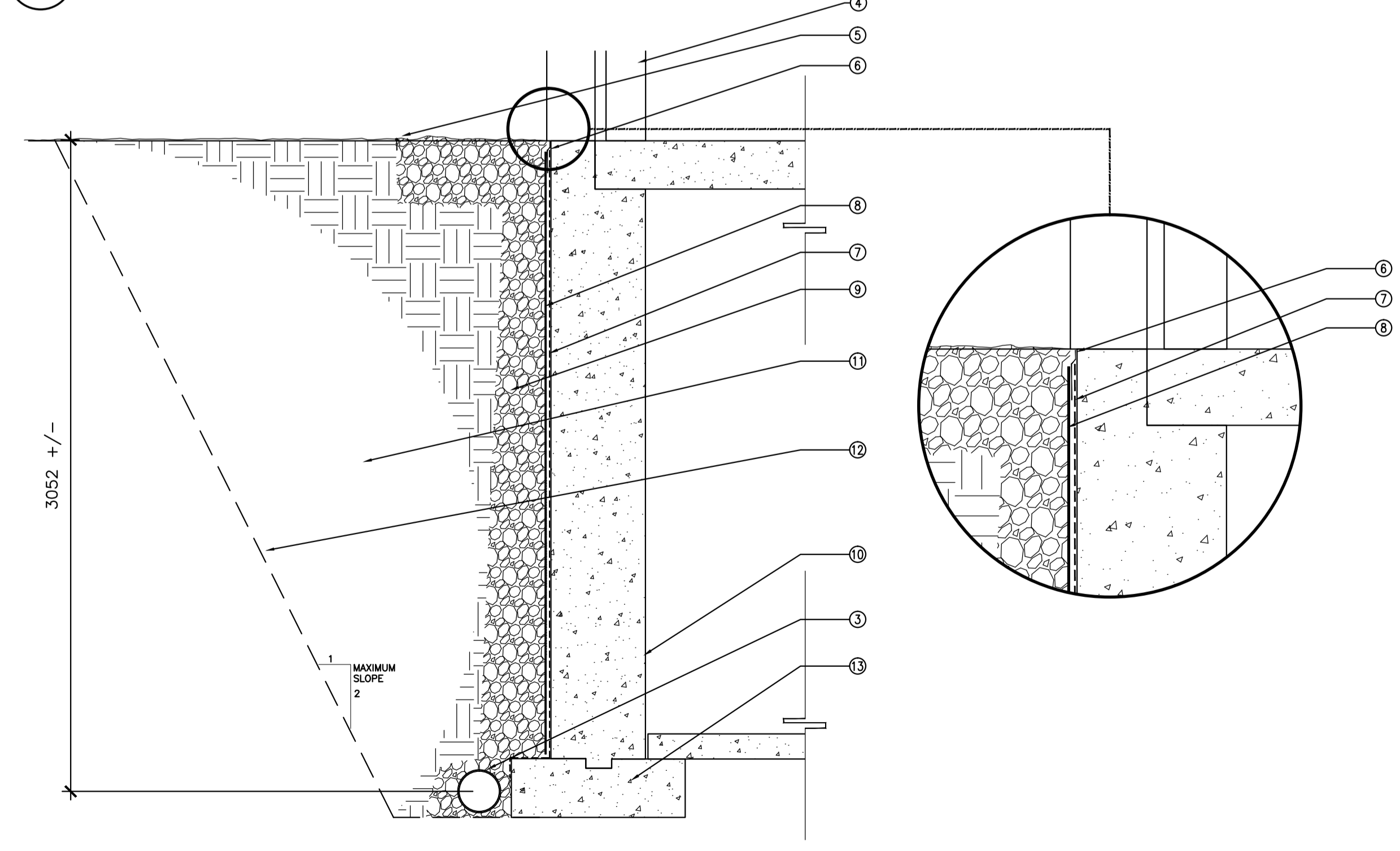


1
A01
SCALE = 1:200



2
A01
SCALE = 1:20

GENERAL NOTES
 PRIOR TO COMMENCEMENT OF WORK, NOTIFY DEPARTMENTAL REPRESENTATIVE OF ANY DISCREPANCIES NOTED IN THE CONTRACT DOCUMENTS.

- ALL GRID TO GRID DIMENSIONS ARE PLUS/MINUS. PRIOR TO COMMENCEMENT OF WORK, REVIEW SITE CONDITIONS AND VERIFY ALL DIMENSIONS. NOTIFY DEPARTMENTAL REPRESENTATIVE OF ANY DISCREPANCIES.
- DO NOT SCALE DRAWINGS.
- ALL DIMENSIONS ARE INDICATED IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
- SEAL ALL OPENINGS WHERE CABLES, CONDUITS OR PIPES PASS THROUGH WALLS WITH AN ACOUSTIC SEALANT CONFORMING TO CAN/CGSB-19.21-M87.
- WHERE CABLES, CONDUITS AND PIPES PASS THROUGH FIRE RATED WALLS AND FLOORS, PACK SPACE BETWEEN WITH COMPRESSED GLASS FIBRES AND SEAL WITH FIRE STOP CAULKING IN ACCORDANCE WITH CAN/CGSB-19.13-M87 AND NBC 3.1.7.
- PROVIDE ALL DISTURBED AREAS SHALL BE REINSTATED TO EQUAL OR BETTER CONDITION TO THE APPROVAL OF NRC DEPARTMENTAL REPRESENTATIVE.

DRAWING NOTES - SHEET A01
 THESE NOTES APPLY TO DRAWING SHEET A01 ONLY

- CONNECT NEW DRAINAGE TUBING TO EXISTING.
- WHERE REQUIRED, REMOVE EXISTING LANDSCAPE INCLUDING SHRUBS/TREES. REINSTATE WITH SAME SPECIES AND SIZE TO MATCH EXISTING OR TO MATCH REMOVED.
- NEW 200mm PERFORATED, CORRUGATED PLASTIC TUBING WEeping TILE.
- EXISTING CONCRETE WALL.
- NEW CONTINUOUS PVC DIVIDER.
- CONTINUOUS CAP MouldING.
- TORCHED ON WATERPROOF MEMBRANE.
- 6mm ASPHALT IMPREGNATED FIBREBOARD.
- RE-USED EXISTING CRUSHED STONE FROM EXCAVATION.
- EXISTING FOUNDATION WALL.
- COMPACTED BACKFILL.
- LINE OF EXCAVATION.
- EXISTING CONCRETE FOOTING.



- CONTRACTORS TO CHECK AND VERIFY ALL DIMENSIONS ON SITE PRIOR TO DEMOLITION OR CONSTRUCTION AND REPORT ANY ERRORS OR OMISSIONS TO NRC REPRESENTATIVE.
- CONTRACTORS MUST VISIT THE SITE & FULLY FAMILIARIZE THEMSELVES WITH THE SCOPE OF THE WORK.
- PREVENT THE SPREAD OF DUST & DEBRIS BEYOND THE WORK AREA AND CLEAN ALL SURFACES AT COMPLETION.
- MAKE GOOD ALL SURFACES AFFECTED BY THIS WORK.
- COORDINATE ALL SHUTDOWNS WITH THE NRC REPRESENTATIVE.
- PROVIDE ALL LABOUR AND MATERIAL REQUIRED TO FORM A COMPLETE, FUNCTIONAL SYSTEM AS DESCRIBED ON DRAWINGS.
- ALL PENETRATIONS THROUGH WALLS TO TEST CELLS SHALL BE SEALED AS PER SPECIFICATIONS.
- COORDINATE LOCATIONS OF ALL MECHANICAL SERVICES WITH ALL OTHER TRADES AND REPORT ANY CONFLICTS TO NRC REPRESENTATIVE.

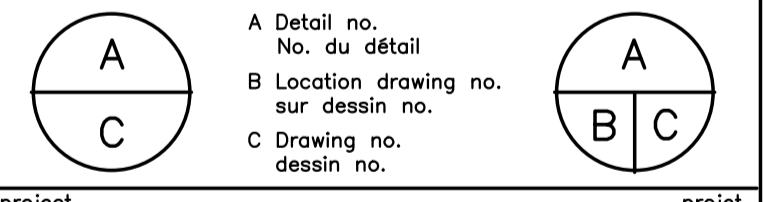
EXISTING SERVICES LEGEND

—	PROPERTY LINE
—+—	CHAIN LINK FENCE
—S—	SANITARY SEWER
---SD---	STORM SEWER
---G---	GASMAIN
---W---	WATERMAIN
---T---	TRAFFIC DUCT
---S---	STEAM LINE
---H---	HYDRO DUCT
---B---	STREET LIGHT DUCT
---C---	BELL DUCT
□	CATCHBASIN
○MH	MANHOLE
⊙	VALVE CHAMBER
⊙	CURB STOP
HYD.	HYDRANT
M	LAWN SERVICE
T.S.	TRAFFIC SIGN
TL	TRAFFIC LIGHT
LS#	STREET LIGHT OR LIGHT STANDARD
—	TOP OF CURB GRADE
—	BOTTOM OF CURB GRADE
○	BOREHOLE LOCATION AND NUMBER

0	OCT 2016	ISSUED FOR TENDER	JG
No.	Date	Revision	By: Par:

Date Printed: _____ Date imprimée: _____

Verify all dimensions and site conditions and be responsible for same.
 Vérifier toutes les dimensions et l'état des lieux et en assumer la responsabilité

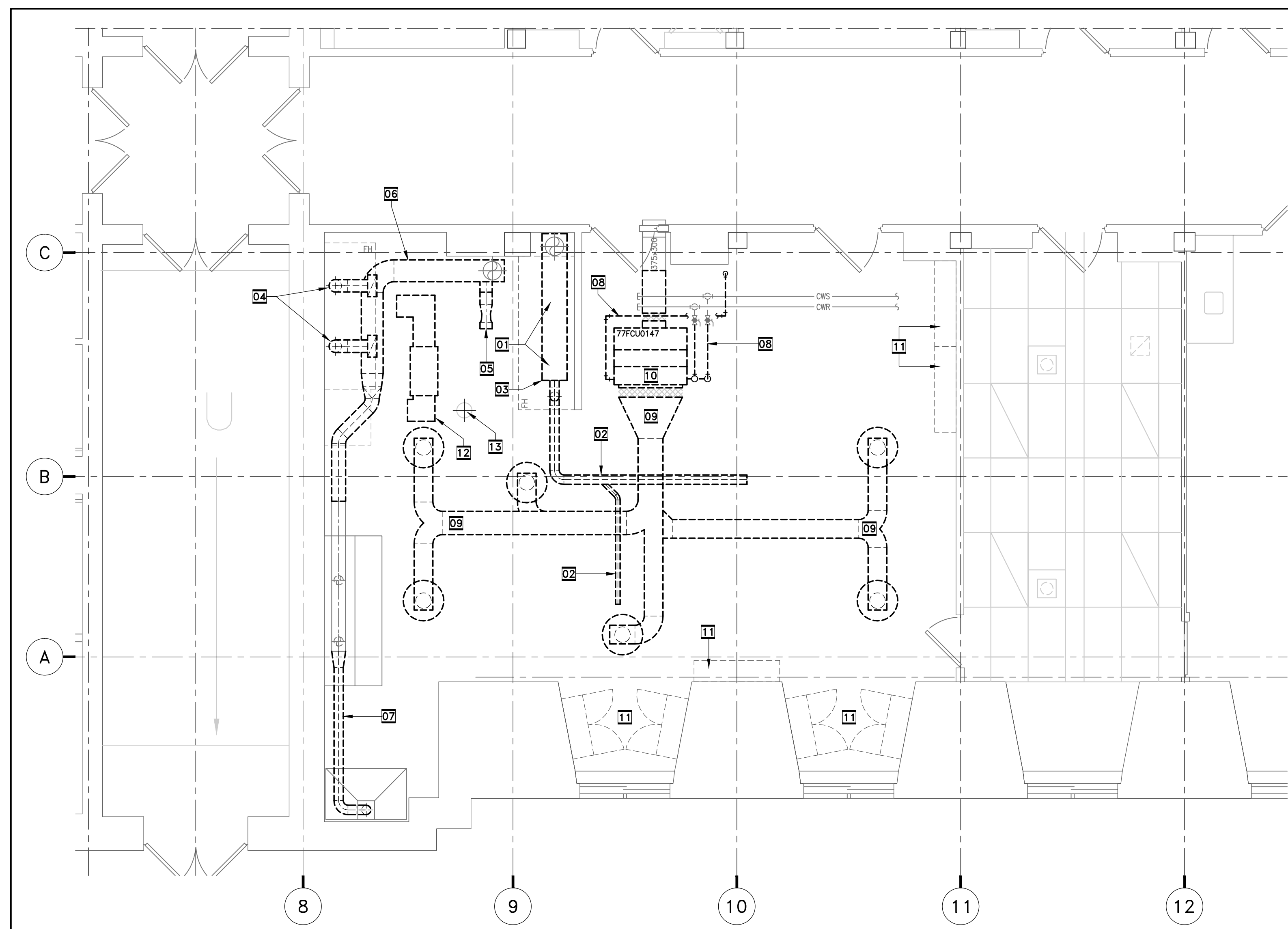


project: **BUILDING 8-77 NANOCOMPOSITES LAB 147 RENOVATIONS**

SUSSEX DRIVE CAMPUS

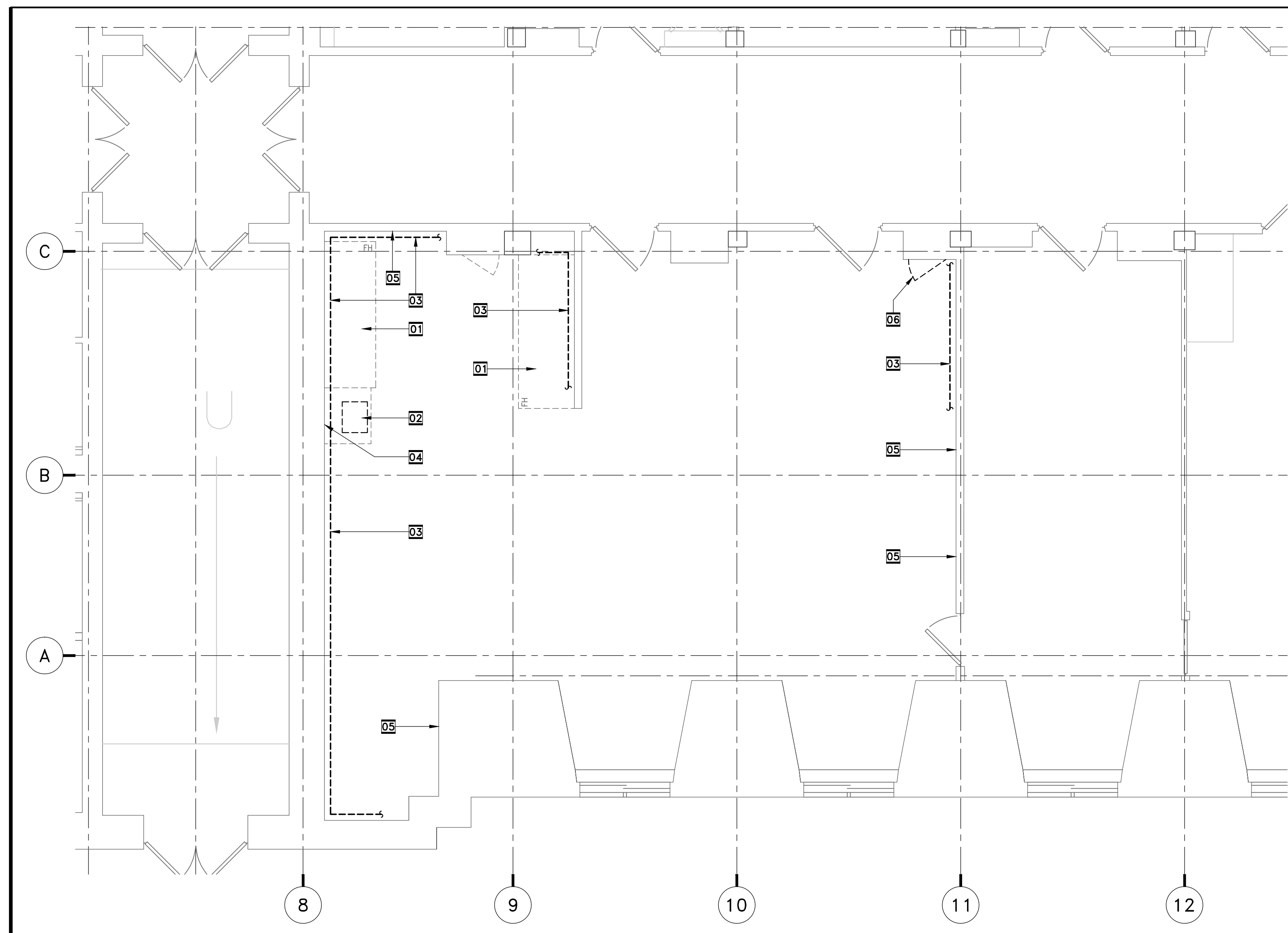
drawing: **EXTERIOR FOUNDATION WALL DAMP PROOFING SITE PLAN, SECTIONS AND DETAILS**

designed	CE	conçu	date	SEPTEMBER 2016	date
drawn	CE	dessiné	scale	AS NOTED	échelle
checked	AS	vérifié	sheet	1 of/de 1	feuille
approved	BY	approuvé	W.O.no.	A1-006436-01	D.T.no.
dwg.no.	5263-A01				dessin no.



- 00 DEMOLITION NOTES HIGH LEVEL**
- 01 DISCONNECT AIRVALVES FROM EXHAUST DUCT AND FUMEHOOD BELOW. RETAIN AIRVALVES FOR RECONNECTION TO NEW DUCT ARRANGEMENT.
 - 02 REMOVE REDUNDANT SPIRAL EXHAUST DUCTING.
 - 03 REMOVE RECTANGULAR HIGH LEVEL EXHAUST DUCT.
 - 04 DISCONNECT AIRVALVES FROM FUMEHOOD. RETAIN AIRVALVES FOR RECONNECTION TO NEW DUCT ARRANGEMENT.
 - 05 REMOVE AIRVALVE AND RETAIN FOR RECONNECTION TO NEW DUCT ARRANGEMENT.
 - 06 REMOVE HIGH LEVEL EXHAUST DUCTING TO EXTENT INDICATED WITH BROKEN LINES.
 - 07 REMOVE SPIRAL EXHAUST DUCTING SERVING CANOPY AT BACK OF ROOM.
 - 08 DISCONNECT CHILLED WATER S&R PIPING, CONDENSATE DRAIN PIPING, AND CONTROLS FROM THIS FANCOIL UNIT.
 - 09 REMOVE ENTIRE FANCOIL SUPPLY DUCT SYSTEM AND DIFFUSERS.
 - 10 AFTER POWER WIRING DISCONNECTION BY ELECTRICAL CONTRACTOR, REMOVE THIS FANCOIL UNIT INCLUDING SECTION OF CORRIDOR MAKE-UP AIR DUCT.
 - 11 REMOVE WALL-HUNG CABINET(S).
 - 12 REMOVE REDUNDANT HIGH LEVEL FAN AND DUCTING. ENSURE FAN IS DISCONNECTED FROM POWER BY ELECTRICAL TRADES PRIOR TO REMOVAL.
 - 13 EXISTING EMERGENCY SHOWER TO REMAIN.
 - 14
 - 15

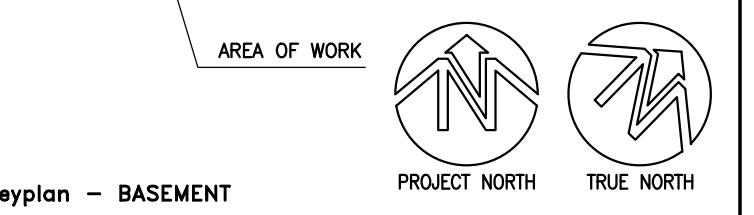
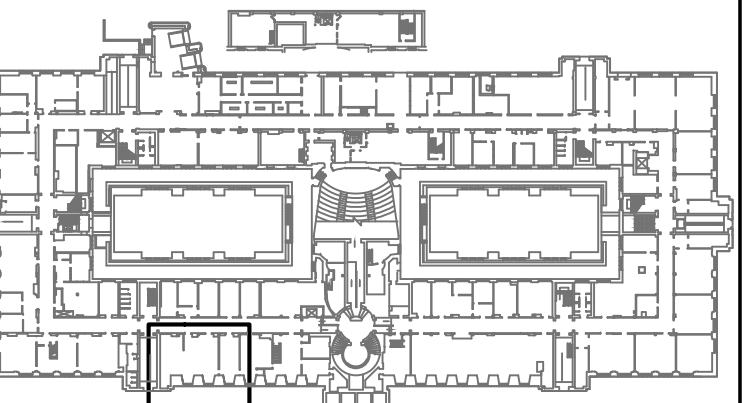
01
601
DEMOLITION WORK HIGH LEVEL
PLAN OF WORK AREA



- 00 DEMOLITION NOTES LOW LEVEL**
- 01 DISCONNECT ALL PIPING, DUCTING AND ELECTRICAL CONNECTIONS TO THIS FUMEHOOD. REMOVE FUMEHOOD FROM SITE.
 - 02 DISCONNECT ALL PIPING CONNECTIONS TO THIS SINK UNIT. REMOVE UNIT FROM SITE.
 - 03 REMOVE ALL PIPING ON THIS WALL BACK TO SERVICE CHASE AND ISOLATE PRIOR TO RE-USE IN NEW LAYOUT.
 - 04 REMOVE DRYING RACK FROM WALL ABOVE SINK UNIT.
 - 05 REMOVE UNSTRUT AND CHAIN ANCHOR ARRANGEMENTS ON WALL.
 - 06 PROVIDE NEW 610x1070mm ACCESS DOOR AT LOW LEVEL IN THIS SERVICE CHASE WALL TO ALLOW ACCESS TO PIPED SERVICES.
 - 07
 - 08

02
601
DEMOLITION WORK LOW LEVEL
PLAN OF WORK AREA

C

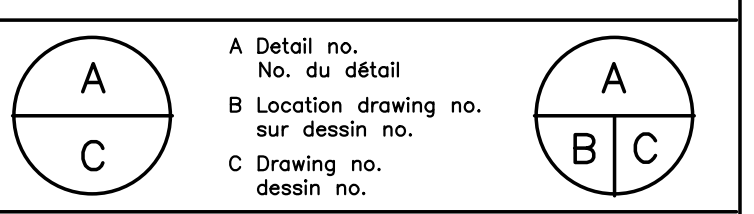


keyplan - BASEMENT

No.	Date	Revision	By:

Date Printed: _____ Date imprimée: _____

Verify all dimensions and site conditions and be responsible for same
Vérifier toutes les dimensions et l'état des lieux et en assumer la responsabilité



project
BUILDING S-77
Nanocomposites Lab 147
Renovations
SUSSEX DRIVE CAMPUS

drawing
GENERAL
DEMOLITION WORK
ROOM 147, 149, 151 PLAN

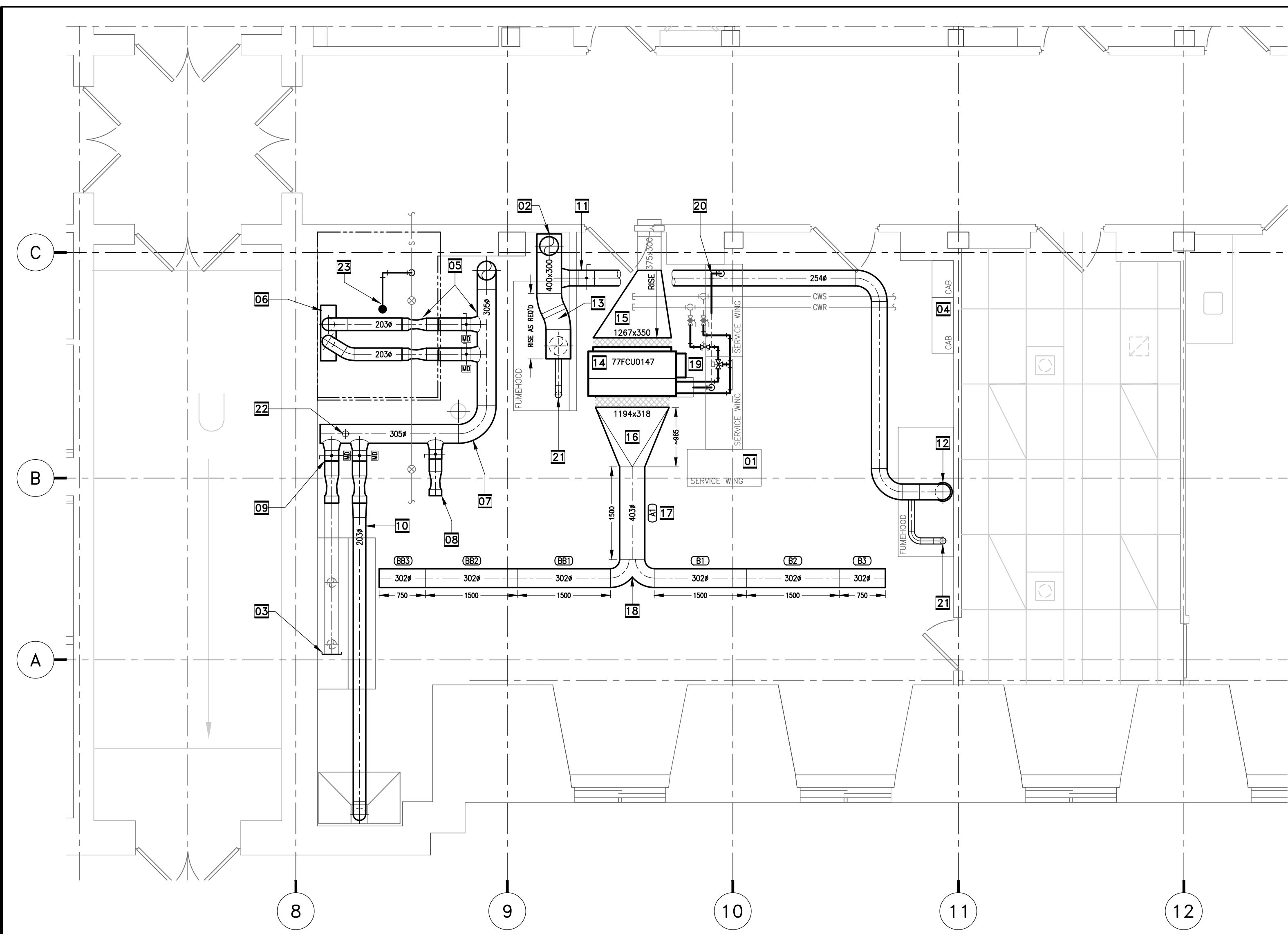
designed R.C./A.S. date September 2016

drawn RODDERS CAS date 1:50 UNO

checked R.C./A.S. sheet G01 of/de G04

approved B VALLIERES W.O.no. D.T.no.

dwg.no. 5263-G01



- 00 NEW LAYOUT NOTES HIGH LEVEL**
- SUSPENDED SERVICE WING OVER ISLAND BENCHES - REFER TO LOW LEVEL PLAN.
 - PROVIDE NEW 400x300 EXHAUST DUCT AT HIGH LEVEL, CONNECTING TO EXISTING EXHAUST RISER.
 - PROVIDE CAP ON END OF EXHAUST DUCT AS INDICATED.
 - SUSPENDED CABINETS ON SERVICE SPINE - REFER TO LOW LEVEL PLAN. PROVIDE NEW 305# EXHAUST DUCT RECONNECTING TO EXHAUST RISER. RECONNECT EXISTING ARRIVALS FROM FUMEHOOD AS INDICATED ON HORIZONTAL BRANCHES. TURN BRANCHES DOWN INTO EXHAUST ENCLOSURE TO CONNECT TO SLOT EXHAUST PLENUM. PROVIDE ESOUICHONS AT ENCLOSURE CEILING PENETRATIONS. PROVIDE MOTORIZED N.C. DAMPERS AT BRANCHES AS INDICATED.
 - PROVIDE SLOT EXHAUST PLENUM INSIDE ENCLOSURE. SECURE PLENUM TO REAR WALL.
 - CONTINUE 305# EXHAUST DUCT TO SERVE EXISTING EXHAUST CANOPIES.
 - REINSTALL RETAINED 203# ARRIVAL C/W BALANCING DAMPER ON BRANCH AS INDICATED.
 - PROVIDE NEW NOMINAL 250# BRANCH C/W MOTORIZED N.C. DAMPER TO SERVE EXISTING CANOPY, CONNECTING TO EXISTING DUCT. INSTALL RETAINED ARRIVAL AS INDICATED.
 - PROVIDE NEW BRANCH C/W MOTORIZED N.C. DAMPER AND NEW EXHAUST DUCT TO SERVE EXISTING CANOPY. INSTALL RETAINED ARRIVAL AS INDICATED.
 - PROVIDE 254# BRANCH DUCT WITH DAMPER AT HIGH LEVEL GENERALLY ALONG THIS ROUTE TO SERVE FUMEHOOD.
 - EXPAND TO NOMINAL 300# COLLAR ON TOP OF FUMEHOOD CONTROL VALVE.
 - RISE 400x300 DUCT AS REQUIRED AND PROVIDE CONNECTION TO NOMINAL 300# COLLAR ON TOP OF FUMEHOOD CONTROL VALVE.
 - PROVIDE NEW FANCOIL UNIT PER SCHEDULE ON THIS DRAWING, C/W BOTTOM ACCESS AND FLEXIBLE CONNECTIONS INTO DUCTING.
 - PROVIDE RISING AND EXPANDING DUCT CONNECTION FROM CORRIDOR MAKE-UP SUPPLY AIR DUCT ONTO INTAKE OF FANCOIL UNIT.
 - PROVIDE TRANSFORMATION SUPPLY DUCT FROM FANCOIL UNIT ONTO NAD/KLIMA DIFFUSER SECTIONS.
 - PROVIDE NAD/KLIMA DUCT & DIFFUSER ARRANGEMENT PER SCHEDULE. POSITION AT HIGH LEVEL BELOW BEAMS, AND ABOVE LIGHT FIXTURES.
 - INSTALL FITTING C/W BALANCING DAMPERS ON 303# BRANCHES PROVIDED BY NAD/KLIMA TO MATCH DIFFUSERS.
 - PROVIDE 20mm CHILLED WATER S&R PIPING CONNECTING TO FANCOIL COOLING COIL. ARRANGE PIPING TO ALLOW EASY ACCESS TO FANCOIL UNIT CONTROL PANEL. PIPE UNIT PER SCHEMATIC DETAIL 05/203.
 - PROVIDE 20mm CONDENSATE DRAIN PIPING FROM DRAIN PAN AND DISCHARGE OVER FURNEL - MODIFY FURNEL HEIGHT AS REQUIRED.
 - PROVIDE EXHAUST CONNECTION C/W BALANCING DAMPER ONTO 90mm BASE CABINET VENTILATION DUCT.
 - PROVIDE EXHAUST CONNECTION C/W BALANCING DAMPER OFF BOTTOM OF DUCT, DOWN ONTO 90mm LABORATORY CABINET VENTILATION DUCT BELOW (ITEM 005).

DUCT DIFFUSER SCHEDULE

Identification	Brand	Quantity	Volumetric Flow	Model	Remarks
A1	NAD Klima	1	1200 CFM	RRA-1500-XXXX-403-X Passive Duct followed by a "T" connection to ducts B1 and BB1	1, 2, 3, 4
B1 to B2	NAD Klima	2	600 CFM	RRA-1500-1000-302-4* With a control damper at duct B1	1, 2, 3, 4
B3	NAD Klima	1	600 CFM	RRA-1500-550-302-4*	1, 2, 3, 4
BB1 to BB2	NAD Klima	2	600 CFM	RRA-1500-1000-302-4* With a control damper at duct BB1	1, 2, 3, 4
BB3	NAD Klima	1	600 CFM	RRA-1500-550-302-4*	1, 2, 3, 4

- The mechanical contractor must provide duct diffusers as well as any accessories required for a proper installation such as elbows, sleeves between ducts, transitions, reducers, branches, caps, raling suspension system and any other accessory required for the project.
 - All accessories must be provided by the same manufacturer as the duct manufacturer (NAD Klima).
 - Threaded rods 3/8" must be used for proper installation and shall be provided by the contractor.
 - The color of duct diffuser may be chosen from the "RAL" chart and the colors of the rollers/nozzles must be chosen from the standards offered by the manufacturer.
- *Slots will be located on the side of the duct (2 slots at 3PM and 2 Slots at 9PM with 12PM being the top of the duct)

UNLESS SPECIFICALLY NOTED OTHERWISE, ALL GALVANIZED STEEL DUCT, BENDS, ELBOWS, TRANSFORMATIONS, BRANCH FITTINGS, ETC. SHALL BE FABRICATED, SEALED AND INSTALLED IN ACCORDANCE WITH THE "S" WATER GAUGE (-1.5 kPa) PRESSURE CLASS (NONARRASIVE) OF THE LATEST EDITION OF SMACNA ROUND INDUSTRIAL DUCT CONSTRUCTION STANDARDS.

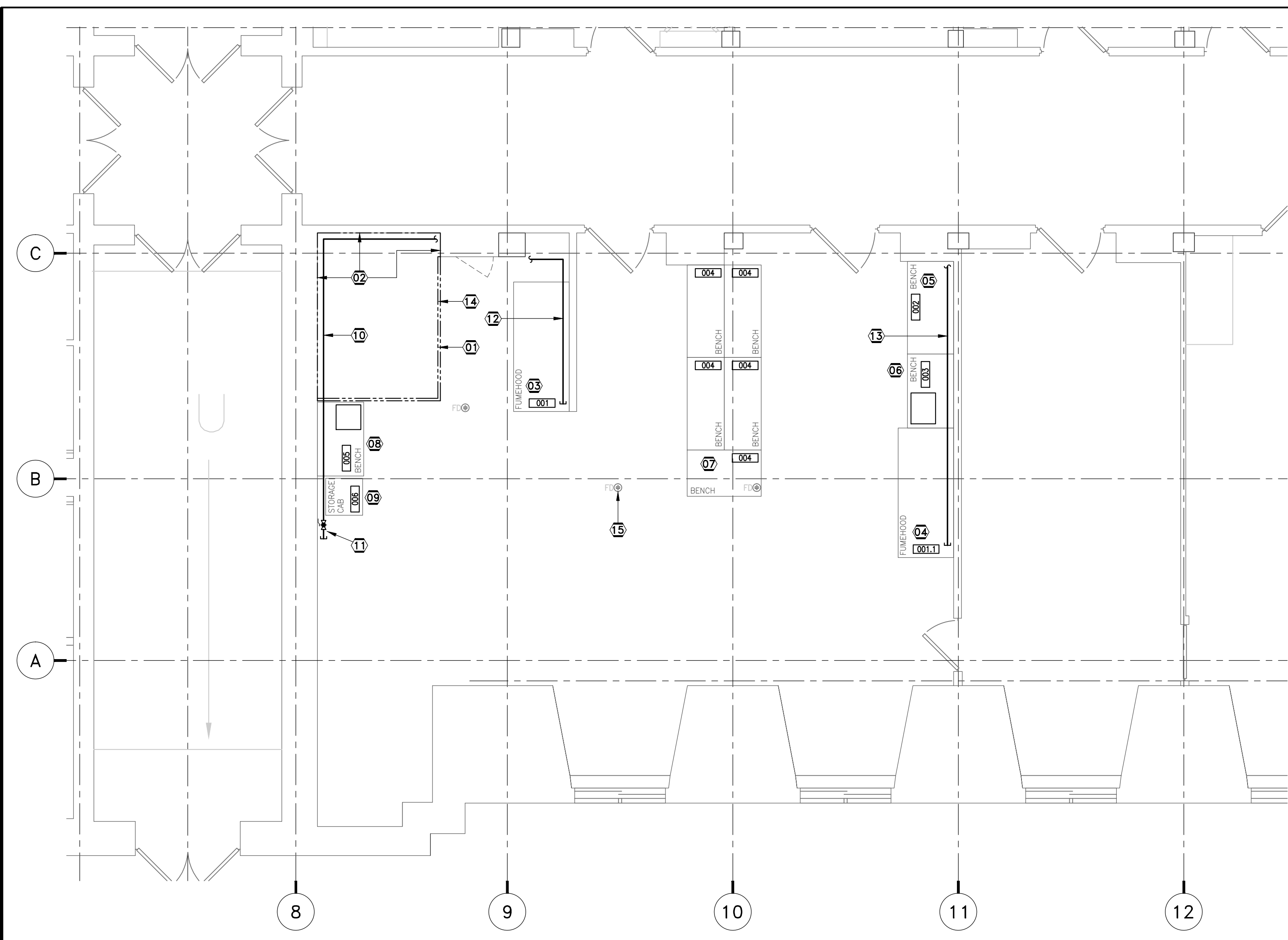
MECHANICAL CONTRACTOR SHALL INCLUDE FOR CONTROL SYSTEM INDICATIONS PROVIDED BY AIRTRON CANADA. AIRTRON CANADA SHALL COORDINATE WITH PRESTON PHIPPS AS REQUIRED TO UPDATE THE SEQUENCE OF OPERATIONS FOR THE PHOENIX AIR VALVES USED IN THIS SYSTEM.

Fancoil Units

ITEM NUMBER	SYSTEM REFERENCE	MODEL NUMBER	UNIT TYPE	FAN CFM @ 7"wg	FAN MOTOR WAT	ELECTRICAL RPM	COOLING CAPACITY BTU/HR TOTAL	COOLING SENSIBLE	COOLING LATENT	HEATING BTU/HR	NOTES
14	77FCU0147	FMP20	HORIZONTAL	1220	0.75	914	5280	35800	10.50	13.57	-

BASE MANUFACTURER: JOHNSON CONTROLS

01 602 PLAN OF WORK AREA



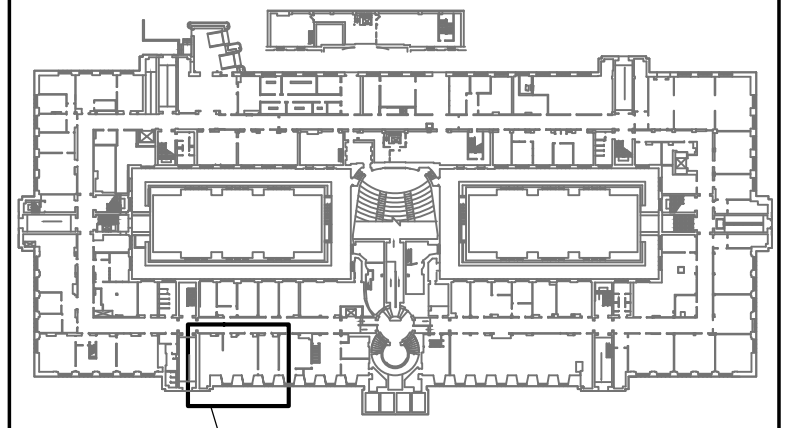
- 00 NEW LAYOUT NOTES LOW LEVEL**
- PROVIDE EXHAUST ENCLOSURE STANDING ON FLOOR. CONSTRUCT WALLS PER DETAIL 02/203. PROVIDE ROOF OVER ENCLOSURE USING THE SAME CONSTRUCTION METHODS.
 - PROVIDE LINING ON BACK WALLS USING GALVANIZED SHEET STEEL TO MATCH FRONT WALLS OF ENCLOSURE.
 - ITEM 001 - PROVIDE SECULFLOW RMI FUME HOOD PER SCHEDULE AND SPECIFICATION.
 - ITEM 001.1 - PROVIDE SECULFLOW RMI FUME HOOD PER SCHEDULE AND SPECIFICATION.
 - ITEM 002 - PROVIDE WORKTOP WALL BENCH WITH SERVICE SPLINE PER SCHEDULE AND SPECIFICATION.
 - ITEM 003 - PROVIDE WORKTOP WALL BENCH WITH SINK PER SCHEDULE AND SPECIFICATION.
 - ITEM 004 - PROVIDE WORKTOP DOUBLE WORK BENCH WITH SERVICE WING PER SCHEDULE AND SPECIFICATION.
 - ITEM 005 - PROVIDE LABORATORY SINK PER SCHEDULE AND SPECIFICATION.
 - ITEM 006 - PROVIDE LABORATORY FLAMMABLE MATERIAL CABINET PER SCHEDULE AND SPECIFICATION.
 - PROVIDE PIPED SERVICES FROM ADJACENT SERVICE CHASE SECURELY SUPPORTED OFF WALLS. PROVIDE 32mm LAB VENT, 15mm OXYGEN, 20mm NATURAL GAS, 15mm NITROGEN, 15mm COMPRESSED AIR, 15mm DOMESTIC COLD WATER, 15mm DOMESTIC HOT WATER, 15mm DEIONIZED WATER, AND 50mm LAB WASTE. PROVIDE CONNECTIONS TO NEW LAB SINK AND FUMEHOOD PER SCHEDULE AND SPECIFICATION. RUN NEW SERVICES AT HIGH LEVEL FROM OTHER SERVICE CHASE AS REQUIRED FOR FURNITURE.
 - PROVIDE ACCORDION STRIP VINYL DOOR OVER DOOR OPENING TO ENCLOSURE. C/W OVERHEAD BRACKET AND B-PARTING OPENING DESIGN. CONTACT "LOADING DOCK COMPANY" OF MISSISSAUGA ONTARIO, TEL. NO. 1-877-318-9582.
 - TYPICAL - REPLACE FLOOR DRAIN COVER GRATES WITH NEW TO MATCH EXISTING.
 - TERMINATE SANITARY PIPING AFTER SINK WASTE, AND TERMINATE REMAINING PIPED SERVICES AFTER STORAGE CABINET WITH BALL VALVES AND CAPS FOR FUTURE EXTENSION.
 - PROVIDE PIPED SERVICES FROM ADJACENT SERVICE CHASE SECURELY SUPPORTED OFF WALLS. PROVIDE 15mm OXYGEN, 15mm NATURAL GAS, AND 15mm NITROGEN. PROVIDE CONNECTIONS TO NEW FUMEHOOD PER SCHEDULE AND SPECIFICATION.
 - PROVIDE PIPED SERVICES FROM ADJACENT SERVICE CHASE SECURELY SUPPORTED OFF WALLS. PROVIDE 32mm LAB VENT, 15mm OXYGEN, 20mm NATURAL GAS, 15mm NITROGEN, 15mm COMPRESSED AIR, 15mm DOMESTIC COLD WATER, 15mm DOMESTIC HOT WATER, 15mm DEIONIZED WATER, AND 50mm LAB WASTE. PROVIDE CONNECTIONS TO NEW LAB SINK AND FUMEHOOD PER SCHEDULE AND SPECIFICATION. RUN NEW SERVICES AT HIGH LEVEL FROM OTHER SERVICE CHASE AS REQUIRED FOR FURNITURE.

001 FURNITURE SUMMARY SCHEDULE

ITEM	No	DESCRIPTION	PROVIDED BY	ERECTED BY	POSITIONED BY	CONNECTED BY	SERVICE CONNECTIONS								
							GAS	N2	CA	O2	DCW	DHW	DI	WASTE	ELEC
001	1x	WALDNER SECULFLOW RMI FUME HOOD	GENERAL	SUPPLIER	GENERAL	M&E	Y	Y	Y	Y					DWG E01
	1x	WASTE DISPOSAL CUPBOARD FOR ACIDS & ALKALINES													
	1x	STORAGE CUPBOARD COMBUSTIBLE HAZARDOUS SUBSTANCES OR SOLVENTS													
	1x	STORAGE CUPBOARD COMBUSTIBLE HAZARDOUS SUBSTANCES OR SOLVENTS													
001.1	1x	WALDNER SECULFLOW RMI FUME HOOD	GENERAL	SUPPLIER	GENERAL	M&E	Y	Y	Y	Y					DWG E01
	2x	STORAGE CUPBOARD FOR ACIDS & ALKALINES													
	1x	STORAGE CUPBOARD COMBUSTIBLE HAZARDOUS SUBSTANCES OR SOLVENTS													
002	1x	WORKTOP WALL BENCH WITH SERVICE SPINE	GENERAL	SUPPLIER	GENERAL	M&E	Y	Y	Y	Y					DWG E01
	1x	UNDER BENCH UNIT ON PLINTH 600mm													
	1x	UNDER BENCH UNIT ON PLINTH 900mm													
	1x	WORKTOP 1500mm													
	1x	SUSPENDED CABINET 600mm													
	1x	SUSPENDED CABINET 900mm													
003	1x	WORKTOP WALL BENCH WITH SINK									Y	Y	Y	Y	
	1x	SINK UNDER BENCH UNIT ON PLINTH 1200mm													
	1x	WORKTOP													
	1x	SINK 500x400x250mm													
004	1x	WORKTOP DOUBLE WORK BENCH WITH SERVICE WING	GENERAL	SUPPLIER	GENERAL	M&E	Y	Y	Y	Y					DWG E01
	2x	SERVICE WING 1500mm													
	1x	SERVICE WING 1200mm													
	2x	UNDER BENCH UNIT MOVABLE 600mm													
	2x	UNDER BENCH UNIT MOVABLE 600mm													
	1x	UNDER BENCH UNIT MOVABLE 900mm													
	4x	C-FRAME 1500mm													
	1x	C-FRAME 1200mm													
	2x	WORKTOP 3000mm													
	1x	WORKTOP 1200mm													
005	1x	LABORATORY SINK	GENERAL	SUPPLIER	GENERAL	M&E					Y	Y		Y	
	1x	SINK UNDER BENCH UNIT ON PLINTH 1200mm													
	1x	WORKTOP													
	1x	SINK 400x400x250mm													
006	1x	LABORATORY CABINET FOR FLAMMABLE MATERIALS STORAGE	GENERAL	SUPPLIER	GENERAL	M&E									

02 602 PLAN OF WORK AREA

ASPM B1 (1000x707)



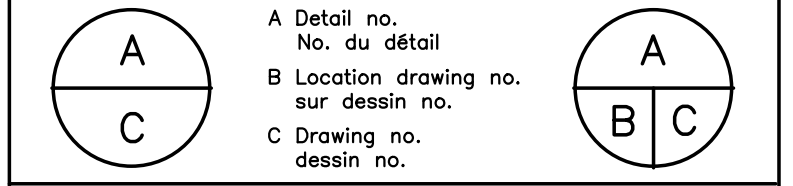
keyplan - BASEMENT



No.	Date	Revision	By:

Date Printed: _____ Date Imprimé: _____

Verify all dimensions and site conditions and be responsible for same
Vérifier toutes les dimensions et l'état des lieux et en assumer la responsabilité



project: BUILDING S-77
Nanocomposites Lab 147
Renovations

SUSSEX DRIVE CAMPUS

GENERAL NEW LAYOUTS
ROOM 147, 149, 151 PLAN

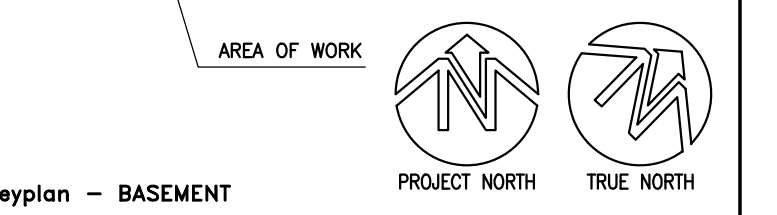
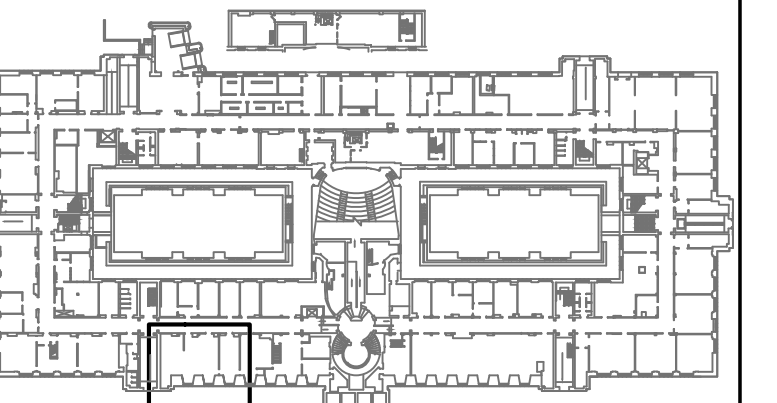
designed: R.C./A.S. conçu: September 2016

drawn: RODDERS CAS dessiné: scale: 1:50 échelle

checked: R.C./A.S. vérifié: sheet: G02 of/de G04 feuille

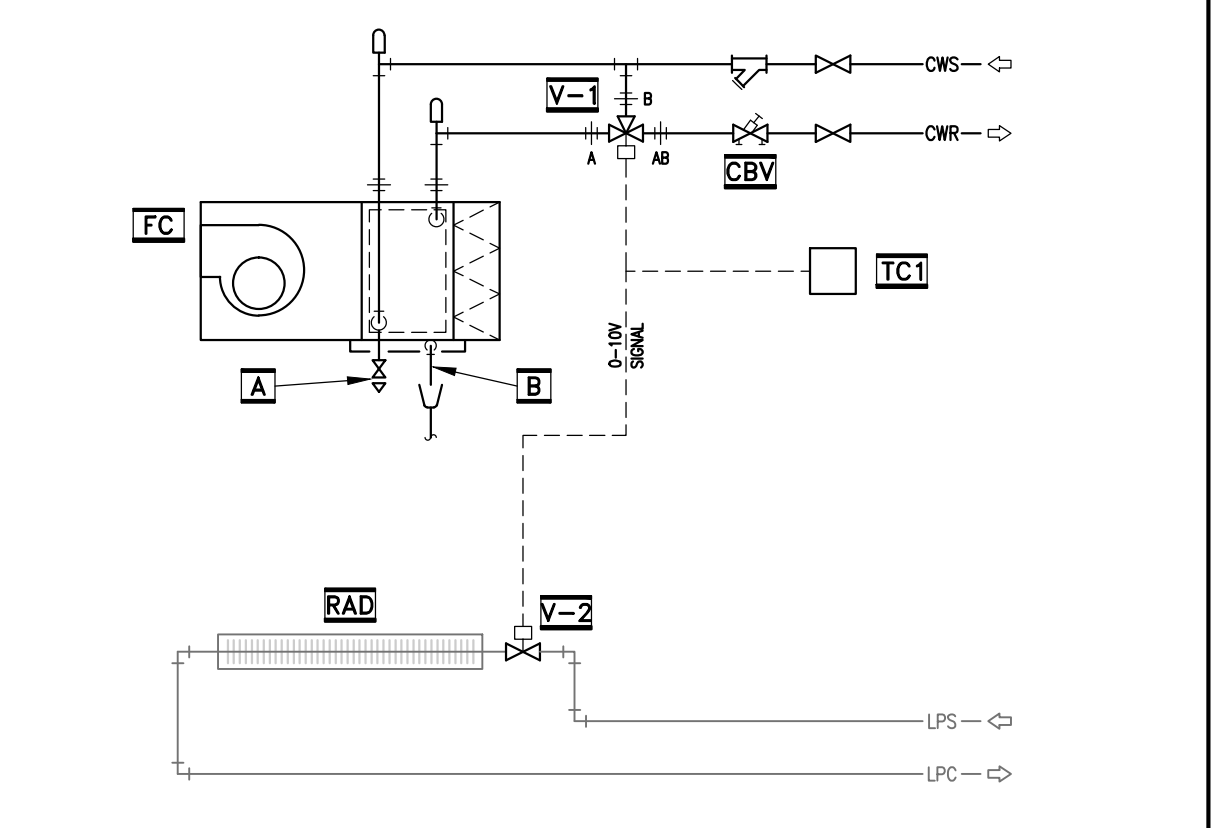
approved: B VALLIERES approuvé: W.O.no. D.T.no.

dwg.no.: 5263-G02 dessin no.

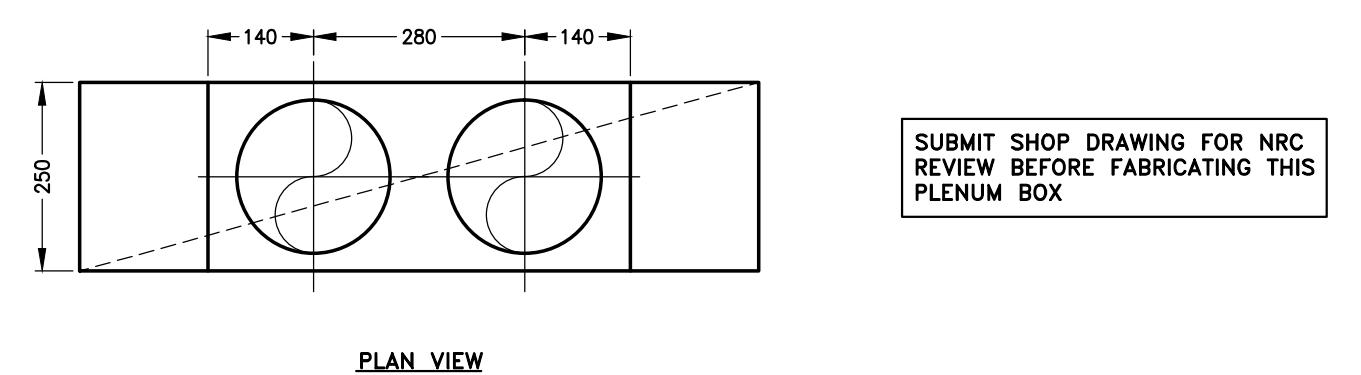
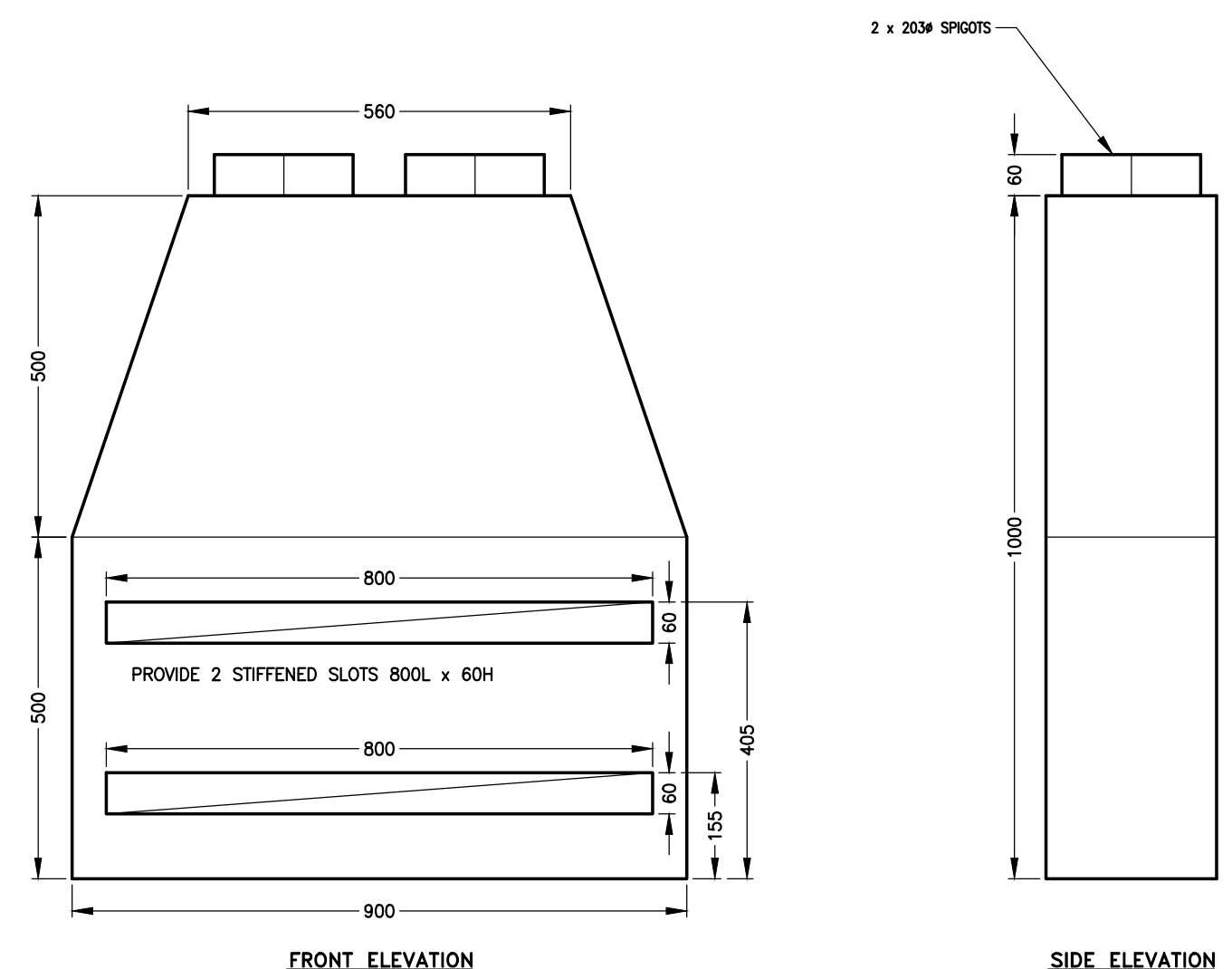


keyplan - BASEMENT

- FC** FAN-COIL UNIT (COOLING ONLY)
- RAD** RADIATOR (EXISTING PERIMETER HEATING)
- V-1** THREE-WAY ELECTRONIC CONTROL VALVE - N.O. 'B' TO 'AB'
- V-2** TWO-WAY ELECTRONIC CONTROL VALVE - N.O.
- TCT** ROOM ELECTRONIC TEMPERATURE SENSOR - SET AT 21°C
- CBV** CIRCUIT BALANCING VALVE
- A** COIL DRAIN
- B** CONDENSATE PAN DRAIN

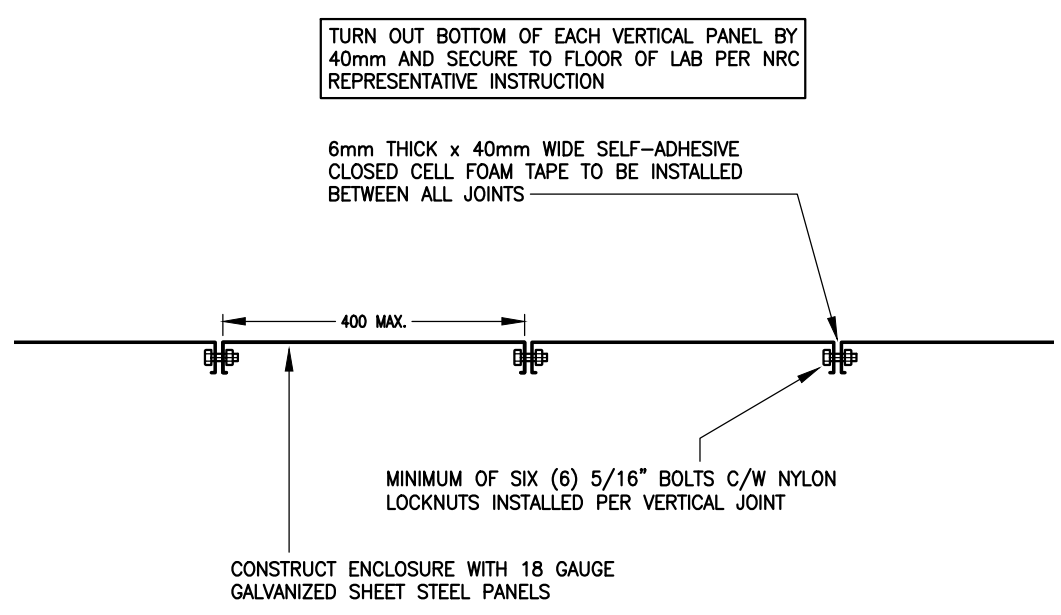


05 FANCOIL UNIT & RADIATION



SUBMIT SHOP DRAWING FOR NRC REVIEW BEFORE FABRICATING THIS PLENUM BOX

01 SLOTTED EXHAUST PLENUM DETAIL



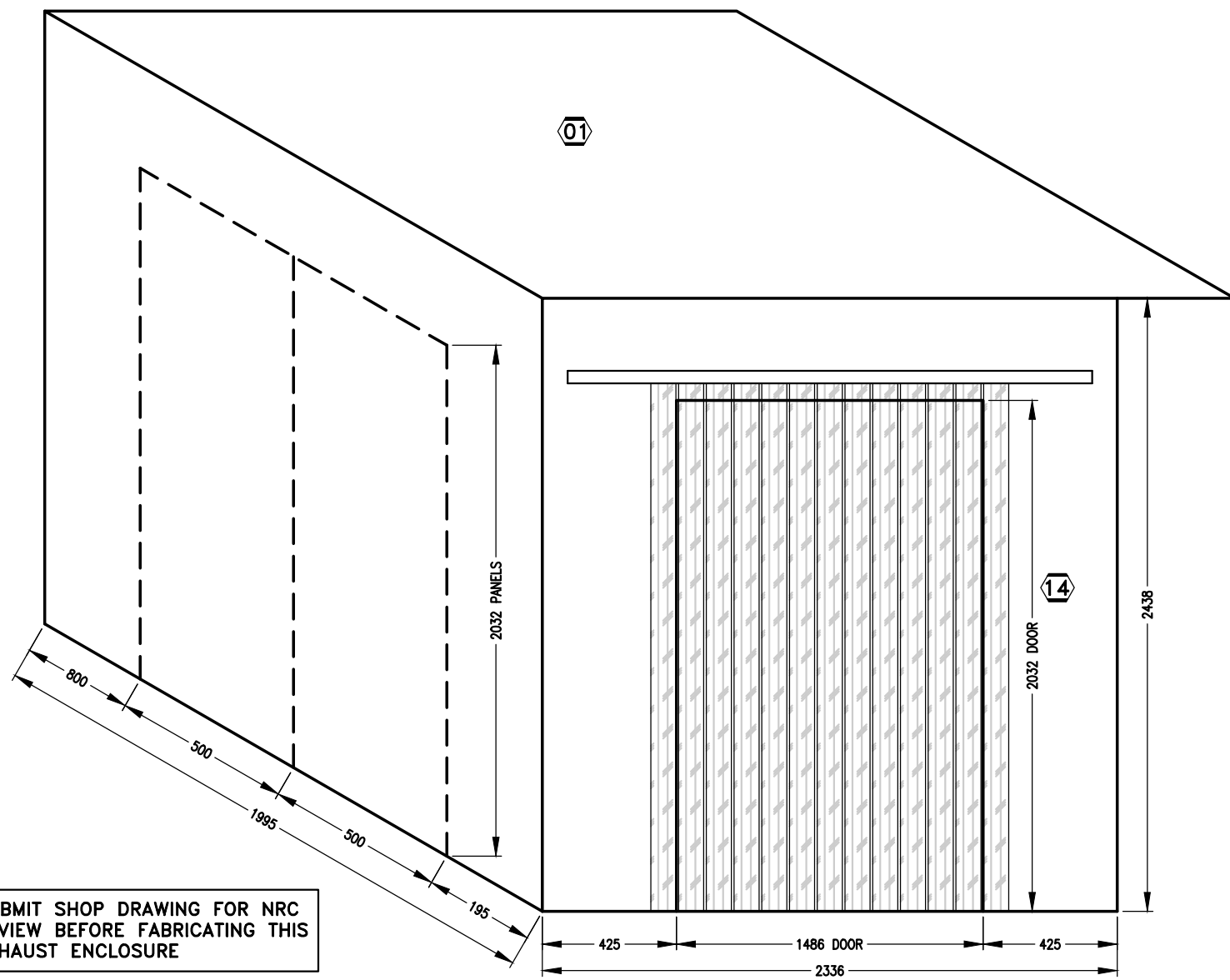
TURN OUT BOTTOM OF EACH VERTICAL PANEL BY 40mm AND SECURE TO FLOOR OF LAB PER NRC REPRESENTATIVE INSTRUCTION

6mm THICK x 40mm WIDE SELF-ADHESIVE CLOSED CELL FOAM TAPE TO BE INSTALLED BETWEEN ALL JOINTS

MINIMUM OF SIX (6) 5/16" BOLTS C/W NYLON LOCKNUTS INSTALLED PER VERTICAL JOINT

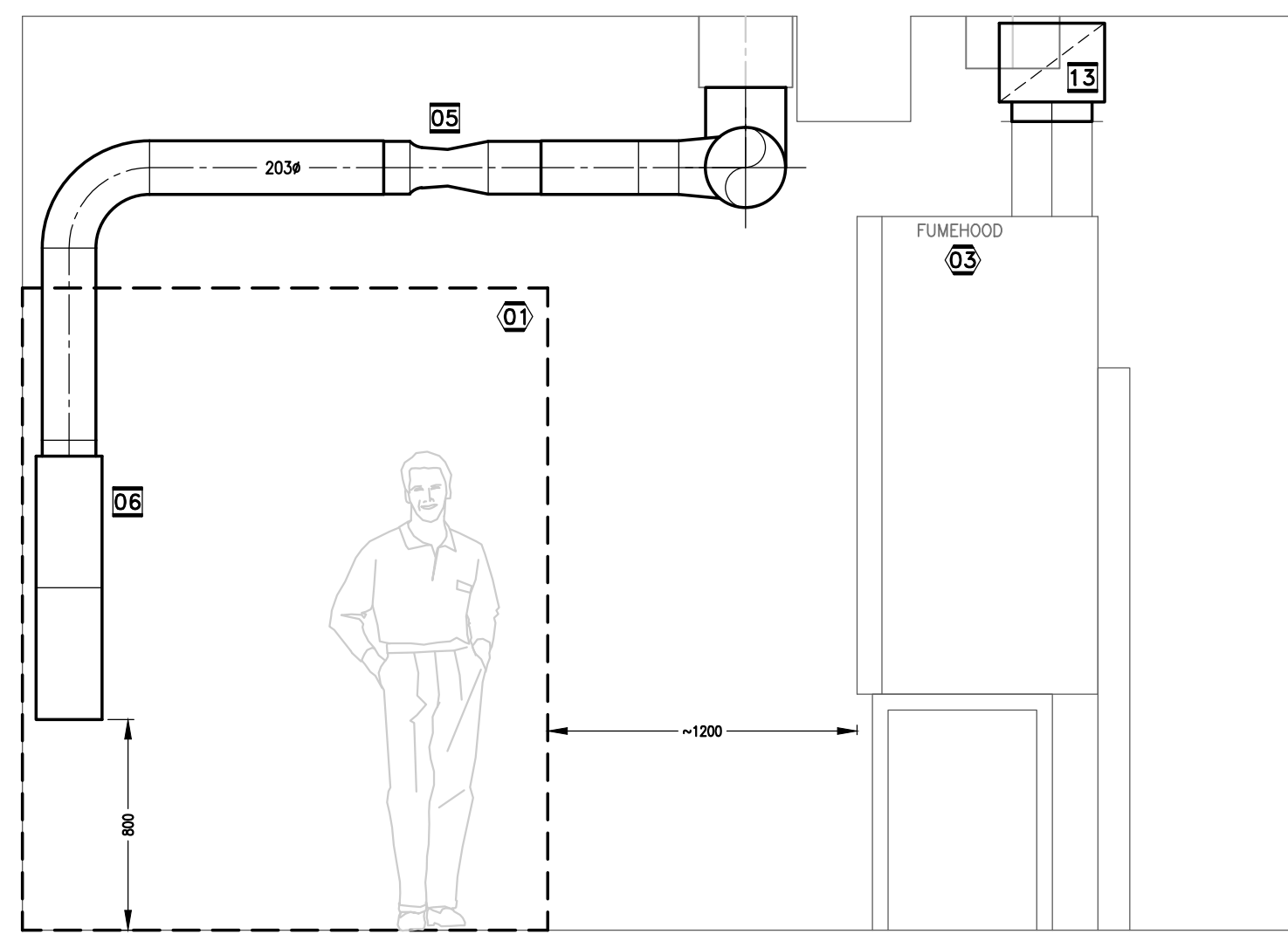
CONSTRUCT ENCLOSURE WITH 18 GAUGE GALVANIZED SHEET STEEL PANELS

04 ENCLOSURE PANEL CONSTRUCTION DETAIL



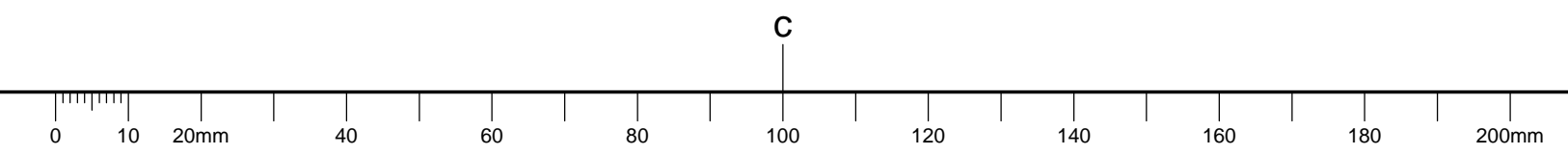
SUBMIT SHOP DRAWING FOR NRC REVIEW BEFORE FABRICATING THIS EXHAUST ENCLOSURE

02 EXHAUST ENCLOSURE DETAIL



03 EXHAUST ENCLOSURE ELEVATION

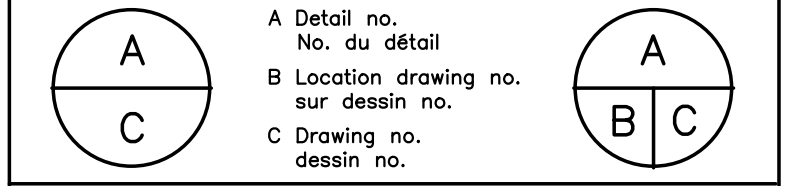
UNLESS SPECIFICALLY NOTED OTHERWISE, ALL GALVANIZED STEEL DUCT, BRISCS, ELBOWS, TRANSFORMATIONS, BRANCH FITTINGS, ETC. SHALL BE FABRICATED, SEALED AND INSTALLED IN ACCORDANCE WITH THE -6" WATER GAUGE (-15 kPa) PRESSURE CLASS (NONBRASING) OF THE LATEST EDITION OF SMACNA ROUND INDUSTRIAL DUCT CONSTRUCTION STANDARDS.



No.	Date	Revision	By:

Date Printed: _____ Date imprimée: _____

- Verify all dimensions and site conditions and be responsible for same
- Vérifier toutes les dimensions et l'état des lieux et en assumer la responsabilité



project: **BUILDING S-77 Nanocomposites Lab 147 Renovations**

SUSSEX DRIVE CAMPUS

GENERAL MISCELLANEOUS DETAILS

designed	conçu	date	date
R.C./A.S.		September	2016
drawn	dessiné	scale	échelle
RODDERS CAS		1:50 UNO	
checked	vérifié	sheet	feuille
R.C./A.S.		G03 of/de	G04
approved	approuvé	W.O.no.	D.T.no.
B VALLIERES			

dwg.no. **5263-G03** dessin no. _____

ITEM 001 WALDNER SECUFLOW RWI FUME HOOD

2100 mm (7 foot) Rear Wall Installation Bench-Mounted Fume Hood
Compliant and tested as per ASHRAE 110 and EN14175 at 40 feet per minute hood face velocity.

AIR FLOW REQUIREMENTS

With 18" (457 mm) sash height opening: 410 CFM max airflow is required at 40 fpm.
With 20" (500 mm) sash height opening: 450 CFM max airflow is required at 40 fpm.
With sash closed occupied mode: 120-180 CFM min airflow is required.

FUME HOOD DESCRIPTION

width 2100 mm
depth 900 mm
working height 900 mm
height 2700 mm (2950 mm with Control Valve Mounted)
Supporting construction for fume cupboard - 2100mm wide H- frame
Rear wall/baffle in Athlon
Secuflow bench-mounted fume cupboard - upper part 2100 mm wide
Internal lining Athlon
Glass pane tempered safety glass
Lighting lamp
Controller/monitoring AC3 microprocessor with airflow damper, VAV
Monitor keypad with visual and acoustical alarms
Sash controller SC Automatic motorized sash, photoelectric barrier and presence sensor
Exhaust air system Control valve with high speed actuator, DN 315 mm
Extraction Under bench/floor exhaust device (connection to units) DN 90mm
Side walls 25mm thick
Internal lining athlon
Side panel design Side glass window, tempered safety glass, partially glazed with material lock
Stoneware worktop 2050 x 708 x 26/33 mm with raised edge on all sides

UNDER BENCH UNITS

- 1x Waste Disposal cupboard for acids and alkalines
Full-height drawer with 1 polypropylene tray
Extraction under bench exhaust
1 Funnel, screwed on container for direct filling with removable sieve for disposal of acids/alkalis suitable for 12 L container
1 PE-HD container 12 L, with PTZ+UN-approval
1x Storage cupboard-combustible hazardous substances or solvents
FWF 90 [90 Minutes Fire Resistance]
to store combustible hazardous substances in working rooms
1 hinged door with one automatically moving-out pull-out tray with perforate plate insert adjustment device with thermo-control
ventilation connections in the rear panel locking device
1 Label for collection container "organic solvents"
1 Funnel, screwed on container for direct filling with removable sieve and grounding tag for disposal of flammable liquids suitable for 10 L containers
1 Container 10 L, PE-HD, for solvents conductive, closure with visual level indication
1x Storage cupboard combustible hazardous substances or solvents
FWF 90 [90 Minutes Fire Resistance]
to store combustible hazardous substances in working rooms
1 hinged door with one automatically moving-out pull-out tray with perforate plate insert adjustment device with thermo-control
ventilation connections in the rear panel locking device

MECHANICAL SERVICES

- 1x Gas (Natural Gas) - outlet + valve
1x Gas (Nitrogen) - outlet + valve
1x Compressed Air - outlet + valve
3x Supply lines, one per service
3x Bench connection piece - supply, one per service
2x Pure gas fitting with pre-shut-off, pressure regulator and dosing valve
Medium: NITROGEN (N2) & OTHER
Material brass
Pressure range up to 1.5 bar
2x Supply line - copper, up to purity degree 5.5
2x Bench connection - copper, up to purity degree 5.5
2x Pure gas fitting with pre-shut-off, pressure regulator and dosing valve
Medium: OXYGEN (O2)
Material brass
Pressure range up to 1.5 bar
1x Supply line - stainless steel, up to purity degree 6.0
1x Bench connection - stainless steel, up to purity degree 6.0
2x Elec Double Socket 125 V, 15A with RCD switch, NEMA 5-15R
1x Elec Outlet Twist Lock 2-Pole 250V/30A BB0320-0512 NEMA L6-30R Wiring
1x Elec Twist Lock 3-Pole 208V/30A
3x Electrical panel
Panels for terminal blocks
Panel with electricity distributor

ITEM 001-1 WALDNER SECUFLOW RWI FUME HOOD

2100 mm (7 foot) Rear Wall Installation Bench-Mounted Fume Hood
Compliant and tested as per ASHRAE 110 and EN14175 at 40 feet per minute hood face velocity.

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With 18" (457 mm) sash height opening: 410 CFM max airflow is required at 40 fpm.
With 20" (500 mm) sash height opening: 450 CFM max airflow is required at 40 fpm.
With sash closed occupied mode: 120-180 CFM min airflow is required.

FUME HOOD DESCRIPTION

width 2100 mm
depth 900 mm
working height 900 mm
height 2700 mm (2950 mm with Control Valve Mounted)
Supporting construction for fume cupboard - 2100mm wide H- frame
Rear wall/baffle in Athlon
Secuflow bench-mounted fume cupboard - upper part 2100 mm wide
Internal lining Athlon
Glass pane tempered safety glass
Lighting lamp
Controller/monitoring AC3 microprocessor with airflow damper, VAV
Monitor keypad with visual and acoustical alarms
Sash controller SC Automatic motorized sash, photoelectric barrier and presence sensor
Exhaust air system Control valve with high speed actuator, DN 315 mm
Extraction Under bench/floor exhaust device (connection to units) DN 90mm
Side walls 25mm thick
Internal lining athlon
Side panel design Side glass window, tempered safety glass, partially glazed with material lock
Stoneware worktop 2050 x 708 x 26/33 mm with raised edge on all sides

UNDER BENCH UNITS

- 2x Storage cupboard for acids and alkalines
1 hinged door and 2 extendable shelves with polypropylene tray
Extraction under bench exhaust
1x Storage cupboard combustible hazardous substances or solvents
FWF 90 [90 Minutes Fire Resistance]
to store combustible hazardous substances in working rooms
1 hinged door with one automatically moving-out pull-out tray with perforate plate insert adjustment device with thermo-control
ventilation connections in the rear panel locking device

MECHANICAL SERVICES

- 1x Gas (Natural Gas) - outlet + valve
1x Gas (Nitrogen) - outlet + valve
1x Compressed Air - outlet + valve
3x Supply lines, one per service
3x Bench connection piece - supply, one per service
2x Pure gas fitting with pre-shut-off, pressure regulator and dosing valve
Medium: NITROGEN (N2) & OTHER
Material brass
Pressure range up to 1.5 bar
2x Supply line - copper, up to purity degree 5.5
2x Bench connection - copper, up to purity degree 5.5
2x Pure gas fitting with pre-shut-off, pressure regulator and dosing valve
Medium: OXYGEN (O2)
Material brass
Pressure range up to 1.5 bar
1x Supply line - stainless steel, up to purity degree 6.0
1x Bench connection - stainless steel, up to purity degree 6.0
2x Elec Double Socket 125 V, 15A with RCD switch, NEMA 5-15R
1x Elec Outlet Twist Lock 2-Pole 250V/30A BB0320-0512 NEMA L6-30R Wiring
1x Elec Twist Lock 3-Pole 208V/30A
3x Electrical panel
Panels for terminal blocks
Panel with electricity distributor

ITEM 002 WORKTOP WALL BENCH WITH SERVICE SPINE

SERVICE SPINE

- 1x Service spine for wall bench - 1500mm x 900mm x 1790 mm with integrated service duct and reagent repository
Front panel steel 1.5mm
Spine extension to 2,250mm
1x Pillar left / right for accessories
Grid width 1500mm
1x Reagent shelf 1500mm x 150 mm in glass-version
1 drawer 150 mm high
3 drawers 200 mm high
Depth 550mm

UNDER BENCH UNITS

- 1x Under bench unit on plinth - 600 mm wide, handle element, aluminium
1 drawer 150 mm high
3 drawers 200 mm high
Depth 550mm
1x Under bench unit on plinth - 900 mm wide, handle element, aluminium
1 drawer 150 mm high
2 hinged doors, 2 height-adjustable shelves
Depth 550mm

WORKTOP

- 1x 1,5 m worktop with 10 mm glass, laid on melamine board x 672 x 30 mm

SUSPENDED CABINETS

- 1x Suspended cabinet - 760mm high - 600 mm wide, U handle, aluminium height: 760mm 1 hinged door, 1 height-adjustable shelf
1x Suspended cabinet - 900 mm wide, U handle, aluminium height: 760mm 2 hinged glass doors 1 height-adjustable shelf

MECHANICAL SERVICES

- 1x Gas (Natural Gas) - outlet + valve
1x Gas (Nitrogen) - outlet + valve
1x Compressed Air - outlet + valve
3x Supply lines, one per service
3x Bench connection piece - supply, one per service
2x Pure gas fitting with pre-shut-off, pressure regulator and dosing valve
Medium: NITROGEN (N2) & OTHER
Material brass
Pressure range up to 1.5 bar
2x Supply line - copper, up to purity degree 5.5
2x Bench connection - copper, up to purity degree 5.5
1x Pure gas fitting with pre-shut-off, pressure regulator and dosing valve
Medium: OXYGEN (O2)
Material brass
Pressure range up to 1.5 bar
1x Supply line - stainless steel, up to purity degree 6.0
1x Bench connection - stainless steel, up to purity degree 6.0
2x Elec Double Socket 125 V, 15A with RCD switch, NEMA 5-15R

ITEM 003 WORKTOP WALL BENCH WITH SINK

UNDER BENCH UNITS

- 1x Sink underbench unit on plinth - 1200 mm wide, handle element, aluminium
2 hinged doors
Depth 550mm

WORKTOP

- 1x 1,5 m polypropylene worktop 750 x 30/37 mm with raised edge, front + rear
2x collateral increased edge

- 1x Sink of PP 500 X 400 X 250 mm

MECHANICAL SERVICES

- 1x Mixer tap (pressurized), 1hole
fitting on stand height 300 mm, projection 200 mm
drinking water, cold (WPC) + drinking water, warm (WPH)
1x Outlet pillar - brass, projection 150 mm - demineralised water (WDC) -
1x One hand eye shower for bench incorporation for two eyes consisting of:
Eye shower with rubber eye protection water outlet via spraying head
Pressure hose 1500 mm, with hose connection 3/8" - drinking water, cold (WPC) -
3x Supply lines, one per service
3x Bench connection piece - supply, one per service
1x Waste disposal line
1x Bench connection piece - waste disposal

ITEM 004 WORKTOP DOUBLE WORK BENCH WITH SERVICE WING

SERVICE WING

- 2x Service wing - expansion stage 3
basic trucking in steel sheet, epoxy powdered, for electrical services
ducts for mechanicals
wing edge designed as a lamp
Grid width 1500mm
Dust cover included
LED lamp, service wing grid 1500mm
1x Service wing - expansion stage 3
basic trucking in steel sheet, epoxy powdered, for electrical services
ducts for mechanicals
wing edge designed as a lamp
Grid width 600mm
Dust cover included
LED lamp, service wing grid 600mm

- 4x Ceiling suspension device for wing modules
2 threaded rod with sleeves and fixation parts as suspension from the ceiling
4x Ceiling fixation

- 2x Cross bracing for wing module to be tied above the suspended ceiling consisting of:
stainless steel rope, fixation rings, rope winder and runner

- 2x Cross bracing for wing module to be tied under the suspended ceiling consisting of:
stainless steel rope, fixation rings, rope winder

- 2x Longitudinal bracing for wing module to be tied above the suspended ceiling consisting of:
stainless steel rope, fixation rings, rope winder and runner
2x Longitudinal bracing for wing module to be tied under the suspended ceiling consisting of:
stainless steel rope, fixation rings, rope winder and runner

- 1x Light switch on-off

BENCH FRAMES

- 4x C-frame - 1500mm x 600mm x 900mm
1x C-frame - 1200mm x 750mm x 900mm

UNDER BENCH UNITS

- 2x Underbench unit movable - 600 mm wide, handle element, aluminium
3 drawers 150 mm high
1 drawer 200 mm high
Depth 550mm
2x Underbench unit movable - 600 mm wide, handle element, aluminium
1 hinged door, 2 height-adjustable shelves
Depth 550mm
1x Underbench unit movable - 900 mm wide, handle element, aluminium
1 drawer 150 mm high
2 hinged doors, 1 height-adjustable shelf
Depth 550mm

WORKTOPS

- 1x 3 m worktop with 10 mm glass, laid on melamine board 600 x 30 mm
1x 3 m worktop with 10 mm glass, laid on melamine board 600 x 30 mm
1x 1,2 m worktop with 10 mm glass, laid on melamine board x 750 x 30 mm

MECHANICAL SERVICES

- 1x Gas (Natural Gas) - outlet + valve
1x Gas (Nitrogen) - outlet + valve
1x Compressed Air - outlet + valve
3x Supply lines, one per service
3x Bench connection piece - supply, one per service
2x Pure gas fitting with pre-shut-off, pressure regulator and dosing valve
Medium: NITROGEN (N2) & OTHER
Material brass
Pressure range up to 1.5 bar
2x Supply line - copper, up to purity degree 5.5
2x Bench connection - copper, up to purity degree 5.5
1x Pure gas fitting with pre-shut-off, pressure regulator and dosing valve
Medium: OXYGEN (O2)
Material brass
Pressure range up to 1.5 bar
1x Supply line - stainless steel, up to purity degree 6.0
1x Bench connection - stainless steel, up to purity degree 6.0
4x Panel 1x Elec Double Socket 125 V, 15A with RCD switch, NEMA 5-15R
4x Panel 3x Elec Double Socket 125 V, 15A with RCD switch, NEMA 5-15R

ITEM 005 LABORATORY SINK

UNDER BENCH UNIT

- 1x Sink underbench unit on plinth - 1200 mm wide, handle element, aluminium
2 hinged doors
Depth 550mm

WORKTOP

- 2x 1,2 m polypropylene worktop 750 x 30/37 mm with raised edge, front + rear
2x Collateral increased edge
1x Sink of PP 400 X 400 X 250 mm

MECHANICAL SERVICES

- 1x Mixer tap (pressurized), 1hole, fitting on stand height 300 mm, projection 200 mm
drinking water, cold (WPC) + drinking water, warm (WPH)
2x Supply lines, one per service
2x Bench connection piece - supply, one per service
1x Waste disposal line
1x Bench connection piece - waste disposal

ITEM 006 LABORATORY CABINET TO STORE FLAMMABLE MATERIALS

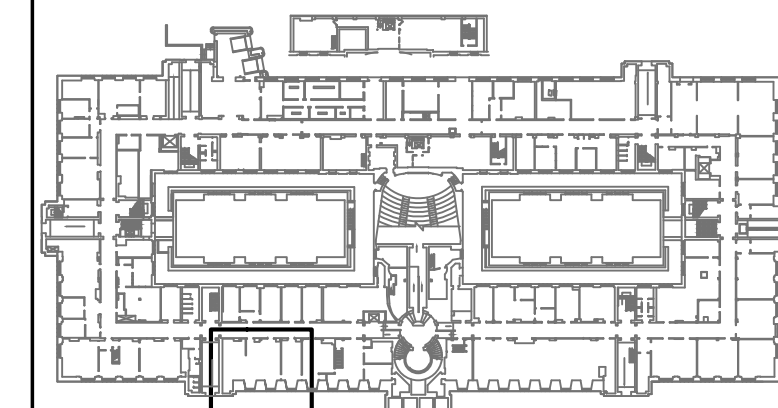
bench construction plinth
width [mm] 595
depth [mm] 595
height [mm] 2040
FR90 - Fire Resistant 90 minutes
Exhaust monitoring unit, without ventilator
Grounding cables with terminals
Bottom tray with grating and base

ITEM 007 ONSITE ASSEMBLY & COMMISSIONING

Work to be performed onsite by specialized technicians:
Assembly of fume hoods
Commissioning of fume hood controllers
Assembly of casework/furniture



www.rodgers.com info@rodgers.com
cell 613.266.2134 3 Rochester St. Carleton Place ON K7C 2P9
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...motivation is key™



keyplan - BASEMENT

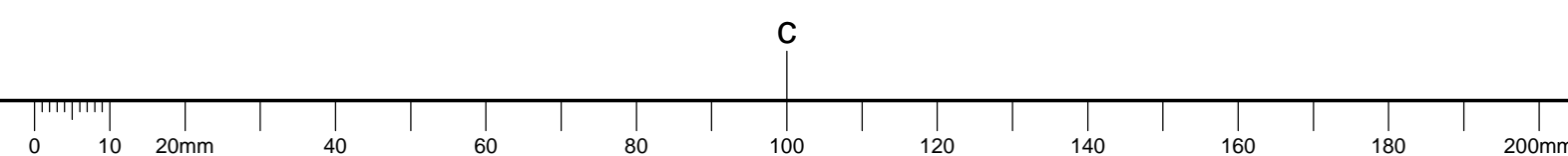
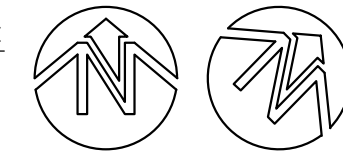
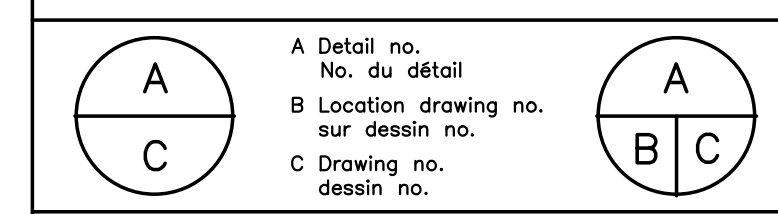


Table with 4 columns: No., Date, Revision, By: / Par: and 4 empty rows.

Date Printed Date imprimée

Verify all dimensions and site conditions and be responsible for same / Vérifier toutes les dimensions et l'état des lieux et en assumer la responsabilité



project BUILDING S-77 Nanocomposites Lab 147 Renovations

drawing SUSSEX DRIVE CAMPUS

GENERAL LABORATORY FURNITURE DETAILS

designed R.C./A.S. conçu September 2016 date

drawn RODDERS CAS dessiné scale 1:50 UNO échelle

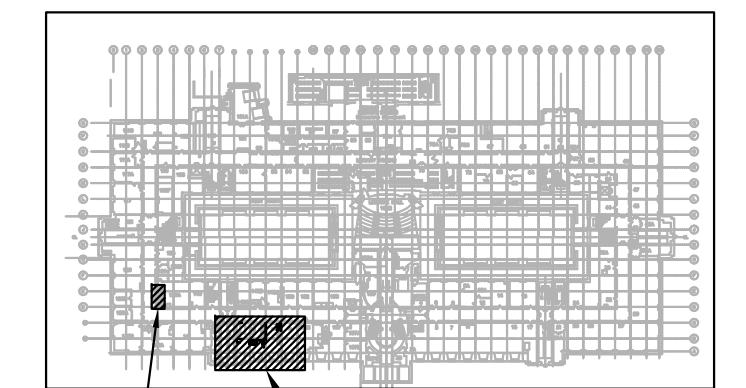
checked R.C./A.S. vérifié sheet G04 of/de G04 feuille

approved B VALLIERES approuvé W.O.no. D.T.no.

dwg.no. 5263-G04 dessin no.

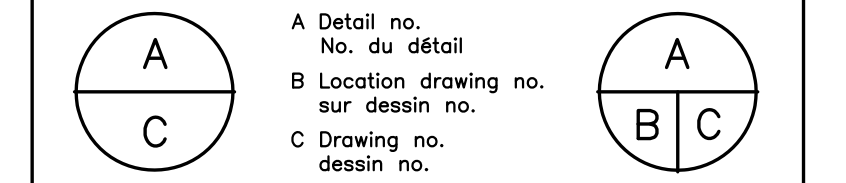
GENERAL NOTES:

- A. READ THIS DRAWING IN CONJUNCTION WITH SPECIFICATIONS, ARCHITECTURAL AND MECHANICAL DRAWINGS.
- B. CONTRACTORS TO CHECK AND VERIFY ALL DIMENSIONS ON SITE PRIOR TO DEMOLITION OR CONSTRUCTION AND REPORT ANY ERRORS OR OMISSIONS TO NRC DEPARTMENTAL REPRESENTATIVE.
- C. CONTRACTORS MUST VISIT THE SITE & FULLY FAMILIARIZE THEMSELVES WITH THE SCOPE OF THE WORK.
- D. PREVENT THE SPREAD OF DUST & DEBRIS BEYOND THE WORK AREA AND CLEAN ALL SURFACES AT COMPLETION.
- E. MAKE GOOD ALL SURFACES AFFECTED BY THIS WORK.
- F. FILL ALL HOLES, PATCH & PAINT ALL SURFACES IN CONTRACT AREA. PAINT ALL SURFACE CONDUITS. COLOR SCHEME TO MATCH EXISTING.
- N. COORDINATE WORK WITH OTHER DIVISIONS FOR INSTALLATION AND TO AVOID INTERFERENCE.
- O. COORDINATE ALL SHUTDOWNS WITH THE NRC DEPARTMENTAL REPRESENTATIVE.
- P. REMOVE MEANS REMOVE AND DISPOSE OF OFF SITE UNLESS OTHERWISE NOTED.
- J. REMOVE REDUNDANT CONDUIT AND WIRING BACK TO SOURCE UNLESS OTHERWISE NOTED, AND MAKE SAFE.
- K. PROVIDE LABELS TO NEW DEVICES TO INDICATE POWER SOURCE. UPDATE PANEL SCHEDULES UPON JOB COMPLETION.
- L. ALL INTERIOR WIRING SHALL BE #12 AWG CONDUCTOR MINIMUM. TYPE R90 XLPE CROSS-LINK POLYETHYLENE STRANDED FOR SIZE NO.8 AND LARGER. TYPE T90 STRANDED FOR SIZE NO.10 AND SMALLER. ALL NEW RACEWAYS SHALL BE THIN WALL ELECTRICAL METALLIC TUBING (EMT) 1/2" MINIMUM UNLESS OTHERWISE INDICATED. CONDUITS TO BE COMPLETE WITH INSULATED TYPE CONNECTORS AND BUSHING.
- N. SURFACE CONDUIT TO RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES. ALL CONDUITS AND JUNCTION BOXES TO BE ANCHORED TO THE BUILDING STRUCTURE.
- O. THE WORD 'PROVIDE' MEANS SUPPLY, INSTALL, CONNECT AND TEST.



WORKING AREA

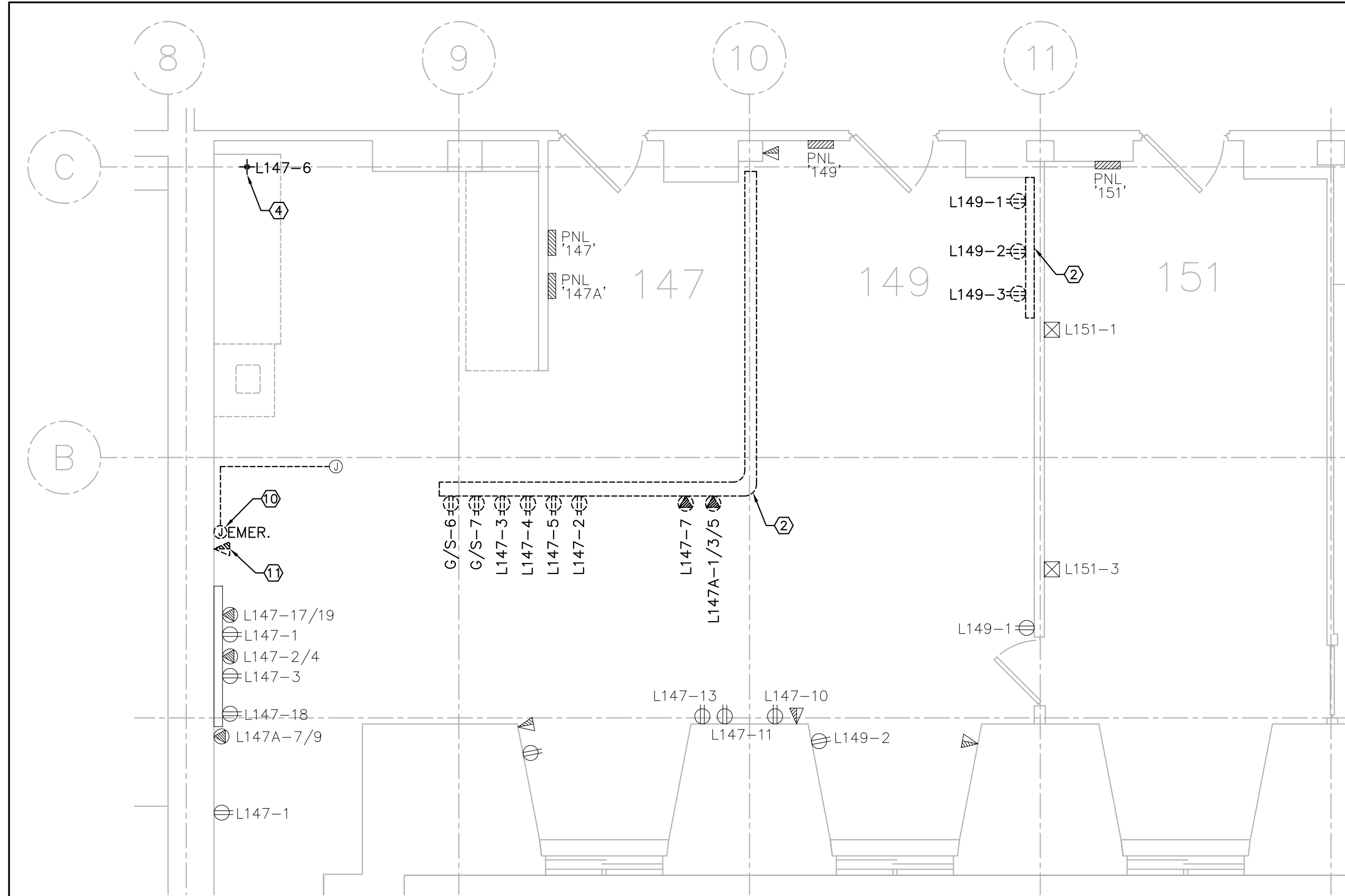
- o Verify all dimensions and site conditions and be responsible for same
- o Vérifier toutes les dimensions et l'état des lieux et en assumer la responsabilité



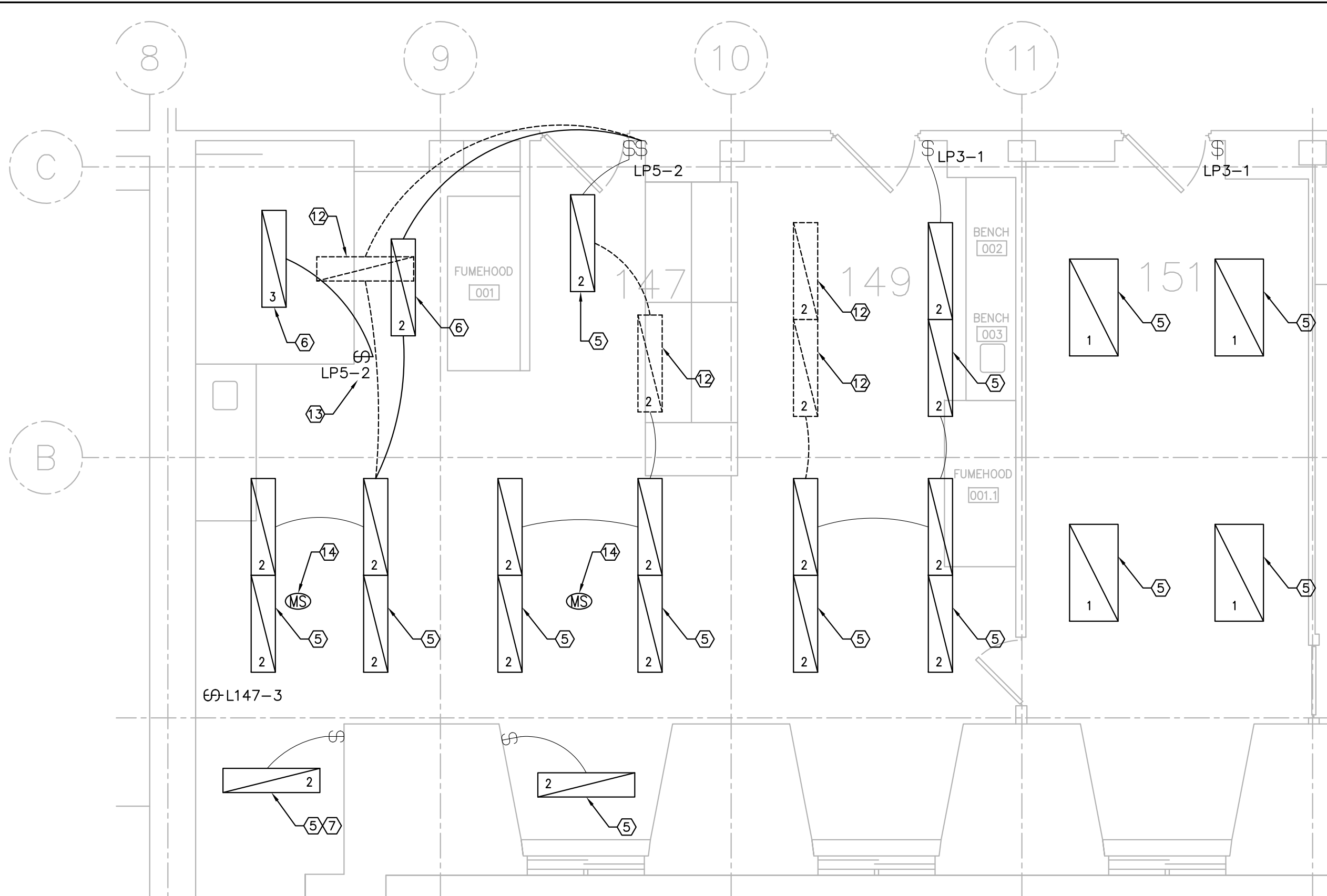
project
BUILDING S-77
NANOCOMPOSITES LAB 147
RENOVATIONS
SUSSEX DRIVE CAMPUS
 drawing
ELECTRICAL LAYOUT
 dessin

designed	C.Y.C	conçu	date	SEP/2016	date
drawn	C.Y.C	dessiné	scale	AS SHOWN	échelle
checked	KL	vérifié	sheet	E01 of/de 1	feuille
approved	BV	approuvé	W.O.no.		D.T.no.
dwg.no.	5263-E01				dessin no.

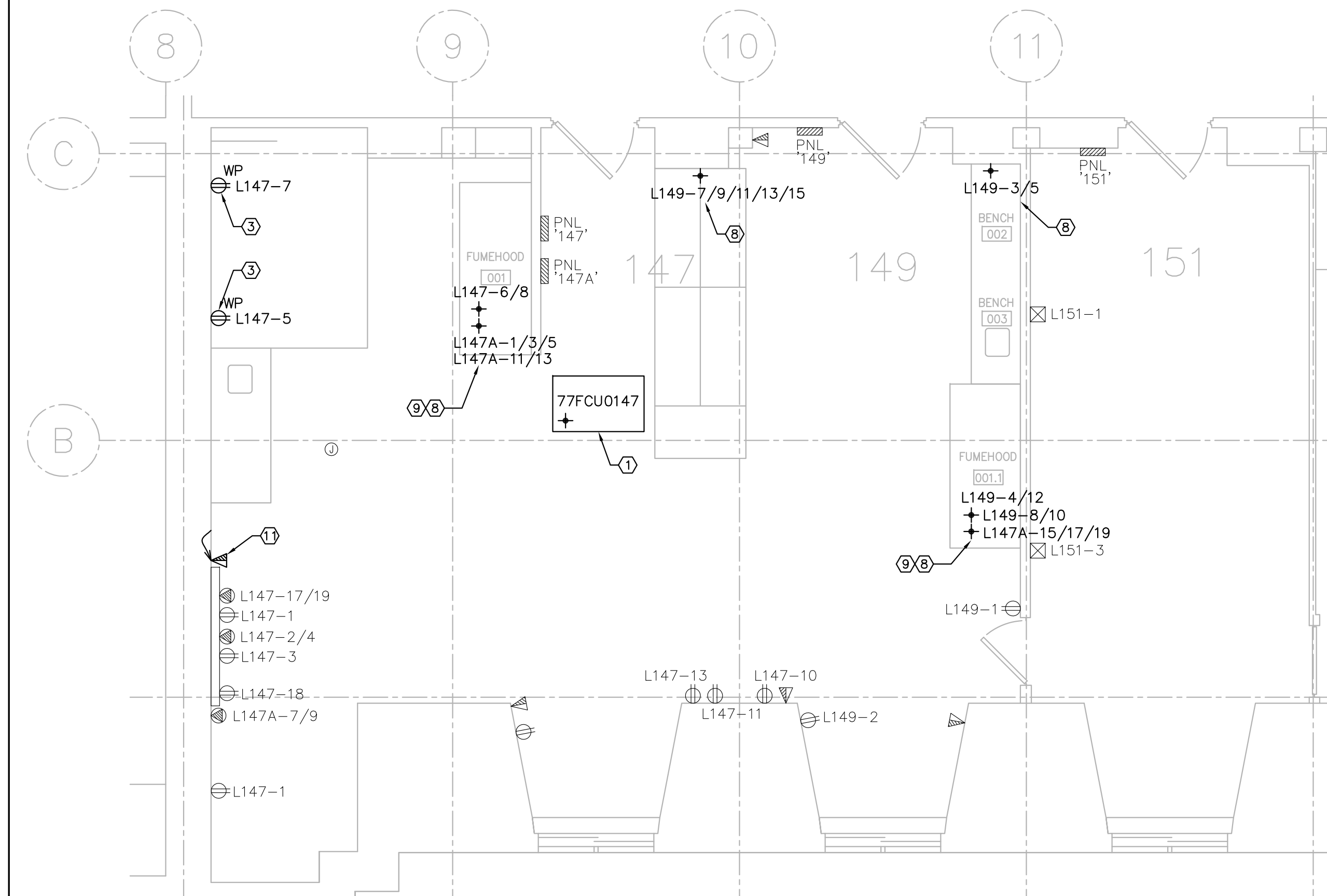
5263-E01



1 GROUND FLOOR ELECTRICAL LAYOUT
 SCALE: 1:50



3 GROUND FLOOR ELECTRICAL LAYOUT
 SCALE: 1:50



2 GROUND FLOOR ELECTRICAL LAYOUT
 SCALE: 1:50

PANEL	149	147	147A
VOLTAGE	120/208V	120/208V	120/208V
PHASE	1	1	3
WIRE	3	3	4
RATING AMPS	100A	100A	100A
LOCATION	RM.147	RM.147	RM.147
MODEL NO.	SQUARE D	SQUARE D	SQUARE D
FED FROM	LF4-23	LF4-23	LF4-6

4 PANEL SCHEDULES
 SCALE: N.T.S

LEGEND	
SYMBOL	DESCRIPTION
[Symbol]	ELECTRICAL PANEL
[Symbol]	MOTION SENSOR
[Symbol]	LUMINAIRE, TYPE AS SHOWN.
[Symbol]	120V, 15A DUPLEX RECEPTACLE
[Symbol]	SPECIAL RECEPTACLE, TYPE AS SHOWN.
[Symbol]	HARDWARE CONNECTION
[Symbol]	TELECOMMUNICATION OUTLET
[Symbol]	WEATHER PROOF
[Symbol]	DARK SOLID LINE DENOTES NEW OR RELOCATED
[Symbol]	LIGHT SOLID LINE DENOTES EXISTING TO REMAIN
[Symbol]	DARK DASHED LINE DENOTES DEMOLITION

GENERAL NOTES:

- 1. EXISTING FAN COIL UNIT TO BE REPLACED BY DIV.23. DIV.26 TO DISCONNECT EXISTING F.C.U AND REINSTATE ALL CONNECTIONS ONCE NEW F.C.U IS IN PLACE. COORDINATE WORK ON SITE WITH DIV.23.
- 2. DISCONNECT AND REMOVE EXISTING CABLE TRAY AND SURFACE RACEWAY, C/W ALL RECEPTACLES. REMOVE ALL WIRING AND CONDUITS BACK TO SOURCE AND MAKE SAFE.
- 3. PROVIDE NEW RECEPTACLES, TYPE AS SHOWN, AND CONNECT TO CIRCUITS AS INDICATED.
- 4. DISCONNECT EXISTING FUMEHOOD. REMOVE WIRING AND CONDUITS BACK TO SOURCE AND MAKE SAFE.
- 5. REPLACE EXISTING LUMINAIRES WITH NEW AT THE SAME MOUNTING HEIGHT. LUMINAIRE TYPE AS PER SCHEDULE.
- 6. PROVIDE NEW LUMINAIRE AND CONTROL SWITCH AND CONNECT TO CIRCUIT AS SHOWN. LUMINAIRE TYPE AS PER SCHEDULE. TYPE 3 IS MOUNTED INSIDE THE NEW BOOTH.
- 7. MOUNT THE LUMINAIRE AS SHOWN AND SUSPEND AT THE SAME HEIGHT AS OTHER LUMINAIRES IN THE ROOM.
- 8. PROVIDE POWER TO NEW FUME HOOD, PRE-WIRED WORK BENCH AND SERVICE WING. PROVIDE NEW 120V, BREAKERS IN PANEL TO SUIT. CONFIRM EQUIPMENT REQUIREMENT ON SITE TO MAKE SURE VOLTAGE AND AMPERAGE ARE CORRECT.
- 9. PROVIDE DEDICATED #6 COPPER BONDING WIRE FROM FUME HOOD BACK TO ELECTRICAL ROOM RM.130 GROUNDING BUS BAR.
- 10. REMOVE EXISTING EMERGENCY JUNCTION BOX, C/W WIRING AND CONDUIT, BACK TO JUNCTION BOX IN CEILING SPACE AND MAKE SAFE.
- 11. RELOCATE EXISTING COMMUNICATION OUTLET TO NEW LOCATION AND RAISE TO ACCOMMODATE CABLE LENGTH.
- 12. DISCONNECT AND REMOVE EXISTING LUMINAIRES, C/W WIRING AND CONDUITS, BACK TO THE NEAREST SOURCE.
- 13. PROVIDE NEW LIGHTING CONTROL TOGGLE SWITCH AND CONNECT TO LUMINAIRE AS SHOWN.
- 14. EXISTING MOTION SENSOR TO STAY. REINSTATE ALL CONNECTIONS TO NEW LUMINAIRES AND FAN COIL UNIT. ENSURE MOTION SENSOR FUNCTIONING PROPERLY UPON JOB COMPLETION.

LUMINAIRE SCHEDULE						
TYPE	LUMINAIRE TYPE	LAMP TYPE	LAMP WATT	LAMP VOLTAGE	MODEL NUMBER	NOTE
1	2'X4' RECESSED	LED	40.3W	120V	PHILIPS 2-AVE-G-38L-840-4-ACR-UNV	
2	4' LINEAR	LED	40.1W	120V	PHILIPS LF-4-10-39-40-U+SV5F36	WITH MTG KIT
3	4' SURFACE	LED	38W	120V	PHILIPS V2-W-L-T-43L-840-4-UNV-IP65+WBK	DUST TIGHT IP65 RATED WITH MTG BRACKET