



1	2018AUG15	ADDENDUM 3	C.W.	M.M.
0	2018JUL03	ISSUED FOR TENDER	C.W.	M.M.
No.	Date/Date	Description/Description	Drawn Dessiné by par	Approved Approuvé

Revision / Revision	
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="border-bottom: 1px solid black; width: 100%; text-align: center;">A</div> <div style="width: 100%; text-align: center;">C</div> </div> </div> <div style="text-align: left;"> <p>A detail number numero de detail</p> <p>B source drawing no. de dessin no.</p> <p>C detail on drawing no. detail sur dessin no.</p> </div> </div>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="border-bottom: 1px solid black; width: 100%; text-align: center;">A</div> <div style="width: 100%; text-align: center;">B C</div> </div> </div> <div style="text-align: left;"> <p>Eng. Stamp Sceau de l'ingénieur</p> </div> </div>
<p>Consultant's Name Nom de l'expert-consult</p>	<p>Associated Engineering</p>
<div style="display: flex; justify-content: space-around; align-items: center;">   </div>	
<p>APEGA Permit to Practice P 3979</p>	
<p>2018-Aug-15</p>	

Client/client	
	Parks Canada Agency
	L'Agence Parcs Canada
	Western and Northern Region
	Ouest et Nord du Canada

Project title/Titre du projet

JOHNSTON CANYON
UPGRADE

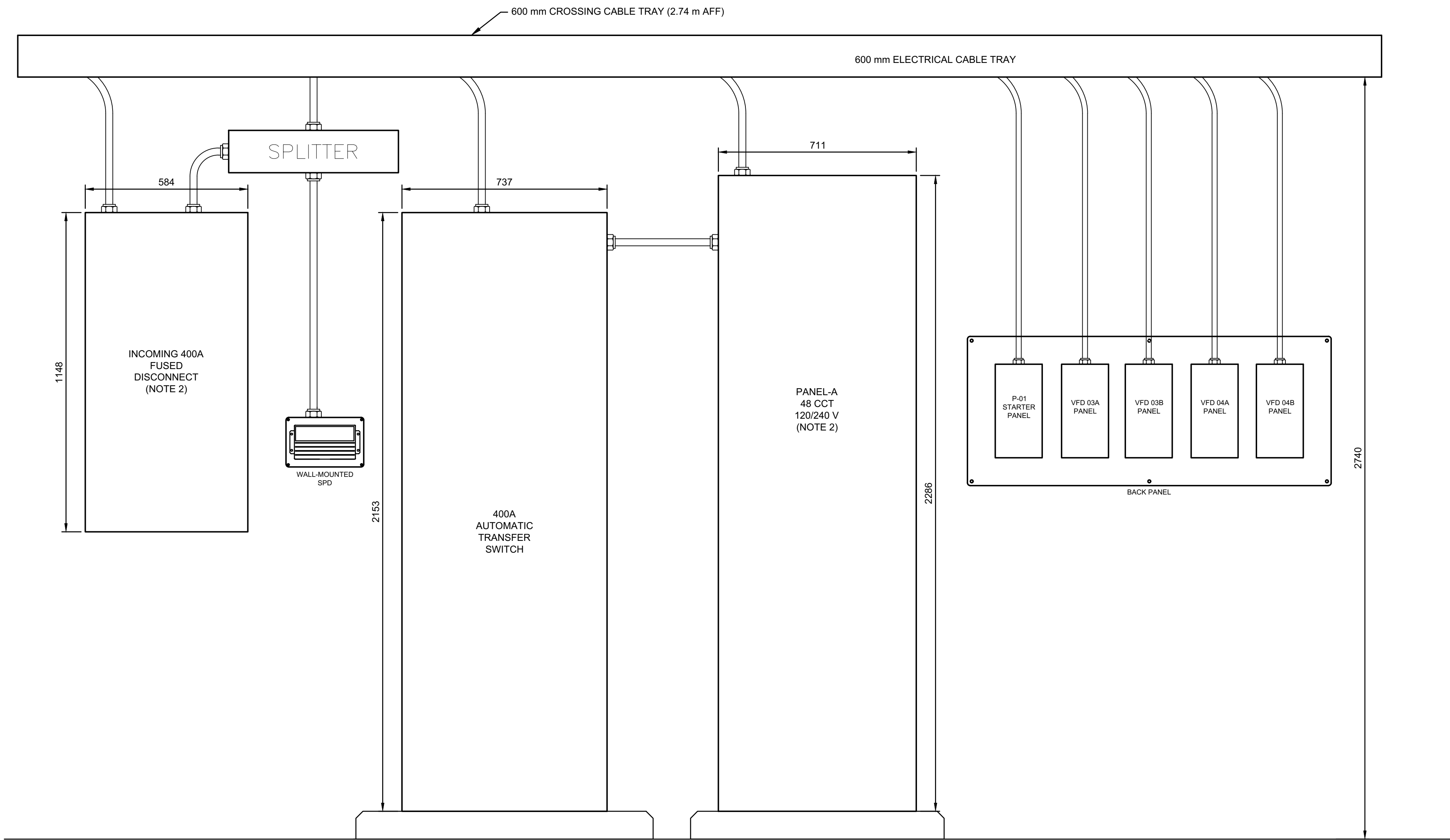
BANFF NATIONAL PARK

Drawing title/Titre du dessin

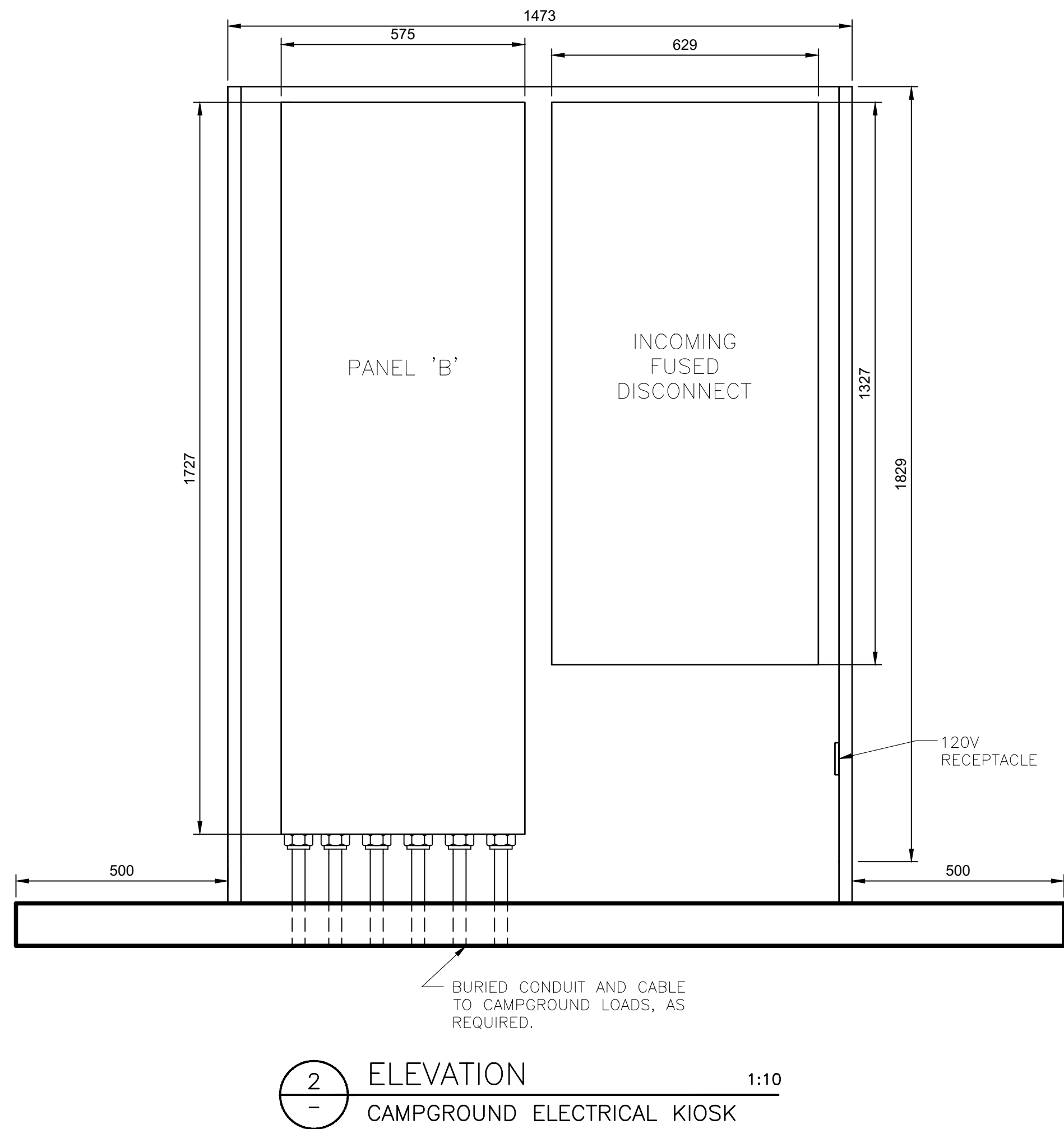
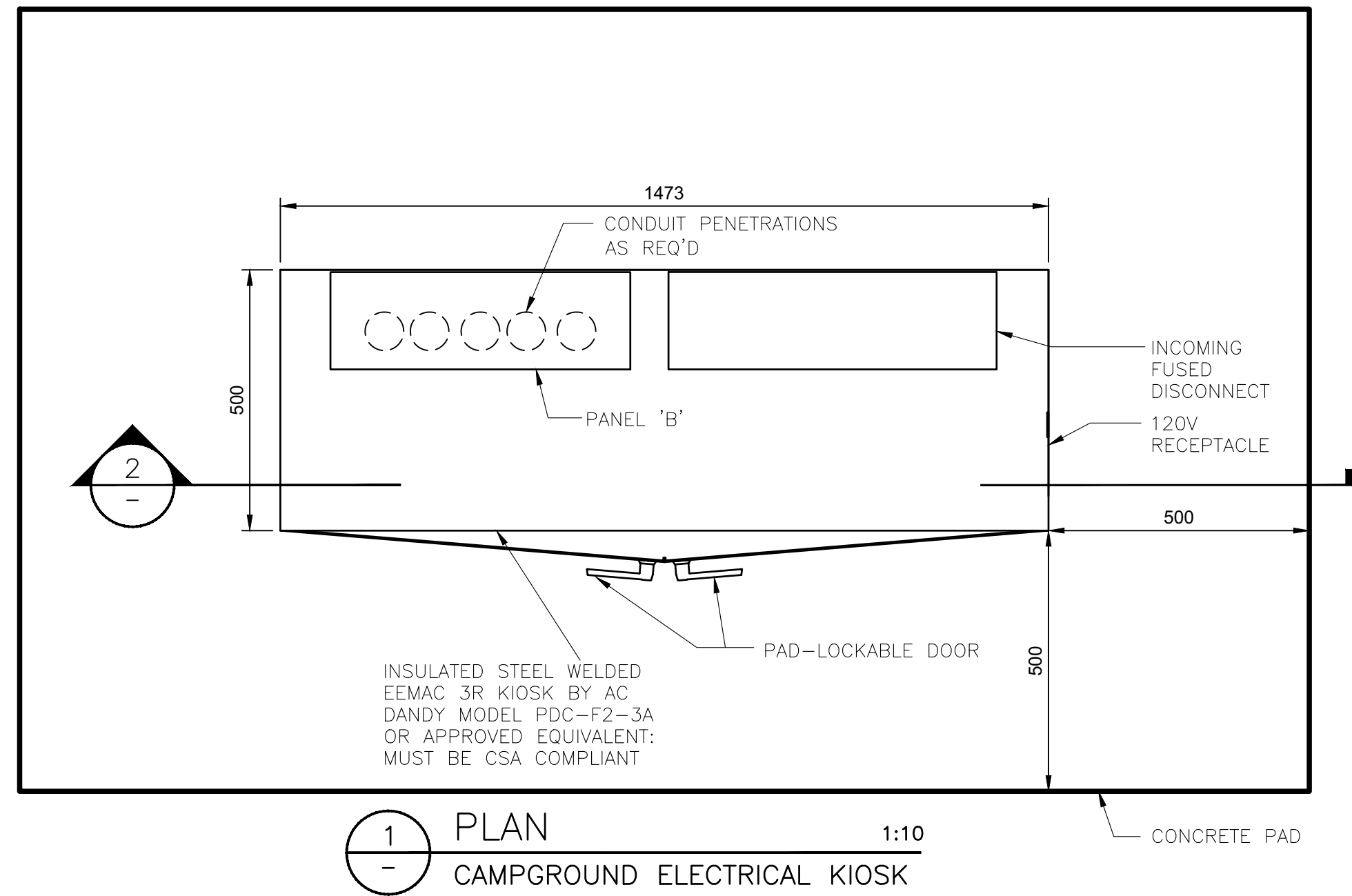
ELECTRICAL
WATER TREATMENT FACILITY
SINGLE LINE DIAGRAM

Survayé par/Paré par	Down by/Dessiné par	Date/Date
	C. WHITEHOUSE	2018FEB20
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
M. MAJUMDAR	R. COLBECQ	AS SHOWN
PWOSC Project Manager/Administrateur de Projets TPSOC		
K. LYALL / L. MACDONALD		
Client Acceptance/Acceptation du client		Approved by/Approuvé par
Peri. Responsible Officer/Agent Responsable		PWOSC Project Manager/Administrateur de Projets TPSOC
Project No./No. du projet	Assel No./No. du-bûien	Sheet No./No. de la feuille
20180475-06		58
Drawing Number/No. de référence du dessin		85
3475-06-E-102		

- NOTES:
- USE VFDs WITH INTEGRATED 3% LINE REACTOR OR CHOKES SUCH AS EATON SVX900, ABB ACS550 OR APPROVED EQUIVALENT.
 - SERVICE ENTRANCE RATED.



1 ELEVATION
WATER TREATMENT FACILITY ELECTRICAL ROOM EQUIPMENT 1:10



PANEL 'B' SCHEDULE - CAMPGROUND

LOCATION: JOHNSTON CANYON CAMPGROUND ELECTRICAL KIOSK VOLTAGE: 120/240 V PHASE: 1Ø
MOUNTING: WALL MOUNTED BUS RATING: 400 AMPS WIRE: 3
INCOMING LUGS: 400 AMPS MAIN BREAKER: SEE SINGLE LINE DIAGRAM MANUFACTURER: SIEMENS P1, OR APPROVED EQUAL

OCT No.	DESCRIPTION	WATTAGE	BKR AMPS	BUS A	BKR AMPS	WATTAGE	DESCRIPTION	OCT No.
1	CAMPGROUND WASHROOM 1	5500	60	A	60	5500	CAMPGROUND WASHROOM 4	2
3			2P	B	2P			4
5	CAMPGROUND WASHROOM 2	5500	60	A	60	5500	CAMPGROUND WASHROOM 5	6
7			2P	B	2P	6125		8
9	CAMPGROUND WASHROOM 3	5500	60	A	60	5000	"THE BEAR DEN" THEATRE BUILDING	10
11			2P	B	2P	5000		12
13	COOKHOUSE 2	350	15	A	15	350	COOKHOUSE 5	14
15			2P	B	2P	350		16
17	COOKHOUSE 4	350	15	A	15		COOKHOUSE 7	18
19			2P	B	2P			20
21	COOKHOUSE 6	350	30	A	15	500	RECEPTACLE IN PANEL (GFCI)	22
23			2P	B	15		SPARE	24
25	COOKHOUSE 8	350		A	15	350	COOKHOUSE 10	26
27			2P	B	2P	350		28
29	SPARE		30	A	15		SPARE	30
31			2P	B	15		SPARE	32
33	SPARE		30	A	15		SPARE	34
35			2P	B			SPACE	36
37	SPACE			A			SPACE	38
39	SPACE			B			SPACE	40
41	SPACE			A			SPACE	42
SUBTOTALS:		17900	17900			17200	17325	

NOTES:

1. BREAKERS MARKED GFI ARE TO USE PANEL STYLE GFI PROTECTION NOT OUTLET STYLE

PHASE A TOTAL - 35100 W
PHASE B TOTAL - 35225 W
PANEL LOAD TOTAL - 70325 W

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Revision / Revision	
A	A
B	B
C	C

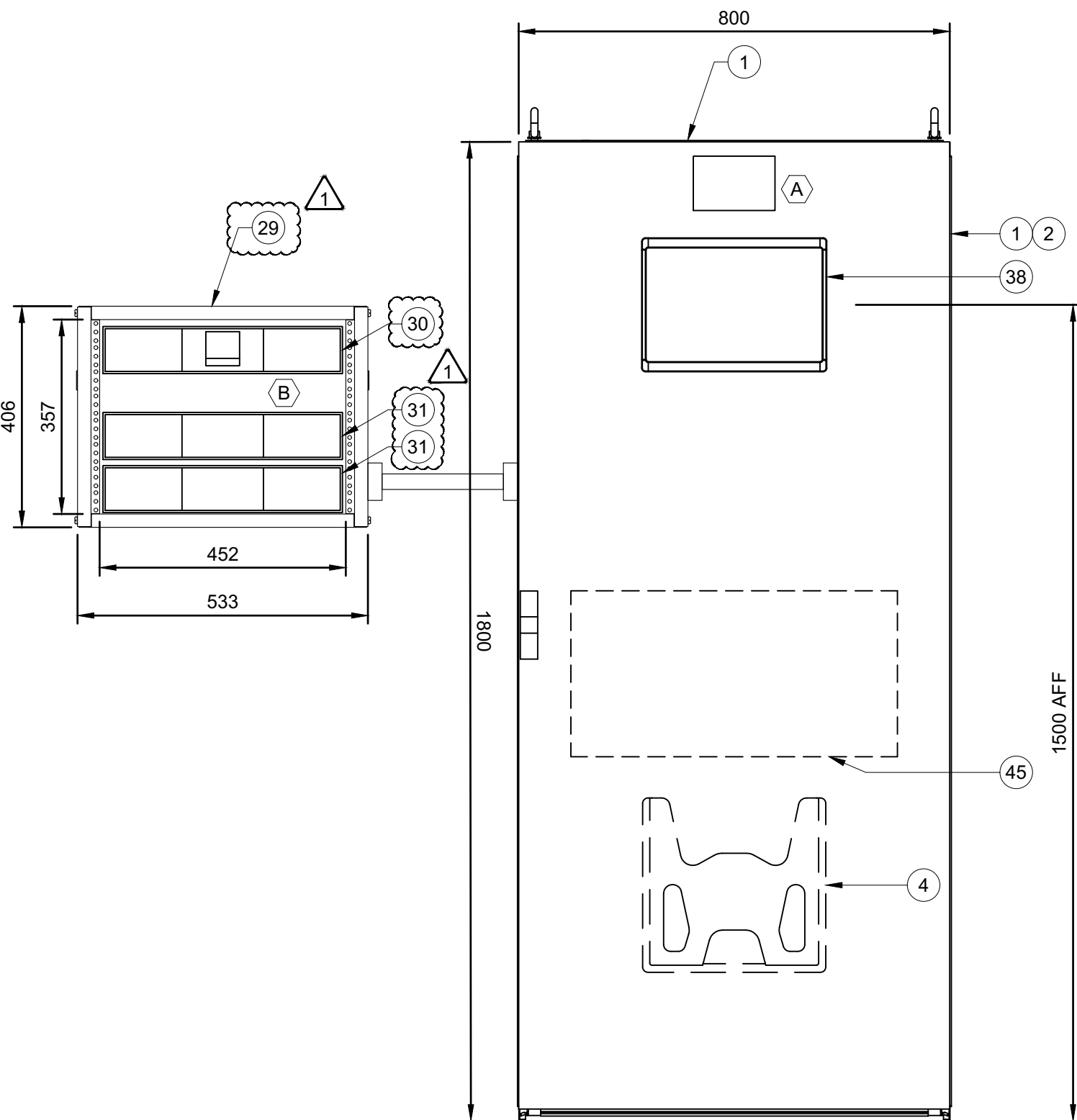
Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
Associated Engineering	ASSOCIATED ENGINEERING
APEGA Permit to Practice P 3979	2016-Aug-15

Client/client	Parks Canada Agence	L'Agence Parcs Canada
	Western and Northern Region	Ouest et Nord du Canada

Project title/Titre du projet	JOHNSTON CANYON UPGRADE
	BANFF NATIONAL PARK

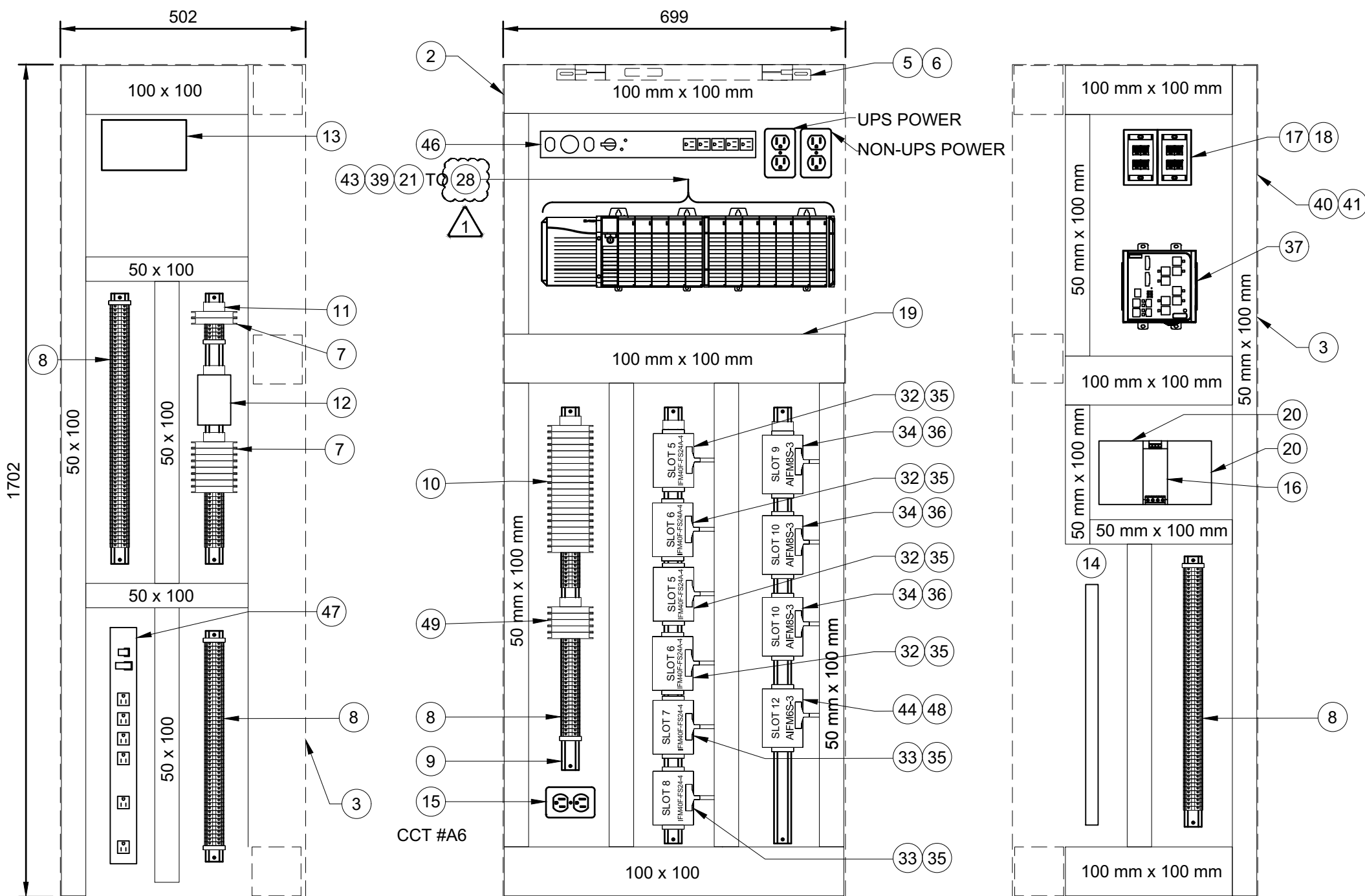
Drawing title/Titre du dessin	ELECTRICAL WTF POWER EQUIPMENT AND CAMPGROUND ELECTRICAL KIOSK
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Surveyed by/Arpenté par	Drawn by/Dessiné par	Date/Date
C. WHITEHOUSE	C. WHITEHOUSE	2018FEB28
Designed by/Conçue par	Reviewed by/Revisé par	Scale/Echelle
M. MAJUMDAR	R. COULBECK	AS SHOWN
PWSC Project Manager/Administrateur de Projets TPSC	K. LYALL / L. MACDONALD	
Client Acceptance/Acceptation du client	Approved by/Approuvé par	
Per Responsible Officer/Agent Responsable	PWSC Project Manager/Administrateur de Projets TPSC	
Project No./No. du projet	Asset No./No. du bien	Sheet No./ No. de la feuille
20183475-06		63
Drawing Reference No./No. de référence du dessin		
3475-06-E-201		



EXTERIOR FRONT

1 DETAIL
CABINET EXTERIOR



INTERIOR LEFT

INTERIOR FRONT

INTERIOR RIGHT

2 DETAIL
CABINET INTERIOR

NOTE:
1. ALL CABLES ARE TOP-ENTRY.
2. CONTRACTOR TO SUPPLY AND INSTALL WALL-MOUNTED SUPPORT FOR UPS CABINET.

BILL OF MATERIALS			
ITEM	QTY.	DESCRIPTION	PART No.
1	1	RITTAL NEMA 12, 1-DOOR ENCLOSURE, 800mm x 1800mm x 600mm, C/W AUTOMATIC TYPE 3-POINT LOCKING LATCH, EXTERIOR ANSI GREY, POWDER COATED, INTERIOR WHITE.	RITTAL 8881.500
2	1	RITTAL MOUNTING PLATE, 699 mm x 1696 mm	c/w PANEL
3	2	RITTAL SIDE PANEL TO FIT 1800mm x 600mm	8186.235
4	1	RITTAL DATA POCKET STEEL	4116.000
5	1	RITTAL LED LIGHT 75 mm x 437 mm x 23 mm D 11W	2500.200
6	1	RITTAL LIGHT CABLE 3 m, RITTAL LED LIGHT DOOR SWITCH	2600.500, 2500.470
7	AS REQ'D	WEIDMULLER SERIES 9926, AC BRANCH RATED CIRCUIT BREAKER, SIZE TO SUIT APPLICATION	-
8	AS REQ'D	WEIDMULLER WDU4 SERIES TERMINAL BLOCKS c/w TERMINAL MARKERS, PARTITIONS, CROSS-CONNECTS, DISCONNECTS, FUSING, END PLATES, ETC TO SUIT APPLICATION	-
9	AS REQ'D	WEIDMULLER DIN TERMINAL MOUNTING RAIL	TS-35
10	AS REQ'D	WEIDMULLER SERIES 4201 DC SUPPLEMENTAL CIRCUIT BREAKER, SIZE TO SUIT APPLICATION	-
11	AS REQ'D	WEIDMULLER LABEL HOLDER c/w LAMACOID	SCHT5
12	1	CUTLER-HAMMER TVSS, 120 VAC, 30 A, DIN RAIL MOUNTED	AGCF12030DIN
13	1	TELEPHONE AUTODIALER	BARNETT B1285 PROTALK LINK & M1,T2,P2 MODULES
14	1	COPPER GROUND BAR c/w DRILLED AND TAPPED HOLES AND SCREWS, 6mm x 50mm x 685mm	-
15	1	DUPLEX CSA 5-20R RECEPTACLE IN UTILITY BOX c/w COVER	-
16	1	WEIDMULLER DIODE REDUNDANCY MODULE, DIN RAIL MOUNTED	WEIDMULLER PRO RM 20
17	2	BELDEN SINGLE GANG, 4 PLACE VERTICAL FACEPLATE & SINGLE GANG PVC WALL BOX	AX102657,AX102249
18	8	BELDEN KEYCONNECT PLUS JACK MODULE, WHITE	AX101309
19	AS REQ'D	PANDUIT WIRE DUCT, SIZE AS NOTED, WHITE	TYPE F
20	2	PHOENIX CONTACT QUINT PSU, 110V INPUT 24 VDC OUTPUT 20A	QUINT-PS/1AC/24DC/20
21	AS REQ'D	ALLEN-BRADLEY EMPTY SLOT FILLER	1756-N2
22	1	ALLEN-BRADLEY CONTROLLOGIX, 13 SLOT CHASSIS	1756-A13
23	1	ALLEN-BRADLEY 24 VDC, POWER SUPPLY (5.1 VDC @13 A)	1756-PB75
24	1	ALLEN-BRADLEY CONTROLLOGIX 5570 PROCESSOR WITH 8MB NV MEMORY	1756-L73
25	4	ALLEN-BRADLEY ISOLATED DIGITAL INPUT MODULE, 16 PTS (36 PIN)	1756-IB16I
26	2	ALLEN-BRADLEY RELAY OUTPUT MODULE, 16 PTS (36 PIN)	1756-OW16I
27	3	ALLEN-BRADLEY ANALOG INPUT MODULE, 8 PTS (36 PIN)	1756-IF8I
28	1	ALLEN-BRADLEY ETHERNET/IP 10/100 MODULE	1756-EN2T
29	1	HAMMOND METAL DESKTOP RACK MOUNTED CABINET, VENTED, C98E	RLHV1901424BK1
30	1	EATON UPS	9PX3000RT
31	2	EATON EXTERNAL BATTERY	9PXE8M72RT
32	AS REQ'D	ALLEN-BRADLEY 40-POINT ISOLATED DIGITAL IFM, FUSED, BLOWN FUSE INDICATOR, 4 TERM/PER INPUT	1492-IFM40F-FS24A-4
33	AS REQ'D	ALLEN-BRADLEY 40-POINT ISOLATED DIGITAL IFM, FUSED, BLOWN FUSE INDICATOR, 4 TERM/PER OUTPUT	1492-IFM40F-FS24A-4
34	AS REQ'D	ALLEN-BRADLEYANALOG INTERFACE MODULE FOR 1756-IF8I, 8 PTS	1492-AIFM8S-3
35	AS REQ'D	ALLEN-BRADLEY I/O MODULE READY IFM CABLE, 1.5m (MIN), DISCRETE I/O MODULES	1492-CABLE015Y
36	AS REQ'D	ALLEN-BRADLEY IFM CABLE 1.5m (MIN), ANALOG INPUT MODULE	1492-ACABLE015YA
37	1	ALLEN-BRADLEY STRATIX ETHERNET SWITCH	1783-RMS10T
38	1	PANELVIEW PLUS 7 STANDARD TERMINAL, TOUCH SCREEN, 12 INCHES, TFT COLOR, SINGLE ETHERNET, 24 VDC, WINDOWS CE OS LICENSE, STANDARD MODEL.	2711P-T12W21D8S
39	1	ALLEN-BRADLEY ANALOG OUTPUT MODULE, 6 PTS (20 PIN)	1756-OF6CI
40	9	PANDUIT CAT 6 ETHERNET PATCH CABLE, YELLOW, 0.6m MINIMUM	UTPSP5YLY
41	2	PANDUIT CAT 6 ETHERNET PATCH CABLE, YELLOW, 1.5m MINIMUM	UTPSP5YLY
42	1	ALLEN BRADLEY 2 POSITION SWITCH	800THG2A
43	1	ALLEN-BRADLEY INPUT HART (8PTS)	1756-IF8H
44	AS REQ'D	ALLEN-BRADLEY ANALOG INTERFACE MODULE, 6 PTS	1492-AIFM6S-3
45	1	RITTAL FOLDING SHELF	4638.600
46	1	EATON BYPASS MODULE C/W TWO 20 A CIRCUIT BREAKERS	EHBPL3000R-PDU1U
47	1	HAMMOND POWER BAR 6 OUTLETS 6 FT CORD	1582H6A1BK
48	AS REQ'D	ALLEN-BRADLEY IFM CABLE, 1.5m (MIN), ANALOG I/O MODULES	1492-ACABLE015Y
49	5	OMRON GENERAL PURPOSE RELAY, 1A, 12VDC COMPLETE WITH RELAY BASE (NOTE 2)	G2R-2-SN12 P2RF-08

NAMEPLATE SCHEDULE

ITEM	QTY.	LINE 1	LINE 2	LINE 3	LINE 4	TEXT COLOR	BACK COLOR	SIZE	NOTE
A	1	JOHNSTON CANYON	WATER TREATMENT FACILITY	PLC CABINET		WHITE	BLACK	100 x 150	LAMACOID
B	1	JOHNSTON CANYON	WATER TREATMENT FACILITY	UPS CABINET		WHITE	BLACK	50 x 100	LAMACOID

