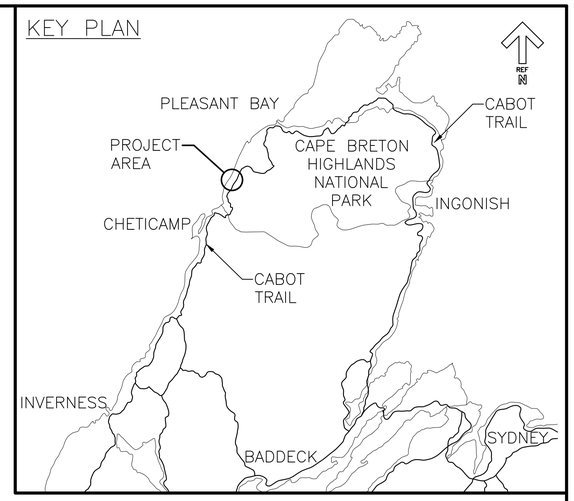
Parks Canada

Parcs Canada



TROUT BROOK CAMPGROUND SITEWORK PACKAGE

CAPE BRETON HIGHLANDS NATIONAL PARK

INVERNESS COUNTY, NOVA SCOTIA

PROJECT NO. 01092017

ISSUED FOR TENDER

DATE: JUNE 21, 2018

DRAWING LIST

DRAWING NO.	TITLE
CIVIL	
C-101	EXISTING CONDITIONS AND REMOVALS PLAN
C-102	SITE PLAN
C-103	SITE LAYOUT AND GRADING PLAN SHEET 1 OF 2
C-104	SITE LAYOUT AND GRADING PLAN SHEET 2 OF 2
C-105	UTILITIES PLAN
C-201	ON-SITE WASTEWATER SEPTIC SYSTEM PLAN AND PROFILE
C-202	DRAINAGE FIELD DETAILS
C-203	WATER TREATMENT AND SUPPLY BUILDING
C-204	WATER TREATMENT PROCESS FLOW DIAGRAM
C-301	CONSTRUCTION DETAILS
ELECTRICAL	
E-001	ELECTRICAL LEGEND, NOTES AND SCHEDULES
E-101	ELECTRICAL SITE PLAN AND DETAILS
E-103	WATER TREATMENT BUILDING AND BUILDING 'H' ELECTRICAL SYSTEMS PLANS
E-104	ELECTRICAL PANEL SCHEDULES
E-105	ELECTRICAL SCHEMATIC AND DETAILS
E-106	ELECTRICAL LOAD CALCULATION TABLES

Canada

NOTE:

1. DRAWINGS SHOW ROADWAY, PARKING LOT, AND PATHWAY CONSTRUCTION DETAILS THAT ARE NOT INCLUDED AS PART OF THIS CONTRACT. THESE DETAILS ARE DENOTED 'N.I.C' AND ARE INCLUDED FOR INFORMATION ONLY, AS THEY ARE THE TRAVEL CORRIDORS THAT THE CONTRACTOR IS TO USE TO ACCESS THEIR CONSTRUCTION REQUIREMENTS UNDER THIS TENDER.

LEGEND

- HIGHWAY CENTERLINE
- EDGE OF GRAVEL
- FENCE LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- BUILDING OUTLINE
- VEGETATION
- VEGETATION TO BE REMOVED
- DRAINAGE DITCH

APPROX. NORTH

NOTE:

LIDAR DATA BASED ON NAD83 (CSRS) UTM ZONE 20.

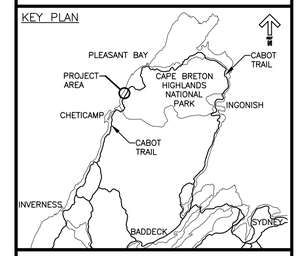
SCALE : 1:1000

0m 10m 20m 30m 40m 50m 60m 70m 80m 90m 100m

0 10 20mm 40 60 80 100 120 140 160 180 200mm

Parcs Canada Parks Canada

KEY PLAN



Stantec

REGISTERED PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA
DATE 17/05/16
C. W. Boone
12015

revisions		date
3	RE-ISSUED FOR TENDER	05/17 2018
2	ISSUED FOR REVIEW	04/11 2018
1	ISSUED FOR TENDER	06/21 2017

project / projet

PARKS CANADA
TROUT BROOK
CAMPGROUND
SITEWORK TENDER

drawing / dessin

EXISTING CONDITIONS AND REMOVALS PLAN

designed	J.M.	conçu
date	2017.05.10	
drawn	K.J.	dessiné
date	2017.05.10	
approved	C.B.	approuvé
date	2018.04.11	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA

project number / no. du projet: 01092017

drawing no. / no. du dessin: C-101

\\cd1213-f01\work_group\1401\active\161413360\161413360_Master_project_folder_template\04-drawings\1-civil\sheet_files\161413360-101-EXISTING CONDITIONS.dwg

PWGSC A1 (2004)

E-DRM/GDD-E:

NOTES:

1. ALL DISTURBED AND EXPOSED AREAS SHALL BE REINSTATED WITH MINIMUM 150mm TOPSOIL AND HYDROSEED. SEE DRAWING L-101.
2. **N.I.C.** INSTALL 2.0m WIDE TYPE 1 GRAVEL STRIP AT END OF PARKING STALLS. SEE DETAIL 3 ON THIS DRAWING.
3. **N.I.C.** ALL WOOD CHIP PATHWAYS AND CAMP SITE CONSTRUCTION WILL BE COMPLETED BY PARKS CANADA.
4. **N.I.C.** FINAL LOCATION OF FENCE TO BE COORDINATED AND APPROVED BY DEPARTMENTAL REPRESENTATIVE PRIOR TO INSTALLATION.
5. ASPHALT APRON TO BE MAINTAINED OR REINSTATED AS PER DEPARTMENTAL REPRESENTATIVE.
6. ALL DIMENSIONS INDICATED ARE IN MILLIMETERS UNLESS NOTED OTHERWISE. PIPE SIZES INDICATED ARE IN MILLIMETERS. ALL ELEVATIONS ARE GEODETIC.
7. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM WORK AND SHALL COMPLY WITH THE PERMIT REQUIREMENTS AND CONDITIONS.
8. DRAWINGS HAVE BEEN PRODUCED USING LIDAR INFORMATION PROVIDED BY NATURAL RESOURCES CANADA. CONTRACTOR TO CONFIRM EXISTING GRADES WITH GRADES PROVIDED ON DRAWINGS AND INFORM DEPARTMENTAL REPRESENTATIVE OF DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
9. MAINTAIN MINIMUM DISTURBANCE IN ALL AREAS.
10. CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED TO A CONDITION EQUAL OR BETTER THAN EXISTED BEFORE CONSTRUCTION.
11. ONCE CONSTRUCTION IS COMPLETE, ALL SURFACES SHALL HAVE POSITIVE DRAINAGE WITHOUT PONDING.
12. 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.
13. CONTRACTOR SHALL PROVIDE A RECORD INFORMATION PACKAGE CONSISTING OF REDLINE DRAWING MARK-UPS AND A FINAL SURVEY. FINAL SURVEY SHALL BE COMPLETED BY CONSTRUCTION SURVEYORS AT THE CONTRACTORS OWN EXPENSE AND SHALL INCLUDE LOCATES OF ALL ABOVE AND BELOW GRADE INFRASTRUCTURE CONSTRUCTED. SUBMITTAL OF THE FINAL SURVEY SHALL INCLUDE AUTOCAD FILE AND RAW POINTS DATA USING METRIC UNITS IN NAD83 (CSRS2010) MTM ZONE4 AND CANADIAN GEODETIC VERTICAL DATUM (GGVD) 2013.
14. CONTRACTOR MUST TRAVEL ON ROADS AND PATHS AS MUCH AS POSSIBLE. ANY DEVIATION FROM THESE SURFACES MUST BE APPROVED BY DEPARTMENTAL REPRESENTATIVE AND FULLY REINSTATED BY THE CONTRACTOR TO THE REQUIREMENTS OF THE DEPARTMENTAL REPRESENTATIVE.
15. EXISTING FOUNDATIONS MAY BE PRESENT IN AREAS ON THE SITE. EXACT LOCATIONS TO BE COORDINATED WITH THE DEPARTMENTAL REPRESENTATIVE. EXCAVATION AND CONSTRUCTION ACTIVITIES SHALL NOT DISTURB EXISTING FOUNDATIONS.

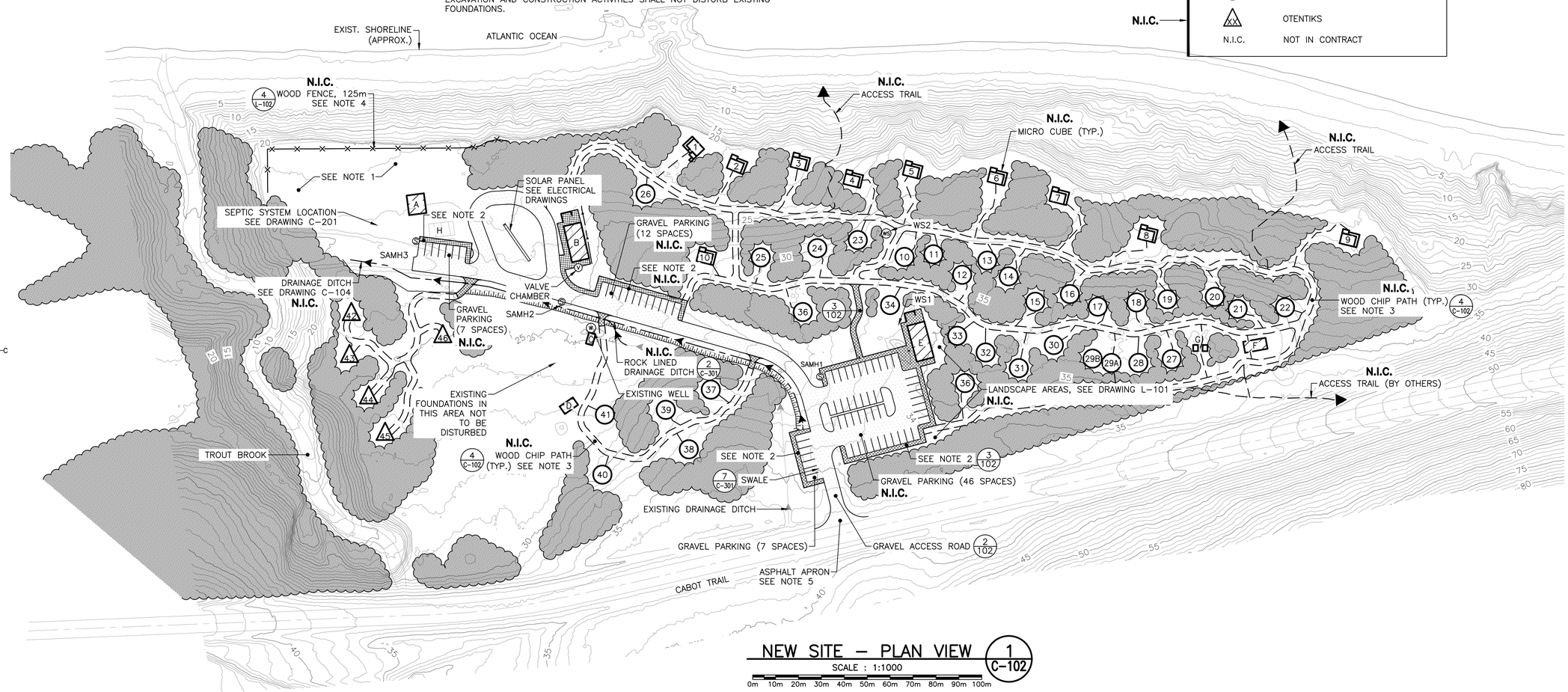
BUILDING DESCRIPTION LEGEND

N.I.C.	1–10	NEW MICRO CUBES
N.I.C.	10–41	NEW CAMP SITES
N.I.C.	42–46	NEW OTENTIKS
N.I.C.	A	NEW INTERPRETIVE CENTRE
N.I.C.	B	NEW WASHROOM AND KITCHENETTE SHELTER
	C	NEW WATER TREATMENT BUILDING
	D	NEW SOLAR EQUIPMENT BUILDING
N.I.C.	E	NEW WASHROOM AND KITCHENETTE SHELTER
N.I.C.	F	NEW PICNIC SHELTER
N.I.C.	G	NEW PIT PRIVY – 2 EA
N.I.C.	H	EXISTING KITCHEN SHELTER

LEGEND

- WS — WATER SPIGOT
- V — VALVE CHAMBER
- W — EXISTING WELL
- S — SANITARY MANHOLE
- N.I.C. — WOOD CHIP PATH
- N.I.C. — WALKING PATH STRUCTURE
- N.I.C. — GRAVEL ROAD/PARKING STRUCTURE
- N.I.C. — BUILDING OUTLINE
- VEGETATION TO REMAIN
- N.I.C. — MICRO CUBES
- N.I.C. — CAMP SITES
- N.I.C. — OTENTIKS
- N.I.C. — NOT IN CONTRACT

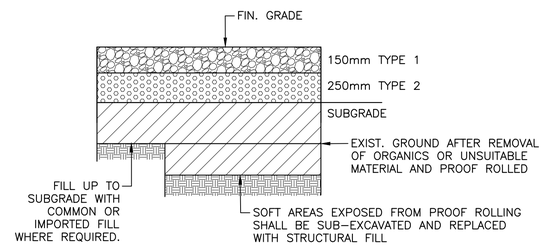
APPROX. NORTH



NEW SITE – PLAN VIEW (1 / C-102)

SCALE : 1:1000

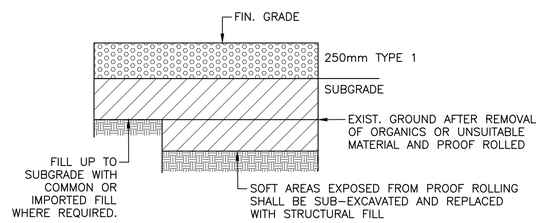
0m 10m 20m 30m 40m 50m 60m 70m 80m 90m 100m



GRAVEL ROAD/PARKING STRUCTURE (2 / C-102)

NOT IN CONTRACT

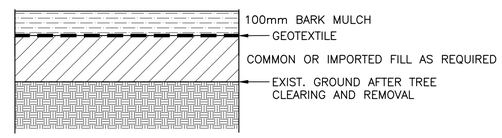
C-103/C-104



WALKING PATH STRUCTURE (3 / C-102)

NOT IN CONTRACT

C-103/C-104



WOOD CHIP PATH (4 / C-102)

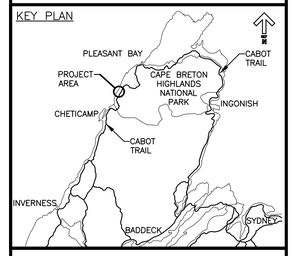
NOT IN CONTRACT

C-103/C-104

0 10 20mm 40 60 80 100 120 140 160 180 200mm

Parcs Canada / Parks Canada

KEY PLAN



Stantec

REGISTERED PROFESSIONAL ENGINEER – PROVINCE OF NOVA SCOTIA – DATE 05/16 – C. W. Boone – 12015

revisions		date
3	RE-ISSUED FOR TENDER	05/17 2018
2	ISSUED FOR REVIEW	04/11 2018
1	ISSUED FOR TENDER	06/21 2017
A	ISSUED FOR 99% REVIEW	04/25 2017

project / projet

PARKS CANADA TROUT BROOK CAMPGROUND SITEWORK TENDER

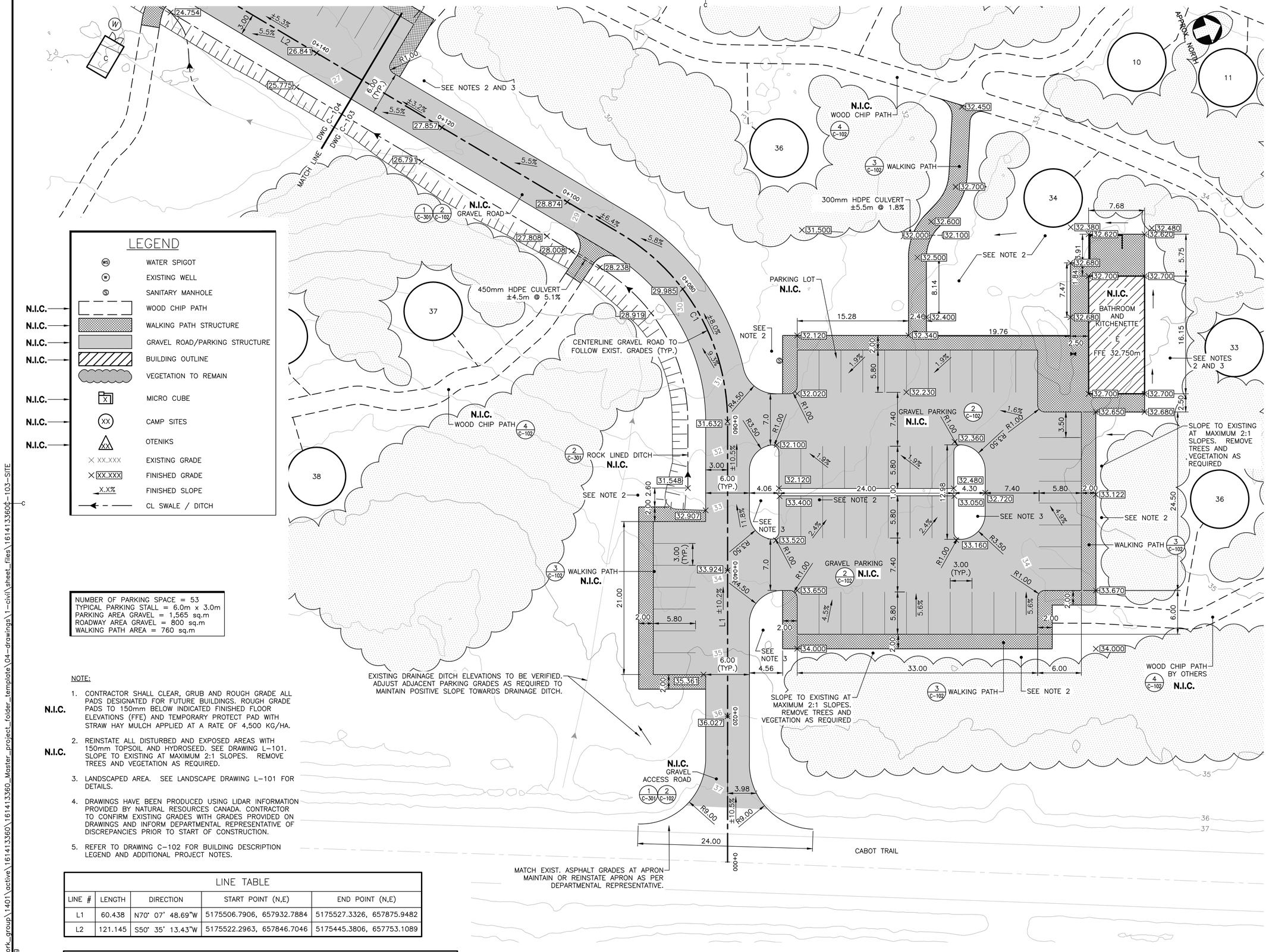
drawing / dessin

SITE PLAN

designed / conçu	J.M.
date	2017.02.03
drawn / dessiné	K.J.
date	2017.02.03
approved / approuvé	C.B.
date	2018.04.11
Tender / Soumission	
PCA Project Manager / Administrateur de projets PCA	
project number / no. du projet	01092017
drawing no. / no. du dessin	C-102

PWGSC A1 (2004)

E-DRM/GDD-E:



NUMBER OF PARKING SPACE = 53
TYPICAL PARKING STALL = 6.0m x 3.0m
PARKING AREA GRAVEL = 1,565 sq.m
ROADWAY AREA GRAVEL = 800 sq.m
WALKING PATH AREA = 760 sq.m

NOTE:

1. CONTRACTOR SHALL CLEAR, GRUB AND ROUGH GRADE ALL PADS DESIGNATED FOR FUTURE BUILDINGS. ROUGH GRADE PADS TO 150mm BELOW INDICATED FINISHED FLOOR ELEVATIONS (FFE) AND TEMPORARY PROTECT PAD WITH STRAW HAY MULCH APPLIED AT A RATE OF 4,500 KG/HA. N.I.C.
2. REINSTATE ALL DISTURBED AND EXPOSED AREAS WITH 150mm TOPSOIL AND HYDROSEED. SEE DRAWING L-101. SLOPE TO EXISTING AT MAXIMUM 2:1 SLOPES. REMOVE TREES AND VEGETATION AS REQUIRED. N.I.C.
3. LANDSCAPED AREA. SEE LANDSCAPE DRAWING L-101 FOR DETAILS.
4. DRAWINGS HAVE BEEN PRODUCED USING LIDAR INFORMATION PROVIDED BY NATURAL RESOURCES CANADA. CONTRACTOR TO CONFIRM EXISTING GRADES WITH GRADES PROVIDED ON DRAWINGS AND INFORM DEPARTMENTAL REPRESENTATIVE OF DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
5. REFER TO DRAWING C-102 FOR BUILDING DESCRIPTION LEGEND AND ADDITIONAL PROJECT NOTES.

LINE TABLE				
LINE #	LENGTH	DIRECTION	START POINT (N,E)	END POINT (N,E)
L1	60.438	N70° 07' 48.69"W	5175506.7906, 657932.7884	5175527.3326, 657875.9482
L2	121.145	S50° 35' 13.43"W	5175522.2963, 657846.7046	5175445.3806, 657753.1089

CURVE TABLE					
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	START POINT (N,E)	END POINT (N,E)
C1	30.000	31.040	S80° 13' 42.37"W	5175527.3326, 657875.9482	5175522.2963, 657846.7046

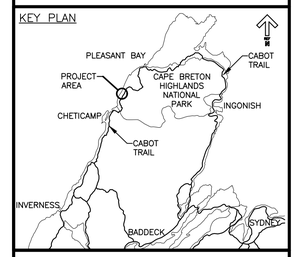
NORTH GRADING PLAN

SCALE: 1:250

1 C-103

Parcs Canada Parks Canada

KEY PLAN



Stantec

revisions		date
3	RE-ISSUED FOR TENDER	05/17 2018
2	ISSUED FOR REVIEW	04/11 2018
1	ISSUED FOR TENDER	06/21 2017

project / projet

PARKS CANADA TROUT BROOK CAMPGROUND SITEWORK TENDER

drawing / dessin

SITE LAYOUT AND GRADING PLAN SHEET 1 OF 2

designed	J.M.	conçu
date	2017.05.25	
drawn	K.J.	dessiné
date	2017.05.29	
approved	C.B.	approuvé
date	2018.04.11	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA
project number	01092017	no. du projet
drawing no.	C-103	no. du dessin

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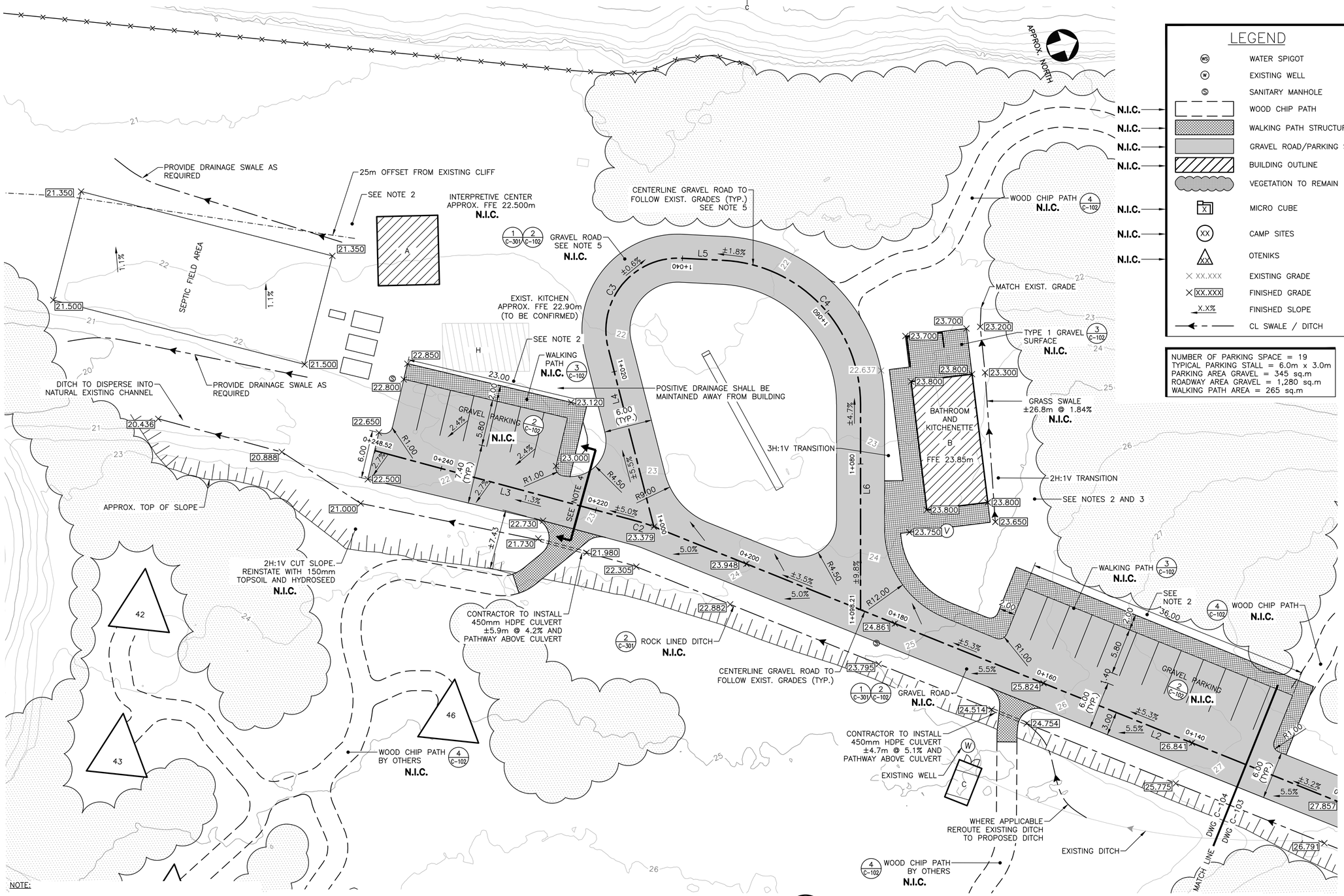
PWGSC A1 (2004)

E-DRM/GDD-E:



LEGEND

- WATER SPIGOT
- EXISTING WELL
- SANITARY MANHOLE
- WOOD CHIP PATH — N.I.C.
- WALKING PATH STRUCTURE — N.I.C.
- GRAVEL ROAD/PARKING STRUCT — N.I.C.
- BUILDING OUTLINE — N.I.C.
- VEGETATION TO REMAIN
- MICRO CUBE — N.I.C.
- CAMP SITES — N.I.C.
- OTENIKS — N.I.C.
- XX.XXX — EXISTING GRADE
- XX.XXX — FINISHED GRADE
- X.X% — FINISHED SLOPE
- CL SWALE / DITCH

NUMBER OF PARKING SPACE = 19
TYPICAL PARKING STALL = 6.0m x 3.0m
PARKING AREA GRAVEL = 345 sq.m
ROADWAY AREA GRAVEL = 1,280 sq.m
WALKING PATH AREA = 265 sq.m

NOTE:

1. CONTRACTOR SHALL CLEAR, GRUB AND ROUGH GRADE ALL PADS DESIGNATED FOR FUTURE BUILDINGS. ROUGH GRADE PADS TO 150mm BELOW INDICATED FINISHED FLOOR ELEVATIONS (FFE) AND TEMPORARY PROTECT PAD WITH STRAW HAY MULCH APPLIED AT A RATE OF 4,500 KG/HA. N.I.C.
2. REINSTATE ALL DISTURBED AND EXPOSED AREAS WITH 150mm TOPSOIL AND HYDROSEED. SEE DRAWING L-101.
3. LANDSCAPED AREA. SEE LANDSCAPE DRAWING L-101 FOR DETAILS. N.I.C.
4. TYPICAL ROADWAY CROSS SECTION DOES NOT APPLY. USE GRADES PROVIDED. N.I.C.
5. LOOP ROAD SHALL BE SUPERELEVATED WITH THE NATURAL GRADE TO ENSURE POSITIVE DRAINAGE FROM INTERIOR GRASSED AREA. MAX. 4%. N.I.C.
6. DRAWINGS HAVE BEEN PRODUCED USING LIDAR INFORMATION PROVIDED BY NATURAL RESOURCES CANADA. CONTRACTOR TO CONFIRM EXISTING GRADES WITH GRADES PROVIDED ON DRAWINGS AND INFORM DEPARTMENTAL REPRESENTATIVE PRIOR TO START OF CONSTRUCTION OF DISCREPANCIES.
7. REFER TO DRAWING C-102 FOR BUILDING DESCRIPTION LEGEND AND ADDITIONAL PROJECT NOTES.

SOUTH - GRADING PLAN (1 / C-104)

SCALE: 1:250

0m 5m 10m 15m 20m 25m

LINE TABLE

LINE #	LENGTH	DIRECTION	START POINT (N,E)	END POINT (N,E)
L2	121.145	S50° 35' 13.43"W	5175522.2963, 657846.7046	5175445.3806, 657753.1089
L3	34.110	S43° 45' 34.20"W	5175444.1662, 657751.7988	5175419.5304, 657728.2073
L4	23.052	N75° 38' 46.88"W	5175445.4872, 657753.2386	5175451.2019, 657730.9064
L5	5.276	N31° 37' 18.95"E	5175464.6398, 657725.4738	5175469.1326, 657728.2402
L6	25.682	S61° 18' 27.59"E	5175475.4848, 657752.2096	5175463.1549, 657774.7377

CURVE TABLE

CURVE #	RADIUS	LENGTH	CHORD DIRECTION	START POINT (N,E)	END POINT (N,E)
C2	15.000	1.787	S47° 10' 23.82"W	5175445.3806, 657753.1089	5175444.1662, 657751.7988
C3	9.000	16.850	N22° 00' 43.97"W	5175451.2019, 657730.9064	5175464.6398, 657725.4738
C4	18.000	27.354	N75° 09' 25.68"E	5175469.1326, 657728.2402	5175475.4848, 657752.2096

0 10 20mm 40 60 80 100 120 140 160 180 200mm

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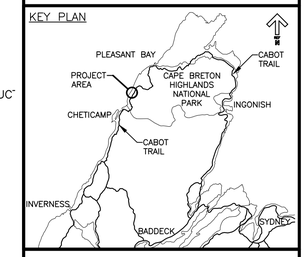
PWGSC A1 (2004)

E-DRM/GDD-E:

Parcs Canada / Parks Canada

KEY PLAN



Stantec

REGISTERED PROFESSIONAL ENGINEERS PROVINCE OF NOVA SCOTIA — DATE Jun 21/2018 — C. W. Boone — 12015

revisions		date
4	RE-ISSUED FOR TENDER	06/21 2018
3	RE-ISSUED FOR TENDER	05/17 2018
2	ISSUED FOR REVIEW	04/11 2018
1	ISSUED FOR TENDER	06/21 2017

project / projet

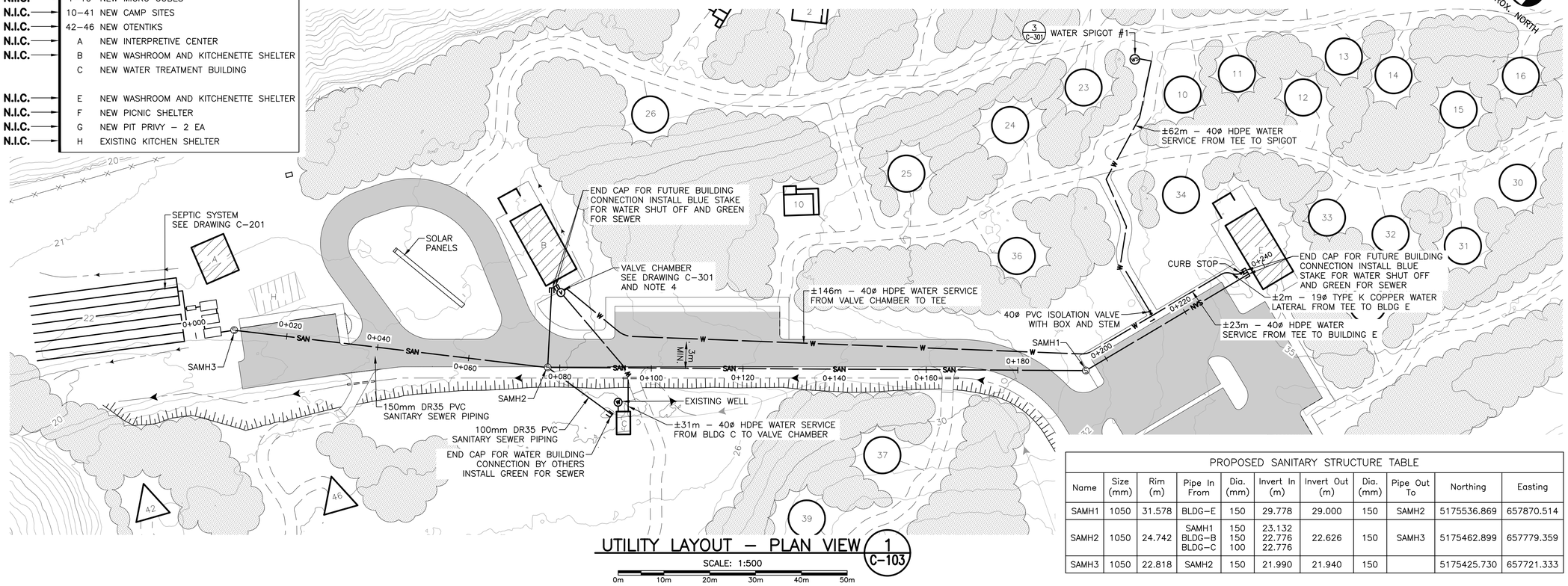
PARKS CANADA TROUT BROOK CAMPGROUND SITEWORK TENDER

drawing / dessin

SITE LAYOUT AND GRADING PLAN SHEET 2 OF 2

designed / conçu	J.M.
date	2017.05.25
drawn / dessiné	K.J.
date	2017.05.29
approved / approuvé	C.B.
date	2018.04.11
Tender / Soumission	
PCA Project Manager / Administrateur de projets PCA	
project number / no. du projet	01092017
drawing no. / no. du dessin	C-104

BUILDING DESCRIPTION		
N.I.C.	1–10	NEW MICRO CUBES
N.I.C.	10–41	NEW CAMP SITES
N.I.C.	42–46	NEW OTENTIKS
N.I.C.	A	NEW INTERPRETIVE CENTER
N.I.C.	B	NEW WASHROOM AND KITCHENETTE SHELTER
	C	NEW WATER TREATMENT BUILDING
N.I.C.	E	NEW WASHROOM AND KITCHENETTE SHELTER
N.I.C.	F	NEW PICNIC SHELTER
N.I.C.	G	NEW PIT PRIVY – 2 EA
N.I.C.	H	EXISTING KITCHEN SHELTER

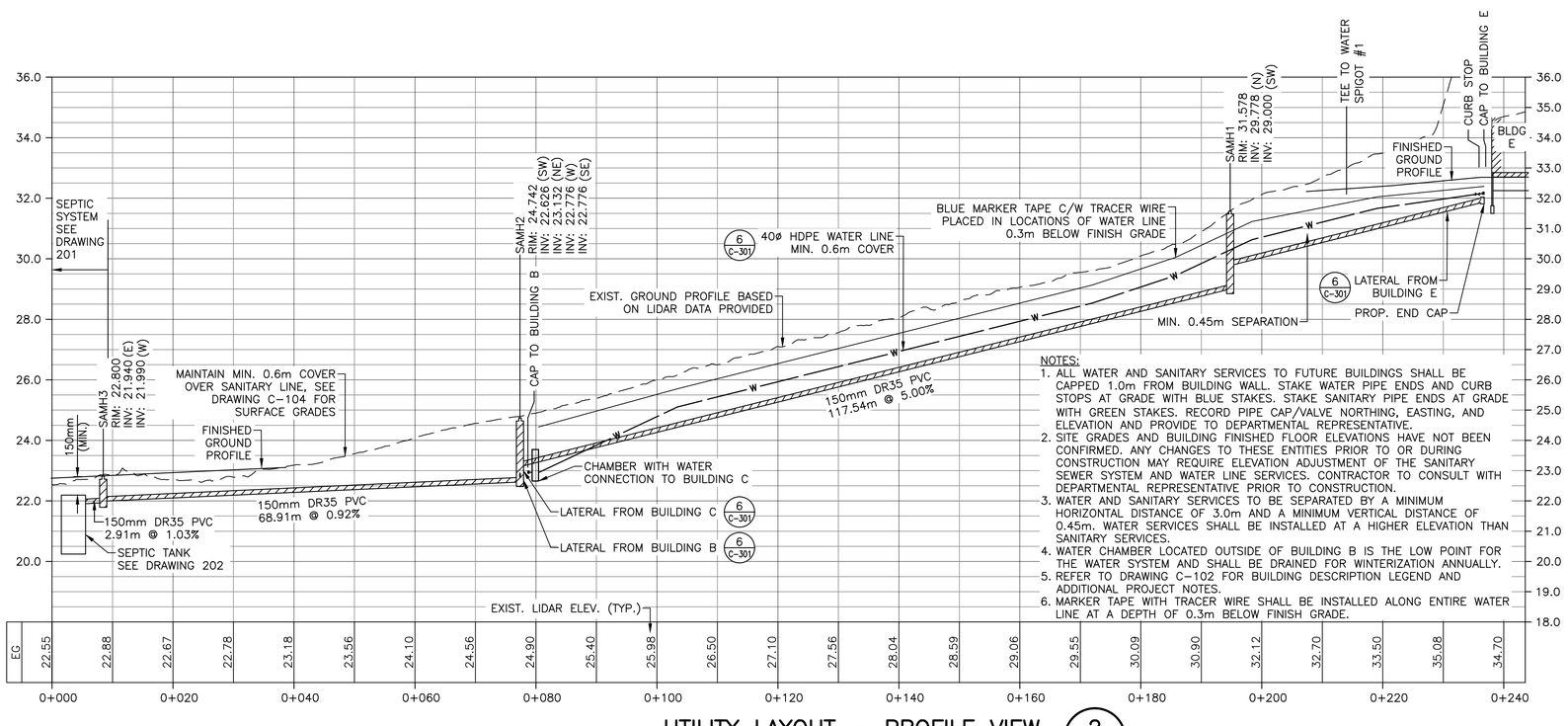


UTILITY LAYOUT – PLAN VIEW 1 C-103

SCALE: 1:500

0m 10m 20m 30m 40m 50m

PROPOSED SANITARY STRUCTURE TABLE										
Name	Size (mm)	Rim (m)	Pipe In From	Dia. (mm)	Invert In (m)	Invert Out (m)	Dia. (mm)	Pipe Out To	Northing	Easting
SAMH1	1050	31.578	BLDG–E	150	29.778	29.000	150	SAMH2	5175536.869	657870.514
SAMH2	1050	24.742	SAMH1 BLDG–B BLDG–C	150 150 100	23.132 22.776 22.776	22.626	150	SAMH3	5175462.899	657779.359
SAMH3	1050	22.818	SAMH2	150	21.990	21.940	150		5175425.730	657721.333



UTILITY LAYOUT – PROFILE VIEW 2 C-103

SCALE: 1:500 HORIZ.

0m 10m 20m 30m 40m 50m

SCALE : 1:100 VERT.

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

PROPOSED SANITARY PIPE TABLE							
From	Invert (m)	To	Invert (m)	Size (mm)	Type	Length (m)	Slope
BLDG–B	22.950	SAMH2	22.776	150	PVC	17.357	1.00%
BLDG–C	23.400	SAMH2	22.776	100	PVC	17.409	3.58%
BLDG–E	31.850	SAMH1	29.778	150	PVC	41.444	5.00%
SAMH1	29.000	SAMH2	23.132	150	PVC	117.391	5.00%
SAMH2	22.626	SAMH3	21.990	150	PVC	68.909	0.92%
SAMH3	21.940		21.910	150	PVC	2.908	1.03%

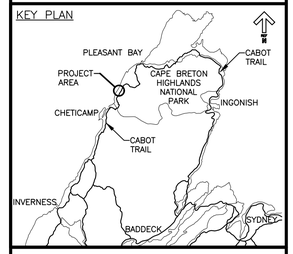
NOTES:
1. ALL WATER AND SANITARY SERVICES TO FUTURE BUILDINGS SHALL BE CAPPED 1.0m FROM BUILDING WALL. STAKE WATER PIPE ENDS AND CURB STOPS AT GRADE WITH BLUE STAKES. STAKE SANITARY PIPE ENDS AT GRADE WITH GREEN STAKES. RECORD PIPE CAP/VALVE NORTHING, EASTING, AND ELEVATION AND PROVIDE TO DEPARTMENTAL REPRESENTATIVE.
2. SITE GRADES AND BUILDING FINISHED FLOOR ELEVATIONS HAVE NOT BEEN CONFIRMED. ANY CHANGES TO THESE ENTITIES PRIOR TO OR DURING CONSTRUCTION MAY REQUIRE ELEVATION ADJUSTMENT OF THE SANITARY SEWER SYSTEM AND WATER LINE SERVICES. CONTRACTOR TO CONSULT WITH DEPARTMENTAL REPRESENTATIVE PRIOR TO CONSTRUCTION.
3. WATER AND SANITARY SERVICES TO BE SEPARATED BY A MINIMUM HORIZONTAL DISTANCE OF 3.0m AND A MINIMUM VERTICAL DISTANCE OF 0.45m. WATER SERVICES SHALL BE INSTALLED AT A HIGHER ELEVATION THAN SANITARY SERVICES.
4. WATER CHAMBER LOCATED OUTSIDE OF BUILDING B IS THE LOW POINT FOR THE WATER SYSTEM AND SHALL BE DRAINED FOR WINTERIZATION ANNUALLY.
5. REFER TO DRAWING C-102 FOR BUILDING DESCRIPTION LEGEND AND ADDITIONAL PROJECT NOTES.
6. MARKER TAPE WITH TRACER WIRE SHALL BE INSTALLED ALONG ENTIRE WATER LINE AT A DEPTH OF 0.3m BELOW FINISH GRADE.

LEGEND

- WS — WATER SPIGOT
- W — EXISTING WELL
- S — SANITARY MANHOLE
- V — VALVE CHAMBER
- SAN — SANITARY SEWER PIPE
- W — WATER PIPE
- N.I.C. — WOOD CHIP PATH
- N.I.C. — WALKING PATH
- N.I.C. — GRAVEL ROAD
- N.I.C. — BUILDING OUTLINE
- VEGETATION TO REMAIN
- N.I.C. — MICRO CUBES
- N.I.C. — CAMP SITES
- N.I.C. — OTENIKS
- N.I.C. — NOT IN CONTRACT

Parcs Canada / Parks Canada

KEY PLAN



Stantec

REGISTERED PROFESSIONAL ENGINEER — C. W. Boone — 12015 — PROVINCE OF NOVA SCOTIA — DATE Jun 21/18

revisions		date
4	RE–ISSUED FOR TENDER	06/21 2018
3	ISSUED FOR TENDER	05/17 2018
2	ISSUED FOR REVIEW	04/11 2018
1	ISSUED FOR TENDER	06/21 2017

project / projet

PARKS CANADA TROUT BROOK CAMPGROUND SITEWORK TENDER

drawing / dessin

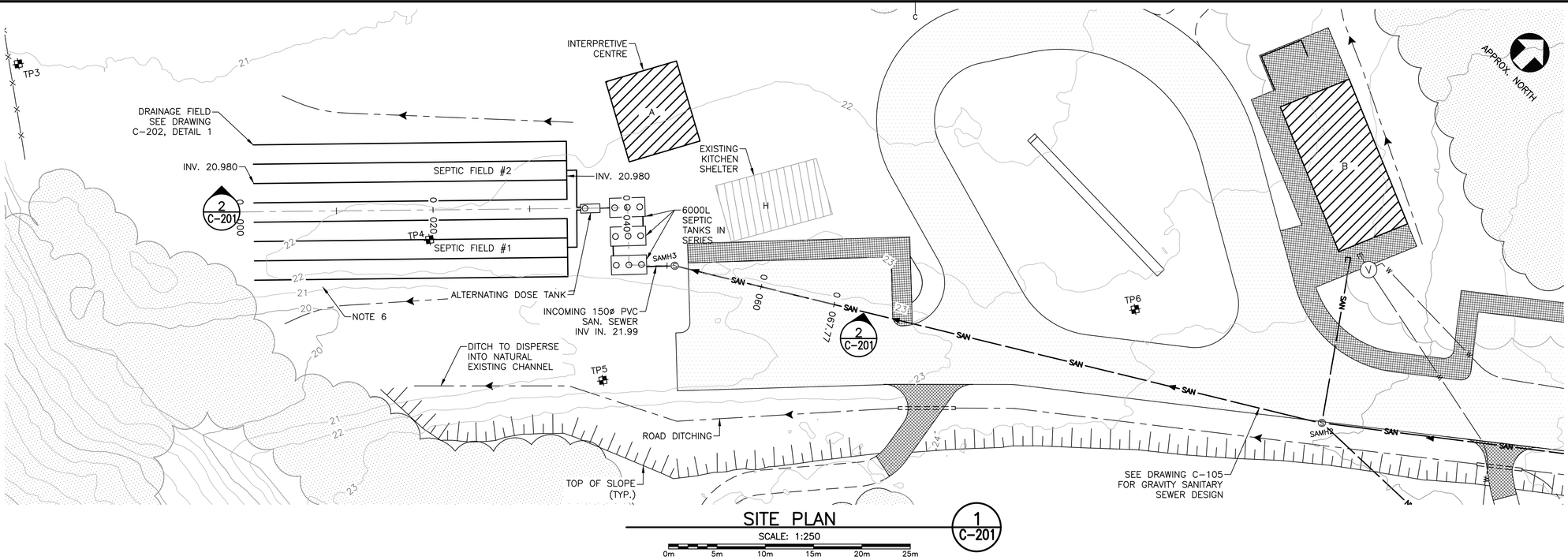
UTILITIES PLAN

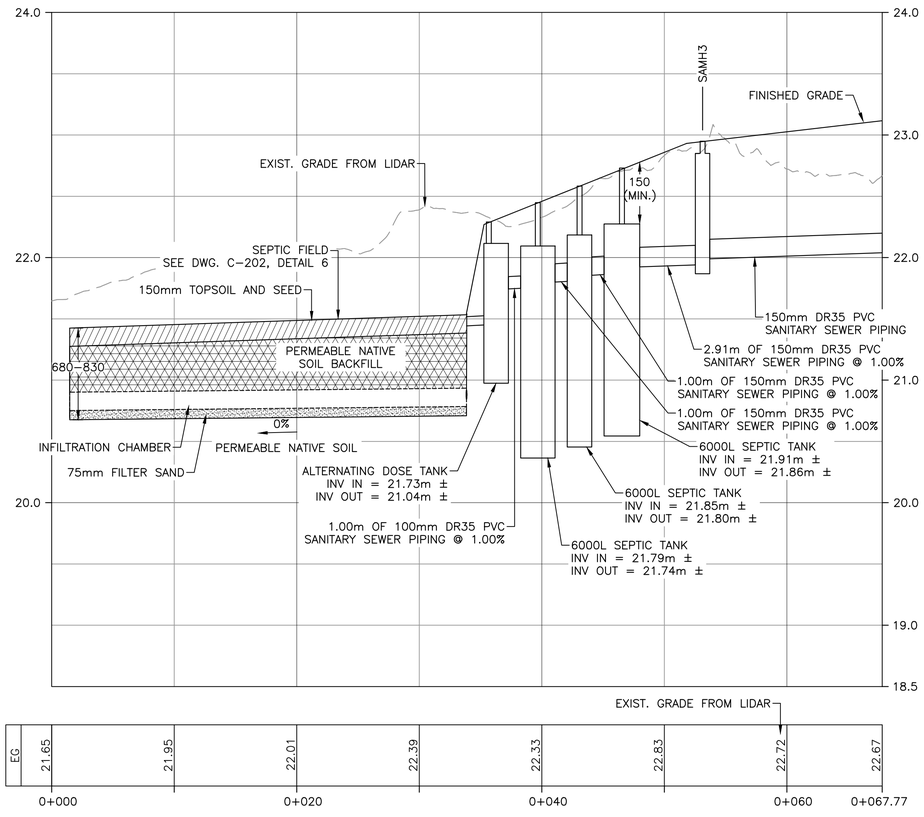
designed J.M. / conçu
date 2017.05.10
drawn K.J. / dessiné
date 2017.05.10
approved C.B. / approuvé
date 2018.04.11
Tender / Soumission
PCA Project Manager / Administrateur de projets PCA
project number / no. du projet
01092017
drawing no. / no. du dessin
C–105

\\CD1213-F01\work_group\1401\active\161413360\161413360_Master_project_folder_template\04-drawings\1-civil\sheet_files\161413360C-105-UTILITES PLAN.dwg

PWGSC A1 (2004)

E-DRM/GDD-E:





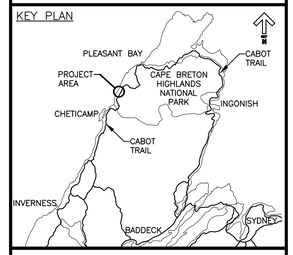
DRAINAGE FIELD PROFILE
SCALE: 1:250
2 C-201
0m 5m 10m 15m 20m 25m

NOTES:

1. FINAL GRADE ABOVE SEPTIC FIELD SHALL BE MAX 3% ACROSS CONTOURS, MAX 1% WITH CONTOURS. SEE DRAWING C-104 FOR GRADING PLAN.
2. MAXIMUM DEPTH OF BOTTOM OF SEPTIC FIELD IS 1250mm BELOW EXISTING ELEVATION.
3. DEPTH OF PERMEABLE SOIL BELOW BOTTOM OF SEPTIC FIELD SHALL BE A MINIMUM OF 600mm.
4. SEPARATION DISTANCE FROM BOTTOM OF DRAINAGE FIELD TO BEDROCK/GROUNDWATER/POORLY DRAINING SOILS SHALL BE A MINIMUM OF 1000mm.
5. SEPTIC FIELD SHALL BE BACKFILLED WITH NATIVE MATERIAL (SILTY GRAVEL WITH SAND) WITH A HYDRAULIC CONDUCTIVITY RANGING FROM 20 TO 80x10^{-6} m/s.
6. FILL TO BE BLENDED BACK TO EXISTING ELEVATION DOWN SLOPE OF DRAINAGE FIELD.
7. FINAL SITE GRADING AND FILL QUANTITIES IN THE AREA OF THE DRAINAGE FIELD TO BE DETERMINED BY CONTRACTOR.
8. CONTRACTOR TO STAKE THE FINAL LOCATION OF ALL TANKS AND HAVE FINAL APPROVAL OF THESE STAKE LOCATIONS BY PARKS CANADA PRIOR TO EXCAVATING.
9. FINAL SEPTIC TANK TO BE COMPLETED WITH EFFLUENT FILTER ON OUTLET.
10. REFER TO DRAWING C-102 FOR BUILDING DESCRIPTION LEGEND AND ADDITIONAL PROJECT NOTES.
11. BOULDERS OR COBBLES ENCOUNTERED DURING SEPTIC FIELD INSTALLATION SHALL BE REMOVED AND REPLACED WITH NATIVE SOIL MATERIAL.

Parcs Canada Parks Canada

KEY PLAN



Stantec

REGISTERED PROFESSIONAL ENGINEERS PROVINCE OF NOVA SCOTIA
DATE Jun. 21/2018
C. W. Boone
12015

revisions		date
5	RE-ISSUED FOR TENDER	06/21 2018
4	RE-ISSUED FOR TENDER	05/17 2018
3	ISSUED FOR REVIEW	04/11 2018
2	ISSUED FOR TENDER	06/21 2017
1	ISSUED FOR 99% REVIEW	04/25 2017

project / projet

PARKS CANADA
TROUT BROOK CAMPGROUND
SITEWORK TENDER

drawing / dessin

ON-SITE WASTEWATER SEPTIC SYSTEM PLAN AND PROFILE

designed / conçu	J.M.
date	2017.04.25
drawn / dessiné	K.J.
date	2017.04.25
approved / approuvé	C.B.
date	2018.04.11
Tender / Soumission	
PCA Project Manager / Administrateur de projets PCA	
project number / no. du projet	01092017
drawing no. / no. du dessin	C-201

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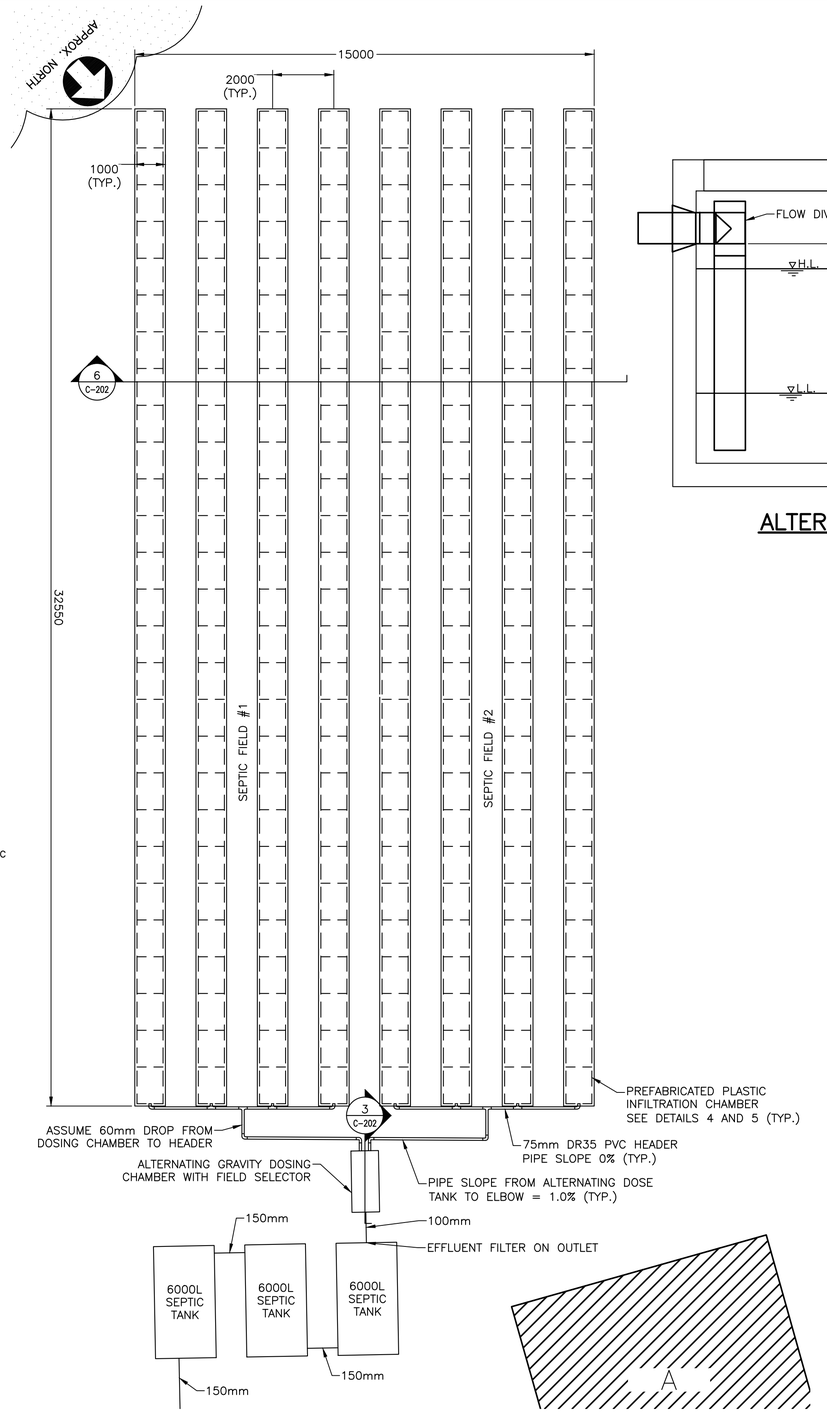
PWGSC A1 (2004)

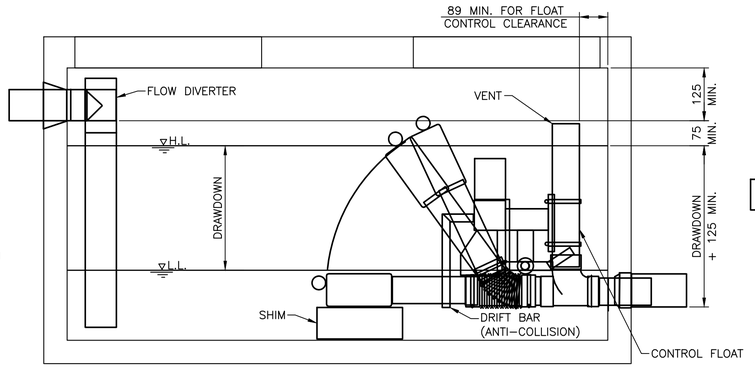
0 10 20mm 40 60 80 100 120 140 160 180 200mm

E-DRM/GDD-E:



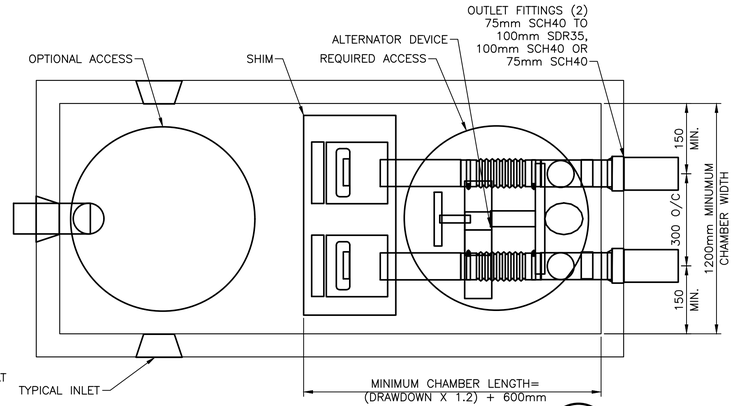
DRAINAGE FIELD PLAN DETAIL 1
SCALE : 1:100

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m



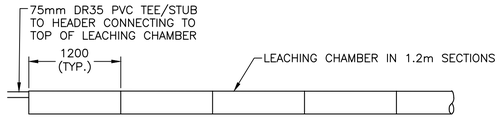
ALTERNATING DOSE TANK SECTION 2
C-202

SCALE : NTS



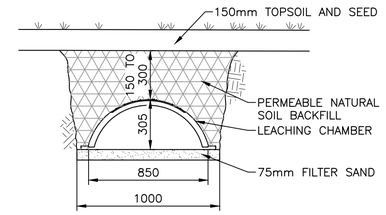
ALTERNATING DOSE TANK PLAN 3
C-202

SCALE : NTS



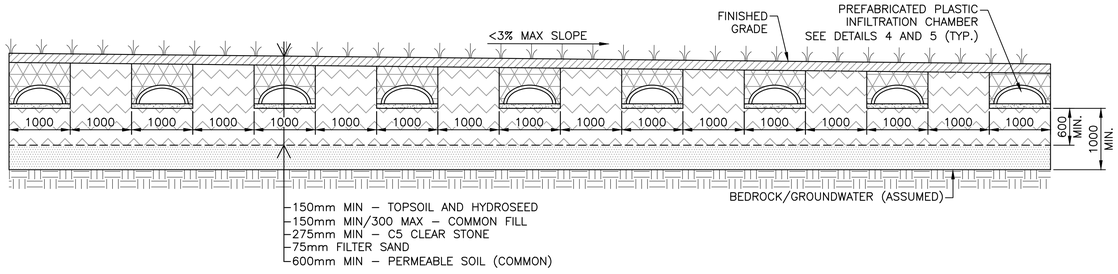
GRAVITY FED INFILTRATION CHAMBER DETAIL 4
C-202

SCALE : NTS



GRAVITY FED INFILTRATION CHAMBER SECTION 5
C-202

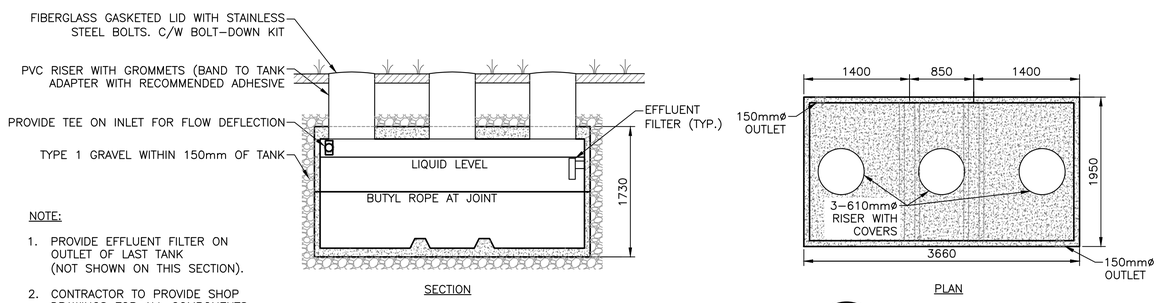
SCALE : NTS



SEPTIC FIELD SECTION DETAIL 6
C-202

SCALE: 1:50

0m 1m 2m 3m 4m 5m



NOTE:

1. PROVIDE EFFLUENT FILTER ON OUTLET OF LAST TANK (NOT SHOWN ON THIS SECTION).
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE SEPTIC SYSTEM.

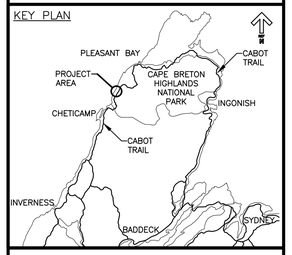
SEPTIC TANK SECTION DETAIL 7
C-202

SCALE: 1:50

0m 1m 2m 3m 4m 5m

Parcs Canada Parks Canada

KEY PLAN



Stantec

revisions		date
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2	ISSUED FOR TENDER	06/21 2017
1	ISSUED FOR 99% REVIEW	04/25 2017

project / projet

PARKS CANADA
TROUT BROOK
CAMPGROUND
SITEWORK TENDER

drawing / dessin

DRAINAGE FIELD
DETAILS

designed J.M. / conçu
date 2017.04.25
drawn K.J. / dessiné
date 2017.04.25
approved C.B. / approuvé
date 2018.04.11
Tender / Soumission
PCA Project Manager / Administrateur de projets PCA
project number / no. du projet
01092017
drawing no. / no. du dessin
C-202

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PWGSC A1 (2004)

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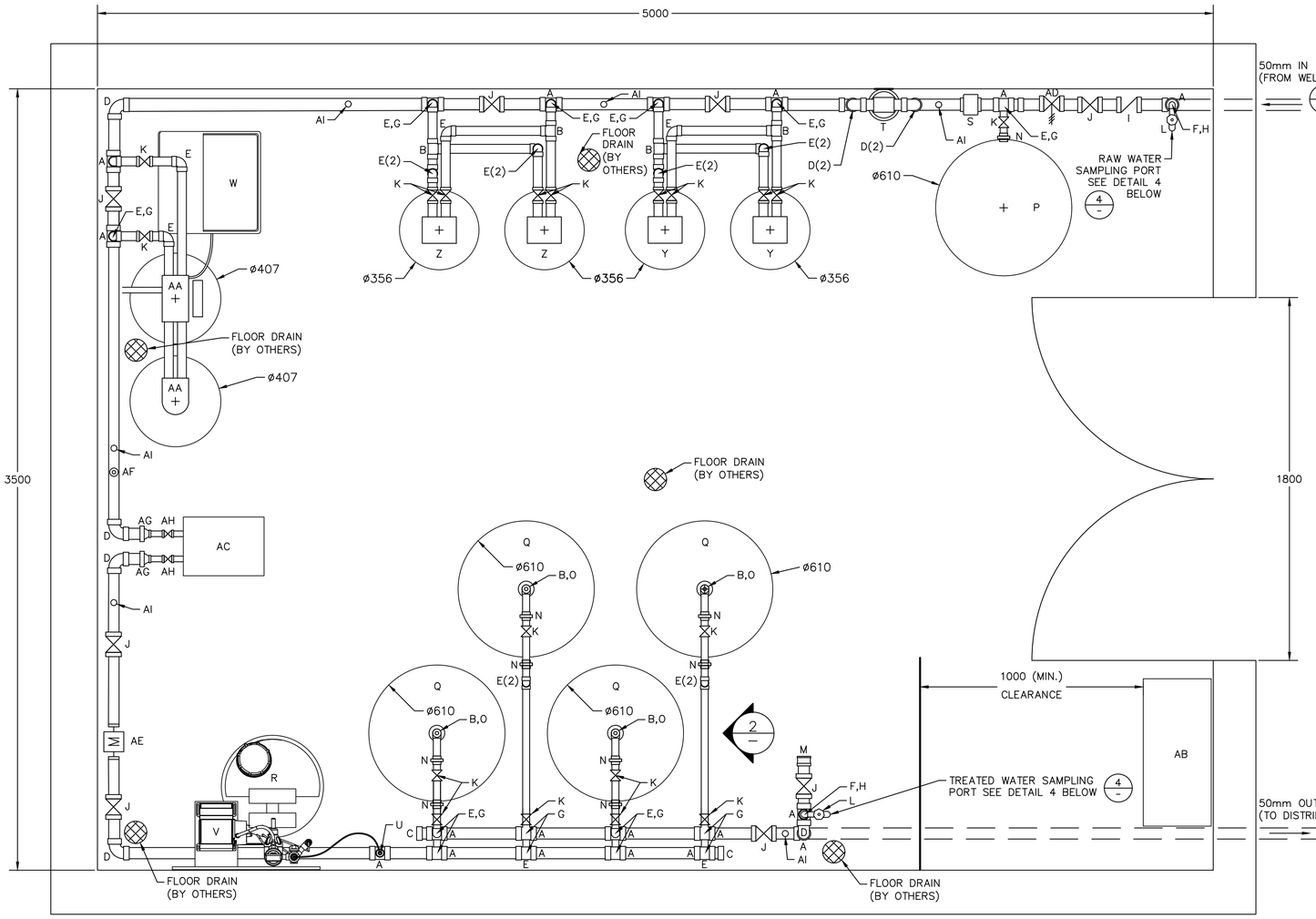
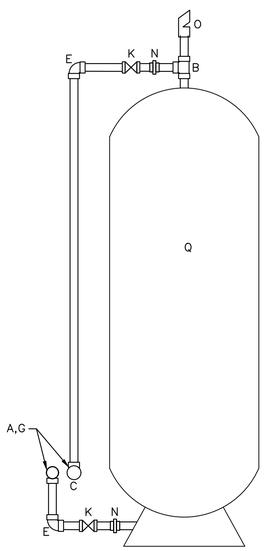


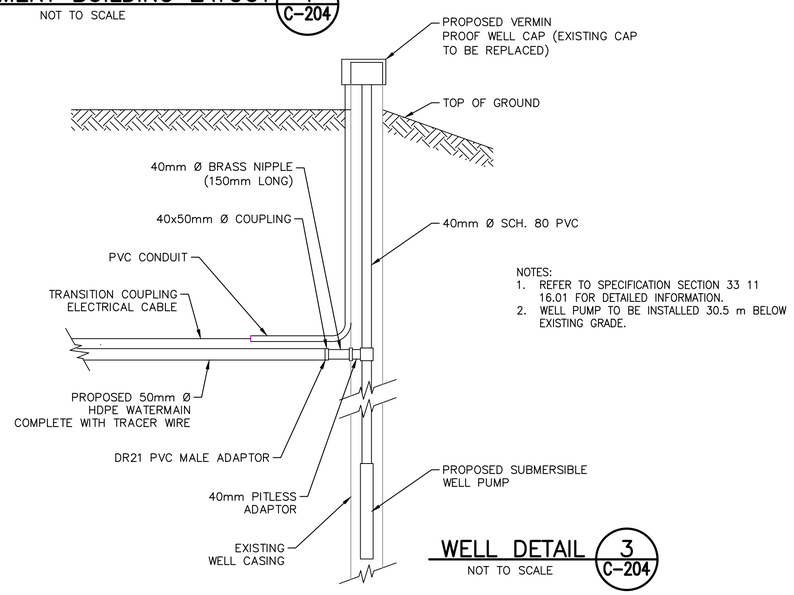
A – 50x50x50mm SCH80 PVC TEE
B – 32x32x32mm SCH80 PVC TEE
C – 50mm SCH80 PVC CAP
D – 50mm SCH80 PVC 90° BEND
E – 32mm SCH80 PVC 90° BEND
F – 19mm SCH80 PVC 90° BEND
G – 50x32mm SCH80 PVC BUSHING
H – 50X19mm SCH80 PVC BUSHING
I – 50mm CHECK VALVE
J – 50mm BALL VALVE
K – 32mm BALL VALVE
L – 19mm HOSEBIB
M – 50mm CAMLOCK CONNECTION
N – 32mm UNION
O – AIR RELEASE VALVE
P – EXPANSION TANK (235L)
Q – CONTACT TANK c/w DRAIN (454L)
R – CHLORINE SOLUTION TANK
S – MECHANICAL PRESSURE SWITCH
T – SEDIMENT FILTER (20 IGPM)
U – CHLORINE INJECTION LANCE
V – CHLORINE METERING PUMP C/W SKID
W – BRINE TANK
Y – IRON REMOVAL SYSTEM
Z – ADSORBENT SYSTEM
AA– SOFTENER SYSTEM
AB– ELECTRICAL PANEL
AC– BOOSTER PUMP
AD– PRESSURE RELIEF VALVE
AE– FLOW METER
AF– PRESSURE SUSTAINING VALVE
AG– 50mm x 25mm SCH80 PVC BUSHING
AH– 25mm BALL VALVE
AI – PRESSURE GAUGE

NOTES:
1) PIPING AND VALVES TO BE SCH80 PVC. REQUIRED PIPING SIZES AS DICTATED BY VALVE AND CONNECTION REQUIREMENTS.
2) TREATMENT COMPONENTS SHALL NOT BEAR THE WEIGHT OF PIPING. PIPE SUPPORT TO BE INSTALLED A MINIMUM OF EVERY 1000mm ON STRAIGHT RUNS OF PIPING AND AT LOCATIONS OF VALVES AND RAISED ELBOWS. PIPE SUPPORT TO BE SECURELY ANCHORED AND DESIGNED TO FIT SCH80 PVC PIPING.
3) REFER TO PROCESS FLOW DIAGRAM FOR SANITARY DRAIN LOCATIONS FROM TREATMENT COMPONENTS. DESIGN AND FINAL LOCATION OF FLOOR DRAINS BY OTHERS.
4) DRAIN LINES SHALL NOT BE DIRECTLY CONNECTED TO THE SANITARY SYSTEM. AN AIR GAP IS REQUIRED TO PREVENT SANITARY BACKUP INTO THE POTABLE SYSTEM.
5) WATER TREATMENT BUILDING TO BE DESIGNED AND CONSTRUCTED BY PARKS CANADA. WOOD FRAME CONSTRUCTION WITH SLAB ON–GRADE.

WATER TREATMENT BUILDING LAYOUT 1 / C-204
NOT TO SCALE

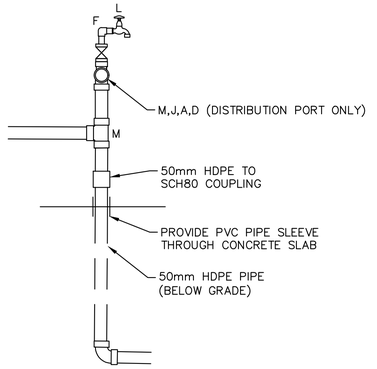


CHLORINE CONTACT TANK SECTION 2 / C-204
NOT TO SCALE



NOTES:
1. REFER TO SPECIFICATION SECTION 33 11 16.01 FOR DETAILED INFORMATION.
2. WELL PUMP TO BE INSTALLED 30.5 m BELOW EXISTING GRADE.

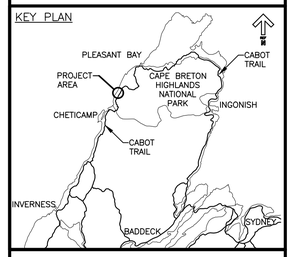
WELL DETAIL 3 / C-204
NOT TO SCALE



SAMPLING AND FLUSHING PORT 4 / C-204
NOT TO SCALE

Parcs Canada Parks Canada

KEY PLAN



Stantec

REGISTERED PROFESSIONAL ENGINEER
DATE June 21/2018
C. W. Boone
12015
PROVINCE OF NOVA SCOTIA

revisions		date
5	RE–ISSUED FOR TENDER	06/21 2018
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3	ISSUED FOR REVIEW	04/11 2018
2	ISSUED FOR TENDER	06/21 2017
1	ISSUED FOR 99% REVIEW	04/25 2017

project / projet
PARKS CANADA
TROUT BROOK
CAMPGROUND
SITEWORK TENDER

drawing / dessin
WATER TREATMENT &
SUPPLY BUILDING

designed / conçu	J.M.
date	2017.04.25
drawn / dessiné	K.J.
date	2017.04.25
approved / approuvé	C.B.
date	2018.04.11
Tender / Soumission	
PCA Project Manager	Administrateur de projets PCA
project number / no. du projet	01092017
drawing no. / no. du dessin	C–203

E–DRM/GDD–E:

PWGSC A1 (2004)

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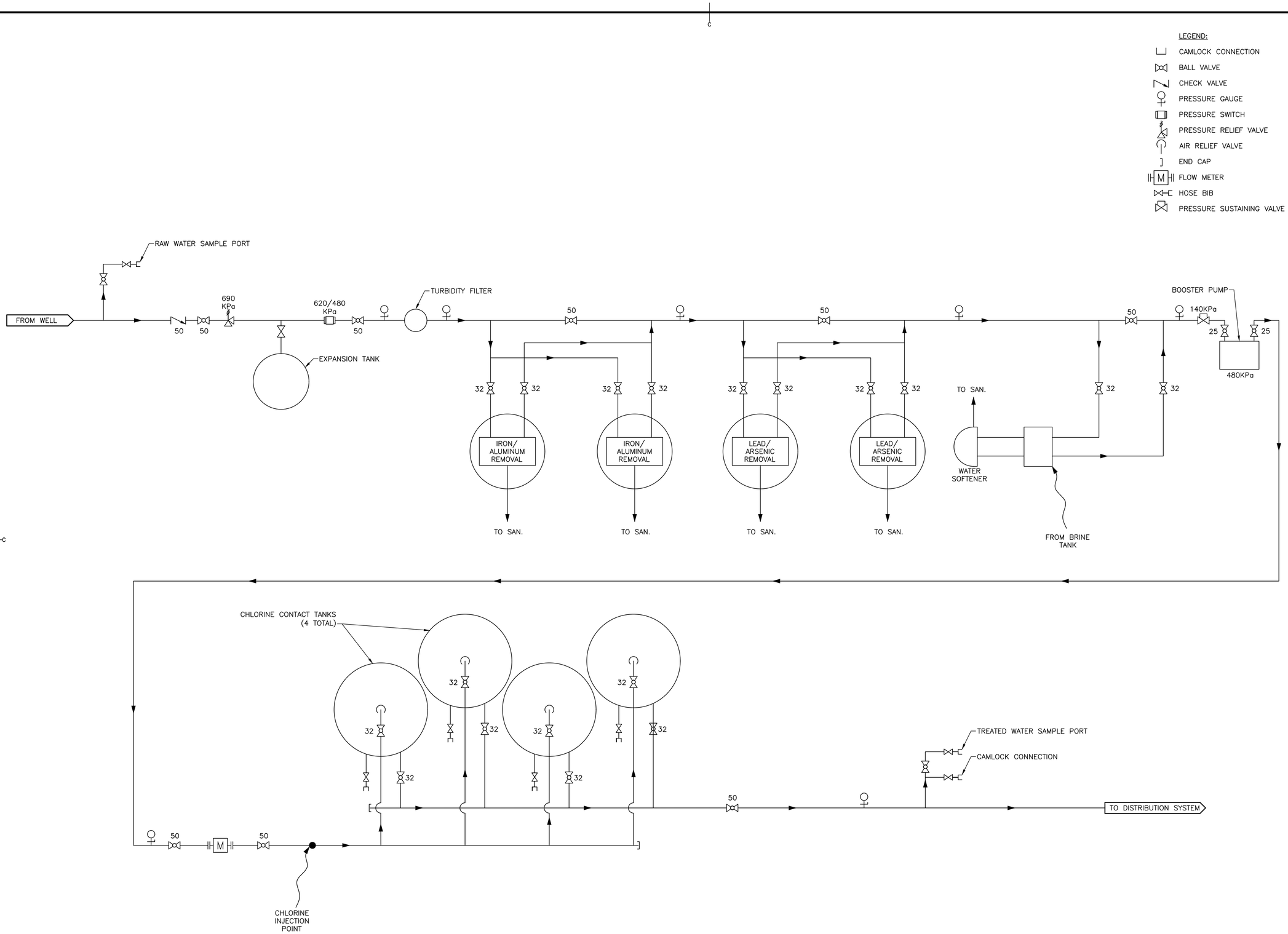
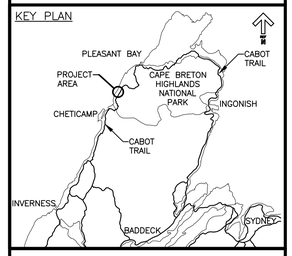


KEY PLAN



Parcs Canada Parks Canada

Stantec

C. W. Boone 12015 REGISTERED PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA DATE Jun 21/18

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1	RE-ISSUED FOR TENDER	05/17 2018

project / projet

PARKS CANADA
TROUT BROOK
CAMPGROUND
SITEWORK TENDER

drawing / dessin

WATER TREATMENT
PROCESS
FLOW DIAGRAM

designed	J.M.	conçu
date	2017.04.25	
drawn	K.J.	dessiné
date	2017.04.25	
approved	C.B.	approuvé
date	2018.04.11	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA

project number / no. du projet: 01092017

drawing no. / no. du dessin: C-204

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PWGSC A1 (2004)

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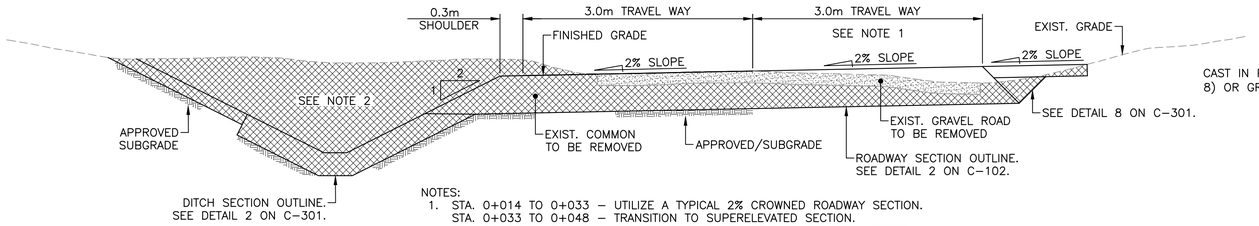
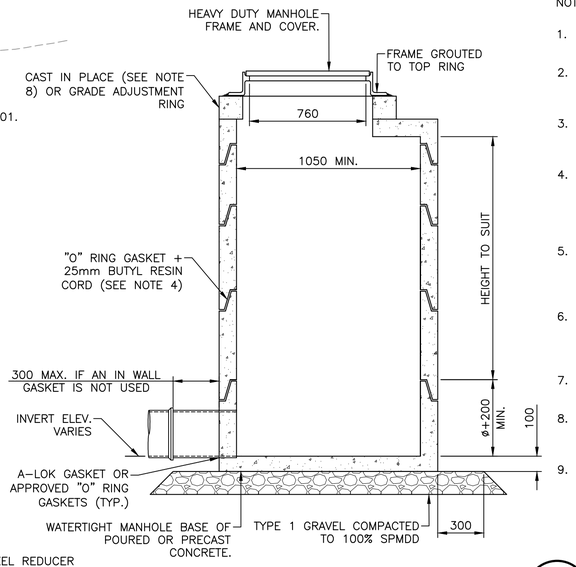


NOTES:
1. STA. 0+014 TO 0+033 – UTILIZE A TYPICAL 2% CROWNED ROADWAY SECTION.
   STA. 0+033 TO 0+048 – TRANSITION TO SUPERELEVATED SECTION.
   STA. 0+180 TO 0+220 – UTILIZE A TYPICAL 2% CROWNED ROADWAY SECTION. LANE SLOPE WILL VARY DUE TO INTERSECTION TRANSITIONS.
2. STA. 0+048 TO END – ROCK LINED DITCH. SEE DETAIL 2 ON C-301.

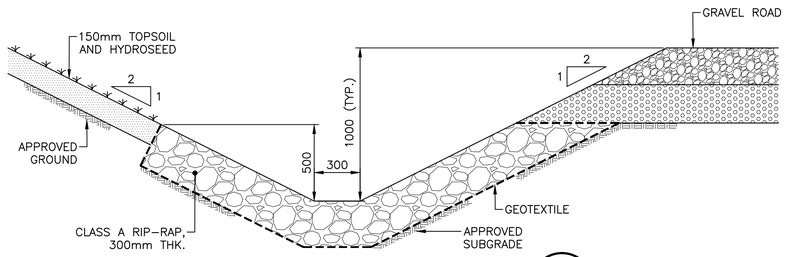
ROAD GRADING SECTION DETAIL 1 C-103
NOT TO SCALE
(NIC)
C-104



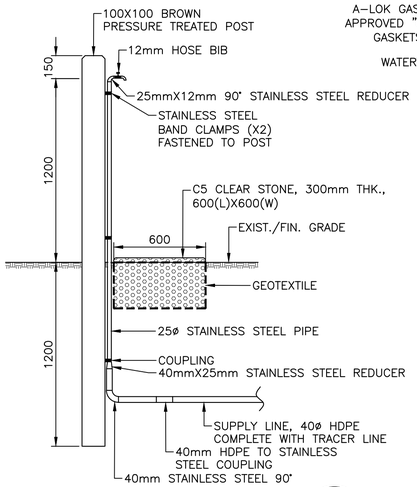
NOTES

1. WATERTIGHT SEAL RING BETWEEN SANITARY MANHOLE SECTIONS.
2. LIFT HOLES IN PRECAST SECTIONS TO BE GROUTED WITH CEMENT MORTAR PRIOR TO PLACING GRANULAR BACKFILL.
3. IF FINAL GRADE ADJUSTMENT EXCEEDS 150mm IN HEIGHT, REBAR MUST BE INCORPORATED IN THE RAISED SECTION.
4. IN ADDITION TO O-RING GASKETS, JOINTS IN PRECAST SECTIONS SHALL BE SEALED WITH 25 MM BUTYL RESIN CORD. THE CORD SHALL BE PLACED ON THE UPPER INSIDE LEDGE OF THE JOINT PRIOR TO PLACEMENT OF THE SUBSEQUENT SECTION.
5. BACKFILL AROUND MANHOLES SHALL BE TYPE 2 GRAVEL EXTENDING A MIN. OF 300 MM OUTWARD FROM MANHOLE AND VERTICALLY FROM BEDDING MATERIAL TO UNDERSIDE OF ROADBED GRAVELS.
6. "A-LOK" OR APPROVED "O" RING GASKETS SHALL BE THOROUGHLY CLEANED, THEN COVERED GENEROUSLY WITH LUBRICANT SPECIFIED BY THE PIPE MANUFACTURER.
7. MINIMUM 600 MM WORKING DEPTH BELOW ANY TAPERED SECTION OR USE FLAT CONCRETE COVER.
8. CAST IN PLACE GRADE ADJUSTMENT TO BE COMPLETED WITH AIR ENTRAINED 40 MPA CONCRETE ON AN APPROVED NON-SHRINK GROUT.
9. IN HIGH WATER TABLE AREAS, MANHOLES SHALL BE WRAPPED IN A WATERPROOFING MEMBRANE.

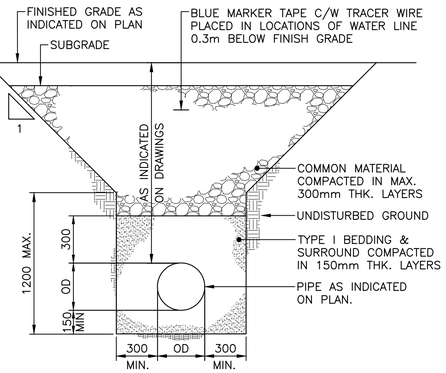
MANHOLE DETAIL 5 C-105
NOT TO SCALE



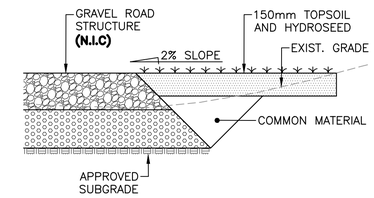
ROCK LINED DITCH 2 C-103
NOT TO SCALE
(NIC)
C-104



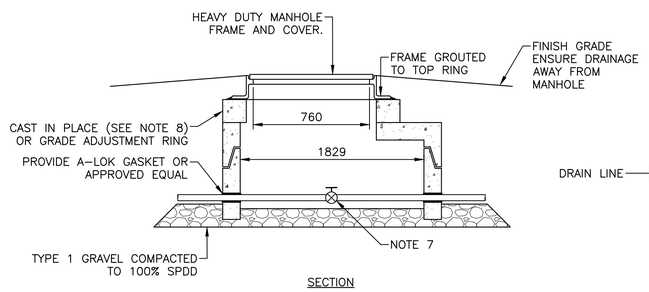
WATER SPIGOT DETAIL 3 C-103
NOT TO SCALE



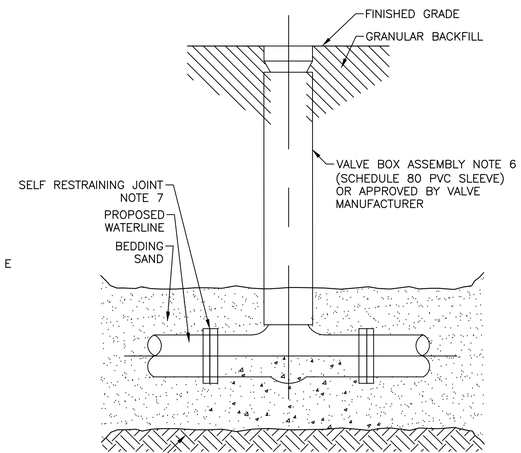
TRENCH DETAIL 6 C-105
NOT TO SCALE



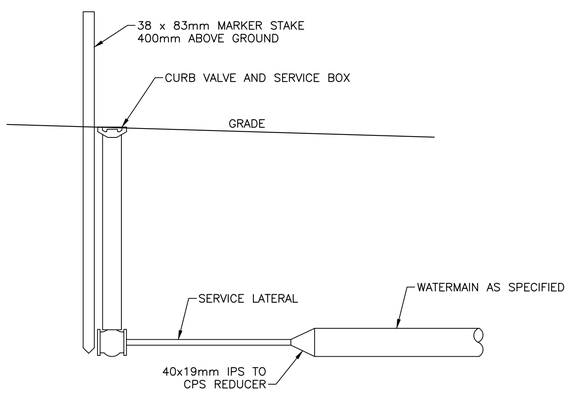
FILL SECTION DETAIL 8 C-103
NOT TO SCALE
C-104



VALVE CHAMBER DETAIL 4 C-104
NOT TO SCALE
C-105



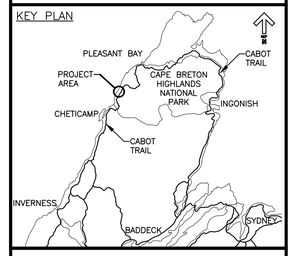
VALVE BOX DETAIL 7 C-105
NOT TO SCALE



CURB STOP DETAIL 8 C-105
NOT TO SCALE

Parcs Canada Parks Canada

KEY PLAN



Stantec

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. THRUST BLOCK MUST NOT COVER ANY JOINT
3. REFER TO DETAIL 1 FOR THRUST BLOCK DIMENSIONS
4. CONCRETE FOR THRUST BLOCK TO BE PLACED AFTER VALVE ASSEMBLY HAS BEEN SET.
5. ANCHOR RODS TO BE INSTALLED AROUND VALVE BODY AND EMBEDDED IN CONCRETE POURED BENEATH VALVE.
6. IF VALVE IS INSTALLED IN A BURIED BOX, THE BOX MUST BE INSTALLED SO AS TO AVOID TRANSMITTING EXTERNAL LOADS TO THE MAIN.
7. ALL VALVE AND FITTING CONNECTIONS TYPE TO BE COMPRESSION FIT. SELECTION OF COMPRESSION VALVES AND FITTINGS MUST BE CAPABLE OF WITHSTANDING INTERNAL WATER FORCES.

REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA
DATE June 21/2018
C.W. Boone
12015

revisions		date
4	RE-ISSUED FOR TENDER	06/21 2018
3	RE-ISSUED FOR TENDER	05/17 2018
2	ISSUED FOR REVIEW	04/11 2018
1	ISSUED FOR TENDER	06/21 2017

project / projet

PARKS CANADA TROUT BROOK CAMPGROUND SITEWORK TENDER

drawing / dessin

CONSTRUCTION DETAILS

designed / conçu	J.M.	
date	2017.06.13	
drawn / dessiné	K.J.	
date	2017.06.13	
approved / approuvé	C.B.	
date	2018.04.11	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA

project number / no. du projet: 01092017

drawing no. / no. du dessin: C-301

E-DRM/GDD-E:

PWGSC A1 (2004)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

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LUMINAIRE SCHEDULE

GRAPHIC	TYPE	STANDARD OF ACCEPTANCE	DESCRIPTION	VOLTS	OUTPUT		MOUNTING	REMARKS
					WATTS	SOURCE		
(B)	B	STAND ALONE SOLAR LIGHTING BOLLARD C/W INTEGRAL CHARGER AND LED LAMPS	GROUND MOUNTED PATH LIGHTING BOLLARD WITH FORWARD THROW ASYMMETRICAL DISTRIBUTION. 914mm (36") IN HEIGHT LIGHT DISTRIBUTION TO BE ASYMMETRICAL FACING TOWARDS PATH. BOLLARD TO BE MOUNTED ON A CONCRETE POST 1200mm DEEP AND 254mm IN DIAMETER. PROVIDE NECESSARY MOUNTING HARDWARE TO AFFIX BOLLARD TO BURIED CONCRETE POST.	12	-	LED	GROUND MOUNTED	INSTALLATION AS PER MANUFACTURER'S INSTRUCTIONS
(G)	G	CEILING MOUNTED LED LUMINAIRE SUITABLE FOR CORROSIVE AND WET ENVIRONMENTS. PHILIPS DAY-BRITE VAPORLUME DW SERIES COOPER PAULUHN INTREPID FPS SERIES LITHONIA DMW2	CEILING MOUNTED LED - PROVIDE ALL CLIPS AND FITTINGS AS REQUIRED	120	32	LED	CEILING SURFACE	INSTALLATION AS PER MANUFACTURER'S INSTRUCTIONS

ELECTRICAL LEGEND

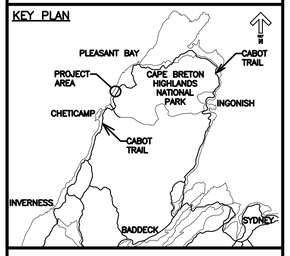
- (B) SOLAR POWERED LED BOLLARD LIGHT FIXTURE.
- (G) CEILING MOUNTED LUMINAIRE C/W LED LAMPS AS INDICATED. , C/W 2-T14 LED LAMPS.
- ^{a} 120V SINGLE POLE LIGHT SWITCH. LOWERCASE LETTER ADJACENT CORRESPONDS TO LUMINAIRE CONTROLED. (TYPICAL)
- 15A WALL MOUNTED DUPLEX RECEPTACLE MOUNTED 457mm ABOVE FINISHED FLOOR OR 150mm ABOVE COUNTERTOPS.
- EF DIRECT CONNECTION POINT TO MECHANICAL SUPPLIED AND INSTALLED EQUIPMENT. "EF" INDICATES EXHAUST FAN.
- DISCONNECT SWITCH - SIZE AS NOTED ON DRAWINGS.
- GENERATOR
- GENERATOR LOAD BANK

ELECTRICAL GENERAL NOTES

1. ALL WORK UNDER THIS SCOPE SHALL COMPLY WITH NATIONAL BUILDING CODE OF CANADA 2015 AND THE CANADIAN ELECTRICAL CODE 2018, 24th EDITION.
2. CONTRACTOR SHALL VERIFY NAMEPLATE RATINGS ON ALL EQUIPMENT IN ELECTRICAL SCOPE AND REPORT ANY DISCREPANCIES PRIOR TO INSTALLATION. VERIFY CONDUCTOR SIZES AS PER MANUFACTURER'S RECOMMENDATIONS.
3. ALL DIMENSIONS WHICH APPEAR ON THE DRAWINGS ARE METRIC, IN MILLIMETERS, UNLESS INDICATED OTHERWISE.
4. 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.
5. ALL DIAGRAMS ILLUSTRATE INTENT ONLY. CONTRACTOR TO MAKE ALL NECESSARY ADJUSTMENTS TO SUIT SUPPLIED EQUIPMENT AND ACHIEVE REQUIRED FUNCTIONALITY.
6. COORDINATE ELECTRICAL WORK REQUIREMENTS WITH ALL OTHER TRADES ON SITE TO AVOID CONFLICT. REPORT ANY CONFLICT(S). 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.
7. COORDINATE FINAL INSTALLATION LOCATION OF ELECTRICAL EQUIPMENT AND DEVICES ON SITE WITH ALL OTHER ASSOCIATED TRADES.
8. ELECTRICAL CONTRACTOR TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS REQUIRED TO PERFORM WORK. COMPLY WITH ALL PERMIT REQUIREMENTS AND CONDITIONS.
9. ALL FEEDER RUNS INDICATED ON DRAWINGS ARE DIAGRAMMATIC ONLY. COORDINATE EXACT RACEWAY AND CABLE LOCATIONS ON SITE.
10. 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.
11. AVOID SCALING FROM DRAWINGS. WHENEVER POSSIBLE EXACT DIMENSIONS SHALL BE VERIFIED ON SITE.
12. ELECTRICAL CONTRACTOR TO PROVIDE PANEL DIRECTORY IN A TYPEWRITTEN FORMAT IN ALL PANELBOARD COVERS.
13. ELECTRICAL CONTRACTOR TO VERIFY EXISTING TELEPHONE SERVICE LOCATIONS IN FIELD PRIOR TO CONSTRUCTION. DISCREPANCIES TO BE REPORTED IMMEDIATELY TO OWNER'S REPRESENTATIVES.
14. 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.
15. CIRCUITS INDICATED ON DRAWINGS ARE FOR GROUPING PURPOSES ONLY.
16. 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.
17. PROVIDE POWER TO EQUIPMENT AS INDICATED ON TENDER DOCUMENTS.
18. THE ELECTRICAL CONTRACTOR SHALL RECORD THE ACTUAL INSTALLATION ON A SET OF CONSTRUCTION DRAWINGS AND PROVIDE TO THE OWNER UPON COMPLETION OF WORK.
19. 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 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.

Parks Canada / Parcs Canada

KEY PLAN



Stantec

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.

REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — DATE 17 05 18 — S. C. BRIGGS — 6564

revisions		date
4	RE-ISSUED FOR TENDER	05/17 2018
3	ISSUED FOR 100% REVIEW	04/17 2018
2	ISSUED FOR TENDER	06/21 2017
0	ISSUED FOR 99% REVIEW	04/25 2017

project / projet

PARKS CANADA
TROUT BROOK
CAMPGROUND

CAMPGROUND BUILDINGS

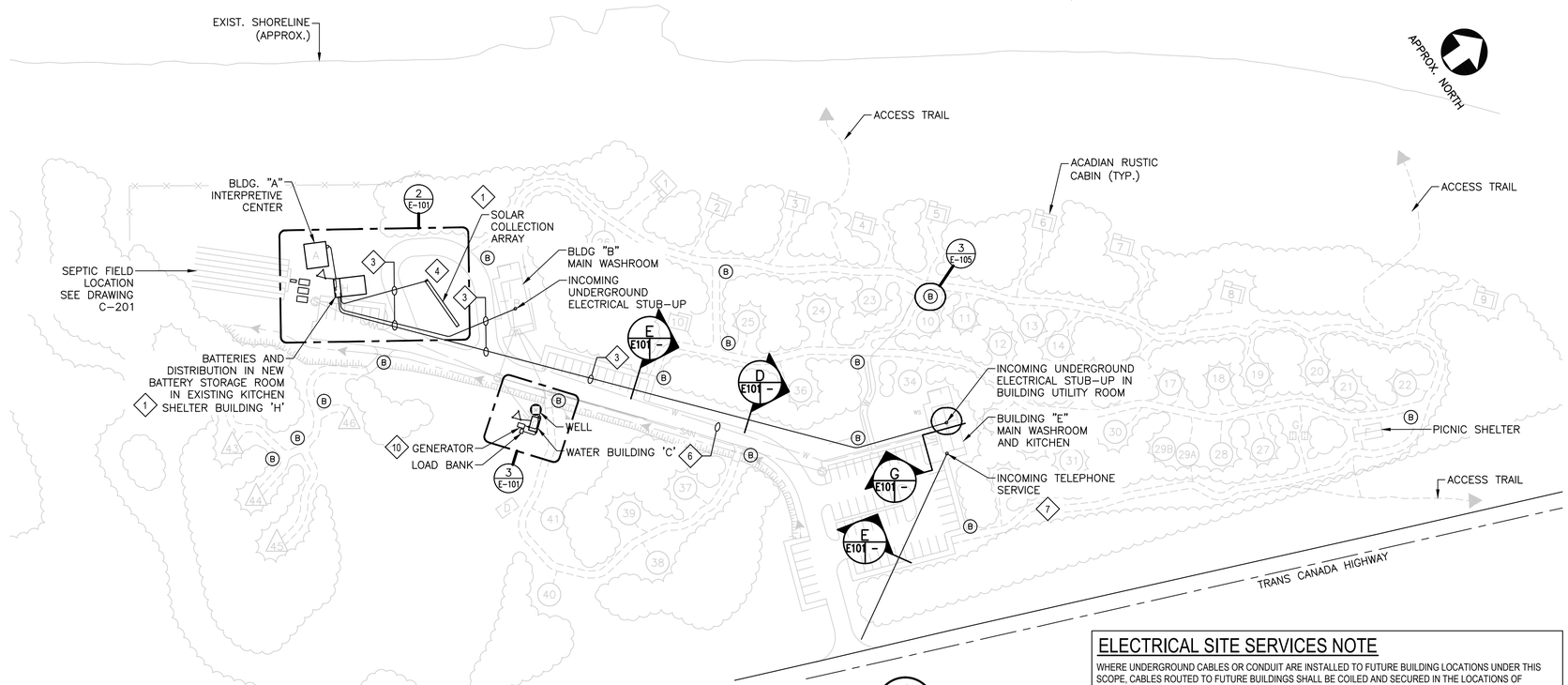
drawing / dessin

ELECTRICAL LEGEND, NOTES AND SCHEDULES

designed / conçu	
date	2018.05.17.
drawn / dessiné	GS/AC
date	2018.05.17.
approved / approuvé	SB
date	2018.05.17.
Tender / Soumission	
PWGSC Project Manager / Administrateur de projets TPSGC	
project number / no. du projet	161413360
drawing no. / no. du dessin	E-001

PWGSC A1 (2004)

E-DRM/GDD-E:



ELECTRICAL SITE PLAN 1 E-101

SCALE : 1:1000

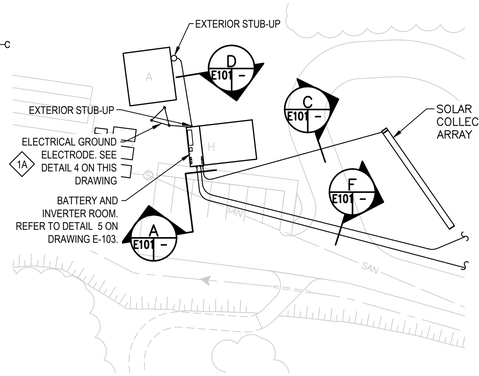
0m 10m 20m 30m 40m 50m 60m 70m 80m 90m 100m

ELECTRICAL SITE SERVICES NOTE

WHERE UNDERGROUND CABLES OR CONDUIT ARE INSTALLED TO FUTURE BUILDING LOCATIONS UNDER THIS SCOPE, CABLES ROUTED TO FUTURE BUILDINGS SHALL BE COILED AND SECURED IN THE LOCATIONS OF BUILDINGS FOR FUTURE INSTALLATION. CONDUITS SHALL BE INSTALLED C/W PULL CORDS AND CAPPED AT EACH END FOR FUTURE USE

ELECTRICAL KEY NOTES

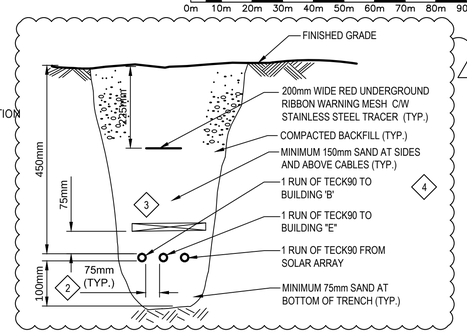
1. PROVIDE AND INSTALL SOLAR DC INVERTERS BATTERIES, SOLAR PANELS AND ELECTRICAL DISTRIBUTION PANELS WITHIN NEW BATTERY BUILDING. COORDINATE FINAL INSTALLED LOCATION ON SITE WITH CLIENT'S REPRESENTATIVE.
1A. PROVIDE AND INSTALL BUILDING GROUND ELECTRODE COMPRISED OF THREE 21mm X 3000mm COPPER CLAD GROUND RODS 3000mm APART. CONNECT WITH #6 GROUND CONDUCTOR AND ROUTE UNBROKEN TO MAIN ELECTRICAL SERVICE ENTRANCE OVER-CURRENT DEVICE GROUND BUS AND THEN TO WALL MOUNTED GROUND BUS. IF SOIL CONDITIONS PROHIBIT USE OF RODS GROUNDING PLATES MAY BE INSTALLED AS PER THE C.E.C. 2018 REQUIREMENTS.
2. PROVIDE AND INSTALL CONDUCTORS AS INDICATED IN TRENCH DETAILS. SPACE CONDUCTORS AS PER C.E.C. 2018 REQUIREMENTS. TRENCH WIDTHS WILL VARY BY QUANTITY OF CONDUCTORS INSTALLED. TYPICAL TRENCH WIDTH SHALL BE CAPABLE OF CONTAINING THE QUANTITY OF CONDUCTORS INDICATED WITH AN ADDITIONAL 150mm SPACE BETWEEN OUTER CONDUCTORS AND TRENCH WALLS. SPACE CONDUCTORS OF DIFFERENT CIRCUITS AT A MINIMUM OF 75mm.
3. PROVIDE AND INSTALL 38mm THICK TREATED PLANKING ABOVE CONDUCTORS IN AREAS OF TRAFFIC. WIDTH OF PLANKING SHALL ACCOMMODATE QUANTITY OF CONDUCTORS WITH A COVER OVERLAP OF 50mm ON EITHER SIDE OF CONDUCTOR EDGES. MULTIPLE PLANKS MAY BE UTILIZED TO ACHIEVE COVERAGE WIDTH. BURIAL DEPTH OF CONDUCTORS SHALL REMAIN AT 450mm.
4. SIZE AND PROVIDE 2 CONDUCTOR TECK90 CABLE FROM SOLAR COLLECTOR ARRAY TO ELECTRICAL DISTRIBUTION EQUIPMENT WITHIN BATTERY BUILDING. SIZE CONDUCTORS TO ACCOMMODATE CURRENT PROVIDED BY PANELS.
5. PROVIDE LOCKABLE CSA-4X RATED 30A- 2 POLE DISCONNECT SWITCH FOR ELECTRICAL SERVICE AT WELL LOCATION. PROVIDE NECESSARY FRAMING/SUPPORT REQUIRED FOR INSTALLATION AND MOUNTING. PROVIDE TECK90 CABLE AND CONNECTORS FROM DISCONNECT TO PUMP EQUIPMENT. PROVIDE MECHANICAL PROTECTION FROM A DEPTH OF 150mm UNDERGROUND TO TERMINATION POINT OF CABLING AT JUNCTION BOXES. MAKE ALL ELECTRICAL PENETRATIONS TO BUILDING WALLS WEATHERTIGHT.
6. MAINTAIN A MINIMUM HORIZONTAL DISTANCE OF 2000mm FROM BURIED WATER LINE TO NEAREST ELECTRICAL CONDUCTOR.
7. ELECTRICAL CONTRACTOR SHALL PROVIDE DIRECT BURIED 53mm RIGID PVC CONDUIT C/W PULL CORD FROM EXISTING SITE TELECOMMUNICATION SERVICE TO NEW BUILDING "E." CLEAN AND CAP BOTH ENDS FOR FUTURE INSTALLATION OF CABLING BY OTHERS. COORDINATE LOCATION OF EXISTING TELECOM LINE ON SITE WITH BELL ALIANT AND CLIENT'S REPRESENTATIVE.
8. PROVIDE AND INSTALL JUNCTION BOXES AND CONDUIT WITHIN WATER BUILDING ELECTRICAL SERVICE AREA FOR CONNECTION OF WATER POWER AND CONTROL SYSTEMS. POWER WIRING BY ELECTRICAL TRADES. CONTROL WIRING AND CONTROLS BY MECHANICAL TRADES. COORDINATE MOUNTING LOCATIONS ON SITE.
9. COORDINATE FINAL LOCATION OF INCOMING CABLES ON SITE FOR EACH BUILDING. WHERE CABLES ARE TO STUB-UP IN INTERIOR WALL LOCATIONS. PROVIDE RIGID PVC SLEEVES IN FLOOR SLABS AND FOUNDATION WALLS FOR TECK 90 PENETRATION. COIL AND SECURE EXPOSED ENDS OF ALL UNDERGROUND CABLE RUNS FOR FUTURE CONNECTION IN BUILDINGS.SEAL ALL PENETRATIONS WATERTIGHT.
10. PROVIDE AND INSTALL THE FOLLOWING:
ONE 45kW GENSET C/W CONCRETE BASE AND SOUND ENCLOSURE.
ONE 6Kw 240V LOAD BANK.
PROVIDE AND INSTALL TECK90 CONDUCTORS FOR GENERATOR POWER TO WATER TREATMENT BUILDING AND LOAD BANK. COORDINATE FINAL LOCATION ON SITE.PROVIDE CONCRETE PAD TO SUIT GENERATOR AND SOUND ENCLOSURE. PAD DIMENSIONS AND OPENING LOCATIONS TO BE TO MANUFACTURER'S RECOMMENDATIONS.



PARTIAL ELECTRICAL SITE PLAN 2 E-101

SCALE: 1:500

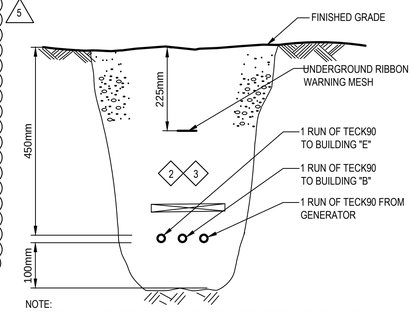
0m 10m 20m 30m 40m 50m



NOTES:
1. THIS DETAIL PROVIDES TYPICAL TRENCHING INFORMATION FOR ALL DIRECT BURIALS IN VEHICULAR AREAS IN WHICH MECHANICAL PROTECTION IS PROVIDED BY MEANS OF PRESSURE TREATED PLANKING.
2. REFER TO SCHEMATIC AND PANEL SCHEDULES FOR CONDUCTOR SIZES.

SECTION - BURIED CABLES A E-101

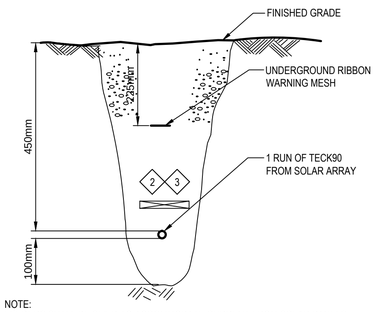
N.T.S.



NOTE:
FEEDERS SHALL BE SIZED TO ACCOMMODATE CURRENT FROM SOLAR PANELS. VERIFY ON SITE.

SECTION - BURIED CABLES B E-101

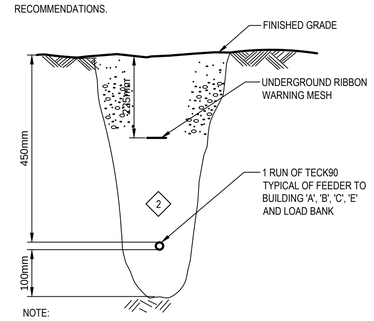
N.T.S.



NOTE:
FEEDERS SHALL BE SIZED TO ACCOMMODATE CURRENT FROM SOLAR PANELS. VERIFY ON SITE.

SECTION - BURIED CABLE C E-101

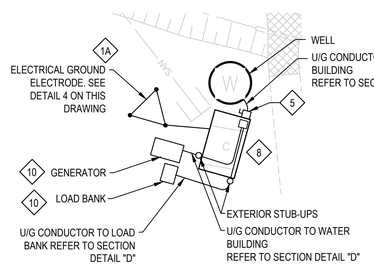
N.T.S.



NOTE:
REFER TO SCHEMATIC AND PANEL SCHEDULES FOR CONDUCTOR SIZES.

SECTION - BURIED CABLES D E-101

N.T.S.



WELL CONNNECTION 3 E-101

SCALE: 1:250

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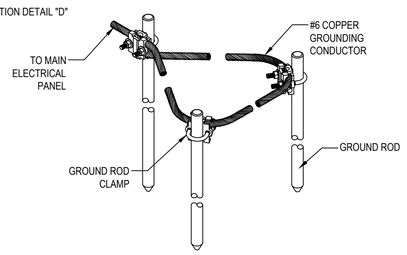
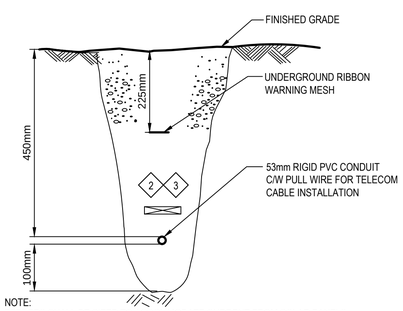


GROUND ROD CONFIGURATION 4 E-101

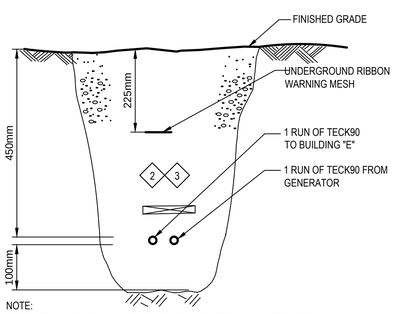
N.T.S.



NOTE:
FEEDERS SHALL BE SIZED TO ACCOMMODATE CURRENT FROM SOLAR PANELS. VERIFY ON SITE.

SECTION - BURIED CONDUIT E E-101

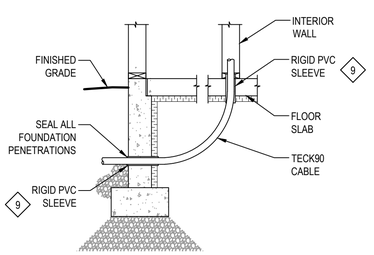
N.T.S.



NOTE:
REFER TO SCHEMATIC AND PANEL SCHEDULES FOR CONDUCTOR SIZES.

SECTION - BURIED CABLE F E-101

N.T.S.

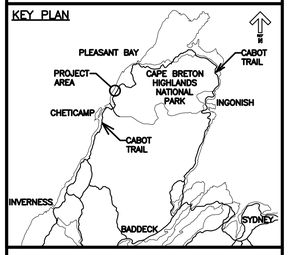


SECTION - INCOMING CABLES G E-101

N.T.S.

Parks Canada / Parcs Canada

KEY PLAN



Stantec

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.

EXISTING BUILDING 'H'

EXISTING BUILDING 'H' HAS NOT BEEN INVESTIGATED. EXISTING CONDITIONS MUST BE VERIFIED ON SITE PRIOR TO ANY MODIFICATIONS. CONTRACTOR SHALL REPORT TO THE OWNER / CLIENT ANY DISCREPANCIES WHICH MAY AFFECT ARCHITECTURAL MODIFICATIONS AND ELECTRICAL EQUIPMENT INSTALLATION PRIOR TO PROCEEDING WITH CONSTRUCTION AND INSTALLATIONS.

REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — DATE 12 VI 18 — S. C. BRIGHAVE — 6564

revisions		date
5	RE–ISSUED FOR TENDER	06/12 2018
4	RE–ISSUED FOR TENDER	05/17 2018
3	ISSUED FOR 100% REVIEW	04/17 2018
2	ISSUED FOR TENDER	06/21 2017
0	ISSUED FOR 99% REVIEW	04/25 2017

project / projet

PARKS CANADA TROUT BROOK CAMPGROUND

CAMPGROUND BUILDINGS

drawing / dessin

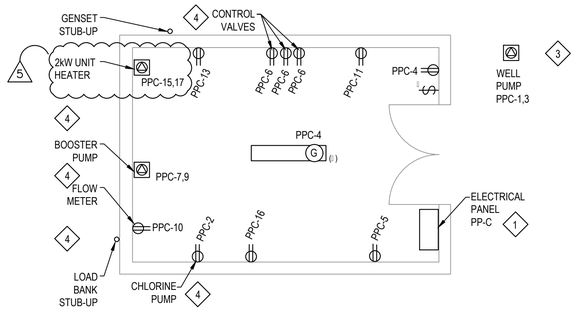
ELECTRICAL SITE PLAN AND DETAILS

designed / conçu	
date	2018.05.17.
drawn / dessiné	GS/AC
date	2018.05.17.
approved / approuvé	SB
date	2018.05.17.
Tender / Soumission	
PWGSC Project Manager	Administrateur de projets TPSGC
project number / no. du projet	161413360
drawing no. / no. du dessin	E–101

PWGSC A1 (2004)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

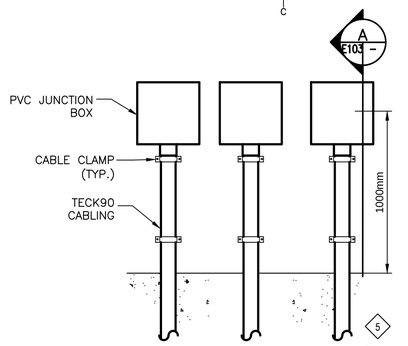
E–DRM/GDD–E:



WATER BUILDING 'C' ELECTRICAL SYSTEMS PLAN — 1 / E-103

SCALE: 1:50

0m 1m 2m 3m 4m 5m

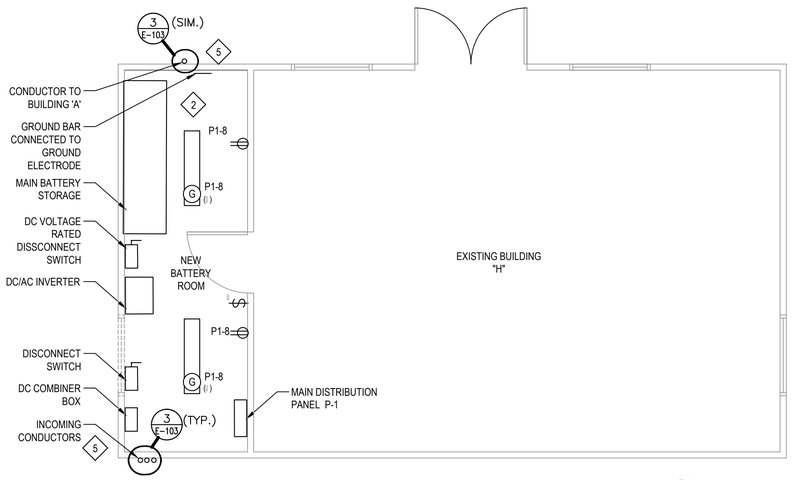


INCOMING CABLES — 3 / E-103

N.T.S.

ELECTRICAL KEY NOTES

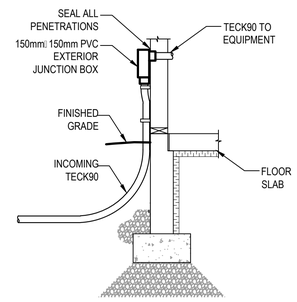
1. ALL ELECTRICAL EQUIPMENT AND DEVICES IN WATER TREATMENT BUILDING SHALL BE RATED FOR INSTALLATION IN CORROSIVE ENVIRONMENT. ELECTRICAL PANEL PP-C SHALL BE INSTALLED IN ACSA 4X RATED STAINLESS STEEL ENCLOSURE SIZED TO FIT PANEL.
2. COORDINATE FINAL INSTALLED LOCATION OF SOLAR CONVERSION EQUIPMENT, INVERTERS 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.
4. VERIFY CONNECTION TYPE FOR ALL PUMPS AND CONTROLLERS IN WATER TREATMENT BUILDING PRIOR TO INSTALLING RECEPTACLES. IF EQUIPMENT REQUIRES A DIRECT ELECTRICAL CONNECTION THEN HARDWIRE EQUIPMENT AND DO NOT INSTALL RECEPTACLE AT ITS LOCATION.
5. ROUTE UNDERGROUND TECK90 CONDUCTORS TO BUILDING "H". INSTALL ON EXTERIOR WALL AND ROUTE INTO BATTERY ROOM. PROVIDE ALL REQUIRED FASTENERS AND JUNCTION BOXES SIZED TO FIT CONDUCTORS. SEAL ALL PENETRATIONS WEATHERTIGHT.



BUILDING 'H' BATTERY ROOM ELECTRICAL SYSTEMS PLAN — 2 / E-103

SCALE: 1:50

0m 1m 2m 3m 4m 5m



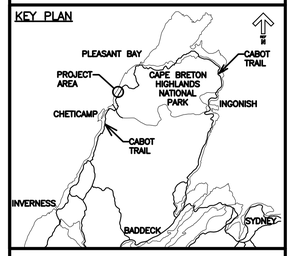
NOTE:
THIS DETAIL IS TYPICAL FOR ALL ELECTRICAL EXTERIOR WALL PENETRATIONS IN BUILDINGS 'H' AND 'C'

SECTION - INCOMING CABLES — A / E-103

N.T.S.

Parks Canada / Parcs Canada

KEY PLAN



Stantec

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
5	RE-ISSUED FOR TENDER	05/31 2018
4	RE-ISSUED FOR TENDER	05/17 2018
3	ISSUED FOR 100% REVIEW	04/17 2018
2	ISSUED FOR 99% REVIEW	04/25 2017
0	ISSUED FOR 99% REVIEW	04/25 2017

project / projet

PARKS CANADA
TROUT BROOK
CAMPGROUND

CAMPGROUND BUILDINGS

drawing / dessin

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		Soumission
PWGSC Project Manager		Administrateur de projets TPSGC
project number		no. du projet
161413360		
drawing no.		no. du dessin
E-103		

MAIN DISTRIBUTION PANEL P-1 - 225 AMP - 120/240V 1ph 3 WIRE - SERVICE RATED												
SERVICE ENTRY RATED PANEL - FED FROM BATTERY BANK												150A RATED MAIN BREAKER
WIRE	DESCRIPTION	LOAD	BRKR	POLES	CCT NO.	PHASE	CCT NO.	POLES	BRKR	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		
#8	PANEL PP-E	301	20	2P	5	A	6	1	15		SPARE	
		150			7	B	8	1	15	664	LIGHTS & RECEPTS BATTERY ROOM	#12
	SPARE		15	1	9	A	10	1	15		SPARE	
	SPACE			1	11	B	12	1			SPACE	
	SPACE			1	13	A	14	1			SPACE	
	SPACE			1	15	B	12	1			SPACE	
	ODD CIRCUITS (1-11)							EVEN CIRCUITS (2-12)				
	LOAD PHASE A (W)	506						LOAD PHASE A (W)		287		
	LOAD PHASE B (W)	160						LOAD PHASE B (W)		714		
	TOTAL PHASE A	793		TOTAL PHASE B	874						TOTAL CONNECTED LOAD	1667

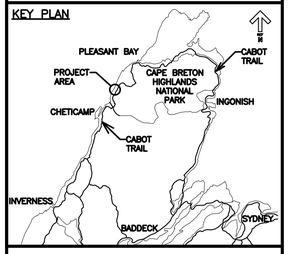
PANEL 'PP-C' - 225 AMP - 120/240V 1ph 3 WIRE - SERVICE RATED												
FED FROM GENERATOR												225A RATED MAIN BREAKER
WIRE	DESCRIPTION	LOAD	BRKR	POLES	CCT NO.	PHASE	CCT NO.	POLES	BRKR	LOAD	DESCRIPTION	WIRE
#12	WELL PUMP	1200	20	2P	1	A	2	1	15	190	CHLORINE DOSING PUMP	#12
		1200			3	B	4	1	15	450	RECEPTACLE & LIGHTS	#12
#12	RECEPTACLE	300	15	1	5	A	6	1	15	40	CONTROL VALVES	#12
#10	BOOSTER PUMP	1560	30	2P	7	B	8	1	15	100	RECEPTACLE	#12
		1560			9	A	10	1	15	100	FLOW METER	#12
#12	RECEPTACLE	300	15	1	11	B	12	1	15		SPARE	
#12	RECEPTACLE	300	15	1	13	A	14	1	15		SPARE	
#12	UNIT HEATER	1000	15	2P	15	B	16	1	15	300	RECEPTACLE	#12
		1000			17	A	18	2P	35		LOAD BANK	#8
	SPARE		15	1	19	B	20					
	SPACE			1	21	A	22	1			SPACE	
	SPACE			1	23	B	24	1			SPACE	
	SPACE			1	25	A	26	1			SPACE	
	SPACE			1	27	B	28	1			SPACE	
	SPACE			1	29	A	30	1			SPACE	
	SPACE			1	31	B	32	1			SPACE	
	ODD CIRCUITS (1-31)							EVEN CIRCUITS (2-32)				
	LOAD PHASE A (W)	4360						LOAD PHASE A (W)		330		
	LOAD PHASE B (W)	4060						LOAD PHASE B (W)		850		
	TOTAL PHASE A	4690		TOTAL PHASE B	4910						TOTAL CONNECTED LOAD	9600

ELECTRICAL KEY NOTES

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

Parks Canada / Parcs Canada

KEY PLAN



Stantec

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.

REGISTERED PROFESSIONAL ENGINEER – PROVINCE OF NOVA SCOTIA – DATE 31 V 18 – S. C. BYGRAVE – 6564

revisions		date
4	RE-ISSUED FOR TENDER	05/31 2018
3	RE-ISSUED FOR TENDER	05/17 2018
2	ISSUED FOR 100% REVIEW	04/17 2018
0	ISSUED FOR 99% REVIEW	04/25 2017

project / projet

PARKS CANADA
TROUT BROOK
CAMPGROUND

CAMPGROUND BUILDINGS

drawing / dessin

ELECTRICAL
PANEL SCHEDULES

designed / conçu — date 2018.05.17.

drawn GS/AC / dessiné — date 2018.05.17.

approved SB / approuvé — date 2018.05.17.

Tender / Soumission

PWGSC Project Manager / Administrateur de projets TPSGC

project number / no. du projet

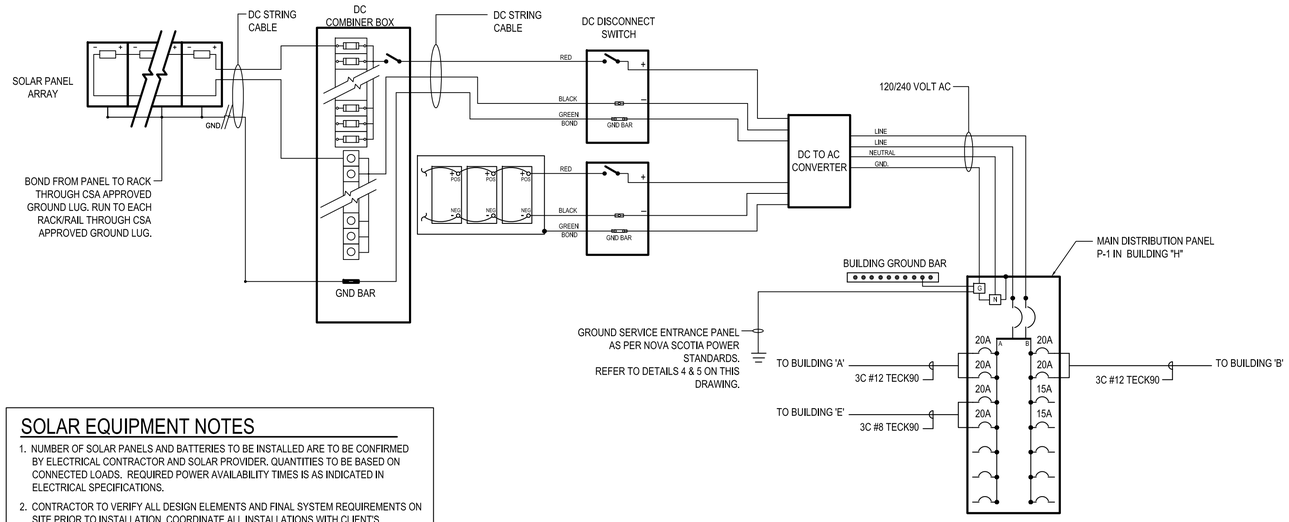
161413360

drawing no. / no. du dessin

E-104

PWGSC A1 (2004)

E-DRM/GDD-E:



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.

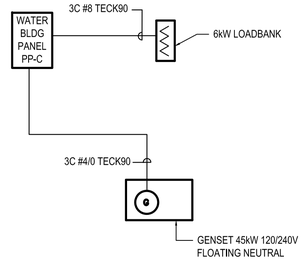
TYPICAL CONNECTION SCHEMATIC 1 ◇1

N.T.S. SCALE: N.T.S. E-105

ELECTRICAL KEY NOTES

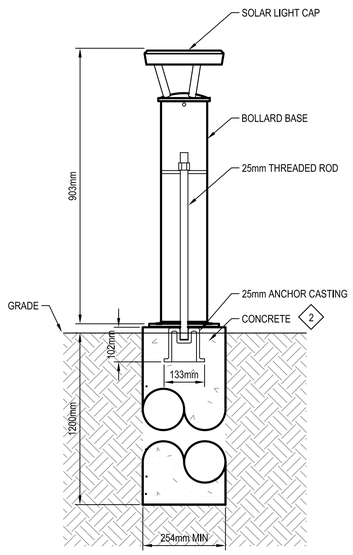
◇1 INSTALL ALL ELECTRICAL CONDUCTORS UNDERGROUND AND ROUTE TO INTERIOR OF NEW BATTERY BUILDING. PROVIDE STRAPS AND LB FITTINGS TO PROVIDE ROUTING AND PROTECTION FOR CONDUCTORS. SEAL ALL PENETRATIONS WEATHERTIGHT. COORDINATE EXACT ROUTING TO BUILDING AND INSTALLATION LOCATIONS WITHIN BUILDING WITH STRUCTURAL TRADES AND CLIENT'S REPRESENTATIVE ON SITE.

◇2 PROVIDE AND INSTALL STAND ALONE PHOTOVOLTAIC LIGHTING BOLLARDS AT EACH PATHWAY INTERSECTION POINT AS INDICATED ON PLANS. PROIVDE CONCRETE BASES AS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.



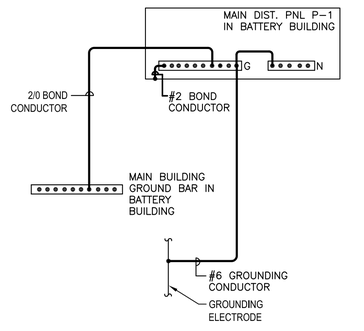
GENERATOR CONNECTION SCHEMATIC 2 ◇1

N.T.S. E-105



TYPICAL BOLLARD DETAIL 3

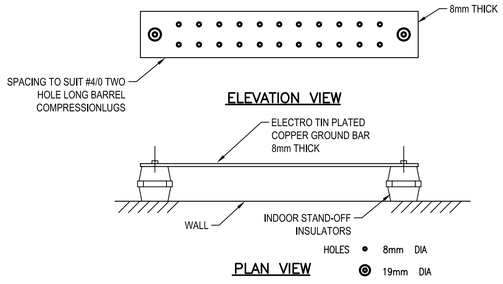
N.T.S. E-101



NOTE:
THIS DETAIL IS DIAGRAMMATIC ONLY TO INDICATE BUILDING GROUNDING CONNECTIONS.
CONNECTIONS IN MAIN DISTRIBUTION BOARD MUST BE CRIMPED OR CADWELD.

BUILDING MAIN GROUND 4

N.T.S. E-105



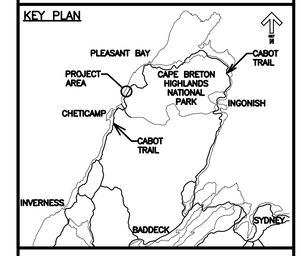
NOTE:
GROUND BAR SHALL BE SIZED TO ACCOMMODATE ELECTRICAL REQUIREMENTS OF BATTERY BUILDING DISTRIBUTION.

BUILDING MAIN GROUND BAR 5

N.T.S. E-105

Parks Canada / Parcs Canada

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — DATE 17 05 18 — S. C. BAGGOLEY — 6564

revisions		date
4	RE-ISSUED FOR TENDER	05/17 2018
3	ISSUED FOR 100% REVIEW	04/17 2018
2	ISSUED FOR TENDER	06/21 2017
0	ISSUED FOR 99% REVIEW	04/25 2017

project / projet

PARKS CANADA
TROUT BROOK CAMPGROUND

CAMPGROUND BUILDINGS

drawing / dessin

ELECTRICAL SCHEMATIC AND DETAILS

designed / conçu
date 2018.05.17.
drawn GS/AC / dessiné
date 2018.05.17.
approved SB / approuvé
date 2018.05.17.
Tender / Soumission
PWGSC Project Manager / Administrateur de projets TPSGC
project number / no. du projet
161413360
drawing no. / no. du dessin
E-105

PWGSC A1 (2004)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

E-DRM/GDD-E:

Trout Brook Campground. Table 1. Non-Lighting Loads

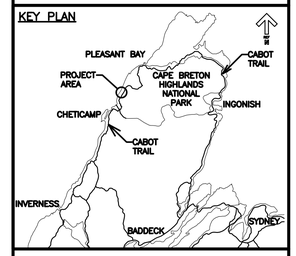
Type	Nominal Load (W)	Interpretive Centre. Building A.			Main (south) washroom. Building B.			Water and water treatment. Building C.			Main washroom & kitchen. Building E			South kitchen shelter. Building H.		
		Device count	Nominal Load (W)	Operation	Device count	Nominal Load (W)	Operation	Device count	Nominal Load (W)	Operation	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	0		2	200	100% load for 25% of an 8hr period, 7 day/wk	0	0	
Receptacle circuit (general purpose)	1440	0	0		0	0		0	0		0	0		0	0	
Space Heating (control power)	50	0	0		1	50	Continuous load	1	50	Continuous load	1	50	Continuous load	0	0	
EXIT sign	3	1	3	Continuous load	0	0		0	0		0	0		0	0	
Well Pump	2400	0	0		0	0		1	2400	100% load for 25% of 18 hours per day, 7 days per week.	0	0		0	0	
Booster Pump	3120	0	0		0	0		1	3120	100% load for 25% of 18 hours per day, 7 days per week.	0	0		0	0	
Chlorine Pump	190	0	0		0	0		1	190	100% load for 25% of 18 hours per day, 7 days per week.	0	0		0	0	
Control valves	300	0	0		0	0		1	300	100% load for 25% of 18 hours per day, 7 days per week.	0	0		0	0	
PLC	350	0	0		0	0		1	350	Continuous load	0	0		0	0	
Flow meter	7	0	0		0			1	7	Continuous load	0	0		0	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	Fixture count	Load (W)	Operation	Fixture count	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	1	8.1	100% load for 5% of an 8hr period, 7 day/wk	24	194.4	100% load for 25% of an 8hr period, 7 day/wk	0	0		54
B	8	0	0		0	0		0	0		0	0			0		0
C	8.1	0	0		0	0		0	0		0	0		0	0		0
D	self powered	2			2			0			4			0			8
E	8.1	0	0		0	0		0	0		0	0		0	0		0
F	24.3	0	0		0	0		0	0		0	0		0	0		0
G	32	0			0	0		1	32	100% load, 1 hr/day, 7 day/wk.	0	0		2	64	100% load, 1 hr/day, 7 day/wk.	3
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	0	0		14	113.4	100% load for 25% of an 8hr period, 7 day/wk		0		32
		194.4			**186.3**			**40.1**			**307.8**			**64**			

Parks Canada / Parcs Canada

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — DATE 17 05 18 — S. C. BOUDREAU — 6564

4	RE-ISSUED FOR TENDER	05/17 2018
3	ISSUED FOR 100% REVIEW	04/17 2018
2	ISSUED FOR TENDER	06/21 2017
0	ISSUED FOR 99% REVIEW	04/25 2017
revisions		date

project / projet

PARKS CANADA
TROUT BROOK
CAMPGROUND

CAMPGROUND BUILDINGS

drawing / dessin

ELECTRICAL
LOAD CALCULATION
TABLES

designed / conçu
date 2018.05.17.

drawn GS/AC / dessiné
date 2018.05.17.

approved SB / approuvé
date 2018.05.17.

Tender / Soumission

PWGSC Project Manager / Administrateur de projets TPSGC

project number / no. du projet
161413360

drawing no. / no. du dessin
E-106

PWGSC A1 (2004)

E-DRM/GDD-E: