



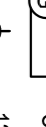

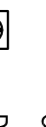
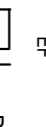



### LUMINAIRE SCHEDULE

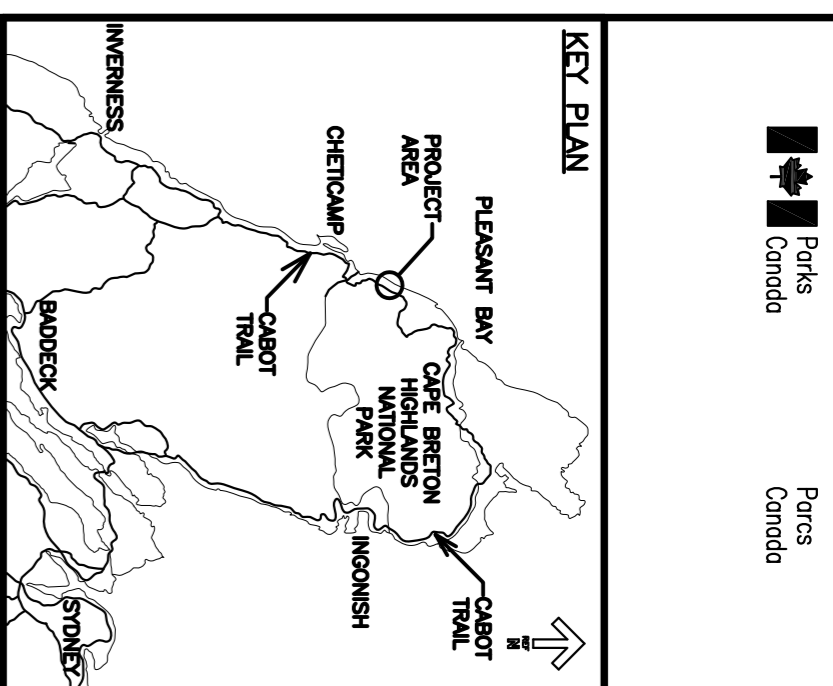
GRAPHIC	TYPE	STANDARD OF ACCEPTANCE	DESCRIPTION	OUTPUT		MOUNTING	REMARKS
				VOLTS	WATTS		
	B	STANDARD ALONE SOLAR LIGHTING BOLLARD C/W INTEGRAL CHARGER AND LED LAMPS	GROUND MOUNTED PATH LIGHTING BOLLARD WITH FORWARD THROW ASYMMETRICAL LIGHT DISTRIBUTION. 914mm (36") IN HEIGHT ASYMMETRICAL FACING TOWARDS PATH. BOLLARD TO BE MOUNTED ON A CONCRETE POST 120mm DEEP AND 254mm IN DIAMETER. PROVIDE NECESSARY MOUNTING HARDWARE TO PATH BOLLARD TO BE EMBEDDED IN CONCRETE POST.	12	-	GROUND MOUNTED	INSTALLATION AS PER MANUFACTURERS INSTRUCTIONS
	G	CEILING MOUNTED LED LUMINAIRE SUITABLE FOR CORROSIVE AND WET ENVIRONMENTS. PHILIPS DAY-BRITE VAPORLUME DW SERIES COOPER PAULIUM INTRERD PFS SERIES LITHONIA DMWZ	CEILING MOUNTED LED - PROVIDE ALL CLIPS AND FITTINGS AS REQUIRED	120	32	CEILING SURFACE	INSTALLATION AS PER MANUFACTURERS INSTRUCTIONS

### ELECTRICAL LEGEND

-  SOLAR POWERED LED BOLLARD LIGHT FIXTURE
-  CEILING MOUNTED LUMINAIRE C/W LED LAMPS AS INDICATED. C/W 2'11"4 LED LAMPS. 120V SINGLE POLE LIGHT SWITCH. LOWERCASE LETTER ADJACENT CORRESPONDS TO LUMINAIRE CONTROLLED. (TYPICAL)
-  15A WALL MOUNTED DUPLEX RECEPTACLE MOUNTED 457mm ABOVE FINISHED FLOOR OR 150mm ABOVE COUNTERTOPS.
-  DIRECT CONNECTION POINT TO MECHANICAL SUPPLIED AND INSTALLED EQUIPMENT. F# INDICATES EXHAUST FAN.
-  DISCONNECT SWITCH - SIZE AS NOTED ON DRAWINGS.
-  GENERATOR
-  GENERATOR LOAD BANK

### ELECTRICAL GENERAL NOTES

- ALL WORK UNDER THIS SCOPE SHALL COMPLY WITH NATIONAL BUILDING CODE OF CANADA 2015 AND THE CANADIAN ELECTRICAL CODE 2018, 24th EDITION.
- CONTRACTOR SHALL VERIFY MANUFACTURE RATINGS ON ALL EQUIPMENT. IN ELECTRICAL SCHEDULE AND REPORT ANY DISCREPANCIES PRIOR TO INSTALLATION. VERIFY CONDUCTOR SIZES AS PER MANUFACTURER'S RECOMMENDATIONS.
- ALL DIMENSIONS WHICH APPEAR ON THE DRAWINGS ARE METRIC. IN MILLIMETERS, UNLESS INDICATED OTHERWISE.
- THIS ELECTRICAL DESIGN PACKAGE IS TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS AND DOCUMENTS. COORDINATION OF WORK IS ESSENTIAL. THIS CONTRACTOR SHALL ESTABLISH A DETAILED WORK PLAN WITH THE GENERAL CONTRACTOR.
- ALL DIAGRAMS ILLUSTRATE INTENT ONLY. CONTRACTOR TO MAKE ALL NECESSARY ADJUSTMENTS TO SUIT SUPPLIED EQUIPMENT AND ACHIEVE REQUIRED FUNCTIONALITY.
- COORDINATE ELECTRICAL WORK REQUIREMENTS WITH ALL OTHER TRADES ON SITE TO AVOID CONFLICT. REPORT ANY CONFLICTS. ALL ELECTRICAL FEEDS FOR MECHANICAL EQUIPMENT SHALL BE COORDINATED WITH THE MECHANICAL CONTRACTOR. COORDINATE ROUTING AND FINAL INSTALLATION LOCATION(S) ON SITE WITH MECHANICAL TRADES. PROVIDE ALL NECESSARY EQUIPMENT, RACEWAYS, FITTINGS, FASTENERS AND DEVICE BOXES TO PROVIDE A COMPLETE SYSTEM.
- COORDINATE FINAL INSTALLATION LOCATION OF ELECTRICAL EQUIPMENT AND DEVICES ON SITE WITH ALL OTHER ASSOCIATED TRADES.
- ELECTRICAL CONTRACTOR TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS REQUIRED TO PERFORM WORK. COMPLY WITH ALL PERMIT REQUIREMENTS AND CONDITIONS.
- ALL FEEDER RUNS INDICATED ON DRAWINGS ARE DIAGRAMMATIC ONLY. COORDINATE EXACT RACEWAY AND CABLE LOCATIONS ON SITE.
- ELECTRICAL CONTRACTOR SHALL SEAL ALL PENETRATIONS CREATED BY NEW INSTALLATIONS OR REMAINING FROM REMOVALS OF EXISTING EQUIPMENT. FIRE RATING INTEGRITY IN ALL OTHER AREAS SHALL BE MAINTAINED.
- AVOID SCALING FROM DRAWINGS, WHENEVER POSSIBLE EXACT DIMENSIONS SHALL BE VERIFIED ON SITE.
- ELECTRICAL CONTRACTOR TO PROVIDE PANEL DIRECTORY IN A TYPEWRITTEN FORMAT IN ALL PANELBOARD COVERS.
- ELECTRICAL CONTRACTOR TO VERIFY EXISTING TELEPHONE SERVICE LOCATIONS IN FIELD PRIOR TO CONSTRUCTION. DISCREPANCIES TO BE REPORTED IMMEDIATELY TO OWNER'S REPRESENTATIVES.
- NOT ALL EXISTING SERVICES MAY BE SHOWN. THOSE SHOWN MAY NOT BE ACCURATE. CONTRACTOR TO CONFIRM EXISTING SERVICES DURING CONSTRUCTION. TAKE EXTREME PRECAUTION NOT TO DISRUPT ANY EXISTING SERVICES/UTILITIES DURING CONSTRUCTION. CONTRACTOR SHALL REINSTATE AND REPAIR ANY DAMAGE TO EXISTING SERVICES AS A DIRECT RESULT OF ELECTRICAL WORK UNDER THIS SCOPE. AT CONTRACTOR'S OWN EXPENSE.
- CIRCUITS INDICATED ON DRAWINGS ARE FOR GROUPING PURPOSES ONLY.
- PERFORM TESTS ON EACH SYSTEM TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVES AND SUBMIT TEST RESULTS FOR APPROVAL PRIOR TO THE FINAL ACCEPTANCE OF THE WORK.
- PROVIDE POWER TO EQUIPMENT AS INDICATED ON TENDER DOCUMENTS.
- THE ELECTRICAL CONTRACTOR SHALL RECORD THE ACTUAL INSTALLATION ON A SET OF CONSTRUCTION DRAWINGS AND PROVIDE TO THE OWNER UPON COMPLETION OF WORK.
- MAINTAIN SITE IN TIDY CONDITION. FREE FROM ACCUMULATION OF WASTE PRODUCTS AND DEBRIS. UPON OBTAINING SUBSTANTIAL PERFORMANCE OF THE WORK, REMOVE SURPLUS PRODUCTS, TOOLS, MACHINERY AND EQUIPMENT FROM THE SITE. COMPLETION OF CLEANUP IS REQUIRED FOR TOTAL PERFORMANCE OF THE WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ANY DAMAGE DONE TO EXISTING FEATURES AS A RESULT OF THIS WORK. DAMAGED OR DISTURBED ITEMS SHALL BE REPLACED IN KIND AND AT NO ADDITIONAL COST TO THE OWNER.



**SITE TRAVEL NOTE**  
 THE CONTRACTOR IS NOT TO DAMAGE AREAS OUTSIDE OF THEIR IMMEDIATE WORK SITE. ESTABLISH APPROVED TRAVEL CORRIDORS WITH PARKS CANADA REPRESENTATIVE AT WORK SITE AT START OF CONSTRUCTION. DO NOT LEAVE APPROVED TRAVEL CORRIDORS.



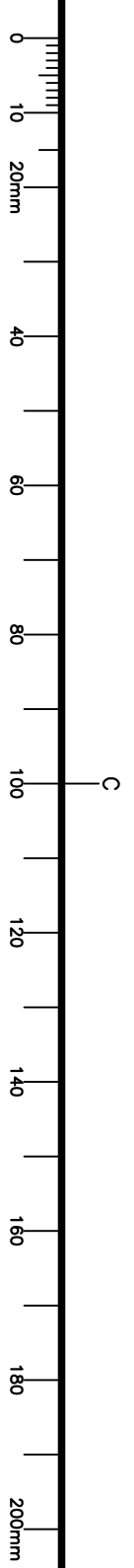
no.	description	date
4	RE-ISSUED FOR TENDER	05/17/2018
3	ISSUED FOR 100% REVIEW	04/17/2018
2	ISSUED FOR TENDER	05/21/2017
0	ISSUED FOR 90% REVIEW	04/25/2017

Project: PARKS CANADA TROUT BROOK CAMPGROUND  
 drawing: CAMPGROUND BUILDINGS

### ELECTRICAL LEGEND, NOTES AND SCHEDULES

date	designed	conçu
2018.05.17.		
date	drawn	dessiné
2018.05.17.	GS/AC	
date	approved	approuvé
2018.05.17.	SB	

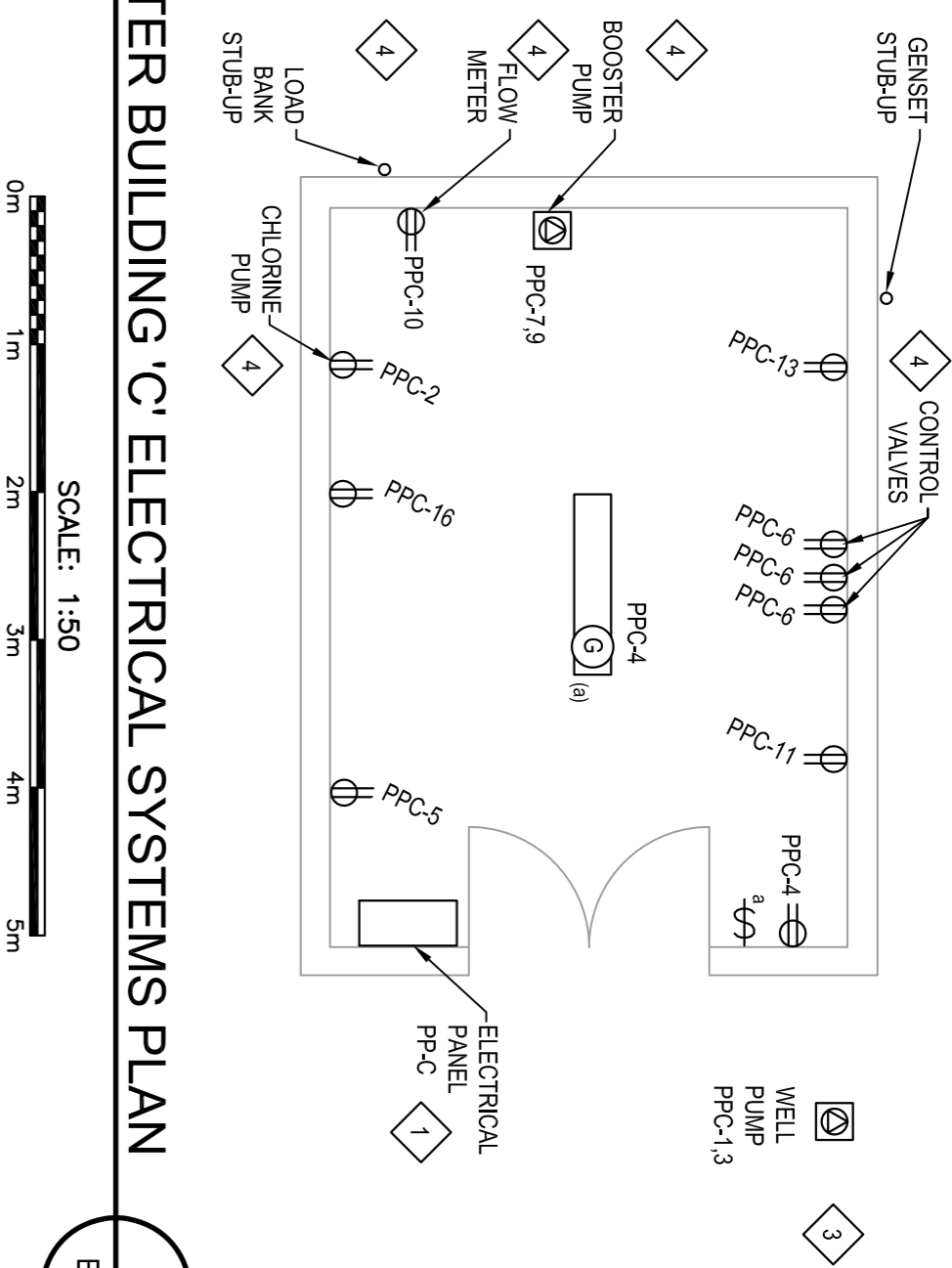
Project number: 161413360  
 no. du projet: 161413360  
 drawing no.: E-001  
 no. du dessin: E-001



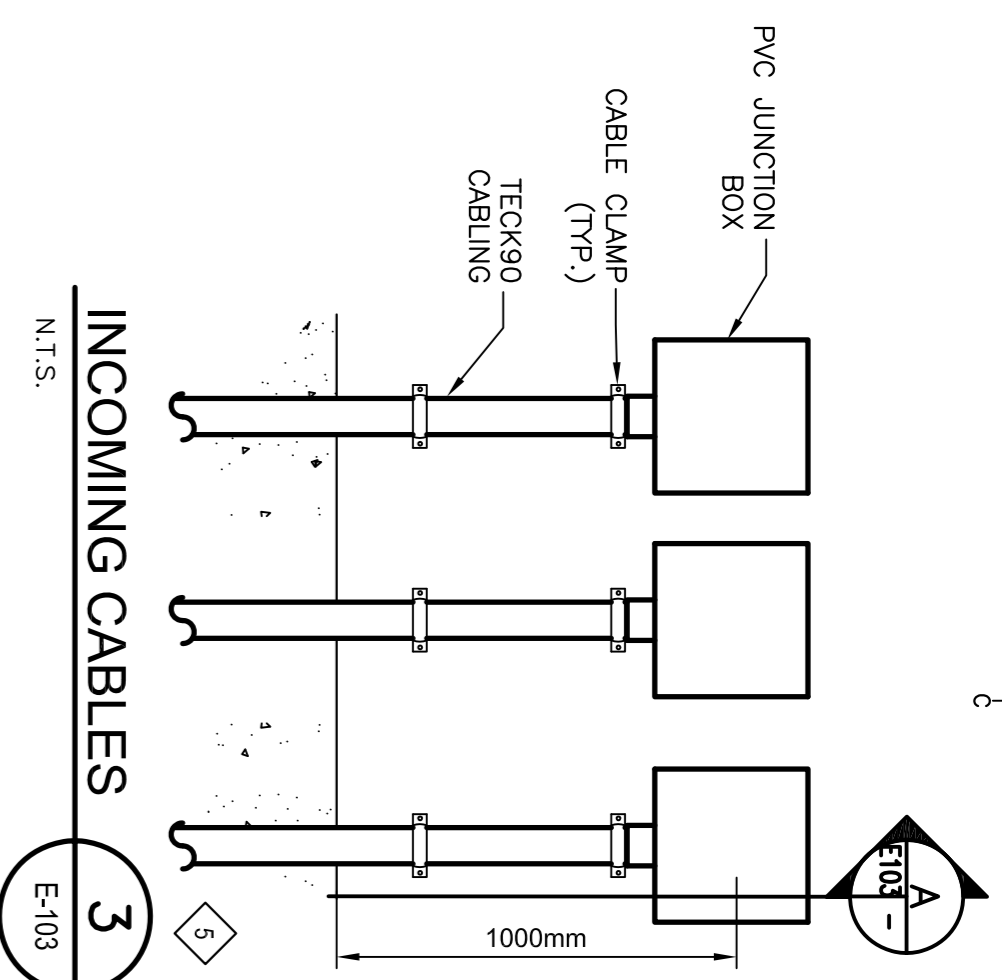




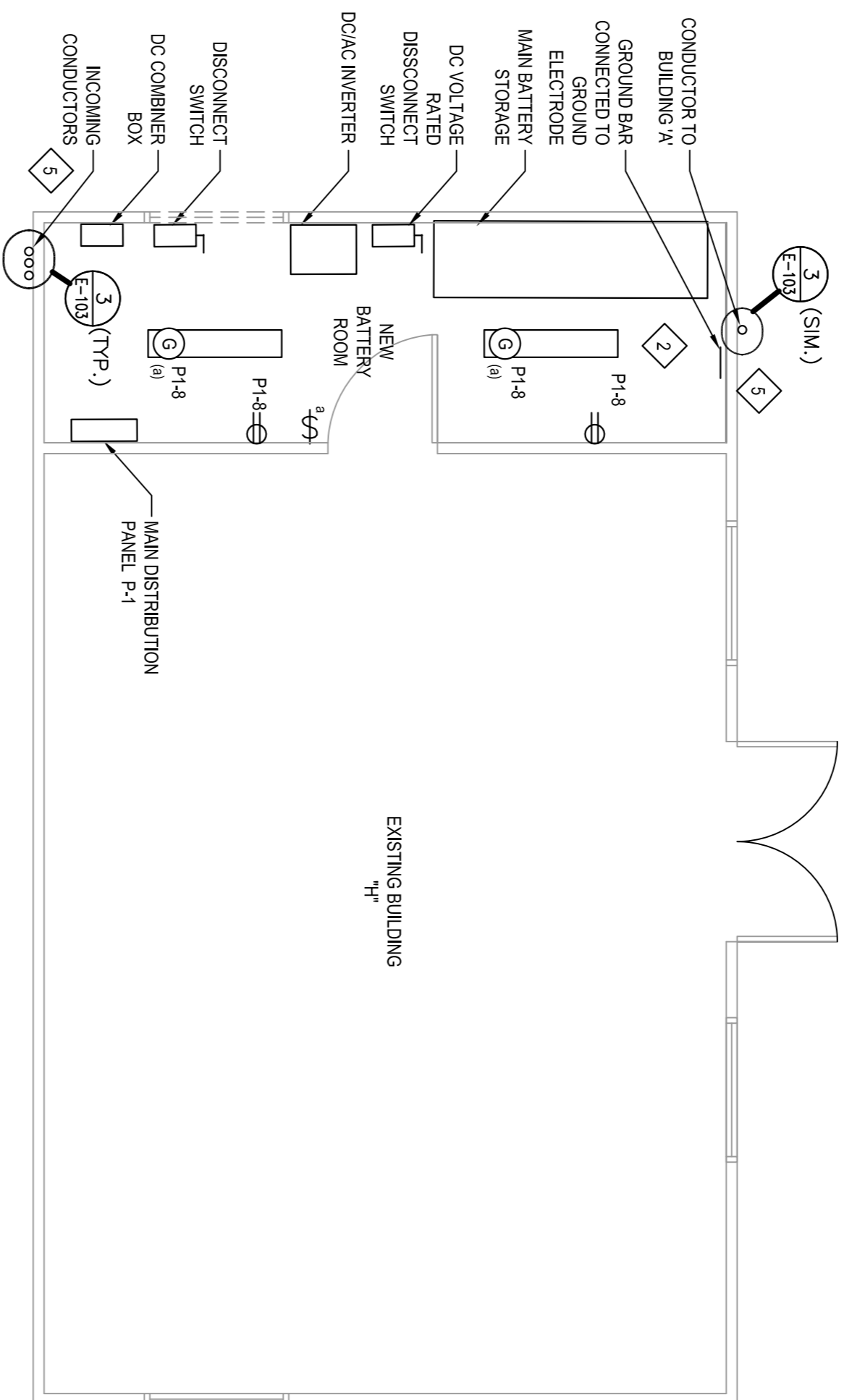




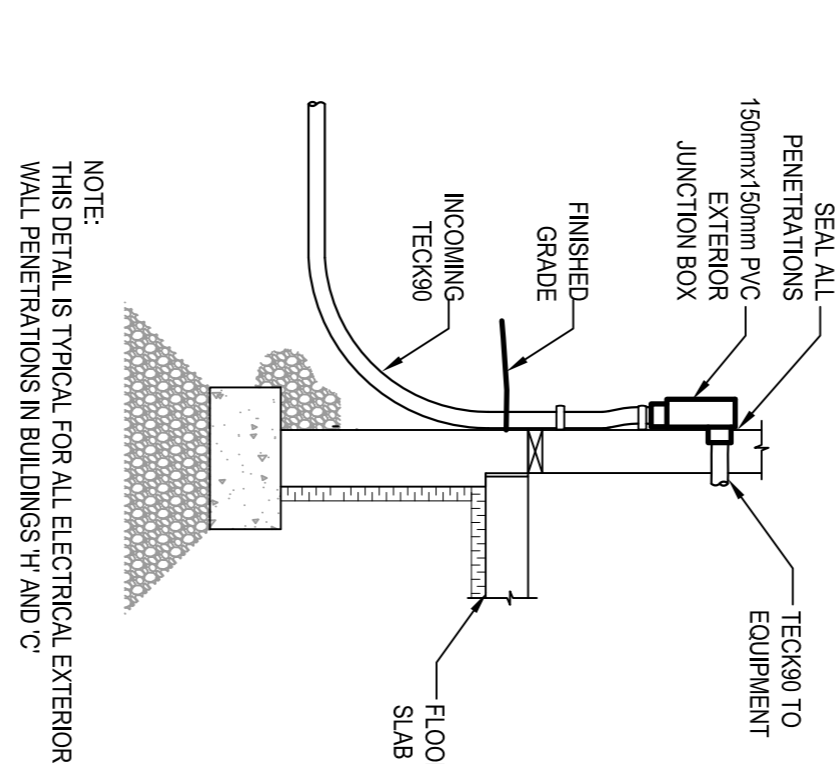
1  
E-103



3  
E-103



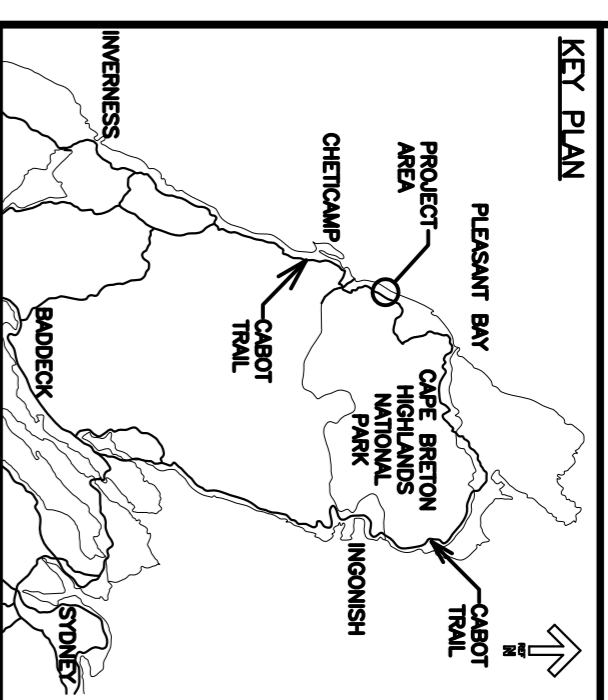
2  
E-103



A  
E-103

**ELECTRICAL KEY NOTES**

- 1 ALL ELECTRICAL EQUIPMENT AND DEVICES IN WATER TREATMENT BUILDING SHALL BE RATED FOR INSTALLATION IN CORROSIVE ENVIRONMENT. ELECTRICAL PANEL PPC-4 SHALL BE INSTALLED IN ACSA 4X RATED STAINLESS STEEL ENCLOSURE SIZED TO FIT PANEL.
- 2 COORDINATE FINAL INSTALLED LOCATION OF SOLAR CONVERSION EQUIPMENT. INVERTERS BATTERIES, RACKS AND PANELS WITHIN BATTERY / ELECTRICAL ROOM ON SITE. REPOSITION IF REQUIRED
- 3 COORDINATE FINAL INSTALLED LOCATION AND CONNECTIONS OF SUBMERSIBLE WELL PUMP ON SITE WITH WATER SYSTEM CONTRACTOR. VERIFY CONNECTION TYPE FOR ALL PUMPS AND CONTROLLERS IN WATER TREATMENT BUILDING PRIOR TO INSTALLING RECEPTACLES. IF EQUIPMENT REQUIRES A DIRECT ELECTRICAL CONNECTION THEN HARDWARE EQUIPMENT AND DO NOT INSTALL RECEPTACLE AT THIS LOCATION.
- 4 ROUTE UNDERGROUND TECK90 CONDUCTORS TO BUILDING 'H'. INSTALL ON EXTERIOR AND ROUTE TO BATTERY ROOM PROVIDE 1.1 SEALS ALL FASTENERS AND JUNCTION EDGES SIZED TO FIT CONDUCTORS. SEAL ALL PENETRATIONS WEATHERTIGHT.
- 5



**SITE TRAVEL NOTE**  
THE CONTRACTOR IS NOT TO DAMAGE AREAS OUTSIDE OF THEIR IMMEDIATE WORK SITE. ESTABLISH APPROVED TRAVEL CORRIDORS WITH PARKS CANADA REPRESENTATIVE AT WORK SITE AT START OF CONSTRUCTION. DO NOT LEAVE APPROVED TRAVEL CORRIDORS.



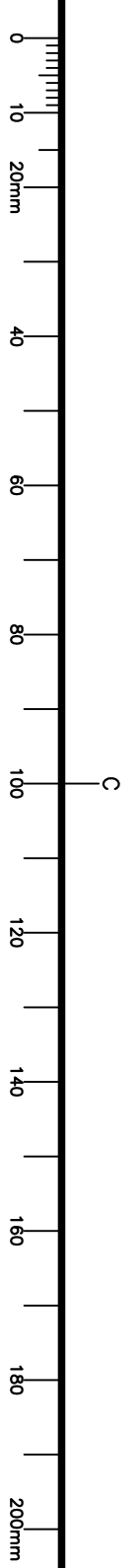
revisions	date
4	RE-ISSUED FOR TENDER 05/17
3	ISSUED FOR 100% REVIEW 04/17
2	ISSUED FOR 99% REVIEW 04/25
0	ISSUED FOR 99% REVIEW 04/25

Project: PARKS CANADA  
TROUT BROOK  
CAMPGROUND BUILDINGS

**WATER TREATMENT BUILDING AND BUILDING 'H' ELECTRICAL SYSTEMS PLANS**

designed	conçu
date: 2018.05.17.	
drawn: GS/AC	dessiné
date: 2018.05.17.	
approved: SB	approuvé
date: 2018.05.17.	

Tender: PWSCC Project Manager / Administrateur de projets PWSCC  
Project number: 161413360  
drawing no.: E-103



**ELECTRICAL KEY NOTES**

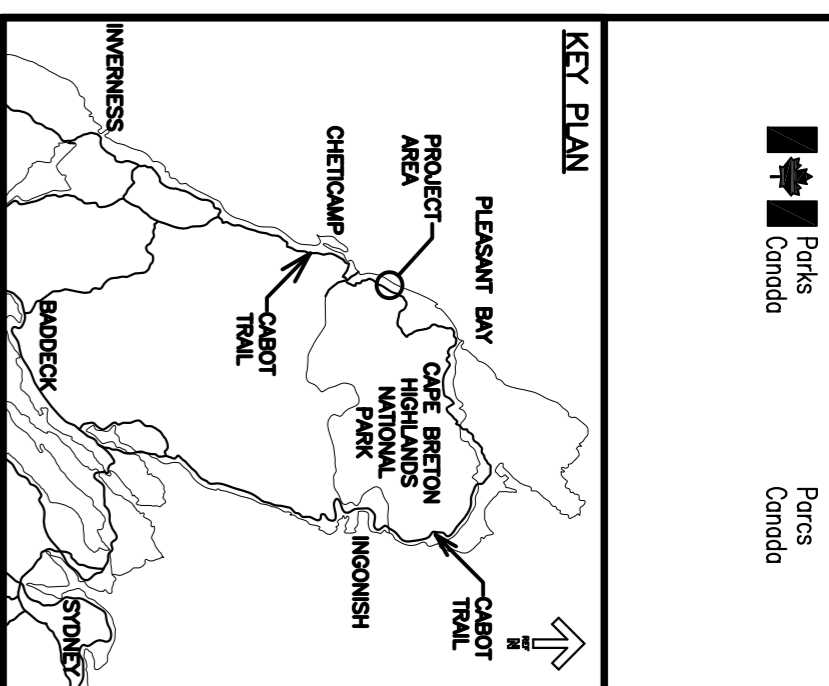
1 BUILDING SERVICE PANEL PP-C IS TO BE BOTTOM ENTRY WITH MAIN BREAKER INSTALLED ON BOTTOM OF CABINET.

**MAIN DISTRIBUTION PANEL P-1 - 225 AMP - 120/240V 1ph 3 WIRE - SERVICE RATED**

WIRE	DESCRIPTION	LOAD	BKR	POLES	CCT NO.	PHASE	CCT NO.	POLES	BKR	LOAD	DESCRIPTION	WIRE
#12	PANEL PP-A	205	20	2P	1	A	2	2P	20	287	PANEL PP-B	#12
		10			3	B	4			50		
		301			5	A	6	1	15			
#8	PANEL PP-E	150	20	2P	7	B	8	1	15	664	LIGHTS & RECEP'S BATTERY ROOM	#12
					9	A	10	1	15			
					1	B	12	1				
	SPACE				1	B	14					
	SPACE				13	A	14					
	SPACE				15	B	12	1				
	ODD CIRCUITS (1-11)	506								287	EVEN CIRCUITS (2-12)	
	LOAD PHASE A (W)										LOAD PHASE A (W)	
	LOAD PHASE B (W)	160								714	LOAD PHASE B (W)	
	<b>TOTAL PHASE A</b>											
	<b>TOTAL PHASE B</b>											
	<b>TOTAL PHASE A</b>	793									<b>TOTAL CONNECTED LOAD</b>	1667

**PANEL 'PP-C' - 225 AMP - 120/240V 1ph 3 WIRE - SERVICE RATED**

FED FROM GENERATOR	DESCRIPTION	LOAD	BKR	POLES	CCT NO.	PHASE	CCT NO.	POLES	BKR	LOAD	DESCRIPTION	WIRE	
#12	WELL PUMP	1200	20	2P	1	A	2	1	15	190	CHLORINE DOSING PUMP	#12	
					3	B	4	1	15	450	RECEPTACLE & LIGHTS	#12	
					5	A	6	1	15	40	CONTROL VALVES	#12	
#10	BOOSTER PUMP	1560	30	2P	9	B	8	1	15	100	RECEPTACLE	#12	
					1560						100	FLOWMETER	#12
					300								
#12	RECEPTACLE	300	15	1	11	B	12	1	15		SPARE	#12	
					15	1	13	A	14	1	15	RECEPTACLE	#12
					15	1	15	B	16	1	15	SPARE	#12
	SPARE		15	1	17	A	18	2P	35		LOAD BANK	#8	
	SPARE		15	1	19	B	20						
	SPACE				21	A	22	1			SPACE		
	SPACE				23	B	24	1			SPACE		
	SPACE				25	A	26	1			SPACE		
	SPACE				27	B	28	1			SPACE		
	SPACE				29	A	30	1			SPACE		
	SPACE				31	B	32	1			SPACE		
	ODD CIRCUITS (1-31)	3360								330	EVEN CIRCUITS (2-32)		
	LOAD PHASE A (W)										LOAD PHASE A (W)		
	LOAD PHASE B (W)	3060								850	LOAD PHASE B (W)		
	<b>TOTAL PHASE A</b>	3690									<b>TOTAL CONNECTED LOAD</b>	7600	
	<b>TOTAL PHASE B</b>												



**SITE TRAVEL NOTE**  
THE CONTRACTOR IS NOT TO DAMAGE AREAS OUTSIDE OF THEIR IMMEDIATE WORK SITE. ESTABLISH APPROVED TRAVEL CORRIDORS WITH PARKS CANADA REPRESENTATIVE AT WORK SITE AT START OF CONSTRUCTION. DO NOT LEAVE APPROVED TRAVEL CORRIDORS.



revisions	date	project
3	05/17/2018	RE-ISSUED FOR TENDER
2	04/17/2018	ISSUED FOR 100% REVIEW
0	04/25/2017	ISSUED FOR 99% REVIEW

**PARKS CANADA  
TROUT BROOK  
CAMPGROUND**

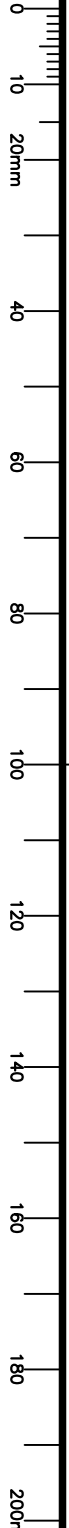
**CAMPGROUND BUILDINGS**

**ELECTRICAL  
PANEL SCHEDULES**

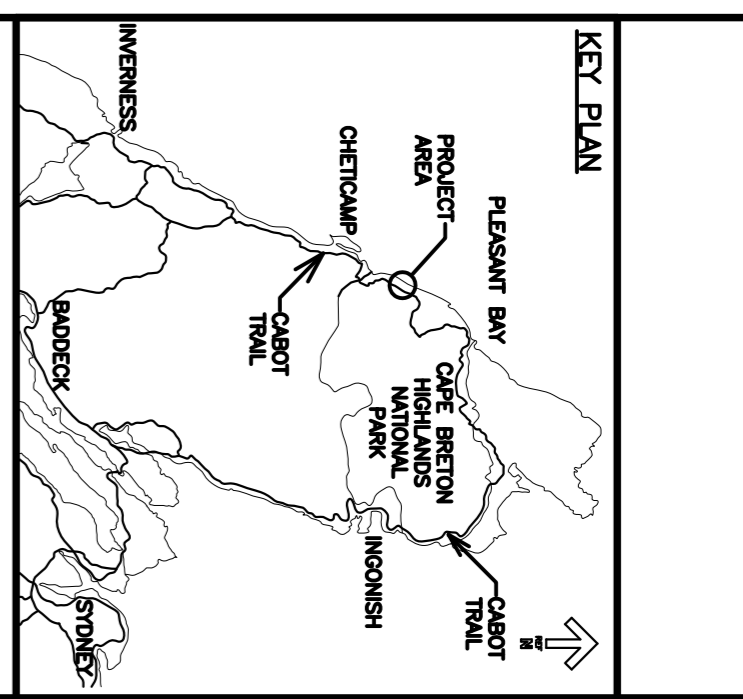
designed	conçu
date 2018.05.17.	date 2018.05.17.
drawn GS/AC	dessiné GS/AC
date 2018.05.17.	date 2018.05.17.
approved SB	approuvé SB
date 2018.05.17.	date 2018.05.17.
Tender	Submission

PMWSC Project Manager Administrateur de projets TPSC  
Project number no. du projet  
**161413360**

drawing no. no. du dessin  
**E-104**



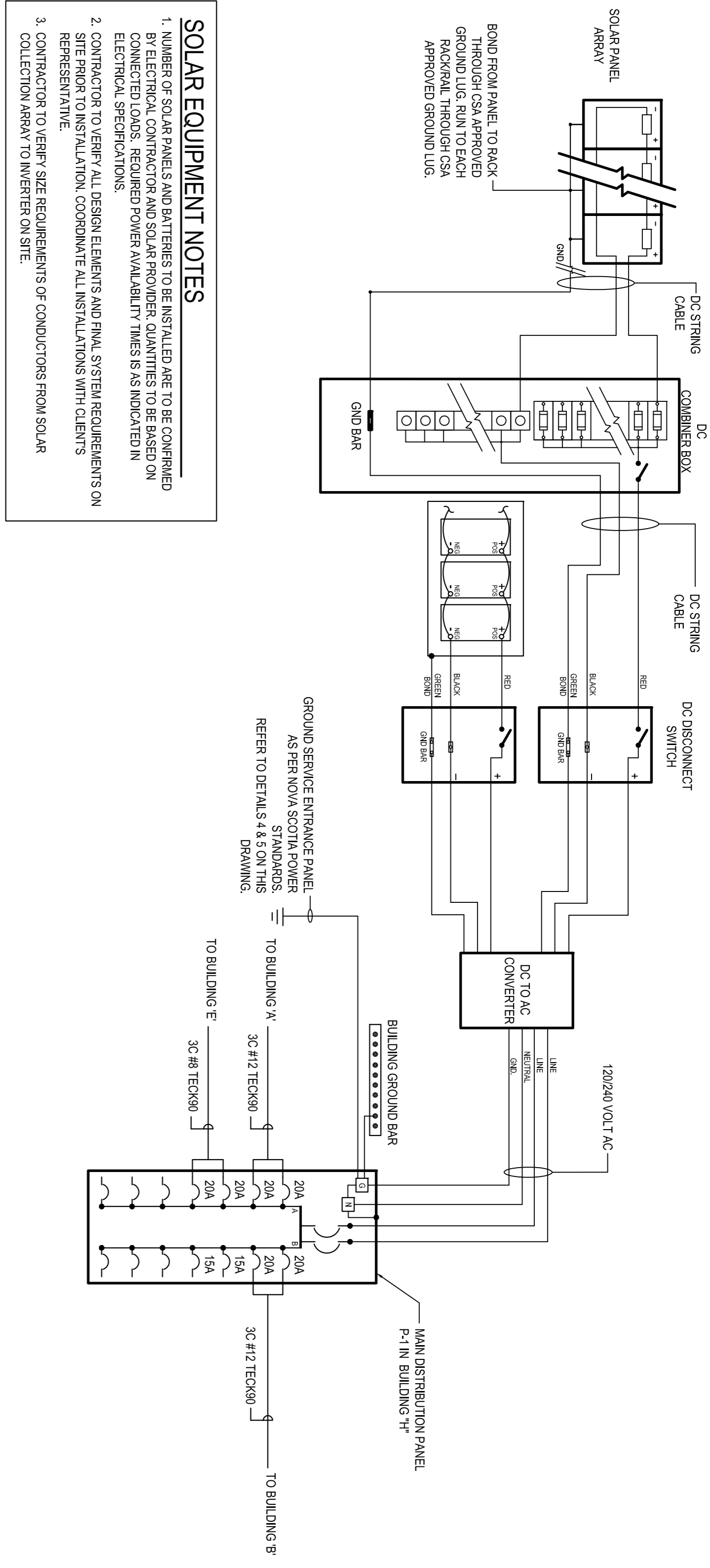




**SITE TRAVEL NOTE**  
 THE CONTRACTOR IS NOT TO DAMAGE AREAS OUTSIDE OF THEIR IMMEDIATE WORK SITE. ESTABLISH APPROVED TRAVEL CORRIDORS WITH PARKS CANADA REPRESENTATIVE AT WORK SITE AT START OF CONSTRUCTION. DO NOT LEAVE APPROVED TRAVEL CORRIDORS.

**ELECTRICAL KEY NOTES**

- 1. INSTALL ALL ELECTRICAL CONDUCTORS UNDERGROUND AND ROUTE TO INTERIOR OF NEW BATTERY BUILDING. PROVIDE STRAPS AND LB FITTINGS TO PROVIDE ROUTING AND PROTECTION FOR CONDUCTORS. SEAL ALL PENETRATION LOCATIONS WITHIN BUILDING WITH STRUCTURAL TRACES AND CLIENT'S REPRESENTATIVE ON SITE.
- 2. PROVIDE AND INSTALL STAND ALONE PHOTOVOLTATIC LIGHTING BOLLARDS AT EACH PATHWAY INTERSECTION POINT AS INDICATED ON PLANS. PROVIDE CONCRETE BASES AS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

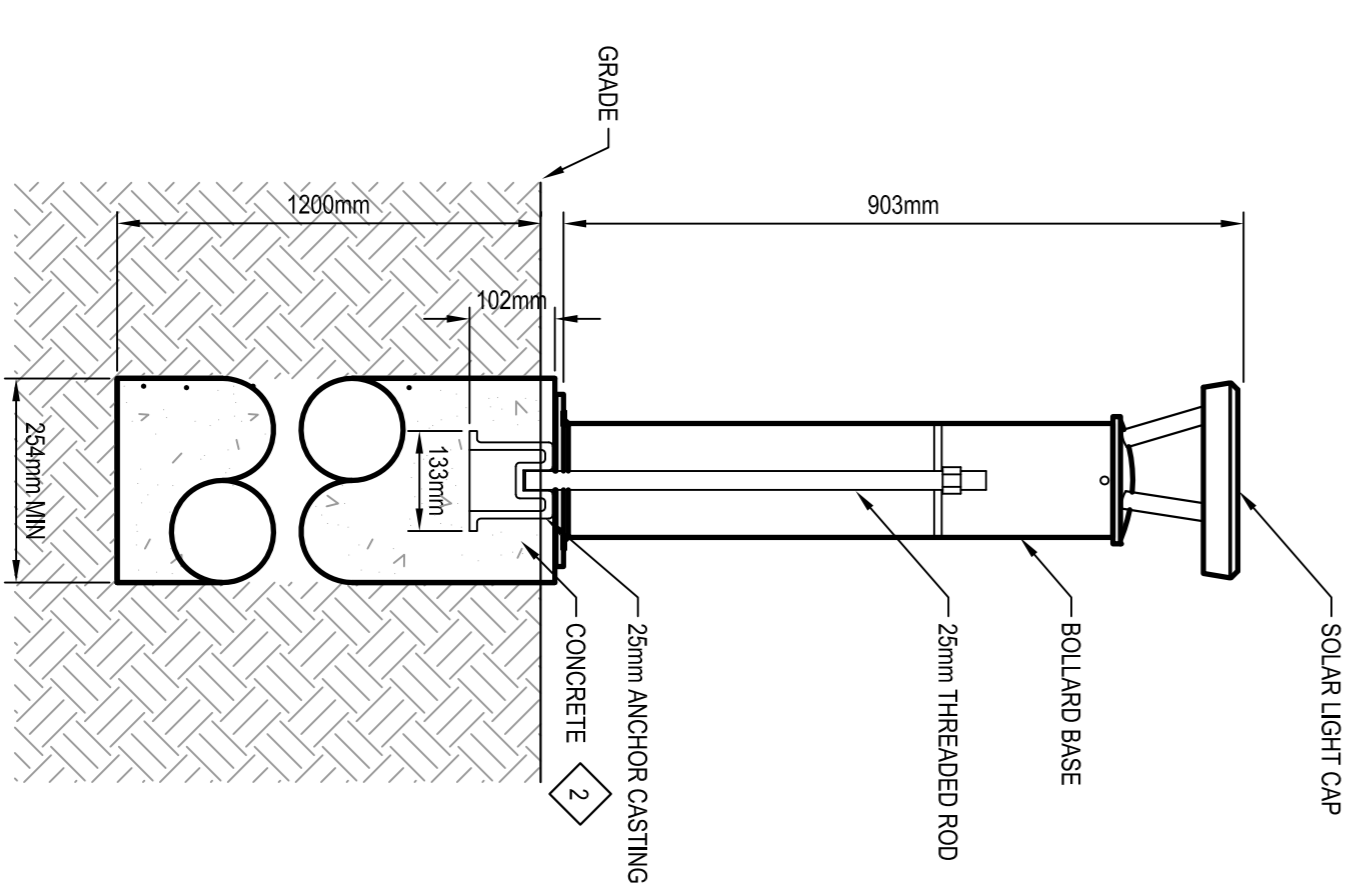


**GENERATOR CONNECTION SCHEMATIC 2**  
 N.T.S. SCALE: N.T.S.

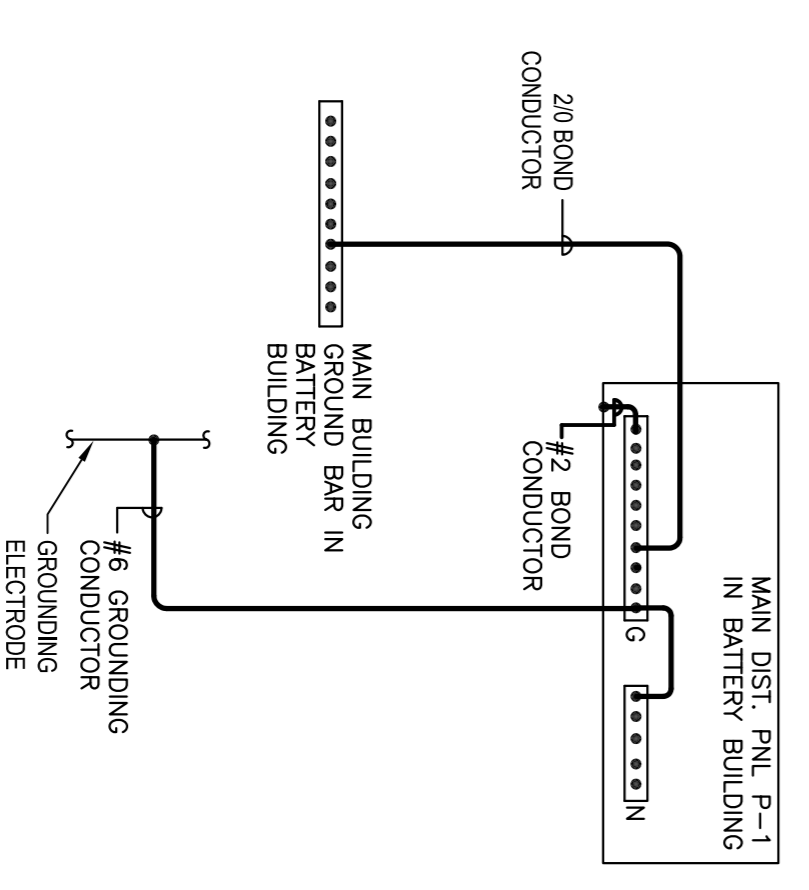
**SOLAR EQUIPMENT NOTES**

1. NUMBER OF SOLAR PANELS AND BATTERIES TO BE INSTALLED ARE TO BE CONFIRMED BY ELECTRICAL CONTRACTOR AND SOLAR PROVIDER. QUANTITIES TO BE BASED ON CONNECTED LOADS. REQUIRED POWER AVAILABILITY TIMES IS AS INDICATED IN ELECTRICAL SPECIFICATIONS.
2. CONTRACTOR TO VERIFY ALL DESIGN ELEMENTS AND FINAL SYSTEM REQUIREMENTS ON SITE PRIOR TO INSTALLATION. COORDINATE ALL INSTALLATIONS WITH CLIENT'S REPRESENTATIVE.
3. CONTRACTOR TO VERIFY SIZE REQUIREMENTS OF CONDUCTORS FROM SOLAR COLLECTION ARRAY TO INVERTER ON SITE.

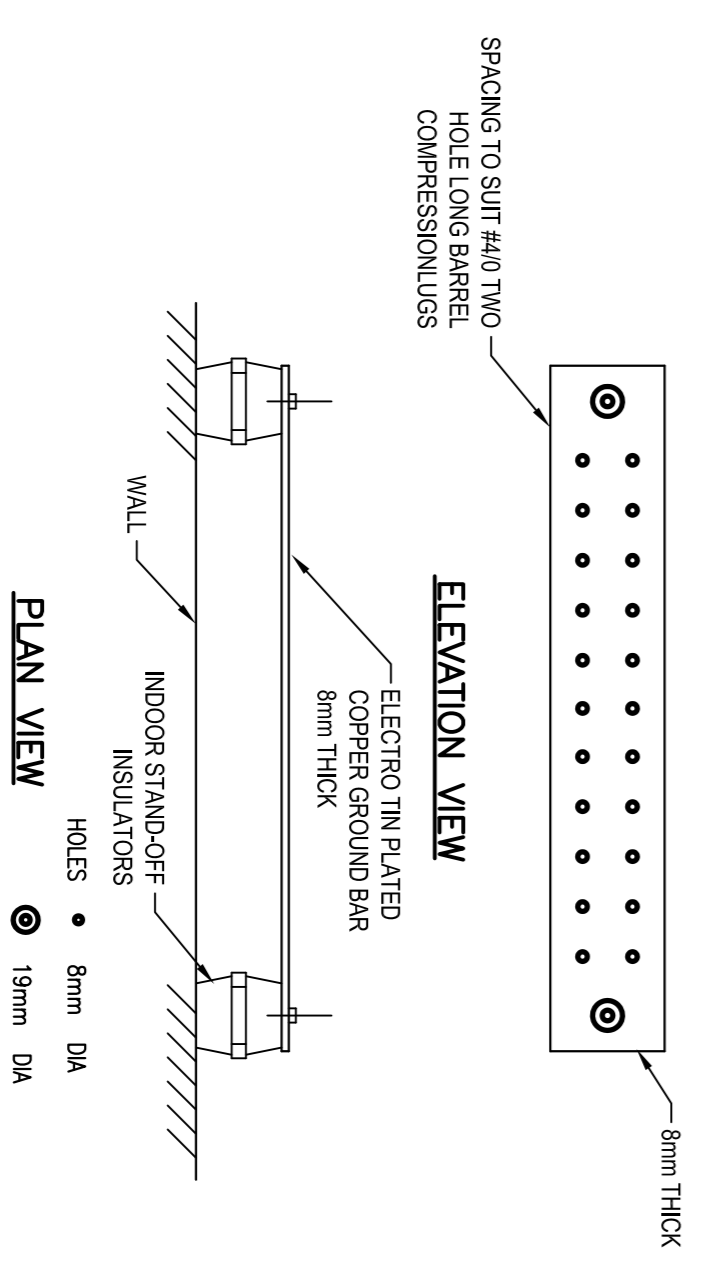
**TYPICAL CONNECTION SCHEMATIC 1**  
 N.T.S. SCALE: N.T.S.



**TYPICAL BOLLARD DETAIL 3**  
 N.T.S. E-101



**BUILDING MAIN GROUND 4**  
 N.T.S. E-105



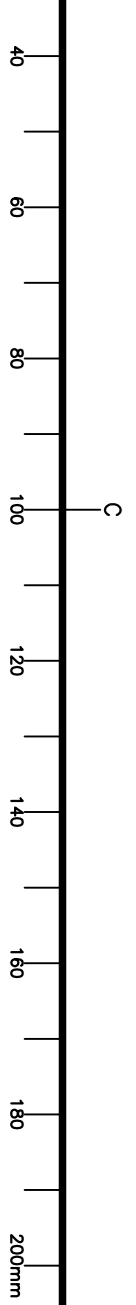
**BUILDING MAIN GROUND BAR 5**  
 N.T.S. E-105

revisions	date	description
4	05/17/2018	RE-ISSUED FOR TENDER
3	04/17/2018	ISSUED FOR 100% REVIEW
2	05/21/2017	ISSUED FOR TENDER
0	04/25/2017	ISSUED FOR 95% REVIEW



Project: PARKS CANADA TROUT BROOK CAMPGROUND  
 drawing: ELECTRICAL SCHEMATIC AND DETAILS

designed	date	2018.05.17.	conçu
drawn	GS/AC	2018.05.17.	dessiné
date	2018.05.17.	approved	SB
date	2018.05.17.	approved	SB
Tender	Submission		
Project number	161413360	no. du projet	
drawing no.	E-105	no. du dessin	

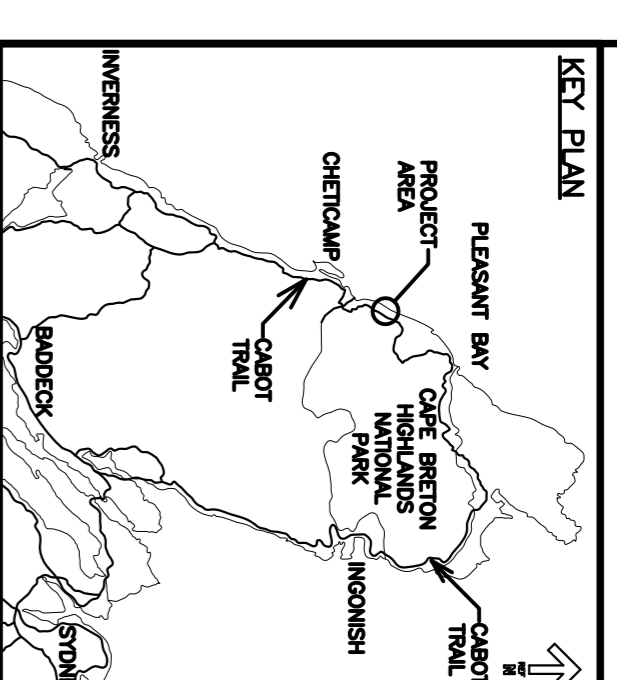
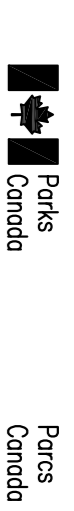


Trout Brook Campground, Table 1. Non-lighting loads

Type	Nominal Load (W)	Interpretive Centre - Building A	Main (south) washroom - Building B	Water and water treatment - Building C	Main washroom & kitchen - Building E	South kitchen shelter - Building H	Total fixture count
		Device count	Nominal Load (W)	Operation	Device count	Nominal Load (W)	Operation
Exhaust fan	100	0	0	2	200	100% load for 25% of an 8hr period, 7 day/wk	0
Receptacle circuit (general purpose)	1440	0	0	0	0	0	0
Space Heating (control power)	50	0	0	1	50	Continuous load	0
EXT sign	3	1	3	Continuous load	0	0	0
Well Pump	2400	0	0	0	0	0	0
Booster Pump	3120	0	0	0	0	0	0
Chlorine Pump	190	0	0	0	0	0	0
Control valves	300	0	0	0	0	0	0
PLC	350	0	0	0	0	0	0
Flow meter	7	0	0	1	7	Continuous load	0

Trout Brook Campground, Table 2. Primary Lighting Loads:

Type	Load (W)	Interpretive Centre - Building A	Main (south) washroom - Building B	Water and water treatment - Building C	Main washroom & kitchen - Building E	South kitchen shelter - Building H	Total fixture count
		Fixture count	Max Load (W)	Operation	Fixture count	Load (W)	Operation
A	8.1	6	48.6	100% load, 3 hr/day, 7 day/wk	23	186.3	100% load for 25% of an 8hr period, 7 day/wk
B	8	0	0		0	0	
C	8.1	0	0		0	0	
D	self powered	2	0		2	0	
E	8.1	0	0		0	0	
F	24.3	0	0		0	0	
G	32	0	0		0	0	
H	8.1	18	145.8	100% load, 3 hr/day, 7 day/wk	0	0	100% load for 25% of an 8hr period, 7 day/wk
			<b>194.4</b>			<b>186.3</b>	
							<b>40.1</b>
							<b>307.8</b>
							<b>64</b>
							<b>32</b>



**SITE TRAVEL NOTE**  
 THE CONTRACTOR IS NOT TO DAMAGE AREAS OUTSIDE OF THEIR IMMEDIATE WORK SITE. ESTABLISH APPROVED TRAVEL CORRIDORS WITH PARKS CANADA REPRESENTATIVE AT WORK SITE AT START OF CONSTRUCTION. DO NOT LEAVE APPROVED TRAVEL CORRIDORS.

revisions	date	project
4	05/17/2018	RE-ISSUED FOR TENDER
3	04/17/2018	ISSUED FOR 100% REVIEW
2	05/21/2017	ISSUED FOR TENDER
0	04/25/2017	ISSUED FOR 98% REVIEW



**PARKS CANADA**  
**TROUT BROOK**  
**CAMPGROUND**

**CAMPGROUND BUILDINGS**

**ELECTRICAL**  
**LOAD CALCULATION**  
**TABLES**

designed	conçu
date 2018.05.17.	
drawn OS/AC	dessiné
date 2018.05.17.	
approved SB	approuvé
date 2018.05.17.	

Tender  
 PWSCC Project Manager Administrateur de projets TRSCC  
 Project number no. du projet  
**161413360**

drawing no. no. du dessin  
**E-106**

