



McElhanney

for / pour



Parks Canada Agency

L'Agence Parcs Canada

**TRANS CANADA HIGHWAY
PAVEMENT REHABILITATION
& BARRIER IMPROVEMENTS**

**HIGHWAY 1
GLACIER NATIONAL PARK, BC
MOUNT REVELSTOKE NATIONAL PARK, BC**

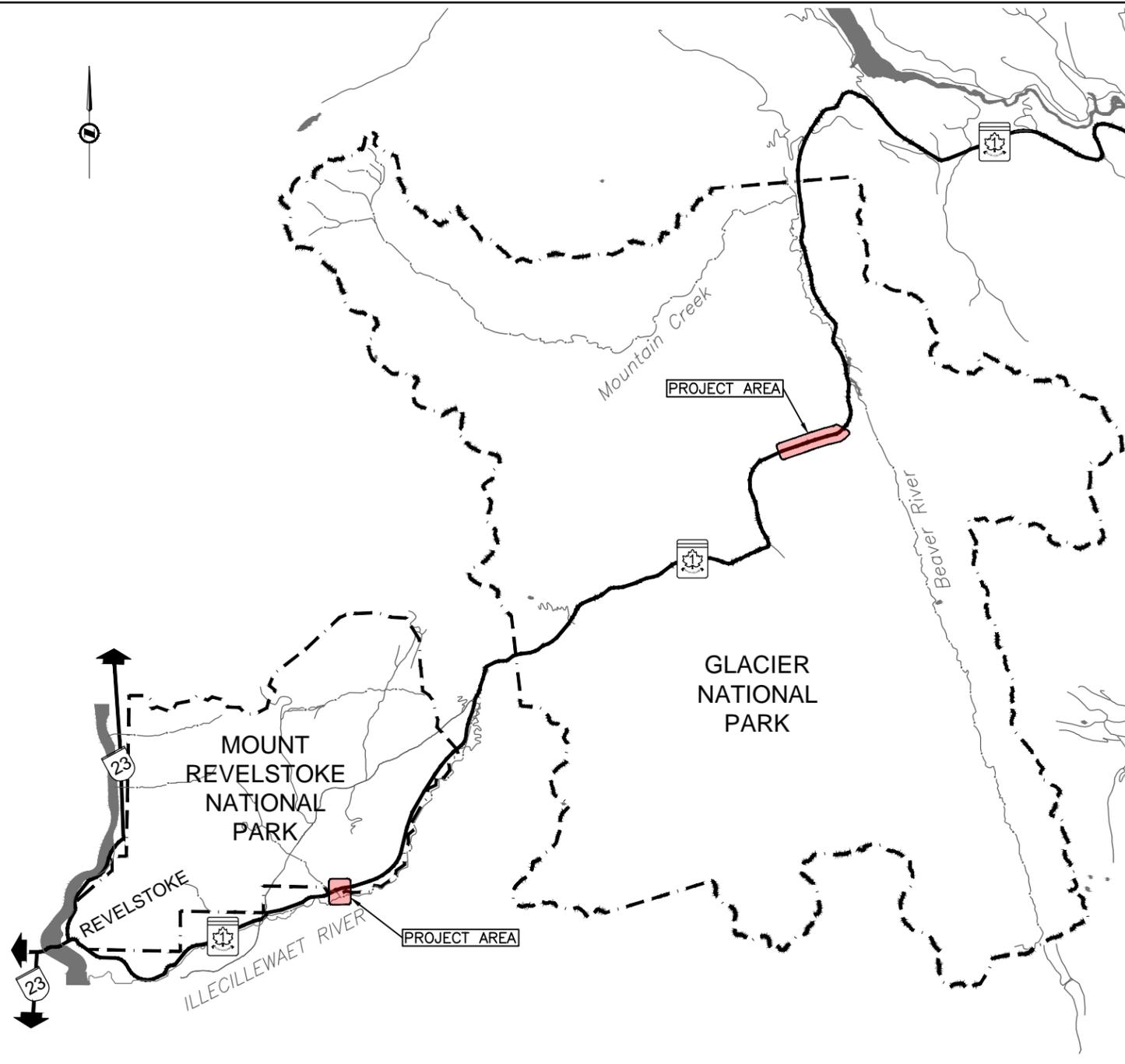
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LOCATION PLAN

ALIGNMENT ABBREVIATIONS

- BC - BEGINNING OF CURVE
- EC - END OF CURVE
- TC - TANGENT TO CURVE
- TS - TANGENT TO SPIRAL
- SC - SPIRAL TO CURVE
- CS - CURVE TO SPIRAL
- ST - SPIRAL TO TANGENT
- CT - CURVE TO TANGENT
- PCC - POINT OF COMPOUND CURVATURE
- POT - POINT ON TANGENT
- POC - POINT ON CURVE
- POS - POINT ON SPIRAL
- BVC - BEGINNING OF VERTICAL CURVE
- EVC - END OF VERTICAL CURVE
- PVI - POINT OF VERTICAL INTERSECTION
- ELEV - ELEVATION
- PI - POINT OF INTERSECTION
- STA - STATION

MISCELLANEOUS ABBREVIATIONS

- AT - ALBERTA TRANSPORTATION
- BH - BORE HOLE
- BW - BACK OF SIDEWALK
- CB - CATCH BASIN
- C&G - CURB AND GUTTER
- CDB - CONCRETE DRAINAGE BARRIER
- CI - CULVERT INLET
- C.I.P. - CAST IN PLACE CONCRETE
- CMB - CONCRETE MEDIAN BARRIER
- CO - CULVERT OUTLET
- CULV - CULVERT
- DES - DESIGN
- E.O.P. - EDGE OF PAVEMENT
- EB - EASTBOUND
- EX - EXISTING
- INV - INVERT
- LOG - LIP OF GUTTER
- LS - LIGHT STANDARD
- LT - LEFT TURN
- MH - MANHOLE
- MoTI - BC MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
- NB - NORTHBOUND
- N.I.C. - NOT IN CONTRACT
- PROP - PROPOSED
- PP - POWER POLE
- RT - RIGHT TURN
- S - SANITARY
- SB - SOUTHBOUND
- ST - STORM
- W - WATER
- WB - WESTBOUND

EXISTING	DESCRIPTION	PROPOSED
— EW —	CONTROL LINE AND STATIONING	67+500
~~~~~	EDGE OF WATER	—
~~~~~	TREE LINE	—
+++++	CANADIAN PACIFIC RAILWAY	—
—○—○—	GUARD RAIL C/W POSTS	—
---	EDGE OF GRAVEL ROAD	---
---	EDGE OF PAVEMENT	---
---	EDGE OF GRAVEL SHOULDER	---
1012.14	SUBGRADE ELEVATION	—
—	CONCRETE BARRIER	—
—	OVERLAY (50mm)	▨
—	MILL & INLAY (50mm)	▩
—	MILLED TIE IN	▧
—	RECLAMITE SURFACE TREATMENT	▨
—	BARRIER FLARE	▭
---	DRAINAGE ROAD SIDE DITCH	---
---	CULVERT	---
---	TOP OF BANK	---
---	TOP OF CUT	T.O.C.
---	BOTTOM OF FILL	B.O.F.
~~~~~	TREELINE	---
---	GATE	---
---	FENCE LINE	---
---	POWER POLE	---
---	UNDERGROUND TEL & MANHOLE	---
---	POWER POLE WITH LIGHT	---
---	UTILITY POLE	---
---	ROAD SIGN (SINGLE POLE)	—
---	ROAD SIGN (MULTIPLE POLES)	— —
---	ROAD SIGN (DOUBLESIDED)(SINGLE POLE)	— —
---	ROAD SIGN (CANTILEVER)	— —○
---	DELINEATOR POLE	— —
---	RETAINING WALL	— —
---	STREETLIGHT	— —○
---	SURVEY CONTROL POINT	— —▲

DRAWING INDEX				
SHEET NO	DRAWING NO	SUBSET	DRAWING TITLE	
000-GENERAL				
1	G-000		COVER	
2	G-002		LOCATION PLAN	LEGEND & DRAWING INDEX
100-PAVEMENT REHABILITATION PLANS				
3	C-101	SITE PLAN	PAVEMENT TREATMENT	STA 15+680 TO STA 16+100
4	C-102	SITE PLAN	PAVEMENT TREATMENT	STA 16+100 TO STA 17+400
5	C-103	SITE PLAN	PAVEMENT TREATMENT	STA 17+400 TO STA 18+700
6	C-104	SITE PLAN	PAVEMENT TREATMENT	STA 18+700 TO STA 19+900
200-BARRIER FLARE PLANS				
7	C-201	BARRIER FLARE	LAYOUT PLAN	SITE 1 - KM 17.2 SITE 2 - KM 18.0
8	C-202	MOUNT REVELSTOKE	KM12.24 EX CSP REMOVAL	PLAN & SECTION
300-TYPICAL DETAILS				
9	C-301	TYPICAL SECTIONS	PAVEMENT OVERLAY & BARRIER FLARE WIDENING	
10	C-302	TYPICAL SECTIONS	MILLING, BARRIER, & SPILLWAY DETAILS	

TO	2022-06-03	ISSUED FOR TENDER	MMK	JH	DL
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Rev.	Date	Description	Drawn Dessiné	Designed Conçu	Approved Approuvé

A	detail number	A
B	numero de detail	B
C	source drawing no.	C
	de dessin no.	
	detail on drawing no.	
	detail sur dessin no.	

Consultant's Stamp  
Sceau de l'expert-conseil

Eng. Stamp  
Sceau de l'ingénieur

Client

Parks Canada Agency

L'Agence Parcs Canada

Consultant's Name  
Nom de l'expert-conseil

Project Title  
Titre du projet

**TRANS CANADA HIGHWAY PAVEMENT REHABILITATION & BARRIER IMPROVEMENTS**

GLACIER NATIONAL PARK, BC  
MOUNT REVELSTOKE NATIONAL PARK, BC

Drawing Title  
Titre du dessin

**LOCATION PLAN LEGEND & DRAWING INDEX**

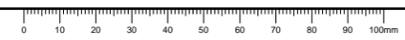
Surveyed by / Arpenté par <b>MCELHANNEY</b>	Drawn by / Dessiné par <b>MMK</b>	Date <b>2022-06-03</b>
Designed by / Conçu par <b>JH</b>	Reviewed by / Révisé par <b>DL</b>	Scale / Echelle <b>NOT TO SCALE</b>

Client Acceptance / Acceptation du client		Approved by / Approuvé par
Parks Canada Responsible Officer / Agente Responsable Parcs Canada		Parks Canada Project Manager / Administrateur de Projets Parcs Canada

Project No. / No. du projet <b>2511-01292-00</b>	Asset No. / No. du bien	Sheet No. / No. de la feuille <b>2</b>
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Drawing Reference No. / No. de référence du dessin  
**G-002**

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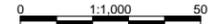
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**LEGEND**

-  OVERLAY (50mm)
-  MILLED TIE-IN
-  MILL & INLAY (50mm)
-  PROPOSED RECLAMITE SURFACE TREATMENT
-  REMOVE AND DISPOSE OF EX BARRIER
-  PROPOSED BARRIER FLARE




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A B C	detail number numéro de détail source drawing no. de dessin no. detail on drawing no. détail sur dessin no.	A B C
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Consultant's Stamp Sceau de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur 
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Client

 Parks Canada Agency      L'Agence Parcs Canada

Consultant's Name  
Nom de l'expert-conseil



Project Title  
Titre du projet

**TRANS CANADA HIGHWAY  
PAVEMENT REHABILITATION  
& BARRIER IMPROVEMENTS**

HIGHWAY 1  
GLACIER NATIONAL PARK, BC

Drawing Title  
Titre du dessin

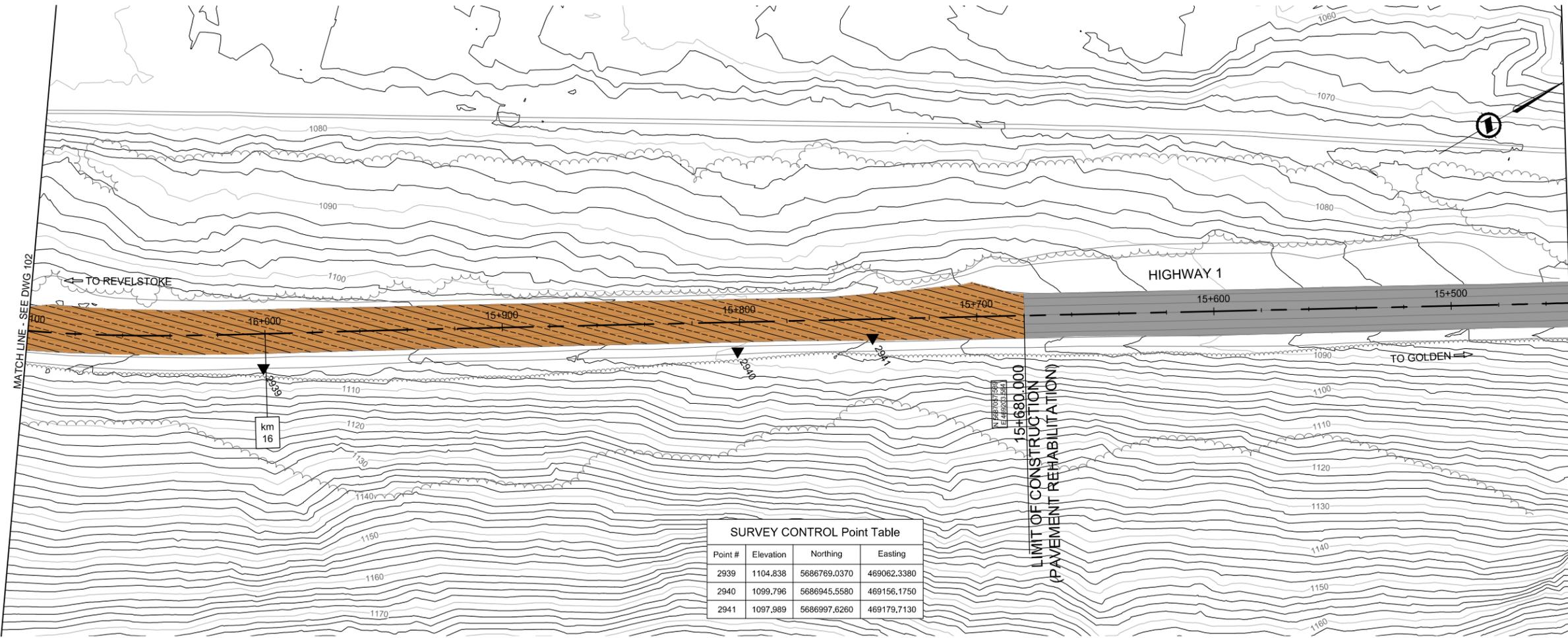
**SITE PLAN  
PAVEMENT TREATMENT  
STA 15+680 TO STA 16+100**

Surveyed by / Arpenté par <b>MCELHANNEY</b>	Drawn by / Dessiné par <b>MMK</b>	Date <b>2022-06-03</b>
Designed by / Conçu par <b>JH</b>	Reviewed by / Révisé par <b>DL</b>	Scale / Echelle <b>1:1000</b>

Parks Canada Project Manager / Administrateur de Projets Parcs Canada

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Project No. / No. du projet <b>2511-01292-00</b>	Asset No. / No. du bien	Sheet No. / No. de la feuille <b>3</b>
Drawing Reference No. / No. de référence du dessin <b>C-101</b>		



Point #	Elevation	Northing	Easting
2939	1104.838	5686769.0370	469062.3380
2940	1099.796	5686945.5580	469156.1750
2941	1097.989	5686997.6260	469179.7130

FILE G:\PROJECTS\2511-01\107-00-AVALANCHE MITIGATION\GNP\10.0 DRAWINGS\10.0 GNP BARRIERS\10.0 SHEET FILES\C-101-00 PLANS.DWG PLOTTED: 2022/06/03 1:48 PM





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**LEGEND**

-  OVERLAY (50mm)
-  MILLED TIE-IN
-  MILL & INLAY (50mm)
-  PROPOSED RECLAMITE SURFACE TREATMENT
-  REMOVE AND DISPOSE OF EX BARRIER
-  PROPOSED BARRIER FLARE



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de dessin no.  
detail on drawing no.  
detail sur dessin no.



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Eng. Stamp  
Sceau de l'ingénieur



Client



Parks Canada Agency L'Agence Parcs Canada

Consultant's Name  
Nom de l'expert-conseil



Project Title  
Titre du projet

**TRANS CANADA HIGHWAY PAVEMENT REHABILITATION & BARRIER IMPROVEMENTS**  
HIGHWAY 1  
GLACIER NATIONAL PARK, BC

Drawing Title  
Titre du dessin

**SITE PLAN PAVEMENT TREATMENT STA 17+400 TO STA 18+700**

Surveyed by / Arpenté par <b>MCELHANNY</b>	Drawn by / Dessiné par <b>MMK</b>	Date <b>2022-06-03</b>
Designed by / Conçu par <b>JH</b>	Reviewed by / Révisé par <b>DL</b>	Scale / Echelle <b>1:1000</b>

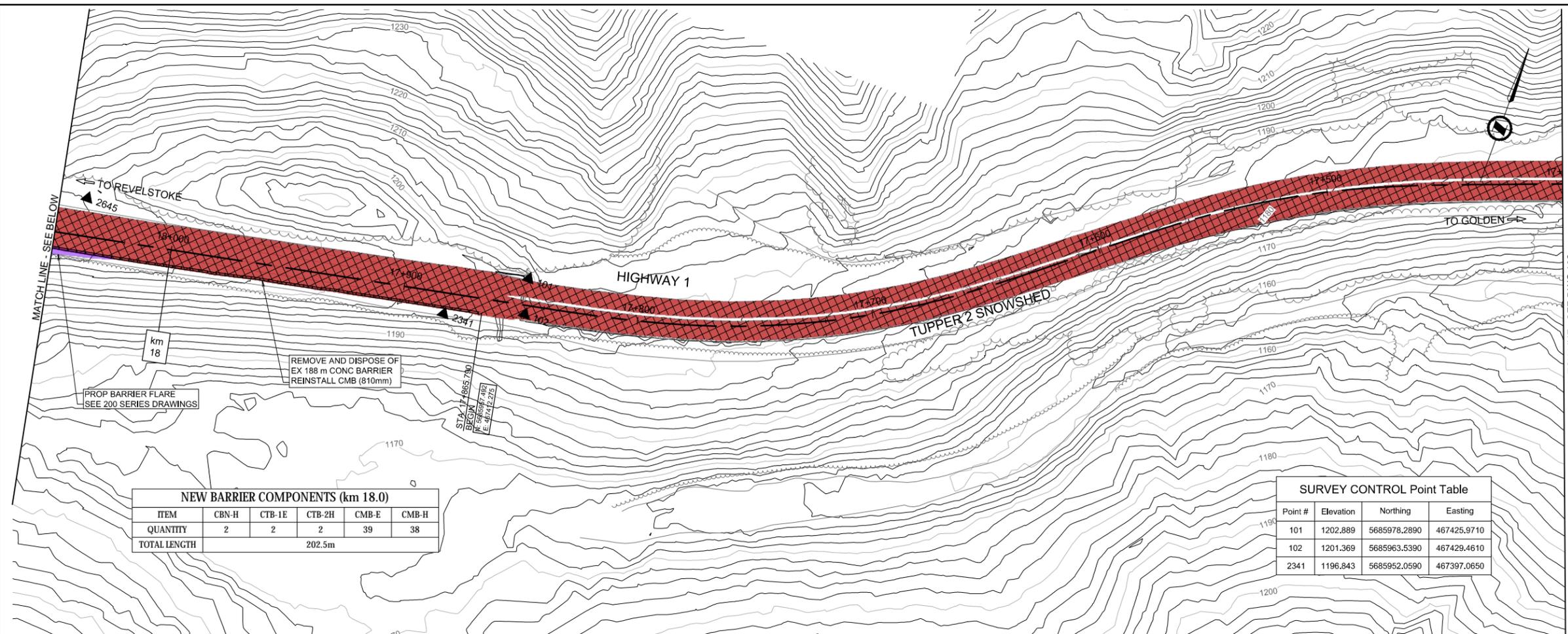
Parks Canada Project Manager / Administrateur de Projets Parcs Canada

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Approved by / Approuvé par

Project No. / No. du projet <b>2511-01292-00</b>	Asset No. / No. du bien	Sheet No. / No. de la feuille <b>5</b>
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Drawing Reference No. / No. de référence du dessin  
**C-103**



**NEW BARRIER COMPONENTS (km 18.0)**

ITEM	CBN-H	CTB-1E	CTB-2H	CMB-E	CMB-H
QUANTITY	2	2	2	39	38
TOTAL LENGTH	202.5m				

**SURVEY CONTROL Point Table**

Point #	Elevation	Northing	Easting
101	1202.889	5685978.2890	467425.9710
102	1201.369	5685963.5390	467429.4610
2341	1196.843	5685952.0590	467397.0650

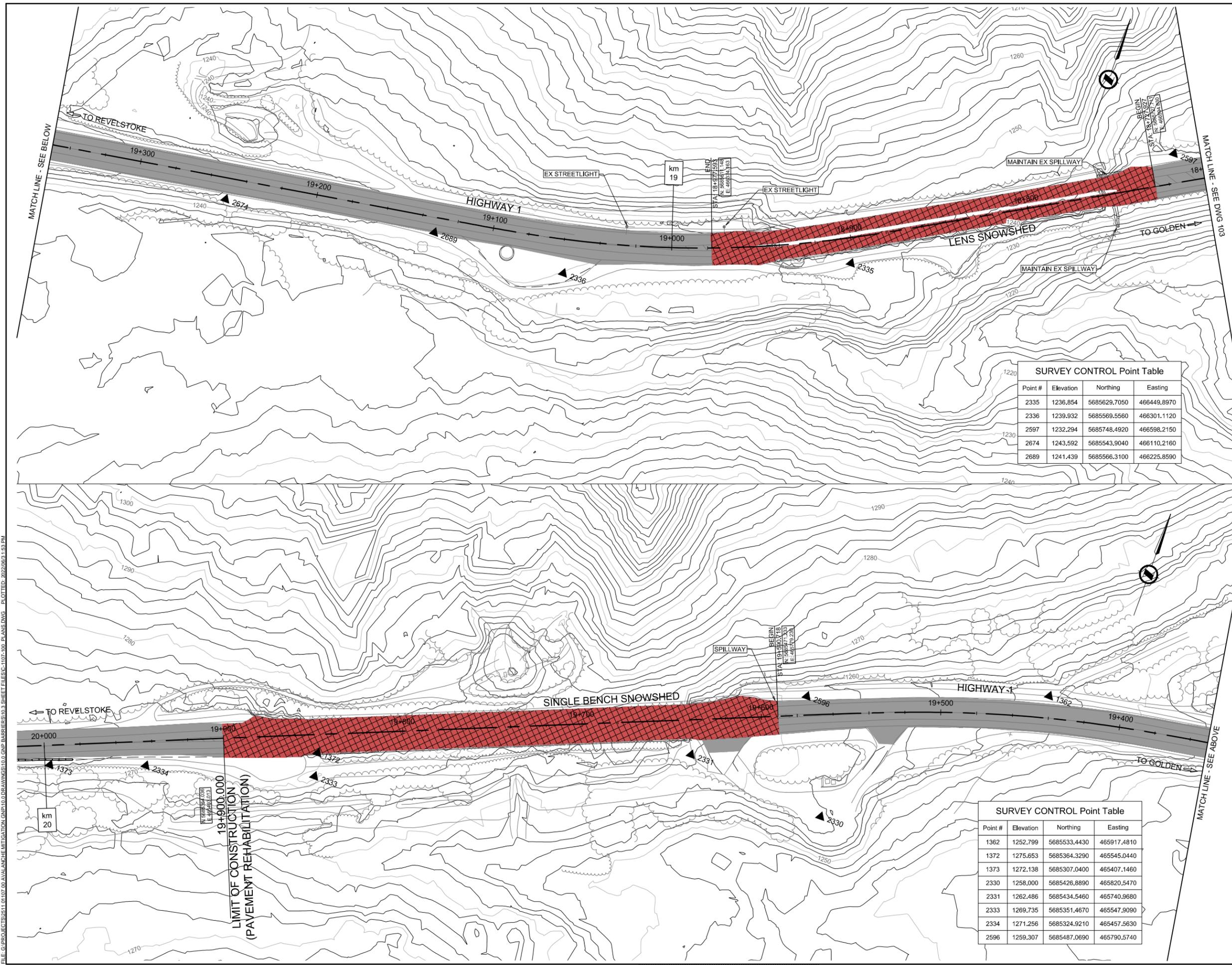
**SURVEY CONTROL Point Table**

Point #	Elevation	Northing	Easting
2337	1230.876	5685754.8910	466657.5970
2338	1225.571	5685837.0570	466802.6680
2339	1221.075	5685880.3860	466919.6360
2340	1207.939	5685916.8040	467214.4440
2590	1228.745	5685805.1720	466708.3700
2600	1225.010	5685874.9760	466833.0080
2751	1221.131	5685884.4210	466923.3080

FILE G:\PROJECTS\2511-01\107-00-AVALANCHE MITIGATION\GNP\100 DRAWINGS\100-3 BARRIERS\100-3 SHEET FILES\C-107-100-PLANS.DWG PLOTTED: 2022/06/03 1:52 PM

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**LEGEND**

- OVERLAY (50mm)
- MILLED TIE-IN
- MILL & INLAY (50mm)
- PROPOSED RECLAMITE SURFACE TREATMENT
- REMOVE AND DISPOSE OF EX BARRIER
- PROPOSED BARRIER FLARE



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C		C

Consultant's Stamp / Sceau de l'expert-conseil

Eng. Stamp / Sceau de l'ingénieur

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Parks Canada Agency / L'Agence Parcs Canada

Consultant's Name / Nom de l'expert-conseil

**McElhanney**

Project Title / Titre du projet

**TRANS CANADA HIGHWAY PAVEMENT REHABILITATION & BARRIER IMPROVEMENTS**  
HIGHWAY 1  
GLACIER NATIONAL PARK, BC

Drawing Title / Titre du dessin

**SITE PLAN PAVEMENT TREATMENT STA 18+700 TO STA 19+900**

Surveyed by / Arpenté par	Drawn by / Dessiné par	Date
MCELHANEY	MMK	2022-06-03
Designed by / Conçu par	Reviewed by / Révisé par	Scale / Echelle
JH	DL	1:1000

Parks Canada Project Manager / Administrateur de Projets Parcs Canada

Client Acceptance / Acceptation du client	Approved by / Approuvé par

Project No. / No. du projet	Asset No. / No. de la feuille	Sheet No. / No. de la feuille
2511-01292-00		6

Drawing Reference No. / No. de référence du dessin

C-104

**SURVEY CONTROL Point Table**

Point #	Elevation	Northing	Easting
2335	1236.854	5685629.7050	466449.8970
2336	1239.932	5685569.5560	466301.1120
2597	1232.294	5685748.4920	466598.2150
2674	1243.592	5685543.9040	466110.2160
2689	1241.439	5685566.3100	466225.8590

**SURVEY CONTROL Point Table**

Point #	Elevation	Northing	Easting
1362	1252.799	5685533.4430	465917.4810
1372	1275.653	5685364.3290	465545.0440
1373	1272.138	5685307.0400	465407.1460
2330	1258.000	5685426.8890	465820.5470
2331	1262.486	5685434.5460	465740.9680
2333	1269.735	5685351.4670	465547.9090
2334	1271.256	5685324.9210	465457.5630
2596	1259.307	5685487.0690	465790.5740

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**LEGEND**



0 1:250 10

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**TRANS CANADA HIGHWAY PAVEMENT REHABILITATION & BARRIER IMPROVEMENTS**  
HIGHWAY 1  
GLACIER NATIONAL PARK, BC

Drawing Title  
Titre du dessin

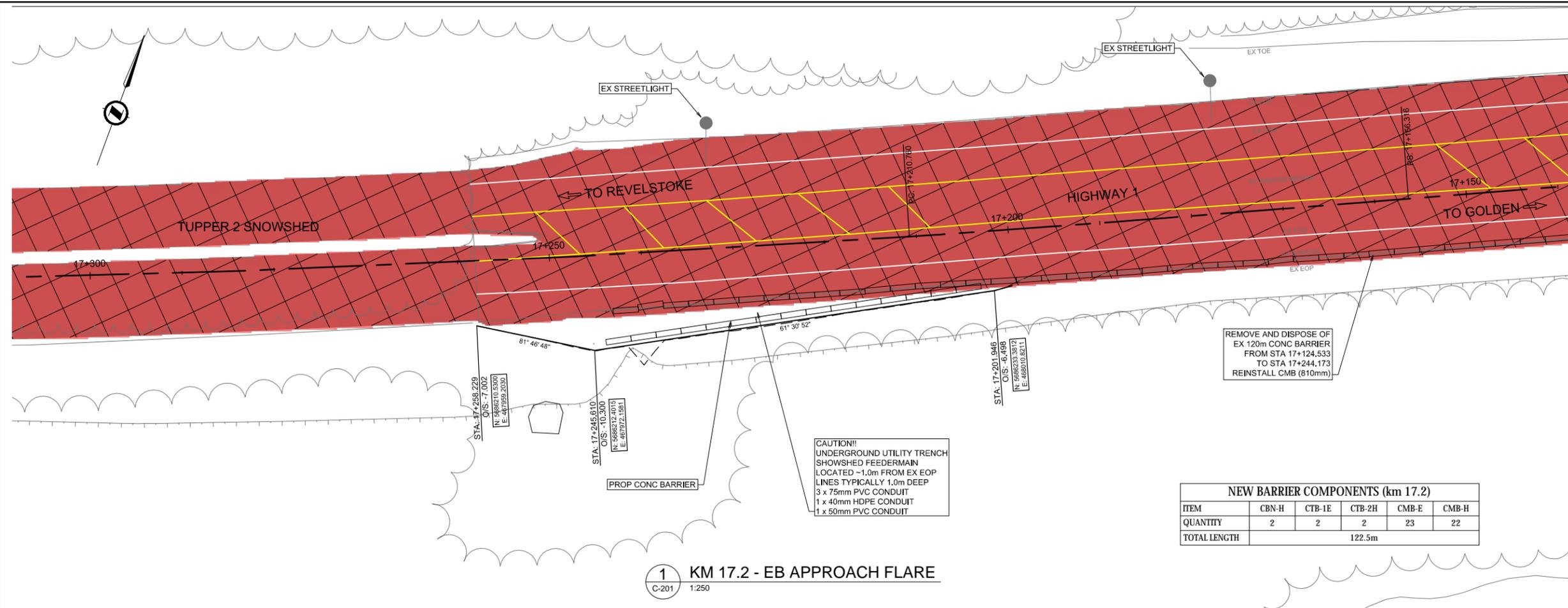
**BARRIER FLARE LAYOUT PLAN**  
SITE 1 - KM 17.2  
SITE 2 - KM 18.0

Surveyed by / Arpenté par <b>MCELHANNY</b>	Drawn by / Dessiné par <b>MMK</b>	Date <b>2022.06.03</b>
Designed by / Conçu par <b>JH</b>	Reviewed by / Révisé par <b>DL</b>	Scale / Echelle <b>1:250</b>

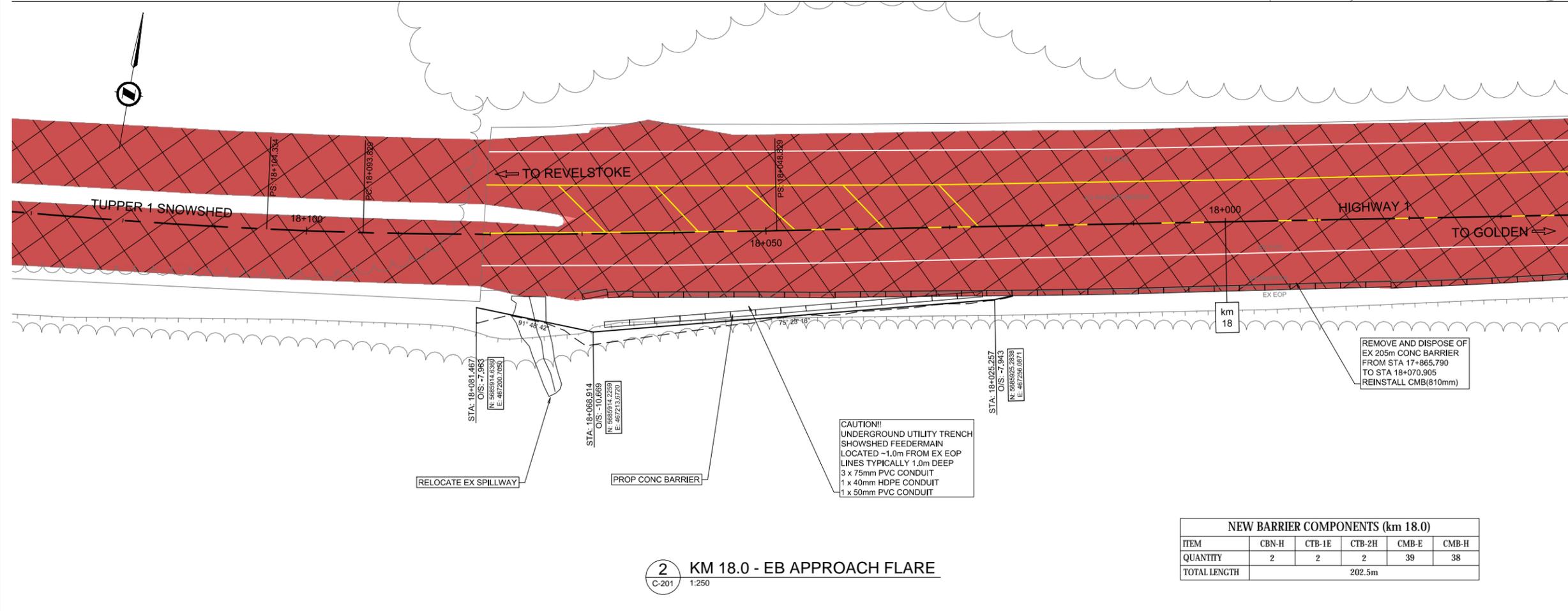
Parks Canada Project Manager / Administrateur de Projets Parcs Canada

Client Acceptance / Acceptation du client	Approved by / Approuvé par
Parks Canada Responsible Officer / Agente Responsable Projets Canada	Parks Canada Project Manager / Administrateur de Projets Parcs Canada

Project No. / No. du projet <b>2511-01292-00</b>	Asset No. / No. du bien	Sheet No. / No. de la feuille <b>7</b>
Drawing Reference No. / No. de référence du dessin <b>C-201</b>		



**1 KM 17.2 - EB APPROACH FLARE**  
C-201 1:250



**2 KM 18.0 - EB APPROACH FLARE**  
C-201 1:250

FILE G:\PROJECTS\2511-01\107-00-AVALANCHE MITIGATION-GN1\10.0 DRAWINGS\10.0 GNP BARRIERS\10.3 SHEET FILES\C-1107-200 PLANS.DWG - PLOTTED: 2022/06/03 12:09 PM

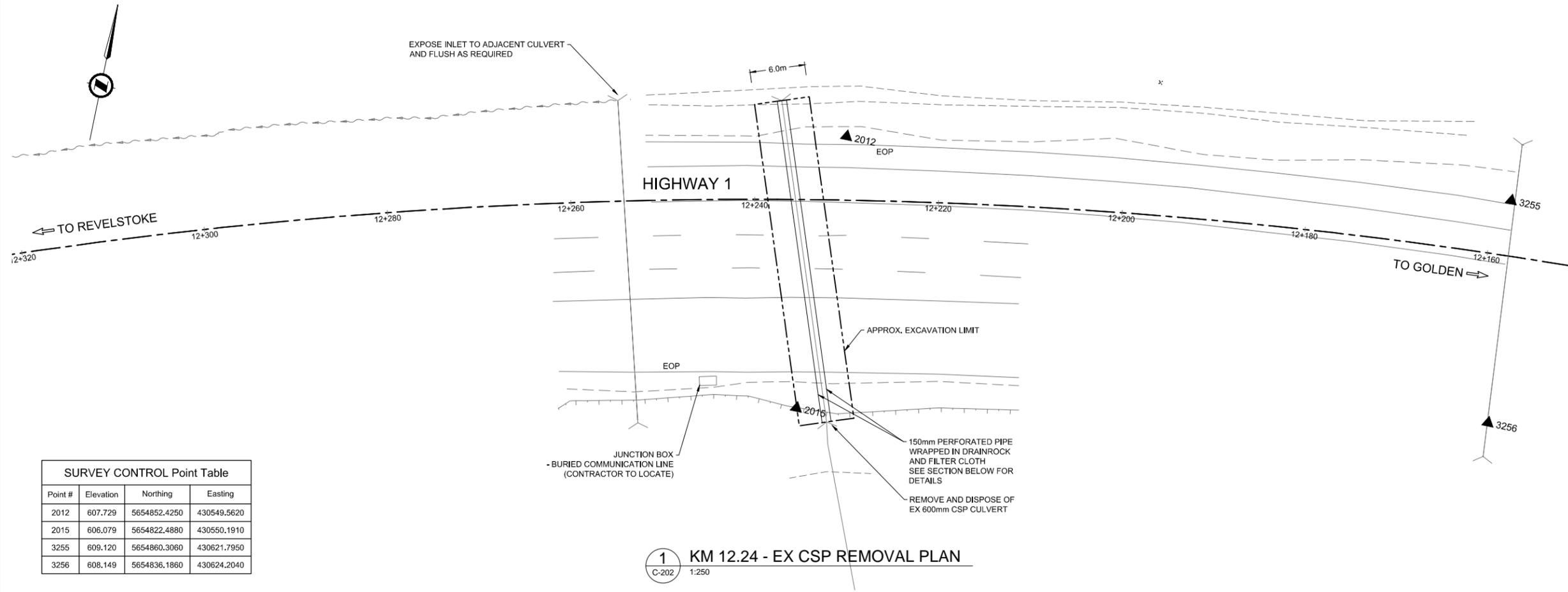


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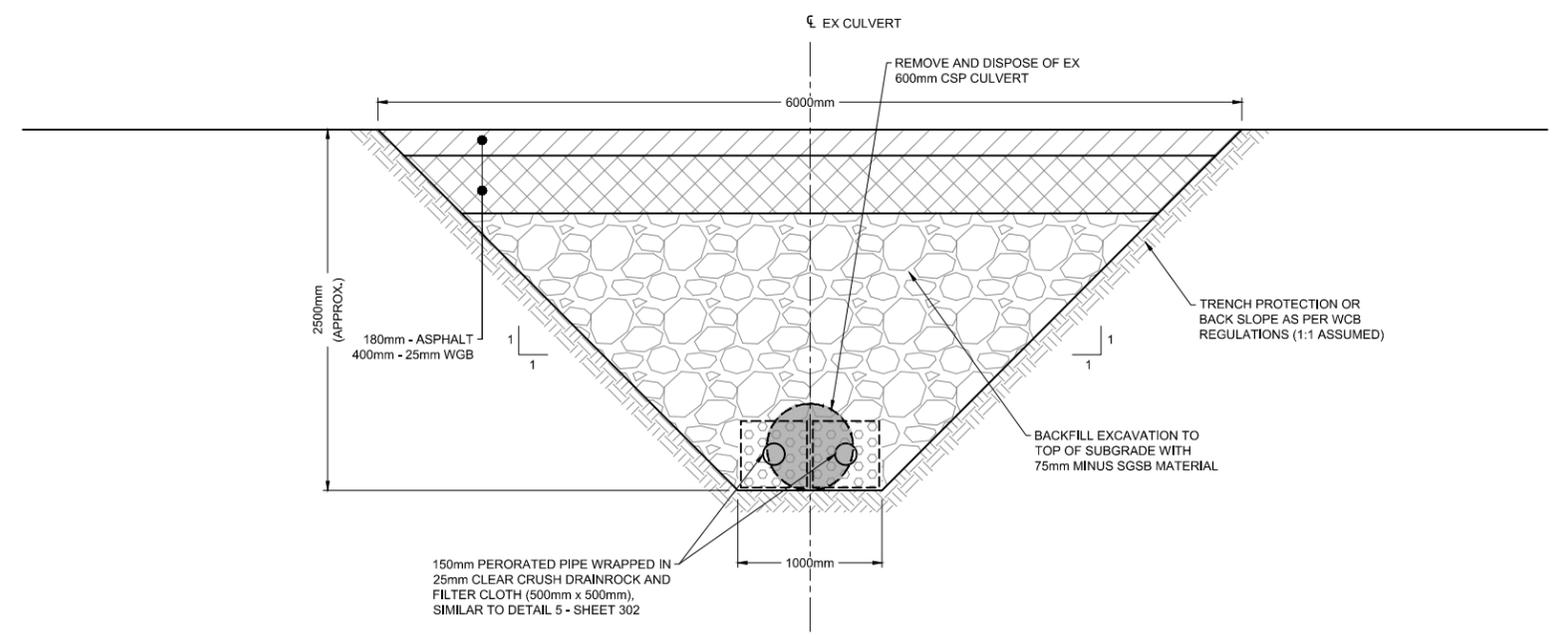
COORDINATES ARE GRID IN NAD 83 CSRS UTM ZONE 11. ALL ELEVATIONS ARE GEODETIC. ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE NOTED.



**SURVEY CONTROL Point Table**

Point #	Elevation	Northing	Easting
2012	607.729	5654852.4250	430549.5620
2015	606.079	5654822.4880	430550.1910
3255	609.120	5654860.3060	430621.7950
3256	608.149	5654836.1860	430624.2040

**1 KM 12.24 - EX CSP REMOVAL PLAN**  
C-202 1:250



**2 KM 12.24 - EX CSP REMOVAL SECTION**  
C-202 1:25



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To	2022-06-03	ISSUED FOR TENDER	MMK	JH	DL
Rev.	Date	Description	Drawn Dessiné	Designed Conçu	Approved Approuvé

<p>A detail number numéro de détail</p> <p>B source drawing no. de dessin no.</p> <p>C detail on drawing no. détail sur dessin no.</p>	<p>A</p> <p>B</p> <p>C</p>
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<p>Consultant's Stamp Sceau de l'expert-conseil</p>	<p>Eng. Stamp Sceau de l'ingénieur</p>
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Client

Parks Canada Agency L'Agence Parcs Canada

Consultant's Name  
Nom de l'expert-conseil

Project Title  
Titre du projet

**TRANS CANADA HIGHWAY PAVEMENT REHABILITATION & BARRIER IMPROVEMENTS**

HIGHWAY 1  
MOUNT REVELSTOKE NATIONAL PARK, BC

Drawing Title  
Titre du dessin

**MOUNT REVELSTOKE KM 12.24 EX CSP REMOVAL PLAN & SECTION**

Surveyed by / Arpenté par <b>MCELHANNEY</b>	Drawn by / Dessiné par <b>MMK</b>	Date <b>2022-06-03</b>
Designed by / Conçu par <b>JH</b>	Reviewed by / Révisé par <b>DL</b>	Scale / Echelle <b>AS NOTED</b>

Parks Canada Project Manager / Administrateur de Projets Parcs Canada

Client Acceptance / Acceptation du client

Approved by / Approuvé par

Project No. / No. du projet <b>2511-01292-00</b>	Asset No. / No. du bien	Sheet No. / No. de la feuille <b>8</b>
Drawing Reference No. / No. de référence du dessin <b>C-202</b>		

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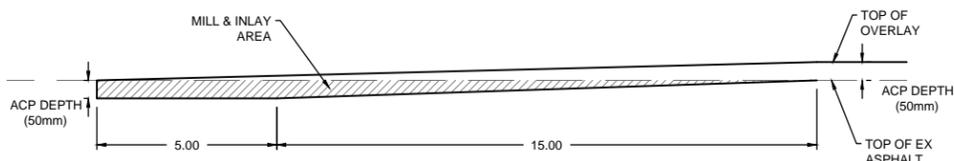


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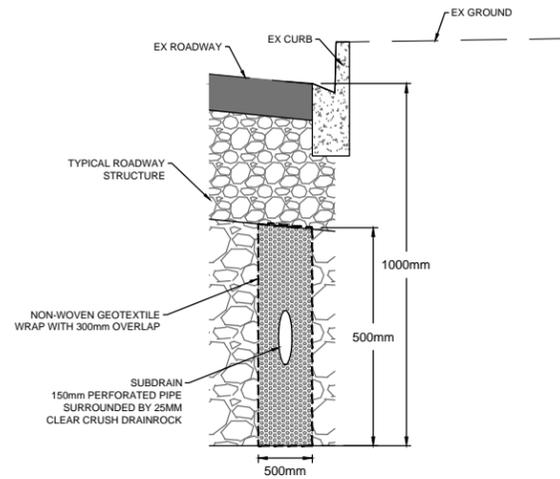
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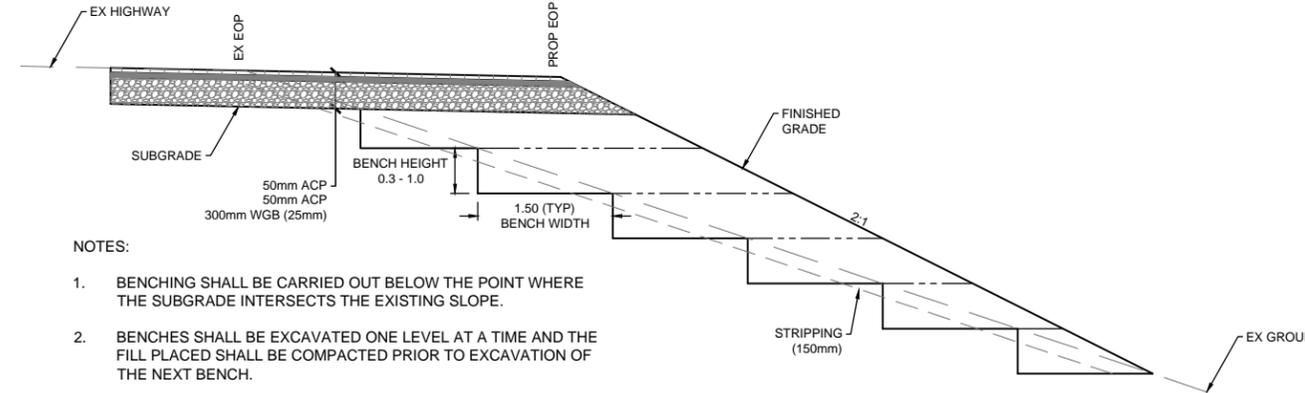
COORDINATES ARE GRID IN NAD 83 CSRS UTM ZONE 11. ALL ELEVATIONS ARE GEODETIC. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.



**4 TYPICAL MILLING TIE-IN (LONGITUDINAL)**  
C-302 1:100



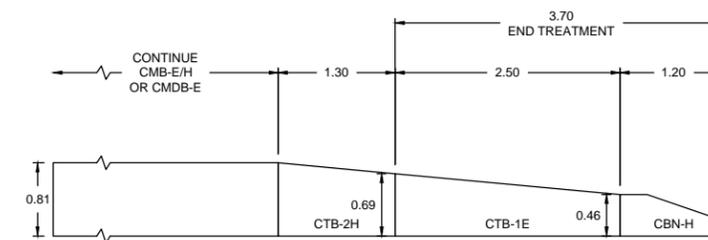
**5 TYPICAL SUBDRAIN PLACEMENT**  
C-302 1:40 (V.E.) 4:1



NOTES:

- BENCHING SHALL BE CARRIED OUT BELOW THE POINT WHERE THE SUBGRADE INTERSECTS THE EXISTING SLOPE.
- BENCHES SHALL BE EXCAVATED ONE LEVEL AT A TIME AND THE FILL PLACED SHALL BE COMPACTED PRIOR TO EXCAVATION OF THE NEXT BENCH.
- BENCHING IS NOT REQUIRED ON SLOPES FLATTER THAN 3:1.
- ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.

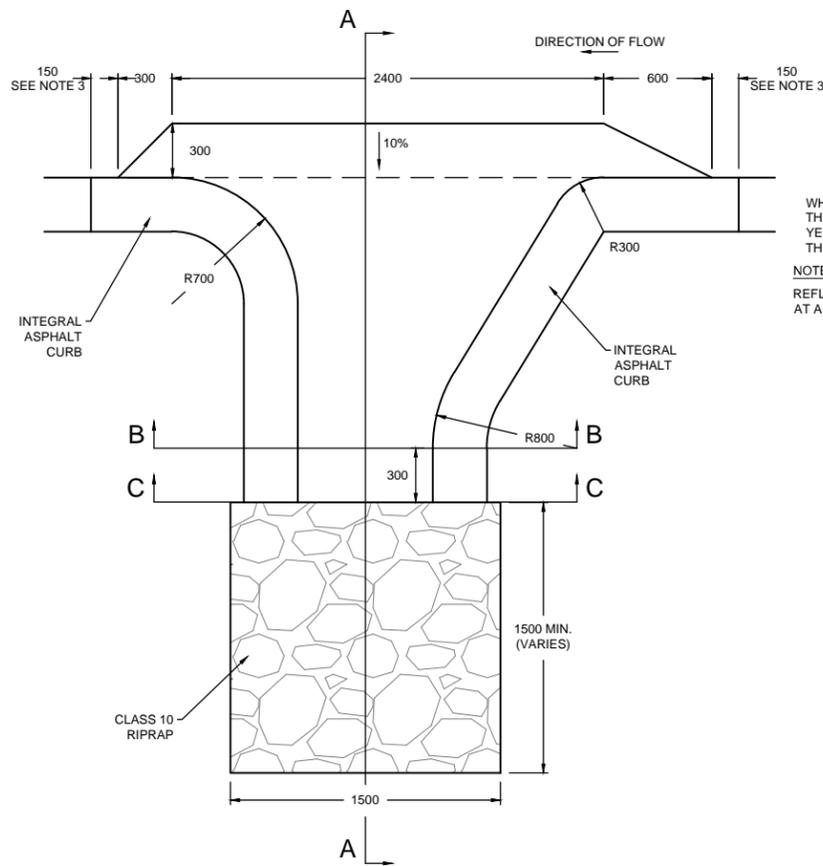
**6 TYPICAL SLOPE BENCHING**  
C-302 1:20



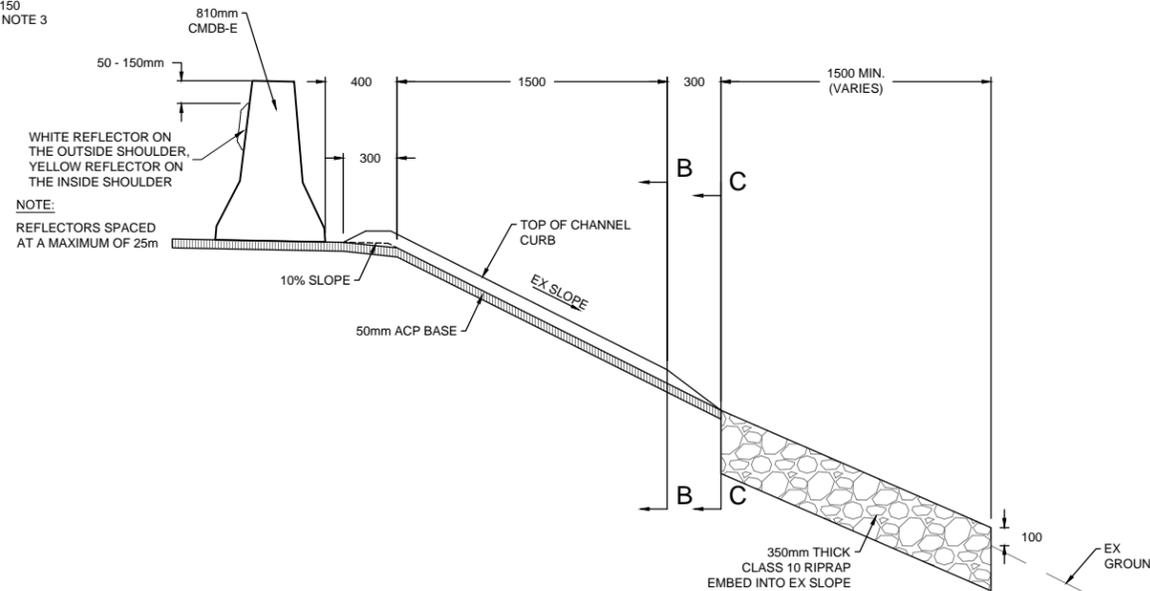
NOTES:

- REFER TO BC MOTI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SECTION 941 FOR STANDARD BARRIER DRAWINGS.
- DRAINAGE BARRIER PIECES (CMB-E) SHALL BE INSTALLED AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE.

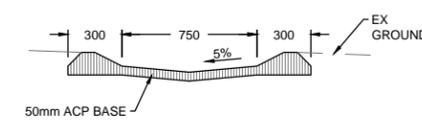
**7 TYPICAL BARRIER END TREATMENT**  
C-302 1:40



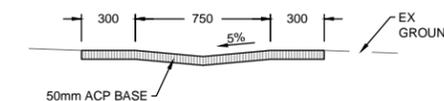
**8 TYPICAL ASPHALT SPILLWAY - PLAN**  
C-302 1:20



**A SECTION A-A: ASPHALT SPILLWAY**  
C-302 1:40



**B SECTION B-B: ASPHALT SPILLWAY**  
C-302 1:40



**C SECTION C-C: ASPHALT SPILLWAY**  
C-302 1:40

NOTES:

- SPILLWAYS ARE TO BE LOCATED AT THE DOWNHILL END OF INTEGRAL ASPHALT CURBS OR BARRIER STRINGS.
- ADDITIONAL SPILLWAYS SHALL BE PROVIDED AT 100m INTERVALS ALONG CURBS AND BARRIERS.
- INTEGRAL ASPHALT CURB SHALL BE FORMED AT DRAINAGE BARRIER OUTLETS USING A 150mm TRANSITION.
- SPILLWAYS ARE NOT REQUIRED WHERE ROADWAY GRADE IS FLATTER THAN 3%.

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To	2022-06-03	ISSUED FOR TENDER	MMK	JH	DL
Rev.	Date	Description	Drawn Dessiné	Designed Conçu	Approved Approuvé

A	detail number	A
B	numero de detail	B
C	source drawing no.	C
	de dessin no.	
	detail on drawing no.	
	detail sur dessin no.	

Consultant's Stamp Sceau de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
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Client	Parks Canada Agency L'Agence Parcs Canada
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Consultant's Name Nom de l'expert-conseil	<b>McElhanney</b>
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Project Title Titre du projet	<b>TRANS CANADA HIGHWAY PAVEMENT REHABILITATION &amp; BARRIER IMPROVEMENTS</b> GLACIER NATIONAL PARK, BC MOUNT REVELSTOKE NATIONAL PARK, BC
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Drawing Title Titre du dessin	<b>TYPICAL SECTIONS MILLING, BARRIER, &amp; SPILLWAY DETAILS</b>
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Surveyed by / Arpenté par <b>McELHANNEY</b>	Drawn by / Dessiné par <b>MMK</b>	Date 2022-06-03
Designed by / Conçu par <b>JH</b>	Reviewed by / Révisé par <b>DL</b>	Scale / Echelle AS NOTED

Parks Canada Project Manager / Administrateur de Projets Parcs Canada	
Client Acceptance / Acceptation du client	Approved by / Approuvé par

Project No. / No. du projet 2511-01292-00	Asset No. / No. du bien	Sheet No. / No. de la feuille 10
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Drawing Reference No. / No. de référence du dessin C-302
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