



SNC • LAVALIN

**WHALE TAIL INFRASTRUCTURE ENGINEERING
PROJECT (AMARUQ)**
Nunavut



AGNICO EAGLE

WHALE TAIL PROJECT, NUNAVUT
DESIGN REPORT AND DRAWINGS
Design report for culverts (Road #24)

Prepared by:

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0	2019-07-22	For construction	RM	RM	PA
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Client Document No. 6115-C-230-001-REP-003 Client Project No. 6115			SNC Document No. 644819-0024-41ER-0005 SNC Project No. 644819		

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1. GENERAL

SNC-Lavalin Stavibel has been mandated by Agnico Eagle to design the infrastructure for the Whale Tail Project. The Amaruq property is a 408 square kilometer (km²) site located on Inuit-owned Land approximately 150 kilometers (km) north of the hamlet of Baker Lake and approximately 50 km northwest of Meadowbank Mine in the Kivalliq Region of Nunavut. The deposit will be mined as an open pit (i.e., Whale Tail Pit), and ore will be hauled by truck to the approved infrastructure at Meadowbank Mine for milling. The Project facilities will consist of a personnel camp, power plant, maintenance shop, tank farm, water and sewage collection and treatment system, haul roads and access roads.

The infrastructures have been designed to accommodate the personnel, equipment and fuel requirements. Given its location, project infrastructures have been designed to accommodate cold temperatures and permafrost conditions.

1.1. DEVELOPMENT OF ROAD INFRASTRUCTURES FOR THE MINING OPERATIONS

Road infrastructures are essential to allow mining/maintenance operations and an effective design is important for ensuring that these activities are not compromised.

In Appendix B, there is an overall plan showing the location of Road #24. This road is the extension of Road #22, already showed in the design report 6115-C-230-001-REP-001. The main function of this road is to provide access to the South Whale Tail diversion channel. This road will be use for the construction of the diversion channel and later for the maintenance of this infrastructure. So that Road #24 can be classified as an access road (provides activities for mining/maintenance operations by light vehicles or service vehicles).

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1.2. SCOPE OF WORK

SNC-Lavalin Stavibel Inc. has been hired by Agnico Eagle to provide professional engineering services related to the design of Road #24 and for drainage, respecting Water Management and Environment requirements.

Accordingly, the scope of the mandate includes:

- Geometric design of roads, their horizontal geometry and vertical profile.
- Structural design of the roads.
- Calculation of surface runoff rates and sizing of the culverts.
- Environmental impact attenuation measures during construction.
- Stabilization of structures.

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2. DESIGN CRITERIA – DESIGN OF CULVERTS

2.1. CULVERT DESIGN BASIS AND WATER MANAGEMENT STRATEGY

The overall objective of the water management strategy of this project is to develop a practical and feasible site-wide water management plan to minimize the potential negative impacts of mining development on the surrounding environment including fish and wildlife habitats, and facilitate mine operation and long-term closure and reclamation of the mine site. To attain this objective, culverts are used to control and divert runoff beneath the road and new facilities.

All culverts on Road #24 are required and installed at the lowest point of their watershed to allow runoff flow by gravity under the roads. Locations of proposed culverts are shown in Appendix B.

2.2. HYDRAULIC ANALYSES AND PEAK FLOW CALCULATION

Hydrologic and hydraulic analyses were carried out to determine culvert sizes to accommodate a 25-year peak design flow.

The Rational Method was used to determine peak flows. The Intensity-Duration-Frequency (IDF) curve developed by Environment Canada for Baker Lake Station was used. The 25-year recurrence period rainfall intensity for a duration equivalent to the time of concentration of the catchment area was used to determine the design peak flow for each culvert.

Estimated peak flows, culvert capacity and the characteristics of each culvert (Road #24) are given in Table 2.1 Culvert characteristics.

2.3. CULVERTS

A. Specification

All proposed culverts are Aluminized Corrugated Steel Pipe (ACSP) TYPE 2, with a profile of 68 x 13mm (helical) and a minimum size of 600mm. The thickness of each culvert is shown in the table below.

Ø	Gage (mm)
600	2.8
700	2.8
800	2.8
900	3.5
1000	3.5
1200	3.5
1400	4.2
1500	4.2

B. Installation

A minimum of fill cover will be placed over and all around the culverts according to the Standard Proctor Maximum Dry Density (ASTM D698) and these specifications:

- Minimum recovery height over culverts : 0.9 m
- Minimum spacing between culvert walls: 1.2 m
- Seating or recovery materials: MG 20 or (0-50mm)
- Seating thickness:
 - Recommended: 300 mm;
 - Minimum: 150 mm.

All details and layout for culvert installation are shown on drawing 61-417-230-226 presented in Appendix C. This drawing shown general information about culvert installation, some details aren't required for this report (i.e. saline protection and impervious gutter details).

Given the nature of the existing soils, which are composed of mostly gravel, sand and some silt, no special protection has been provided to protect culvert inverts from the effects of permafrost thaw. However, special precautions (compaction, material, etc.) will

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be applied for compaction of the bedding and lateral cover of culverts to avoid settlements.

As previously mentioned, Road #24 will be used for the construction/maintenance of the South Whale Tail diversion channel, so it must be built along this one to simplify the access to the works. As showed on the construction drawings (Appendix D), Road #24 passes through the Lake A45. But in fact, this Lake A45 will no longer exist after the construction of the channel, so the road can still along it.

The timeline, for the construction and installation of the culverts on Road #24 is planned in June 2019.

2.4. EROSION CONTROL

Erosion control is provided by the installation of rip rap at the culvert entrance and exit. The rip rap consists of fragmented rocks (150-300mm) from an NAG (Non Acid Generator) and Non Metal Leaching source of rock. To insure the quality of materials, a sampling protocol is followed on the construction site (180601-16MN056_ARD-ML Sampling Plan). For the installation, see drawing 61-417-230-226, in Appendix C.

During construction, in the summer, it is planned to use anti-sediment barriers (geotextile curtains) to limit erosion and the transport of fine particles into the watercourses.

Table 2.1: Culvert characteristics

LOCATION		Ø (mm)	Length (m)	Slope (%)	Material		Estimated Peak Flow (m³/s)	Culvert Flow capacity (m³/s)
ROAD	# CULVERT				Type	Thickness (mm)		
ROAD # 24 - SWDC road	24-1	700	18	2.6	ACSP	2.8	0.383	0.790
ROAD # 24 - SWDC road	24-2	900	22	2.0	ACSP	3.5	0.939	1.700
ROAD # 24 - SWDC road	24-3	700	18	2.9	ACSP	2.8	0.347	0.790

(1) ACSP: Aluminized Corrugated Steel Pipe

(2) All culverts are helical profile 68 x 13mm.

(3) SWDC: South Whale Tail Diversion Channel

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3. VARIOUS CALCULATIONS

A. Return period

- $T_c = 25$ years.
- T_c : Concentration time.

B. Calculation of peak flow

- Rational method
- $Q = CIA / 360$

Q : peak flow (m^3/s)

C : Coefficient of runoff

A : area of watershed (ha).

I : intensity of rainfall

C. Coefficient of runoff

- $C = 1.0$ (frozen or saturated soil condition)

D. Calculation of concentration time

- $T_c = 3.26 (1.1 - C) L^{0.5} / S^{0.33}$ $C < 0.4$
- $T_c = 0.057 L_c / (S_c^{0.2} \times A_b^{0.1})$ $C \geq 0.4$

E. Calculation of rainfall intensity

$$I_{(T, t_c)} = A / (t_c + B)^C$$

I : rainfall intensity (mm/h)

A, B, C : parameter of the IDF curve (recurrence T)

t_c : concentration time

T : rainfall recurrence

F. Parameters of the IDF curve

SNC QUEBEC - BAKER LAKE			
IDF CURVE WITH SWMHYMO			
RETURN PERIOD	PARAMETERS		
	A=	B=	C=
2	51	1.5	0.512
5	75	1.5	0.516
10	76	1.5	0.49
25	100	1.5	0.509
50	116	1.5	0.507
100	118	1.5	0.494

4. CONCLUSION

To achieve the water management strategy objective (showed in section 2.1), some culverts are required on the lowest point of Road #24 to make sure to allow gravity runoff water flow. Road #24 will be used for construction and maintenance of the South Whale Tail Diversion Channel, so it will be built along this one.

Culvert capacity and the characteristics of each culvert are given in Table 2.1 Characteristics of the culverts. Locations of proposed culverts are shown in Appendix B.

5. REPORT LIMITATIONS

This report and its contents are intended for the sole use of Agnico Eagle Mines Ltd., and their agents, SNC-Lavalin Stavibel does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Agnico Eagle Mines Ltd. or for any Project other than the proposed development at the subject site, Any such unauthorized use of this report is at the sole risk of the user, Use of this report is subject to the terms and conditions stated in SNC-Lavalin Stavibel's Services Agreement.

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6. FIGURES AND DRAWINGS

The following plans and drawings were prepared for the design of the structures (shown in Appendix D).

- **61-417-230-226_R3** : CROSS SECTION AND DETAILS
- **61-417-230-254_R2** : PLAN & PROFILE / ROADS #22 AND #24 – SOUTH WHALE TAIL DIVERSION CHANNEL / 1+800 @ 2+400
- **61-417-230-255_R2** : PLAN & PROFILE / ROAD #24 – SOUTH WHALE TAIL DIVERSION CHANNEL / 2+400 @ 2+900
- **61-417-230-256_R3** : PLAN & PROFILE / ROAD #24 – SOUTH WHALE TAIL DIVERSION CHANNEL / 2+900 @ 3+133
- **61-417-230-259_R2** : CROSS SECTIONS / ROADS #22 AND #24 – SOUTH WHALE TAIL DIVERSION CHANNEL / 1+800 @ 2+600
- **61-417-230-260_R2** : CROSS SECTIONS / ROADS #24 – SOUTH WHALE TAIL DIVERSION CHANNEL 2+670 @ 3+080
- **61-417-230-272_R0** : PLAN & PROFILE / ROAD #24 – SOUTH WHALE TAIL DIVERSION CHANNEL / 0+000 @ 0+380
- **61-417-230-273_R0** : PLAN & PROFILE / ROAD #24 – SOUTH WHALE TAIL DIVERSION CHANNEL / 0+380 @ 0+785
- **61-417-230-274_R0** : CROSS SECTIONS - MAINTENANCE ROAD
SOUTH WHALE TAIL DIVERSION CHANNEL / 0+100 @0+700

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APPENDIX A

General project location plan



APPENDIX B

Plan general view – Layout of proposed culverts on Road #24



PAD NUMBER	DESCRIPTION	CONST. STATUS
A	Exploration Ramp Garage Pad + Exploration Camp Pad	Existing
B	Temporary Explosive Magasine	Existing
C	Exploration Ramp Pad South (NPAG)	Existing
D1	Exploration Ramp Pad North (UG Waste) Pt.1	Existing
D2	Exploration Ramp Pad North (UG Waste) Pt.2	Existing
E1	West Ore Stockpile Pad & Overburden Storage Pt.1	Planned
E2	West Ore Stockpile Pad & Overburden Storage Pt.2	Planned
F	WTP Pad	Existing
F'	WTP Pad Extension Pad	Planned
G	East Ore Stockpile Pad (Extension Explo. Ramp Pad)	Existing
H	Industrial Pad	Existing
I	Explosive Magasine	Planned
J	Dewatering Ramp Whale Lake Center (Main)	Planned
K	Fuel Tank Containment Basin	Planned
L	Dewatering Ramp Whale Lake Center (Secondary)	Planned
M	Landfill	Planned
N	Nemo Fresh water Pad	Existing
P	Truck Scale pad	Existing
Q	Construction Whale Tail Dike Pad	Existing
R	Ventilation Raise Pad	Existing
S	Nonexistent	Nonexistent
T	Emulsion Storage pad	Existing
U	Office & Lunch Room Pad	Planned

ROAD NUMBER	DESCRIPTION	CONST. STATUS
1	AWR Road to Exploration Camp	Existing
2	Exploration Camp to Exploration Ramp Pad	Existing
3	North Exploration Road Pt.1	Existing
4	Exploration Ramp Pad to Exploration Ramp	Existing
5	Exploration Ramp to Quarry#1	Existing
6	Exploration Ramp to A-P5	Existing
7	North Exploration Road Pt.2	Existing
8	North Exploration Road to WRSF	Existing
9	North Exploration Road to Starter Pit	Existing
10	Starter Pit to Whale Tail Dike (West Side)	Existing
11	Nemo Fresh Water Pumping Station Road	Planned
12	WTP Access road	Planned
13	Whale Tail Dike East Access (Widening)	In Progress
14	Quarry#1 to Exploration Camp (South Road)	Existing
15	Exploration Camp to AWR (Widening)	Existing
16	Tank Farm Bay	Planned
17	Communication Tower	Planned
18	Nonexistent	Nonexistent
19	RSF Dike pump station Acess	Planned
20	RSF Seepage Collection Pond Acess	Planned
21	Seepage Whale Tail Dike road	Planned
22	Explosive road	In Progress
23	Pit Rim RD North	Planned
24	South Whale Tail Diversion Channel	Planned
25	Road Around RSF	Planned
26	Pit Rim RD South	Planned
27	Nonexistent	Nonexistent
28	Nonexistent	Nonexistent
29	Ventilation Raise Access	Planned

NOTES:

SEE THE SHEET 1/2, FOR THE LOCATION OF EACH ITEMS (PADS & ROADS)

POUR COMMENTAIRES FOR COMMENTS
DATE : 2019-03-08



PROJECT NO.: 644819

CHANGEMENTS A-APPROUVEZ-LES EN LA PRESENCE DE AGNICO EAGLE. CE DROIT EST RESERVE. AGNICO EAGLE NE GARANTIT PAS LA PRECISION DES DONNEES FOURNIES. AGNICO EAGLE NE GARANTIT PAS LA PRECISION DES DONNEES FOURNIES. AGNICO EAGLE NE GARANTIT PAS LA PRECISION DES DONNEES FOURNIES. AGNICO EAGLE NE GARANTIT PAS LA PRECISION DES DONNEES FOURNIES.

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TITRE / TITLE	# DWG

DESSINS EN REFERENCE/REFERENCE DRAWINGS

B	FOR COMMENTS	2019-03-08	NBG
A	FOR COMMENTS	2019-02-14	NBG
REV	DESCRIPTION	DATE	PAR RY

REVISIONS

DESIGNED PAR DRAWN BY	NICOLAS BORDELEAU G.	DATE	2019-03-08
CHECKED PAR CHECKED BY	RICHARD MARCOUX, ING.		
APPROVED PAR APPROVED BY	RICHARD MARCOUX, ING.		
No. PROJET PROJECT NO.	6115		
DATE	2019-02-12		
AGNICO EAGLE — MEADOWBANK DIVISION			
AMARUQ — INFRASTRUCTURE ENGINEERING PROJECT			
230 — GENERAL EARTH WORKS			
LAYOUT OF PROPOSED CULVERTS			
IDENTIFICATION OF ITEMS			

SCALE/NTS	61-417-230-271-1_RB.DWG
No. DESSIN/ DRAWING NO.	61-417-230-271
REVISION	B
PAGE/NO.	2 / 2

NE PAS UTILISER POUR CONSTRUCTION NOT FOR CONSTRUCTION
DATE : 2019-03-08

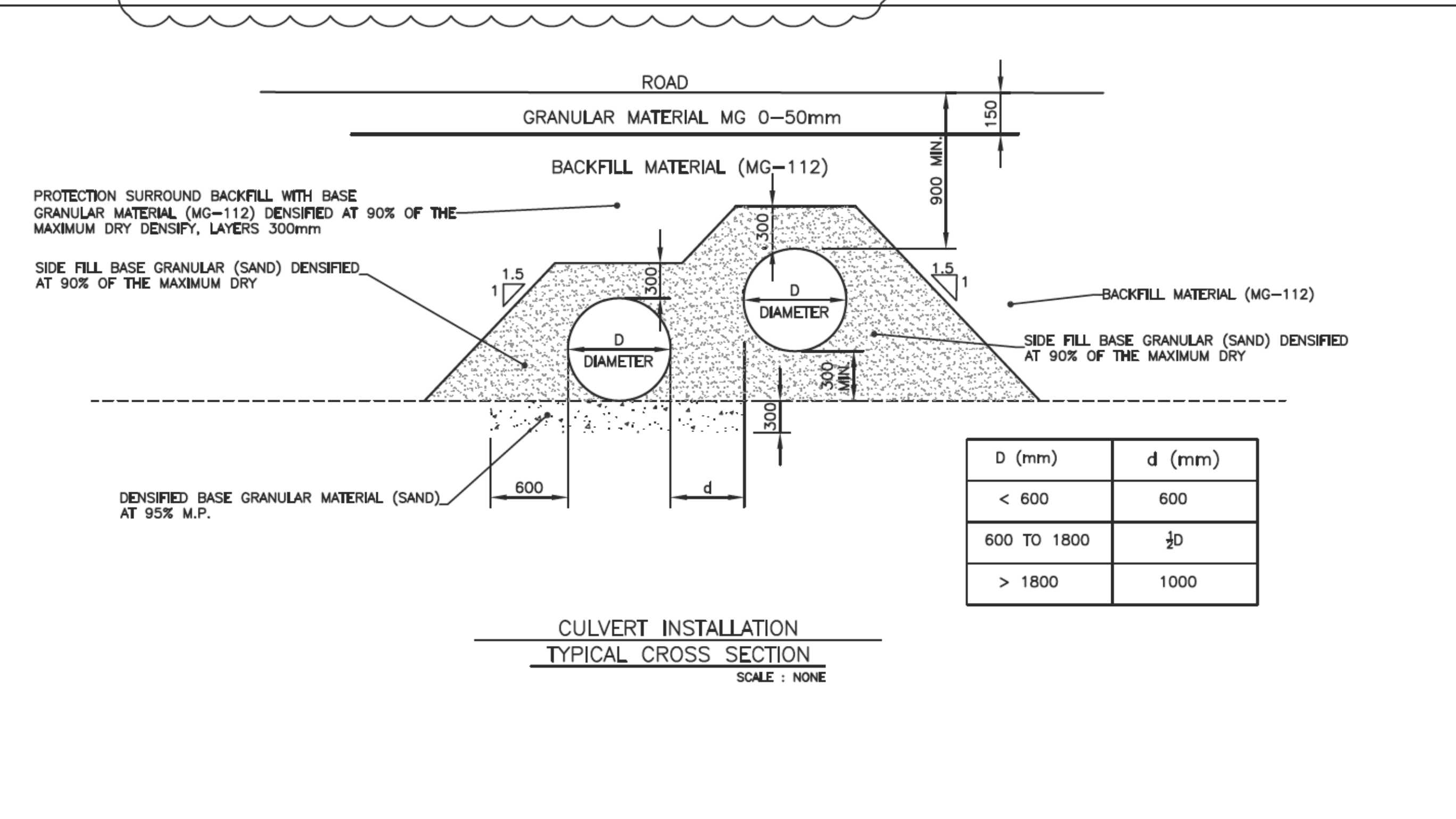
APPENDIX C
Culvert installations (61-417-230-226)



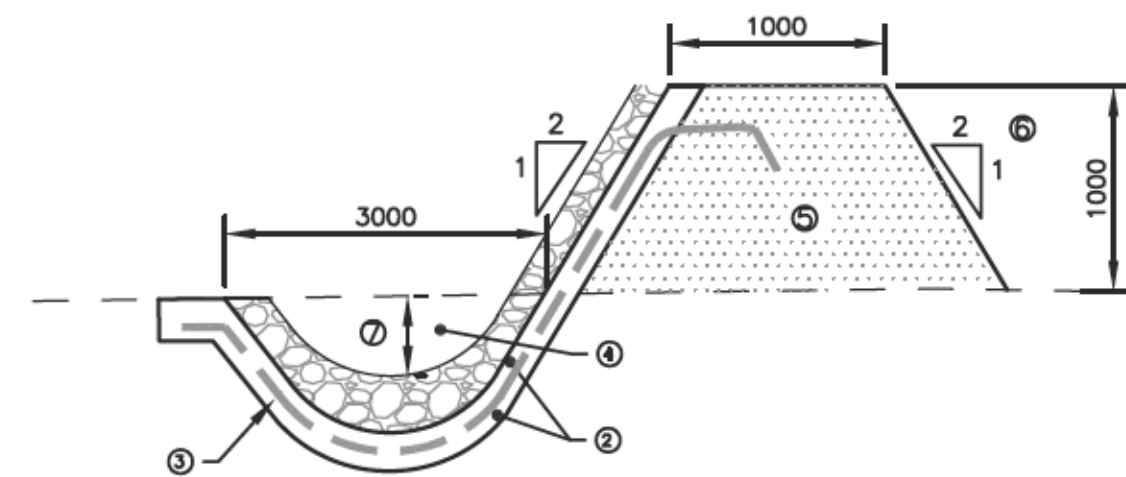
SNC-LAVALIN			AMARUQ INFRASTRUCTURE ENGINEERING PROJECT			AGNICO EAGLE		
LOCALISATION			List of materials (culverts)			Date: 2017-07-10		
ROAD	STATION (m)	Fonction	ID #	Ø (mm)	Total Length (m)	Material Type	Gage (mm)	COMMENTS
ACCESS	0+239	Culvert	1	700	18	ACSP	2,8	
ACCESS	0+618	Culvert	1	1200	18	ACSP	3,5	SNC-Québec, East Channel
ACCESS	0+618	Culvert	2	1200	18	ACSP	3,5	SNC-Québec, East Channel
ACCESS	0+705	Culvert	1	900	18	ACSP	3,5	
ACCESS	0+892	Culvert	1	600	28	ACSP	2,8	
NEMO	0+026	Culvert	1	600	18	ACSP	2,8	
NEMO	0+123	Culvert	1	1200	19	ACSP	3,5	
NEMO	0+123	Culvert	2	900	17	ACSP	3,5	
NEMO	0+123	Culvert	3	900	17	ACSP	3,5	
NEMO	0+344	Culvert	1	600	17	ACSP	2,8	
NEMO	0+876	Culvert	1	1200	20,5	ACSP	3,5	
NEMO	0+876	Culvert	2	1200	20,5	ACSP	3,5	
NEMO	0+876	Culvert	3	900	18	ACSP	3,5	
NEMO	0+876	Culvert	4	900	18	ACSP	3,5	
NEMO	1+146	Culvert	1	900	18	ACSP	3,5	SNC-Québec
NEMO	1+146	Culvert	2	900	18	ACSP	3,5	SNC-Québec
NEMO	1+146	Culvert	3	900	18	ACSP	3,5	SNC-Québec
WRSF	0+240	Culvert	1	600	21	ACSP	2,8	Culvert for service pipelines
WRSF	0+240	Culvert	2	600	21	ACSP	2,8	Culvert for service pipelines
WRSF	10+227	Culvert	1	1200	26,5	ACSP	3,5	
WRSF	10+227	Culvert	2	900	25	ACSP	3,5	
WRSF	10+227	Culvert	3	900	24,5	ACSP	3,5	
WRSF	10+505	Culvert	1	1400	30	ACSP	4,2	
WRSF	10+505	Culvert	2	1200	28	ACSP	3,5	
WRSF	10+505	Culvert	3	1200	26	ACSP	3,5	
WRSF	1+816	Culvert	1	600	23,5	ACSP	2,8	
WRSF	2+315	Culvert	1	900	24	ACSP	3,5	SNC-Québec, North Channel
WRSF	2+512	Culvert	1	600	26	ACSP	2,8	
WHALE TAIL	0+030	Culvert	1	900	23	ACSP	3,5	
WHALE TAIL	0+385	Culvert	1	600	22,5	ACSP	2,8	
WHALE TAIL	0+565	Culvert	1	900	25,5	ACSP	3,5	SNC-Québec, North Channel
WHALE TAIL	0+565	Culvert	2	900	25,5	ACSP	3,5	SNC-Québec, North Channel
RAMP	30+300	Culvert	1	600	28	ACSP	2,8	Culvert for access to the pad

- (1) ACSP: Aluminized Corrugated Steel Pipe
(2) These lengths are associated with road widths built in 2017
(3) All hardware must be provided, if required

LIST OF MATERIALS
(FOR THE LAST REVISION, SEE DOCUMENT 6115-C-230-MTO-001 & 002)

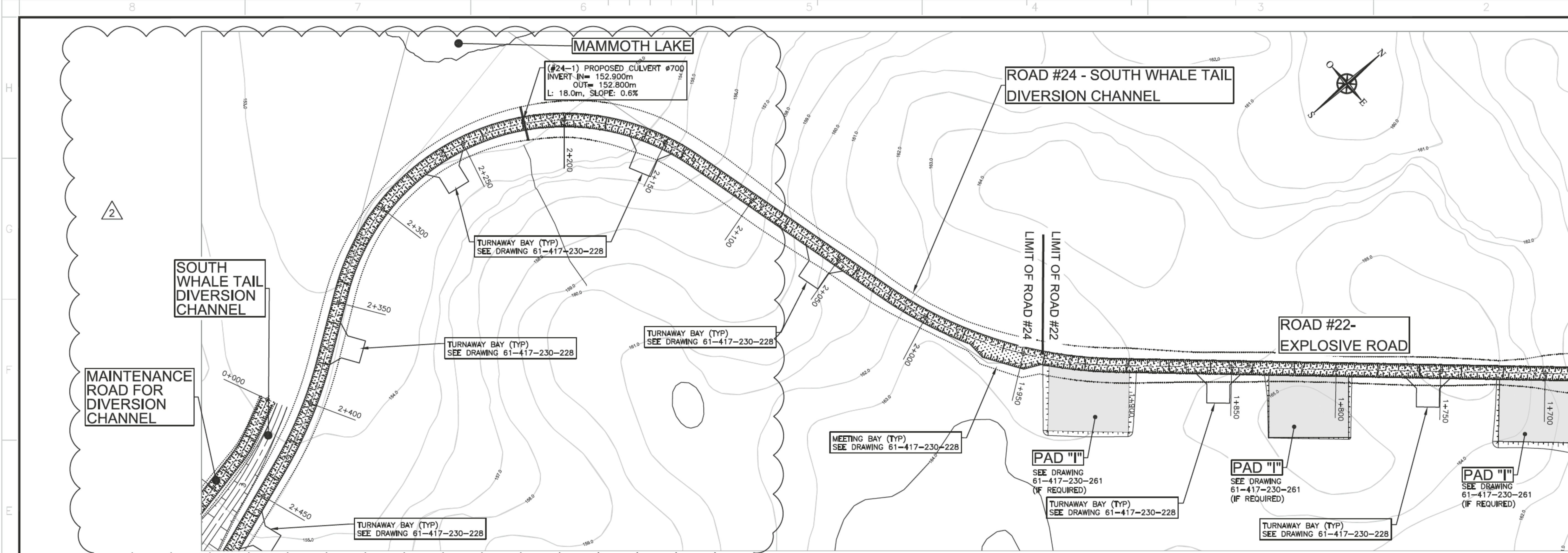


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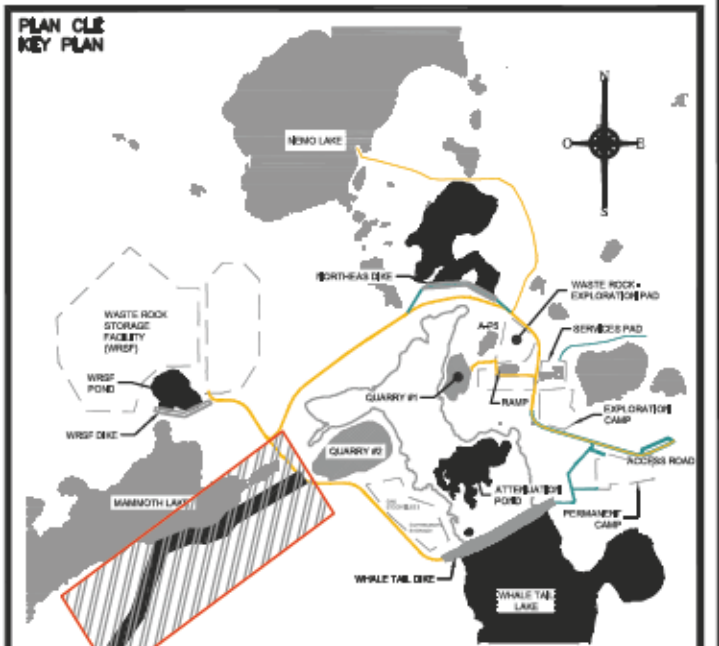
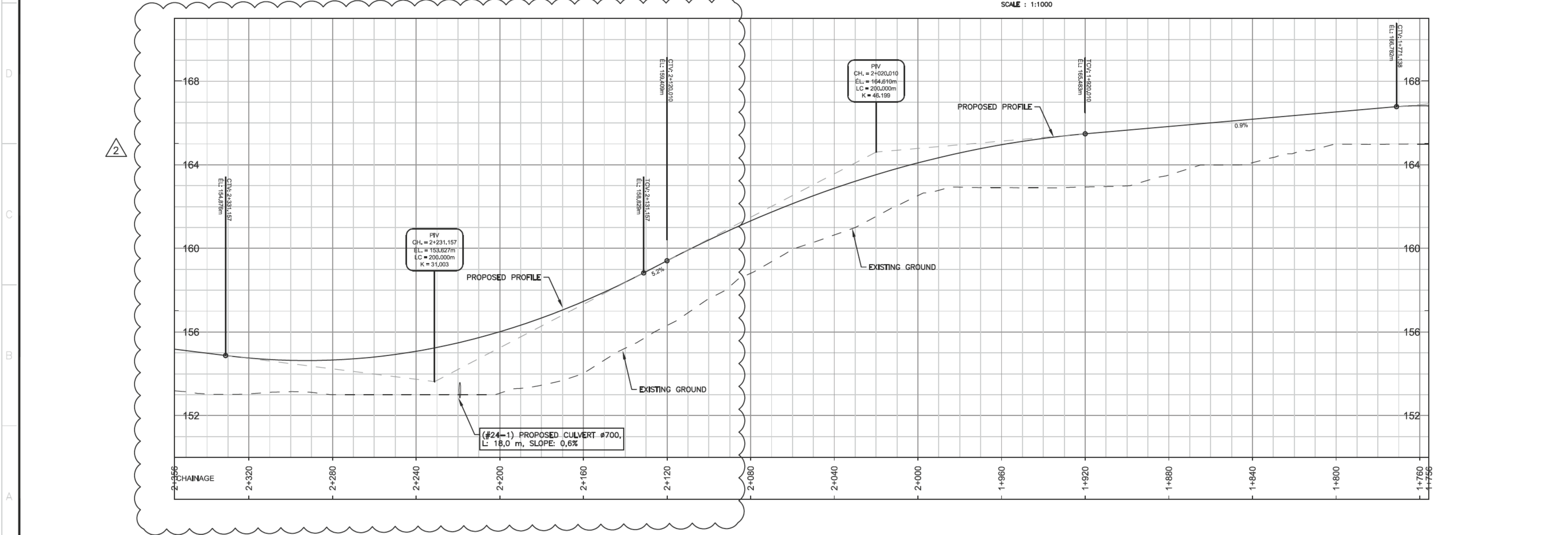


APPENDIX D
Construction drawings





ROAD #22 AND ROAD #24
SCALE : 1:1000



CONSTRUCTION ROADS 2017:
CONSTRUCTION ROADS 2018:

NOTES GÉNÉRALES / GENERAL NOTES

**POUR CONSTRUCTION
FOR CONSTRUCTION**
DATE : 2019-07-22

SNC-LAVALIN
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www.snc-lavalin.com

Project # : 644819-0000

CHANGEMENTS O-CORRIGES ET LA PROPOSER DE AJOUTER DES LIGES ET DES LIGES ASSOCIÉS À UN CHANGEMENT DANS LE PROJET. LES CHANGEMENTS DOIVENT ÊTRE APPROUVÉS PAR LE GÉNÉRALISTE EN CHARGE. LES CHANGEMENTS DOIVENT ÊTRE APPROUVÉS PAR LE GÉNÉRALISTE EN CHARGE. LES CHANGEMENTS DOIVENT ÊTRE APPROUVÉS PAR LE GÉNÉRALISTE EN CHARGE.

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS			
TITLE / TITRE	#	DWG	
TURN AWAY / MEETING BAY	61-417-230-228		
EMULSION STORAGE PAD	61-417-230-262		



REV.	DATE	DESCRIPTION	PAR/REV	APP.	LEGEND
1	2019-07-22	ISSUED FOR CONSTRUCTION	D.D.	R.M.	E.T.
1	2019-03-08	ISSUED FOR CONSTRUCTION	F.P.	R.M.	E.T.
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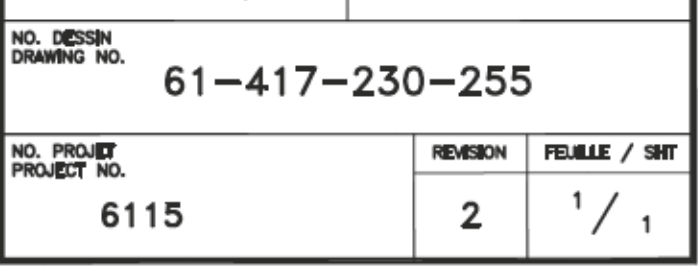
REVISIONS

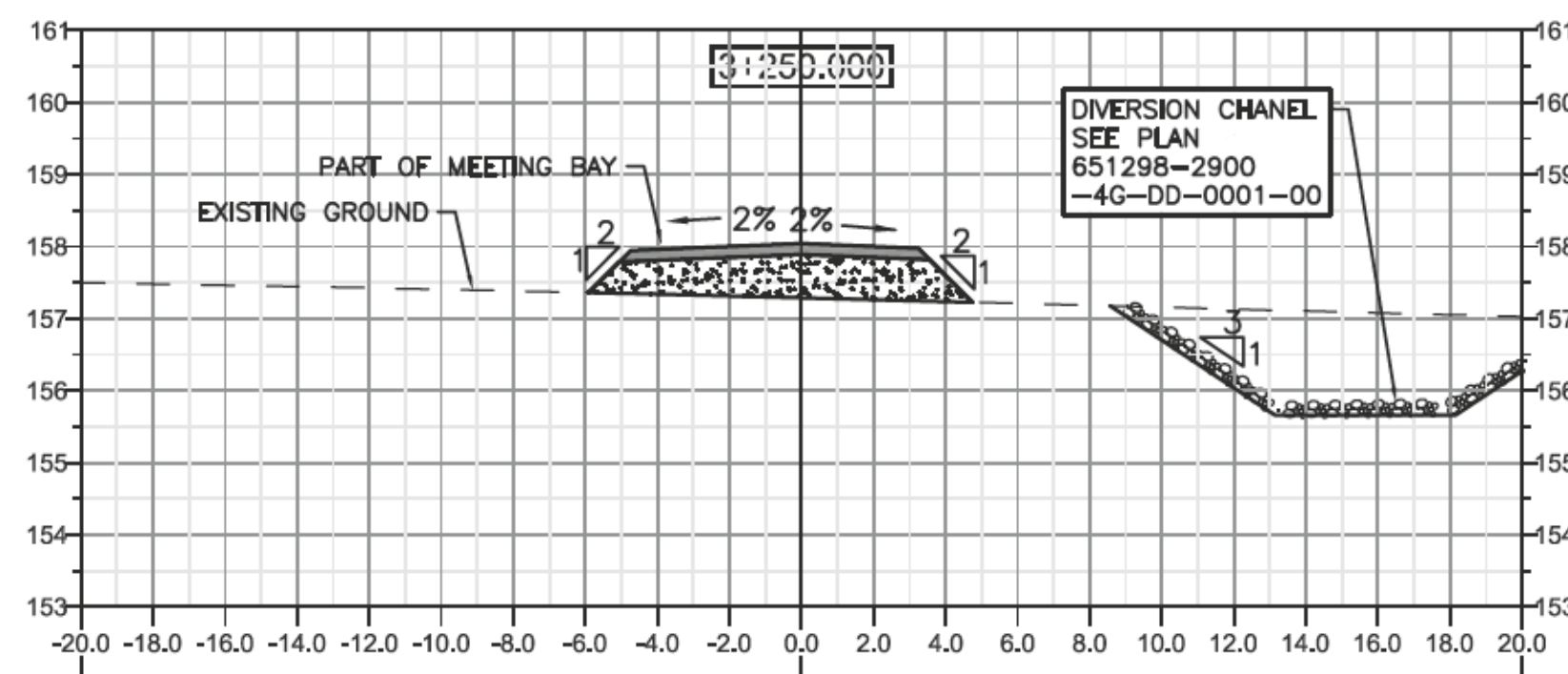
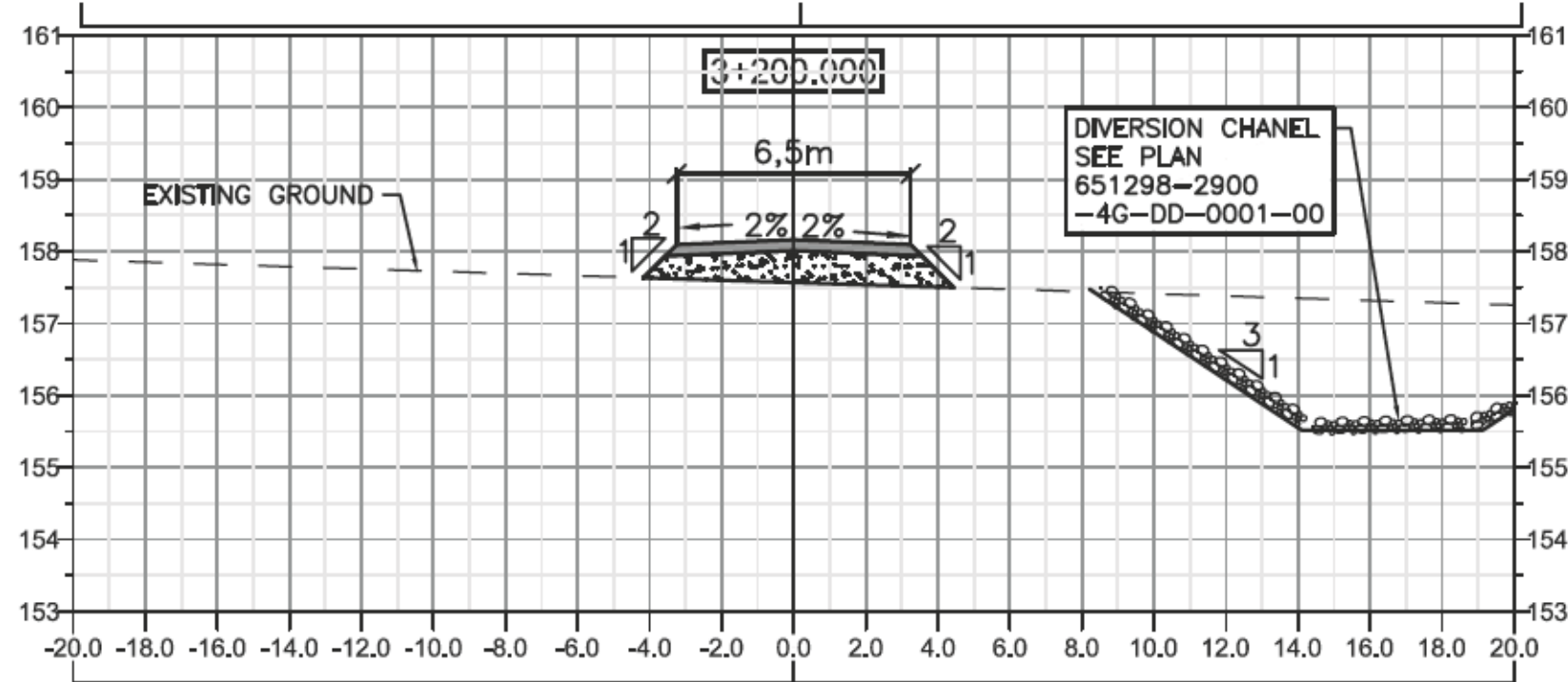
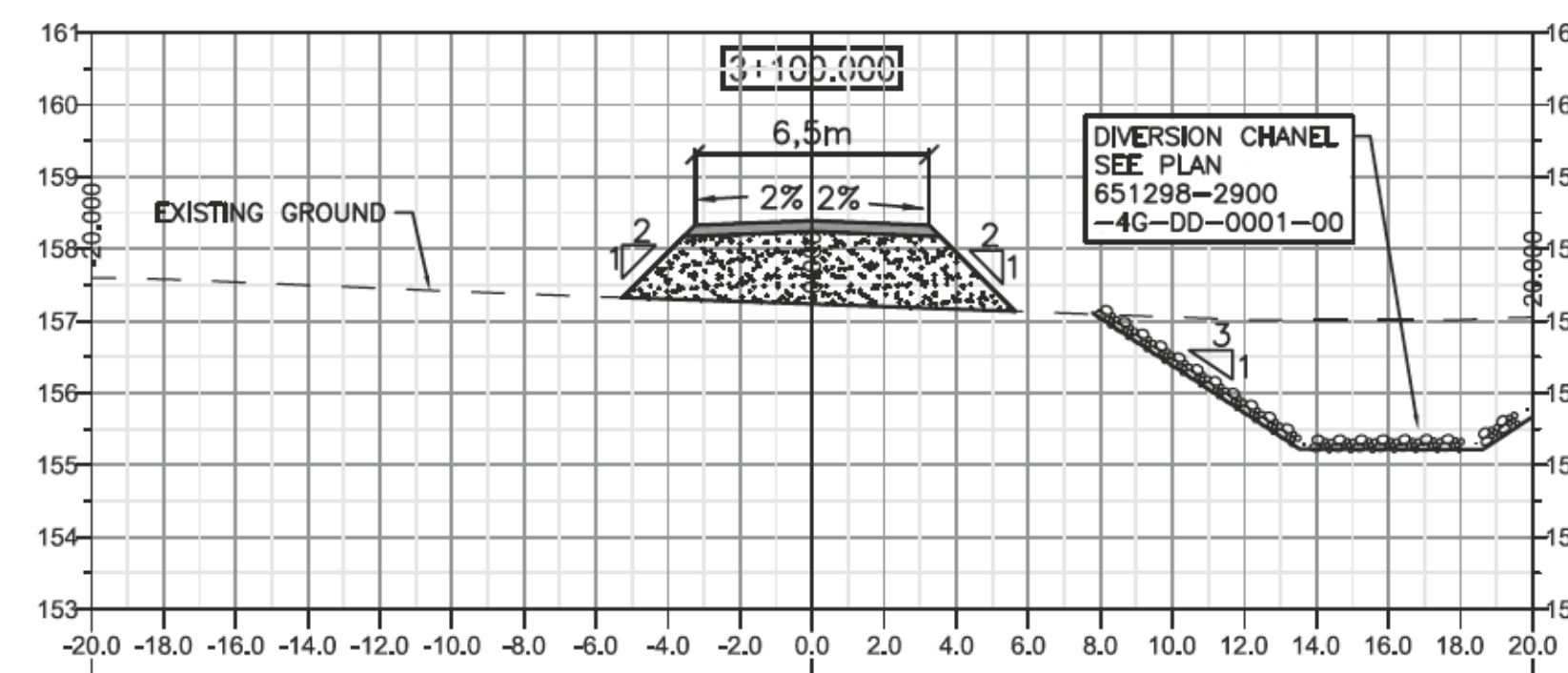
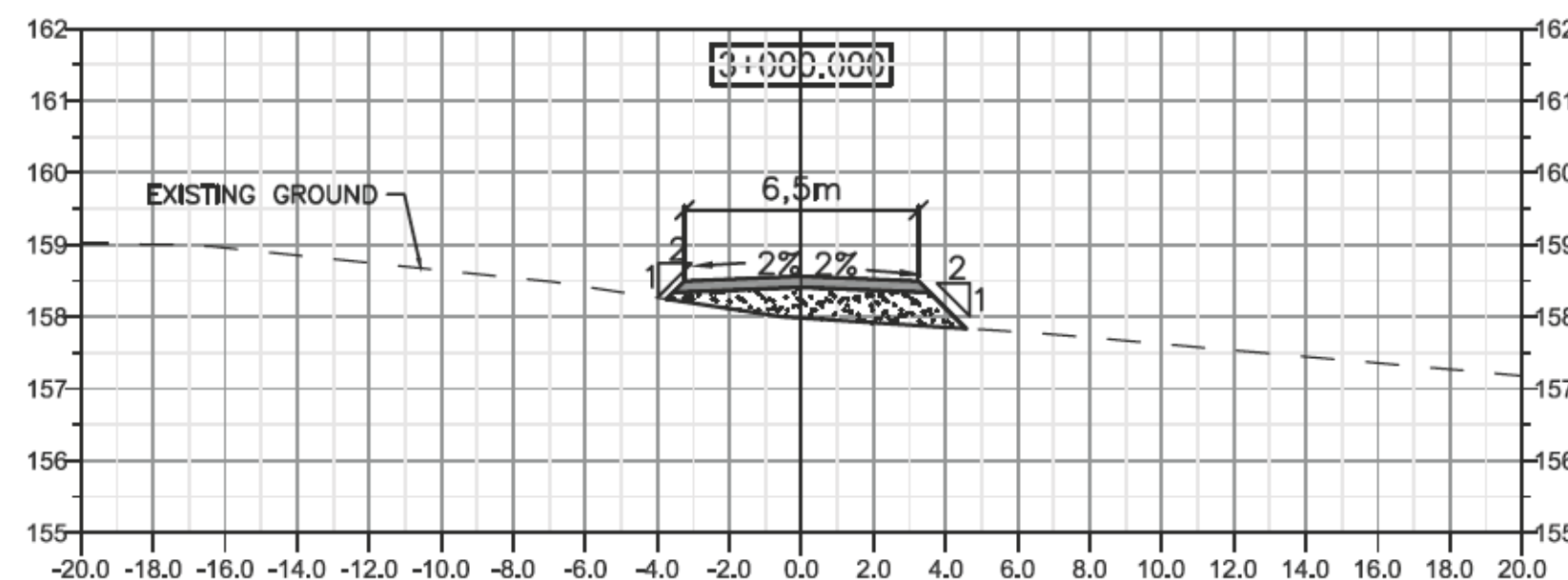
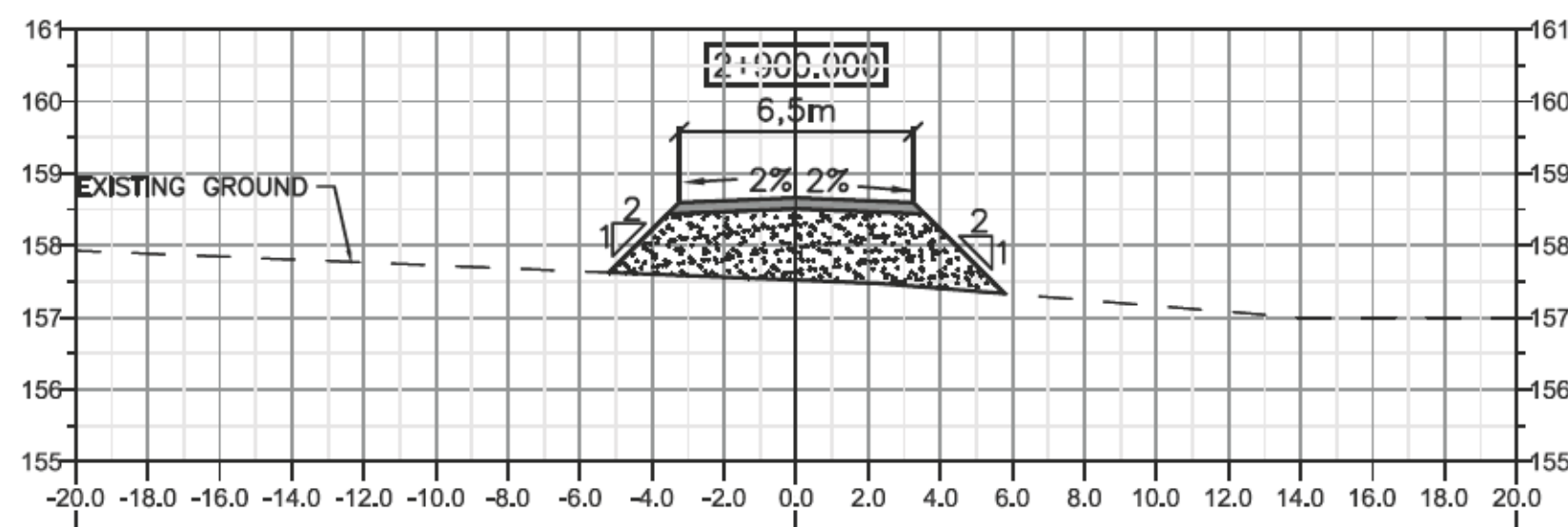
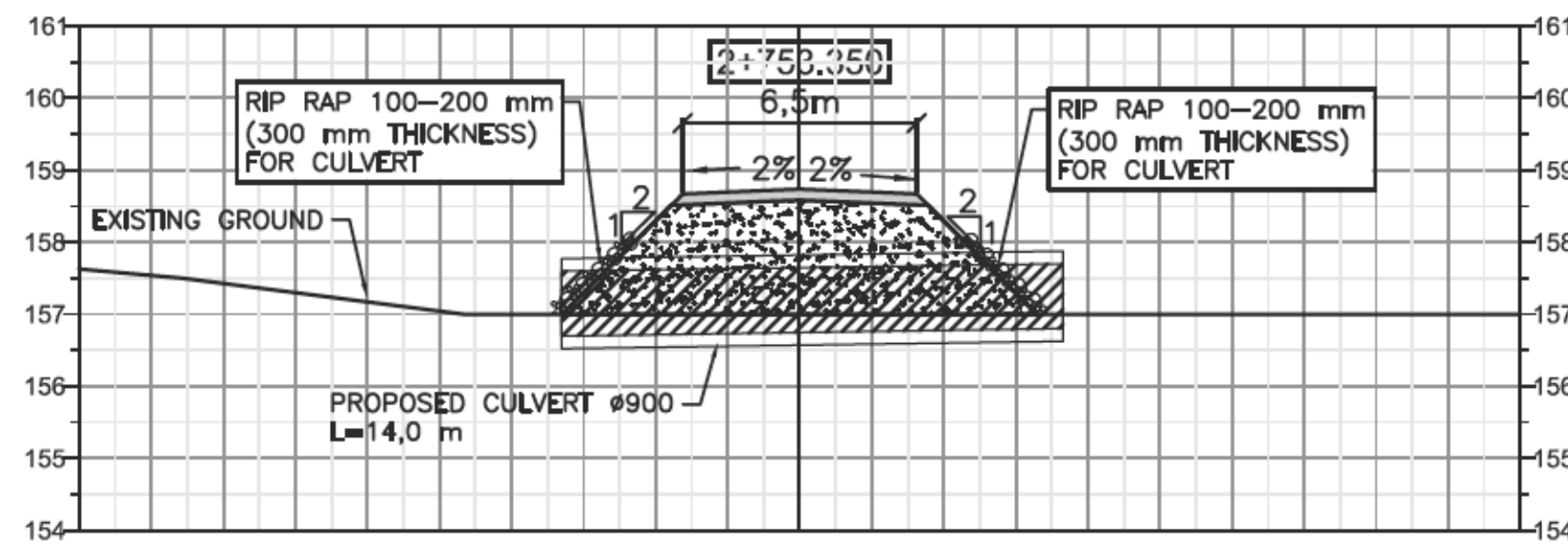
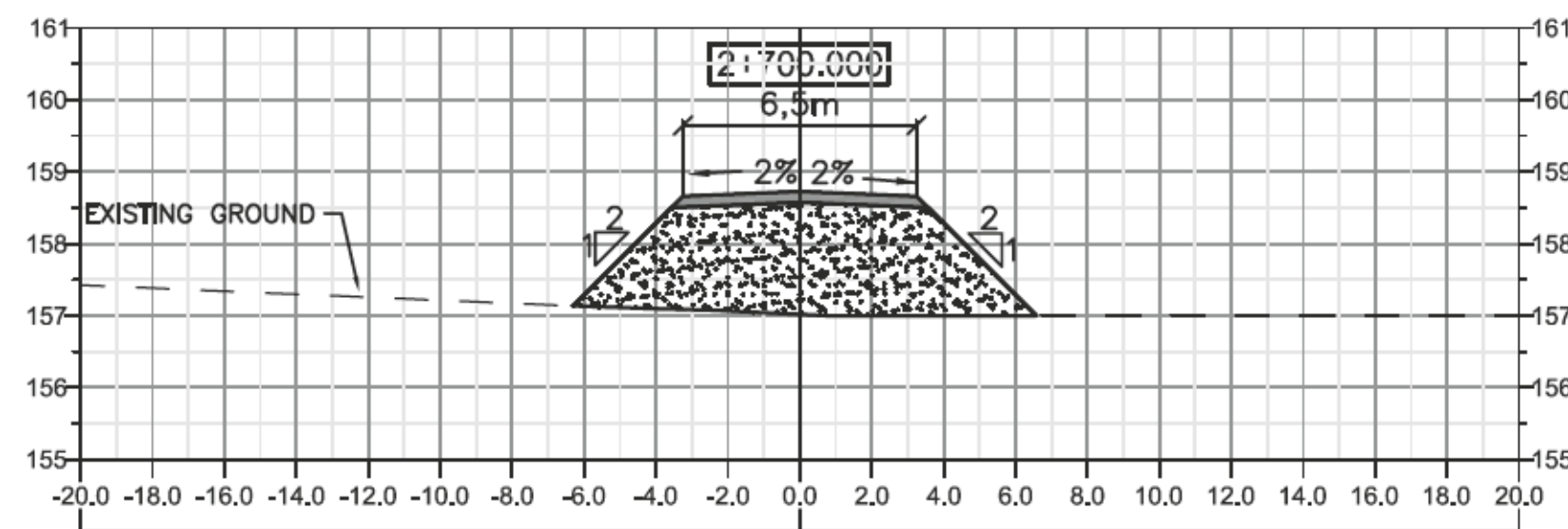
TITLE / TITRE
AGNICO EAGLE - WHALE TAIL (AMARUQ)
417 - ROADS, YARDS, FENCES AND OTHER
230 - GENERAL EARTH WORKS
PLAN & PROFILE
ROAD #22 AND #24 - SOUTH WHALE TAIL DIVERSION CHANNEL
1+800 @ 2+400

DESIGNÉ PAR DRAWN BY	DANIELLE DESCÔTEAUX, T.P.	DATE 2018-06-04
VÉRIFIÉ PAR CHECKED BY	RICHARD MARCOUX, ING.	2019-02-20
APPROUVÉ PAR APPROVED BY	RICHARD MARCOUX, ING.	2019-02-20

NO. DESIGN
DRAWING NO. 61-417-230-254

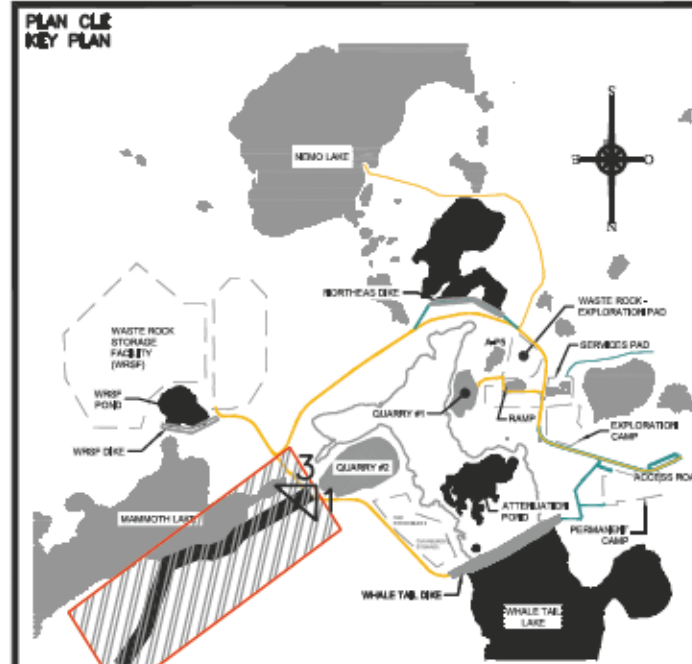
NO. PROJET PROJECT NO.	REVISION	FEMELLE / SHEET
6115	2	1 / 1





NOTE:
WIDTH OF ROAD #22 AND #23 = 6.5 m
EACH WAY = 3.25 m

LEGEND:	
	CRUSHED STONES 0-50, THICKNESS 150mm, COMPACTED TO 95% P.M.
	BACKFILL- ESKER MATERIALS, MAX Ø 0-150 mm, MIN. THICKNESS 600 mm, COMPACTED TO 92% P.M.
	EXCAVATION



CONSTRUCTION ROADS 2017:
CONSTRUCTION ROADS 2018:
NOTES GÉNÉRALES / GENERAL NOTES

**POUR CONSTRUCTION
FOR CONSTRUCTION**
AMARUO
DATE : 2019-07-22

SNC-LAVALIN
SNC-Lavalin Stantec Inc.
150, rue Gambelle Ouest
Rouyn-Noranda (Québec) J8X 2R7
Tél : 819 784-5181 Fax : 819 787-0158
www.snc-lavalin.com

Project # : 644819-0000
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DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS		
TITLE / TITRE	#	DWG
ROAD #22 / ROUTE #22	1	61-417-230-228
EROSION STORAGE PAD	1	61-417-230-232
SOUTH WHALE TAIL DIVERSION CHANNEL	1	61-417-230-230-001E



REV.	DATE	DESCRIPTION	APP.	REV.
2	2019-07-22	ISSUED FOR CONSTRUCTION	D.D.	R.M.
1	2019-04-02	ISSUED FOR CONSTRUCTION	F.P.	R.M.
0	2018-06-04	ISSUED FOR CONSTRUCTION	D.D.	G.M.

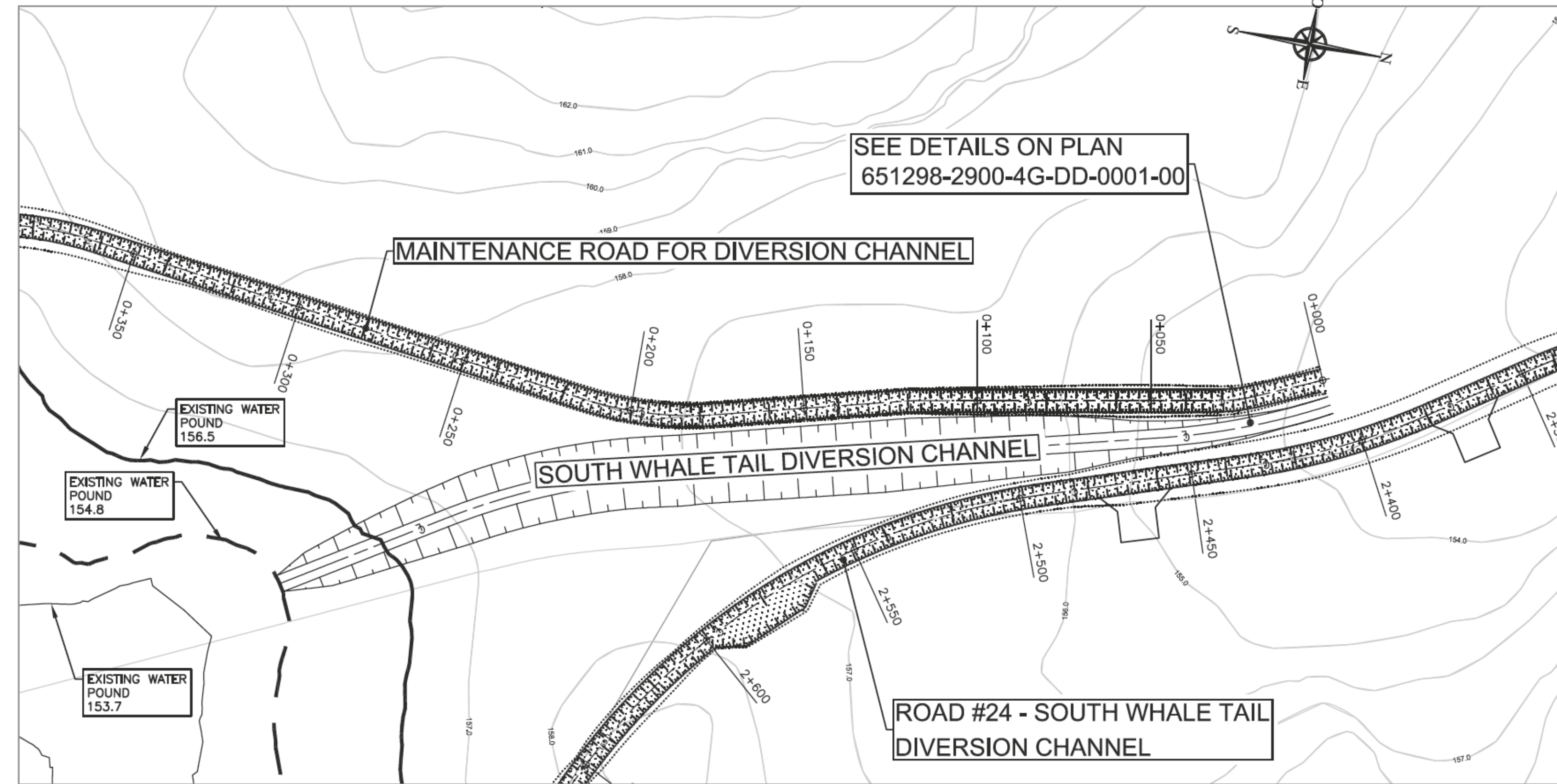
REVISIONS

TITLE / TITRE
AGNICO EAGLE - WHALE TAIL (AMARUO)
417 - ROADS, YARDS, FENCES AND OTHER
230 - GENERAL EARTH WORKS
CROSS SECTIONS
ROAD #24 - SOUTH WHALE TAIL DIVERSION CHANNEL
2+670 @ 3+080

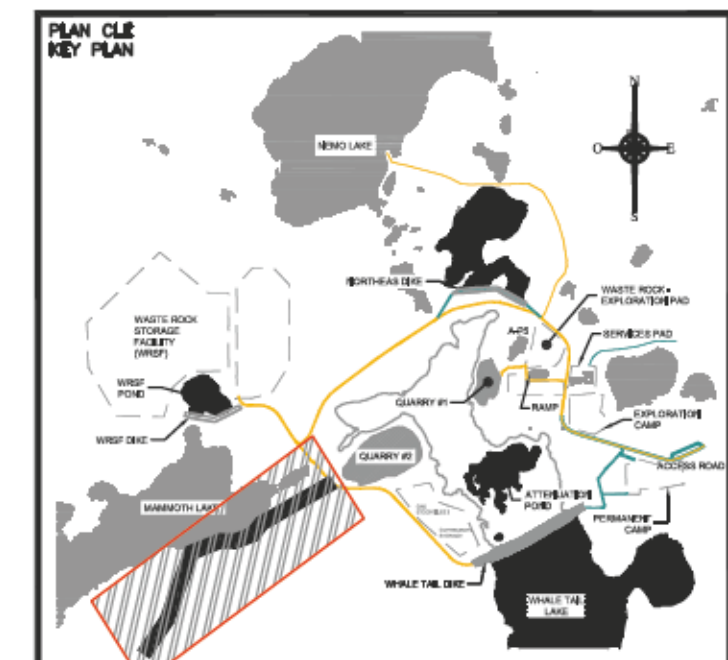
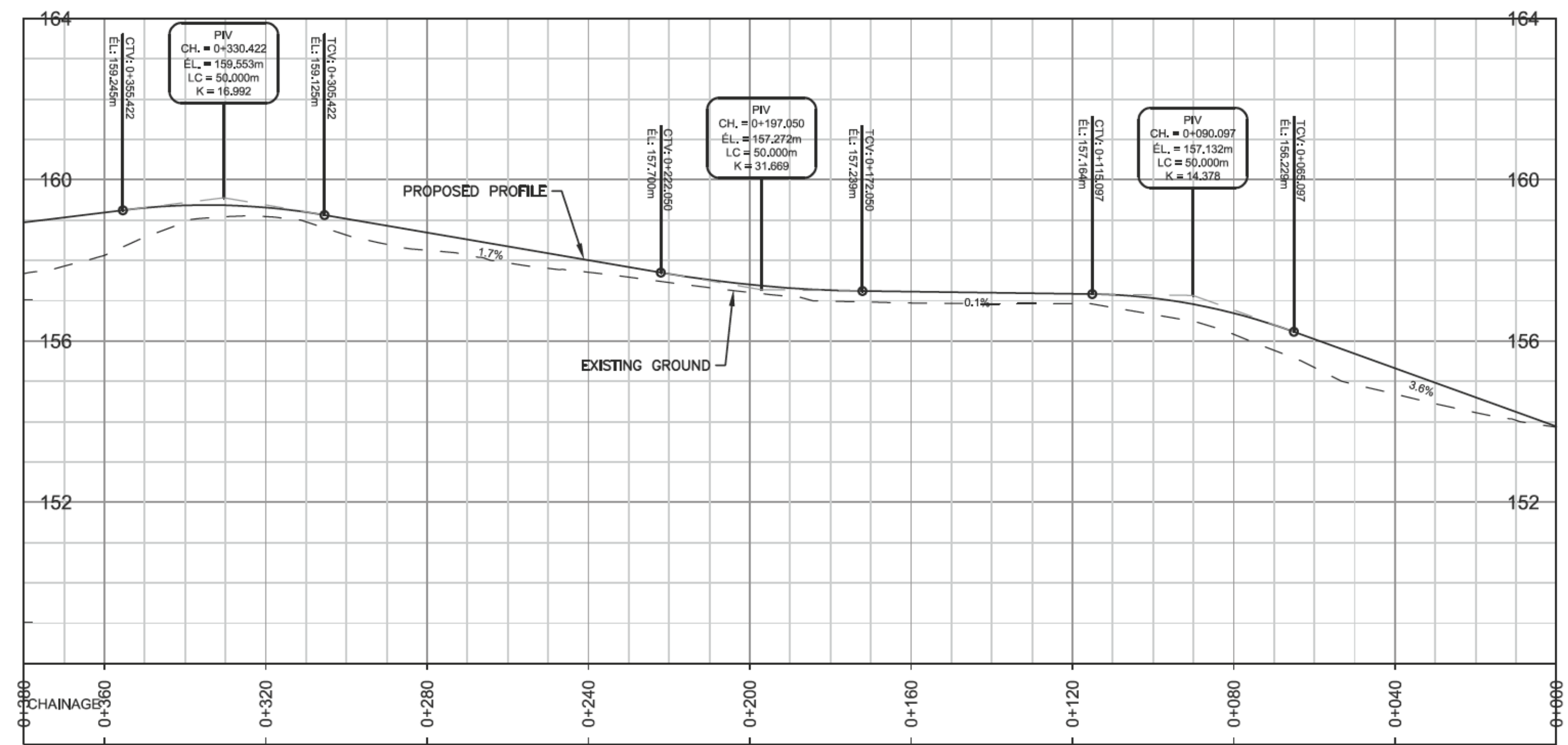
DESIGNÉ PAR DRAWN BY	DANIELLE DESCÔTEAUX, T.P.	DATE 2018-06-04
VÉRIFIÉ PAR CHECKED BY	GILLES MARCOTTE, ING.	2018-06-04
APPROUVÉ PAR APPROVED BY	GILLES MARCOTTE, ING.	2018-06-04

GRAPHIQUE
SCALE 1:200/1:100 DATE 2018-06-04

NO. DESIGN
DRAWING NO. 61-417-230-260
NO. PROJET
PROJECT NO. 6115
REVISION 2
FEMELLE / SHEET 1 / 1



MAINTENANCE ROAD – SOUTH WHALE TAIL DIVERSION CHANNEL
SCALE : 1:1000



CONSTRUCTION ROADS 2017: _____
CONSTRUCTION ROADS 2018: _____

NOTES GÉNÉRALES / GENERAL NOTES

[illegible]

**POUR CONSTRUCTION
FOR CONSTRUCTION**

 **AGNICO EAGLE**

DATE : 2019-07-22



SNC-Lavalin Stavlbel Inc.
150, rue Gamble Ouest
Rouyn-Noranda (Québec) J9X 2R7
Tel. : 819 764-5181 Fax : 819 797-0158
www.snc-lavalin.com

Project # : 644819-0000

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DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

TIME / TITLE	# DWG
TURN AWAY / MEETING BAY	61-417-230-228
EMULSION STORAGE PAD	61-417-230-262
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**AGNICO EAGLE**

0	2019-07-22	ISSUED FOR CONSTRUCTION	D.D.	G.M.	E.T.
REV.	DATE	DESCRIPTION	PAR/BY	APP.	CLIENT
REVISIONS					

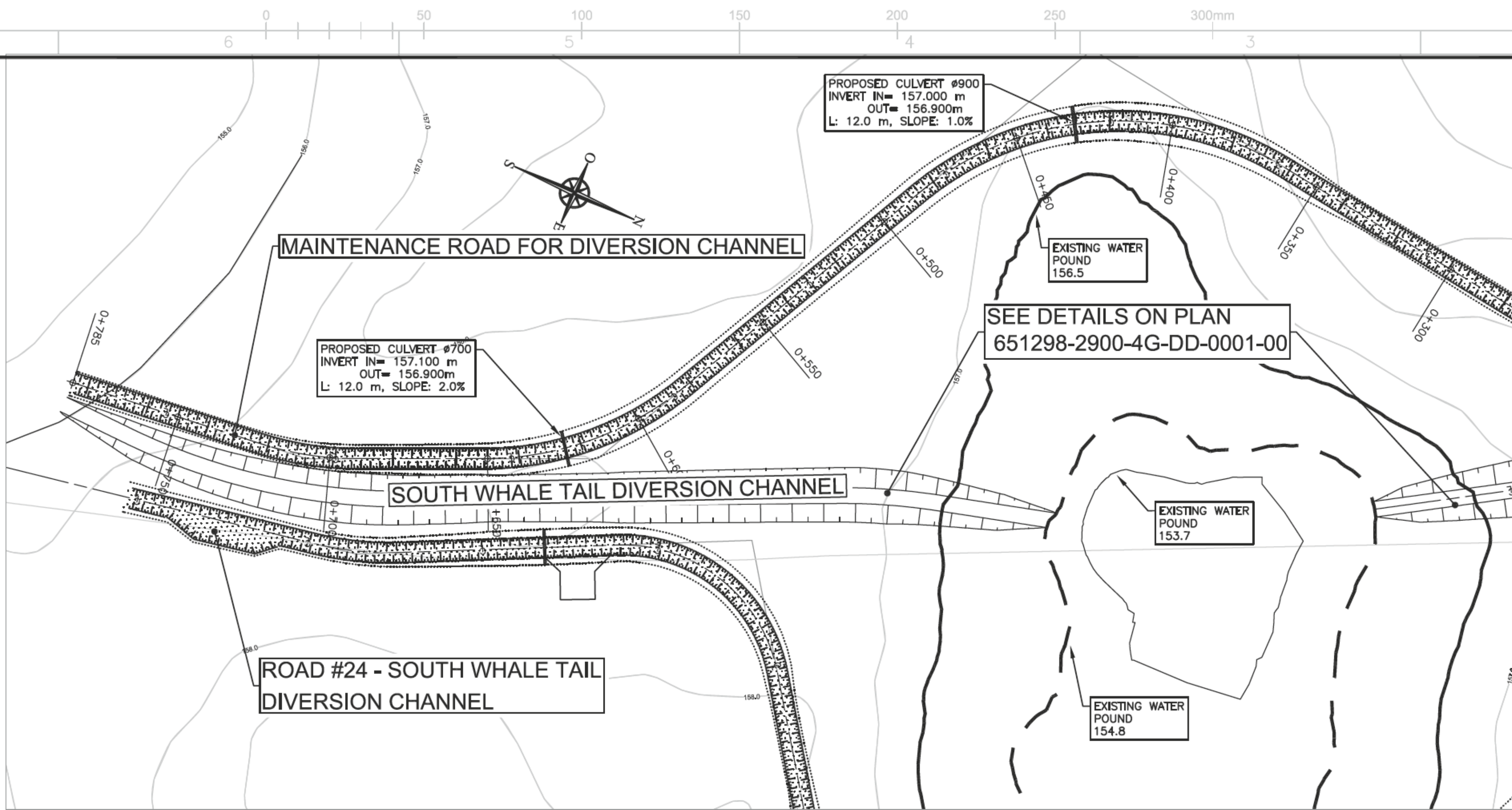
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TIME / TITLE
AGNICO EAGLE - WHALE TAIL (AMARUQ)
417 - ROADS, YARDS, FENCES AND OTHER
230 - GENERAL EARTH WORKS
PLAN & PROFILE
ROAD #24 - SOUTH WHALE TAIL DIVERSION CHANNEL
0+000@ 0+380

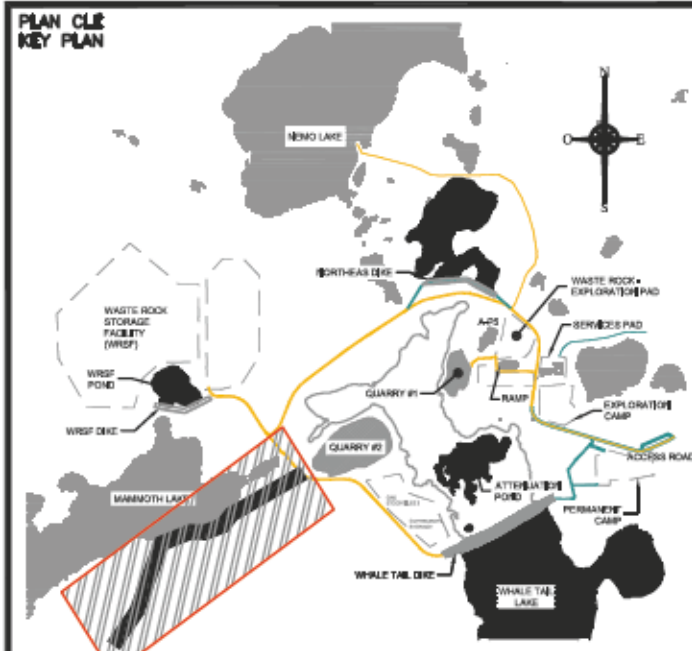
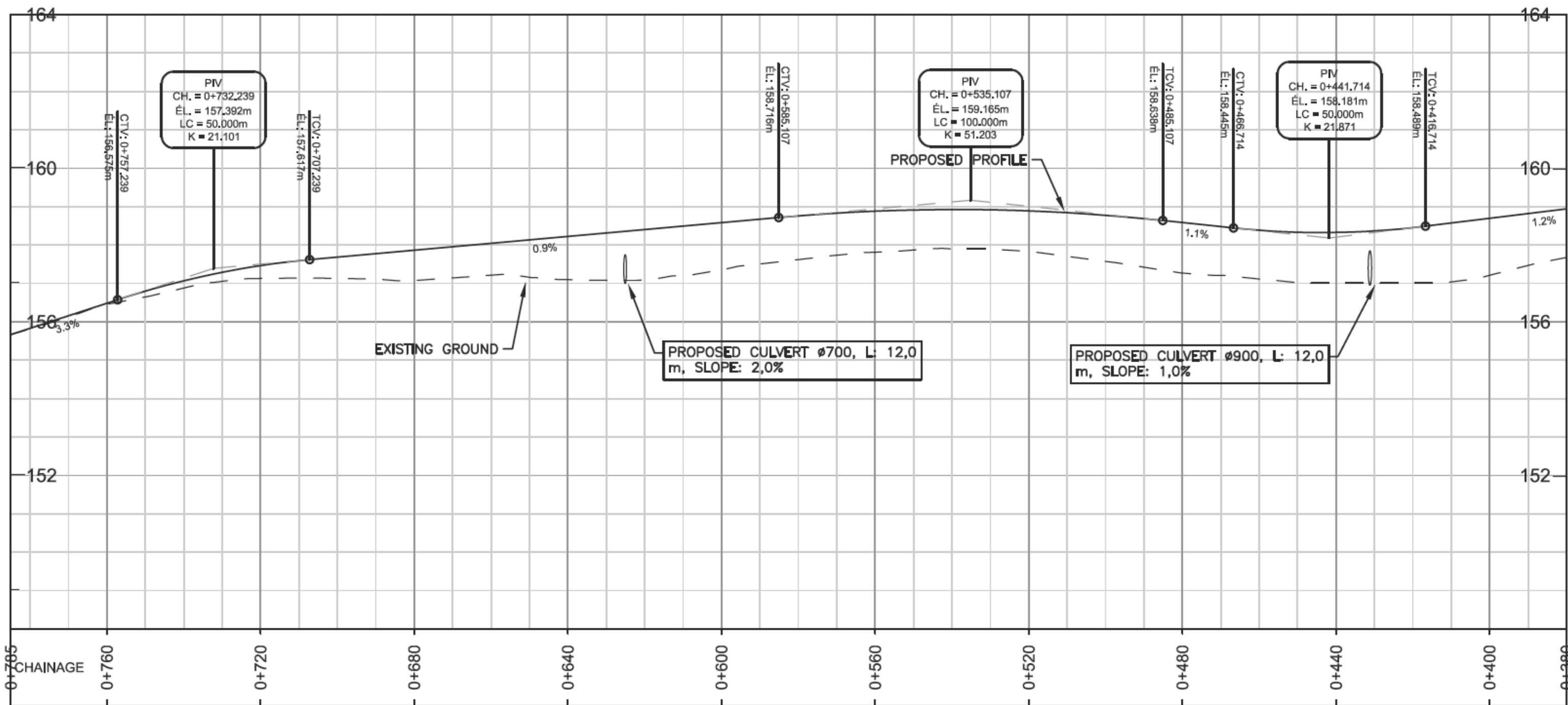
DESSINE PAR DRAWN BY	DANIELLE DESCOTTEAUX, T.P	DATE 2019-07-22
VERIFIE PAR CHECKED BY	RICHARD MARCOUX, ING.	2019-07-22
APPROUVE PAR APPROVED BY	RICHARD MARCOUX, ING.	2019-07-22
SCHELLE		DATE

SHEET SCALE 1:1000/1:100	DATE 2019-07-22
NO. DESIGN DRAWING NO. 61-417-230-272	

NO. PROJET PROJECT NO.	REVISION	FEUILLE / SHEET
6115	0	1 / 1



MAINTENANCE ROAD — SOUTH WHALE TAIL DIVERSION CHANNEL
SCALE : 1:1000



CONSTRUCTION ROADS 2017:
CONSTRUCTION ROADS 2018:

NOTES GÉNÉRALES / GENERAL NOTES

**POUR CONSTRUCTION
FOR CONSTRUCTION**
DATE : 2019-07-22
AGNICO EAGLE

SNC-LAVALIN
SNC-Lavalin Stantec Inc.
150, rue Gamble Ouest
Rouyn-Noranda (Québec) J8X 2R7
Tel.: 819 784-5181 Fax: 819 787-0158
www.snc-lavalin.com

Project # : 644819-0000

CHANGEMENTS O-CORRIGES ET LA PROPOSER DE AJOUTER DANS UNE DE VOTRE DATE ASSURER UN RELEVÉ. SUIVANT LES CHANGEMENTS
PROPOSÉS, TOUTE MODIFICATION DE CONTEXTE À AJOUTER ET TOUTE MODIFICATION AJOUTER QUE CHANGEMENTS PROPOSÉS
NOTES: 1. AGNICO EAGLE
2. AGNICO EAGLE
3. AGNICO EAGLE

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

TITLE / TITRE	# DWG
TURN AWAY / MEETING BAY	61-417-230-228
EMULSION STORAGE PAD	61-417-230-262
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REV.	DATE	DESCRIPTION	PAR/REV	APP.	LGMENT
0	2019-07-22	ISSUED FOR CONSTRUCTION	D.D.	G.M.	E.T.

REVISIONS

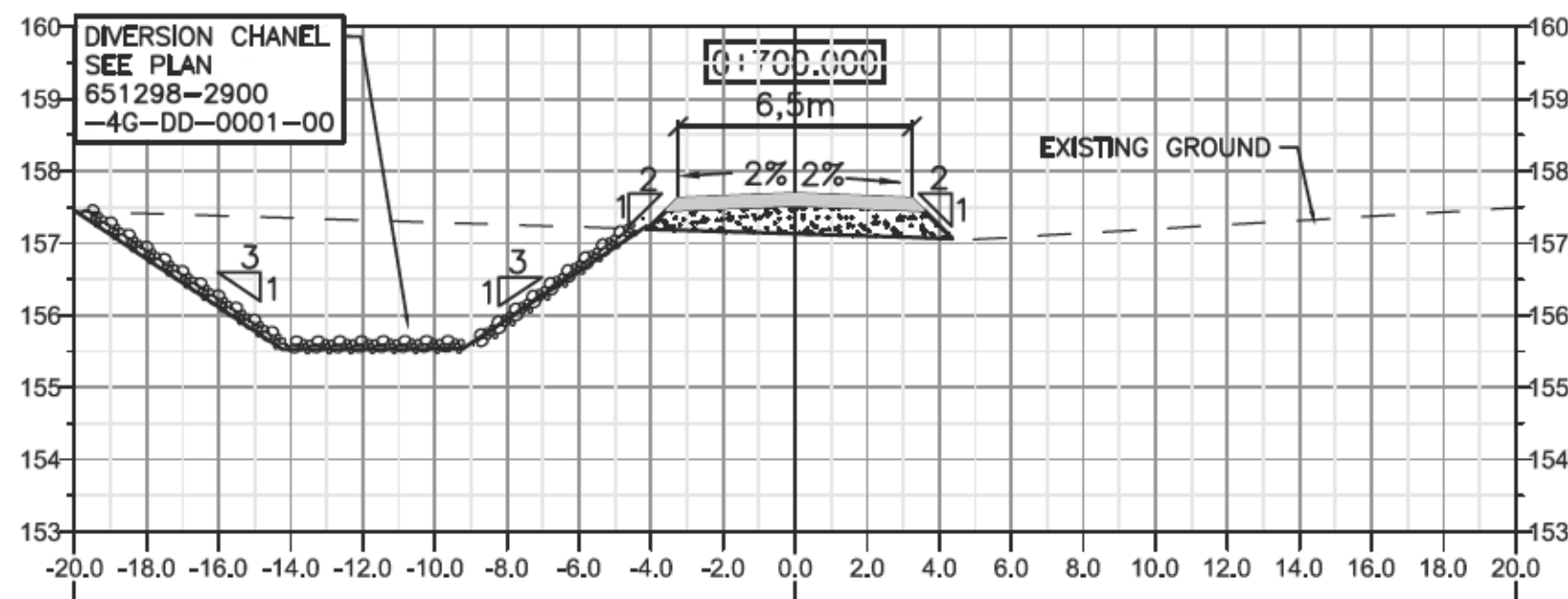
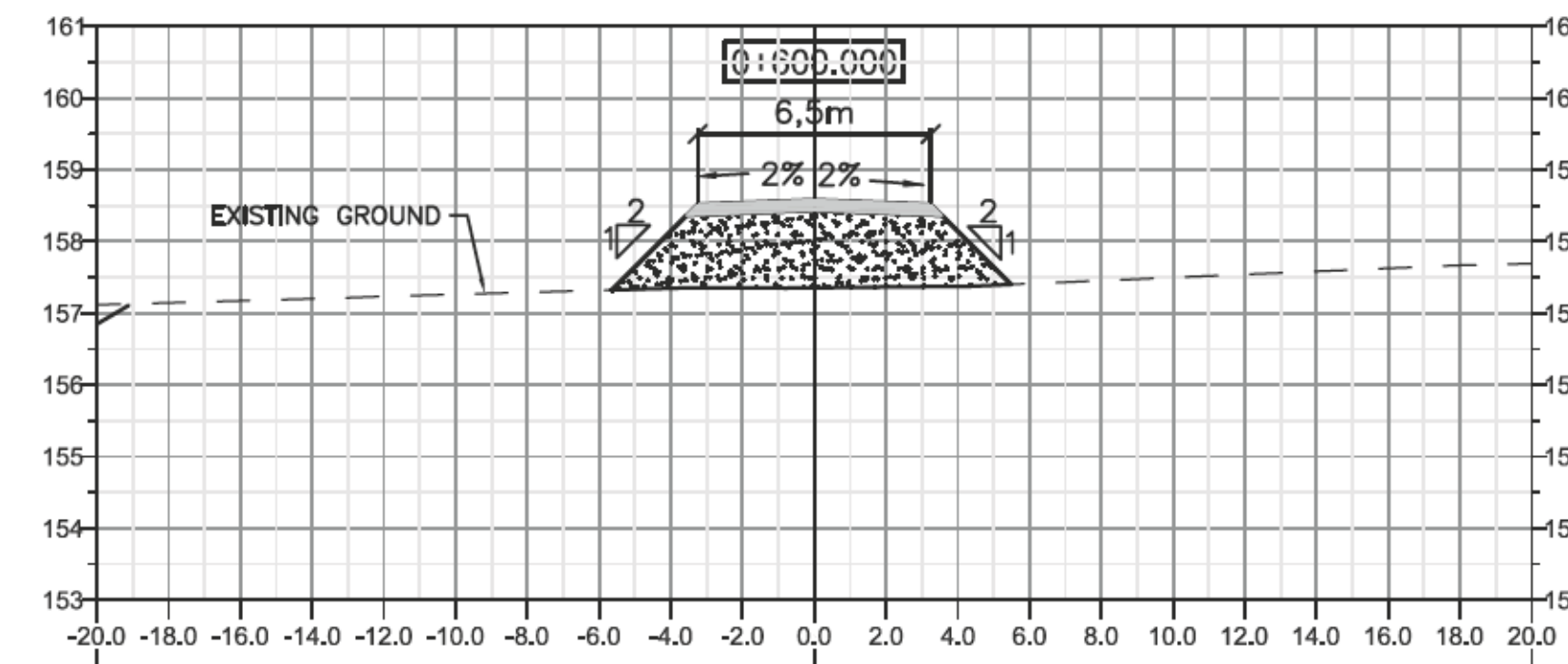
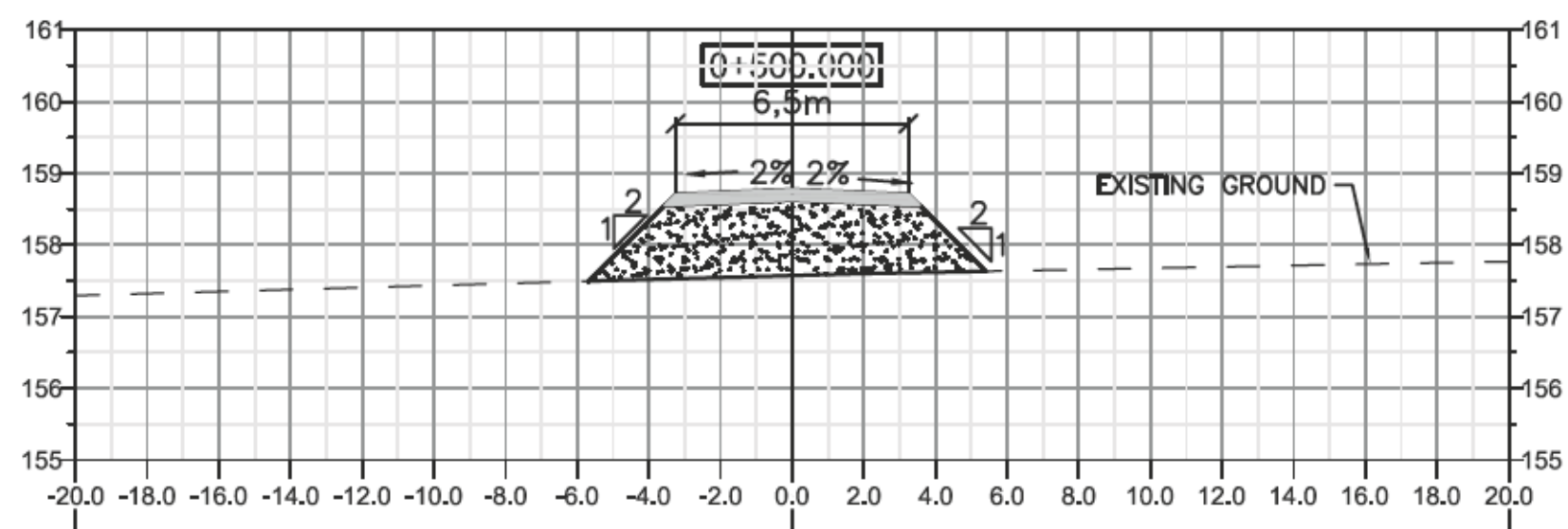
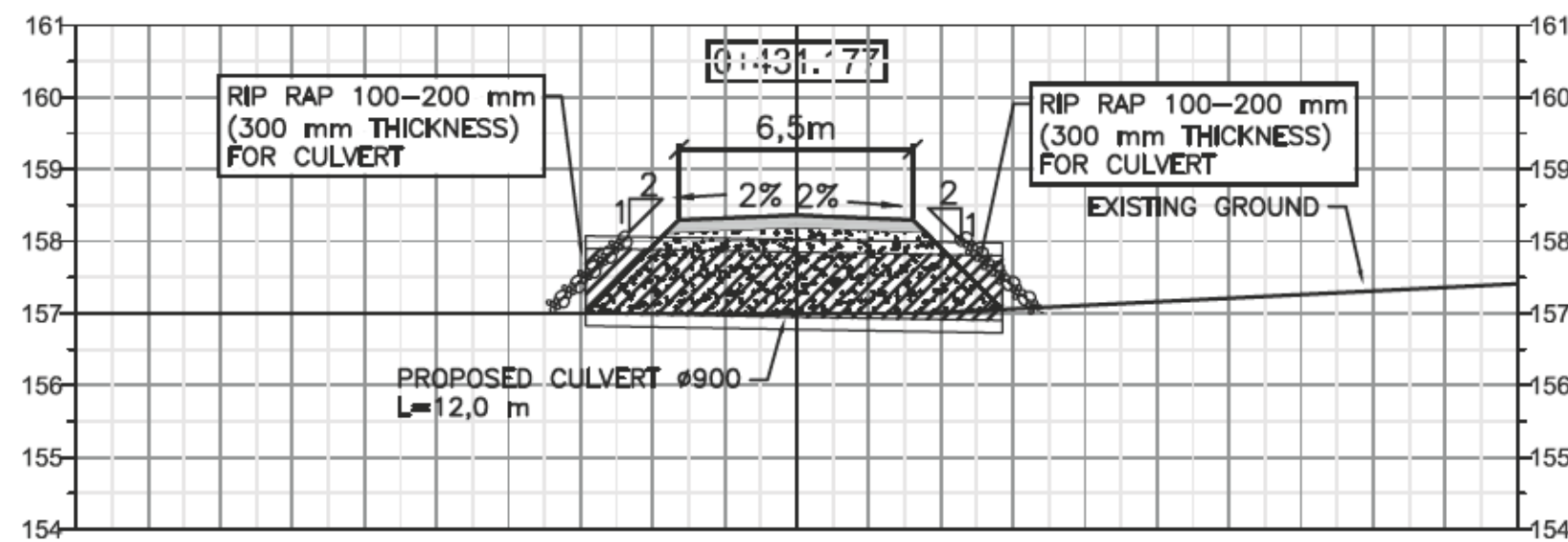
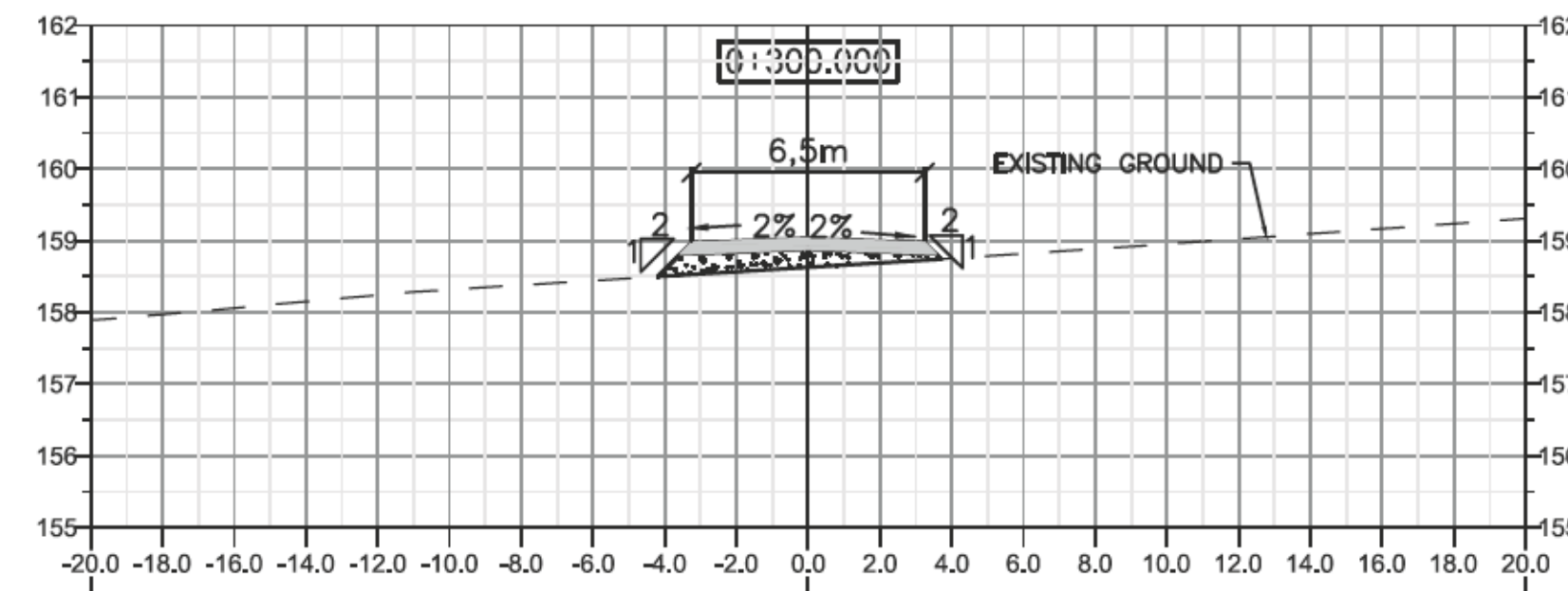
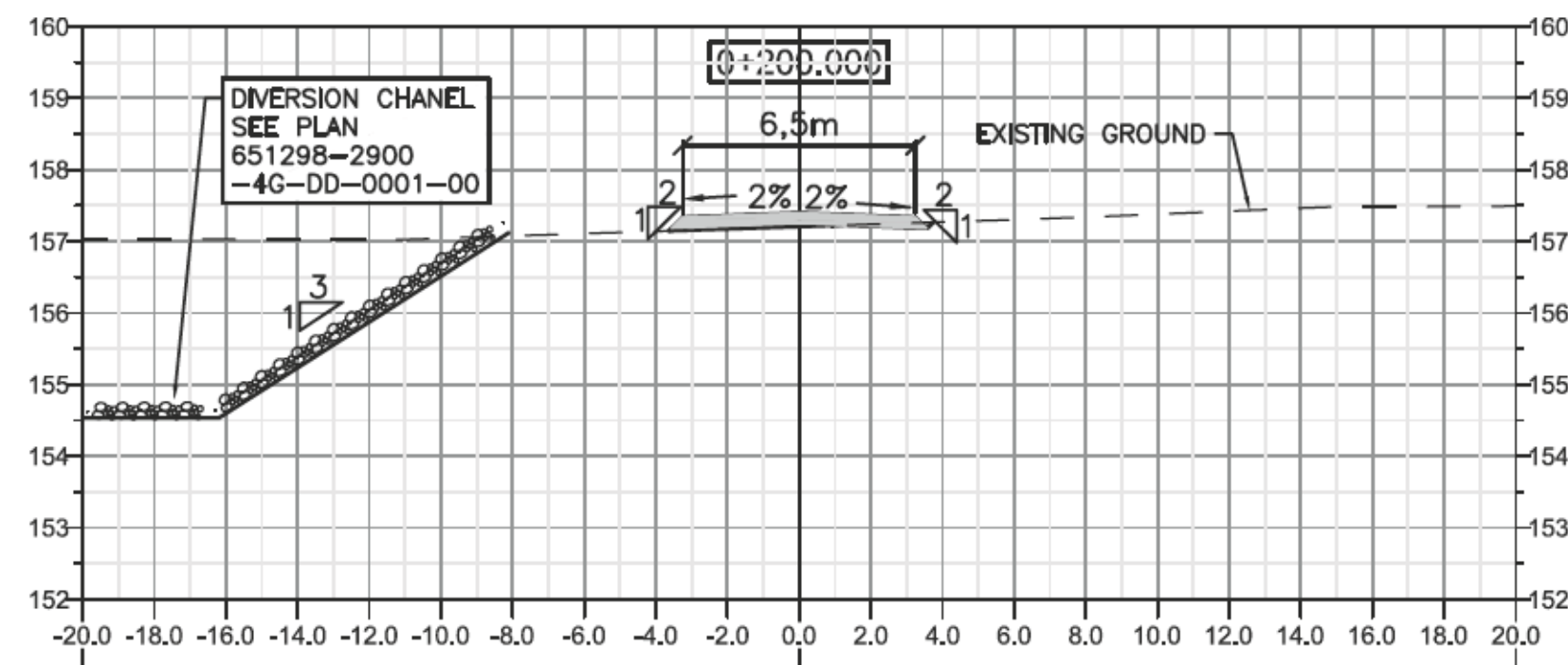
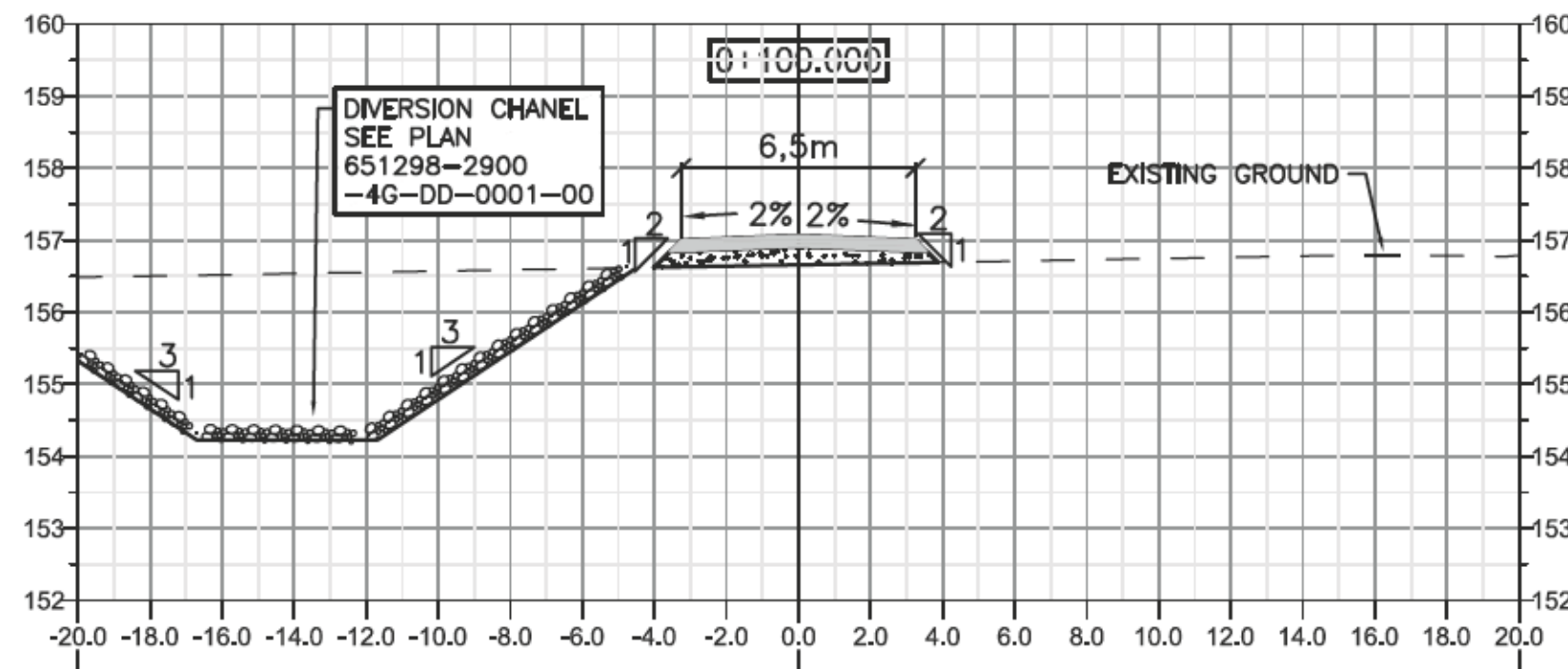
TITLE / TITRE
AGNICO EAGLE — WHALE TAIL (AMARUO)
417 — ROADS, YARDS, FENCES AND OTHER
230 — GENERAL EARTH WORKS
PLAN & PROFILE
ROAD #24 — SOUTH WHALE TAIL DIVERSION CHANNEL
0+380 @ 0+785

DESSINÉ PAR DRAWN BY	DANIELLE DESCÔTEAUX, T.P.	DATE 2019-07-22
VÉRIFIÉ PAR CHECKED BY	RICHARD MARCOUX, ING.	2019-07-22
APPROUVÉ PAR APPROVED BY	RICHARD MARCOUX, ING.	2019-07-22

GRAPHIQUE
SCALE 1:1000/1:100 DATE 2019-07-22

NO. DESIGN
DRAWING NO. 61-417-230-273

NO. PROJET PROJECT NO.	REVISION	FEMELLE / SHEET
6115	0	1 / 1



NOTE:
WIDTH OF ROAD #22 AND #23 = 6.5 m
EACH WAY = 3.25 m

LEGEND:

- CRUSHED STONES 0-50, THICKNESS 150mm, COMPACTED TO 95% P.M.
- BACKFILL- ESKER MATERIALS, MAX Ø 0-150 mm, MIN. THICKNESS 600 mm, COMPACTED TO 92% P.M.
- EXCAVATION

PLAN CLE
KEY PLAN

CONSTRUCTION ROADS 2017:
CONSTRUCTION ROADS 2018:

NOTES GÉNÉRALES / GENERAL NOTES

**POUR CONSTRUCTION
FOR CONSTRUCTION**

DATE : 2019-07-22

AGNICO EAGLE

SNC-LAVALIN

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150, rue Gamble Ouest
Rouyn-Noranda (Québec) J8X 2R7
Tél.: 819 784-5181 Fax : 819 787-0158
www.snc-lavalin.com

Project #: 644819-0000

CHANGEMENT Q-CORRIGER EST LA PROPRÉTÉ DE AGNICO EAGLE. CE DOK EST ASSURÉ PAR AGNICO. SANS GARANTIE. AGNICO ASSUME SEULEMENT LA RESPONSABILITÉ DE LA PRÉPARATION DE CE DOK. AGNICO ASSUME SEULEMENT LA RESPONSABILITÉ DE LA PRÉPARATION DE CE DOK. AGNICO ASSUME SEULEMENT LA RESPONSABILITÉ DE LA PRÉPARATION DE CE DOK.

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS		
TITRE / TITLE	#	DWG
TOURNER / TURNING	91-417-230-228	
EXCAVATION / EXCAVATION	91-417-230-232	
SOUTH WHALE TAIL DIVERSION CHANNEL	91-417-230-232	



REV.	DATE	DESCRIPTION	PAR/REV	APP.	LGND
0	2019-07-22	ISSUED FOR CONSTRUCTION	D.D.	G.M.	E.T.

REVISIONS

TITLE / TITRE
AGNICO EAGLE - WHALE TAIL (AMARUQ)
417 - ROADS, YARDS, FENCES AND OTHER
230 - GENERAL EARTH WORKS
CROSS SECTIONS
MAINTENANCE ROAD - SOUTH WHALE TAIL DIVERSION CHANNEL
0+100 @ 0+700

DESIGNÉ PAR DRAWN BY	DANIELLE DESCÔTEAUX, T.P.	DATE 2019-07-22
VÉRIFIÉ PAR CHECKED BY	RICHARD MARCOUX, ING.	2019-07-22
APPROUVÉ PAR APPROVED BY	RICHARD MARCOUX, ING.	2019-07-22

ÉCHELLE
SCALE 1:200/1:100 DATE 2019-07-22

NO. DESIGN
DRAWING NO. 61-417-230-274

NO. PROJET PROJECT NO.	REVISION	FEMELLE / SHEET
6115	0	1 / 1