



Parks Canada  
Agency

Western and  
Northern Region

L'Agence Parcs  
Canada

Ouest et Nord  
du Canada

# BANFF NATIONAL PARK, ALBERTA. ISSUED FOR TENDER

## JOHNSON LAKE DOCKS AND BEACH REHABILITATION

Proj. No.: 36161  
April 28, 2017

Canada

### LIST OF DRAWINGS

#### SITE

C-01	SITE PLAN EXISTING CONDITIONS
C-02	AREA 1 PLAN SWIM DOCK AND BEACH REHABILITATION
C-03	AREA 1 TYPICAL SECTIONS AND ABUTMENT DETAILS
C-04	AREA 2 PLAN AND TYPICAL SECTION
C-05	CONSTRUCTION NOTES AND SPECIFICATIONS

#### STRUCTURAL

S-01	PARKING AREA WASH STATION PLAN AND ELEVATION
------	--

#### SITE LOCATION MAP



Scale: 1:50 000 (metres)

### KLA ENGINEERING LTD.

P.O. BOX 21115, 102 - 22441 DEWDNEY TRUNK ROAD, MAPLE RIDGE, BC V2X 1P7  
T: 604.380.3552 |

**WATERS EDGE  
ENGINEERING LTD.**  
"Quality \* Value \* Innovation"







LEGEND:

DECIDUOUS TREE	
SPRUCE TREE	
PINE TREE	
SHRUB/BUSH	
TRUNK DIAMETER	TD=0.2
BUSHLINE	
MAJOR CONTOUR (EXISTING)	
MINOR CONTOUR (EXISTING)	
EXISTING CONTOUR ELEVATION (m)	1420.0
MAJOR CONTOUR (PROPOSED)	
CONTOUR ELEVATION (PROPOSED)	1420.00
PICNIC TABLE (EXISTING)	

Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.

REVO	Issued for Tender	17/04/28
------	-------------------	----------

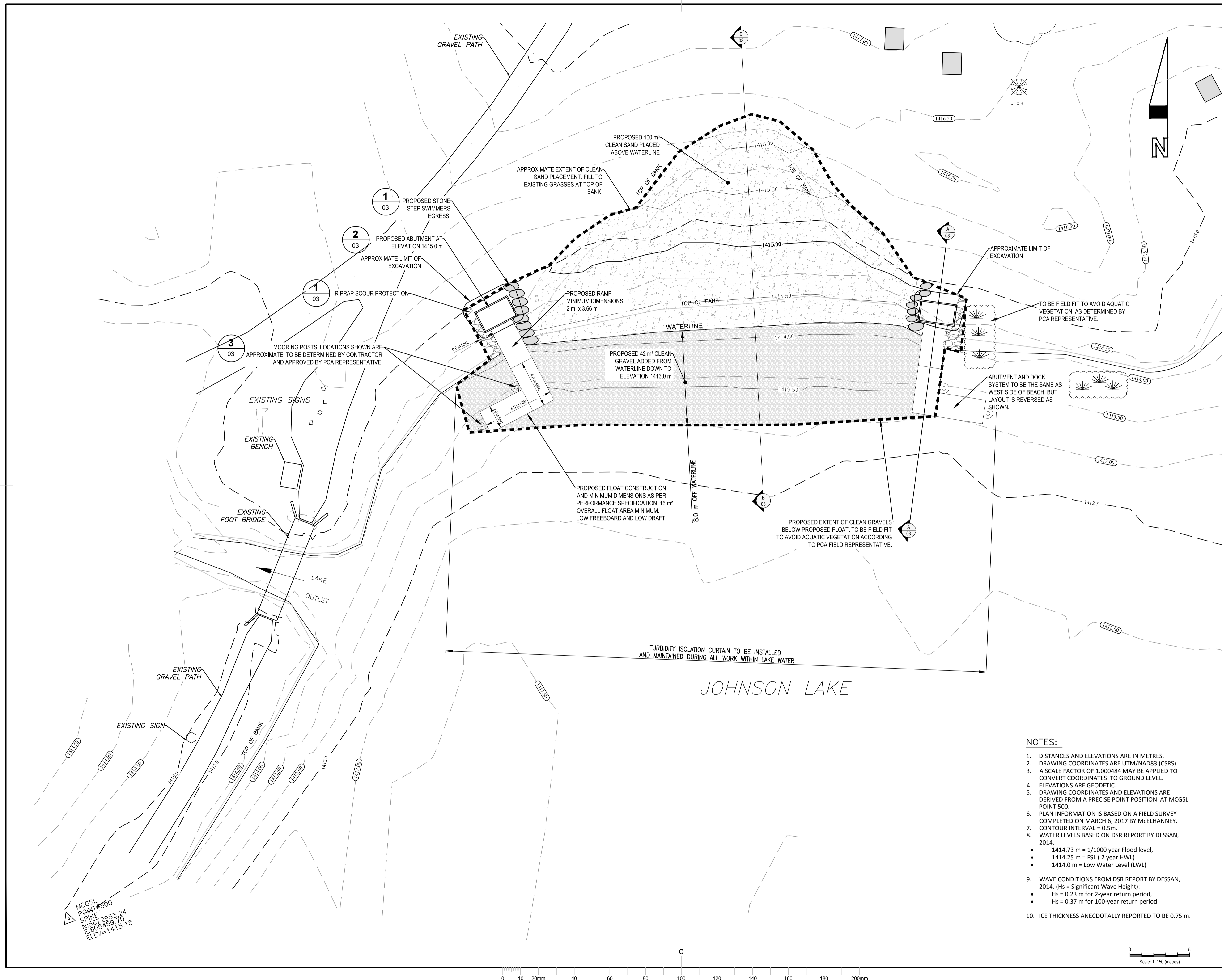
revisions	description	date
A	detail no. du detail	
B	location drawing no. sur dessin no.	
C	drawing no. dessin no.	

project  
**JOHNSON LAKE DOCKS AND BEACH REHABILITATION**  
BANFF NATIONAL PARK

drawing  
**AREA 1 PLAN SWIM DOCK AND BEACH REHABILITATION**

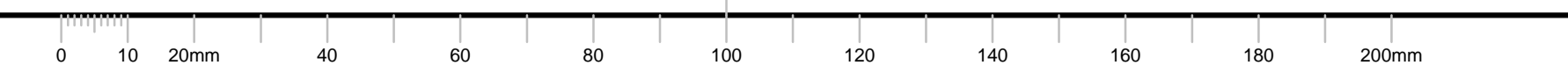
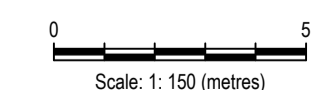
Designed By	T.HIRSEKORN	Conçu par
Date	2017/04/27	(yyyy/mm/dd)
Drawn By	R.HALLEY	Dessiné par
Date	2017/04/27	(yyyy/mm/dd)
Reviewed By	R. EVERTS	Examiné par
Date	2017/04/27	(yyyy/mm/dd)
Approved By	T.HIRSEKORN	Approuvé par
Date	2017/04/28	(yyyy/mm/dd)
Tender	C.MORTSON	Soumission
Project Manager	Administrateur de projets	
Project no.	No. du projet	

**36161**  
Drawing no. No. du dessin  
**C-02**



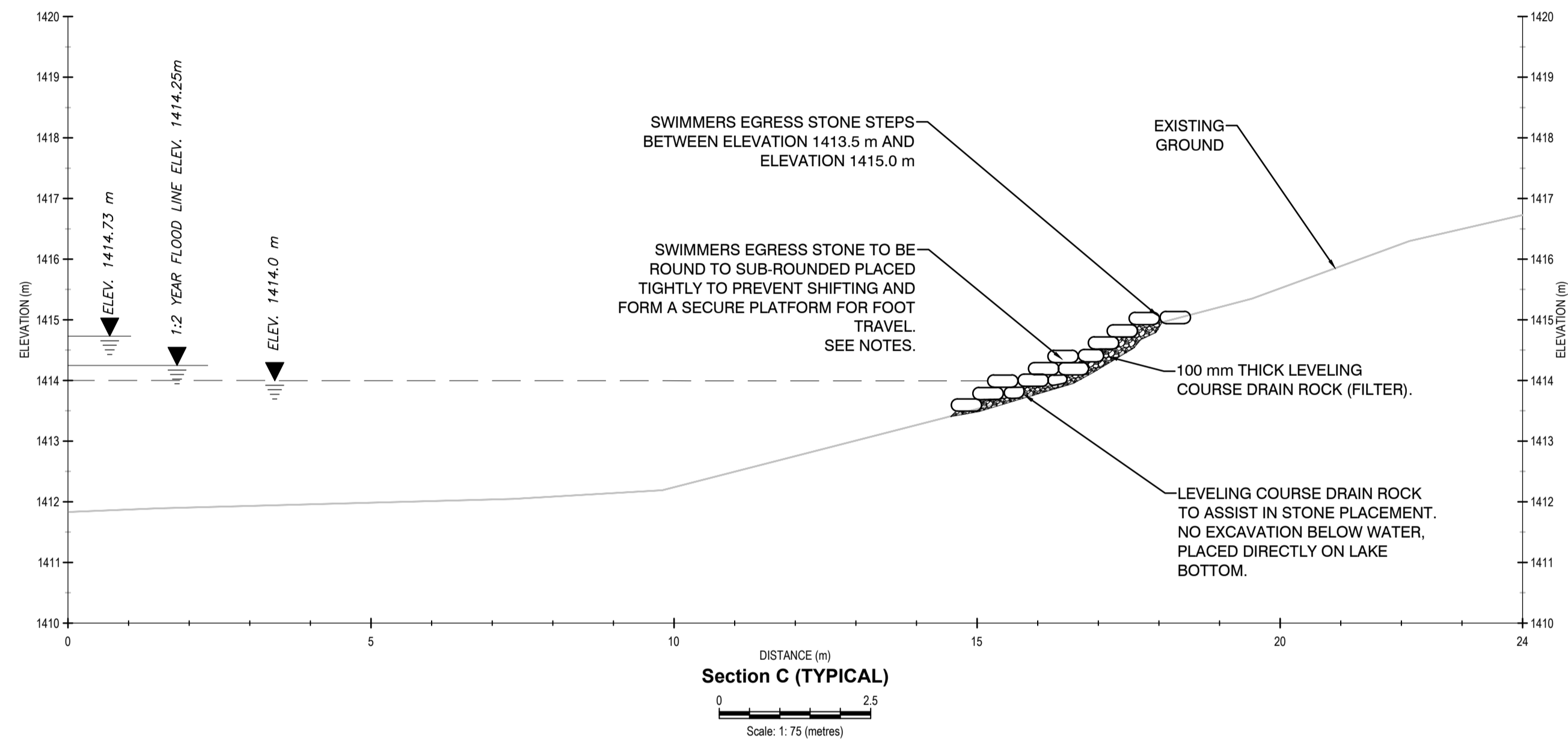
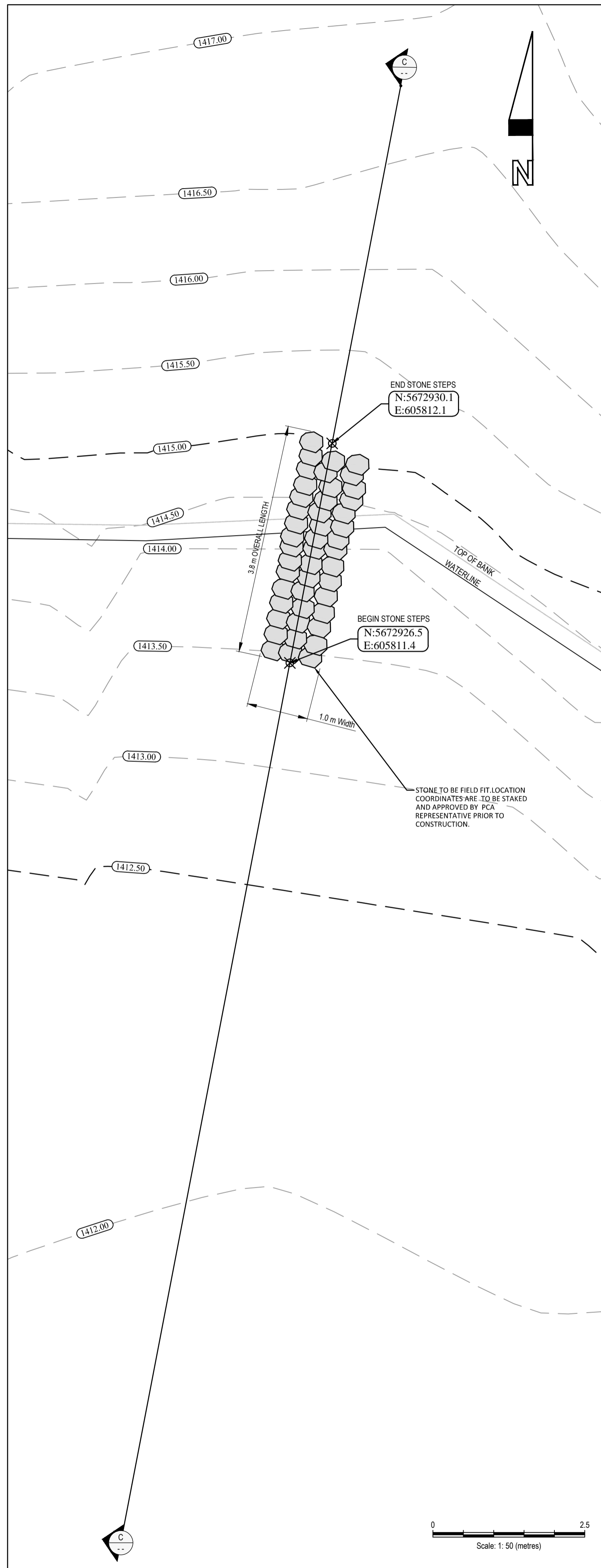
NOTES:

- DISTANCES AND ELEVATIONS ARE IN METRES.
- DRAWING COORDINATES ARE UTM/NAD83 (CSRS).
- A SCALE FACTOR OF 1.000484 MAY BE APPLIED TO CONVERT COORDINATES TO GROUND LEVEL.
- ELEVATIONS ARE GEODETIC.
- DRAWING COORDINATES AND ELEVATIONS ARE DERIVED FROM A PRECISE POINT POSITION AT MCGSL POINT 500.
- PLAN INFORMATION IS BASED ON A FIELD SURVEY COMPLETED ON MARCH 6, 2017 BY McELHANNEY.
- WATER LEVELS BASED ON DSR REPORT BY DESSAN, 2014.
  - 1414.73 m = 1/1000 year Flood level,
  - 1414.25 m = FSL (2 year HWL)
  - 1414.0 m = Low Water Level (LWL)
- WAVE CONDITIONS FROM DSR REPORT BY DESSAN, 2014. (Hs = Significant Wave Height):
  - Hs = 0.23 m for 2-year return period,
  - Hs = 0.37 m for 100-year return period.
- ICE THICKNESS ANECDOTALLY REPORTED TO BE 0.75 m.



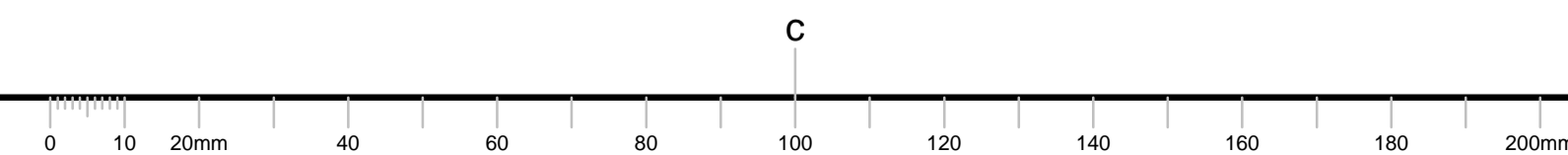






**NOTES:**

1. STONES WILL BE 100 mm THICK MINIMUM. HORIZONTALLY 350 mm X 350 mm ± 50 mm ON AVERAGE, BUT NOT UNIFORMLY SMALLER. PLACE EACH STONE WITH THE LONGEST AXIS PERPENDICULAR TO THE SHORE AND OVER LAPPING THE STONE BELOW.
2. VEHICLE ACCESS IS NOT AVAILABLE. ACCESS BY FOOT FROM PARKING LOT. TRAIL HAS STEPS AND A SMALL BRIDGE.
3. CONTRACTOR SHALL DETERMINE THE BEST METHOD FOR BRINGING MATERIALS TO SITE AND CONSTRUCTION METHODOLOGY.
4. LOCATION COORDINATES ARE APPROXIMATE. PCA REPRESENTATIVE SHALL SELECT THE LOCATION CLOSE TO PROVIDED COORDINATES.



**LEGEND:**

DECIDUOUS TREE	
SPRUCE TREE	
PINE TREE	
SHRUB/BUSH	
TRUNK DIAMETER	TD=0.2
BUSHLINE	
MAJOR CONTOUR (EXISTING)	
MINOR CONTOUR (EXISTING)	
MAJOR CONTOUR ELEVATION (m)	1420.0
MAJOR CONTOUR (PROPOSED)	
CONTOUR ELEVATION (PROPOSED)	1420.00
PICNIC TABLE (EXISTING)	

**Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.**

REVO	Issued for Tender	17/04/28
revisions	description	date

A	A detail no. no. du detail	A
C	B location drawing no. sur dessin no.	B C
	C drawing no. dessin no.	

project project  
**JOHNSON LAKE DOCKS AND BEACH REHABILITATION**  
 BANFF NATIONAL PARK

drawing dessin  
**AREA 2 SWIMMERS EGRESS PLAN VIEW AND TYPICAL SECTION**

Designed By	T.HIRSEKORN	Conçu par
Date	2017/04/27	(yyyy/mm/dd)
Drawn By	R.HALLEY	Dessiné par
Date	2017/24/27	(yyyy/mm/dd)
Reviewed By	R.EVERTS	Examiné par
Date	2017/04/27	(yyyy/mm/dd)
Approved By	T.HIRSEKORN	Approuvé par
Date	2017/04/28	(yyyy/mm/dd)
Tender	C.MORTSON	Soumission
Project Manager		Administrateur de projets

Project no. No. du projet  
**36161**  
 Drawing no. No. du dessin  
**C-04**



UNDERGROUND UTILITIES HAVE NOT BEEN SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING SERVICES DURING CONSTRUCTION.

CONTRACTOR MUST SATISFY ALL REQUIREMENTS OF GOVERNMENT AGENCIES FOR WORKS IN THE AQUATIC ENVIRONMENT.

OWNER MAY HAVE A REPRESENTATIVE/ENGINEER ON SITE AT ANY TIME TO INSPECT THE WORK. OWNER'S REPRESENTATIVE MAY REJECT WORKS AND APPROVE CHANGES AS NECESSARY.

REPORT ANY DISCREPANCIES IN CONDITIONS OR PROBLEMS WITH CONSTRUCTION TO THE OWNERS REPRESENTATIVE /ENGINEER IMMEDIATELY.

CONTRACTOR MUST KEEP SITE CLEAN AND FREE OF POTENTIAL HAZARDS.

1. EXCAVATION

1.1. EXCAVATED MATERIAL SHALL BE STOCKPILED FOR REUSE ON SITE.

2. FILL AND BACKFILL PLACEMENT

- 2.1. PLACEMENT SHALL BE DONE USING METHODS WHICH DO NOT LEAD TO SEGREGATION OR DEGRADATION OF AGGREGATE.
- 2.2. PLACEMENT OF BEACH SAND IS TO BE PLACED FROM WATERS EDGE PROGRESSING UP SLOPE TO A MINIMUM DEPTH OF 200mm. FILL ANY DEPRESSIONS TO FORM A SMOOTH CONTINUOUS CONTOUR.
- 2.3. PLACEMENT OF CLEAN GRAVEL IS TO BE PLACED FROM WATERS EDGE PROGRESSING INTO LAKE BOTTOM BY 8.0 M HORIZONTALLY MAINTAINING A MINIMUM DEPTH OF 100mm. FILL ANY DEPRESSIONS TO FORM A SMOOTH CONTINUOUS CONTOUR.
- 2.4. SHAPE EACH LAYER TO SMOOTH CONTOUR AND COMPACT (IF REQUIRED) TO SPECIFIED PERFORMANCE CRITERIA BEFORE SUCCEEDING LAYER IS PLACED.
- 2.5. REMOVE AND REPLACE PORTION OF ANY LAYER IN WHICH MATERIAL HAS BECOME SEGREGATED DURING SPREADING.
- 2.6. FILL PLACEMENT LIFTS SHALL NOT EXCEED 200 MM IN THICKNESS.
- 2.7. FILL MATERIAL REQUIRING COMPACTIVE EFFORT SHALL BE MOISTURE CONDITIONED TO 5 - 7 % MOISTURE CONTENT AND COMPACTED WITH A MINIMUM 91 KG (200 LB) PLATE COMPACTOR.
- 2.8. COMPACTOR SHALL BE ALLOWED SUFFICIENT TIME TO EXECUTE A MINIMUM OF SIX (6) COMPLETE PASSES. WITH ONE PASS BEING DEFINED AS ONE COMPLETE FORWARD MOTION AND ONE COMPLETE REVERSE MOTION ALONG THE SAME PATH OF TRAVEL.
- 2.9. COMPACTION TO BE COMPLETED FOR THE ENTIRE FOOTPRINT OF PLACED FILL AND APPROVED BY A PCA REPRESENTATIVE PRIOR TO PLACEMENT OF THE NEXT LIFT.
- 2.10. AREAS OF COMPLETED COMPACTION SHALL HAVE NO RUTTING OR OBSERVED DEFLECTION GREATER THAN 10 mm. ANY IDENTIFIED SOFT AREAS MAY REQUIRE FURTHER COMPACTION OR REMOVAL AND REPLACEMENT OF FILL WITHIN IMPACTED AREA.
- 2.11. MOISTURE CONTENT DETERMINATION IS TO BE CONDUCTED ON A BY MASS PERCENTAGE METHOD USING THE FOLLOWING EQUATION:  
 $MC = ((\text{MASS OF SAMPLE WET} - \text{MASS OF SAMPLE DRIED}) / \text{MASS OF SAMPLE DRIED}) \times 100$

3. MATERIALS

- 3.1. ALL FILL AND SPECIFIED MATERIALS INTENDED FOR USE ON SITE SHALL BE SAMPLED AND TESTED, AND RESULTS SUBMITTED FOR ACCEPTANCE BY THE ENGINEER PRIOR TO DELIVERY ON-SITE.
- 3.2. AGGREGATE SHALL BE DURABLE QUARRIED STONE, HARD, PH NEUTRAL, FREE FROM DIRT, SAND, CLAY AND DEBRIS, AND FREE FROM WEAK JOINTS.
- 3.3. WHERE THERE IS A DOUBT TO SUITABILITY, DURABILITY WILL BE DETERMINED BY ONE OR MORE OF THE FOLLOWING TESTS AT AN EXPENSE BORNE BY THE CONTRACTOR:
  - 3.3.1. LOS ANGELES ABRASION (ASTM TEST C-535) WITH LOSS OF NOT MORE THAN 15% AFTER 500 REVOLUTIONS.
  - 3.3.2. THE FREEZE/THAW TEST (AASHTO TEST 103 FOR LEDGE ROCK PROCEDURE A) WITH A LOSS NOT EXCEEDING 10% AFTER 12 CYCLES OF FREEZING AND THAWING.
  - 3.3.3. THE SPECIFIC GRAVITY (BULK SATURATED-SURFACE-DRY BASIS, ASTM TEST C127) SHALL BE AT LEAST 2.60.

4. CLEAN GRAVEL (BEACH IN WATER) SHALL CONSIST OF CLEAN ROUND STONE CONFORM TO THE FOLLOWING GRADATION LIMITS:

NOMINAL SIZE (mm)	PERCENT TOTAL WEIGHT LESS THAN GIVEN SIZE
75	100
50	70 - 100
25	50 - 90
4.75	22 - 80
2.36	5 - 35
0.075	0 - 2

5. BEACH SAND (BEACH DRY) SHALL CONFORM TO THE FOLLOWING GRADATION LIMITS:

NOMINAL SIZE (mm)	PERCENT TOTAL WEIGHT LESS THAN GIVEN SIZE
19	100
4.75	80 - 100
0.6	30 - 85
0.42	10 - 75
0.15	0 - 40
0.074	0 - 4

6. 25 MM MINUS CRUSHED GRAVEL AND SAND (STRUCTURAL FILL) SHALL CONFORM TO THE FOLLOWING GRADATION LIMITS:

NOMINAL SIZE (mm)	PERCENT TOTAL WEIGHT LESS THAN GIVEN SIZE
25	100
19	80 - 100
9.5	50 - 85
4.75	35 - 70
2.36	25 - 50
1.18	15 - 35
0.3	5 - 20
0.075	0 - 5

7. DRAIN ROCK TO CONSIST OF CLEAN ANGULAR STONE CONFORMING TO THE FOLLOWING GRADATION LIMITS:

NOMINAL SIZE (mm)	PERCENT TOTAL WEIGHT LESS THAN GIVEN SIZE
25	100
19	0 - 100
9.5	0 - 40
4.75	0 - 5

8. INFORMAL STONE FACIA AND PATHS:

- 8.1. STONE MASS TO BE NO LESS THAN, 32 KG.
- 8.2. THICKNESS OF ANY INDIVIDUAL PIECE OF STONE IS TO BE NO LESS THAN 100 mm (4").
- 8.3. IN AREAS STONES ARE TO BE USED AS STEPS THE PLATFORM OF EACH STONE IS TO BE NO LESS THAN 300 mm (12") ALONG PATH WITH AN OVER ALL PATH WIDTH WIDTH OF NO LESS THAN 600 mm (24").
- 8.4. STONE FOR THE PROJECT SHALL BE STOCKPILED AT THE SOURCE OR ON THE SITE FOR INSPECTION PRIOR TO PLACEMENT. STOCKPILE FOR INSPECTION NOT TO CONTAIN LESS THAN THE REQUIRED VOLUME FOR PROJECT.
- 8.5. STONE NOT CONFORMING TO THE REQUIREMENTS STATED HERE, SHALL BE REMOVED FROM THE PROJECT SITE AT THE EXPENSE OF THE CONTRACTOR.
- 8.6. DO NOT DROP MATERIAL FROM A HEIGHT GREATER THAN 1.0 m VERTICALLY FROM ITS FINAL POSITION.
- 8.7. PLACE MATERIAL FROM THE TOE OF SLOPE AND PROCEED UP THE SLOPE.
- 8.8. THE CONTRACTOR SHALL ENSURE THAT THE FINISHED SURFACE IS COMPRISED OF THE FULL SPECTRUM OF PARTICLE SIZES CONTINUOUSLY THROUGHOUT ITS LENGTH AND BREADTH.
- 8.9. DRESS ALL VOIDS SO THAT THE FINAL SURFACE IS WELL KEVED, DENSELY PLACED AND UNIFORM. THE ENGINEER WILL REQUIRE THE FILLING OF ALL SURFACE VOIDS INTO WHICH A ROCK HAVING A MASS EQUAL OR GREATER THAN 25% OF THE MAXIMUM STONE MASS CAN BE PLACED.

9. RIPRAP SHALL CONFORM TO THE FOLLOWING GRADATION LIMITS, FROM DSR REPORT BY DESSAU, 2014:

NOMINAL SIZE (mm)	PERCENT TOTAL WEIGHT LESS THAN GIVEN SIZE
250	100
230	50 - 100
150	0 - 20

- 9.1. NEITHER THE BREADTH NOR THE THICKNESS OF ANY INDIVIDUAL PIECE OF RIPRAP IS TO BE LESS THAN 50 PERCENT OF ITS LENGTH.
- 9.2. RIPRAP FOR THE PROJECT SHALL BE STOCKPILED AT THE SOURCE OR ON THE SITE FOR INSPECTION PRIOR TO PLACEMENT. STOCKPILE FOR INSPECTION NOT TO CONTAIN LESS THAN 13 TONNES OF MATERIAL.
- 9.3. RIPRAP NOT CONFORMING TO THE REQUIREMENTS STATED HERE SHALL BE REMOVED FROM THE PROJECT SITE AT THE EXPENSE OF THE CONTRACTOR.
- 9.4. DO NOT DROP MATERIAL FROM A HEIGHT GREATER THAN 1.0 M VERTICALLY FROM ITS FINAL POSITION.
- 9.5. PLACE MATERIAL FROM THE TOE OF SLOPE AND PROCEED UP THE SLOPE.
- 9.6. PLACE MATERIAL SO THAT TO FORM SMOOTH CONTOURING WITH NO PROMINENT LOW AREAS OR HIGH AREAS.
- 9.7. THE CONTRACTOR SHALL ENSURE THAT THE FINISHED SURFACE IS COMPRISED OF THE FULL SPECTRUM OF PARTICLE SIZES CONTINUOUSLY THROUGHOUT THE LENGTH AN THE BREADTH.

10. NON-WOVEN GEOTEXTILE:

- 10.1. GEOTEXTILE SHALL BE A NON-WOVEN SYNTHETIC FIBRE FABRIC, SUPPLIED IN ROLLS. NILEX 4510E OR PRE-APPROVED EQUIVALENT.
  - 10.1.1. WIDTH: 3.5 M MINIMUM.
  - 10.1.2. LENGTH: 50 M MINIMUM.
  - 10.1.3. COMPOSED OF:
    - 10.1.3.1. MINIMUM 85% BY MASS OF POLYESTER WITH INHIBITORS ADDED TO BASE PLASTIC TO RESIST DETERIORATION BY ULTRA-VIOLET AND HEAT EXPOSURE FOR 60 DAYS.
- 10.2. PHYSICAL PROPERTIES:
  - 10.2.1. TENSILE STRENGTH AND ELONGATION (IN ANY PRINCIPAL DIRECTION): TO ASTM D4595.
  - 10.2.2. TENSILE STRENGTH: MINIMUM 1000 N, WET CONDITION.
  - 10.2.3. ELONGATION AT BREAK: MINIMUM 50%.
  - 10.2.4. SEAM STRENGTH: EQUAL TO OR GREATER THAN TENSILE STRENGTH OF FABRIC.
- 10.3. HYDRAULIC PROPERTIES:
  - 10.3.1. APPARENT OPENING SIZE (AOS): TO ASTM D4751, 0.150 MICROMETRES.

11. ENVIRONMENTAL REQUIREMENTS:

- 11.1. TURBIDITY ISOLATION CURTAIN TO BE INSTALLED AS PER PCA ENVIRONMENTAL REQUIREMENTS.
- 11.2. PROVIDE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT SOIL EROSION AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS, ACCORDING TO PCA ENVIRONMENTAL PROCEDURES.
- 11.3. INSPECT, REPAIR, AND MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION
- 11.4. REMOVE EROSION AND SEDIMENTATION CONTROLS AND RESTORE AND STABILIZE AREAS DISTURBED DURING REMOVAL.

12. TIMBER FABRICATION AND INSTALLATION

- 12.1. MATERIALS
  - 12.1.1. TREATED TIMBER AND LUMBER SHALL BE IMPREGNATED WITH PRESERVATIVE SUITABLE FOR SPECIFIED CONSTRUCTION TYPE AND LOCATION.
  - 12.1.2. UNLESS OTHERWISE SPECIFIED, STRUCTURAL STEEL SHAPES, PLATES, AND RODS SHALL NOT BE GALVANIZED. NUTS, DRIFTBOLTS, DOWELS, AND SCREWS SHALL BE EITHER WROUGHT IRON OR STEEL.
- 12.2. WORKMANSHIP
  - 12.2.1. ALL FRAMING SHALL BE TRUE AND EXACT. TIMBER AND LUMBER SHALL BE ACCURATELY CUT AND ASSEMBLED TO A CLOSE FIT AND SHALL HAVE EVEN BEARING OVER THE ENTIRE CONTACT SURFACE. NO OPEN OR SHIMMED JOINTS WILL BE ACCEPTED. NAILS AND SPIKES SHALL BE DRIVEN WITH JUST SUFFICIENT FORCE TO SET THE HEADS FLUSH WITH THE SURFACE OF THE WOOD. DEEP HAMMER MARKS IN WOOD SURFACES SHALL BE CONSIDERED EVIDENCE OF POOR WORKMANSHIP AND MAY BE SUFFICIENT CAUSE FOR REJECTION OF THE WORK.

12.2.2. HOLES FOR ROUND DRIFTPINS AND DOWELS SHALL BE BORED WITH A BIT 1/16 INCH SMALLER IN DIAMETER THAN THAT OF THE DRIFTPIN OR DOWEL TO BE INSTALLED. THE DIAMETER OF HOLES FOR SQUARE DRIFTPINS OR DOWELS SHALL BE EQUAL TO ONE SIDE OF THE DRIFTPIN OR DOWEL. HOLES FOR LAG SCREWS SHALL BE BORED WITH A BIT NOT LARGER THAN THE BODY OF THE SCREW AT THE BASE OF THE THREAD.

12.2.3. WASHERS SHALL BE USED IN CONTACT WITH ALL BOLT HEADS AND NUTS THAT WOULD OTHERWISE BE IN CONTACT WITH WOOD. CAST IRON WASHERS SHALL BE USED WHEN THE BOLT WILL BE IN CONTACT WITH EARTH. ALL NUTS SHALL BE CHECKED OR BURRED EFFECTIVELY WITH A POINTED TOOL AFTER FINALLY TIGHTENED.

12.2.4. UNLESS OTHERWISE SPECIFIED, SURFACING, CUTTING, AND BORING OF TIMBER AND LUMBER SHALL BE COMPLETED BEFORE TREATMENT. IF FIELD CUTTING OR FIELD REPAIR OF TREATED TIMBER AND LUMBER IS APPROVED, ALL CUTS AND ABRASIONS SHALL BE CAREFULLY TRIMMED AND COATED WITH APPROVED PRESERVATIVE. THE TREATMENT PRESERVATIVE SHALL BE APPLIED ACCORDING TO THE PRODUCT LABEL. ANY EXCESS PRESERVATIVE NOT ABSORBED BY THE WOOD MEMBER SHALL BE CLEANED FROM THE SURFACE PRIOR TO THE USE OF THE MEMBER. AFTER TIMBER ASSEMBLY, ANY UNFILLED HOLES SHALL BE PLUGGED WITH TIGHTLY FITTING WOODEN PLUGS THAT HAVE BEEN TREATED WITH PRESERVATIVE AS SPECIFIED.

12.3. HANDLING AND STORING MATERIAL

ALL TIMBER AND LUMBER STORED AT THE SITE OF THE WORK SHALL BE NEATLY STACKED ON SUPPORTS A MINIMUM OF 12 INCHES ABOVE THE GROUND SURFACE AND PROTECTED FROM THE WEATHER BY SUITABLE COVERING(S). UNTREATED MATERIAL SHALL BE STAKED AND STRIPPED TO PERMIT FREE CIRCULATION OF AIR BETWEEN THE TIERS AND COURSES. TREATED TIMBER MAY BE CLOSE-STAKED. THE GROUND SURFACE FOR THE STOCKPILE OF TIMBER AND LUMBER SHALL BE FREE OF WEEDS AND RUBBISH. THE USE OF CANT HOOKS, PEAVIES, OR OTHER POINTED TOOLS EXCEPT END HOOKS IS NOT PERMITTED IN THE HANDLING OF STRUCTURAL TIMBER AND/OR LUMBER. TREATED TIMBER SHALL BE HANDLED WITH ROPE SLINGS OR BY OTHER METHODS THAT PREVENT THE BREAKING OR BRUISING OF OUTER FIBERS OR PENETRATION OF THE SURFACE IN ANY MANNER.

13. ACCESS DEVELOPMENT

- 13.1. THE CONTRACTOR SHALL DEVELOP ACCESS TO THE SITE TO FACILITATE CONSTRUCTION AS INDICATED IN THESE SPECIFICATIONS AND ON THE CONTRACT DRAWINGS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE SELECTION AND IMPLEMENTATION OF ALL METHODS TO ACCOMPLISH THIS REQUIREMENT. THE CONTRACTOR IS REQUIRED TO DEVELOP ACCESS TO THE SITE WITHIN THE ZONES INDICATED ON THE CONTRACT DRAWINGS. THE LOCATIONS AND METHODS USED TO DEVELOP ACCESS SHALL BE REVIEWED AND ACCEPTED BY THE PCA REPRESENTATIVE PRIOR TO IMPLEMENTATION.
- 13.2. THE CONTRACT DRAWINGS INCLUDE CONCEPTUAL ACCESS POINTS, RAMPS AND ROADS ALONG WITH MAXIMUM LIMITS. THIS INFORMATION HAS BEEN REVIEWED BY THE PCA BUT PROVIDED TO THE CONTRACTOR FOR CONSIDERATION ONLY. THE CONTRACTOR MAY CHOOSE TO ADOPT THIS APPROACH OR ALTER AS DEEMED APPROPRIATE. REGARDLESS OF THE APPROACH TAKEN, THE CONTRACTOR REMAINS RESPONSIBLE FOR ACHIEVING THE STATED OBJECTIVES FOUND IN THE PROJECTS - ENVIRONMENTAL PROTECTION AND SHALL COMPLY WITH ALL APPROVAL REQUIREMENTS OF THE REGULATORY AGENCIES.
- 13.3. THE COMPLETION OF THE WORKS WILL LIKELY CAUSE DISTURBANCE OF SOME EXISTING TREES AND BRUSH. THE INTENT IS TO NOT REMOVE ANY TREES AND BRUSH IN ORDER TO FACILITATE THE WORK. PRIOR TO STARTING WORK, CONTRACTOR IS TO REVIEW SITE WITH PCA REPRESENTATIVE TO IDENTIFY ANY POSSIBLE DAMAGE THAT MAY BE CAUSED TO NATIVE VEGETATION AND PROPOSE MEASURES TO MITIGATE POSSIBLE DAMAGE. THESE MEASURE ARE TO BE APPROVED BY THE PCA REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK.
- 13.4. KEEP PAVEMENT AND AREA ADJACENT TO SITE CLEAN AND FREE FROM EXCESSIVE MUD, DIRT, AND DEBRIS AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEANUP.
- 14. RESTORATION
  - 14.1. REMOVE ACCESS POINTS, ROADS, PADS, AND ALL OTHER WORKS INSTALLED DURING ACCESS DEVELOPMENT (INCLUDING THOSE SHOWN ON CONTRACT DRAWINGS). RE-INSTATE THE WORK SITE TO A CONDITION EQUAL TO OR BETTER THAN THE SITE CONDITION PRIOR TO CONSTRUCTION BY:
    - 14.1.1. RESTORING ORGANIC SOILS (IF REMOVED DURING ACCESS DEVELOPMENT).
    - 14.1.2. ELIMINATING UNEVEN AREAS AND LOW SPOTS.
    - 14.1.3. RESTORING DRAINAGE PATTERNS.
    - 14.1.4. REMOVAL OF ALL GRAVELS, OTHER MATERIALS, OR STRUCTURES PLACED TO CREATE ACCESS POINTS, ROADS OR PADS. DISPOSE OF GRAVELS, OTHER MATERIALS, OR STRUCTURES AT AN OFF-SITE DISPOSAL FACILITY ACCEPTABLE TO THE PCA REPRESENTATIVE.
    - 14.1.5. REPLACEMENT OF ALL TEMPORARY EXCAVATED MATERIALS INCLUDING STRIPPING. RETURN GROUND BACK TO ORIGINAL CONTOUR ELEVATIONS OR AS PRE-APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.
    - 14.1.6. LEVELING AND SEEDING ALL DISTURBED AREAS WITH NATIVE GRASS SEED SPECIES MIXTURE IN ACCORDANCE WITH BANFF NATIONAL PARK, AND APPROVED BY PCA REPRESENTATIVE.



Parks Canada  
Parcs Canada

LEGEND:

- DECIDUOUS TREE
- SPRUCE TREE
- PINE TREE
- SHRUB/BUSH
- TRUNK DIAMETER TD=0.2
- BUSHLINE
- MAJOR CONTOUR (EXISTING)
- MINOR CONTOUR (EXISTING)
- MAJOR CONTOUR ELEVATION (m) 1420.0
- MAJOR CONTOUR (PROPOSED)
- CONTOUR ELEVATION (PROPOSED) 1420.00
- PICNIC TABLE (EXISTING)

Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.

REVO	Issued for Tender	17/04/28
------	-------------------	----------

revisions	description	date

A C	A detail no. no. du detail B location drawing no. sur dessin no. C drawing no. dessin no.	A B C
--------	--	-------------

project projet

**JOHNSON LAKE  
DOCKS AND  
BEACH  
REHABILITATION**

BANFF NATIONAL PARK

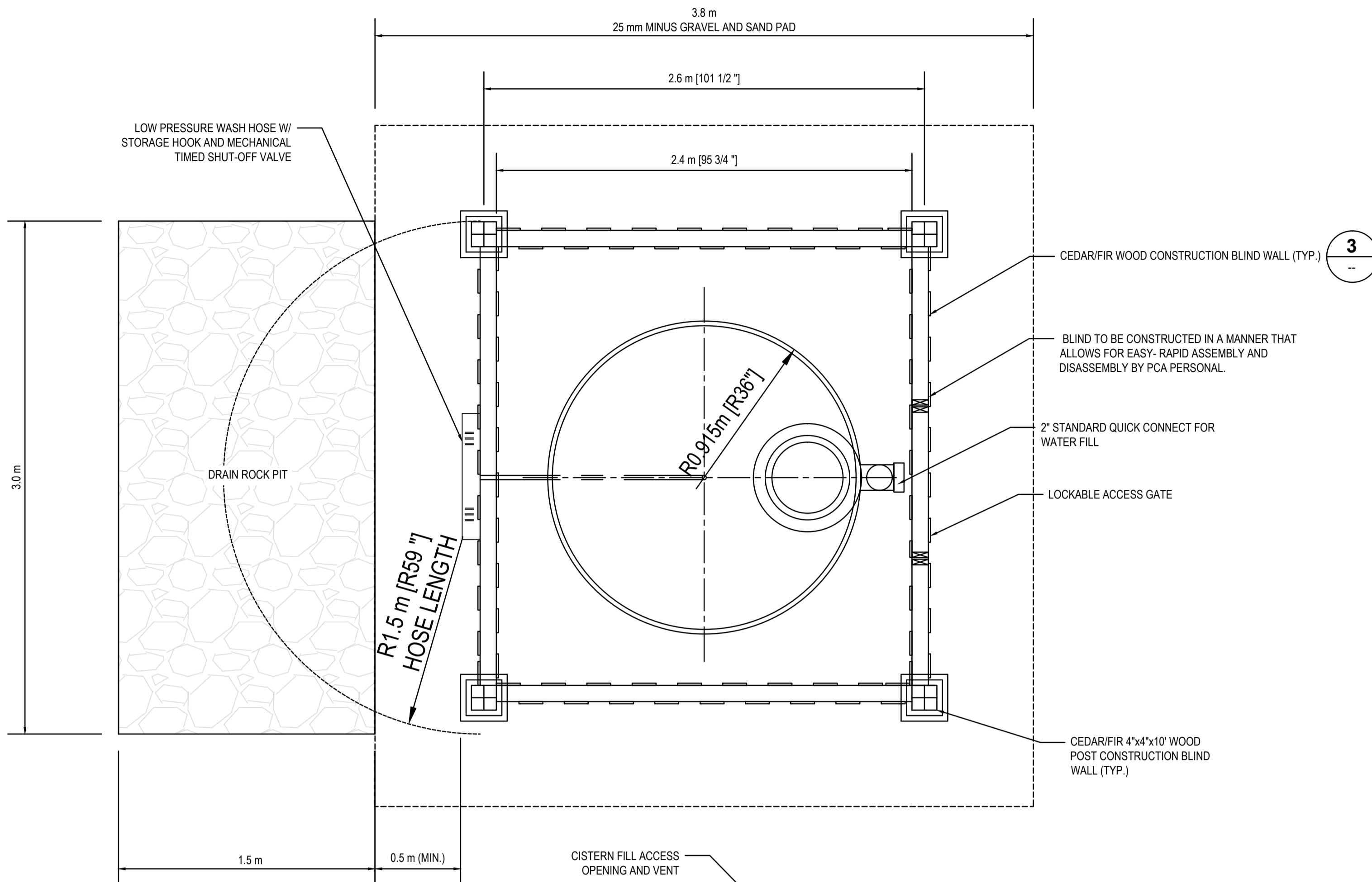
drawing dessin

**CONSTRUCTION  
NOTES AND  
SPECIFICATIONS**

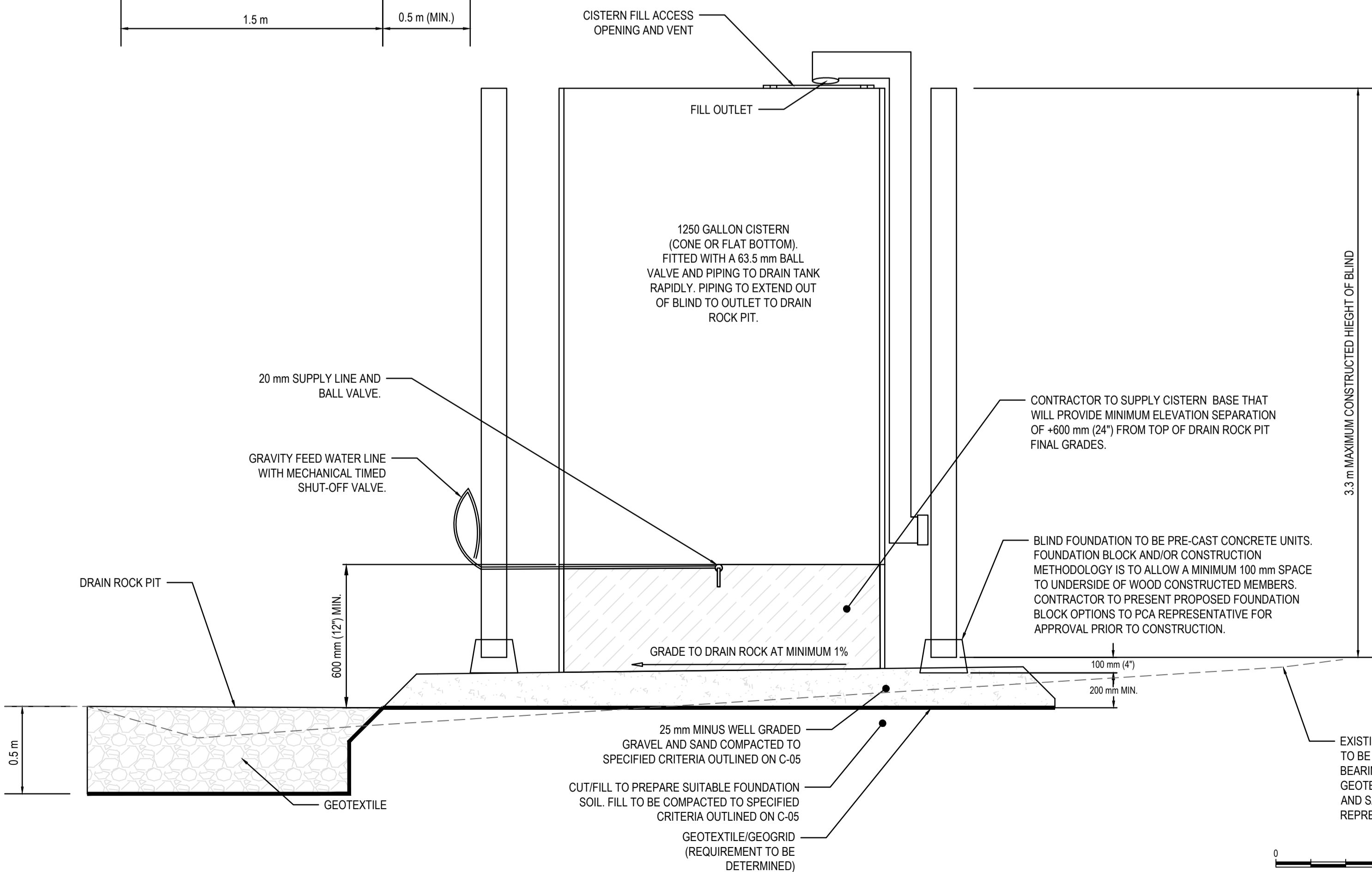
Designed By	T.HIRSEKORN	Conçu par
Date	2017/04/27	(yyyy/mm/dd)
Drawn By	R.HALLEY	Dessiné par
Date	2017/04/27	(yyyy/mm/dd)
Reviewed By	R. EVERTS	Examiné par
Date	2017/04/27	(yyyy/mm/dd)
Approved By	T.HIRSEKORN	Approuvé par
Date	2017/04/28	(yyyy/mm/dd)
Tender	C.MORTSON	Soumission
Project Manager	Administrateur de projets	
Project no.	No. du projet	
	<b>36161</b>	
Drawing no.	No. du dessin	
	<b>C-05</b>	







**3 BLIND TEXTURE**  
N.T.S.



**NOTES:**

- DISTANCES AND ELEVATIONS ARE IN METRES.
- ALL ELEMENTS OF THE COMPLETE WASH STATION SHOWN ON THIS SHEET, SUCH AS THE CISTERN, STRUCTURAL SUPPORTS, HOSE, TIMED SHUT OFF VALVE, EARTHWORKS AND BLIND WALL COMPONENTS, ARE TO BE PROPOSED AS A COMPLETE, FUNCTIONING PACKAGE BY THE CONTRACTOR AS PER PERFORMANCE SPECIFICATIONS.

**LEGEND:**

DECIDUOUS TREE	.....	
SPRUCE TREE	.....	
PINE TREE	.....	
SHRUB/BUSH	.....	
TRUNK DIAMETER	.....	TD=0.2
BUSHLINE	.....	
MAJOR CONTOUR (EXISTING)	.....	
MINOR CONTOUR (EXISTING)	.....	
MAJOR CONTOUR ELEVATION (m)	.....	1420.0
MAJOR CONTOUR (PROPOSED)	.....	
CONTOUR ELEVATION (PROPOSED)	.....	1420.00
PICNIC TABLE (EXISTING)	.....	

**Contractor to verify all dimensions & conditions on site and immediately notify the departmental representative of all discrepancies.**

REVO	Issued for Tender Review	17/04/28
revisions	description	date

A	A detail no.	A
C	no. du detail	B
	B location drawing no.	C
	sur dessin no.	
	C drawing no.	
	dessin no.	

project JOHNSON LAKE DOCKS AND BEACH REHABILITATION  
BANFF NATIONAL PARK

drawing PARKING AREA WASH STATION PLAN AND ELEVATION

Designed By	T.HIRSEKORN	Conçu par
Date	2017/04/27	(yyyy/mm/dd)
Drawn By	R.HALLEY	Dessiné par
Date	2017/04/27	(yyyy/mm/dd)
Reviewed By	R.EVERTS	Examiné par
Date	2017/04/27	(yyyy/mm/dd)
Approved By	T.HIRSEKORN	Approuvé par
Date	2017/04/28	(yyyy/mm/dd)
Tender	C.MORTSON	Soumission

Project Manager Administrateur de projets  
Project no. 36161  
Drawing no. S-01