



TAL-CO SUPPLEMENTAL INSTRUCTION #64			
TEST FACILITY - LIGHTING & ELECTRICAL			
Project Name:	RW TOMLINSON - NEW HEAD OFFICE		
Project Location:	100 CitiGate Drive, Ottawa, Ontario		
ARCH. SI #:	N/A	Issued By:	Chris Simpson
STRUC. SI #:	N/A	Date Issued:	October 4, 2017
MECH. SI #:	N/A	Revision #:	N/A
ELEC. SI #:	E104 & E206	Revision Date:	N/A

Supplemental Instructions are issued by the Construction Manager to record a clarification or revision to the previously issued Contract Documentation as reflected by the attached information prepared by the identified Professionals.

The Construction Manager shall review the Supplemental Instruction and the attached information and issue to the affected Trade Contractors identifying the following course of action by the Trade Contractor.

Notify TAL-CO within 5 days of receipt, if the attached documents will require a change to Contract Price or Schedule.

TITLE: TEST FACILITY - LIGHTING & ELECTRICAL

Reference:

Architectural Construction Update 28-Jul-2017

Electrical Issued for Construction 22-Nov-2016

Attachments:

CCN E12

Electrical Drawing E104 - Issued for CCN E12 - 01 Oct 2017

Electrical Drawing E206 - Issued for CCN E12 - 01 Oct 2017

Description of the Work:

To provide Test Facility Lighting & Electrical Details.

Reason:

Due to revised Test Facility Layout.

Contemplated Change Notice

CCN E-12

Project: Tomlinson Regional Headquarters Building
Location: 100 Nortel Drive, Ottawa
Contractor: Tal-Co Building Innovations / Continental – Price Electric
Date: Sept. 26, 2017

Provide quotation/credit for proposed work described in this CCN. No work can commence prior to approval of this quotation.

Scope of work.

1. Electrical distribution - Revised test facility layout:
 - a. Refer to attached drawing (new power distribution) to accommodate, layout changes, additional equipment, equipment changes etc.
 - b. Attached drawing to replace existing drawing E-206.

End of CCN

An exact copy of all working documents including, without limitation, the original of the present document or plan is kept on file by J.R.P. Engineering. Any modification carried out to this document or plan or to accompanying documents without written authorization by the engineer is prohibited.

Authorized modifications must be signed and sealed by an engineer and this engineer will be completely responsible for these modifications. J.R.P. Engineering is not and will not be responsible for the consequences of these modifications or for modifications carried out without its consent.

GENERAL / CONSTRUCTION NOTES:

1. THE ISSUED FOR CONSTRUCTION SET OF DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE FOLLOWING ADDITIONAL CONTRACT DOCUMENTS:

- .1 NOOGA COMMS/AV/SECURITY DRAWINGS.
- .2 ESA PLAN APPROVAL REVIEW COMMENTS.

DRAWING NOTES:

- ◇ PROVIDE LED EXIT SIGN C/W DIRECTIONAL ARROWS AS INDICATED, ALL ASSOCIATED HARDWARE. EXIT SIGN TO BE TIED INTO EMERGENCY LIGHTING CIRCUIT.
- ◇ LIGHT FIXTURE TO BE TIED INTO EMERGENCY LIGHTING CIRCUIT AND REMAIN UNSWITCHED AT ALL TIMES.
- ◇ PROVIDE LIGHTING FIXTURE, ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
- ◇ FIRE ALARM PANEL, REFER TO RISER DIAGRAM FOR FURTHER DETAILS.
- ◇ PROVIDE FIRE ALARM DEVICE AS INDICATED C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
- ◇ LIGHTING TO BE CONTROLLED BY BAS BUILDING AUTOMATION SYSTEM.



1 TEST FACILITY – R.C.P.
E104 SCALE 1:100

No	DESCRIPTION	DATE
B	ISSUED FOR CCN – E12 REV 1	OCT. 1 2017
A	ISSUED FOR CCN – E12	SEPT. 26 2017

REVISIONS

No	DESCRIPTION	DATE

client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

drawing title:
**R.C.P
TEST FACILITY
REVISED LAYOUT
CCN E12**

scale:	AS SHOWN	drawn by:	M.G
designed by:	M.G	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	NOV. 2016

project no.:	100-16L	drawing no.:	E-104
revision:	0		



1 TEST FACILITY – ELECTRICAL DISTRIBUTION
SCALE 1:100

- DRAWING NOTES:**
- 1 PROVIDE DUPLEX RECEPTACLE (5-15R) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
 - 2 PROVIDE DEDICATED/SPLIT DUPLEX RECEPTACLE AS INDICATED (5-15R) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
 - 3 PROVIDE GFCI DUPLEX RECEPTACLE (5-15R) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
 - 4 PROVIDE DEDICATED DUPLEX RECEPTACLE (5-20R) FOR NEW PRINTER C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
 - 5 PROVIDE TWO (2) CONTROLS TRANSFORMER FOR ADDITIONAL VAV BOXES (LOW VOLTAGE WIRING BY OTHERS) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE. MOUNT TO UNDERSIDE OF SLAB. LOCATIONS NOT SHOWN.
 - 6 PROVIDE DISTRIBUTION PANEL, REFER TO SLD AND PANEL SCHEDULE FOR FURTHER DETAILS.
 - 7 PROVIDE ELECTRICAL DISTRIBUTION AS PER SLD, C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
 - 8 112.5KVA TRANSFORMER C/W AL CONDUIT, WIRING AND ASSOCIATED HARDWARE. MOUNTED AT HIGH LEVEL.
 - 9 PROVIDE NEW SECURE DOOR AS PER NOOGA/SECURITY DRAWINGS.
 - 10 FUTURE UNIT HEATER: PROVIDE 120V CIRCUIT c/w ALL ASSOCIATED CONDUIT, WIRING, FASTENERS AND HARDWARE TO LOADING DOCK UNIT HEATER. TERMINATE IN CEILING MOUNTED J/B AND LABEL FOR FUTURE UNIT HEATER. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS.
 - 11 DHWT: PROVIDE 120V CIRCUIT c/w ALL ASSOCIATED CONDUIT, WIRING, FASTENERS AND HARDWARE.
 - 12 FT-1: PROVIDE DIRECT CONNECTION AND INTERCONNECTION B/W VSD AND FAN c/w ALL ASSOCIATED CONDUIT, WIRING, FASTENERS AND HARDWARE.
 - 13 AHU-1: PROVIDE DIRECT CONNECTION c/w DISCONNECT SWITCH (60A, NEMA 3R) ALL ASSOCIATED CONDUIT (21MMC), WIRING (3X#10+GND), FASTENERS AND HARDWARE.
 - 14 AHU-2: PROVIDE DIRECT CONNECTION c/w DISCONNECT SWITCH (30A, NEMA 3R) ALL ASSOCIATED CONDUIT (21MMC), WIRING (3X#10+GND), FASTENERS AND HARDWARE.
 - 15 RADIANT HEATER: PROVIDE 120V CIRCUIT c/w INTERCONNECTION B/W LINE VOLTAGE THERMOSTAT, ALL ASSOCIATED CONDUIT, WIRING, FASTENERS AND HARDWARE.
 - 16 FT-2 & FT-3: PROVIDE DIRECT CONNECTION c/w DISCONNECT SWITCH (RATED TOGGLE), ALL ASSOCIATED CONDUIT, WIRING, FASTENERS AND HARDWARE.
 - 17 FT-4 & FT-5: TIE INTO LOCAL LIGHTING CONTROL SWITCH.
 - 18 THE ELECTRICAL CONTRACTOR SHALL ALLOW FOR THE INSTALLATION OF ELECTRICAL INFRASTRUCTURE FOR LAB EQUIPMENT ITEMS INDICATED IN THE TEST FACILITY EQUIPMENT SCHEDULE AND PANEL SCHEDULE. HOWEVER, THE CONTRACTOR MUST CONFIRM EXACT LOCATIONS OF EACH DEVICE ON SITE WITH THE GENERAL CONTRACTOR AS REQUIRED.

TEST FACILITY EQUIPMENT SCHEDULE													
#	Qty	Equipment Discription	Volts	Phase	Amps	KW	HP	Direct	Receipt	Elec Remarks	Elec Breaker	Elec Feeder	Elec Circuit
1	1	Balance – Ohaus: EP22001	120	1	1.0				5-15P		15A-1P	2#12-12mmC	
2	1	Balance – Ohaus: RD35LM	120	1	1.0				5-15P		15A-1P	2#12-12mmC	
3	1	Balance – Ohaus: EP4102	120	1	1.0				5-15P		15A-1P	2#12-12mmC	
4	1	Balance – Mettler: PJ6000	120	1	1.0				5-15P		15A-1P	2#12-12mmC	
5	3	Forced Air Over – Quincy Labs: 21-350	120	1	18.0				5-20P	Bench	20A-1P	2#12-12mmC	
6	1	Forced Air Over – Shel Lab: FX28-2	208	1	20.0				6-20P	Floor	20-2P	2#12-12mmC	
7	1	Forced Air Over – Barnstead/Thermo: LC-18	208	1	16.0				6-20P	Floor	20-2P	2#12-12mmC	
8	1	Lab Oven – Quincy Labs: 10GC	120	1	5.2				5-15P	Counter top	15-1P	2#12-12mmC	
9	1	Microwave Oven – Panasonic: NN-T795SFX	120	1		1.2			5-15P	Dedicated	15-1P	2#12-12mmC	
10	1	Microwave Oven – Panasonic: JES16505HC01	120	1		1.55			5-15P	Dedicated	15-1P	2#12-12mmC	
11	2	Sieve Shaker – Ro-Tap: RX-29	120	1	4.4				5-15P		15-1P	2#12-12mmC	
12	1	Sieve Shaker – Ro-Tap: RX-30	120	1	4.4				5-15P		15-1P	2#12-12mmC	
13	2	Sieve Shaker – Gilson: TS-1	120	1	15				5-15P	Dedicated	15-1P	2#12-12mmC	
14	1	Sieve Shaker – Gilson: SP4	120	1	15				5-15P	Dedicated	15-1P	2#12-12mmC	
15	1	Gyratory Compactor – Troxler: 4141	120	1	10				5-15P	Dedicated	15-1P	2#12-12mmC	
16	1	Gyratory Compactor – Pine: AFG2A	120	1	12				5-15P	Dedicated	15-1P	2#12-12mmC	
17	1	Mechanical Mixer – Spar: SP-200	120	1	13				5-15P	Dedicated	15-1P	2#12-12mmC	
18	1	Hot Plate – Barnstead/Cimarec: HP141925	120	1	5.5				5-15P		15-1P	2#12-12mmC	
19	1	Marshall Compression Machine – Humbolt: H-1322	120	1	15				5-15P	Dedicated	15-1P	2#12-12mmC	
20	1	Water Bath – Humbolt: H-1390	120	1	15				5-15P	Dedicated	15-1P	2#12-12mmC	
21	1	Water Bath – Humbolt: H-1394	120	1	15				5-15P	Dedicated	15-1P	2#12-12mmC	
22	1	Centrifuge Extractor – Ploog: M207	120	2	5				5-15P		15-1P	2#12-12mmC	
23	1	High Speed Centrifuge – SMM	120	1	6				5-15P		15-1P	2#12-12mmC	
24	1	Solvent Recycler – Spee-distill	120	1					5-15P		15-1P	2#12-12mmC	
25	1	Ignition Oven – Troxler: 4155	208	1	50				6-50P		50-2P		
26	1	UN-USED											
27	1	Water Bath Heater – EBO-JAGER: TS-250	120	1		300			5-15P		15-1P	2#12-12mmC	
28	1	Vacuum Pump – Hyvac 1: 91105	120	1	6.6				5-15P		15-1P	2#12-12mmC	
29	1	Digital Residual Pressure	120	1	0.3				5-15P		15-1P	2#12-12mmC	
30	1	UN-USED											
31	1	Freezer – Woods: C1011W3	120	1	3.3				5-15P		15-1P	2#12-12mmC	
32	1	Circulation Fan in freezer – Delta Electronics: WFB1212HE	120	1	0.55				5-15P		15-1P	2#12-12mmC	
33	1	MDA Loss Jar Rolling Mill – Geneq Inc: MRCO10-0	120	1	15				5-15P		15-1P	2#12-12mmC	
34	1	Parts Washer – Zep	120	1	1				5-15P		15-1P	2#12-12mmC	

PANEL NAME: "CDP-T1" LOCATION: TEST FACILITY 400A, 600V, 3A, 3W												
DESCRIPTION	KVA LOAD			BRK SIZE	KVA LOAD			BRK SIZE	KVA LOAD			DESCRIPTION
	#A	#B	#C		#A	#B	#C		#A	#B	#C	
112.5KVA DISTRIBUTION TRANSFORMER				150				150				DUST COLLECTOR FT-1
TEST FACILITY AHU-T1				150				150				SPARE
TEST FACILITY AHU-T2				150				150				HEAT EXTRACTION FAN FT-3
SPACE												SPACE
SPACE												SPACE

2 TEST FACILITY – 600V CDP-T1 SCHEDULE
SCALE NTS

PANEL NAME: "A-TF" LOCATION: TEST FACILITY 225A, 120/208V, 3A, 4W														
DESCRIPTION	KVA LOAD			BRK SIZE	KVA LOAD			BRK SIZE	KVA LOAD			DESCRIPTION		
	#A	#B	#C		#A	#B	#C		#A	#B	#C			
LAB – BALANCE				15	1			20				WORKSTATIONS		
FORCED AIR OVEN – BENCH – QUINCY LABS				20	3			20				WORKSTATIONS		
FORCED AIR OVER – SHEL LAB				20	5			20				WASHROOM EXHAUST FAN F-4		
FORCED AIR OVER – BARNSTEAD THERMOLINE LC-18				2P	7			15				PRINTER		
LAB OVEN – QUINCY LABS: 10GC				20	9			15				KITCHENETTE		
FREEZER – WOODS: CIRCULATION FAN IN FREEZER				2P	11			12				KITCHENETTE		
TEST FACILITY RECEPTACLE GEN. PURP.				15	13			14				WASHROOM GFCI RECEPT.		
TEST FACILITY RECEPTACLE GEN. PURP.				15	13			14				IRRIGATION CONTROLLER/PUMP		
TEST FACILITY RECEPTACLE GEN. PURP.				20	19			20				SPARE		
TEST FACILITY RECEPTACLE GEN. PURP.				20	21			22				SPARE		
TEST FACILITY RECEPTACLE GEN. PURP.				20	23			24				SPARE		
TEST FACILITY RECEPTACLE GEN. PURP.				20	25			26				SPARE		
TEST FACILITY RECEPTACLE GEN. PURP.				20	27			28				SPARE		
TEST FACILITY RECEPTACLE GEN. PURP.				15	29			30				SPARE		
TEST FACILITY RECEPTACLE GEN. PURP.				15	31			32				SPARE		
OFFICE AREA RECEPTACLE GEN. PURP.				15	33			34				SPARE		
OFFICE AREA RECEPTACLE GEN. PURP.				15	35			36				SPARE		
ENTRANCE HEATER				15	37			38				SPARE		
FORCED AIR OVEN				2P	39			40				SPARE		
EXHAUST FAN FT-2 FUME EXHAUST				15	43			44				SPARE		
EXHAUST FAN FT-3				15	45			46				SPARE		
HEAT TRACE				15	47			48				SPARE		
FORCED AIR OVEN – BENCH – QUINCY LABS				15	49			50				SPARE		
FORCED AIR OVEN – BENCH – QUINCY LABS				20	51			52				SPARE		
FORCED AIR OVEN – BENCH – QUINCY LABS				20	53			54				SPARE		
FORCED AIR OVEN – BENCH – QUINCY LABS				20	55			56				SPARE		
FORCED AIR OVEN – BENCH – QUINCY LABS				20	57			58				SPARE		
LIGHTING				15	59			60				SPARE		
MICROWAVE OVEN – PANASONIC: NN-T795SFX									15	61		62	15	WORKSTATIONS
MICROWAVE OVEN – PANASONIC: JES16505HC01									15	63		64	15	WORKSTATIONS
SIEVE SHAKER – RO-TAP: RX-29									15	65		66	15	WORKSTATIONS
SIEVE SHAKER – GILSON: TS-1									15	67		68	15	PRINTER
SIEVE SHAKER – GILSON: SP4									15	69		70	15	KITCHENETTE
GYRATORY COMPACTOR – TROXLER: 4141									15	71		72	15	KITCHENETTE
GYRATORY COMPACTOR – PINE: AFG2A									15	73		74	15	WASHROOM GFCI RECEPT.
MARSHALL COMPRESSION MACHINE – HUMBOLT: H-1322									15	75		76	15	IRRIGATION CONTROLLER/PUMP
WATER BATH – HUMBOLT: H-1390									15	77		78	15	SPARE
WATER BATH – HUMBOLT: H-1394									15	79		80	15	SPARE
FORCE AIR OVEN									15	81		82	15	SPARE
CENTRIFUGE EXTRACTOR – PLOOG: M207									15	83		84	15	SPARE
HIGH SPEED CENTRIFUGE – SMM									15	85		86	15	SPARE
SOLVENT RECYCLER – SPEE-DISTILL									15	87		88	15	SPARE
IGNITION OVEN – TROXLER: 4155									15	89		90	15	SPARE
WATER BATH HEATER – EBO-JAGER: TS-250									15	91		92	15	SPARE
VACUUM PUMP – HYVAC 1: 91105									103	103		104		SPARE
DIGITAL RESIDUAL PRESSURE									105	105		106		SPARE
MDA LOSS JAR ROLLING MILL – GENEQ INC: MRCO10-0									107	107		108		SPARE
PARTS WASHER – ZEP									109	109		110		SPARE
CHESSE FREEZER + CIRCULATION FAN									111	111		112		SPARE
WORKSTATIONS									113	113		114		SPARE
WORKSTATIONS									115	115		116		SPARE
WORKSTATIONS									117	117		118		SPARE
WORKSTATIONS									119	119		120		SPARE

3 TEST FACILITY – 120/208V A-TF SCHEDULE
SCALE NTS

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