AGNICO EAGLE

Side Slopes of Proposed Waterlines

During the NIRB Technical meetings for the Water FEIS Amendment (held January 11 and 12, 2021), the Kivaliq Inuit Association (KivIA) requested more details on the proposed side slopes of the proposed waterlines, recorded as commitment 5:

a) Agnico Eagle will provide details on the proposed side slope of the covered waterlines on February 5, 2021.

b) Agnico Eagle will provide details on the actual side slopes ("as built") within 6 months of completion of the waterline construction.

Commitment **5, part a,** is fulfilled through this technical note and attached drawing which present details of the designed side slopes of the waterlines.

Drawing 65-180-230-241-RB (attached), is the typical cross-section of the waterline where it is covered by a sand and gravel granular fill and this cross-section will be prioritized along the entire road. The targeted slope is a 3 Horizontal: 1 Vertical. Where possible, this method of construction will effectively blend the waterline granular fill with the road, providing a monolithic block instead of two separate structures. The areas where this specific detail will apply represent between 80 and 90% of the total length of the waterline.

The areas where the road will be monolithic with the waterline backfill will not be designed to sustain heavy traffic loads and the cover will be at a different elevation than the road itself. However, periodic ATV, snowmobile crossings and caribou migration would not affect the structural integrity of the HDPE pipe. Ground conditions permitting, it is planned to excavate and partially embed the pipes in the existing ground to lower the total height of the waterline cover.

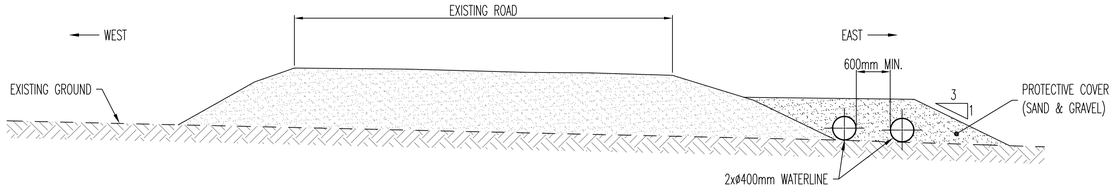
In some areas, due to topographical features or ground characteristics, we will need to deviate from the road as it would be either impossible to achieve the typical section or we would put the line at risk from snow removal operations. My estimate is that around 70-80% of the total length will use the section from drawing #241, and the remainder will be a mix of the sections from drawing #246.

The planned cover will be composed of esker material. Large sections of the AWAR are made of this material, as are the ATV crossings on the existing on-site waterline at Meliadine. This material provides for a firm substrate that allows people, caribou, and ATVs to cross easily." (From KivIA-TC-17)

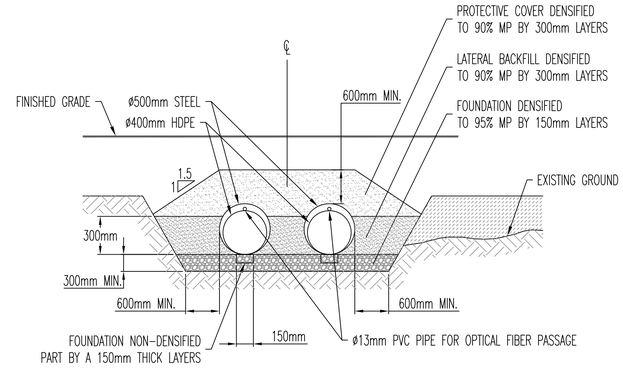
Where the waterline crosses between the west and east side of the AWAR, it will be embedded in a steel casing to handle the loads generated by the various traffic on the AWAR/By-pass. This can be seen in the section on the top right of the attached drawing. The leak detection fiber optic will also be located in the sleeves for its protection and to provide continuous leak detection along the waterline.

NO. DESSIN
DRAWING NO. 65-180-230-241

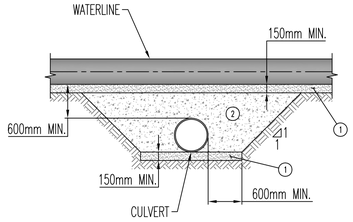
FORMAT ARCHD



TYPICAL SECTION – 2x16"ø WATERLINE NORMAL CONDITION
SCALE 1:50



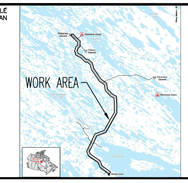
TYPICAL SECTION – ROAD CROSSING
SCALE NO SCALE



1. FOUNDATION DENSIFIED TO 95% MP
2. PROTECTIVE COVER DENSIFIED TO 90% MP BY 200mm LAYERS

TYPICAL SECTION – WATERLINE ABOVE A CULVERT
SCALE 1:50

PLAN CLÉ
KEY PLAN



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Projet No. : 674195

NOTES GÉNÉRALES / GENERAL NOTES

POUR COMMENTAIRES
FOR COMMENTS
AGNICO EAGLE
DATE : 2020-01-28

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

TITRE / TITLE	# DWG

AGNICO EAGLE

REV.	DATE	DESCRIPTION	PAR/BY	APP.	CLIENT
B	2021/01/28	FOR COMMENTS	V.J.T.	A.L.	B.R.
A	2020/08/07	FOR COMMENTS	V.J.T.	A.L.	B.R.

REVISIONS

TITRE / TITLE
AGNICO EAGLE – MELIADINE DIVISION
180 – SALINE EFFLUENT DISCHARGE SYSTEM
230 – GENERAL EARTH WORKS
PLAN
DISCHARGE TO SEA
DETAILS

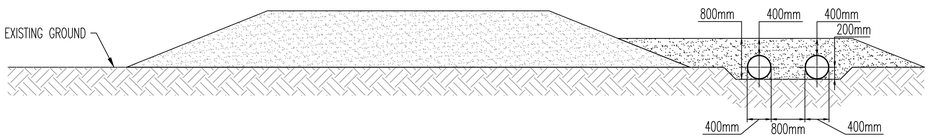
DESSINÉ PAR / DRAWN BY	DANY BOULIANNE L., Tech.	DATE 2020/05/19
VERIFIÉ PAR / CHECKED BY	VINCENT JODOIN-TÉTREAULT,P.Eng.	2020/05/19
APPROUVÉ PAR / APPROVED BY	ANDRÉ LEVESQUE,P.Eng.	2020/05/19
ÉCHELLE / SCALE	LIKE INDICATED	DATE 2020/05/19
NO. DESSIN / DRAWING NO.	65-180-230-241	
NO. PROJET / PROJECT NO.	6526	REVISION B
		FEUILLE / SHT 1 / 1

AC-CART-ARCH D

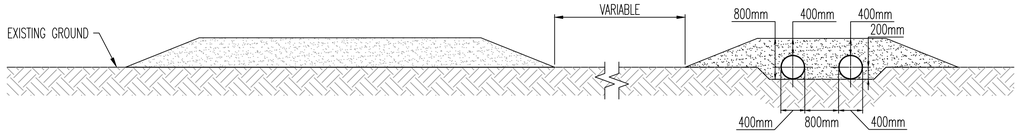
FILE NO.

NO. DESSIN
DRAWING NO. 65-180-230-246

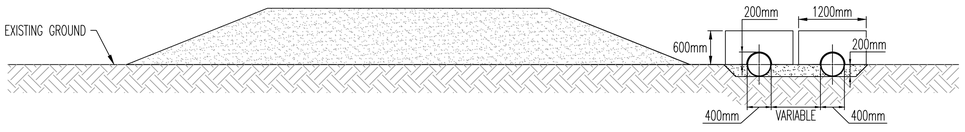
FORMAT ARCHD



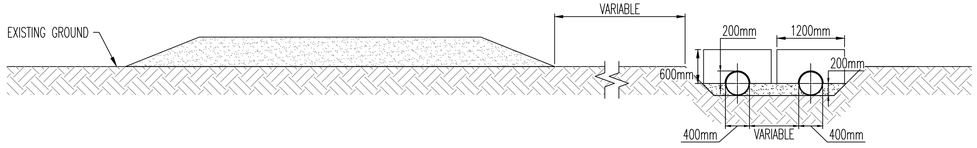
WELL DRAINED OVERBURDEN – ROAD EMBANKMENT TYPICAL SECTION 1
SCALE 1:50



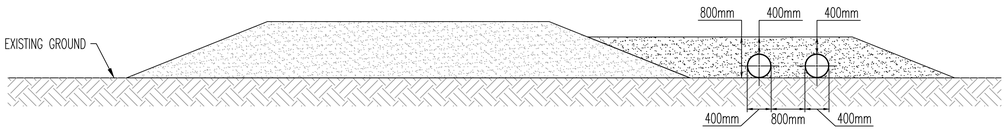
WELL DRAINED OVERBURDEN – ROAD EMBANKMENT TYPICAL SECTION 2
SCALE 1:50



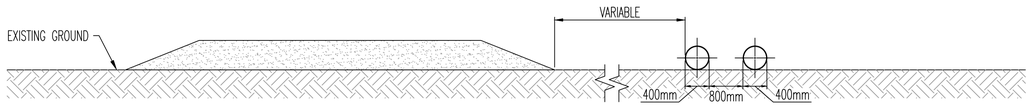
WET OVERBURDEN – ROAD EMBANKMENT TYPICAL SECTION 1
SCALE 1:50



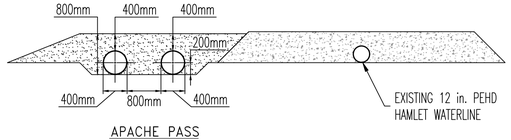
WET OVERBURDEN – ROAD EMBANKMENT TYPICAL SECTION 2
SCALE 1:50



ROCK SURFACE – ROAD EMBANKMENT TYPICAL SECTION 1
SCALE 1:50

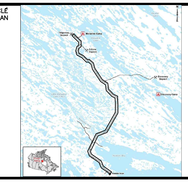


ROCK SURFACE – ROAD EMBANKMENT TYPICAL SECTION 2
SCALE 1:50



APACHE PASS
SCALE 1:50

PLAN CLÉ
KEY PLAN



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Projet No. : 674195

NOTES GÉNÉRALES / GENERAL NOTES

POUR COMMENTAIRES
FOR COMMENTS
AGNICO EAGLE
DATE : 2020-10-05

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

TITRE / TITLE	# DWG

AGNICO EAGLE

REV.	DATE	DESCRIPTION	PAR/BY	APP.	CLIENT
C	2020/10/05	FOR COMMENTS	A.L.	A.L.	B.R.
B	2020/08/18	FOR COMMENTS	A.L.	A.L.	B.R.
A	2020/08/07	FOR COMMENTS	V.J.T.	A.L.	B.R.

REVISIONS

TITRE / TITLE
AGNICO EAGLE – MELIADINE DIVISION
180 – SALINE EFFLUENT DISCHARGE SYSTEM
230 – GENERAL EARTH WORKS
SECTIONS
WATERLINE SECTION DRAWING

DESSINÉ PAR / DRAWN BY	ISABELLE PICHÉ, Tech.	DATE 2020/05/19
VERIFIÉ PAR / CHECKED BY	VINCENT JODOIN-TÉTREAULT,P.Eng.	2020/05/19
APPROUVÉ PAR / APPROVED BY	ANDRÉ LEVESQUE,P.Eng.	2020/05/19
ÉCHELLE / SCALE	LIKE INDICATED	DATE 2020/05/19

NO. DESSIN / DRAWING NO. 65-180-230-246

NO. PROJET / PROJECT NO.	REVISION	FEUILLE / SHT
6526	C	1 / 1

AE-CART-ARCH D

FILE NO.