EXISTING CIRCUITRY AND REMOVE EXISTING BREAKERS AND PROVIDE AND INSTALL A 40A-3P BREAKER TO FEED NEW PANEL 'P181EAA'. EXISTING CIRCUITRY TO BE RELOCATED TO PANEL P181EAA CIRCUIT P181EAA-20/22/24.
 GF DENOTES BREAKER TO BE GROUND FAULT
 * DENOTE EXISTING BREAKER IS OFF
 N DENOTES PROVIDE NEW BREAKER.
 EXB DENOTES PROVIDE EXISTING BREAKER.
 CONTRACTOR TO USE WIRE GAUGE IN ACCORDANCE WITH C22.1-18 TO LIMIT VOLTAGE DROP

NEW PANEL 'P181EAA'									
PANEL SCHEDULE									
TYPE CIRCUIT BREAKER TYPE									
RATING 120/208V, 3ø, 4W, 100A									
MANUFACTURER GENERAL ELECTRIC, TYPE ANLB-2.									
MINIMUM INTERRUPTING CAPACITY 10,000									
CIRCUIT DESCRIPTION	LOAD	WIRE SIZE	BRKR. SIZE	CIRCUIT NO.	BRKR. SIZE	WIRE SIZE	LOAD	CIRCUIT DESCRIPTION	
P18 - FRIDGE/FREEZER			12	15	1 2	15	12	P18 - EMBEDDING STATION	
P18 - COUNTER RECEPTACLE			12	15	3 4	20	12	P18 - TISSUE PROCESSOR	
P18 - MIRCOTOME			12	15	5 6	20	12	P18 - FUME HOOD RECEPTACLE	
P18-WATER BATH			12	15	7 8	15	12	P18 - FUME HOOD LIGHTING	
P18 - SLIDE WARMER			12	15	9 10	15	12	P18 - AUTO STAINER	
P18 - VENTHOOD			12	15	11 12	15	12	P18 - COUNTER RECEPTACLE	
P18 - VENTHOOD			12	15	13 14	15	12		
VENTURI VALVE			12	15	15 16	15			
					17 18				
					19 20				
					21 22	15		EXISTING SPARE	
					23 24				

REMARKS:
 GF DENOTES BREAKER TO BE GROUND FAULT
 * DENOTE EXISTING BREAKER IS OFF
 N DENOTES PROVIDE NEW BREAKER.
 EXB DENOTES PROVIDE EXISTING BREAKER.
 CONTRACTOR TO USE WIRE GAUGE IN ACCORDANCE WITH C22.1-18 TO LIMIT VOLTAGE DROP

EXISTING PANEL 'P181RA'									
PANEL SCHEDULE									
TYPE CIRCUIT BREAKER TYPE									
RATING 120/208V, 3ø, 4W, 100A									
MANUFACTURER CUTLER HAMMER, TYPE PRL1.									
MINIMUM INTERRUPTING CAPACITY 10,000									
CIRCUIT DESCRIPTION	LOAD	WIRE SIZE	BRKR. SIZE	CIRCUIT NO.	BRKR. SIZE	WIRE SIZE	LOAD	CIRCUIT DESCRIPTION	
EXISTING			15	1 2	15			EXISTING	
EXISTING			15	3 4	15			EXISTING	
EXISTING			15	5 6	20			EXISTING	
EXISTING			15	7 8	15			EXISTING	
EXISTING			15	9 10	15			EXISTING	
EXISTING			15	11 12	15			EXISTING	
EXISTING			15	13 14	20			EXISTING	
EXISTING			15	15 16	15			EXISTING	
EXISTING			15	17 18	15			EXISTING	
EXISTING			15	19 20	15			EXISTING	
EXISTING			20	21 22	15			EXISTING	
EXISTING			30	23 24	15			EXISTING	
EXISTING			25 26	20				EXISTING	
EXISTING			27 28	15				EXISTING	
EXISTING			29 30	15				EXISTING	
EXISTING			20	31 32				EXISTING	
EXISTING			20	33 34	50			EXISTING	
EXISTING			15	35 36	15			EXISTING	
EXISTING			15	37 38	15			EXISTING	
EXISTING			15	39 40	15			EXISTING	
EXISTING			20	41 42	15			EXISTING	

REMARKS:
 GF DENOTES BREAKER TO BE GROUND FAULT
 * DENOTE EXISTING BREAKER IS OFF
 N DENOTES PROVIDE NEW BREAKER.
 EXB DENOTES PROVIDE EXISTING BREAKER.
 CONTRACTOR TO USE WIRE GAUGE IN ACCORDANCE WITH C22.1-18 TO LIMIT VOLTAGE DROP

EXISTING PANEL 'P181RB'									
PANEL SCHEDULE									
TYPE CIRCUIT BREAKER TYPE									
RATING 120/208V, 3ø, 4W, 100A									
MANUFACTURER GENERAL ELECTRIC, TYPE ANLB-2.									
MINIMUM INTERRUPTING CAPACITY 10,000									
CIRCUIT DESCRIPTION	LOAD	WIRE SIZE	BRKR. SIZE	CIRCUIT NO.	BRKR. SIZE	WIRE SIZE	LOAD	CIRCUIT DESCRIPTION	
EXISTING			15	1 2	15			EXISTING	
EXISTING			15	3 4	15			EXISTING	
EXISTING			15	5 6	20			EXISTING	
P18 - FUME HOOD RECEPTACLE			12	15	7 8	20		EXISTING	
EXISTING			15	9 10	15			EXISTING	
EXISTING			15	11 12	15			EXISTING	
EXISTING			15	13 14	15			EXISTING	
EXISTING			15	15 16	15			EXISTING	
EXISTING			15	17 18	15	12		P18 - COUNTER RECEPTACLE	
EXISTING			15	19 20	15	12		P18 - COUNTER RECEPTACLE	
EXISTING			20	21 22	20			EXISTING	
EXISTING			20	23 24	20			EXISTING	
EXISTING			20	25 26	20			EXISTING	
EXISTING			20	27 28	20			EXISTING	
EXISTING			20	29 30	20			EXISTING	
EXISTING			20	31 32	20			EXISTING	
EXISTING			15	33 34	15			EXISTING	
EXISTING			15	35 36	15			EXISTING	
EXISTING			15	37 38	15			EXISTING	
EXISTING			20	39 40	50			EXISTING	
P18 - COUNTER RECEPTACLE			12	15	41 42			EXISTING	

REMARKS:
 GF DENOTES BREAKER TO BE GROUND FAULT
 * DENOTE EXISTING BREAKER IS OFF
 N DENOTES PROVIDE NEW BREAKER.
 EXB DENOTES PROVIDE EXISTING BREAKER.
 CONTRACTOR TO USE WIRE GAUGE IN ACCORDANCE WITH C22.1-18 TO LIMIT VOLTAGE DROP

EXISTING PANEL 'P181RC'									
PANEL SCHEDULE									
TYPE CIRCUIT BREAKER TYPE									
RATING 120/208V, 3ø, 4W, 100A									
MANUFACTURER GENERAL ELECTRIC, TYPE ANLB-2.									
MINIMUM INTERRUPTING CAPACITY 10,000									
CIRCUIT DESCRIPTION	LOAD	WIRE SIZE	BRKR. SIZE	CIRCUIT NO.	BRKR. SIZE	WIRE SIZE	LOAD	CIRCUIT DESCRIPTION	
EXISTING			15	1 2	15			EXISTING	
EXISTING			15	3 4	15			EXISTING	
EXISTING			15	5 6	15			EXISTING	
EXISTING			15	7 8	15			EXISTING	
EXISTING			15	9 10	15			EXISTING	
EXISTING			15	11 12	20			EXISTING	
EXISTING			15	13 14	20			EXISTING	
EXISTING			15	15 16	20			EXISTING	
EXISTING			15	17 18	20			EXISTING	
EXISTING			15	19 20	15			EXISTING	
EXISTING			15	21 22	15			EXISTING	
EXISTING			15	23 24	15			EXISTING	
EXISTING			30	25 26	15			EXISTING	
EXISTING			30	27 28	15			EXISTING	
EXISTING			30	29 30	20			EXISTING	
EXISTING			30	31 32	20			EXISTING	
EXISTING			15	33 34	20			EXISTING	
EXISTING			15	35 36	15			EXISTING	
EXISTING			15	37 38	20			EXISTING	
EXISTING			20	39 40	20			EXISTING	
P18 - COUNTER RECEPTACLE			12	15	41 42	15	12	P18 - COUNTER RECEPTACLE	

REMARKS:
 GF DENOTES BREAKER TO BE GROUND FAULT
 * DENOTE EXISTING BREAKER IS OFF
 N DENOTES PROVIDE NEW BREAKER.
 EXB DENOTES PROVIDE EXISTING BREAKER.
 CONTRACTOR TO USE WIRE GAUGE IN ACCORDANCE WITH C22.1-18 TO LIMIT VOLTAGE DROP

EXISTING PANEL 'P181RD'									
PANEL SCHEDULE									
TYPE CIRCUIT BREAKER TYPE									
RATING 120/208V, 3ø, 4W, 100A									
MANUFACTURER GENERAL ELECTRIC, TYPE ANLB-2.									
MINIMUM INTERRUPTING CAPACITY 10,000									
CIRCUIT DESCRIPTION	LOAD	WIRE SIZE	BRKR. SIZE	CIRCUIT NO.	BRKR. SIZE	WIRE SIZE	LOAD	CIRCUIT DESCRIPTION	
EXISTING			15	1 2	15			EXISTING	
EXISTING			15	3 4	20			EXISTING	
EXISTING			15	5 6	20			EXISTING	
EXISTING			15	7 8	20			EXISTING	
EXISTING			15	9 10	30			EXISTING	
EXISTING			15	11 12	20			EXISTING	
EXISTING			15	13 14	20			EXISTING	
EXISTING			15	15 16	20			EXISTING	
EXISTING			15	17 18	20			EXISTING	
EXISTING			15	19 20	20			SPACE	
EXISTING			50	21 22	15			EXISTING	
EXISTING			23 24	15				SPACE	

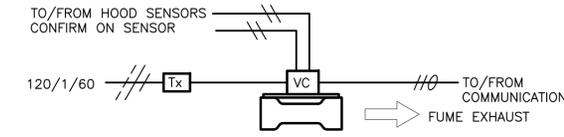
CONNECTED LOAD: _____ kW

REMARKS:
 GF DENOTES BREAKER TO BE GROUND FAULT
 * DENOTE EXISTING BREAKER IS OFF
 N DENOTES PROVIDE NEW BREAKER.
 EXB DENOTES PROVIDE EXISTING BREAKER.
 CONTRACTOR TO USE WIRE GAUGE IN ACCORDANCE WITH C22.1-18 TO LIMIT VOLTAGE DROP



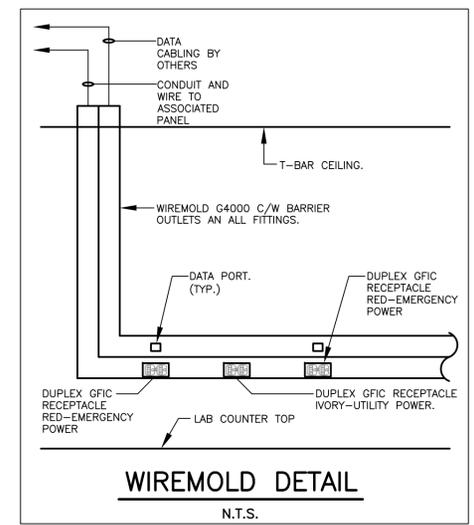
CONTROL SCHEMATIC

SCALE: N.T.S.



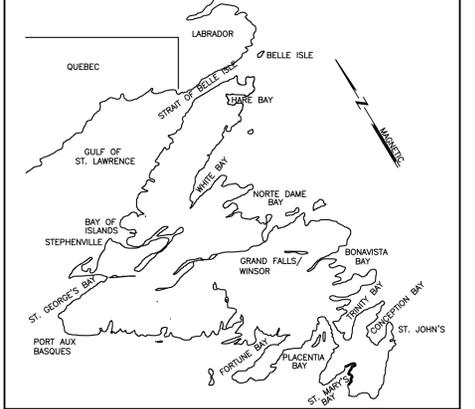
FUME HOOD CONTROL SCHEMATIC

SCALE: N.T.S.



WIREMOLD DETAIL

N.T.S.



KEY LOCATION PLAN

PRIME CONSULTANT CORE PROJECT #18-2901
COREC ENGINEERING INC.
 MECHANICAL & ELECTRICAL CONSULTANT
 57 PIPPY PLACE ST. JOHN'S, NL CANADA A1B 6E8
 TEL: 709-722-8813 FAX: 709-722-0910

SUB CONSULTANT
NEWLAB ENGINEERING LIMITED
 CONSULTING ENGINEERS - PROJECT MANAGERS
 SOUTH RIVER OFFICE P.O. BOX 400, ST. JOHN'S OFFICE
 TEL. 709-786-4446 CLARKE'S BEACH, TEL. 709-738-2065
 FAX. 709-786-4140 NL, AOA 1W0 FAX. 709-738-2066
 e-mail: info@newlabengineering.ca

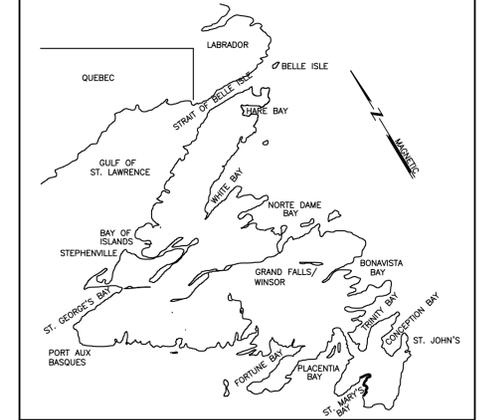
PROVINCE OF NEWFOUNDLAND PERMIT HOLDER
 This Permit Allows CORE Engineering Inc.
 MIRC: 04696
 To practice Professional Engineering in Newfoundland and Labrador, Permit No. as Issued by PEGNL D0209 which is valid for the year 2018.

RO	ISSUED FOR TENDER	NOV/14 2018
revisions		date
project		projct

P18 LAB RENOVATION

ELECTRICAL SCHEDULES & DETAILS

designed G.T.	conçu
date AUG 2018	
drawn B.H.	dessiné
date AUG 2018	
approved G.T.	approuvé
date NOV 2018	
Tender	Soumission
---	---
PWSC Project Manager	Administrateur de projets TPSGC
project number	no. du projet
F6879-189222	
drawing no.	no. du dessin
01N1009A087E02	



KEY LOCATION PLAN

PRIME CONSULTANT CORE PROJECT #18-2901
COREC ENGINEERING INC.
 MECHANICAL & ELECTRICAL CONSULTANT
 57 POPPY PLACE ST. JOHN'S, NL CANADA A1B 4H8 TEL: (709) 722-8813 FAX: (709) 722-0910

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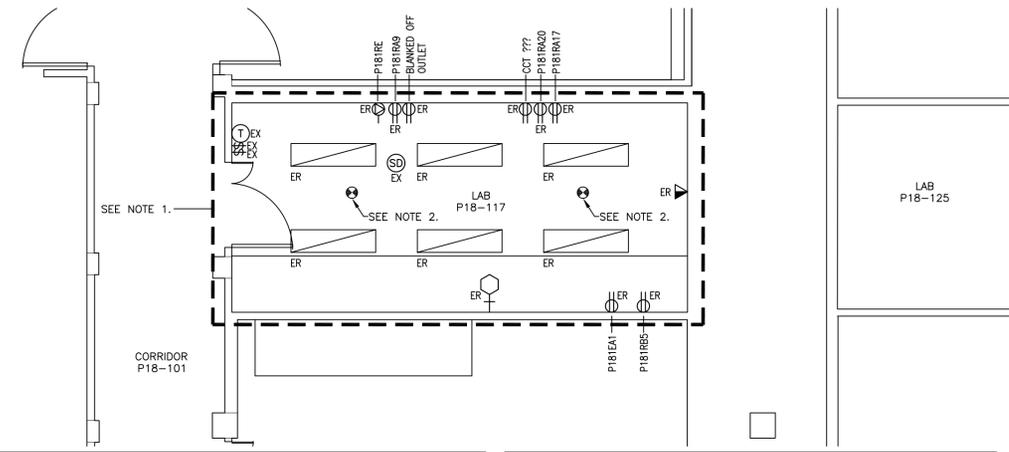
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RO	ISSUED FOR TENDER	NOV/14 2018
revisions		date

project P18 LAB RENOVATION projet

drawing PART FLOOR PLANS - ELECTRICAL DEMOLITION dessin

designed G.T.	conçu
date AUG 2018	
drawn B.H.	dessiné
date AUG 2018	
approved G.T.	approuvé
date NOV 2018	
Tender	Soumission
---	---
PWGSC Project Manager	Administrateur de projets TPSGC
project number	no. du projet
F6879-189222	
drawing no.	no. du dessin
01N1009A087E03	

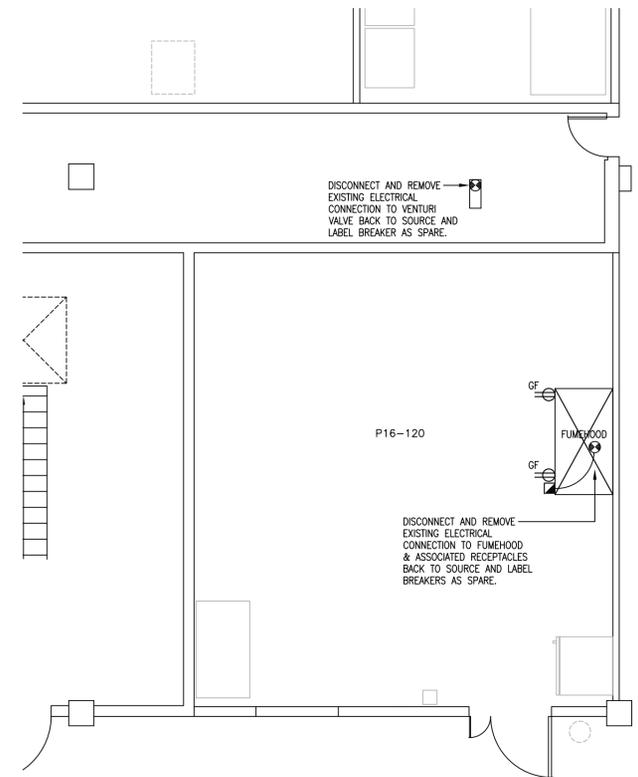


- GENERAL DEMOLITION NOTES:
- EXCEPT AS NOTED OTHERWISE OR WITH SUBSCRIPT "EX" ALL ELECTRICAL ITEMS IN THIS AREA TO BE REMOVED.
 - REMOVE WIRING ASSOCIATED WITH OBSOLETE ELECTRICAL EQUIPMENT BACK TO SOURCE.
 - THE ELECTRICAL CONTRACTOR SHALL CLEAN AND REFURBISH ALL EXISTING DEVICES THAT ARE TO REMAIN AND/OR BE RELOCATED. EXTEND CONDUIT AND WIRE TO SUIT.
 - IF ANY CIRCUITS ARE DAMAGED OR INTERRUPTED DURING CONSTRUCTION, CIRCUITS SHALL BE EXTENDED AND RECONNECTED AS REQUIRED TO MAINTAIN EXISTING DEVICES AND EQUIPMENT IN SERVICE.
 - RELOCATE ALL EXISTING JUNCTION BOXES, CONDUIT, DEVICE, ETC. AS REQUIRED TO ACCOMMODATE DEMOLITION OF EXISTING WALL & CEILING ASSEMBLIES.
 - PERFORM ALL REQUIRED DEMOLITION. DO NOT LEAVE POWERED WIRING EXPOSED IN DEMOLISHED AREAS.
 - REMOVE ALL ELECTRICAL EQUIPMENT DEEMED OBSOLETE BY RENOVATION.
 - OWNER TO HAVE FIRST RIGHT OF REFUSAL FOR ALL EQUIPMENT BEING REMOVED. ALL OTHER OBSOLETE ELECTRICAL EQUIPMENT TO BE REMOVED FROM SITE BY ELECTRICAL DIVISION.
 - FIRE ALARM SYSTEM TO REMAIN OPERATIONAL THROUGHOUT DEMOLITION AND TO REMAIN OPERATIONAL AFTER DEMOLITION. CONTRACTOR SHALL HAVE SYSTEM RE-VERIFIED BY FIRE ALARM INSTALLER TO ULC REQUIREMENTS.
 - UPDATE ALL EXISTING PANELBOARDS DIRECTORIES IN PANELS AFFECTED BY THIS PROJECT.

- GENERAL DEMOLITION NOTES:
- REMOVE ALL OBSOLETE WIRING TO MECHANICAL EQUIPMENT BEING REMOVED BACK TO SOURCE. COORDINATE WITH MECHANICAL CONTRACTOR AND GENERAL CONTRACTOR.
 - PRIOR TO REMOVAL OF DEVICES/EQUIPMENT AND WIRING, CONTRACTOR SHALL CONFIRM THAT ITEMS BEING REMOVED DO NOT IMPACT SERVICES IN OTHER SPACES. OPERATION OF SYSTEMS IN ALL ADJACENT AREAS SHALL BE MAINTAINED.
 - TAKE CARE TO MINIMIZE DAMAGE TO EXISTING CEILINGS, WALLS AND FLOORS.
 - WHERE EXISTING EQUIPMENT AND RELATED CIRCUITRY, WHICH IS TO REMAIN, IS IN THE VICINITY OF AREAS TO BE RENOVATED, LEAVE INTACT IF POSSIBLE. IF IT MUST BE REMOVED TO FACILITATE OTHER CONSTRUCTION, RESTORE TO PREVIOUS CONDITION UNLESS INDICATED.
 - ALL RECEPTACLES, FIRE ALARM DEVICES, LIGHTING ETC. LEFT ISOLATED BY THE REMOVAL OF OUTLETS/DEVICES IN THE SAME RUN SHALL BE RE-FED TO BECOME FULLY OPERATIONAL TO THE SATISFACTION OF THE DESIGN ENGINEER.
 - COORDINATE ALL WORK TO AVOID ANY DISRUPTION TO EXISTING AREAS OUTSIDE OF AREA OF WORK.
 - PROVIDE TEMPORARILY SUPPORT FOR EXISTING FIRE ALARM SMOKE DETECTOR DENOTED AS EXISTING TO REMAIN.

- DEMOLITION NOTES
- ALL ELECTRICAL DEVICES LOCATED IN CEILING SPACE TO BE REMOVED AND REINSTALLED UNLESS OTHERWISE INDICATED. ALL EXISTING LIGHTING FIXTURES TO BE REMOVED AND NEW PROVIDED. SEE LEGEND FOR DESCRIPTION. REROUTE/EXTEND WIRING AND CONDUIT AS REQUIRED.
 - DISCONNECT AND REMOVE EXISTING ELECTRICAL CONNECTION BACK TO SOURCE TO ABANDON A/C UNIT IN CEILING SPACE AND LABEL BREAKER AS SPARE.

PART FLOOR PLAN - ELECTRICAL DEMOLITION
 SCALE: 1:50



PART FLOOR PLAN - ELECTRICAL DEMOLITION
 SCALE: 1:50

- LEGEND
- ⊞ — MANUAL STARTER.
 - ⊕ — ELECTRICAL CONNECTION TO EQUIPMENT.
 - ⊕ — DUPLEX RECEPTACLE, GF DENOTE GROUND FAULT RECEPTACLE
 - ▽ — DATA OUTLET RUN 21mm CONDUIT TO ACCESSIBLE CEILING SPACE
 - SD — SMOKE DETECTOR
 - ⊕ — THERMOSTAT
 - ⊕ — 15A, 120V TOGGLE SWITCH
 - ⊕ — SPECIAL PURPOSE OUTLET
 - ⊕ — CLOCK
 - ⊕ — EXISTING FLUORESCENT LIGHTING FIXTURE.
 - A — TYPE 'A' LIGHT FIXTURE TO BE DAY-BRITE #1TG32835-4-FS-02F-347 LED, 3200 LUMENS, 347V. CONFIRM VOLTAGE PRIOR TO ORDERING FIXTURES.
 - A1 — EMERGENCY LIGHTING. TYPE 'A1' LIGHT FIXTURE TO BE DAY-BRITE #1TG32835-4-FS-02F-UNV LED, 3200 LUMENS, 120V. CONFIRM VOLTAGE PRIOR TO ORDERING FIXTURES.
- SUBSCRIPTS
- EX — EXISTING TO REMAIN.
 - ER — EXISTING TO BE REMOVED.
 - DM — DAMPER MOTOR ELECTRICAL CONNECTION
 - GF — DENOTES GROUND FAULT