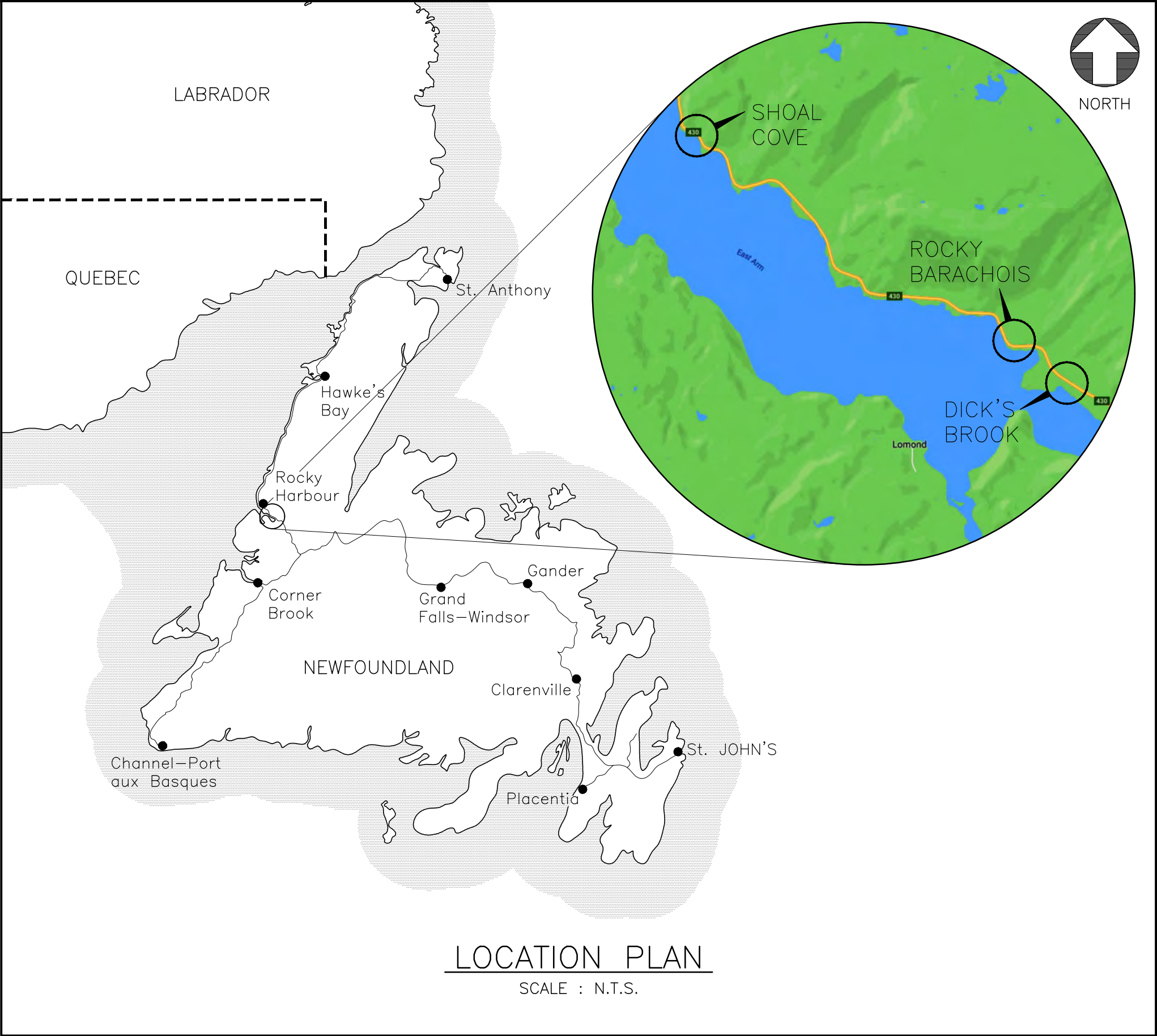




Parcs  
Canada

Parks  
Canada



RE-ALIGNMENT AND  
RE-CONSTRUCTION OF  
HWY 430  
GROS MORNE NATIONAL PARK  
NEWFOUNDLAND AND LABRADOR

PROJECT NO. 1813 / 1845

DRAWING LIST

CIVIL

DICK'S BROOK

- C1 CLEARING PLAN
- C2 PROPOSED CONDITIONS STA. 0+060 TO 0+380
- C3 PROPOSED CONDITIONS STA. 0+380 TO 0+700
- C4 PROPOSED CONDITIONS STA. 0+700 TO 0+920
- C5 GRADING PLAN NEAR BROOK
- C6 EAST APPROACH GRADING PLAN NEAR BROOK
- C7 GRADING AND EPS SECTIONS AND DETAIL NEAR BROOK
- C8 SECTIONS (SHEET 1 OF 6)
- C9 SECTIONS (SHEET 2 OF 6)
- C10 SECTIONS (SHEET 3 OF 6)
- C11 SECTIONS (SHEET 4 OF 6)
- C12 SECTIONS (SHEET 5 OF 6)
- C13 SECTIONS (SHEET 6 OF 6)
- C14 INSTRUMENTATION PLAN
- C15 MISCELLANEOUS DETAILS
- C16 BOREHOLE LOCATION PLAN
- C17 BOREHOLE LOGS (SHEET 1 OF 4)
- C18 BOREHOLE LOGS (SHEET 2 OF 4)
- C19 BOREHOLE LOGS (SHEET 3 OF 4)
- C20 BOREHOLE LOGS (SHEET 4 OF 4)

CIVIL

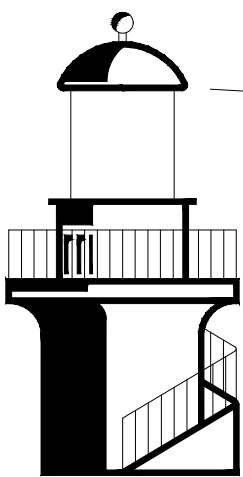
ROCKY BARACHOIS

- RB-C1 PROPOSED CLEARING PLAN
- RB-C2 PROPOSED ROUTE 430 STA. 9+976 TO 10+220
- RB-C3 PROPOSED ROUTE 430 STA. 10+220 TO 10+460
- RB-C4 PROPOSED ROUTE 430 STA. 10+460 TO 10+700
- RB-C5 PROPOSED ROUTE 430 STA. 10+700 TO 10+812
- RB-C6 CROSS-SECTIONS (SHEET 1 OF 3)
- RB-C7 CROSS-SECTIONS (SHEET 2 OF 3)
- RB-C8 CROSS-SECTIONS (SHEET 3 OF 3)
- RB-C9 MISCELLANEOUS SECTIONS AND DETAILS

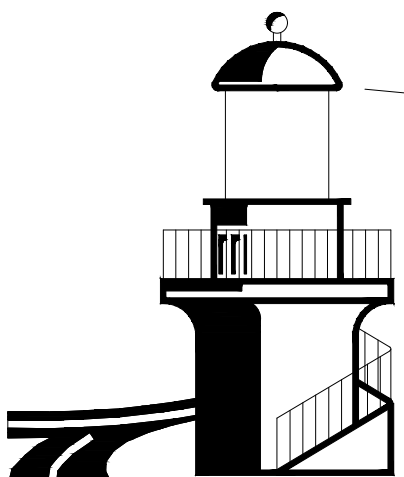
CIVIL

SHOAL COVE

- L01A EXISTING CONDITIONS AND REMOVALS STA. 22+920 TO 23+300
- L01B EXISTING CONDITIONS AND REMOVALS STA. 22+740 TO 22+920
- L02A GRADING PLAN STA. 23+060 TO 23+300
- L02B GRADING PLAN STA. 22+920 TO 23+060
- L02C GRADING PLAN STA. 22+740 TO 22+920
- L03A LANDSCAPE FINISH TREATMENT PLAN STA. 22+920 TO 23+300
- L03B LANDSCAPE FINISH TREATMENT PLAN STA. 22+740 TO 22+920



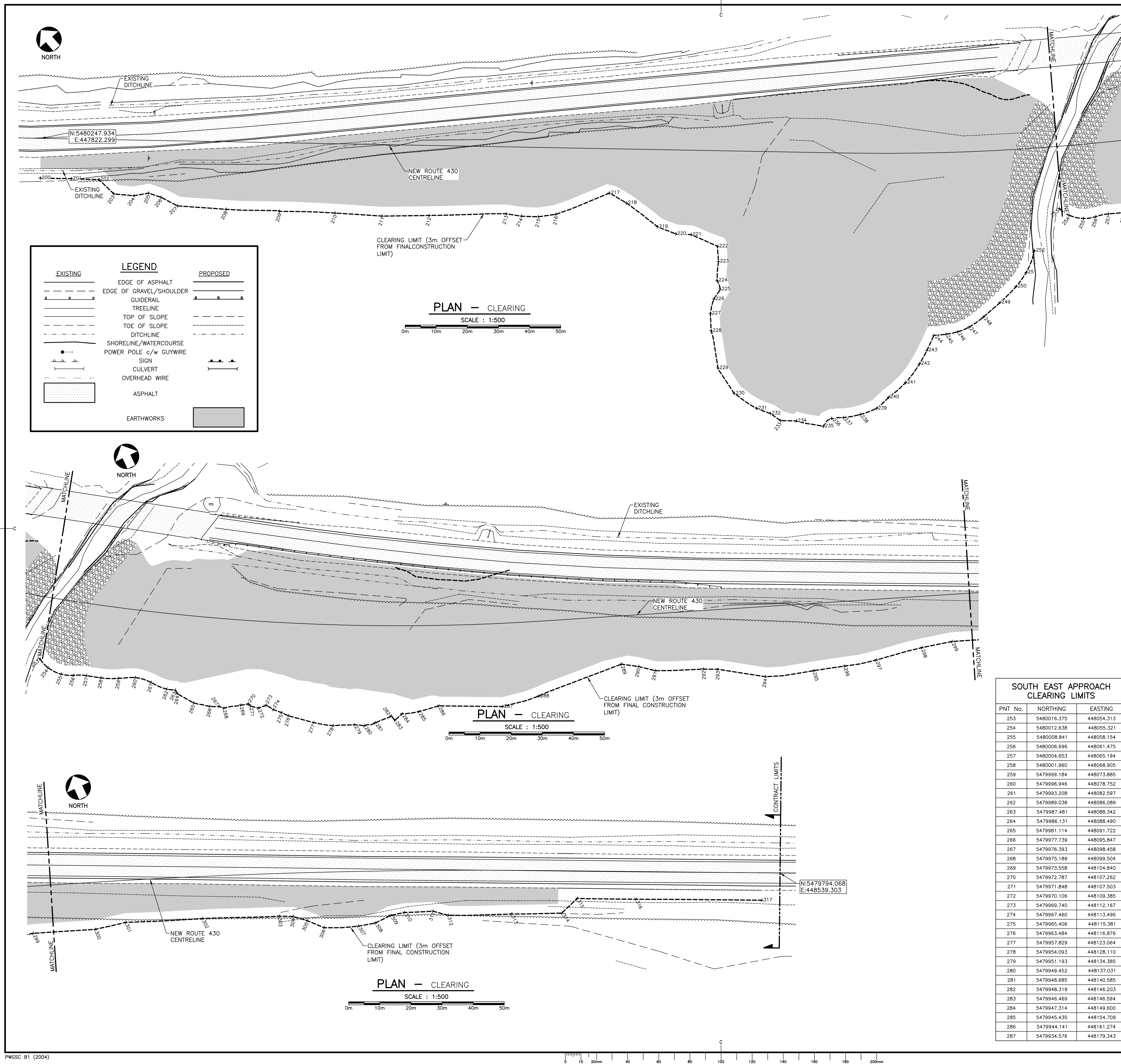
HARBOURSIDE  
Engineering Consultants



HARBOURSIDE  
Transportation Consultants

Canada





SOUTH WEST APPROACH CLEARING LIMITS		
PNT No.	NORTHING	EASTING
200	5480238.463	447813.759
201	5480231.775	447821.147
202	5480225.764	447827.661
203	5480219.102	447828.257
204	5480214.428	447832.740
205	5480212.014	447836.818
206	5480208.367	447838.967
207	5480202.814	447841.157
208	5480191.722	447852.217
209	5480179.997	447864.720
210	5480167.858	447877.842
211	5480157.233	447888.593
212	5480147.446	447900.139
213	5480131.639	447919.153
214	5480127.808	447922.381
215	5480124.100	447926.367
216	5480121.038	447931.087
217	5480114.899	447948.575
218	5480108.902	447950.602
219	5480096.547	447953.130
220	5480091.001	447956.055
221	5480087.602	447959.627
222	5480079.159	447963.597
223	5480075.330	447960.614
224	5480071.017	447956.243
225	5480068.235	447955.168
226	5480067.191	447951.560
227	5480064.432	447947.683
228	5480060.035	447944.221
229	5480049.610	447938.010
230	5480040.024	447936.593
231	5480031.681	447938.922
232	5480027.572	447941.141
233	5480023.642	447942.128
234	5480020.286	447945.853
235	5480013.263	447951.288
236	5480013.435	447954.958
237	5480011.129	447957.993
238	5480008.369	447962.649
239	5480006.379	447967.942
240	5480006.561	447973.269
241	5480006.515	447980.473
242	5480008.158	447987.819
243	5480009.865	447992.408
244	5480012.015	447997.224
245	5480009.737	448000.402
246	5480007.866	448003.719
247	5480006.598	448007.439
248	5480006.037	448013.076
249	5480006.053	448020.204
250	5480006.550	448027.486
251	5480007.827	448032.915
252	5480011.390	448039.517

SOUTH EAST APPROACH CLEARING LIMITS		
PNT No.	NORTHING	EASTING
253	5480016.375	448054.313
254	5480012.638	448055.321
255	5480008.841	448058.154
256	5480006.696	448061.475
257	5480004.653	448065.194
258	5480001.960	448068.905
259	5479999.184	448073.885
260	5479996.946	448078.752
261	5479993.208	448082.597
262	5479989.038	448086.089
263	5479987.481	448088.342
264	5479986.131	448088.490
265	5479981.114	448091.722
266	5479977.739	448095.847
267	5479976.393	448098.458
268	5479975.189	448099.504
269	5479973.558	448104.840
270	5479972.787	448107.262
271	5479971.848	448107.503
272	5479970.106	448109.385
273	5479969.740	448112.167
274	5479967.460	448113.496
275	5479965.406	448115.381
276	5479963.484	448116.876
277	5479957.829	448123.064
278	5479954.093	448128.110
279	5479951.193	448134.385
280	5479949.452	448137.031
281	5479948.685	448140.585
282	5479948.319	448146.203
283	5479946.469	448146.594
284	5479947.314	448149.600
285	5479945.435	448154.709
286	5479944.141	448161.274
287	5479934.576	448179.343

SOUTH EAST APPROACH CLEARING LIMITS		
PNT No.	NORTHING	EASTING
288	5479932.209	448191.233
289	5479929.141	448219.556
290	5479925.936	448224.099
291	5479922.313	448228.209
292	5479915.697	448242.145
293	5479913.500	448246.303
294	5479904.375	448258.791
295	5479898.947	448273.479
296	5479895.725	448282.926
297	5479892.786	448292.928
298	5479889.575	448307.773
299	5479886.901	448317.238
300	5479878.878	448335.548
301	5479876.367	448345.289
302	5479866.189	448367.700
303	5479855.518	448390.035
304	5479853.373	448393.966
305	5479850.152	448397.336
306	5479846.629	448401.111
307	5479841.050	448411.044
308	5479839.423	448416.388
309	5479839.326	448421.935
310	5479838.169	448426.220
311	5479834.298	448434.628
312	5479830.876	448438.370
313	5479821.919	448456.641
314	5479814.769	448471.088
315	5479816.688	448477.696
316	5479807.830	448494.292
317	5479788.991	448530.081

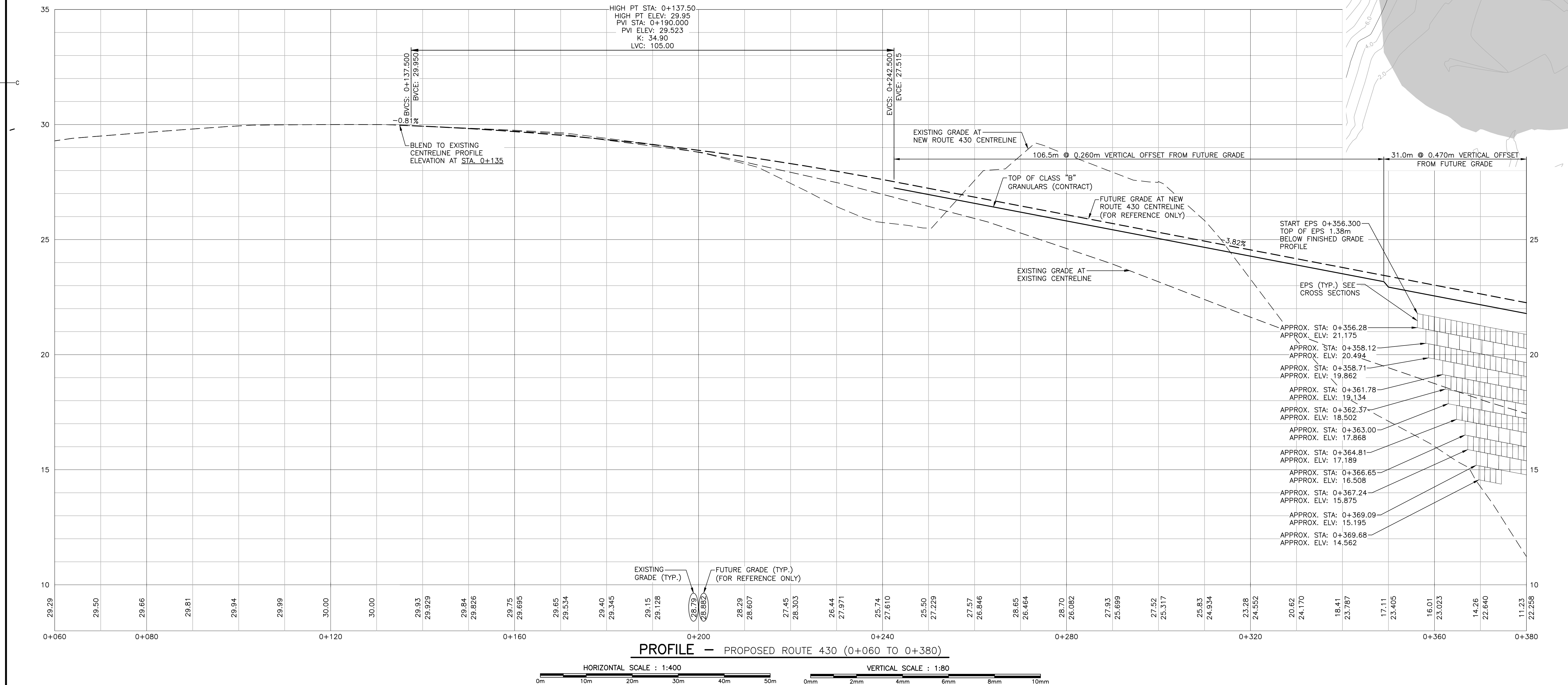
- GENERAL NOTES:
- ALL ELEVATIONS ARE IN METERS UNLESS OTHERWISE NOTED.
  - SURVEY REFERENCED HORIZONTALLY TO UTM ZONE 21 NORTH NAD83 (CSRS) AND VERTICALLY TO CGVD28 (HTV2.0 GEOD MODEL).
  - CONTROL IS DERIVED FROM MULTIPLE STATIC GPS OBSERVATIONS ON NAIL 1000 HAVING CO-ORDINATES OF:  
N=5481239.613m  
E=446748.809m  
EL=9.53m
  - COORDINATES ARE GRID DERIVED FROM NAD83 ELLIPSOID USING THE MAPPING PROJECTION OF UNIVERSAL TRANSVERSE MERCATOR ZONE 21 HAVING A COMBINED GRID SCALE FACTOR OF 1/0.99963351.
  - TOPOGRAPHIC SURVEY COMPLETED BY DESIGN POINT ENGINEERING AND SURVEYING ON SEPT 13-17, 2016.

PROVINCE OF NEWFOUNDLAND  
PERMIT HOLDER  
CLASS "A"  
This Permit Allows  
Harbourside Transportation Consultants  
to practice Professional Engineering  
in Newfoundland and Labrador.  
Permit No. as issued by PCENL N0768  
which is valid for the year 2018.

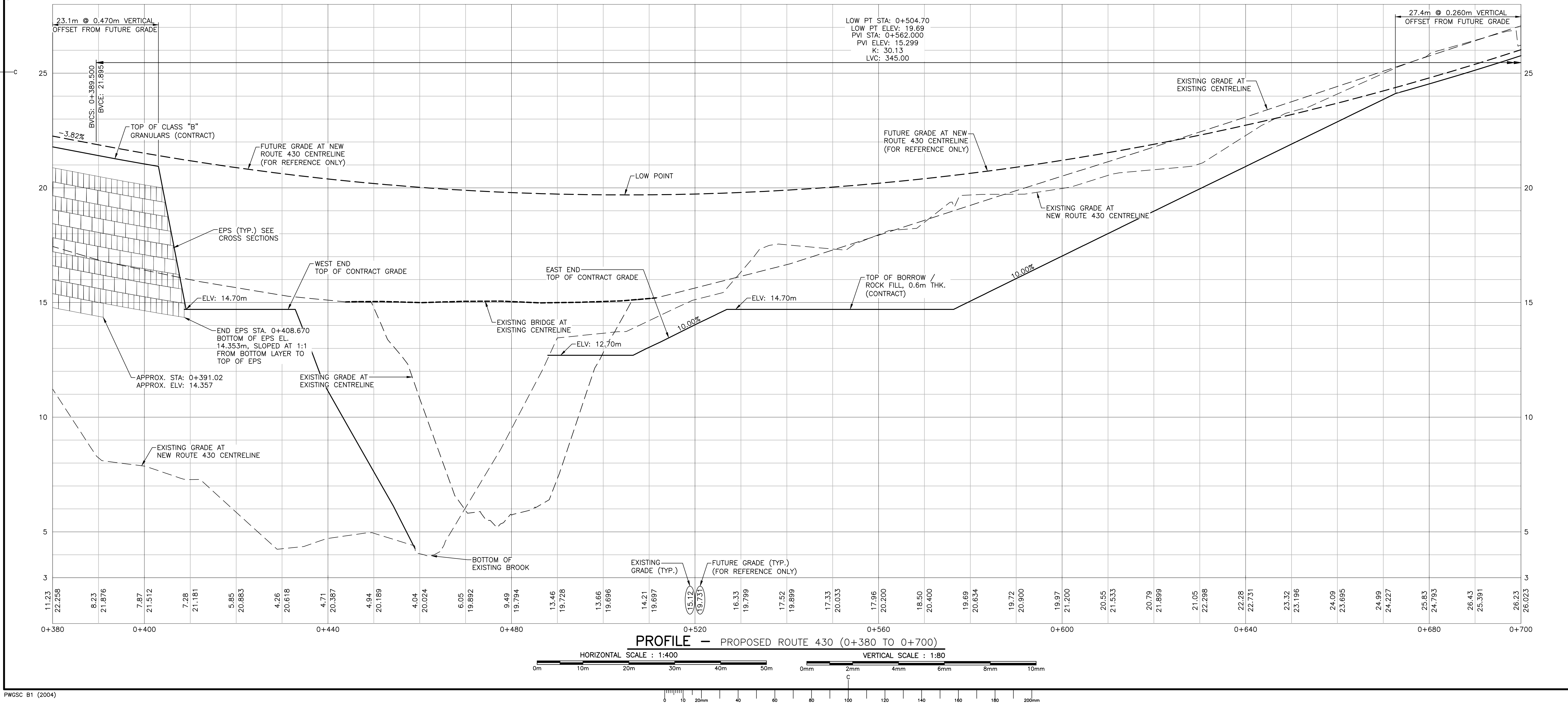
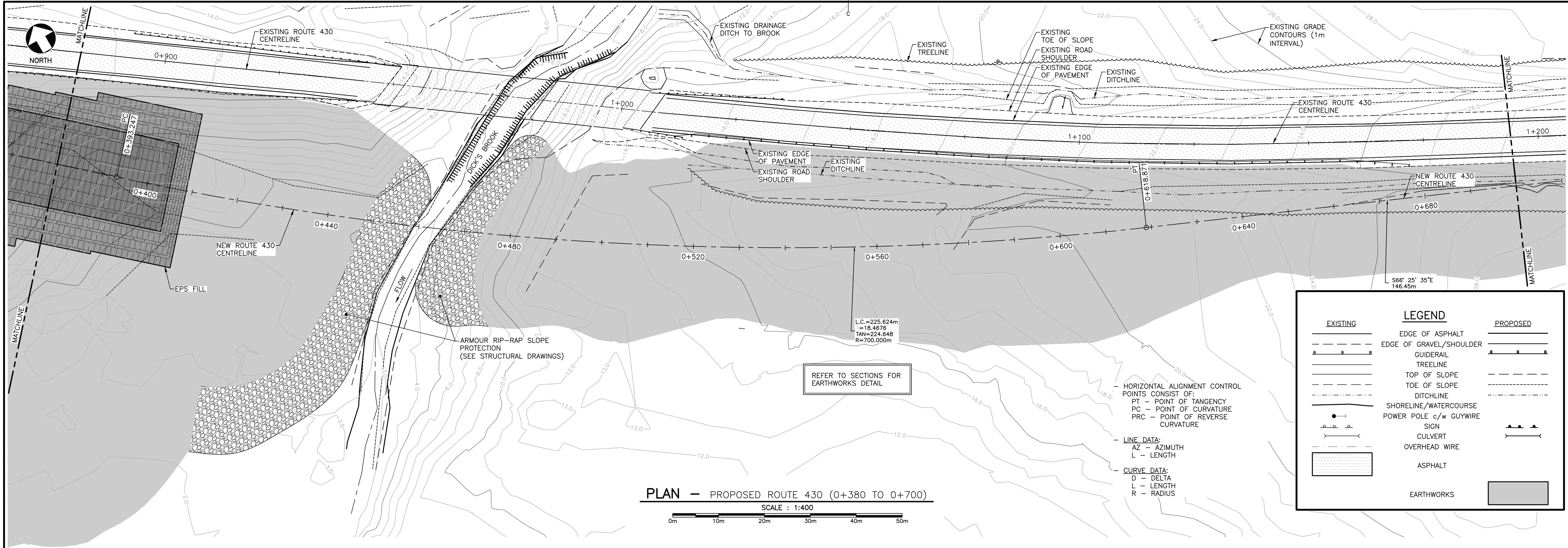


0	ISSUED FOR TENDER	JUL 05 2018
revisions		date
project	RE-ALIGNMENT AND RE-CONSTRUCTION OF HIGHWAY 430 NEAR DICK'S BROOK	project
drawing	GROS MORNE NATIONAL PARK	design
CLEARING PLAN		
designed	TIM JORDAN	conçu
date	NOVEMBER 2017	
drawn	CORY BAKER	dessiné
date	NOVEMBER 2017	
approved	MICHAEL MACDONALD	approuvé
date	NOVEMBER 2017	
Tender		Soumission
PCA Project Manager	Administrateur de projets APC	
project number	1813/1845	no. du projet
drawing no.	C1	no. du dessin









Parcs Canada

HARBORSIDE  
Engineering Consultants

HARBORSIDE  
Transportation Consultants

GENERAL NOTES:

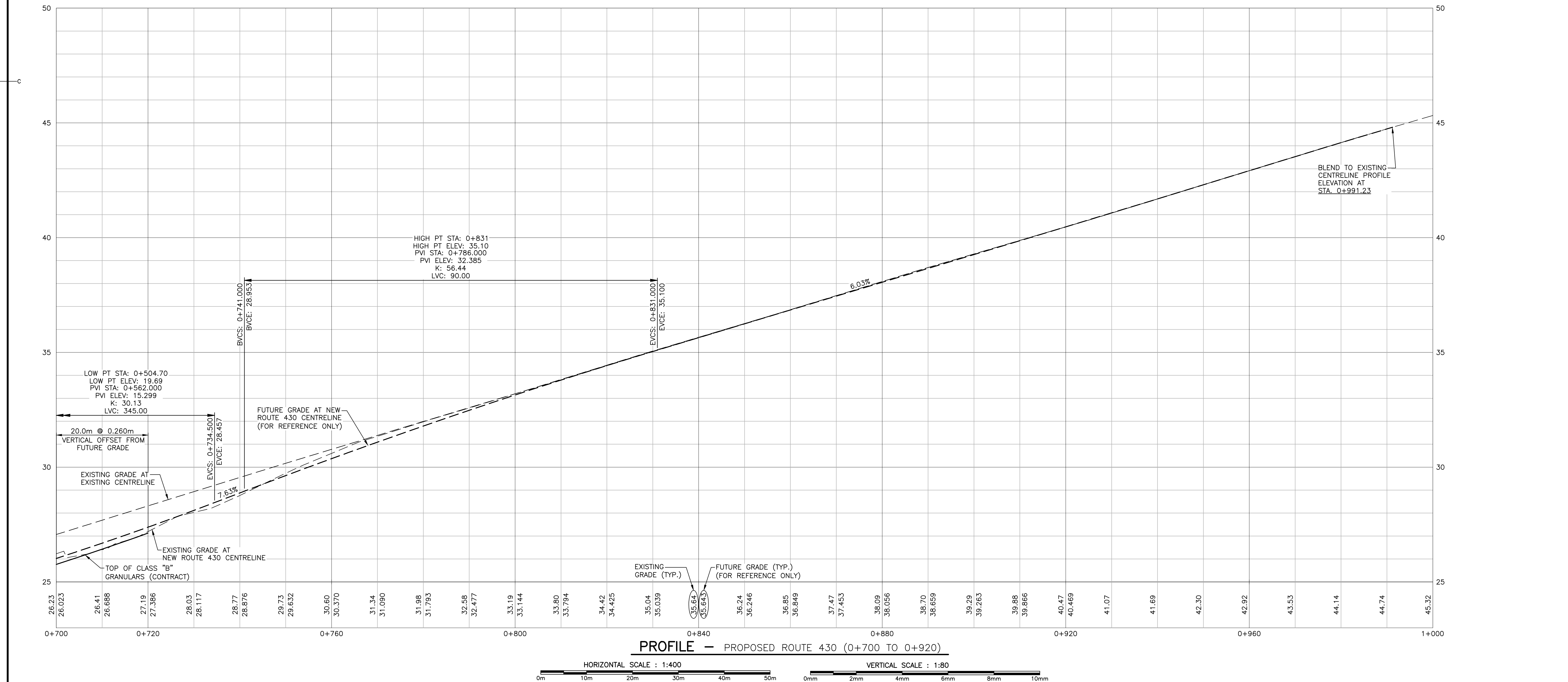
- ALL ELEVATIONS ARE IN METERS UNLESS OTHERWISE NOTED.
- SURVEY REFERENCED HORIZONTALLY TO UTM ZONE 21 NORTH NAD83 (CSRS) AND VERTICALLY TO CGVD28 (HTV2.0 GEOD MODEL).
- CONTROL IS DERIVED FROM MULTIPLE STATIC GPS OBSERVATIONS ON NAIL 1000 HAVING CO-ORDINATES OF:  
N=5481239.813m  
E=446748.809m  
EL=9.53m
- COORDINATES ARE GRID DERIVED FROM NAD83 ELLIPSOID USING THE MAPPING PROJECTION OF UNIVERSAL TRANSVERSE MERCATOR ZONE 21 HAVING A COMBINED GRID SCALE FACTOR OF 1/0.99963351.
- TOPOGRAPHIC SURVEY COMPLETED BY DESIGN POINT ENGINEERING AND SURVEYING ON SEPT 13-17, 2016.
- CONTOUR INTERVAL IS 1.0 METER.
- FOR GEOTECHNICAL INFORMATION SEE REPORT BY HGC DATED AUG. 31, 2017.

PROVINCE OF NEWFOUNDLAND  
PERMIT HOLDER  
CLASS "A"

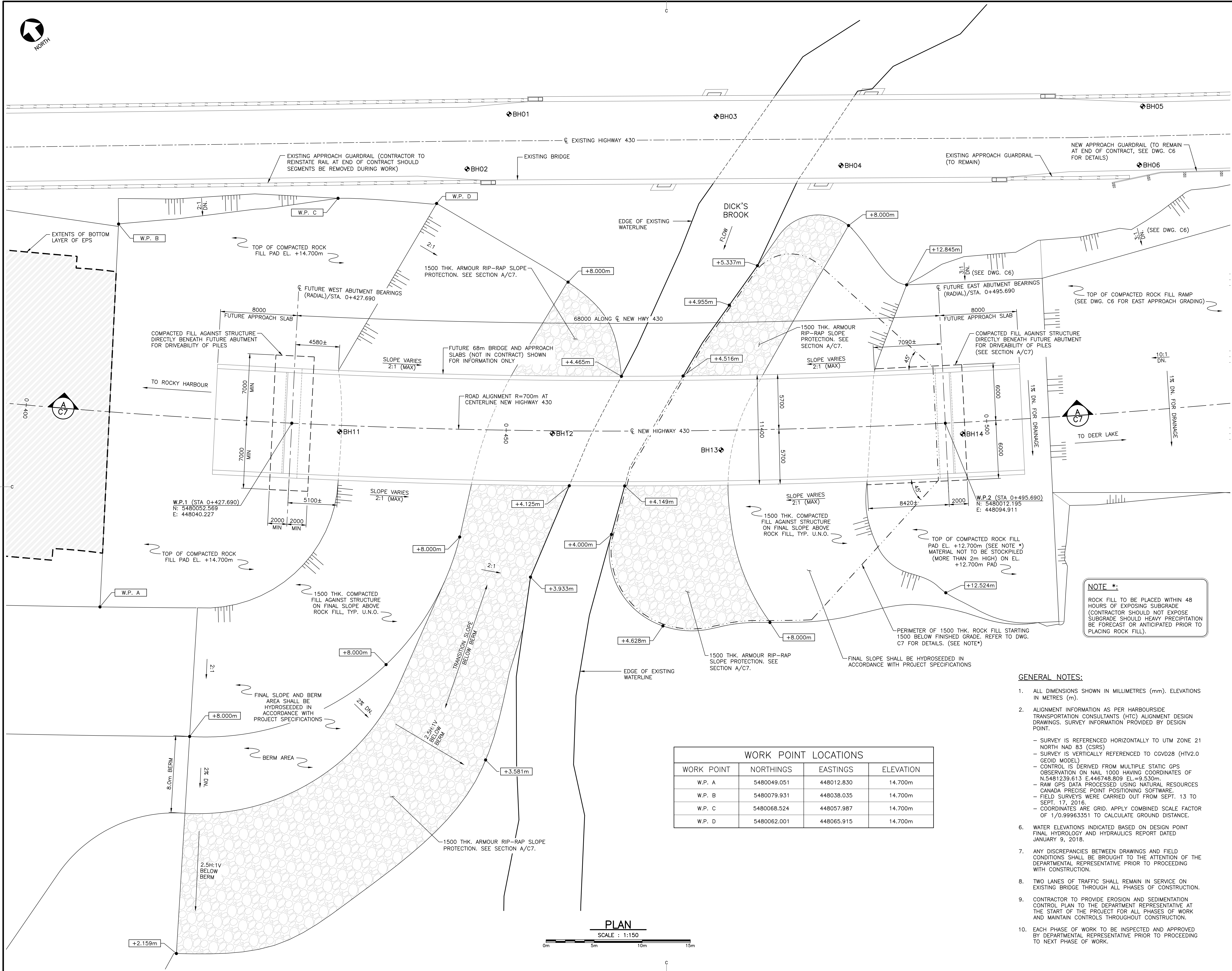
This Permit Allows  
Harbourside Transportation Consultants  
to practice Professional Engineering  
in Newfoundland and Labrador.  
Permit No. as issued by PEGNL N0763  
which is valid for the year 2018.

0	ISSUED FOR TENDER	JUL 05 2018
revisions		date
project	RE-ALIGNMENT AND RE-CONSTRUCTION OF HIGHWAY 430 NEAR DICK'S BROOK	
drawing	GROS MORNE NATIONAL PARK	
designed	TIM JORDAN	
date	NOVEMBER 2017	
drawn	CORY BAKER	
date	NOVEMBER 2017	
approved	MICHAEL MACDONALD	
date	NOVEMBER 2017	
Tender	Soumission	
PCA Project Manager	Administrateur de projets APC	
project number	1813/1845	
drawing no.	C3	









Parcs  
Canada

Parks  
Canada

HARBOURSIDE  
Engineering Consultants

HARBOURSIDE  
Transportation Consultants

PROFESSIONAL ENGINEER  
Wade Pottier  
No. 5480012.195  
Exp. 2018

0ISSUED FOR TENDERJULY 6 2018

revisions

project

RE-ALIGNMENT AND RE-CONSTRUCTION OF HWY 430 NEAR DICK'S BROOK

GROS MORNE NATIONAL PARK

drawing

design

designed WADE POTTIER

conçu

date OCTOBER 2017

drawn JEFF CLARK

dessiné

date OCTOBER 2017

approved ROBBIE FRASER

approuvé

date OCTOBER 2017

Tender

Submission

PCA Project Manager

Administrateur de projets APC

project number

no. du projet

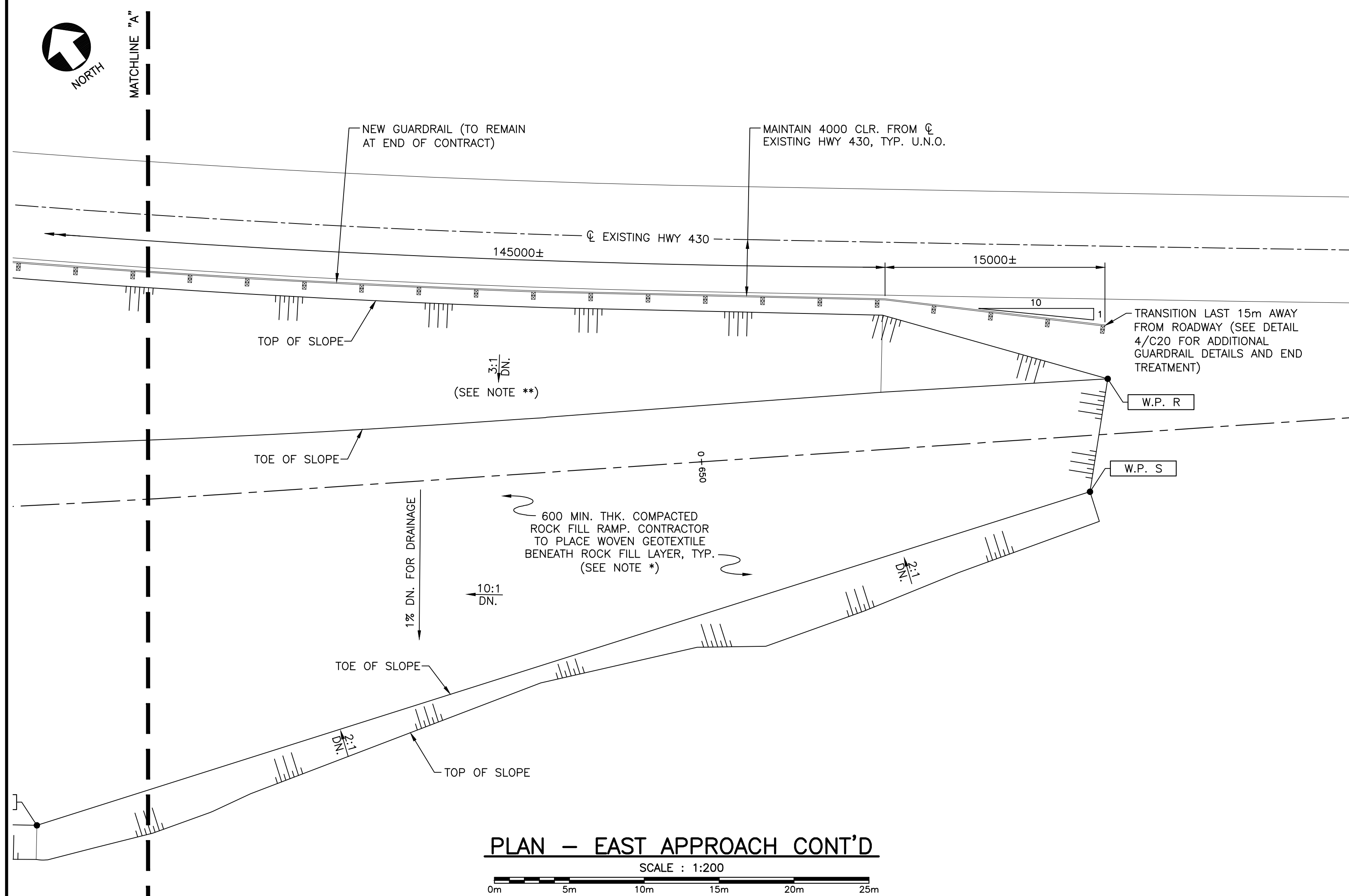
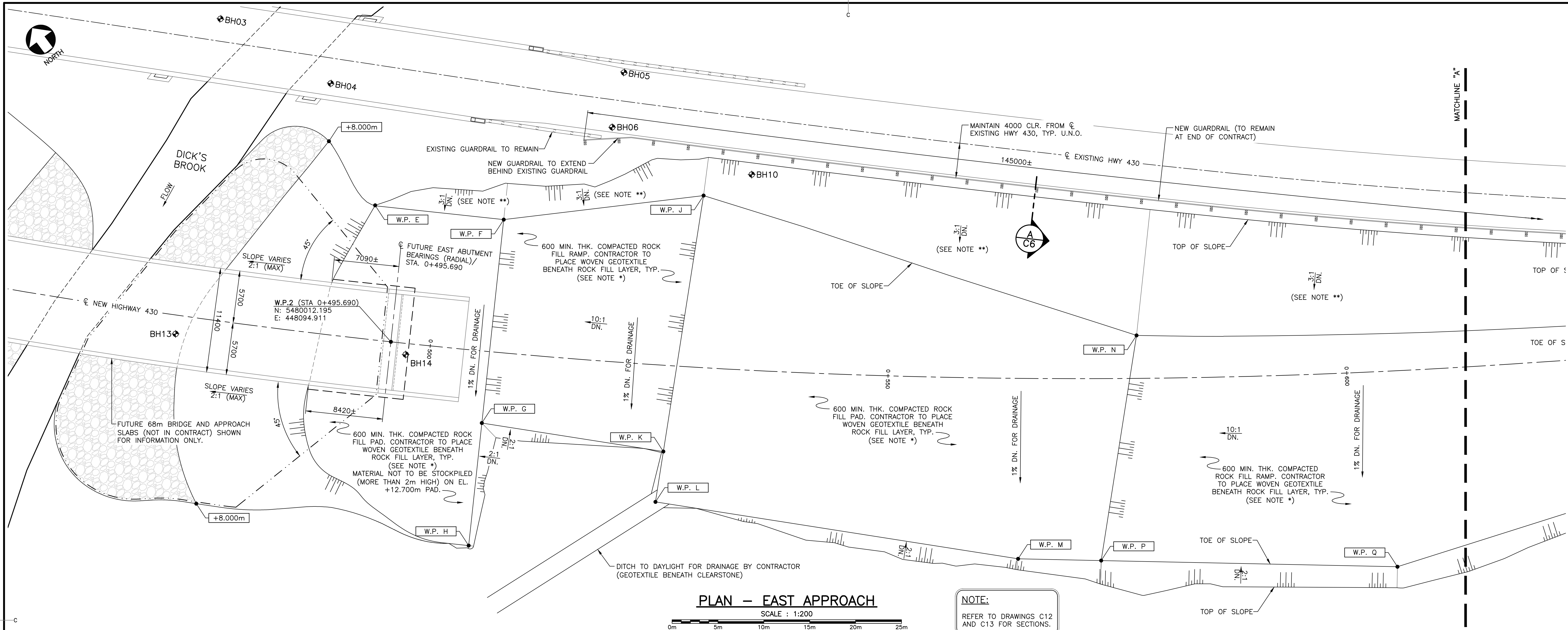
1813 / 1845

drawing no.

no. du dessin

C5



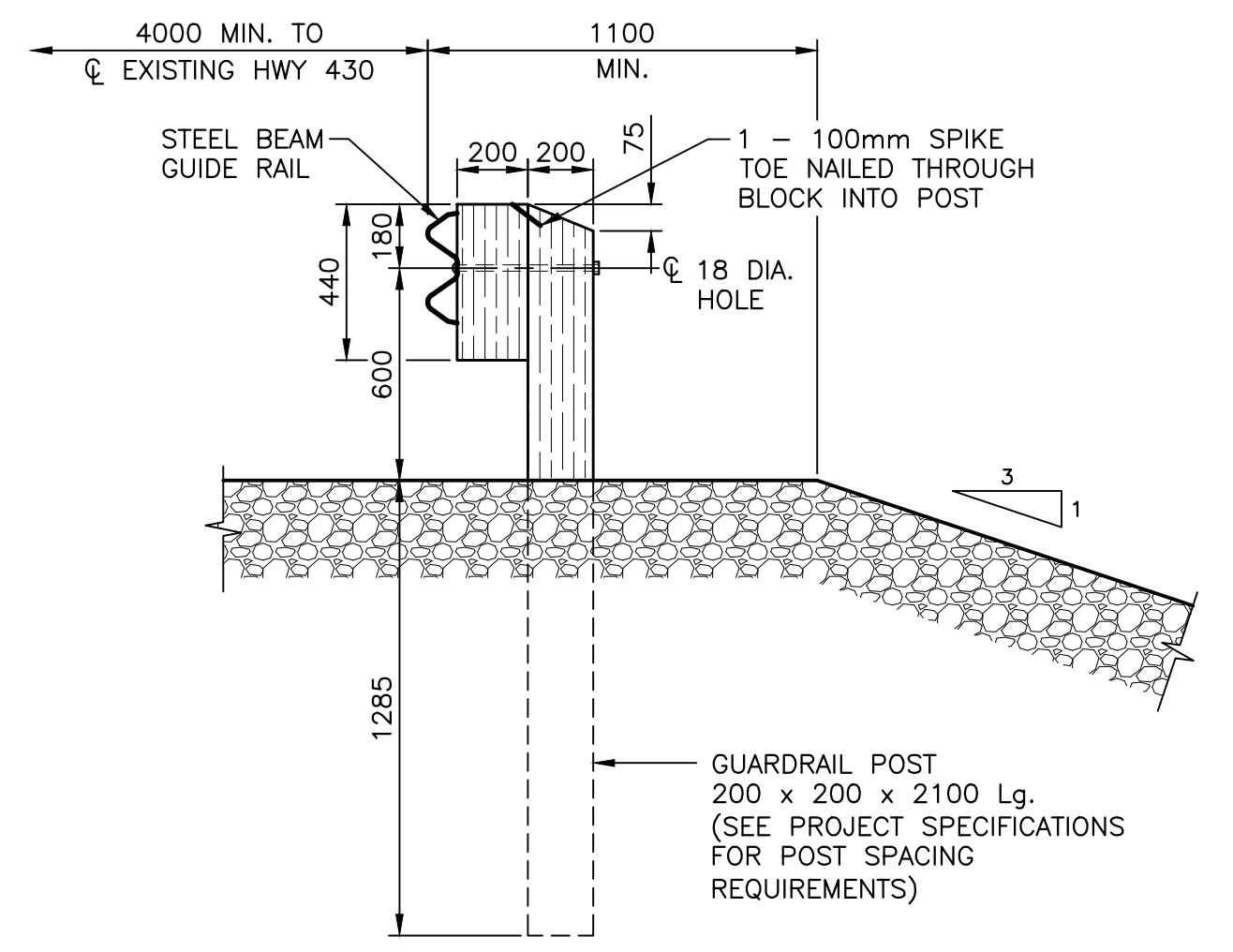


NOTE:  
REFER TO DRAWINGS C12  
AND C13 FOR SECTIONS.

WORK POINT LOCATIONS			
WORK POINT	NORTHINGS	EASTINGS	ELEVATION
W.P. E	5480026.181	448100.264	12.845m
W.P. F	5480018.330	448111.970	12.845m
W.P. G	5479999.767	448099.610	12.622m
W.P. H	5479988.582	448092.163	12.487m
W.P. J	5480010.594	448132.494	14.887m
W.P. K	5479987.873	448115.719	14.606m
W.P. L	5479983.401	448112.417	14.551m
W.P. M	5479959.643	448144.597	14.503m
W.P. N	5479975.278	448167.293	14.747m
W.P. P	5479955.293	448152.538	14.502m
W.P. Q	5479939.779	448180.860	17.687m
W.P. R	5479933.191	448258.036	24.537m
W.P. S	5479927.052	448253.504	24.462m

NOTE \*:  
ROCK FILL TO BE PLACED WITHIN 48 HOURS OF EXPOSING SUBGRADE (CONTRACTOR SHOULD NOT EXPOSE SUBGRADE SHOULD HEAVY PRECIPITATION BE FORECAST OR ANTICIPATED PRIOR TO PLACING ROCK FILL). SUBGRADE NOT TO SUPPORT CONSTRUCTION TRAFFIC UNTIL ROCK FILL IS IN PLACE. ADDITIONAL FILL MAY BE REQUIRED TO FORM TEMPORARY HAUL ROAD (RESPONSIBILITY OF CONTRACTOR).

NOTE \*\*:  
EACH SECTION OF EXPOSED SLOPE TO BE PROTECTED BY 150mm (MIN.) FILL AGAINST STRUCTURE WITHIN 48 HOURS OF BEING CUT.

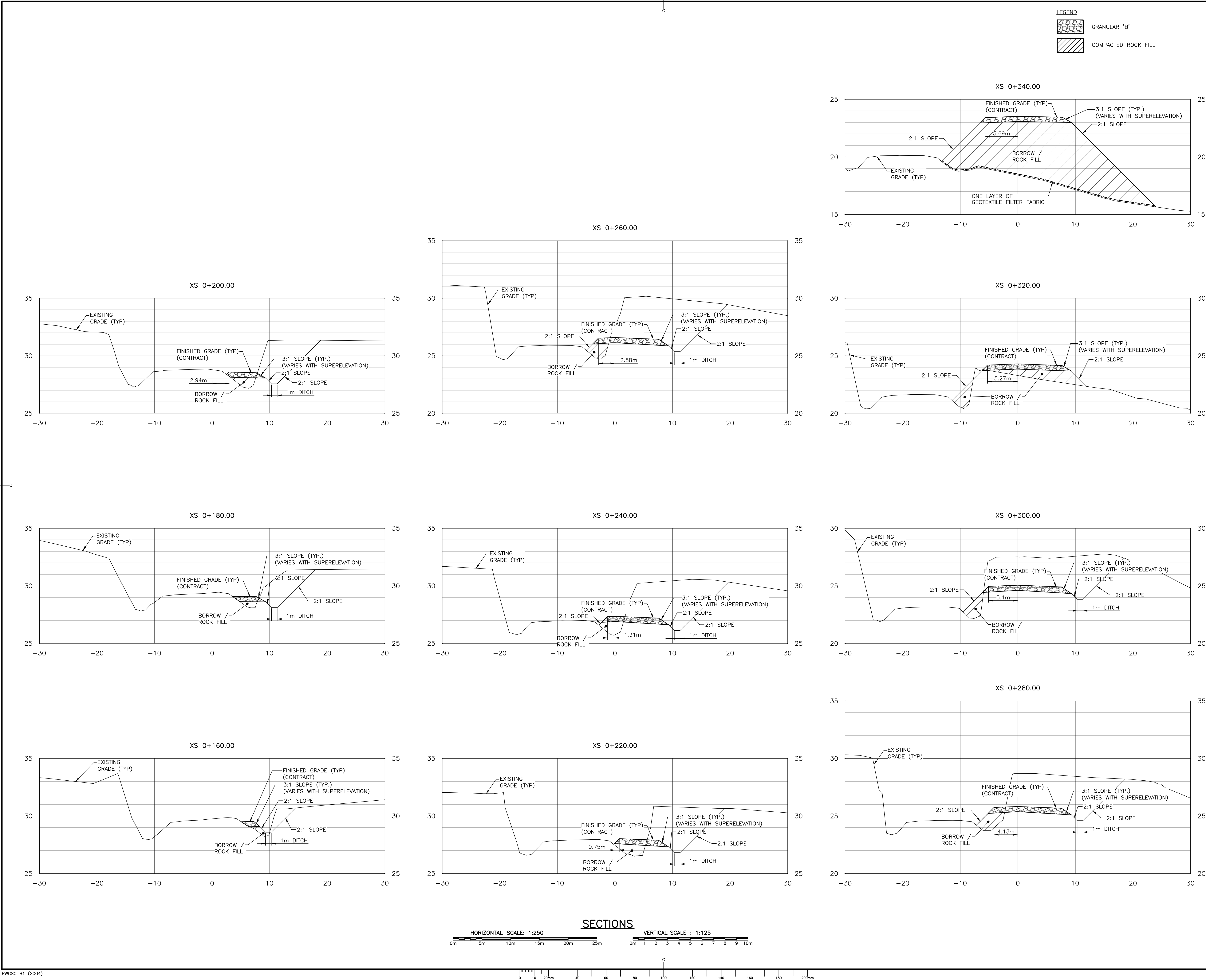


0	ISSUED FOR TENDER	JULY 6 2018
revisions		date
project	RE-ALIGNMENT AND RE-CONSTRUCTION OF HWY 430 NEAR DICK'S BROOK	project
drawing	GROS MORNE NATIONAL PARK	dessin
designed	WADE POTTIER	conçu
date	OCTOBER 2017	
drawn	JEFF CLARK	dessiné
date	OCTOBER 2017	
approved	ROBBIE FRASER	approuvé
date	OCTOBER 2017	
Tender		Soumission
PCA Project Manager	Administrateur de projets APC	
project number	1813 / 1845	no. du projet
drawing no.	C6	no. du dessin









GENERAL NOTES:

1. FOR GENERAL NOTES SEE DRAWING C01.

2. ROCK FILL TO BE PLACED WITHIN 48 HOURS OF EXPOSING SUBGRADE (CONTRACTOR SHOULD NOT EXPOSE SUBGRADE SHOULD HEAVY PRECIPITATION BE FORECAST OR ANTICIPATED PRIOR TO PLACING ROCK FILL). SUBGRADE NOT TO SUPPORT CONSTRUCTION TRAFFIC UNTIL ROCK FILL IS IN PLACE. ADDITIONAL FILL MAY BE REQUIRED TO FORM TEMPORARY HAUL ROAD (RESPONSIBILITY OF CONTRACTOR).

PROVINCE OF NEWFOUNDLAND  
PERMIT HOLDER  
CLASS "A"

This Permit Allows  
Harbourside Transportation Consultants  
PIL 05/18

Signature Date  
To practice Professional Engineering  
in Newfoundland and Labrador.  
Permit No. as issued by PEGNL 00763  
which is valid for the year 2018.



0	ISSUED FOR TENDER	JUL 05 2018
revisions		date

project

RE-ALIGNMENT AND  
RE-CONSTRUCTION OF  
HIGHWAY 430 NEAR  
DICK'S BROOK

GROS MORNE NATIONAL PARK

drawing

dessin

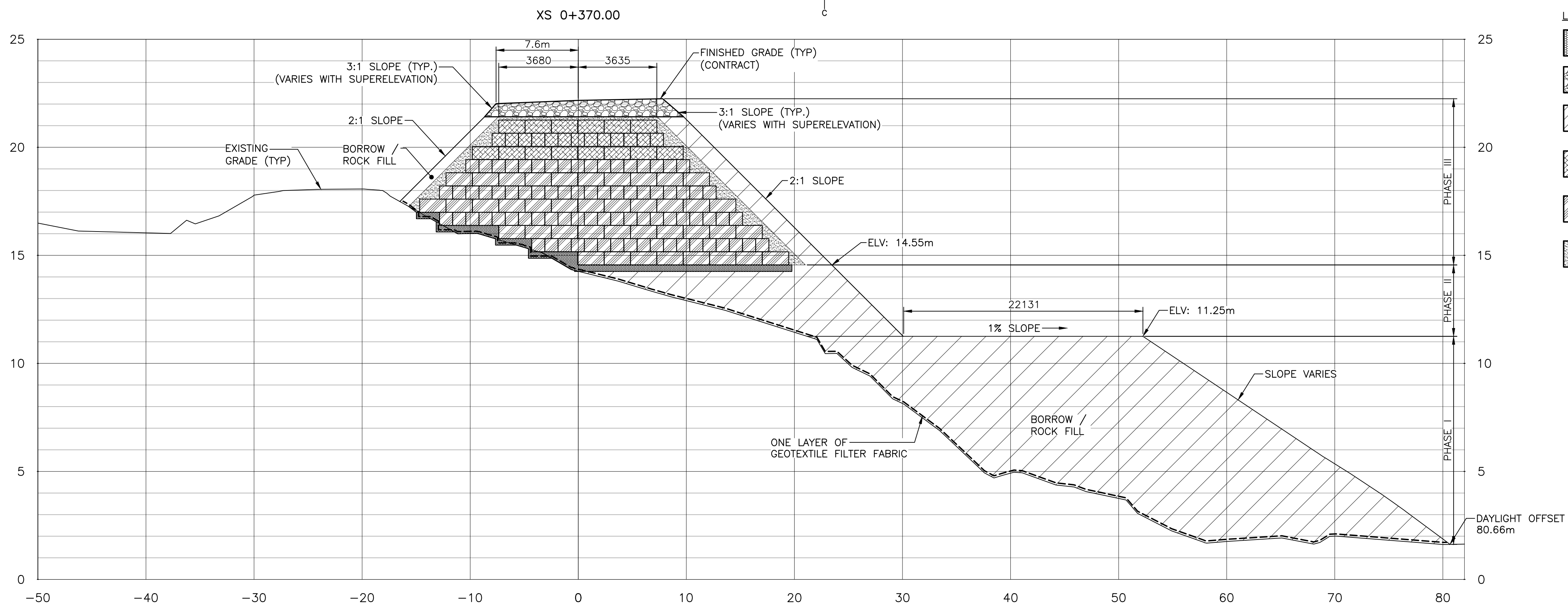
CROSS SECTIONS  
(SHEET 1 OF 6)

designed	TIM JORDAN	conçu
date	NOVEMBER 2017	
drawn	CORY BAKER	dessiné
date	NOVEMBER 2017	
approved	MICHAEL MACDONALD	approuvé
date	NOVEMBER 2017	
Tender		Soumission
PCA Project Manager	Administrateur de projets APC	no. du projet
	1813/1845	
drawing no.		no. du dessin
	C8	



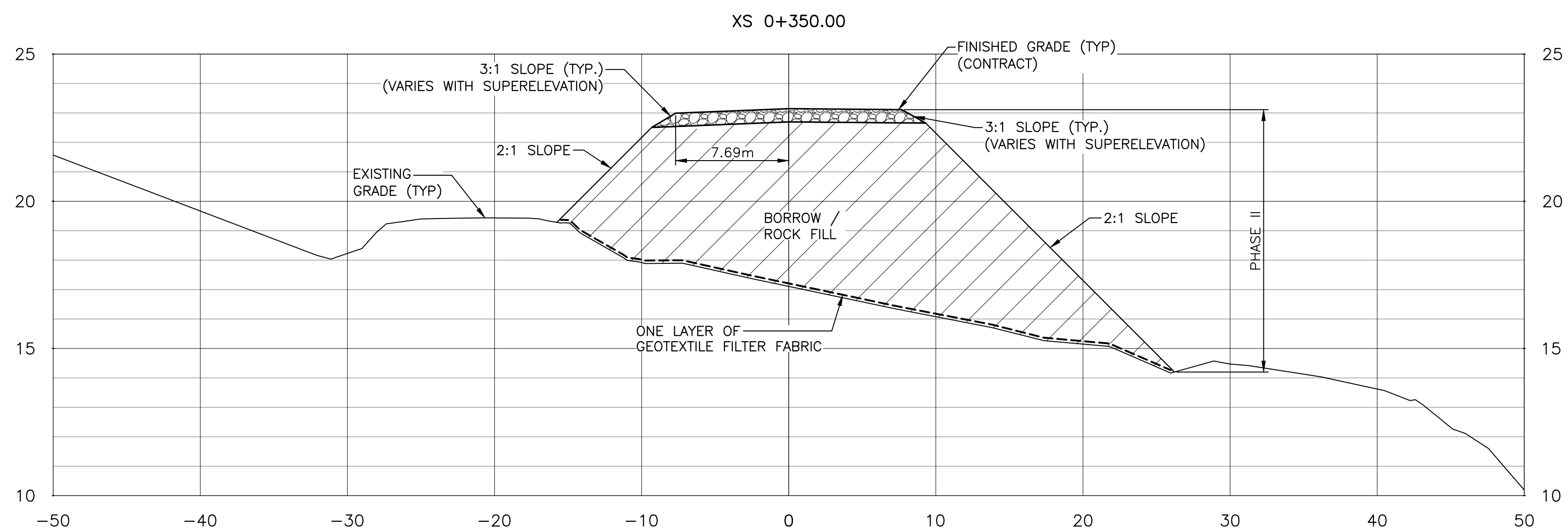
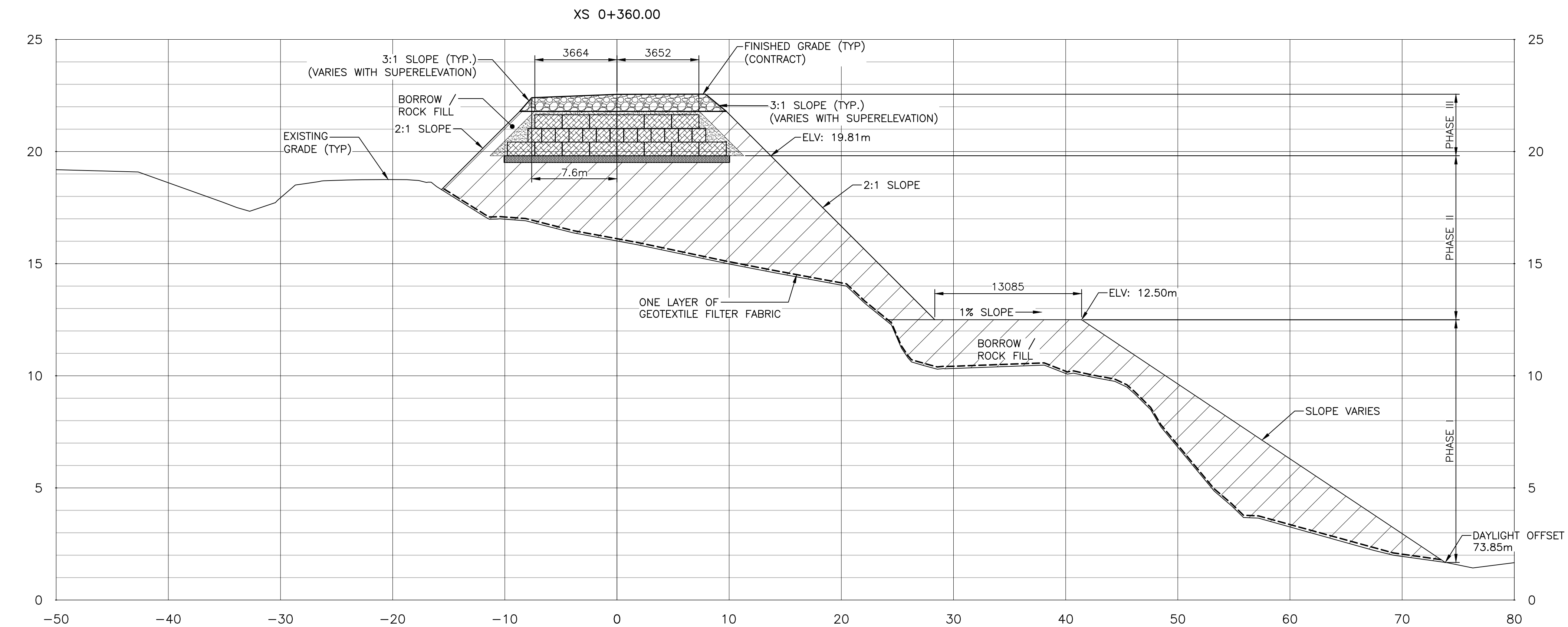
## NOTES:

1. PHASE 1 FILL SHALL BE COMPLETED BEFORE PLACEMENT OF PHASE 2 FILL BEGINS.
2. PHASE 2 FILL SHALL BE COMPLETED BEFORE PLACEMENT OF PHASE 3 FILL BEGINS.
3. INSTRUMENTATION (SEE SHEET C15) TO BE INSTALLED BEFORE PLACEMENT OF PHASE 1 FILL.
4. MONITORING OF INSTRUMENTATION MAY OCCUR THROUGHOUT FILL PLACEMENT DURING PHASE 1 TO 3.
5. EPS FILL TO BE PLACED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
6. MODIFICATIONS TO FILL GEOMETRY MAY BE REQUIRED PENDING ANALYSIS OF INSTRUMENTATION DATA AT THE DISCRETION OF PARKS CANADA'S GEOTECHNICAL REPRESENTATIVE.



## LEGEND

- GRANULAR 'A'
- GRANULAR 'B'
- COMPACTED ROCK FILL
- EPS 29 POLYSTYRENE
- EPS 22 POLYSTYRENE
- SAND

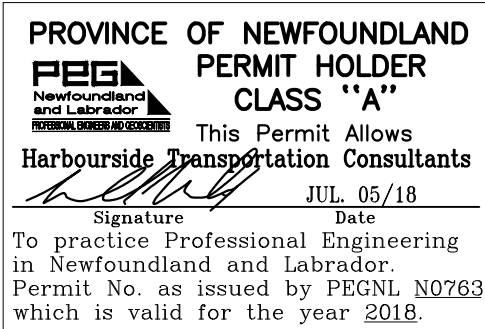


## SECTIONS



## GENERAL NOTES:

1. FOR GENERAL NOTES SEE DRAWING C01.
2. ROCK FILL TO BE PLACED WITHIN 48 HOURS OF EXPOSING SUBGRADE (CONTRACTOR SHOULD NOT EXPOSE SUBGRADE SHOULD HEAVY PRECIPITATION BE FORECAST OR ANTICIPATED PRIOR TO PLACING ROCK FILL). SUBGRADE NOT TO SUPPORT CONSTRUCTION TRAFFIC UNTIL ROCK FILL IS IN PLACE. ADDITIONAL FILL MAY BE REQUIRED TO FORM TEMPORARY HAUL ROAD (RESPONSIBILITY OF CONTRACTOR).
3. REFER TO TYPICAL DETAIL 1/C16 FOR DETAILS RELATING TO EPS, INCLUDING GRAVEL BASE AND SURROUNDING PROTECTION.



0	ISSUED FOR TENDER	JUL 05 2018
revisions		date

project project

**RE-ALIGNMENT AND  
RE-CONSTRUCTION OF  
HIGHWAY 430 NEAR  
DICK'S BROOK  
GROS MORNE NATIONAL PARK**

drawing dessin

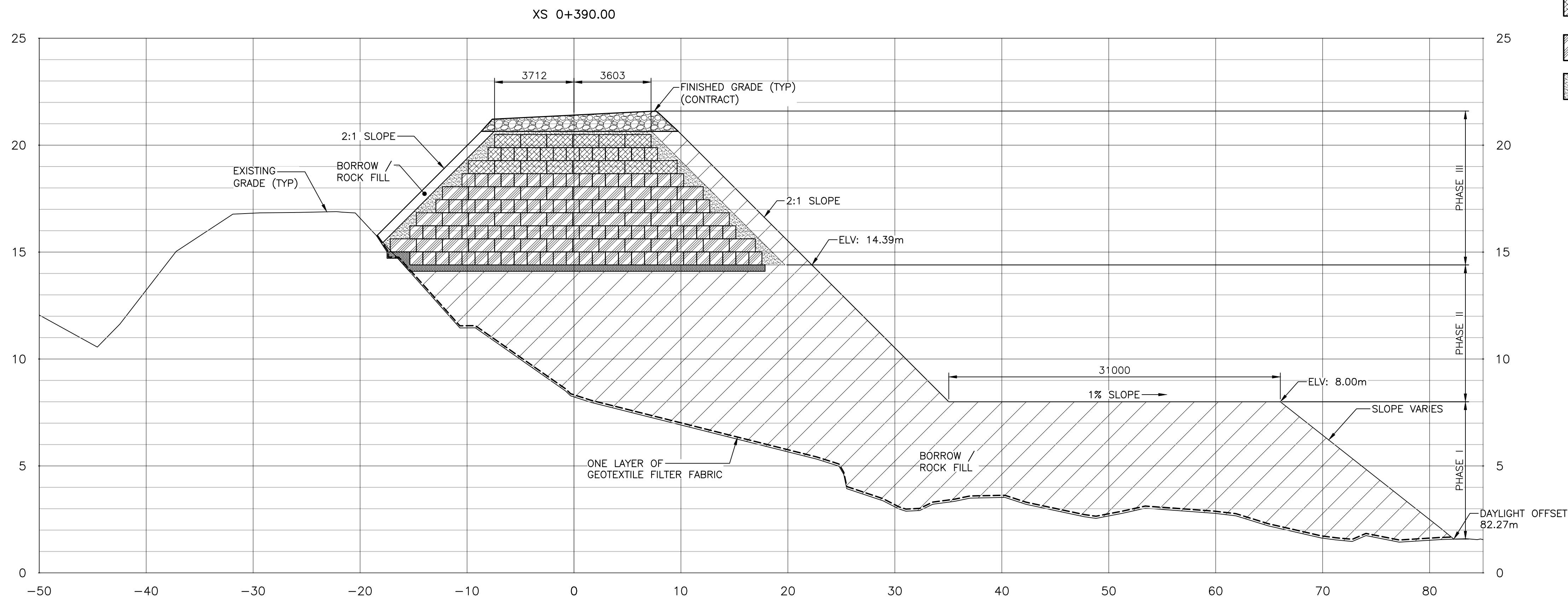
CROSS SECTIONS  
(SHEET 2 OF 6)

designed	TIM JORDAN	conçu
date	NOVEMBER 2017	
drawn	CORY BAKER	dessiné
date	NOVEMBER 2017	
approved	MICHAEL MACDONALD	approuvé
date	NOVEMBER 2017	
Tender	[Signature]	Soumission
PCA Project Manager	Administrateur de projets APC	
project number	no. du projet	
	1813/1845	
drawing no.	no. du dessin	
	C9	

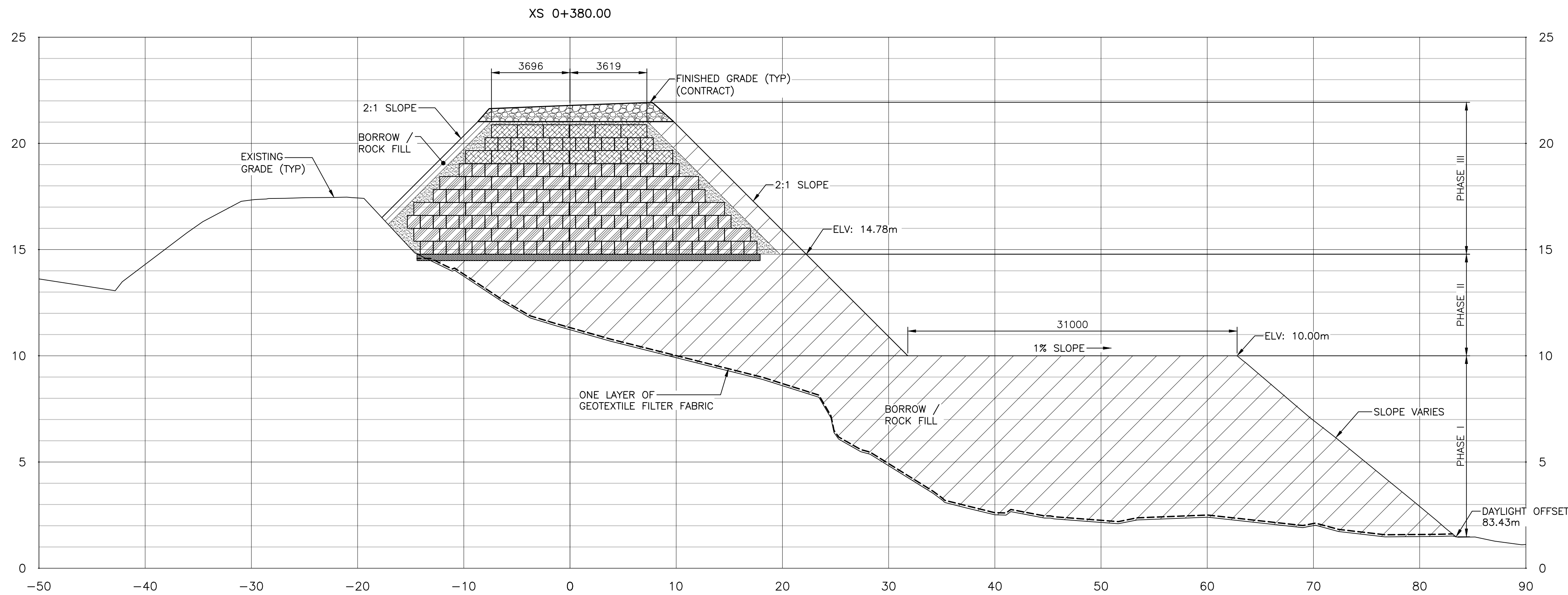


NOTES:

1. PHASE 1 FILL SHALL BE COMPLETED BEFORE PLACEMENT OF PHASE 2 FILL BEGINS.
2. PHASE 2 FILL SHALL BE COMPLETED BEFORE PLACEMENT OF PHASE 3 FILL BEGINS.
3. INSTRUMENTATION (SEE SHEET C15) TO BE INSTALLED BEFORE PLACEMENT OF PHASE 1 FILL.
4. MONITORING OF INSTRUMENTATION MAY OCCUR THROUGHOUT FILL PLACEMENT DURING PHASE 1 TO 3.
5. EPS FILL TO BE PLACED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
6. MODIFICATIONS TO FILL GEOMETRY MAY BE REQUIRED PENDING ANALYSIS OF INSTRUMENTATION DATA AT THE DISCRETION OF PARKS CANADA'S GEOTECHNICAL REPRESENTATIVE.



- LEGEND
- GRANULAR 'A'
  - GRANULAR 'B'
  - COMPACTED ROCK FILL
  - EPS 29 POLYSTYRENE
  - EPS 22 POLYSTYRENE
  - SAND

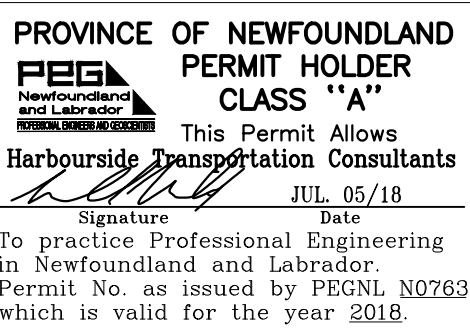


SECTIONS



GENERAL NOTES:

1. FOR GENERAL NOTES SEE DRAWING C01.
2. ROCK FILL TO BE PLACED WITHIN 48 HOURS OF EXPOSING SUBGRADE (CONTRACTOR SHOULD NOT EXPOSE SUBGRADE SHOULD HEAVY PRECIPITATION BE FORECAST OR ANTICIPATED PRIOR TO PLACING ROCK FILL). SUBGRADE NOT TO SUPPORT CONSTRUCTION TRAFFIC UNTIL ROCK FILL IS IN PLACE. ADDITIONAL FILL MAY BE REQUIRED TO FORM TEMPORARY HAUL ROAD (RESPONSIBILITY OF CONTRACTOR).
3. REFER TO TYPICAL DETAIL 1/C16 FOR DETAILS RELATING TO EPS, INCLUDING GRAVEL BASE AND SURROUNDING PROTECTION.



0	ISSUED FOR TENDER	JUL 05 2018
revisions		date

project project  
**RE-ALIGNMENT AND  
RE-CONSTRUCTION OF  
HIGHWAY 430 NEAR  
DICK'S BROOK  
GROS MORNE NATIONAL PARK**

drawing dessin

CROSS SECTIONS  
(SHEET 3 OF 6)

designed	TIM JORDAN	conçu
date	NOVEMBER 2017	
drawn	CORY BAKER	dessiné
date	NOVEMBER 2017	
approved	MICHAEL MACDONALD	approuvé
date	NOVEMBER 2017	
Tender		Soumission
PCA Project Manager	Administrateur de projets APC	
project number	no. du projet	
	1813/1845	
drawing no.	no. du dessin	
	C10	

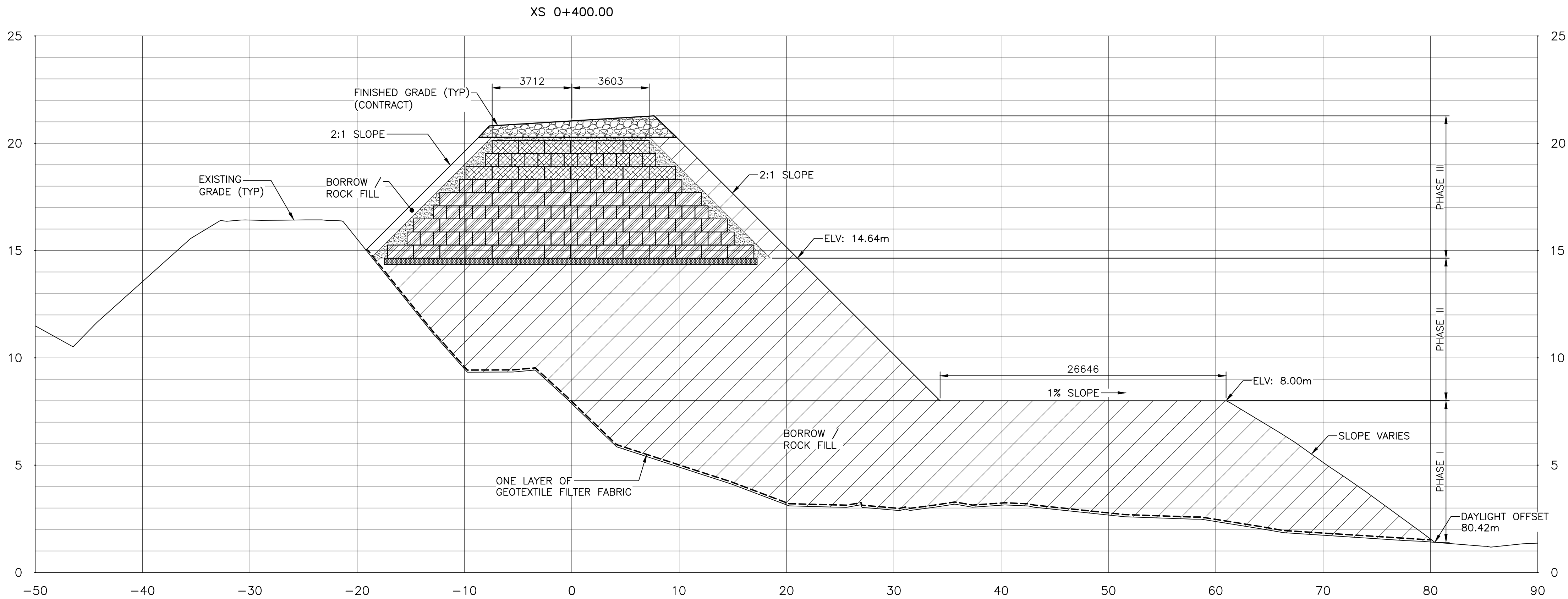
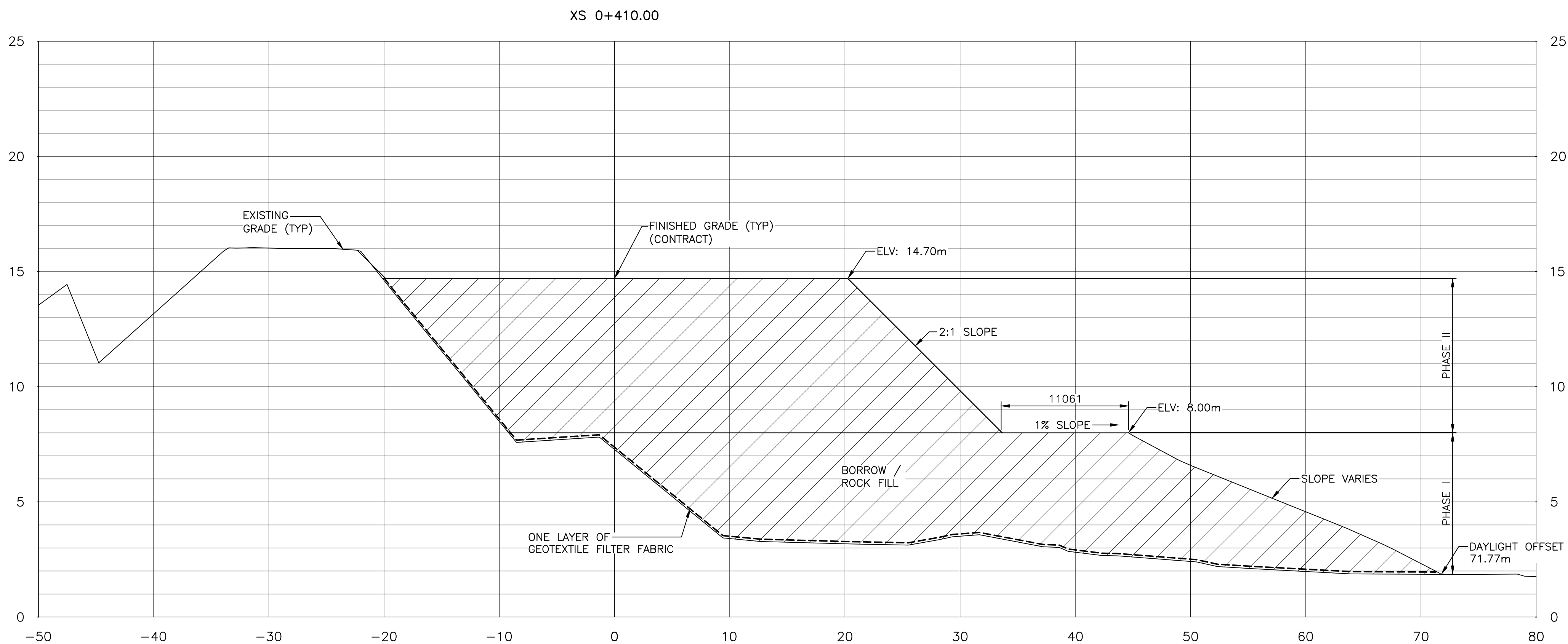


NOTES:

1. PHASE 1 FILL SHALL BE COMPLETED BEFORE PLACEMENT OF PHASE 2 FILL BEGINS.
2. PHASE 2 FILL SHALL BE COMPLETED BEFORE PLACEMENT OF PHASE 3 FILL BEGINS.
3. INSTRUMENTATION (SEE SHEET C15) TO BE INSTALLED BEFORE PLACEMENT OF PHASE 1 FILL.
4. MONITORING OF INSTRUMENTATION MAY OCCUR THROUGHOUT FILL PLACEMENT DURING PHASE 1 TO 3.
5. EPS FILL TO BE PLACED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
6. MODIFICATIONS TO FILL GEOMETRY MAY BE REQUIRED PENDING ANALYSIS OF INSTRUMENTATION DATA AT THE DISCRETION OF PARKS CANADA'S GEOTECHNICAL REPRESENTATIVE.

LEGEND

- GRANULAR 'A'
- GRANULAR 'B'
- COMPACTED ROCK FILL
- EPS 29 POLYSTYRENE
- EPS 22 POLYSTYRENE
- SAND

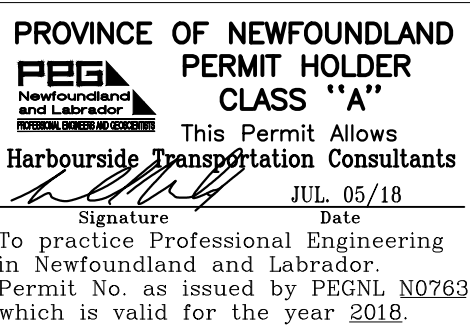


SECTIONS



GENERAL NOTES:

1. FOR GENERAL NOTES SEE DRAWING C01.
2. ROCK FILL TO BE PLACED WITHIN 48 HOURS OF EXPOSING SUBGRADE (CONTRACTOR SHOULD NOT EXPOSE SUBGRADE SHOULD HEAVY PRECIPITATION BE FORECAST OR ANTICIPATED PRIOR TO PLACING ROCK FILL). SUBGRADE NOT TO SUPPORT CONSTRUCTION TRAFFIC UNTIL ROCK FILL IS IN PLACE. ADDITIONAL FILL MAY BE REQUIRED TO FORM TEMPORARY HAUL ROAD (RESPONSIBILITY OF CONTRACTOR).
3. REFER TO TYPICAL DETAIL 1/C16 FOR DETAILS RELATING TO EPS, INCLUDING GRAVEL BASE AND SURROUNDING PROTECTION.



0	ISSUED FOR TENDER	JUL 05 2018
revisions		date

project project

RE-ALIGNMENT AND RE-CONSTRUCTION OF HIGHWAY 430 NEAR DICK'S BROOK

GROS MORNE NATIONAL PARK

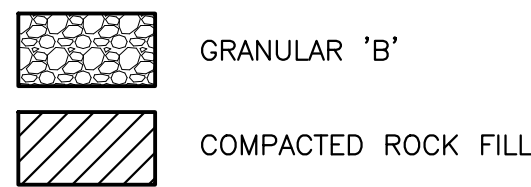
drawing dessin

CROSS SECTIONS (SHEET 4 OF 6)

designed	TIM JORDAN	conçu
date	NOVEMBER 2017	
drawn	CORY BAKER	dessiné
date	NOVEMBER 2017	
approved	MICHAEL MACDONALD	approuvé
date	NOVEMBER 2017	
Tender		Soumission
PCA Project Manager	Administrateur de projets APC	
project number	no. du projet	
	1813/1845	
drawing no.	no. du dessin	
	C11	

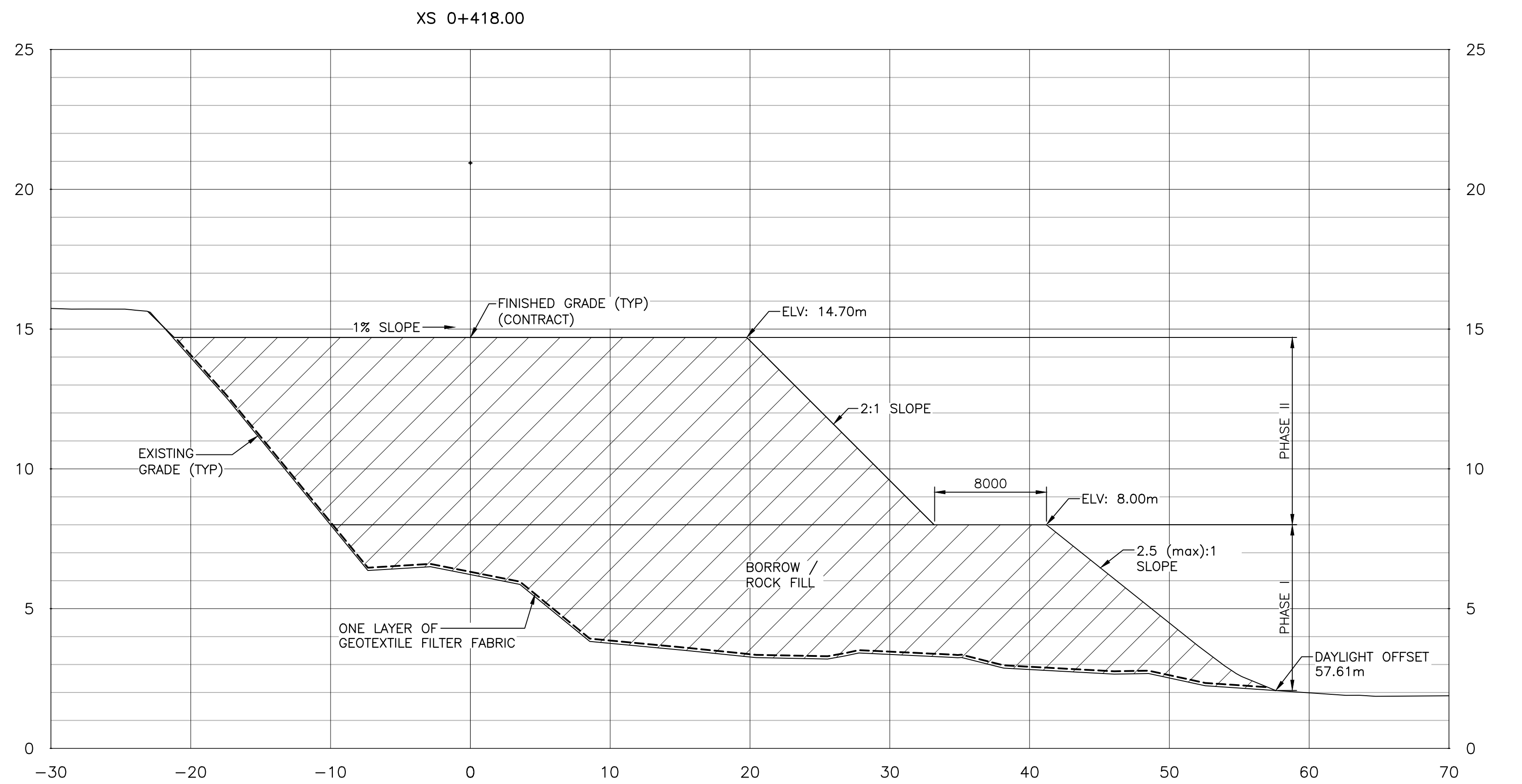
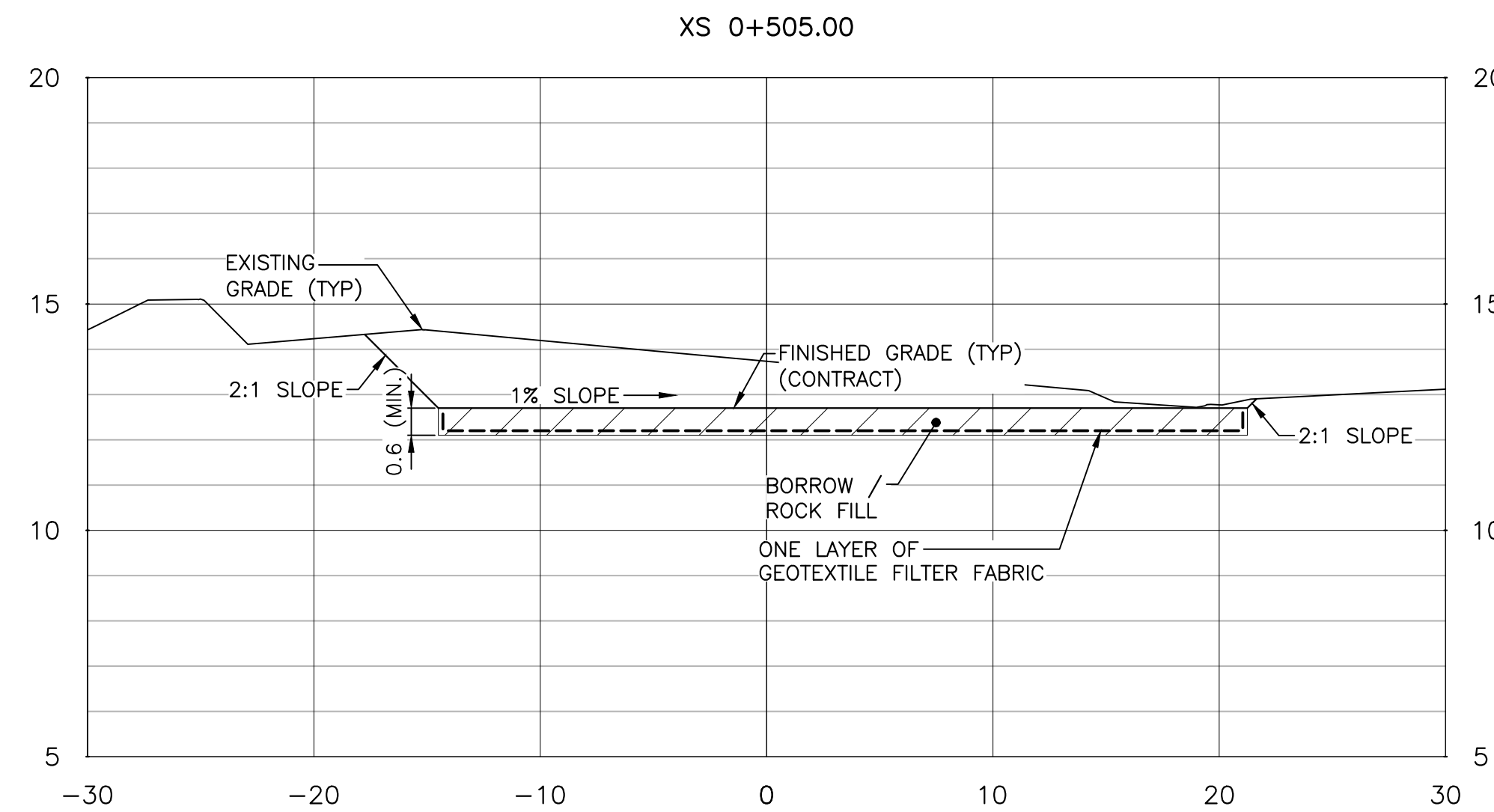
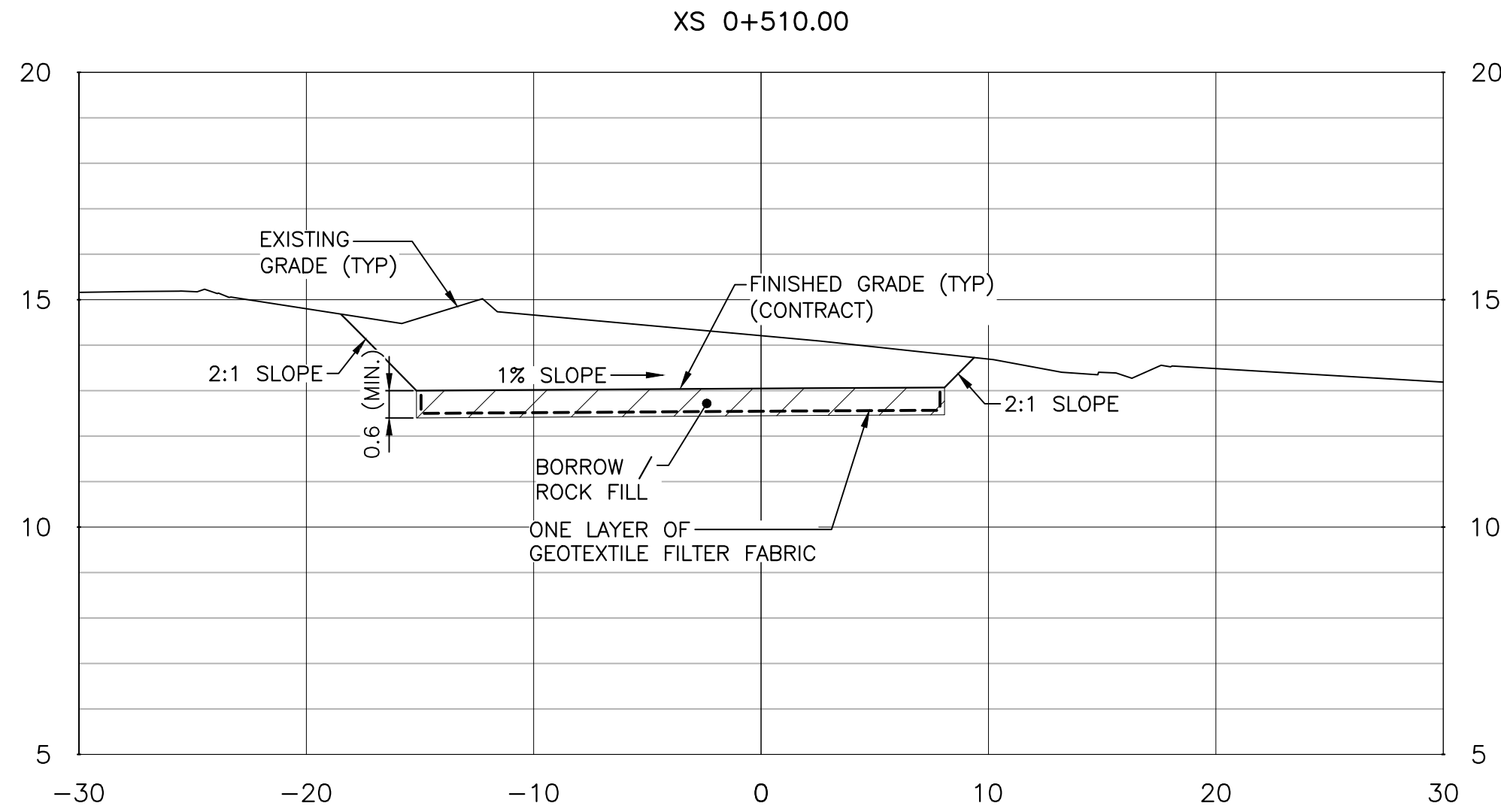


LEGEND



NOTES:

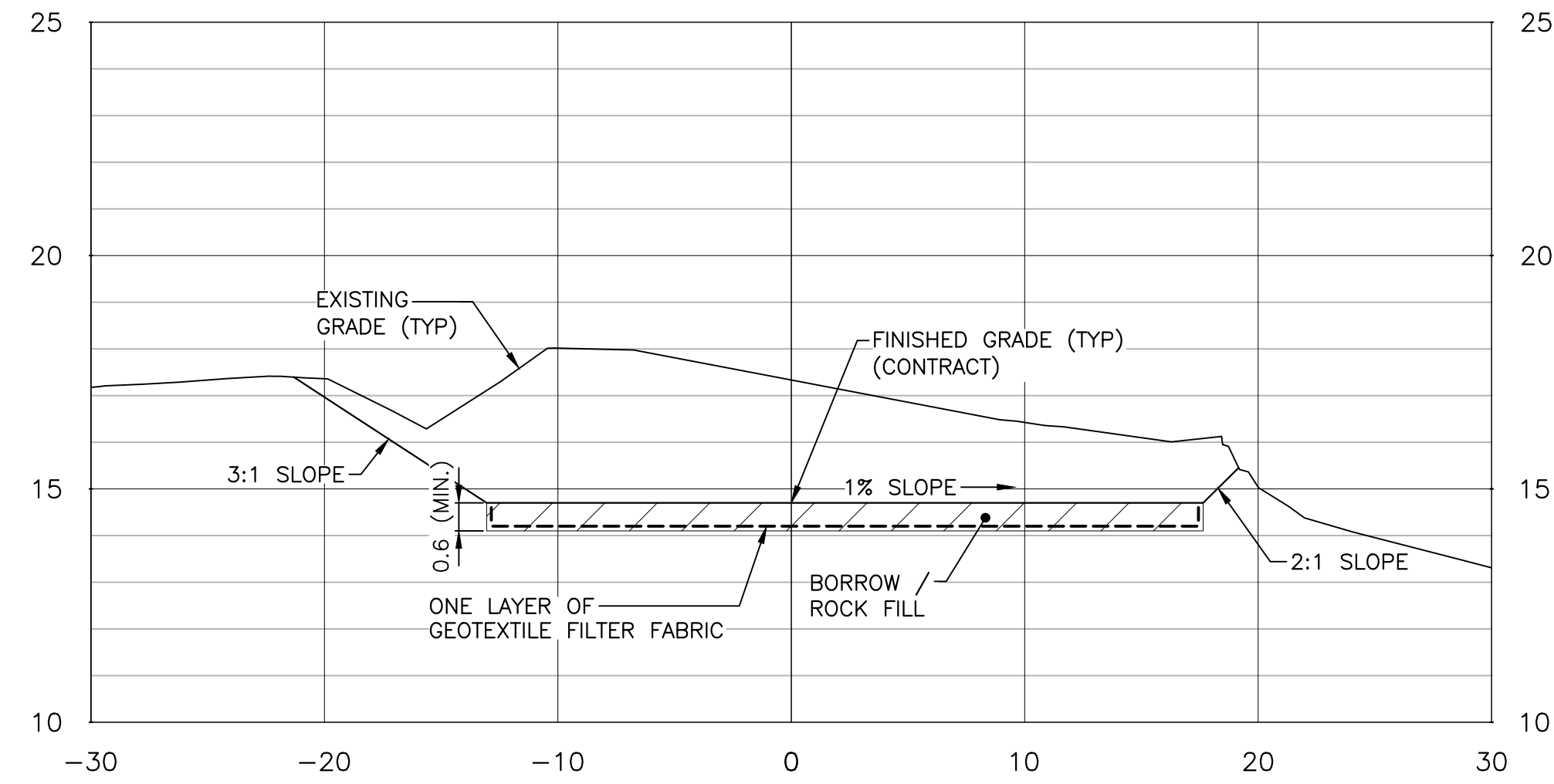
1. PHASE 1 FILL SHALL BE COMPLETED BEFORE PLACEMENT OF PHASE 2 FILL BEGINS.
2. PHASE 2 FILL SHALL BE COMPLETED BEFORE PLACEMENT OF PHASE 3 FILL BEGINS.
3. INSTRUMENTATION (SEE SHEET C15) TO BE INSTALLED BEFORE PLACEMENT OF PHASE 1 FILL.
4. MONITORING OF INSTRUMENTATION MAY OCCUR THROUGHOUT FILL PLACEMENT DURING PHASE 1 TO 3.
5. EPS FILL TO BE PLACED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
6. MODIFICATIONS TO FILL GEOMETRY MAY BE REQUIRED PENDING ANALYSIS OF INSTRUMENTATION DATA AT THE DISCRETION OF PARKS CANADA'S GEOTECHNICAL REPRESENTATIVE.



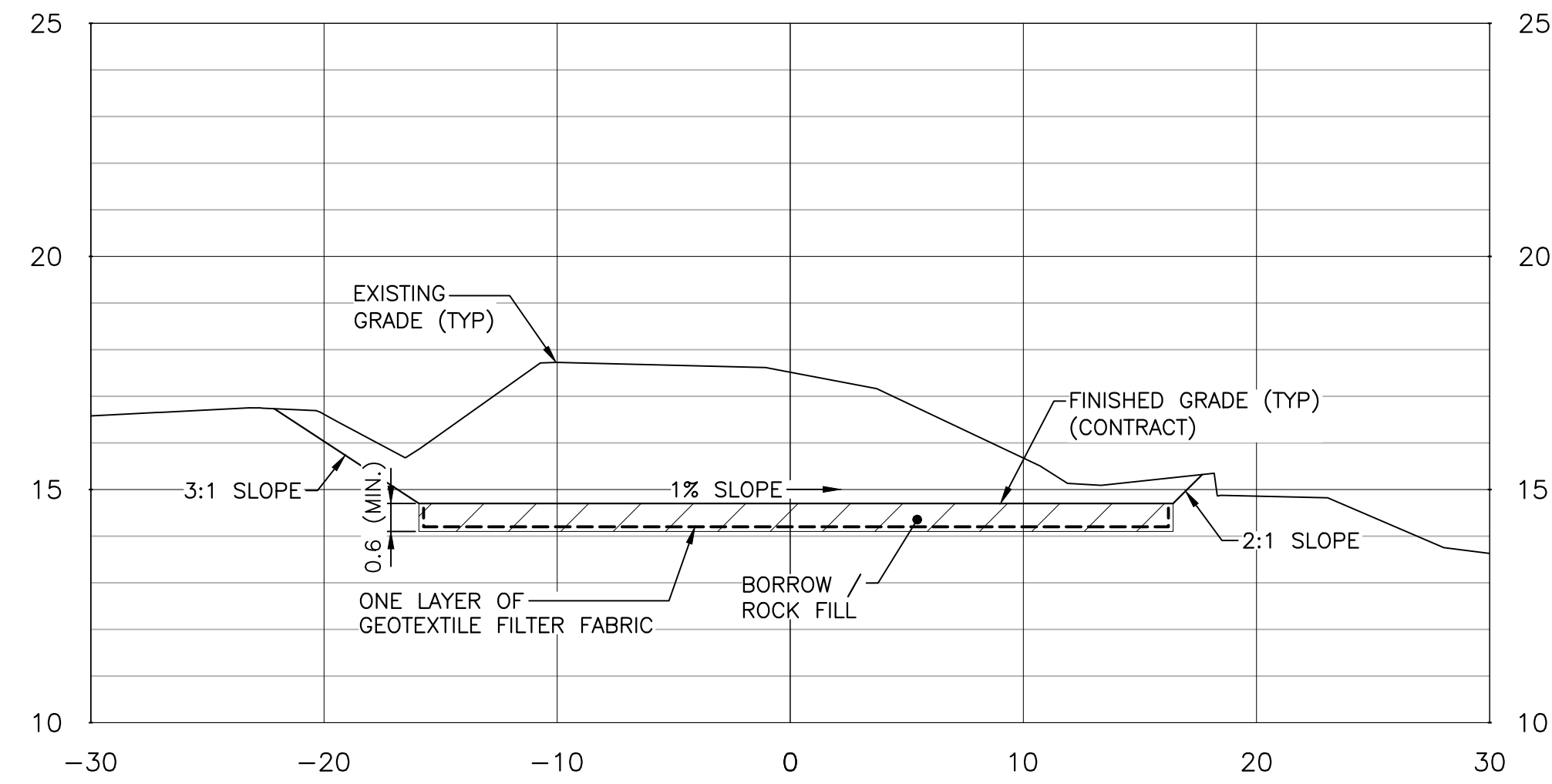
SECTIONS



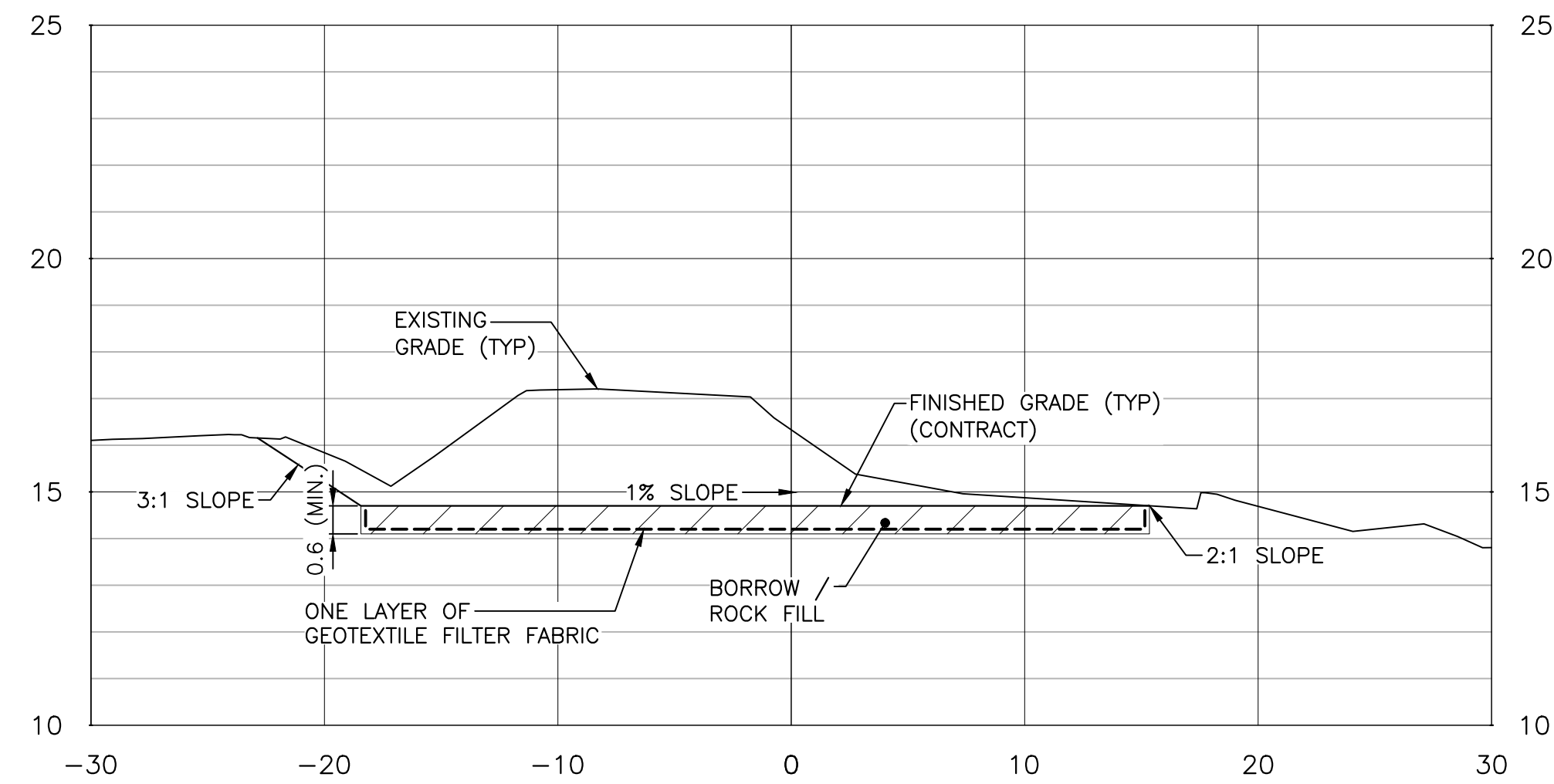
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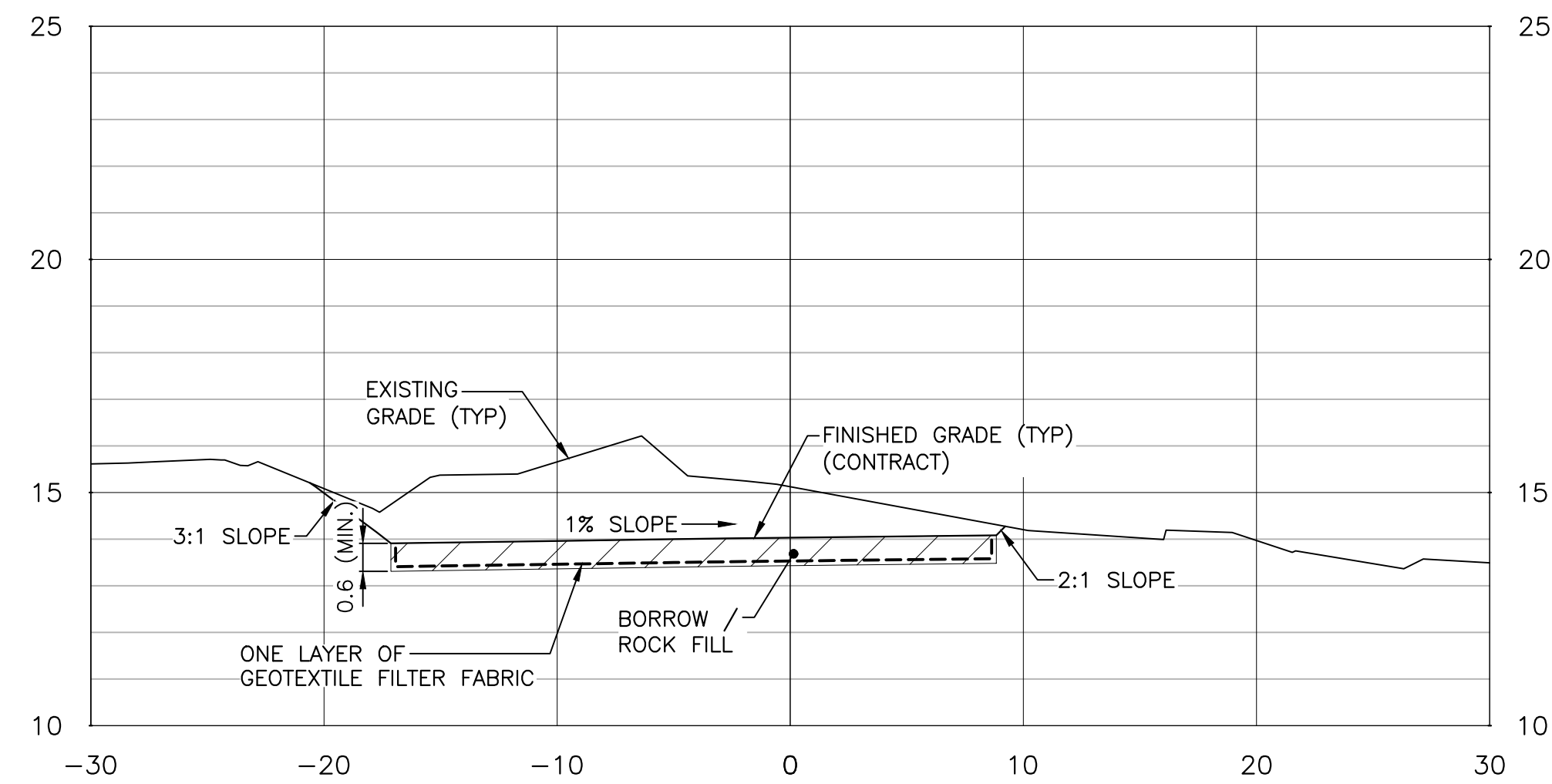
XS 0+540.00



XS 0+530.00



XS 0+520.00



GENERAL NOTES:

1. FOR GENERAL NOTES SEE DRAWING C01.
2. ROCK FILL TO BE PLACED WITHIN 48 HOURS OF EXPOSING SUBGRADE (CONTRACTOR SHOULD NOT EXPOSE SUBGRADE SHOULD HEAVY PRECIPITATION BE FORECAST OR ANTICIPATED PRIOR TO PLACING ROCK FILL). SUBGRADE NOT TO SUPPORT CONSTRUCTION TRAFFIC UNTIL ROCK FILL IS IN PLACE. ADDITIONAL FILL MAY BE REQUIRED TO FORM TEMPORARY HAUL ROAD (RESPONSIBILITY OF CONTRACTOR).



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revisions		date

project

RE-ALIGNMENT AND RE-CONSTRUCTION OF HIGHWAY 430 NEAR DICK'S BROOK

GROS MORNE NATIONAL PARK

drawing

dessin

CROSS SECTIONS (SHEET 5 OF 6)

designed	TIM JORDAN	conçu
date	NOVEMBER 2017	
drawn	CORY BAKER	dessiné
date	NOVEMBER 2017	
approved	MICHAEL MACDONALD	approuvé
date	NOVEMBER 2017	
Tender		Soumission
PCA Project Manager	Administrateur de projets APC	
project number	1813/1845	no. du projet
drawing no.	C12	no. du dessin



LEGEND

GRANULAR 'B'

COMPACTED ROCK FILL



- GENERAL NOTES:
- FOR GENERAL NOTES SEE DRAWING C01.
  - ROCK FILL TO BE PLACED WITHIN 48 HOURS OF EXPOSING SUBGRADE (CONTRACTOR SHOULD NOT EXPOSE SUBGRADE SHOULD HEAVY PRECIPITATION BE FORECAST OR ANTICIPATED PRIOR TO PLACING ROCK FILL). SUBGRADE NOT TO SUPPORT CONSTRUCTION TRAFFIC UNTIL ROCK FILL IS IN PLACE. ADDITIONAL FILL MAY BE REQUIRED TO FORM TEMPORARY HAUL ROAD (RESPONSIBILITY OF CONTRACTOR).

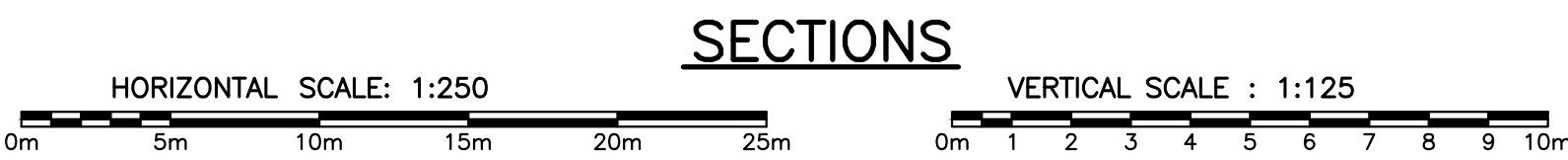
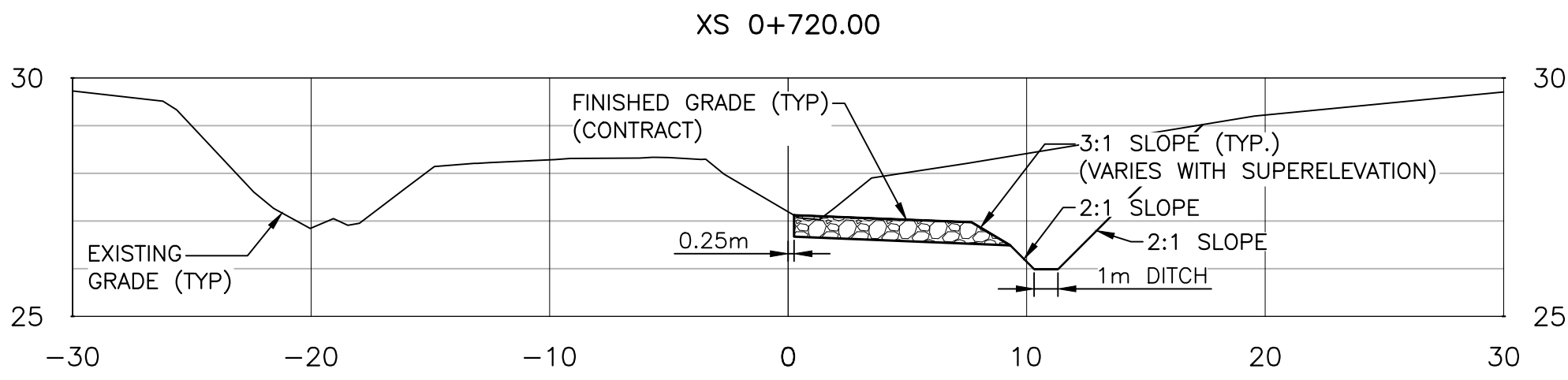
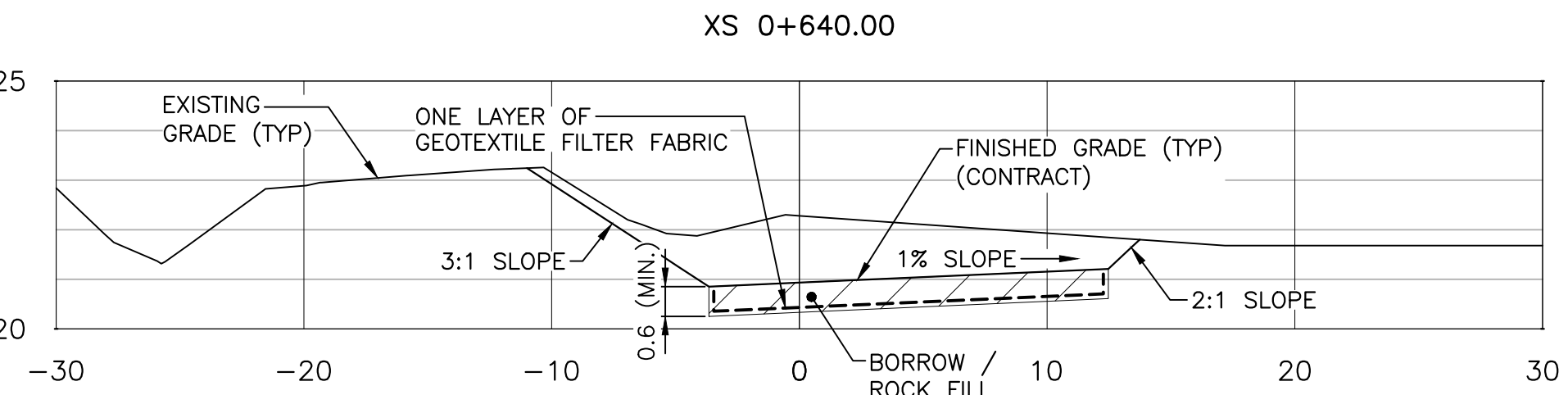
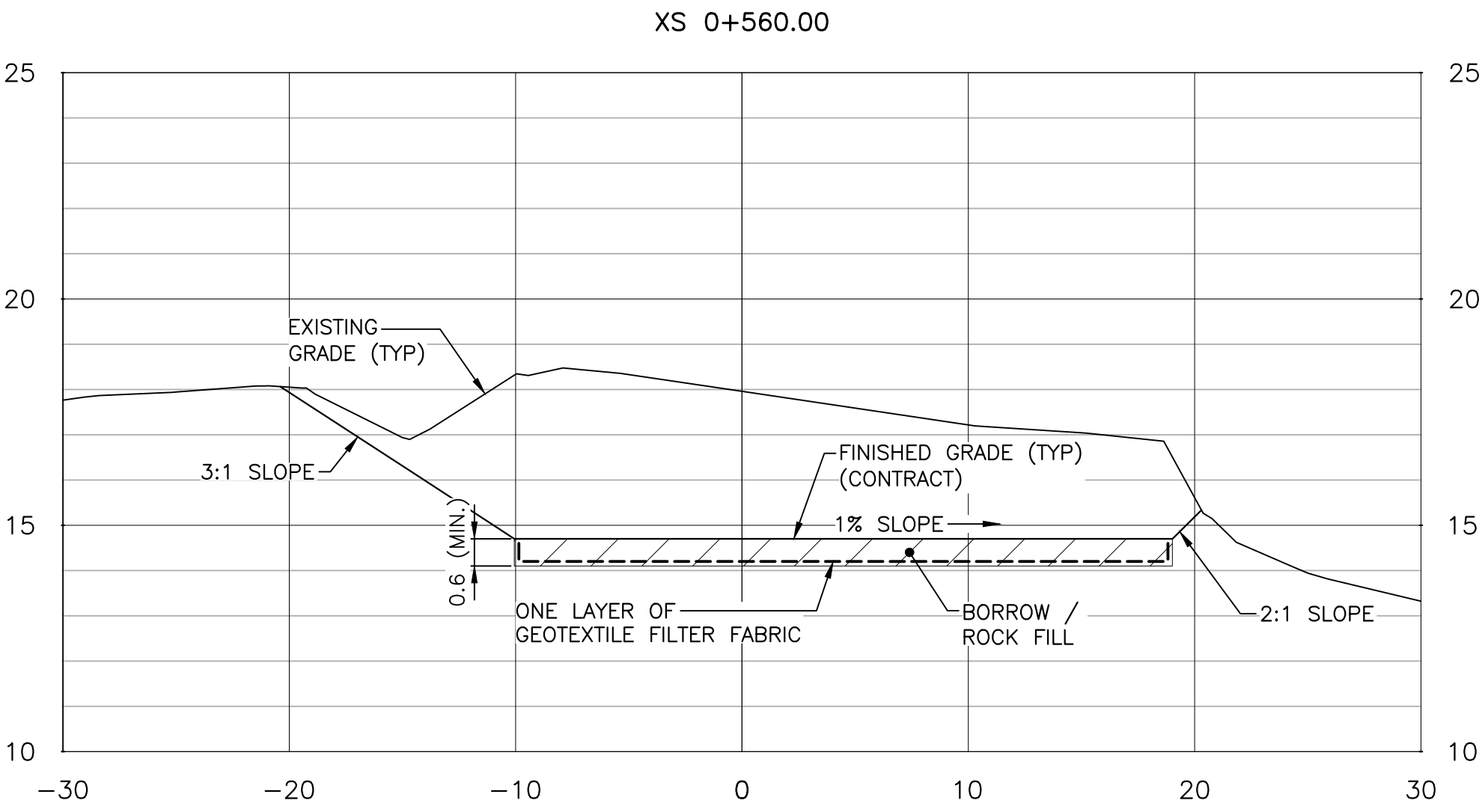
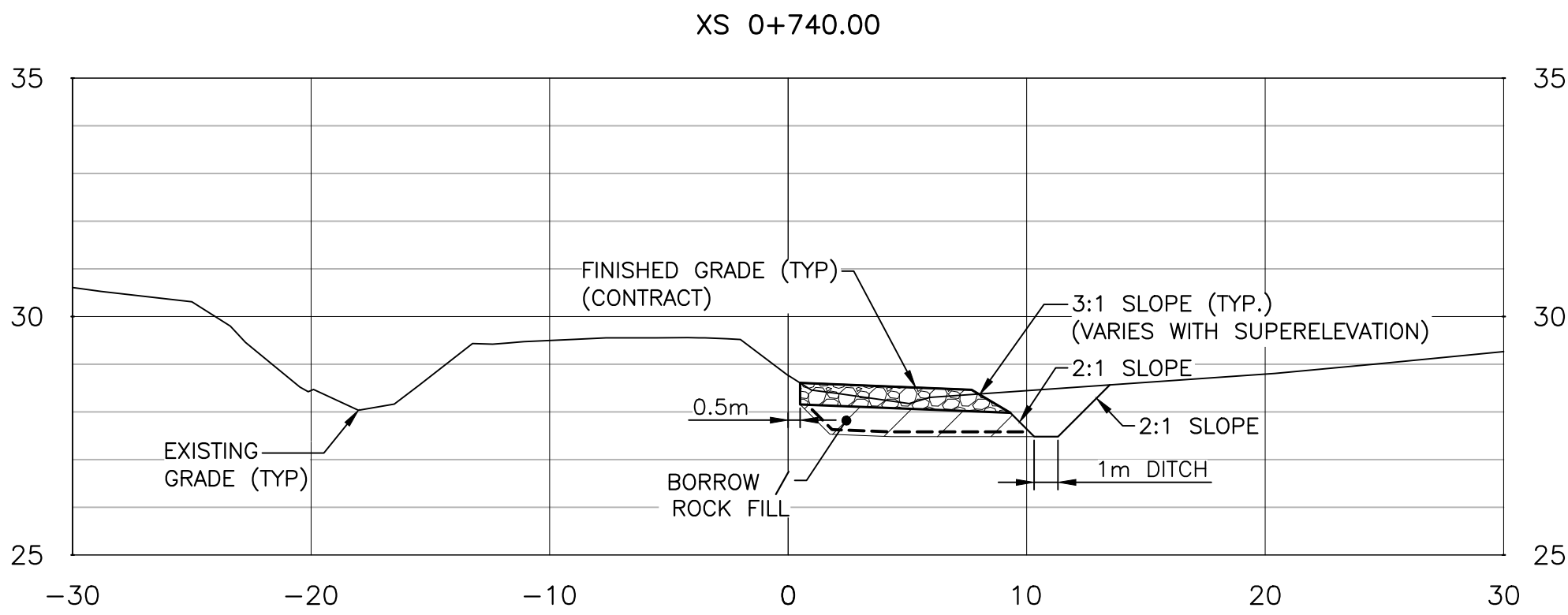
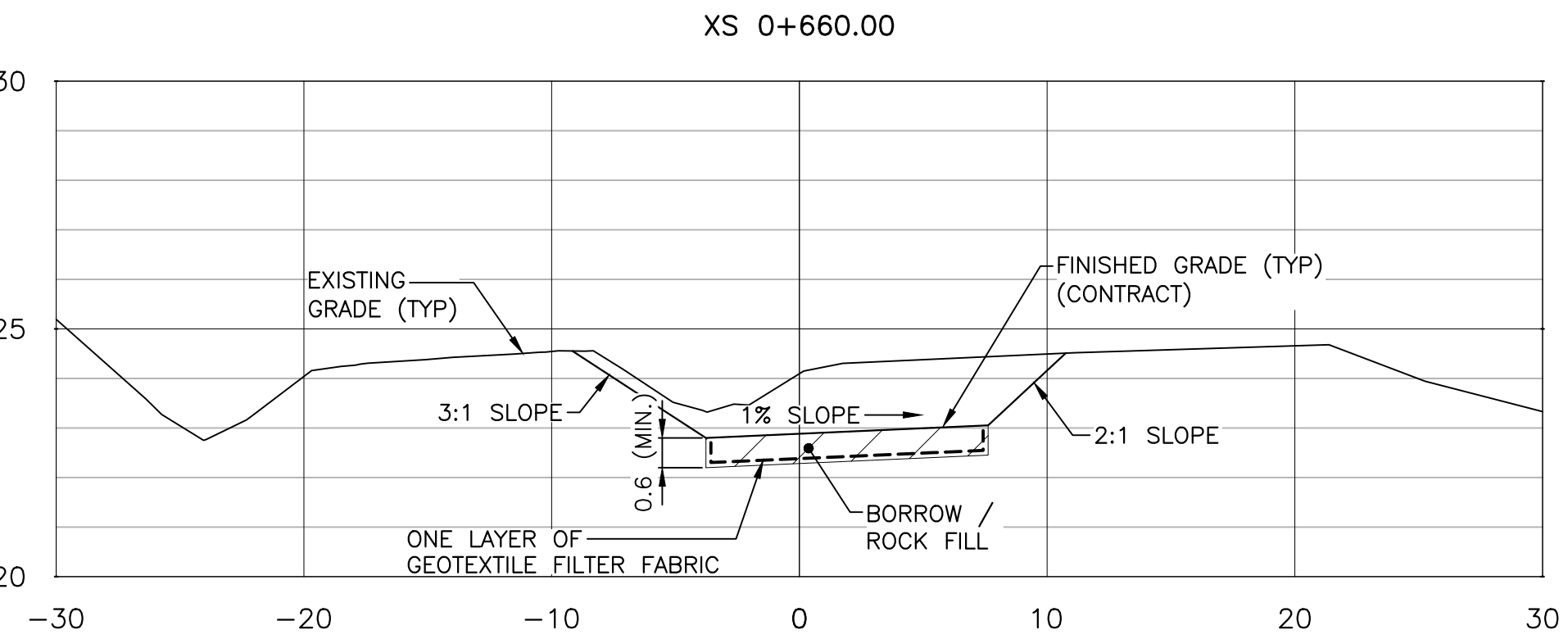
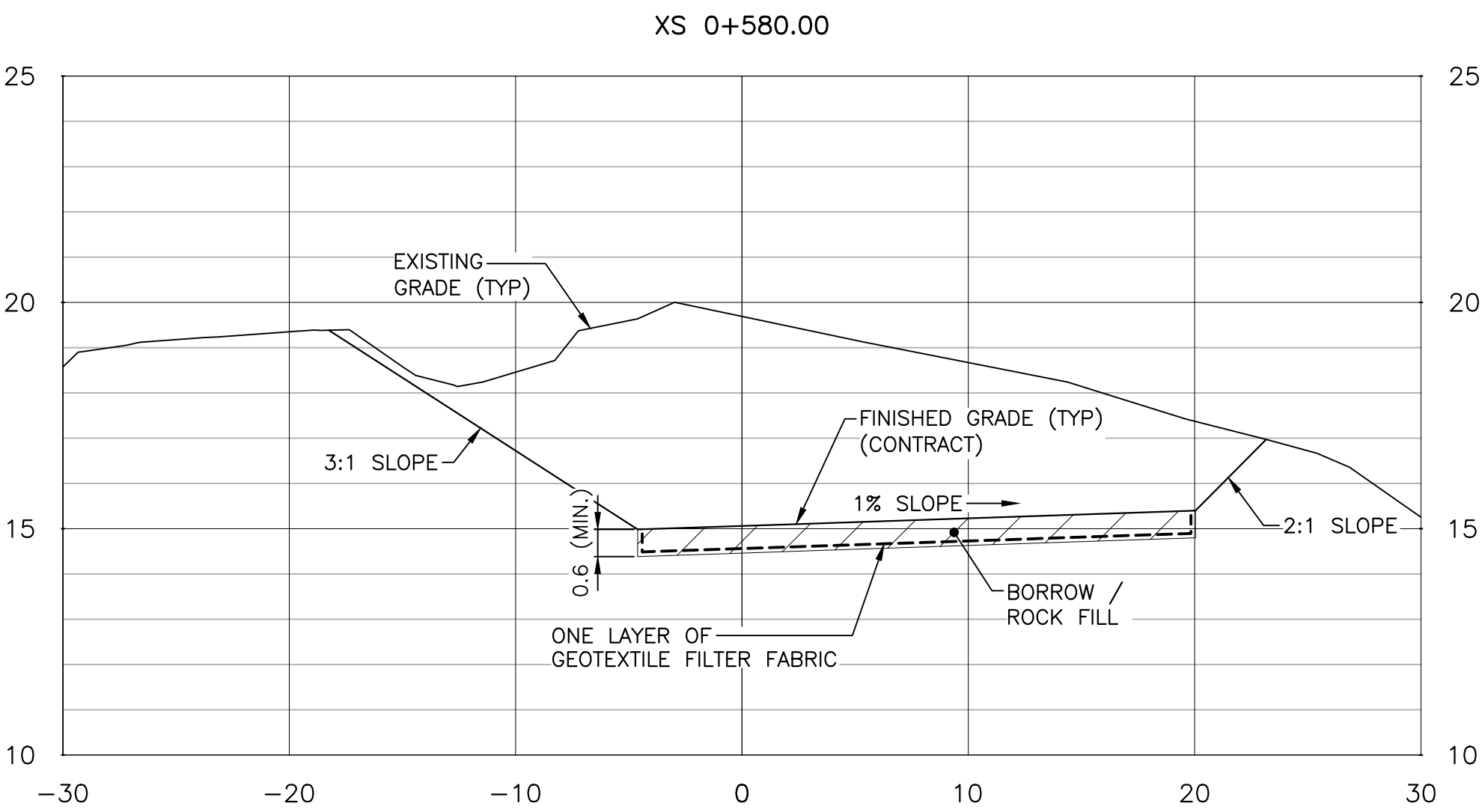
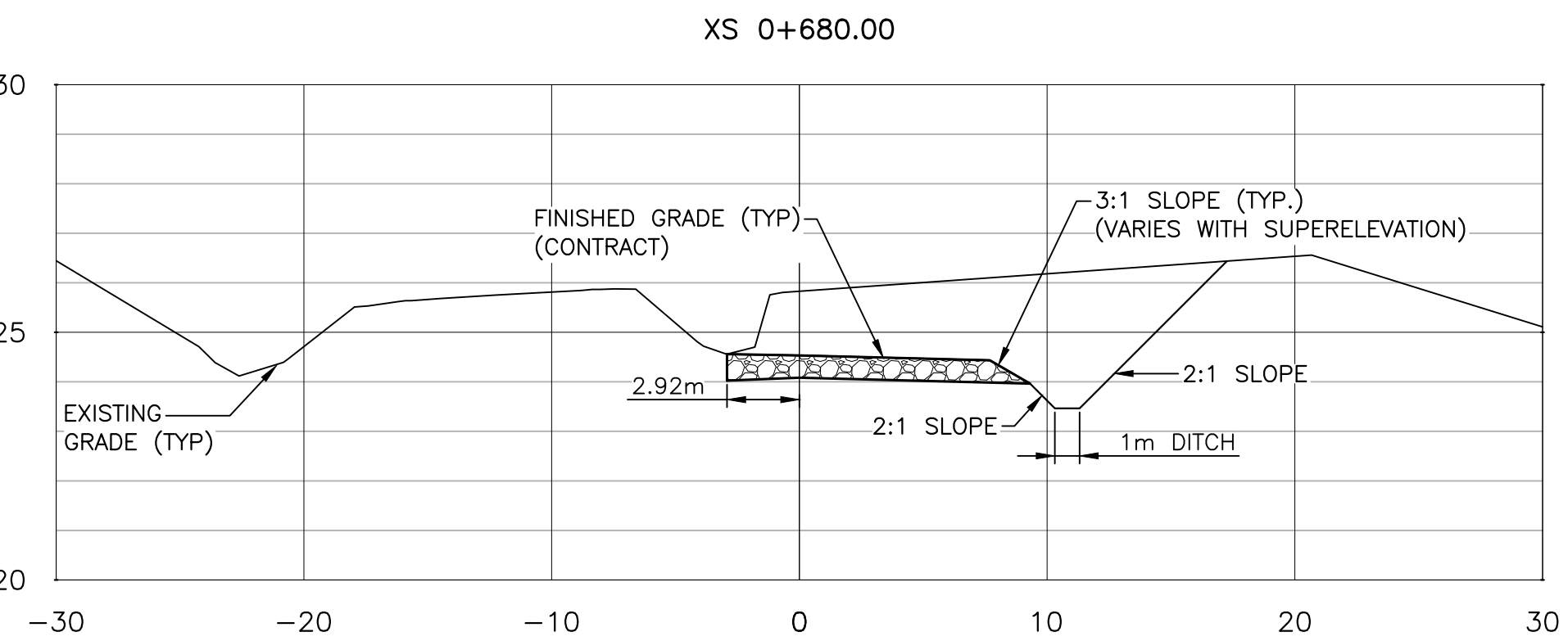
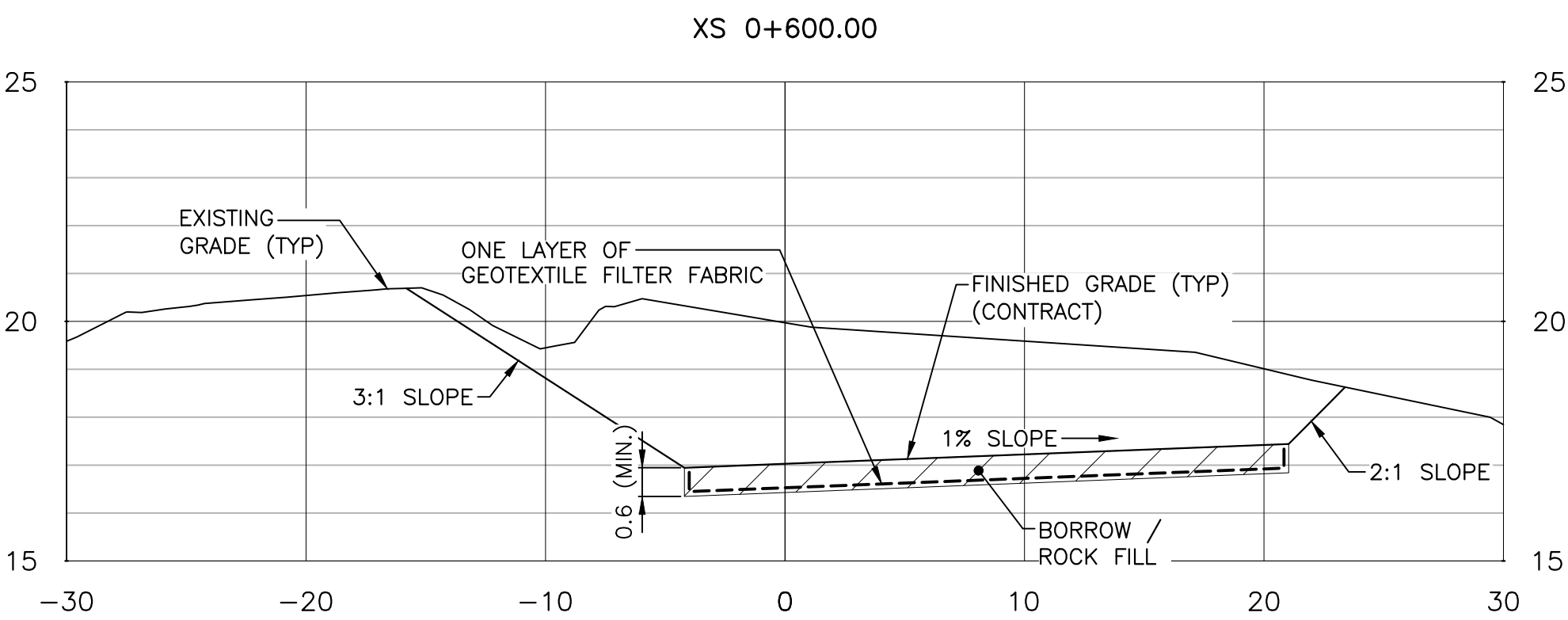
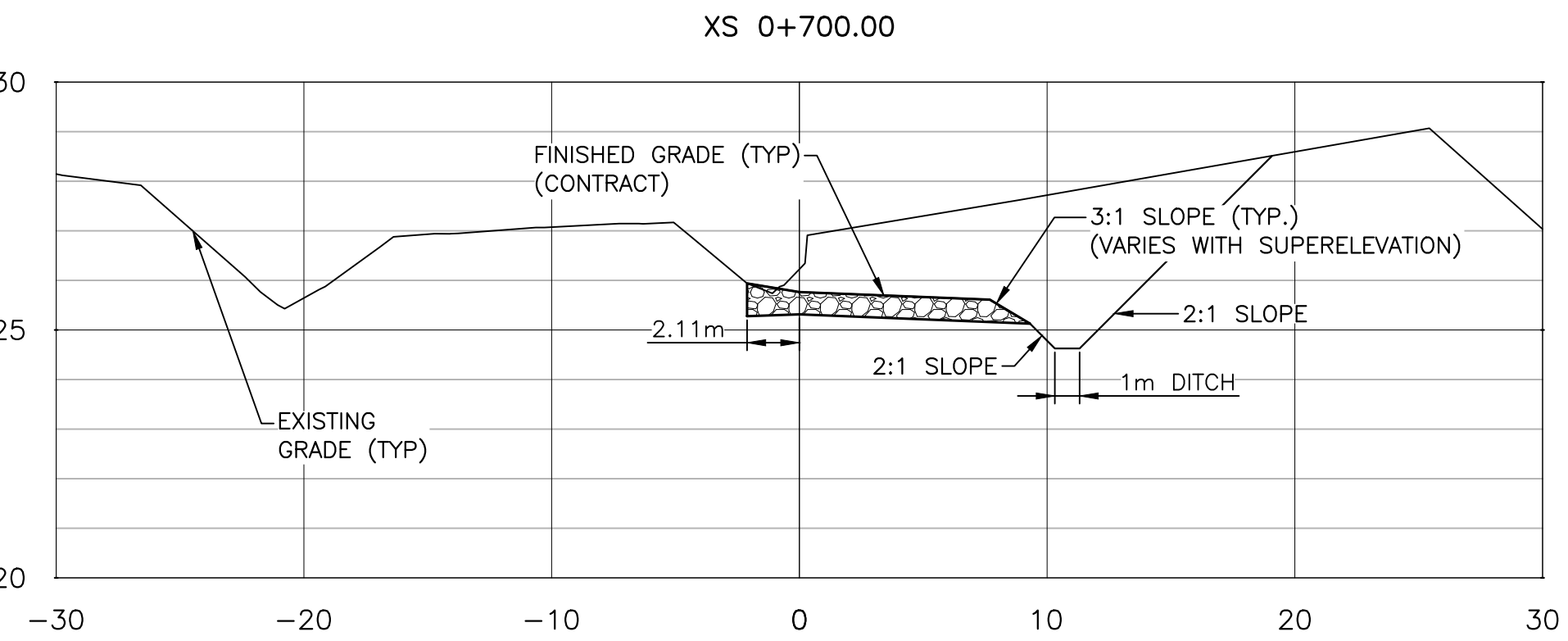
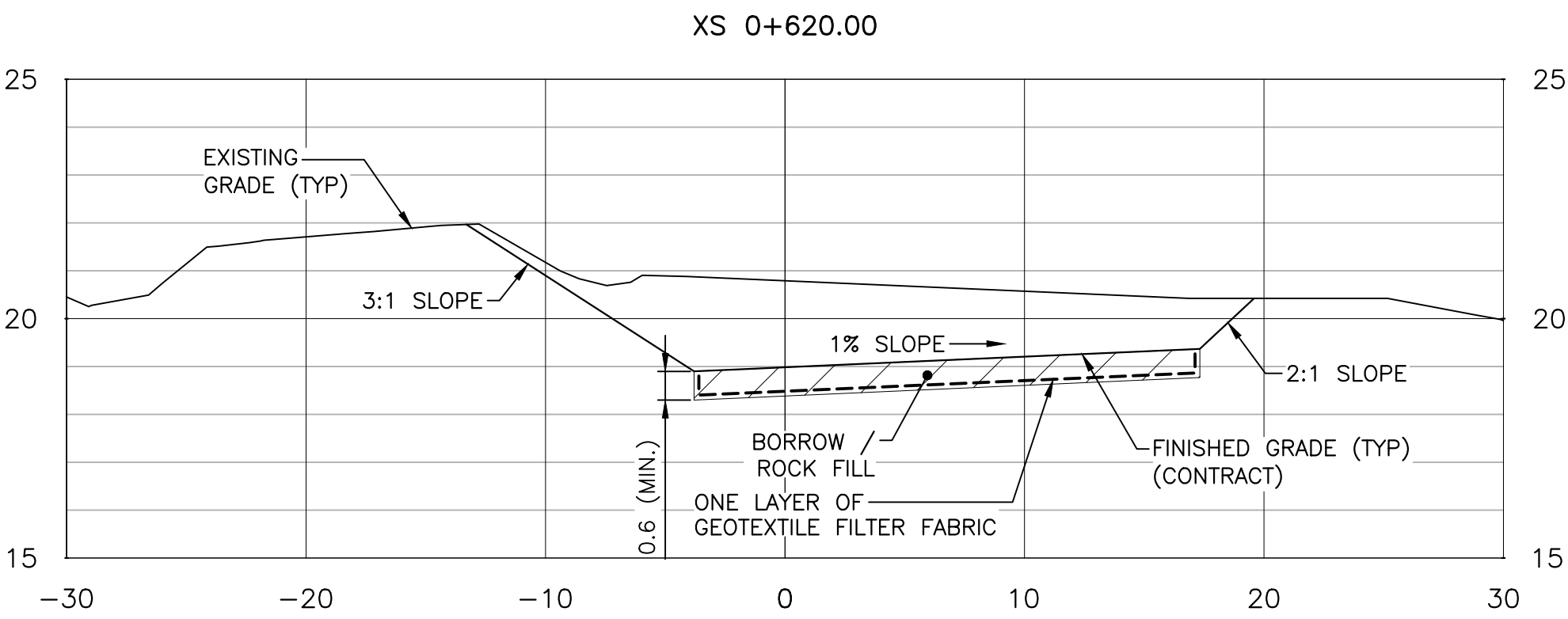
PROVINCE OF NEWFOUNDLAND  
PERMIT HOLDER  
CLASS "A"  
This Permit Allows  
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to practice Professional Engineering  
in Newfoundland and Labrador.  
Permit No. as issued by PEGNL N0763  
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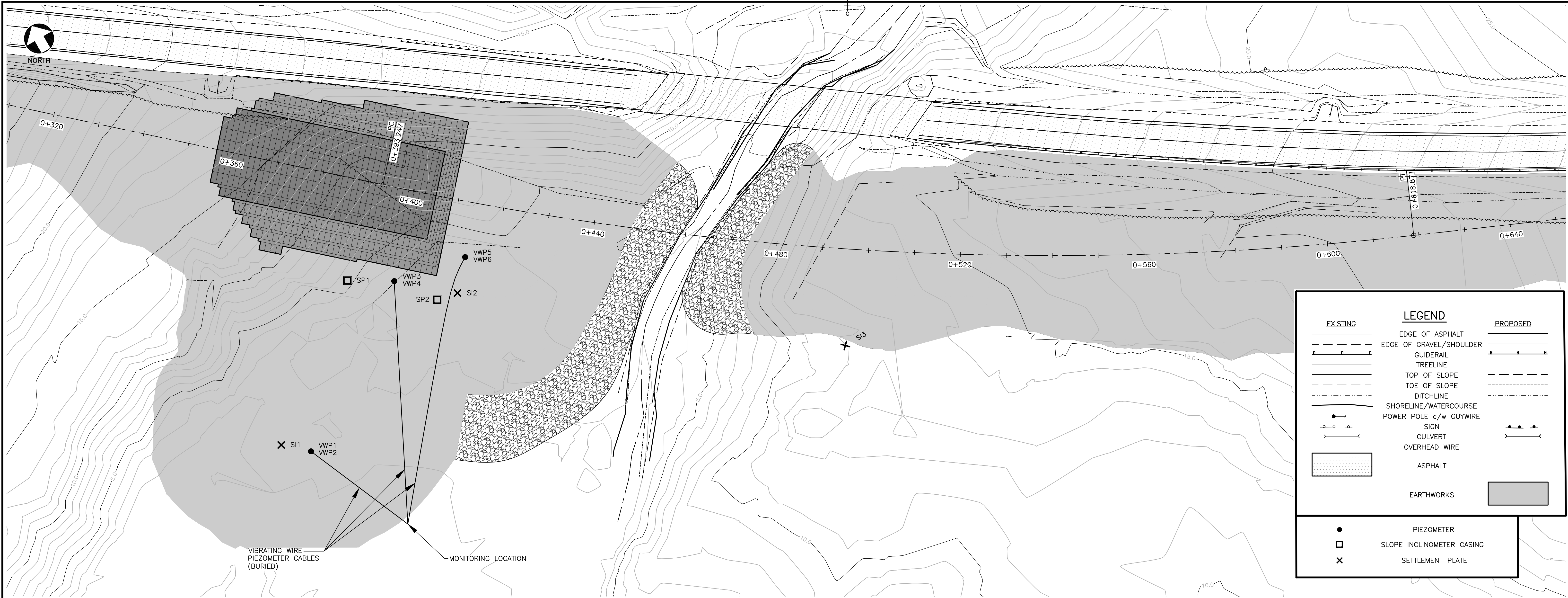
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revisions		date
project	RE-ALIGNMENT AND RE-CONSTRUCTION OF HIGHWAY 430 NEAR DICK'S BROOK GROS MORNE NATIONAL PARK	
drawing		dessin

CROSS SECTIONS  
(SHEET 6 OF 6)

designed	TIM JORDAN	conçu
date	NOVEMBER 2017	
drawn	CORY BAKER	dessiné
date	NOVEMBER 2017	
approved	MICHAEL MACDONALD	approuvé
date	NOVEMBER 2017	
Tender		Soumission
PCA Project Manager	Administrateur de projets APC	
project number	1813/1845	
drawing no.	C13	no. du dessin



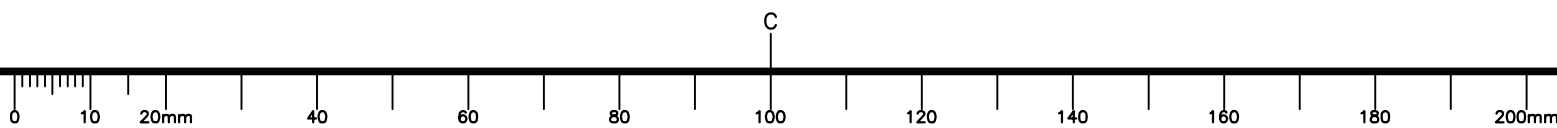




C

#### NOTES:

1. SLOPE INCLINOMETER CASING (SI1 TO SI3), VIBRATING WIRE PIEZOMETERS (VWP1 TO VWP6) AND SETTLEMENT PLATES (SP1 TO SP2) WILL BE INSTALLED AFTER THE SITE HAS BEEN CLEARED. A PERIOD OF UP TO TWO WEEKS AFTER CLEARING SHOULD BE ALLOWED FOR THE INSTALLATION OF THIS EQUIPMENT BEFORE ADDITIONAL WORK CONTINUES IN THESE AREAS.
2. SLOPE INCLINOMETER CASING AND VIBRATING WIRE PIEZOMETERS WILL BE PLACED IN BOREHOLES AND THE SETTLEMENT PLATES ON AN AREA OF FLAT GROUND.
3. THE PIEZOMETER CABLES WILL BE RAN HORIZONTALLY FROM THE GROUND SURFACE NEAR THE BOREHOLE TO AN AREA OUTSIDE THE FOOTPRINT OF THE FILL (AS SHOWN ON DRAWING). ACCESS TO THIS AREA SHALL BE PROVIDED THROUGHOUT CONSTRUCTION TO ALLOW MONITORING OF THE EQUIPMENT.
4. THE PIEZOMETER CABLES SHALL BE RAN IN A BED OF SAND (PLACED BY CONTRACTOR) WITH A MINIMUM COVER OF 200mm (ALL DIRECTIONS) TO PROTECT THE CABLES FROM DAMAGE. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE CABLES WHEN PLACING FILL OR OTHERWISE WORKING NEAR THE INSTRUMENTATION.
5. THE SLOPE INCLINOMETER CASING WILL BE EXTENDED UPWARDS AS FILL IS PLACED TO ALLOW ACCESS AND REGULAR (DAILY) READINGS. CLASS 'A' GRAVEL SHALL BE PLACED AROUND THE CASING AS EACH LIFT OF FILL IS ADDED AND THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE CASING WHEN PLACING FILL OR OTHERWISE WORKING NEAR THE EQUIPMENT.
6. SETTLEMENT PLATES ARE COMPRISED OF SQUARE METAL PLATES (APPROXIMATELY 600mm X 600mm) WITH A MINIMUM THICKNESS OF 6mm. A PIECE OF 25mm DIAMETER PIPE OF KNOWN LENGTH RISES UP FROM THE PLATE AND IS EXTENDED AS ADDITIONAL FILL IS PLACED. THE ELEVATION OF THE PIPE IS MONITORED AND THE MOVEMENT OF THE PLATE IS CALCULATED. MONITORING OF THE SETTLEMENT PLATE WILL CONTINUE THROUGHOUT CONSTRUCTION.
7. A FLAT AREA SHALL BE PREPARED BY THE CONTRACTOR TO ALLOW PLACEMENT OF THE SETTLEMENT PLATES. A LAYER OF GRANULAR 'A' MAY BE REQUIRED TO BE PLACED BY THE CONTRACTOR TO ENSURE THE PLATE IS INITIALLY LEVEL.
8. ADDITIONAL SETTLEMENT PLATES MAY BE ADDED AFTER COUNTERFORCE BERMS (PHASE 1 FILL) ARE COMPLETE. AN ALLOWANCE OF TWO DAYS SHOULD BE PROVIDED TO PLACE THESE PLATES AND TAKE ADDITIONAL READINGS BEFORE WORK CONTINUES IN THESE AREAS.
9. INSTRUMENTATION WILL BE PROVIDED, INSTALLED, AND MONITORED BY PARKS CANADA'S GEOTECHNICAL REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING ACCESS, PLACING PROTECTIVE MATERIAL AROUND THE EQUIPMENT, AND AVOIDING DAMAGE TO THE EQUIPMENT DURING CONSTRUCTION. EQUIPMENT DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED, REPLACED, OR RE-INSTALLED AT THE CONTRACTORS EXPENSE AND WITH THEIR ASSISTANCE.



Parcs  
Canada

Parks  
Canada

HARBOURSIDE  
Engineering Consultants

HARBOURSIDE  
Transportation Consultants

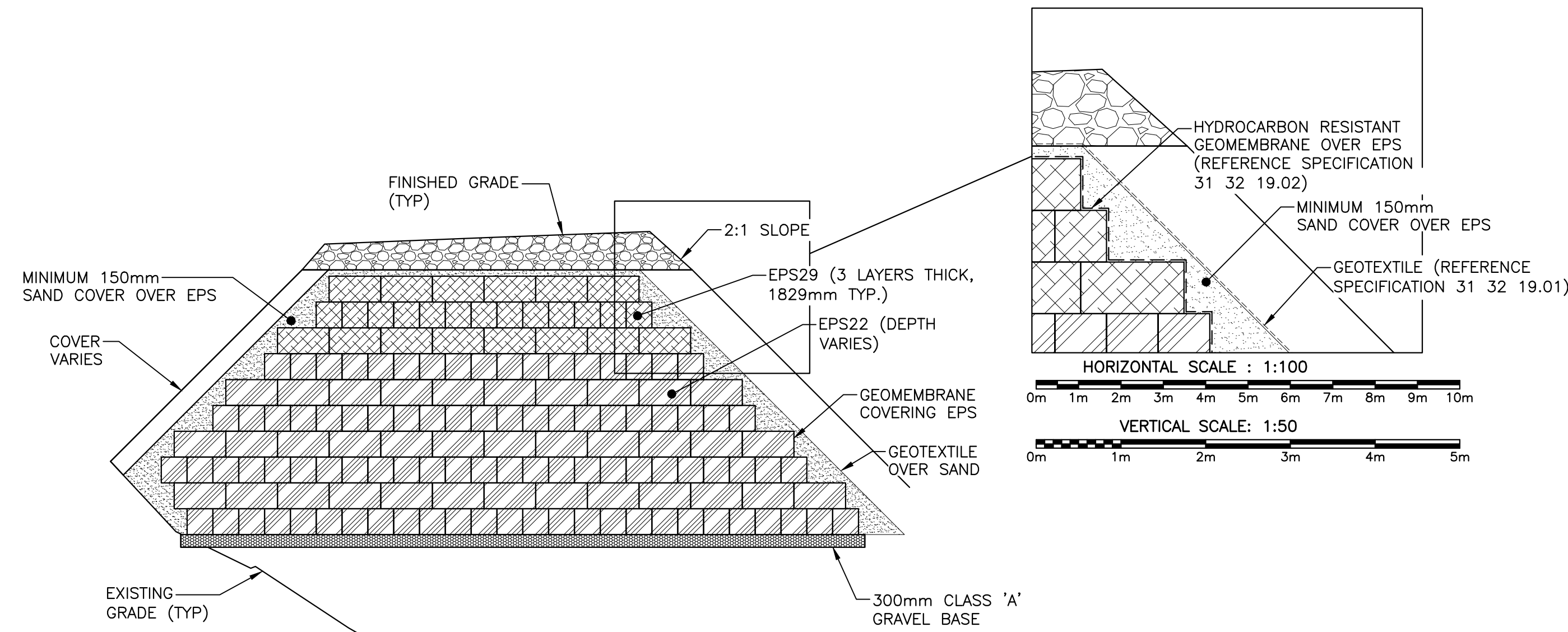
GENERAL NOTES:

1. ALL ELEVATIONS ARE IN METERS UNLESS OTHERWISE NOTED.
2. SURVEY REFERENCED HORIZONTALLY TO UTM ZONE 21 NORTH NAD83 (CSRS) AND VERTICALLY TO CGVD28 (HTV2.0 GEOD MODEL).
3. CONTROL IS DERIVED FROM MULTIPLE STATIC GPS OBSERVATIONS ON NAIL 1000 HAVING CO-ORDINATES OF:  
N=5481239.613m  
E=446748.809m  
EL=9.53m
4. COORDINATES ARE GRID DERIVED FROM NAD83 ELLIPSOID USING THE MAPPING PROJECTION OF UNIVERSAL TRANSVERSE MERCATOR ZONE 21 HAVING A COMBINED GRID SCALE FACTOR OF 1/0.99963351.
5. TOPOGRAPHIC SURVEY COMPLETED BY DESIGN POINT ENGINEERING AND SURVEYING ON SEPT 13-17, 2016.
6. CONTOUR INTERVAL IS 1.0 METER.

PROVINCE OF NEWFOUNDLAND  
PERMIT HOLDER  
CLASS "A"  
This Permit Allows  
Harbourside Transportation Consultants  
to practice Professional Engineering  
in Newfoundland and Labrador.  
Signature: [Signature] Date: Jul. 05/18  
Permit No. as issued by PEGNL N0763  
which is valid for the year 2018.

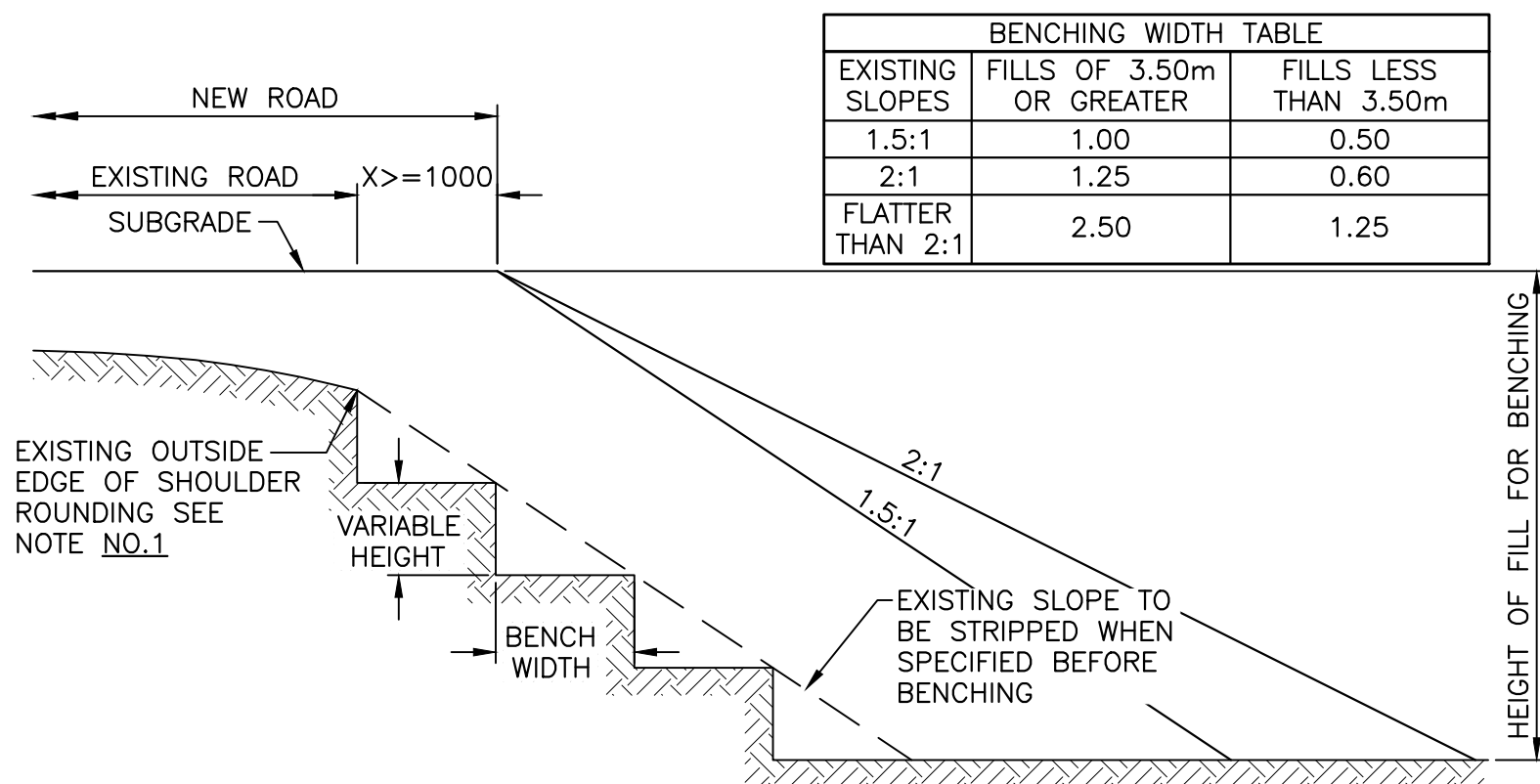
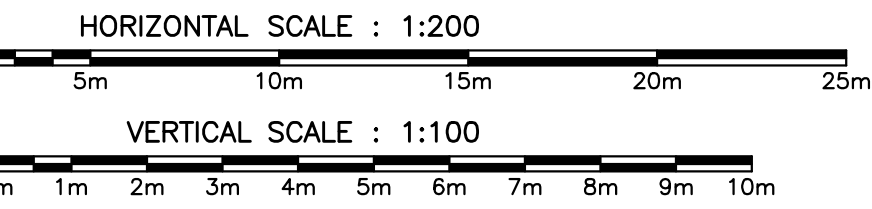
0	ISSUED FOR TENDER	JUL 05 2018
revisions		date
project	project	
RE-ALIGNMENT AND RE-CONSTRUCTION OF HIGHWAY 430 NEAR DICK'S BROOK		
GROS MORNE NATIONAL PARK		
drawing	dessin	
INSTRUMENTATION PLAN		
designed	VINCE GOREHAM	conçu
date	JANUARY 2018	
drawn	CORY BAKER	dessiné
date	JANUARY 2018	
approved	MICHAEL MACDONALD	approuvé
date	JANUARY 2018	
Tender	[Signature]	Soumission
PCA Project Manager	Administrateur de projets APC	
project number	no. du projet	
1813/1845		
drawing no.	no. du dessin	
C14		





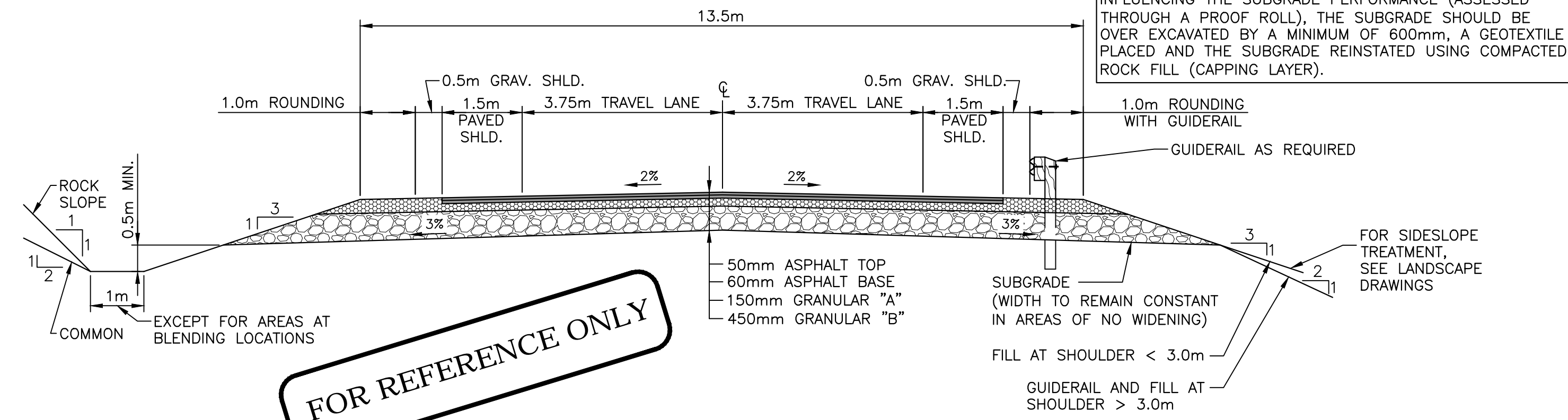
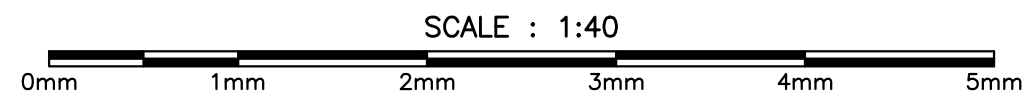
TYPICAL DETAIL - EPS DETAIL

1  
C9-C11



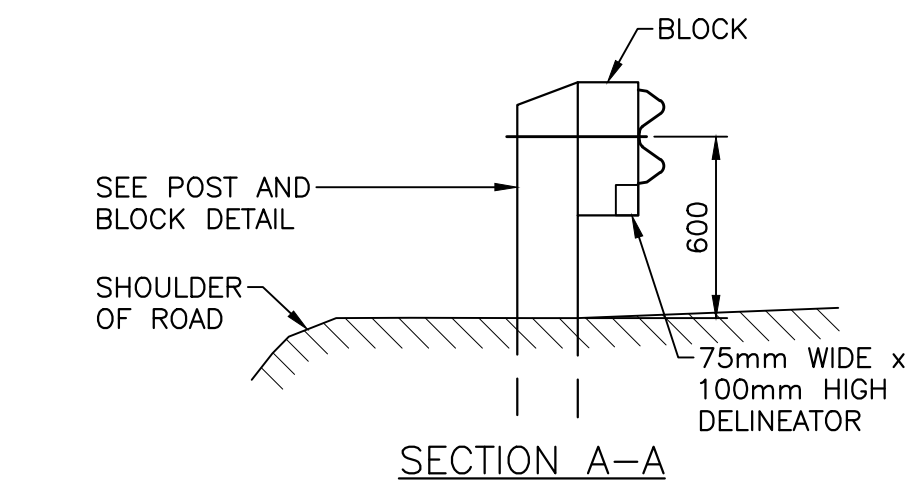
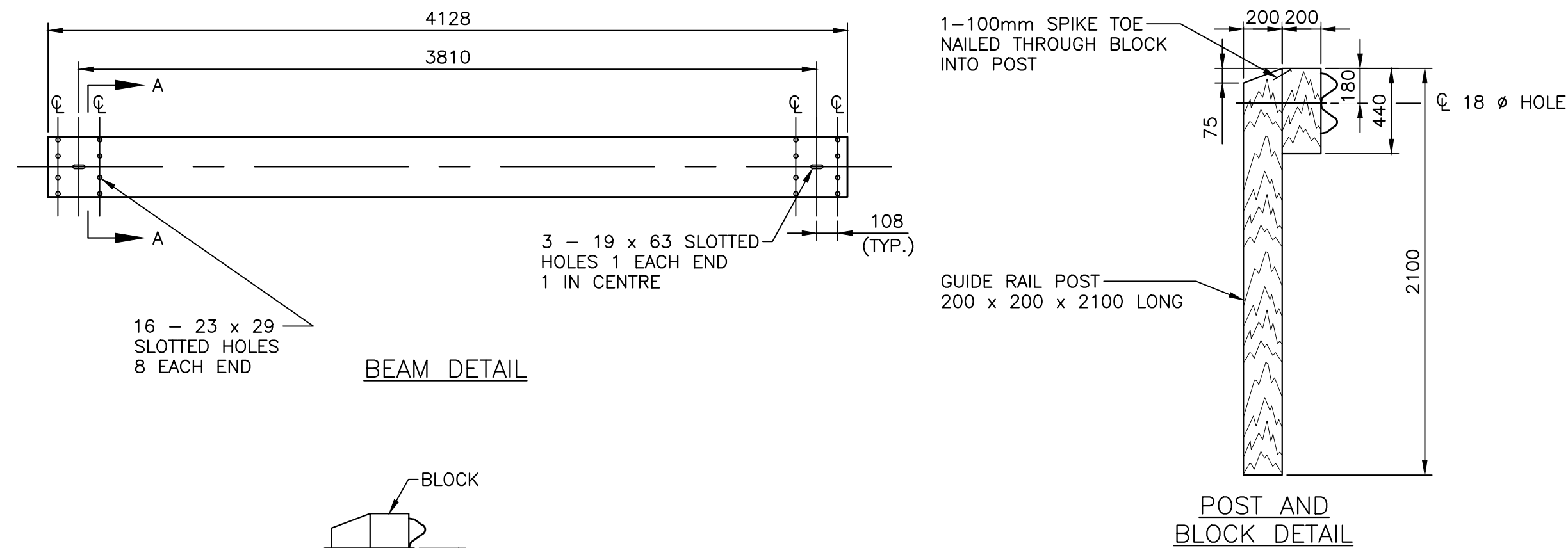
DETAIL - BENCHING OF EARTH SLOPES (FILL SITUATION)

3  
C2-C4



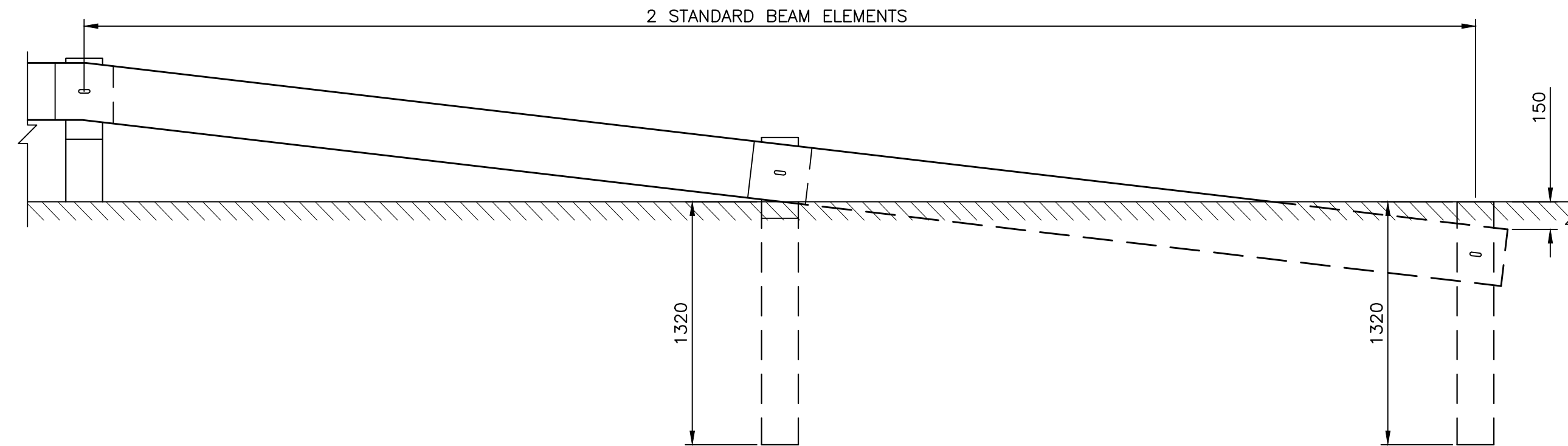
TYPICAL DETAIL - ROUTE 430 CROSS SECTION

2  
C2-C4



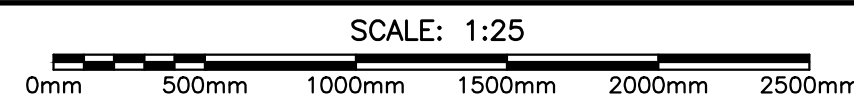
NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
- DELINEATORS TO BE PLACED ON BOTTOM CORNER OF BLOCK, YELLOW WILL BE VISIBLE FROM OPPOSING DIRECTION, WHITE VISIBLE IN DIRECTION OF TRAVEL.



DETAIL - GUIDERAIL AND POST DETAILS

4  
C5-C6



GENERAL NOTES:  
1. FOR GENERAL NOTES SEE DRAWING C01.

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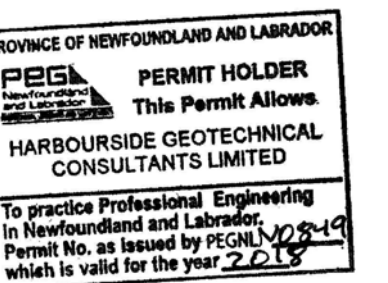
0 ISSUED FOR TENDER JUL 05 2018

RE-ALIGNMENT AND RE-CONSTRUCTION OF HIGHWAY 430 NEAR DICK'S BROOK  
GROS MORNE NATIONAL PARK

MISCELLANEOUS DETAILS

designed TIM JORDAN conçu  
date NOVEMBER 2017  
drawn CORY BAKER dessiné  
date NOVEMBER 2017  
approved MICHAEL MACDONALD approuvé  
date NOVEMBER 2017  
Tender Soumission  
PCA Project Manager Administrateur de projets PCA  
project number no. du projet  
1813/1845  
drawing no. no. du dessin  
C15





0	ISSUED FOR TENDER	JULY 6 2018
revisions		date

project  
**RE-ALIGNMENT AND  
RE-CONSTRUCTION OF  
HWY 430 NEAR  
DICK'S BROOK**  
project  
**GROS MORNE NATIONAL PARK**

drawing  
dessin

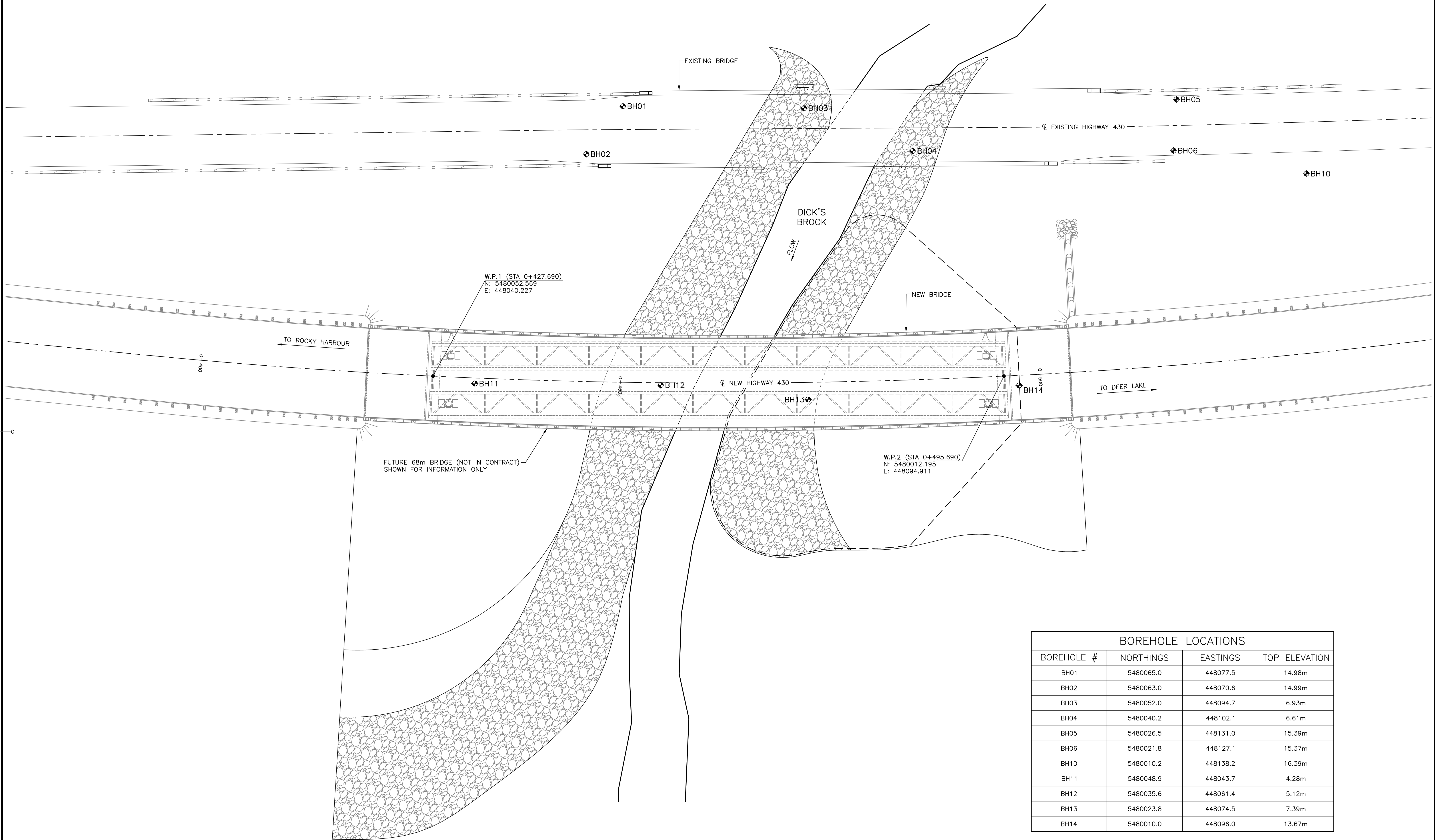
**BOREHOLE LOCATION  
PLAN**

designed	VINCE GOREHAM	conçu
date	OCTOBER 2017	
drawn	JEFF CLARK	dessiné
date	OCTOBER 2017	
approved	GREG MacNEILL	approuvé
date	OCTOBER 2017	
Tender		Soumission

PCA Project Manager Administrateur de projets APC

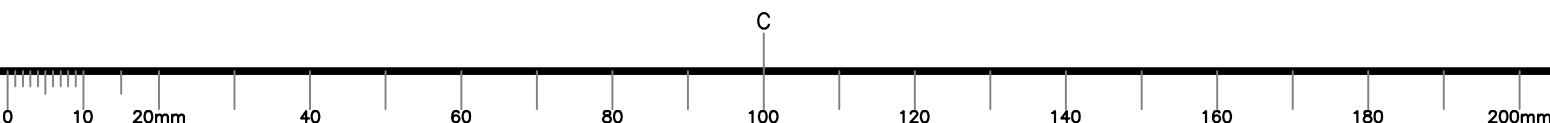
project number  
**1813 / 1845**

drawing no.  
**C16**



**PLAN — BOREHOLE LOCATIONS**

SCALE : 1:200







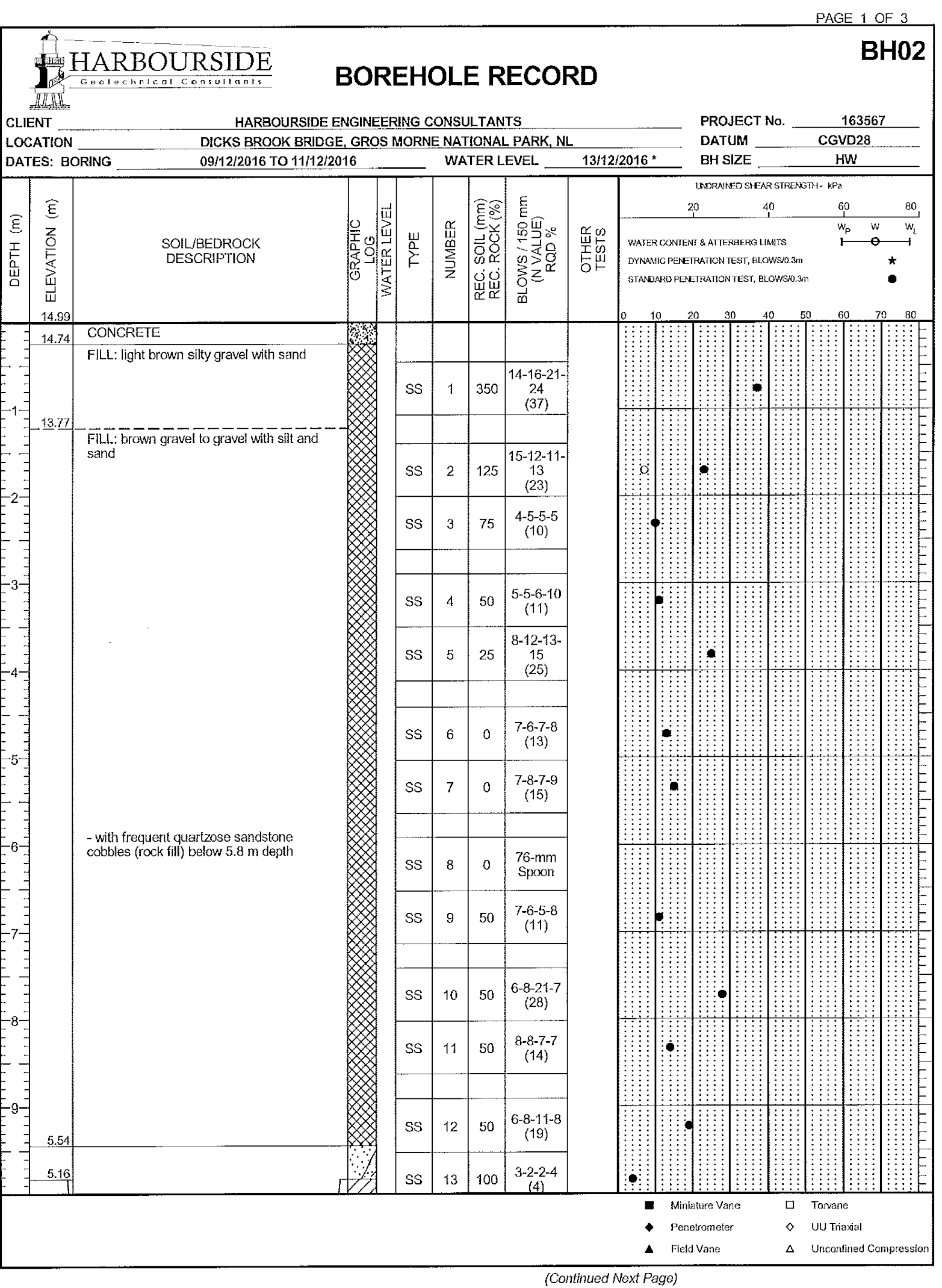
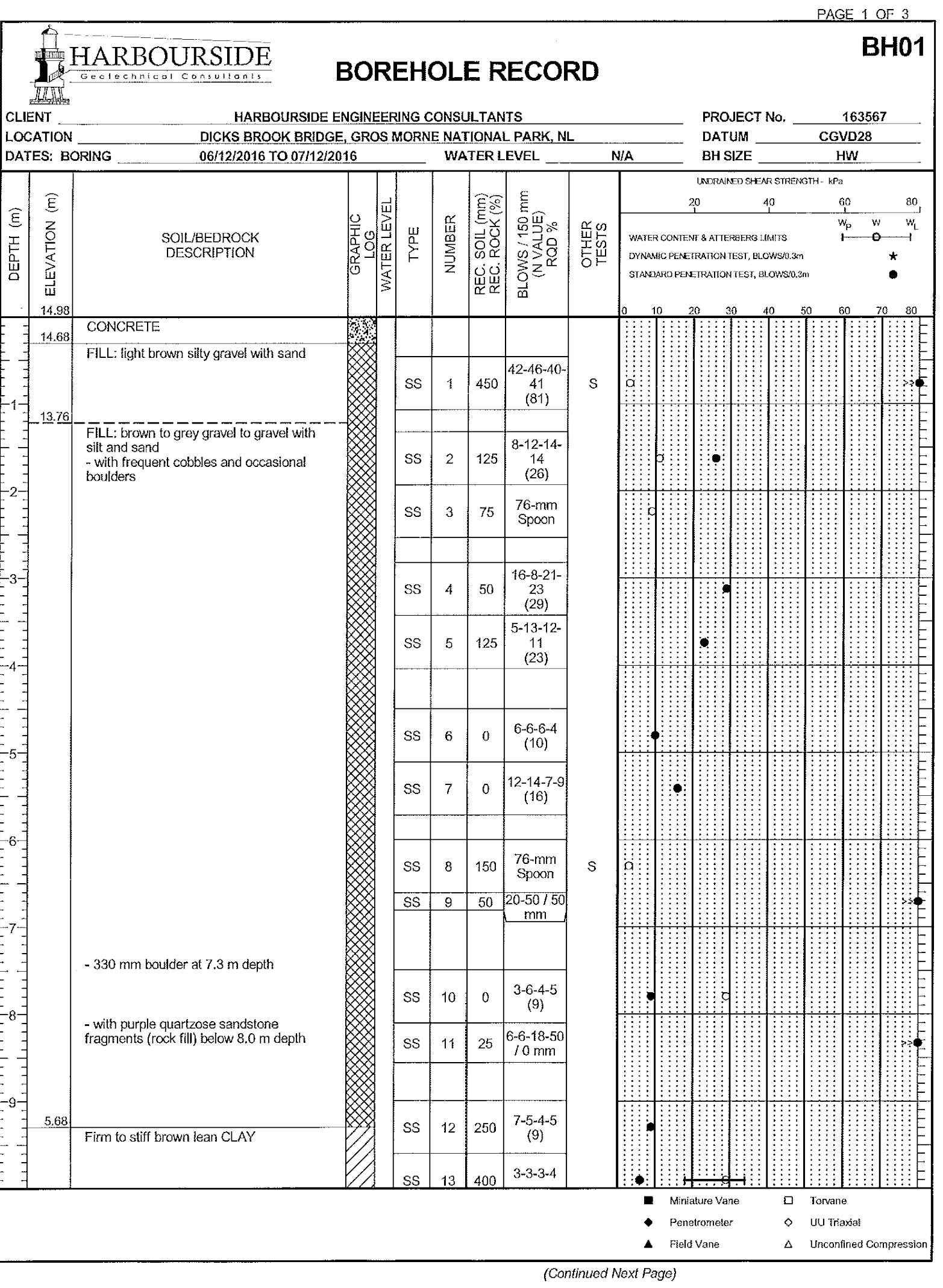
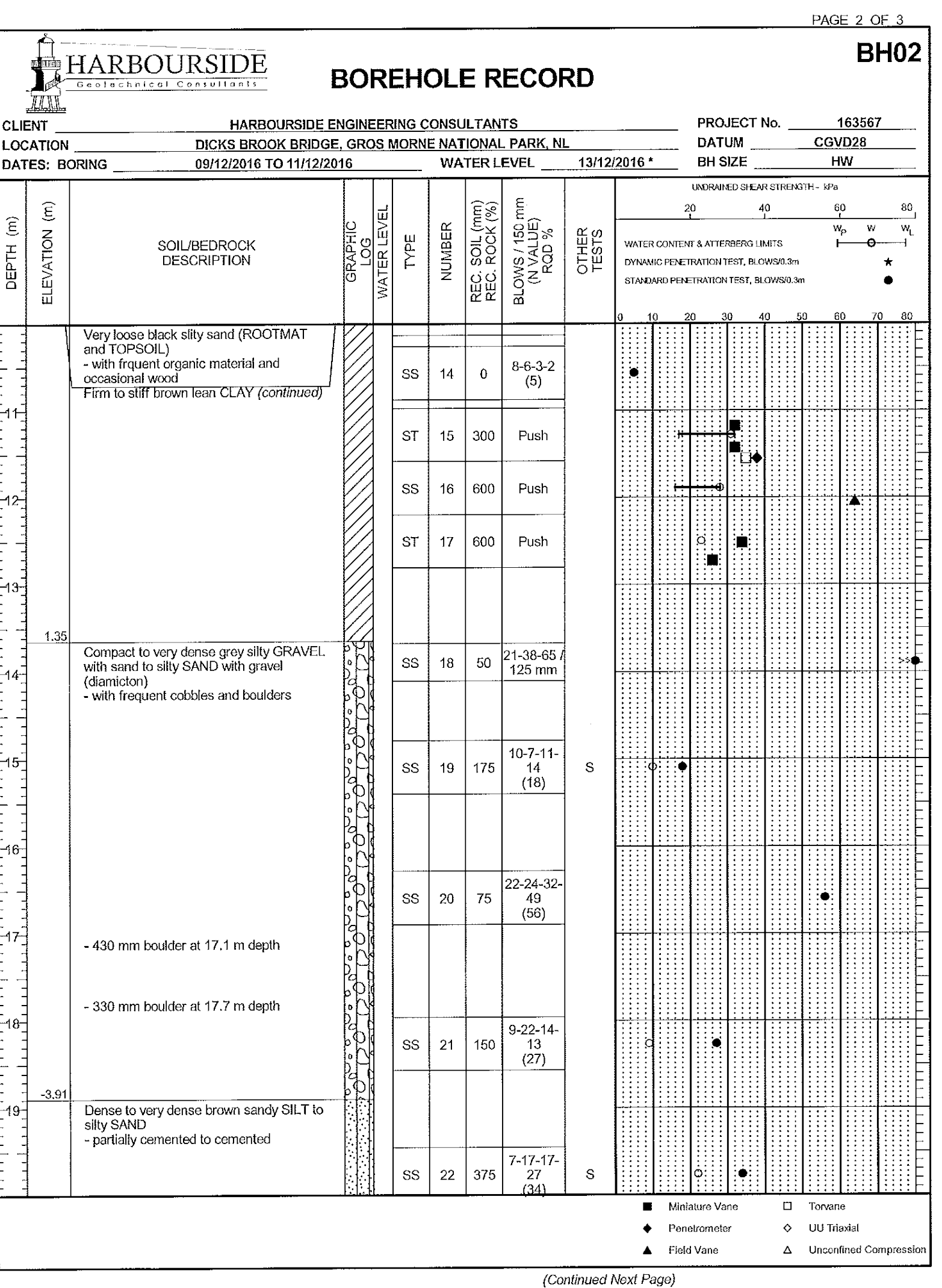
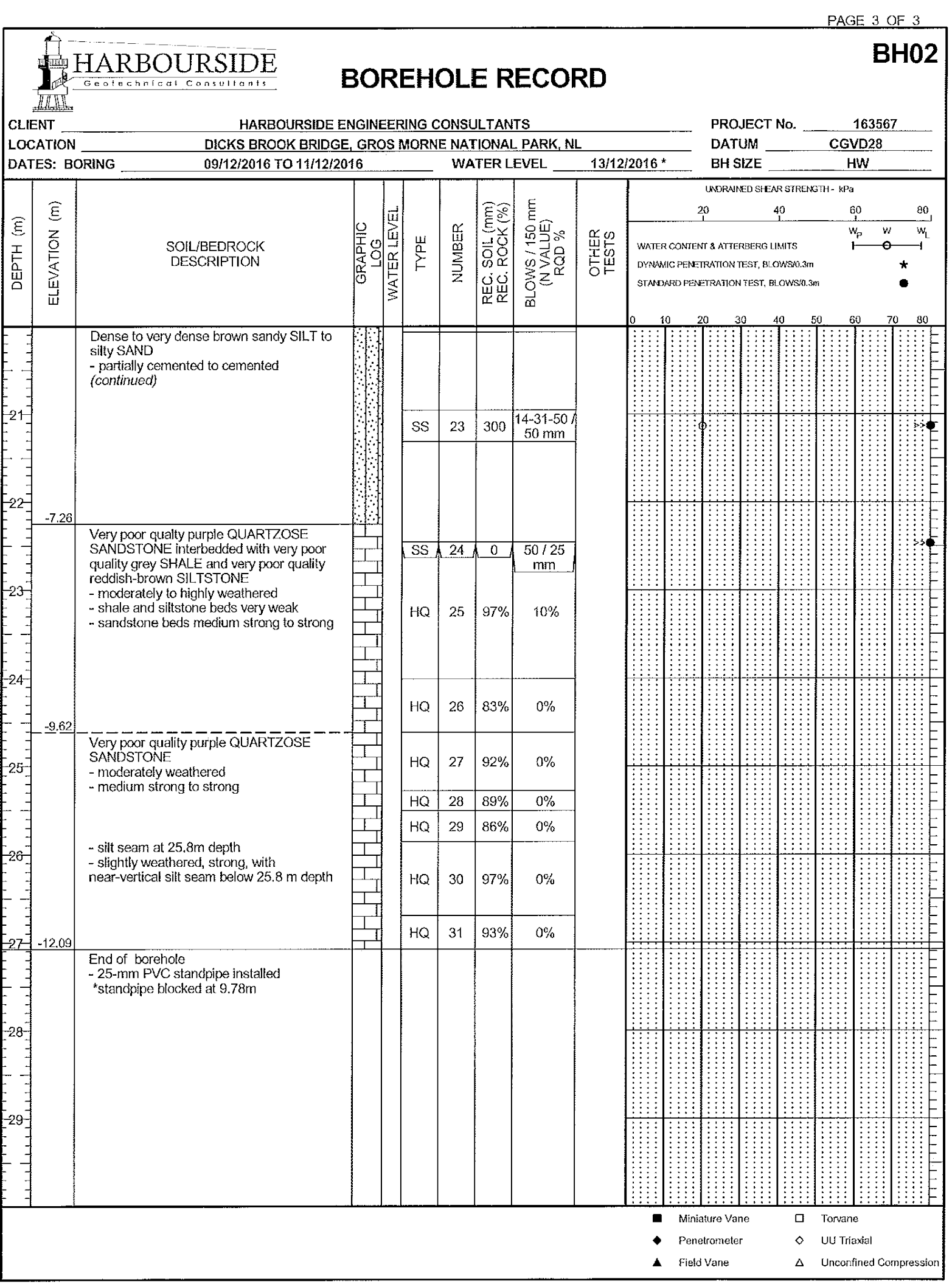
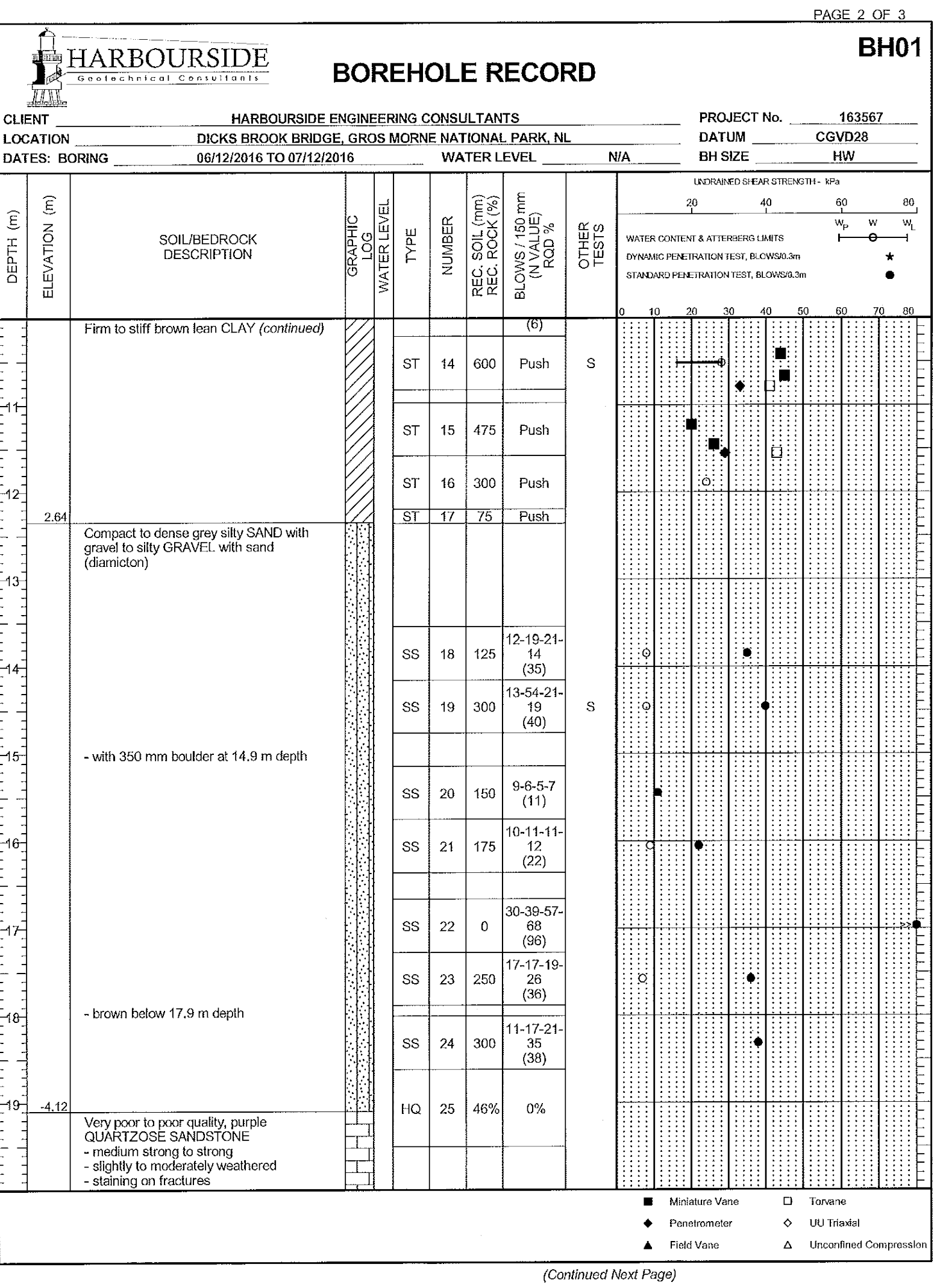
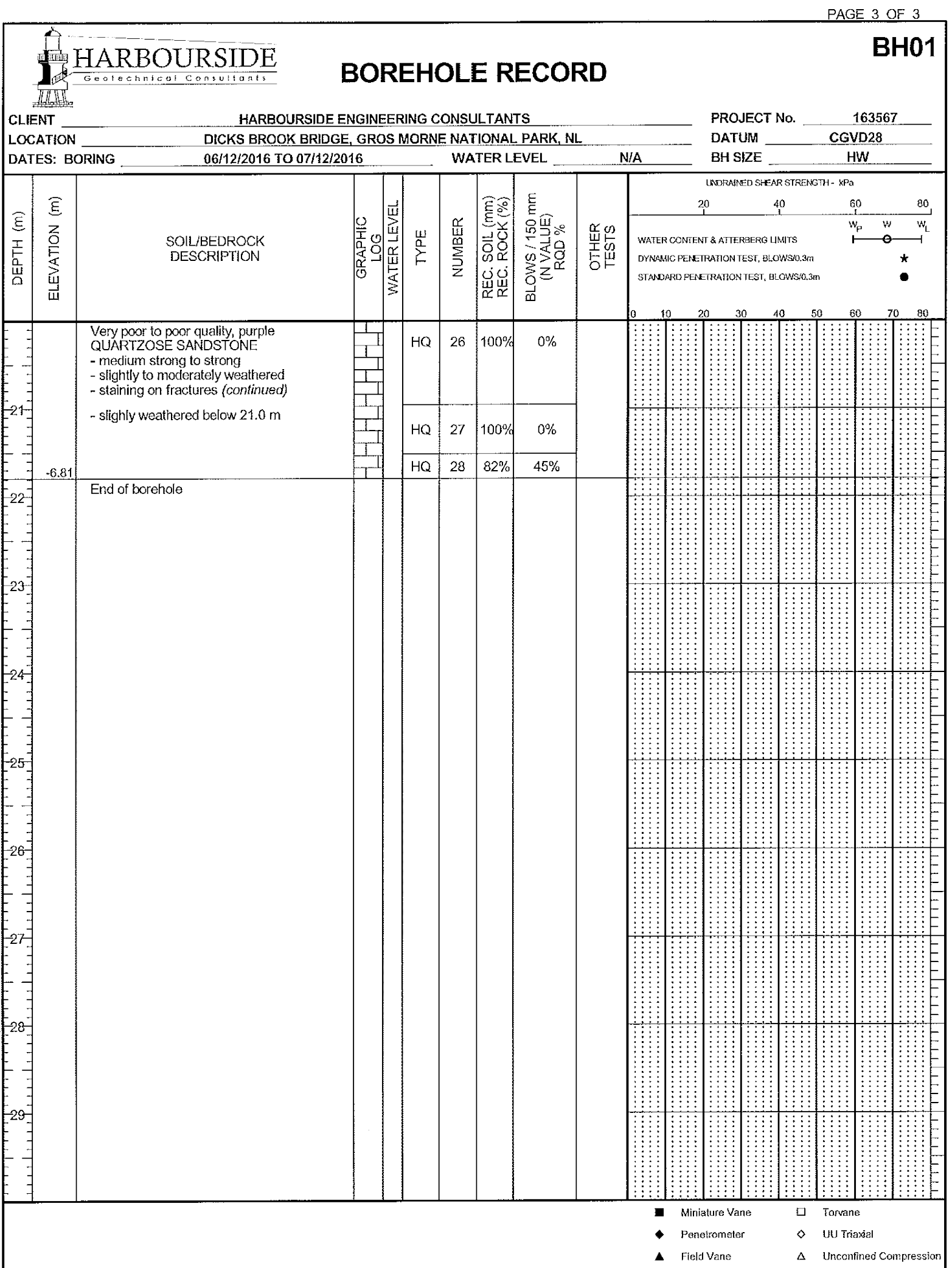
0	ISSUED FOR TENDER	JULY 6 2018
revisions		date

project RE-ALIGNMENT AND RE-CONSTRUCTION OF HWY 430 NEAR DICK'S BROOK  
GROS MORNE NATIONAL PARK

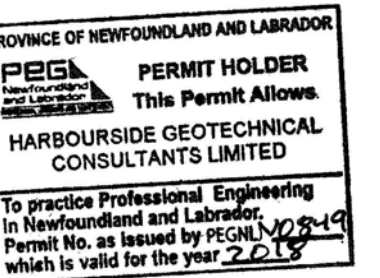
drawing design

### BOREHOLE LOGS (SHEET 1 OF 4)

designed	VINCE GOREHAM	conçu
date	OCTOBER 2017	
drawn	JEFF CLARK	dessiné
date	OCTOBER 2017	
approved	GREG MacNEILL	approuvé
date	OCTOBER 2017	
Tender		Soumission
PCA Project Manager	Administrateur de projets APC	
project number	1813 / 1845	no. du projet
drawing no.	C17	no. du dessin







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revisions

project RE-ALIGNMENT AND RE-CONSTRUCTION OF HWY 430 NEAR DICK'S BROOK GROS MORNE NATIONAL PARK

drawing design

BOREHOLE LOGS (SHEET 2 OF 4)

designed VINCE GOREHAM conçu

date OCTOBER 2017

drawn JEFF CLARK dessiné

date OCTOBER 2017

approved GREG MacNEILL approuvé

date OCTOBER 2017

Tender Submission

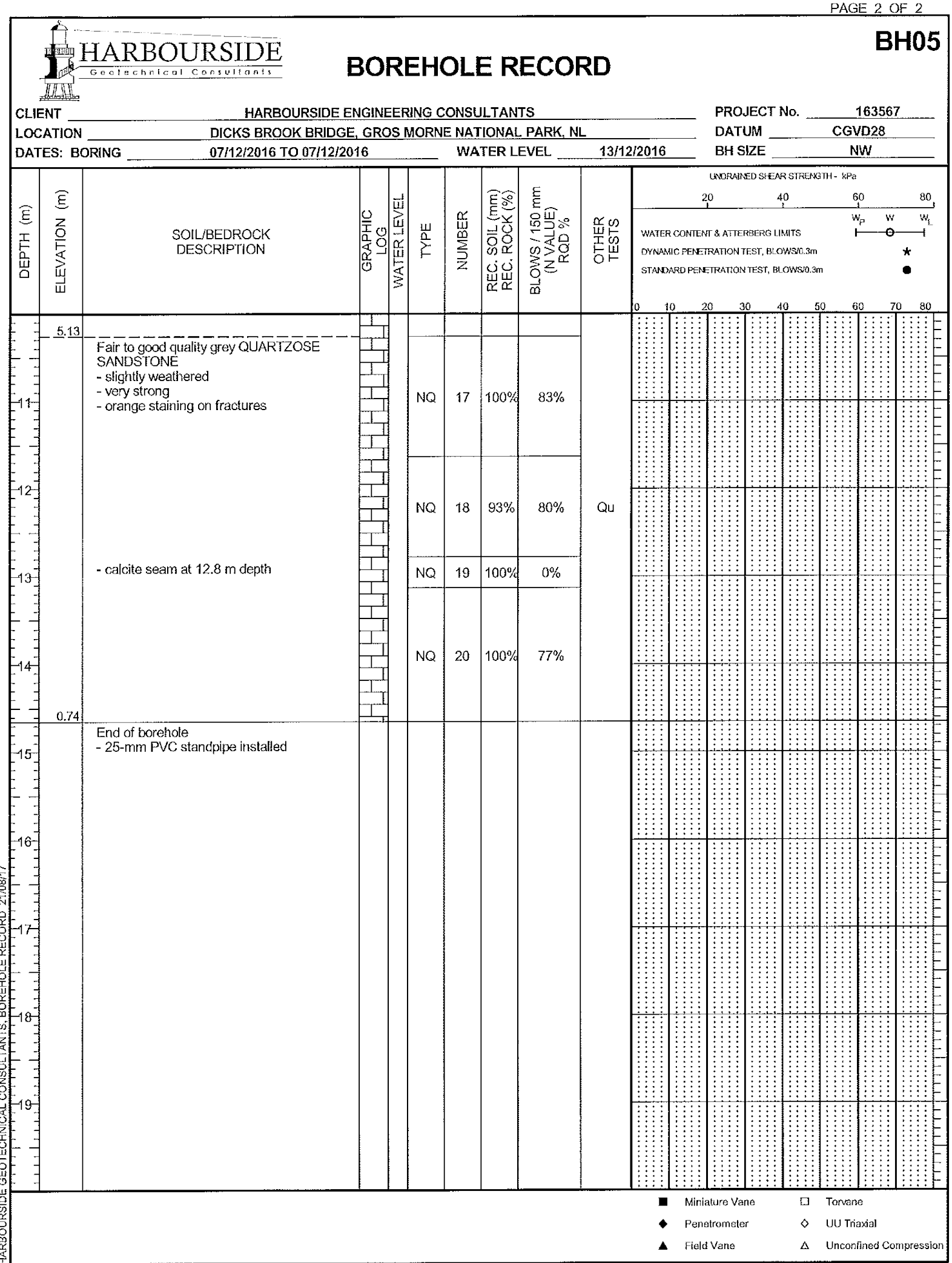
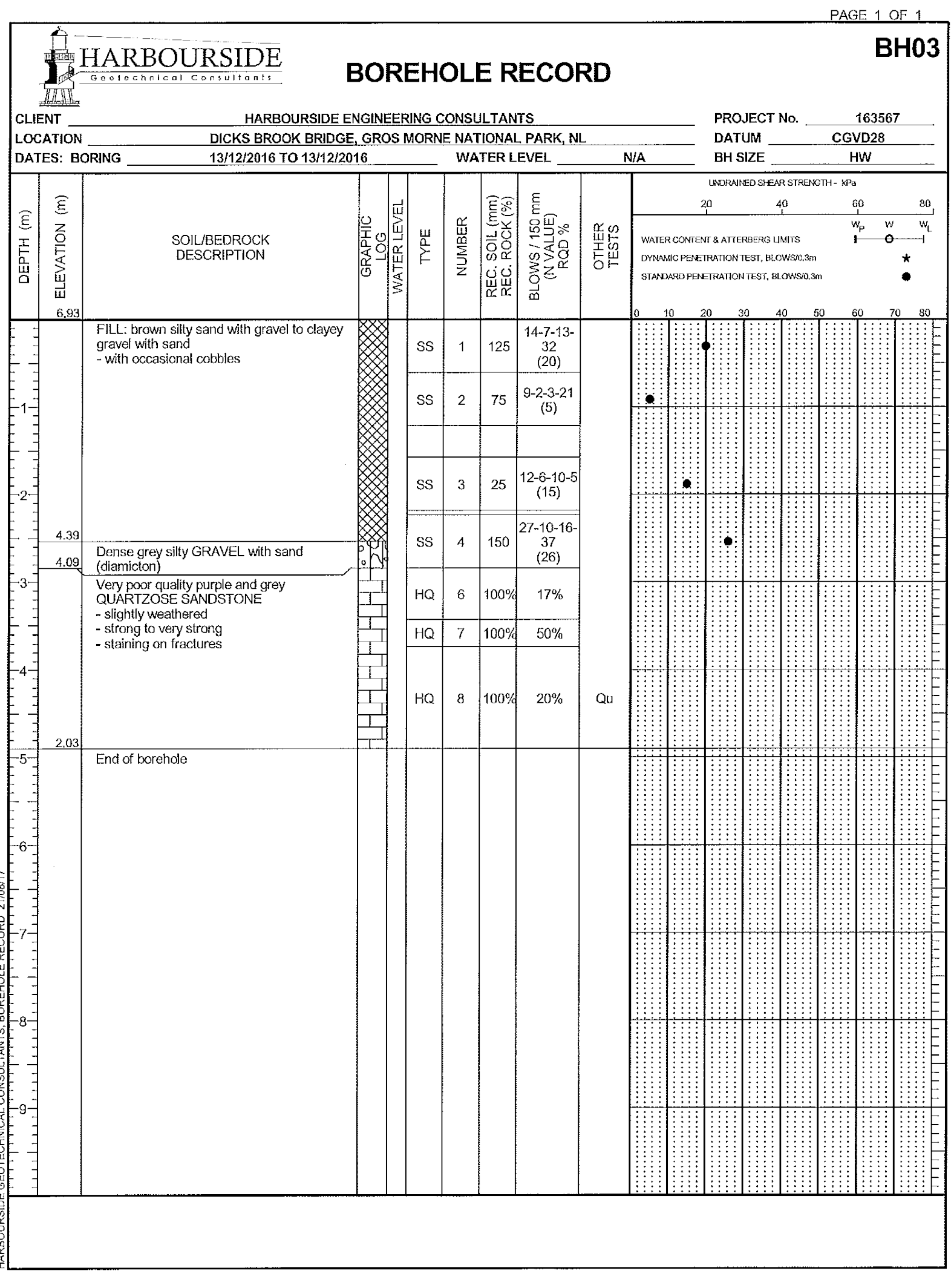
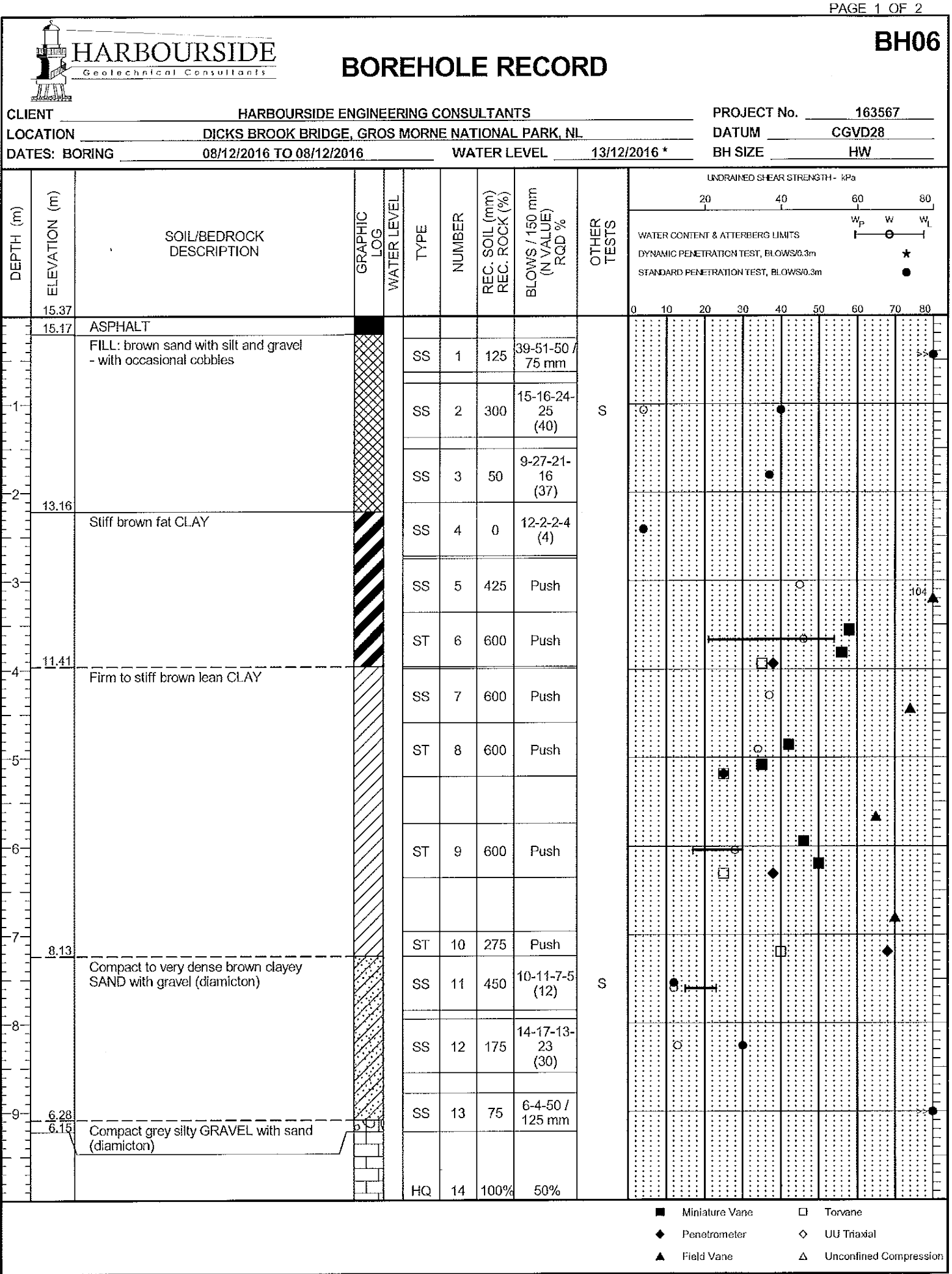
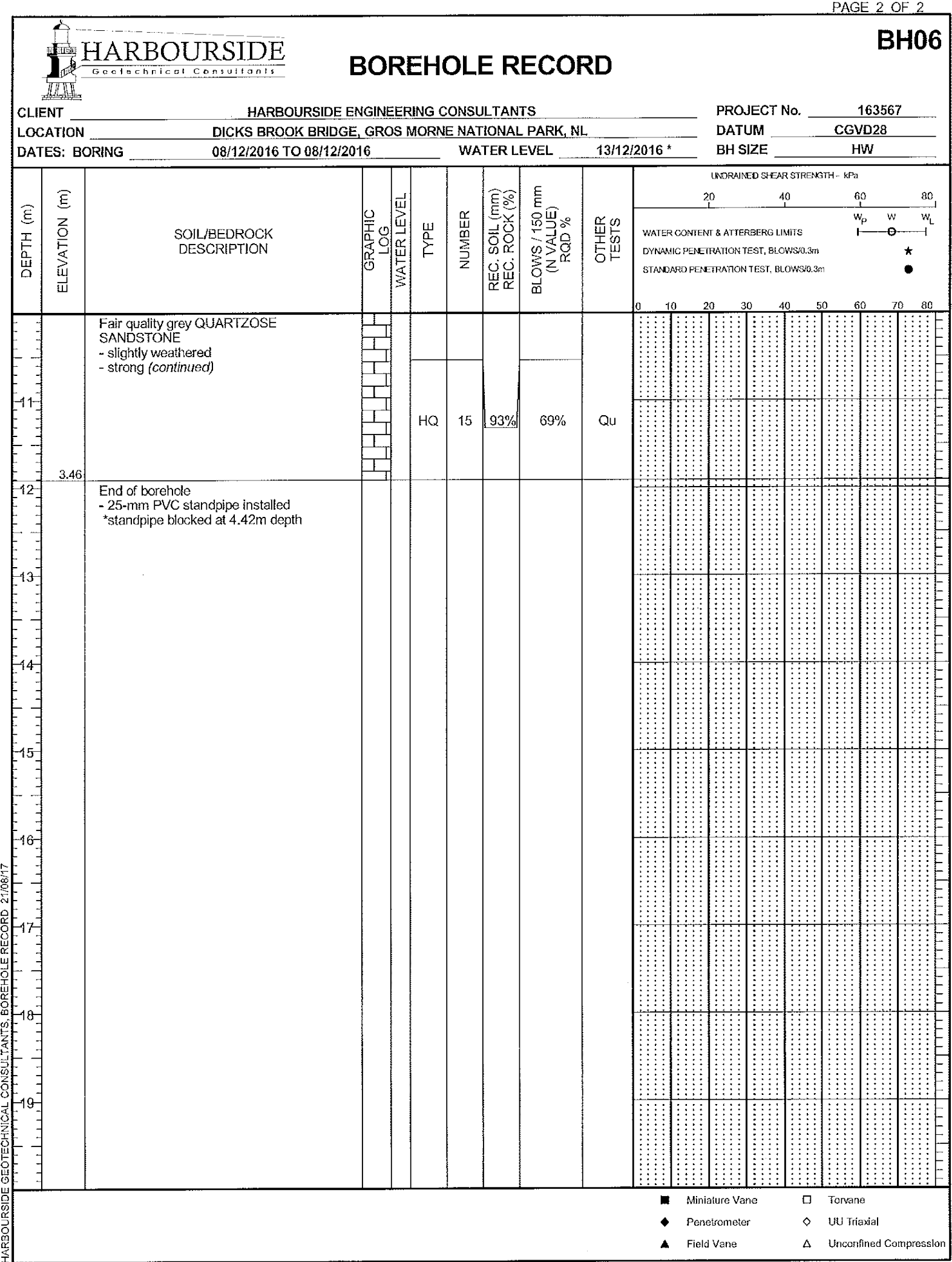
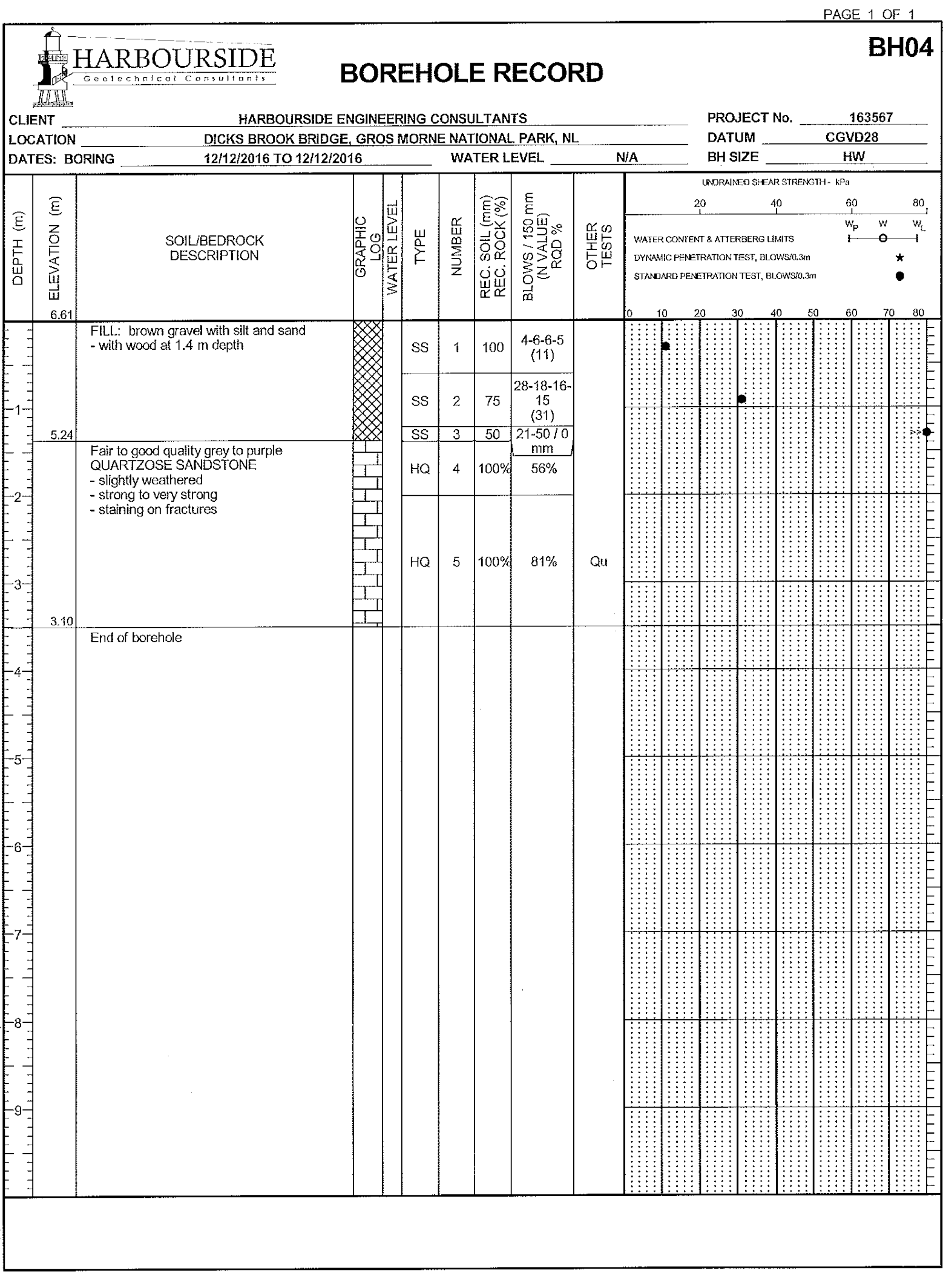
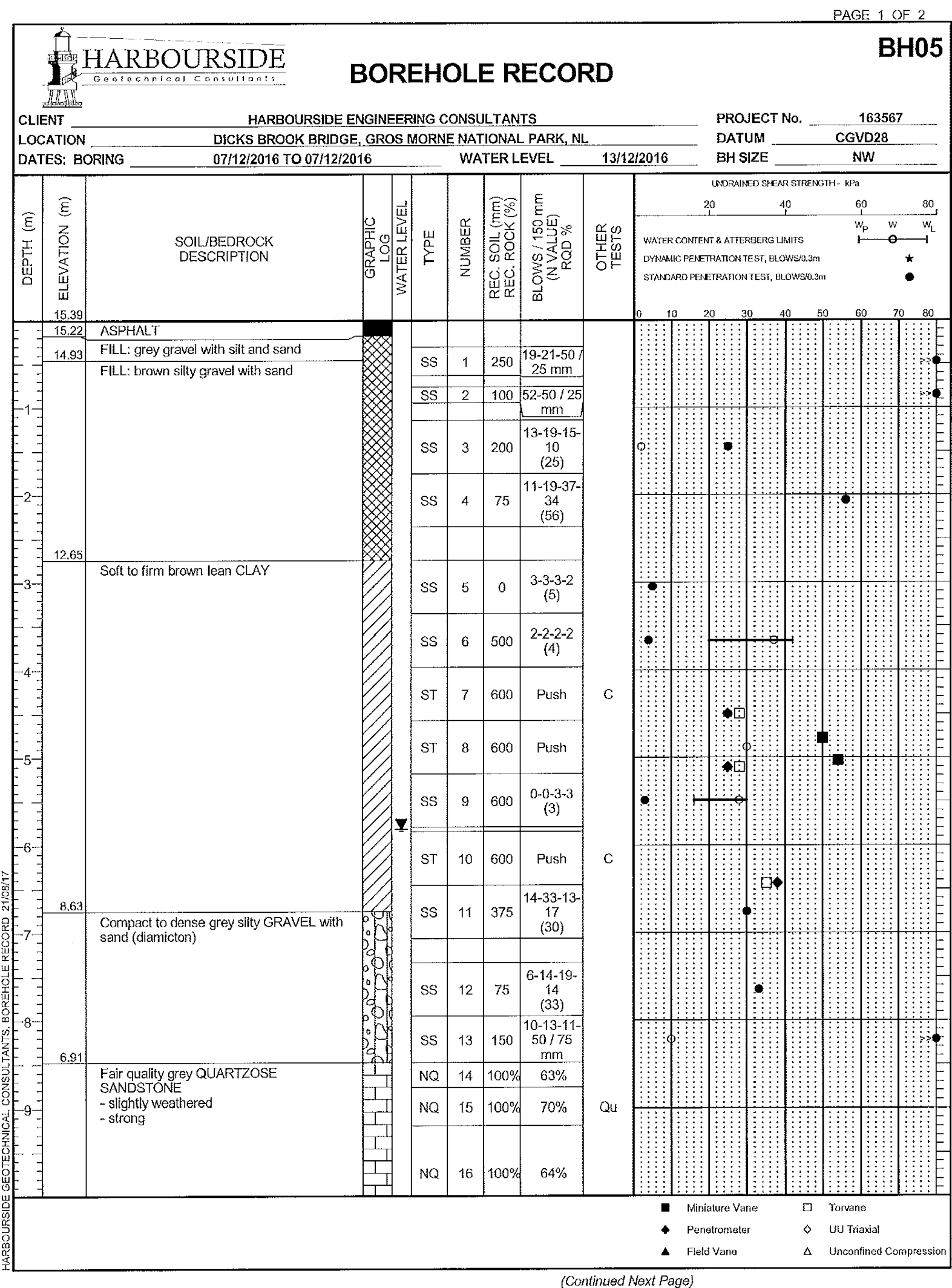
PCA Project Manager Administrateur de projets APC

project number no. du projet

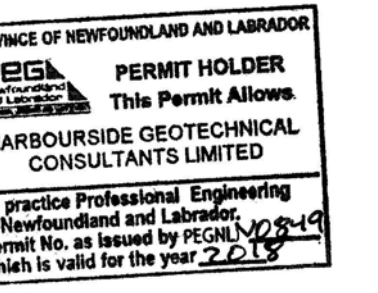
1813 / 1845

drawing no. no. du dessin

C18





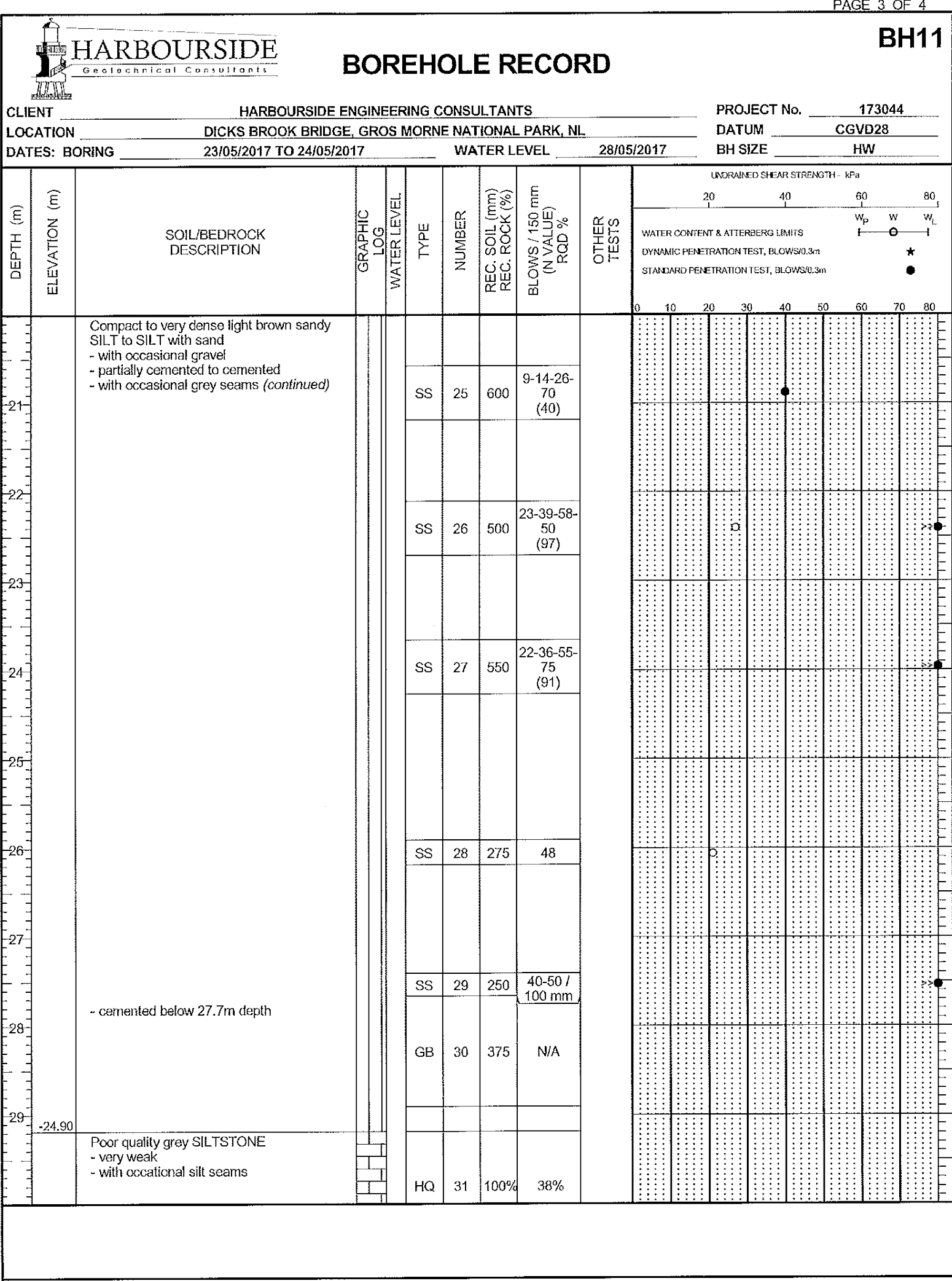
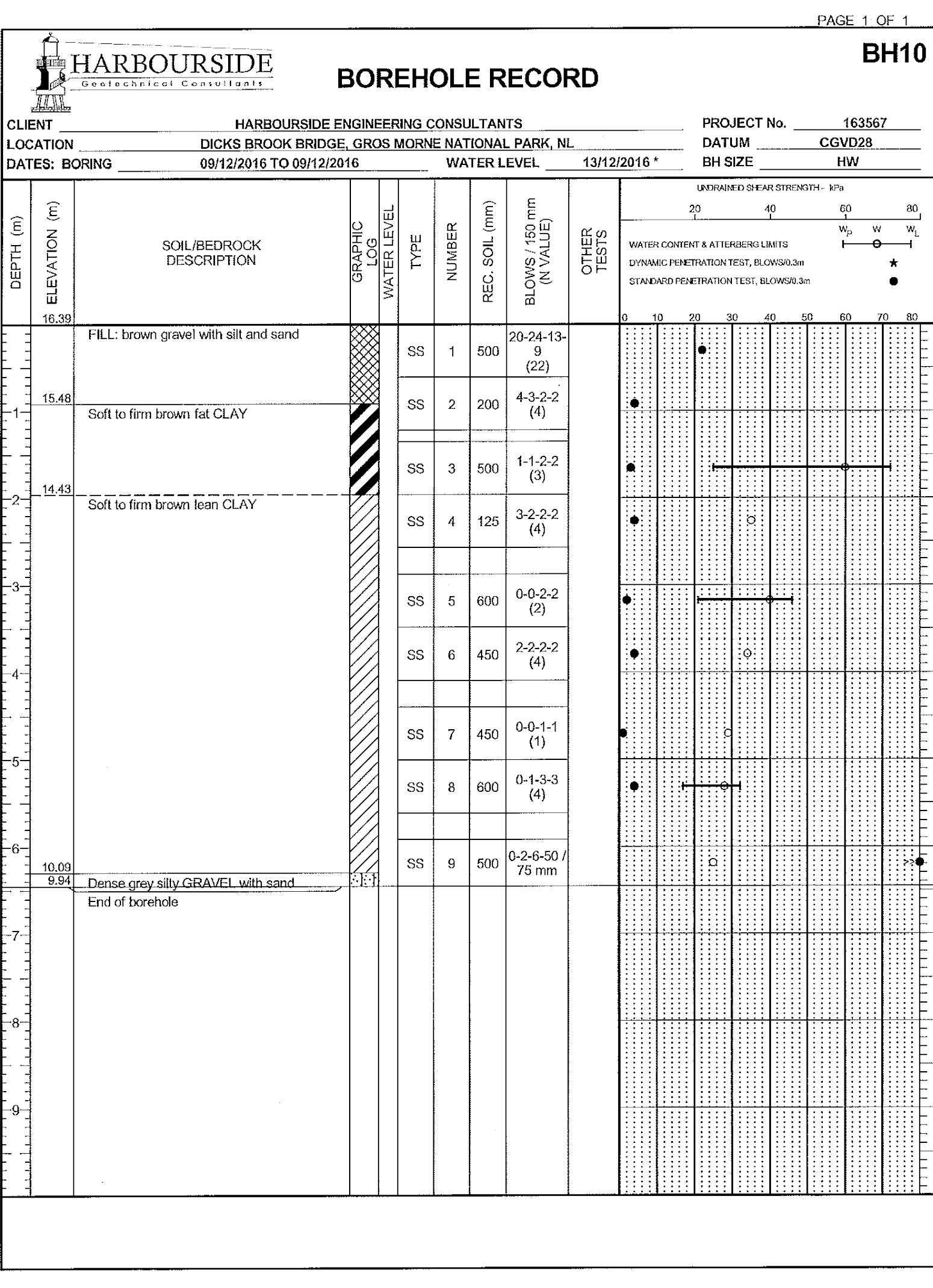
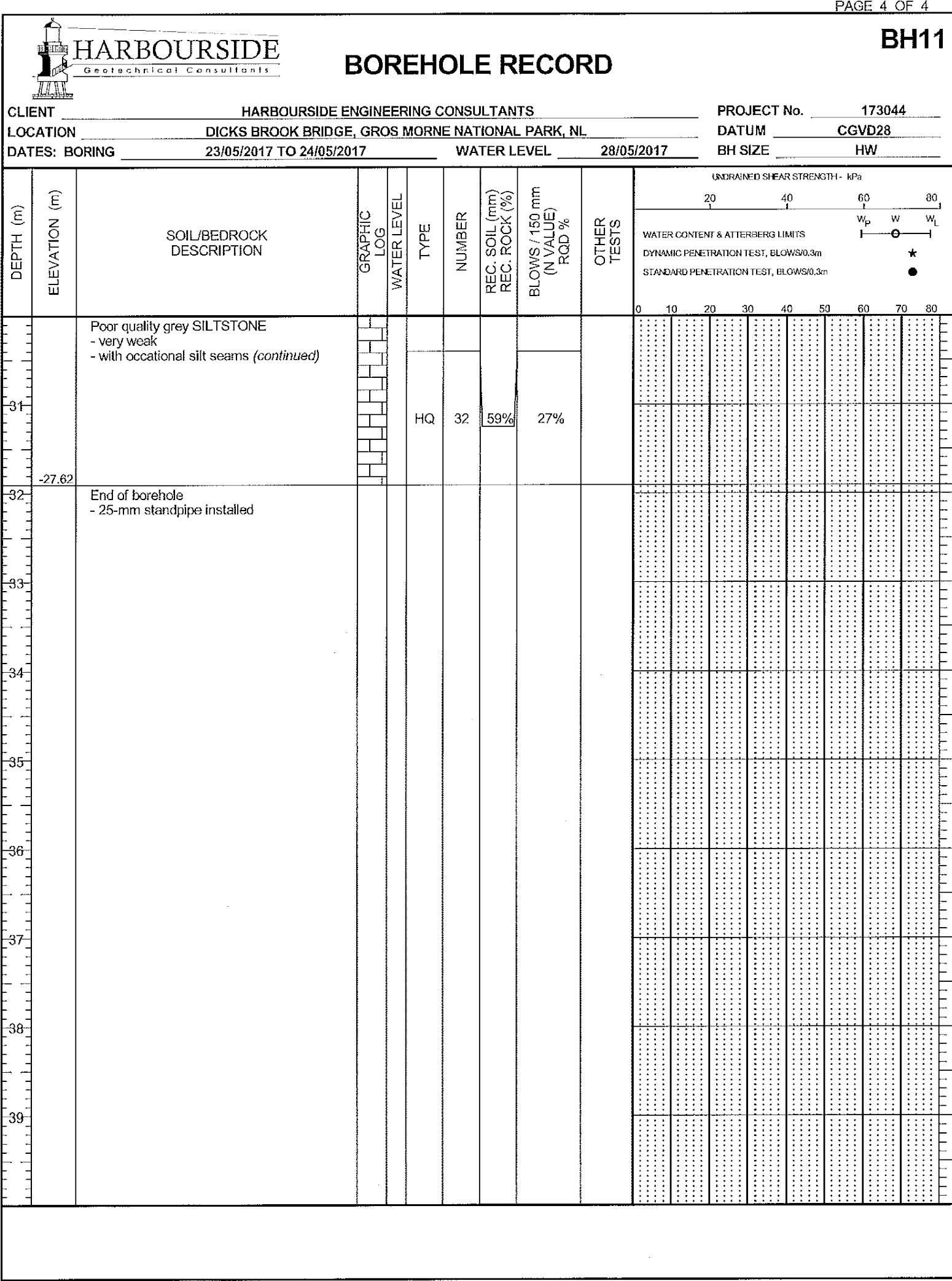
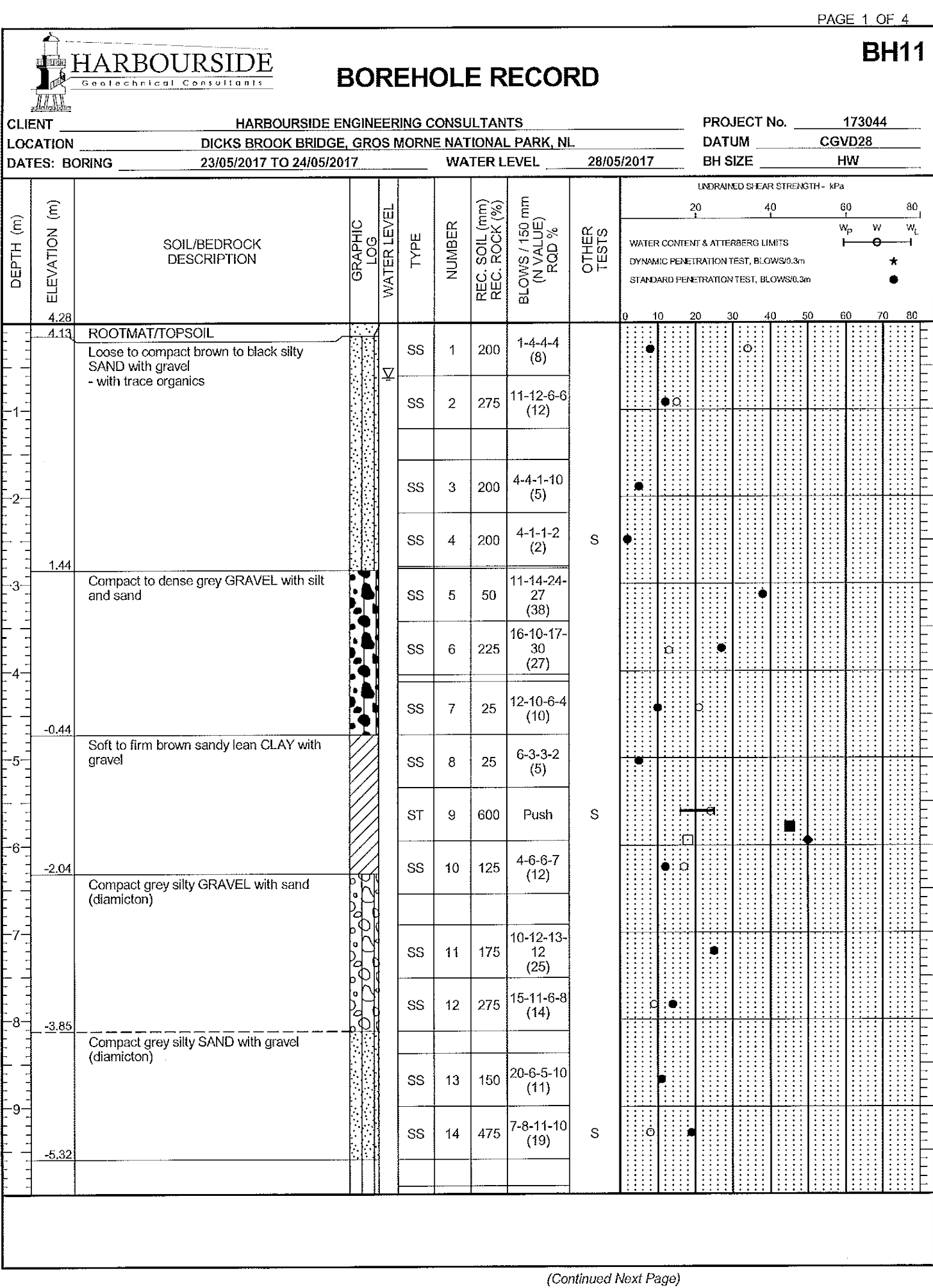
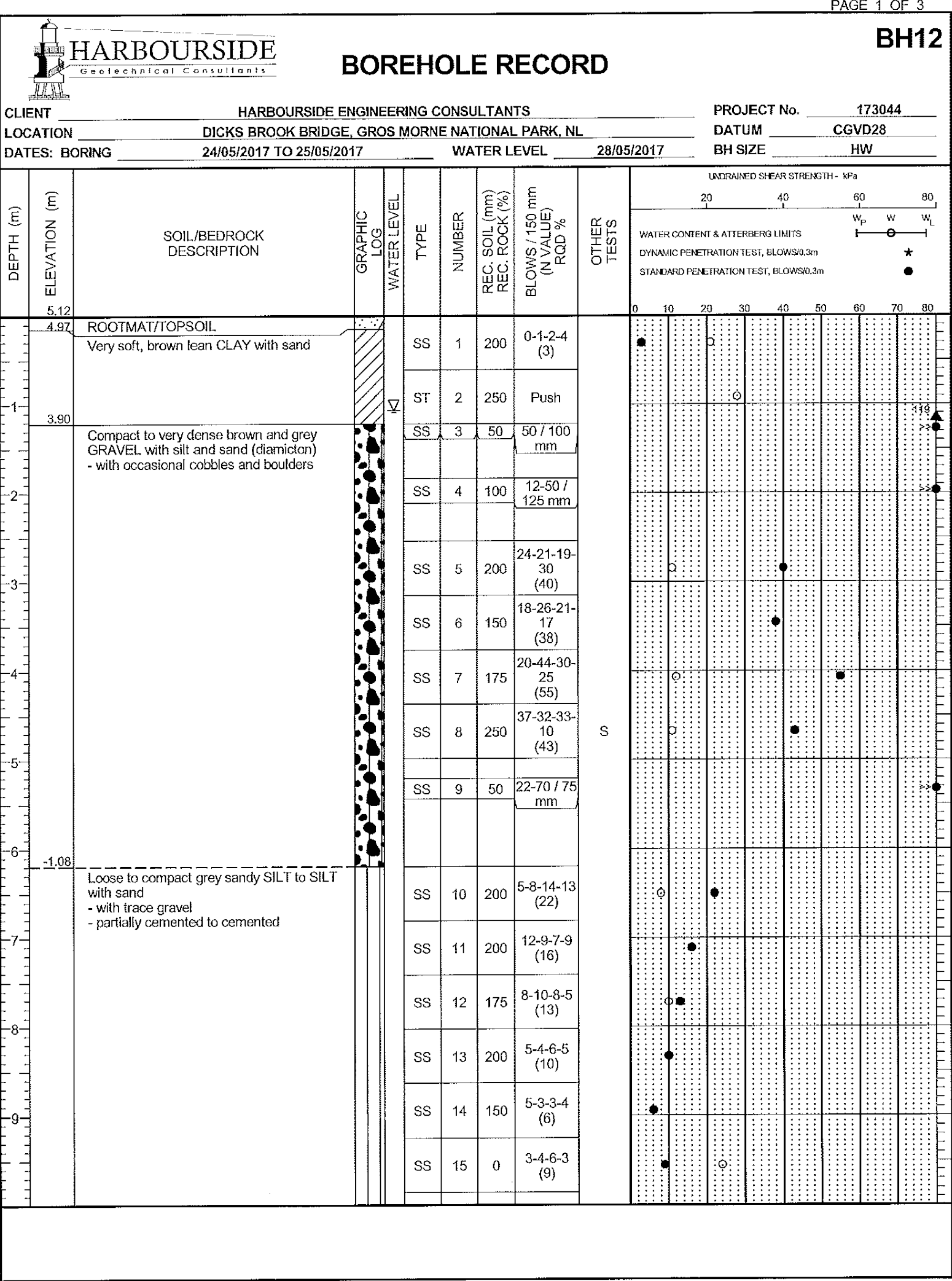
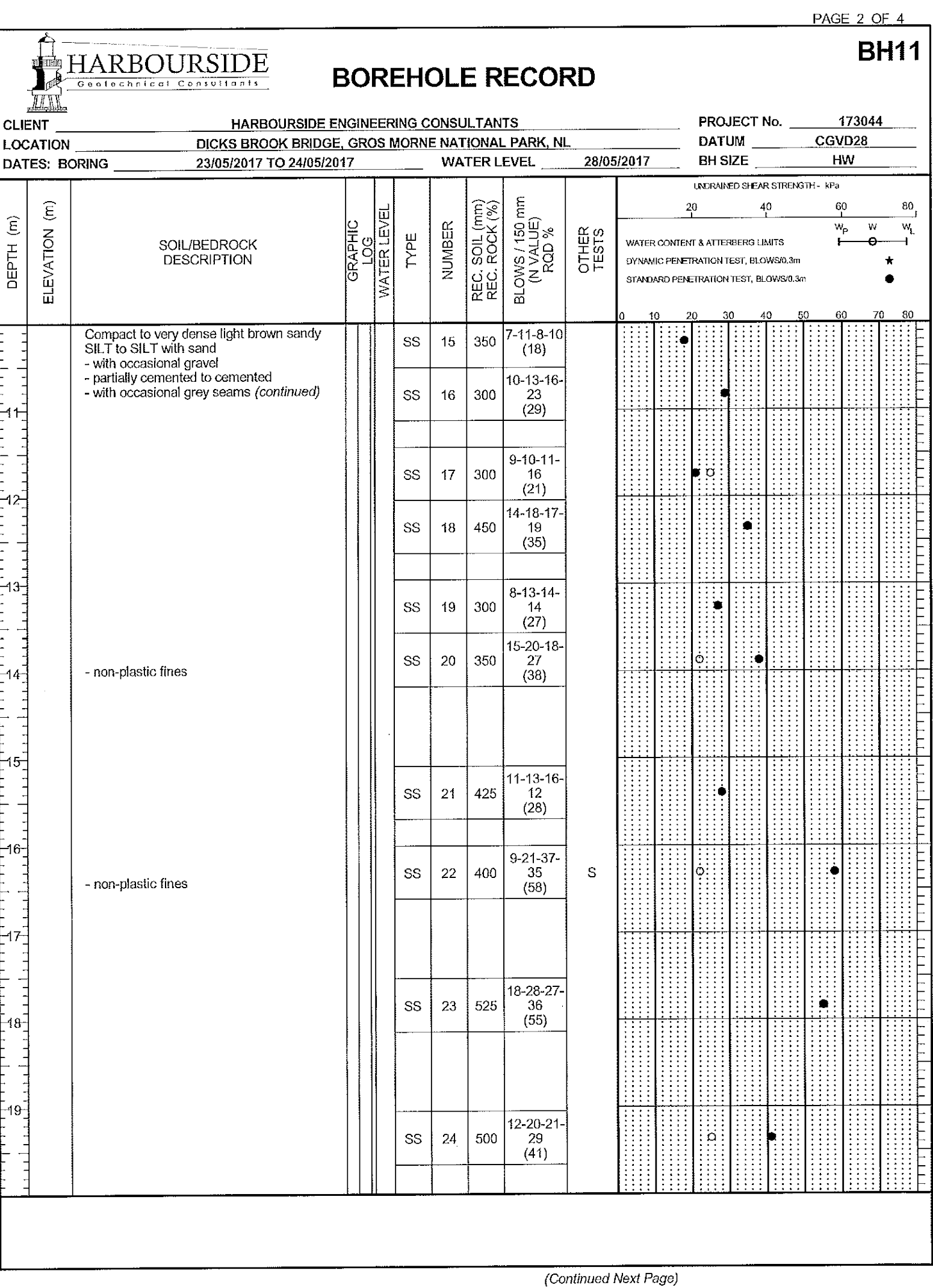


0	ISSUED FOR TENDER	JULY 6 2018
revisions		date

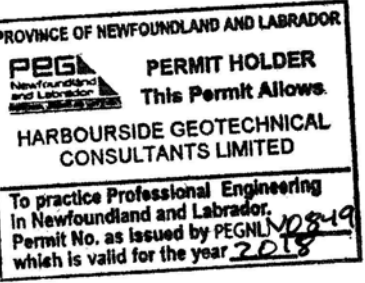
project  
**RE-ALIGNMENT AND RE-CONSTRUCTION OF HWY 430 NEAR DICK'S BROOK**  
 GROS MORNE NATIONAL PARK  
 drawing design

**BOREHOLE LOGS (SHEET 3 OF 4)**

designed	VINCE GOREHAM	conçu
date	OCTOBER 2017	
drawn	JEFF CLARK	dessiné
date	OCTOBER 2017	
approved	GREG MacNEILL	approuvé
date	OCTOBER 2017	
Tender		Soumission
PCA Project Manager	Administrateur de projets APC	
project number	no. du projet	
1813 / 1845		
drawing no.	no. du dessin	
C19		







0	ISSUED FOR TENDER	JULY 6 2018
revisions		date

project  
**RE-ALIGNMENT AND RE-CONSTRUCTION OF HWY 430 NEAR DICK'S BROOK**  
 GROS MORNE NATIONAL PARK  
 drawing  
 dessin

**BOREHOLE LOGS (SHEET 4 OF 4)**

designed	VINCE GOREHAM	conçu
date	OCTOBER 2017	
drawn	JEFF CLARK	dessiné
date	OCTOBER 2017	
approved	GREG MacNEILL	approuvé
date	OCTOBER 2017	
Tender		Soumission
PCA Project Manager	Administrateur de projets APC	
project number		no. du projet

1813 / 1845  
 drawing no. no. du dessin  
**C20**

