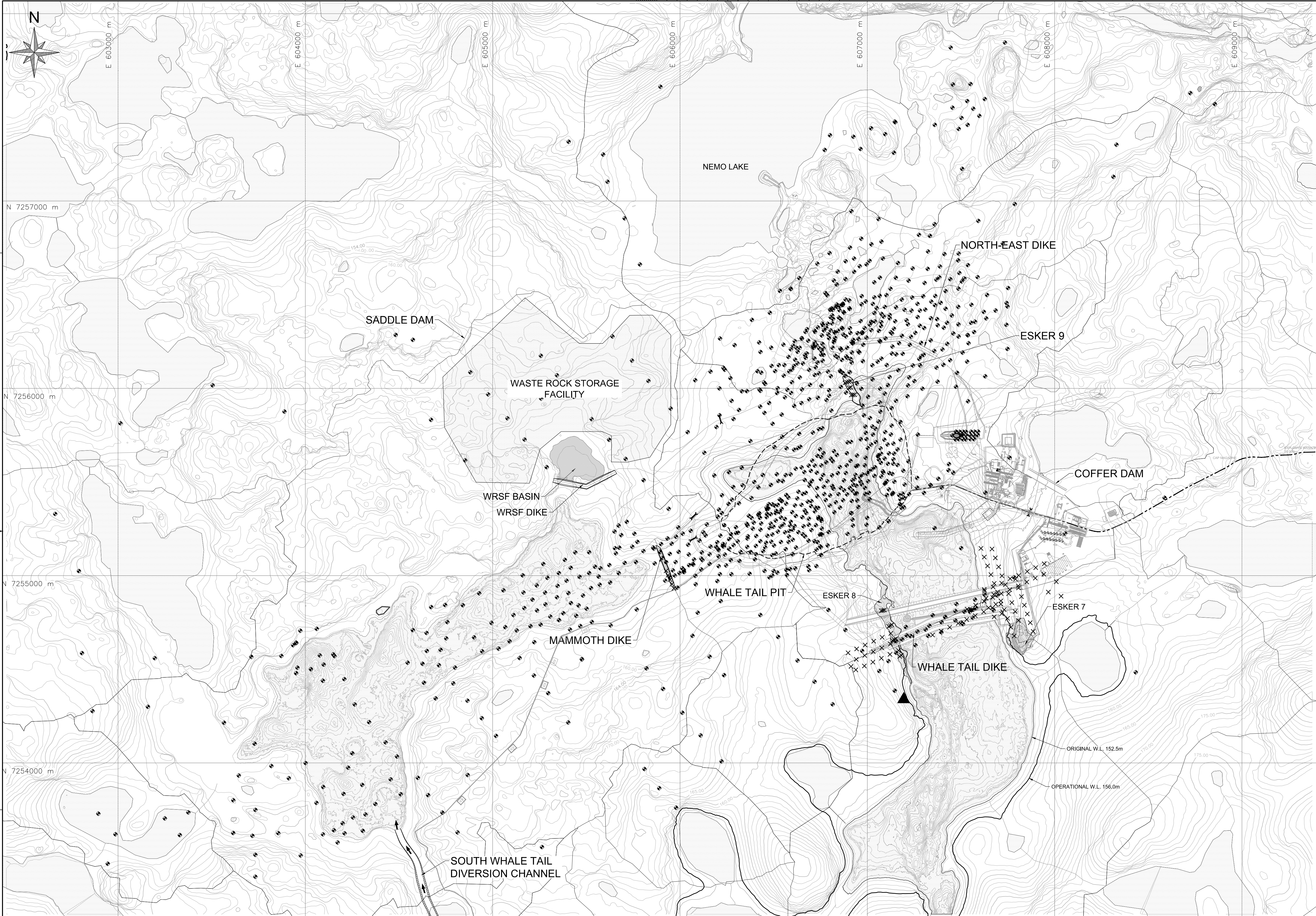


LAST SAVE: 2018/05/10 - 10:47:0m
PATH: T:\proj\651298 Detailed Eng W\A-Geotech Amaruq\40_DD_DESSINS\651298-2500-4600-0002-01.dwg



- LEGEND
- ROAD
 - NATURAL WATERSHED
 - INVESTIGATION HOLES (NOTE 4)
 - AIR TRACK DRILL HOLE (DESTRUCTIVE)
 - ARCTIC FOX HABITAT (D&N & NEG 2015)

- NOTES:
- THIS DRAWING ILLUSTRATES FIELD INVESTIGATION LOCATIONS WITH RESPECT TO THE GENERAL ARRANGEMENT OF THE WHALE TAIL DIKE AND OTHER INFRASTRUCTURE.
 - ALL ELEVATIONS AND COORDINATES ARE IN METERS.
 - WORKS SHOWN ON THIS DRAWING SHALL BE EXECUTED IN ACCORDANCE WITH THE APPLICABLE TECHNICAL SPECIFICATIONS.
 - INVESTIGATION HOLES AT WHALE TAIL DIKE ARE GEOTECHNICAL HOLES. INVESTIGATION HOLES ELSEWHERE ARE A COMBINATION OF GEOTECHNICAL AND EXPLORATION HOLES.

																		6	6112-000-210-001_RC RECEIVED ON 2017-03-16		
05	01	2018-05-10	ISSUED FOR CONSTRUCTION															5	AMARUQ_UTMWF_03132017 REVCEIVED ON 2017-03-14		
04	00	2018-05-07	ISSUED FOR CONSTRUCTION															4	GOLDER GENERAL WATERSHED CONFIGURATION RECEIVED ON 2015-01-13		
03	PC	2018-01-15	ISSUED FOR MDRP COMMENTS															3	LAKE ELEVATION RECEIVED FROM AEM AND SURVEYED ON AUGUST 2015		
02	PB	2017-12-22	ISSUED FOR CLIENT COMMENTS															2	AMARUQ TOPOGRAPHY RECEIVED ON 2015-09-15		
01	PA	2017-12-07	ISSUED FOR INTERNAL COMMENTS							01	WRSF LIMITS MODIFICATION			2018-05-10				1	Amaruq Baseline Studies, Potentially Environmentally Significant Features. Project: DA14-053-04. Dougan & Associates.		
ISSUE No	REV.	DATE (Y/M/D)	PURPOSE OF ISSUE	ISSUE No	REV.	DATE (Y/M/D)	PURPOSE OF ISSUE	No	REVISION DESCRIPTION				DATE (Y/M/D)		*	**	No				
								INITIALS: * DESIGNED ** APPROVED													
ISSUE REGISTER				ISSUE REGISTER				REVISION REGISTER										REFERENCE DRAWINGS			

PROFESSIONAL SEAL

PERMIT TO PRACTICE
SNC-LAVALIN INC.
Signature: *[Signature]*
Date: 2018-05-10
PERMIT NUMBER: P 260
The Association of Professional Engineers, Geologists and Geophysicists of NWTNU

SNC-LAVALIN
Mining & Metallurgy
5500, des Coteaux Blvd., bur. 200, Quebec (Quebec), Canada G2K 2E2
Telephone: (418) 621-5500, Fax: (418) 621-5887

PREPARATION	APPROVAL
DESIGNED A. ARBAIZA, P. ENG.	PROJECT DISCIPLINE ENGINEER G. HAILE, ENG.
DRAWN D. LAN	PROJECT ENGINEERING MANAGER Y. JALBERT, P. ENG.
CHECKED Y. JALBERT / L. MACPHIE	CLIENT
DATE 2018-05-10	PERMIT TO PRACTICE D. LEAHY, P. ENG.
SCALE 1 : 10 000	100 0 100 200 300 400m

CLIENT

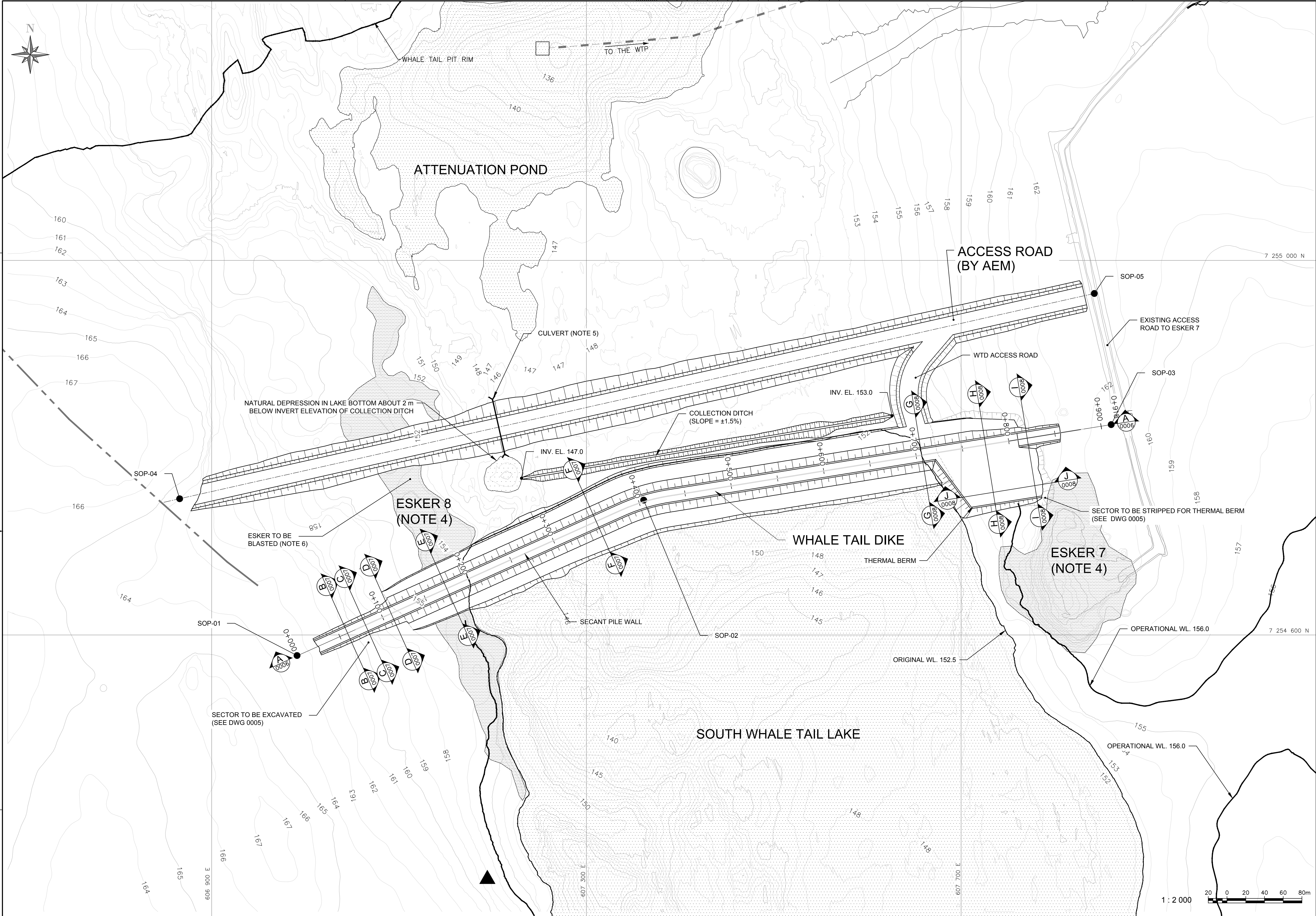
PROJECT
**AGNICO EAGLE - MEADOWBANK DIVISION
AMARUQ PROJECT**

TITLE
**GENERAL PLAN OF
FIELD INVESTIGATION LOCATIONS**

PROJECT No	SUBDIVISION	SUBJECT	SERIAL	REV.
651298	2500	4G DD	0002	01

A1-HOR-FRAME-EN (S)

LAST SAVE: 2018/05/07 - 3:04pm
PATH: T:\proj\651298 Detailed Eng WH-Geotech Amaruq\40_DD_DESSINS\00\651298-2500-4GDD-0004-00.dwg



LEGEND

Plan View

- PROPOSED ROAD
- OPERATIONAL WATER ELEVATION
- CULVERT
- SOP-01
- ARCTIC FOX HABITAT (D&N & NEC.2015)

SETTING OUT POINTS			
NAME	STA.	EASTING	NORTHING
SOP-01	0+000	606 991.1	7 254 578.1
SOP-02	0+405	607 361.2	7 254 744.1
SOP-03	0+911	607 860.3	7 254 824.6
SOP-04	---	606 865.7	7 254 745.5
SOP-05	---	607 842.3	7 254 964.6

- NOTES:
- THIS DRAWING ILLUSTRATES THE PLAN LOCATION OF WHALE TAIL DIKE AFTER CONSTRUCTION AND DEWATERING.
 - ALL ELEVATIONS AND COORDINATES ARE IN METERS.
 - WORKS SHOWN ON THIS DRAWING SHALL BE EXECUTED IN ACCORDANCE WITH THE APPLICABLE TECHNICAL SPECIFICATIONS.
 - LIMITS OF ESKERS ARE APPROXIMATE. THE CONTRACTOR SHALL MAKE ITS OWN INTERPRETATION OF ESKER LIMITS BASED ON SITE VISITS AND FIELD INVESTIGATIONS. MOST OF THE GRANULAR MATERIAL IN ESKER 7 HAS BEEN EXPLOITED. ESKER 8 TO BE EXCAVATED TO EL. 153.0 AND STOCKPILED PRIOR TO WHALE TAIL DIKE CONSTRUCTION.
 - CULVERT TO BE INSTALLED AFTER DEWATERING ON THE DOWNSTREAM SIDE OF WHALE TAIL DIKE. DETAILS TO BE DETERMINED. INVERT OF CULVERT EL. ±147.0.
 - THE EXTENT OF THE ESKER TO BE BLASTED WILL BE DEFINED AND DONE BY AEM.

ISSUE REGISTER				ISSUE REGISTER				REVISION REGISTER				REFERENCE DRAWINGS			
ISSUE No	REV.	DATE (Y/M/D)	PURPOSE OF ISSUE	ISSUE No	REV.	DATE (Y/M/D)	PURPOSE OF ISSUE	No	REVISION DESCRIPTION	DATE (Y/M/D)	*	**	No		
04	00	2018-05-07	ISSUED FOR CONSTRUCTION										4	6112-000-210-001_RC	RECIEVED ON 2017-03-16
03	PC	2018-01-15	ISSUED FOR MDRB COMMENTS										3	AMARUQ_UTMWF_03132017	REVCEIVED ON 2017-03-14
02	PB	2017-12-22	ISSUED FOR CLIENT COMMENTS										2	AMARUQ TOPOGRAPHY	RECEIVED ON 2015-09-15
01	PA	2017-12-05	ISSUED FOR INTERNAL COMMENTS										1	AMARUQ Baseline Studies, Potentially Environmentally, Significant Features. Project: DA14-053-04. Dougan & Associates.	

PROFESSIONAL SEAL

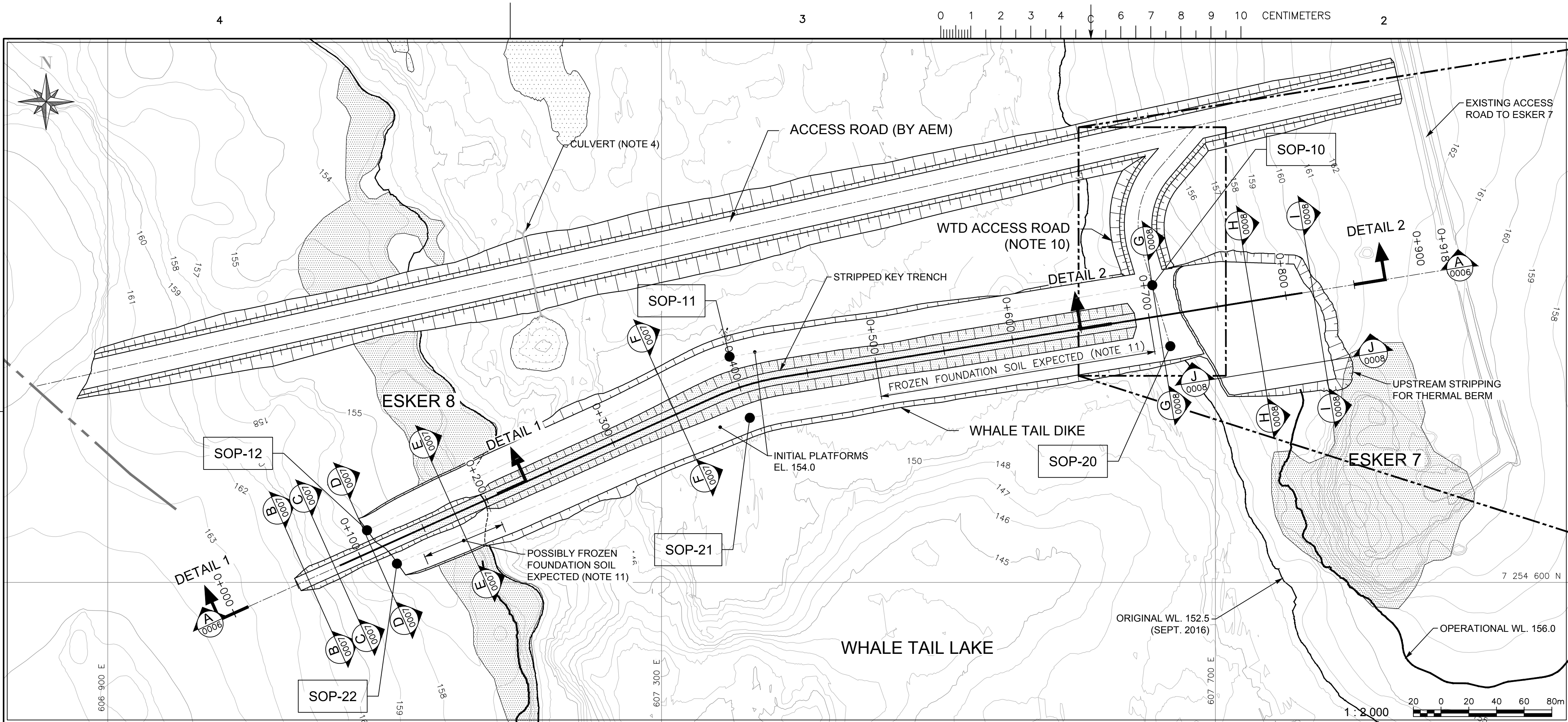
SNC-LAVALIN
Mining & Metallurgy
5500, des Galeries Blvd., bur. 200, Québec (Québec), Canada G2K 2E2
Telephone: (418) 621-5500, Fax: (418) 621-8887

PREPARATION
DESIGNED: A. ARBAIZA, P. ENG.
DRAWN: D. LAN
CHECKED: Y. JALBERT / L. MACPHIE
DATE: 2018-05-07
SCALE: AS SHOWN

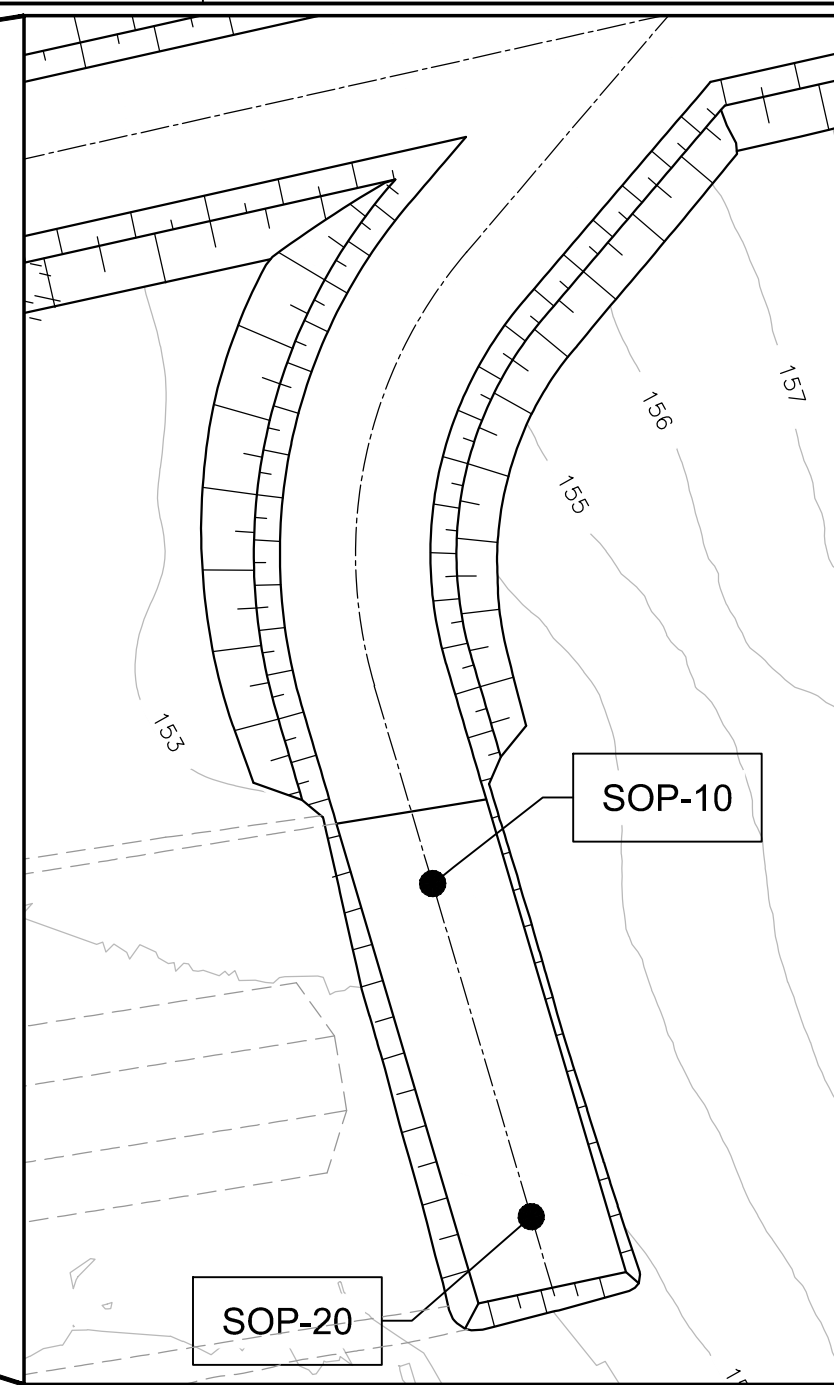
APPROVAL
PROJECT DISCIPLINE ENGINEER: G. HAILE, ENG.
PROJECT ENGINEERING MANAGER: Y. JALBERT, P. ENG.
CLIENT: D. LEAHY, P. ENG.
PERMIT TO PRACTICE: D. LEAHY, P. ENG.

PERMIT TO PRACTICE
SNC-LAVALIN INC.
Signature: [Signature]
Date: 2018-05-07
PERMIT NUMBER: P 260
The Association of Professional Engineers, Geologists and Geophysicists of NEWFOUNDLAND

CLIENT				
AGNICO EAGLE				
PROJECT				
AGNICO EAGLE - MEADOWBANK DIVISION				
AMARUQ PROJECT				
TITLE				
WHALE TAIL DIKE				
PLAN VIEW				
PROJECT No	SUBDIVISION	SUBJECT	SERIAL	REV.
651298	2500	4G DD	0004	00



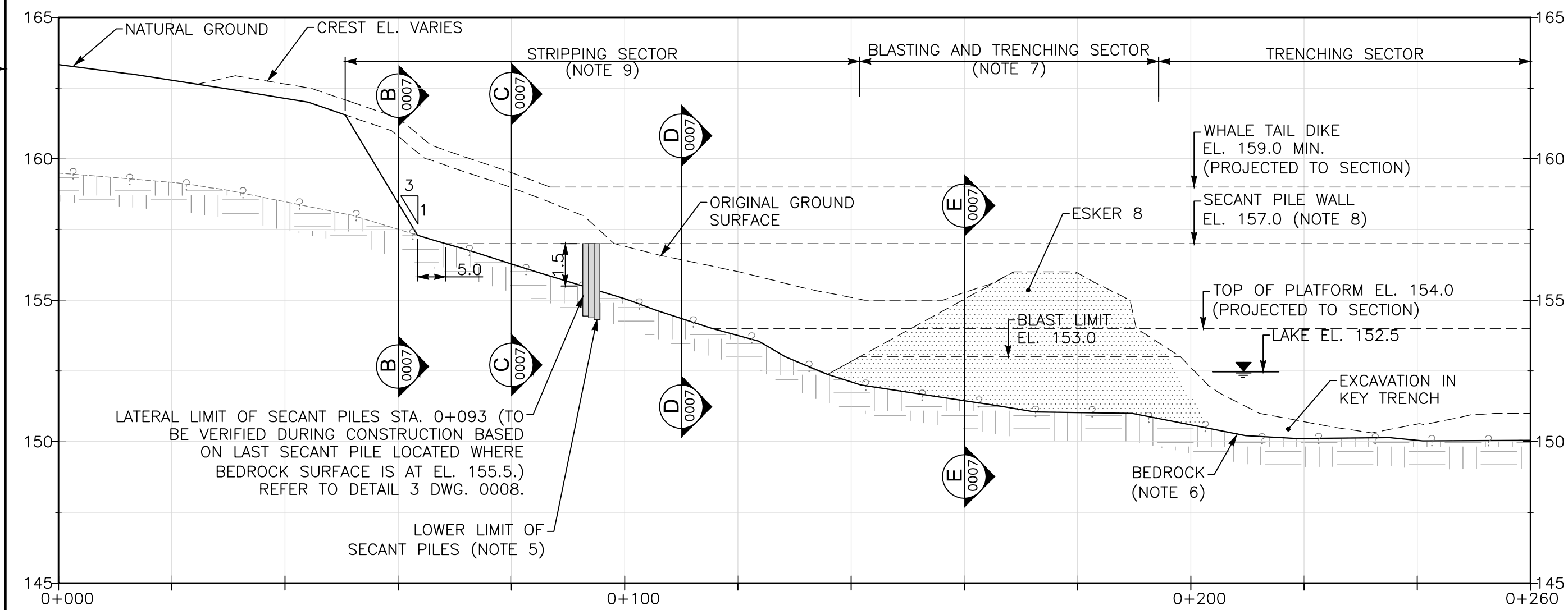
EXCAVATION PLAN VIEW
SCALE 1:2000



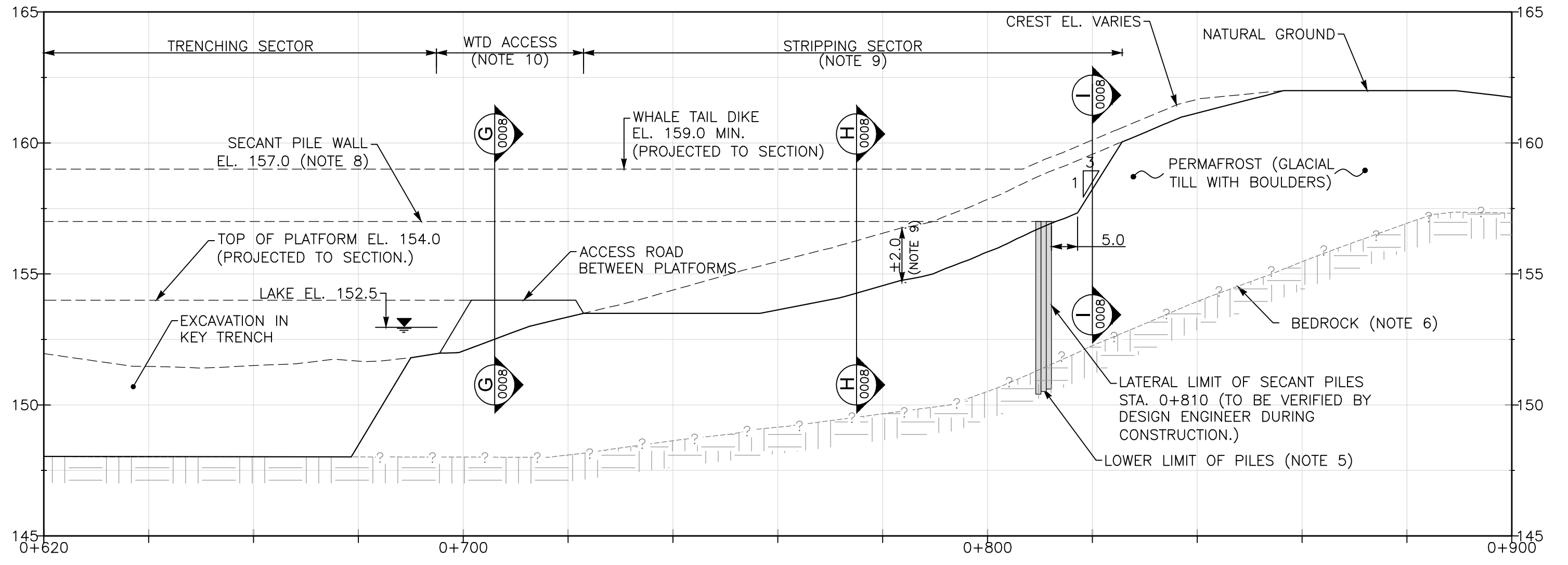
ENLARGEMENT OF WTD ACCESS ROAD DURING CONSTRUCTION
SCALE 1:1000

SETTING OUT POINTS (NOTE 12)				
NAME	STA.	EASTING	NORTHING	
SOP-10	0+706	607 654.4	7 254 814.5	
SOP-11	0+400	607 349.2	7 254 762.7	
SOP-12	0+112	607 087.3	7 254 637.6	
SOP-20	0+712	627 667.4	7 254 770.5	
SOP-21	0+400	607 363.7	7 254 718.8	
SOP-22	0+122	607 109.0	7 254 614.0	

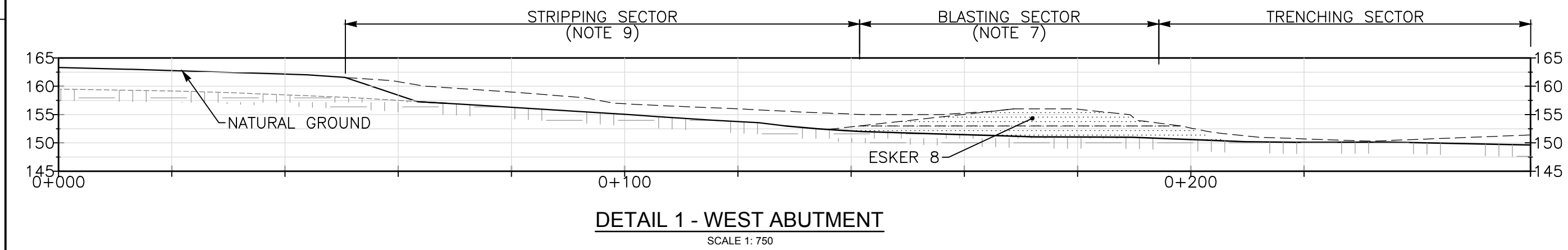
- LEGEND
Plan View
PROPOSED ROAD
CULVERT
- NOTES:
- THIS DRAWING ILLUSTRATES THE TRENCH EXCAVATION, STRIPPING AND BLASTING OF THE NATURAL GROUND, ESKER AND THERMAL BERM AREA. SELECTED DESIGN FEATURES ARE SHOWN TO ILLUSTRATE THEIR CONFIGURATION WITH RESPECT TO THE EXCAVATION.
 - ALL ELEVATIONS AND COORDINATES ARE IN METERS.
 - WORKS SHOWN ON THIS DRAWING SHALL BE EXECUTED IN ACCORDANCE WITH THE APPLICABLE TECHNICAL SPECIFICATIONS.
 - CULVERT TO BE INSTALLED AFTER DEWATERING ON THE DOWNSTREAM SIDE OF WHALE TAIL DIKE. DETAILS TO BE DETERMINED.
 - LOWER LIMITS OF PILES TO BE ADJUSTED ON SITE BASED ON FIELD INVESTIGATIONS. SECANT PILES SHOULD BE EXTENDED INTO BEDROCK (1m. MIN.)
 - THE BEDROCK SURFACE WAS ESTIMATED USING THE FIELD INVESTIGATIONS FROM 2015 TO 2017 (INCLUDING THE DESTRUCTIVE BOREHOLES OF NOVEMBER 2017). THE BEDROCK SURFACE PROFILE SHOWN IS AN AVERAGE CONDITION, THIS DOES NOT ALWAYS MATCH THE BEDROCK SURFACE OF THE INDIVIDUAL LOGS.
 - THE EXTENT OF THE SECTOR TO BE BLASTED WILL BE DEFINED AND DONE BY AEM.
 - THE TOP OF THE SECANT PILE WALL WILL BE AT EL. 157.0 WHICH CORRESPONDS TO THE DESIGN FLOOD.
 - STRIPPING OF SOIL ALONG THE CENTERLINE AT EAST ABUTMENT TO BE AT LEAST 2m AND DEEPER EXCAVATION (POSSIBLY TO BEDROCK) TO BE CARRIED OUT IF PRACTICAL.
 - TOP SOIL/UNFROZEN SOIL WILL HAVE TO BE REMOVED PRIOR TO THE CONSTRUCTION OF THE WTD ACCESS ROAD.
 - FIELD INVESTIGATIONS HAVE IDENTIFIED A FROZEN SECTOR IN THE FOUNDATION SOIL BETWEEN STA 0+500 TO 0+700 AND A POSSIBLY FROZEN SECTOR BETWEEN STA. 0+140 AND 0+200. ADDITIONAL EFFORT WILL BE REQUIRED FOR THE EXCAVATION WITHIN THE TRENCH.
 - THE SETTING OUT POINTS OF THE INITIAL PLATFORMS ARE SELECTED FOR AVERAGE BEDROCK SURFACE CONDITIONS. FOR LOCAL AREAS OF DEEPER BEDROCK SURFACE THE DESIGN WIDTH OF THE STRIPPED BEDROCK SURFACE CAN BE REDUCED AS DIRECTED BY THE DESIGN ENGINEER.



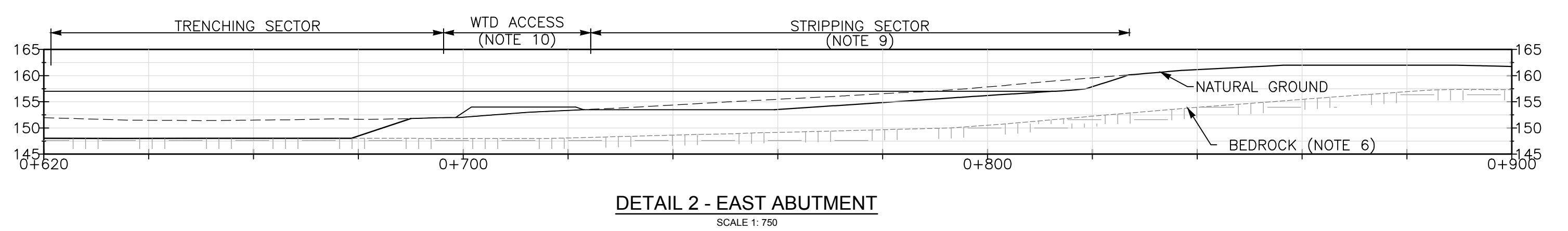
DETAIL 1 - WEST ABUTMENT
SCALE HOR. 1:750
VER. 1:150



DETAIL 2 - EAST ABUTMENT
SCALE HOR. 1:750
VER. 1:150



DETAIL 1 - WEST ABUTMENT
SCALE 1:750



DETAIL 2 - EAST ABUTMENT
SCALE 1:750

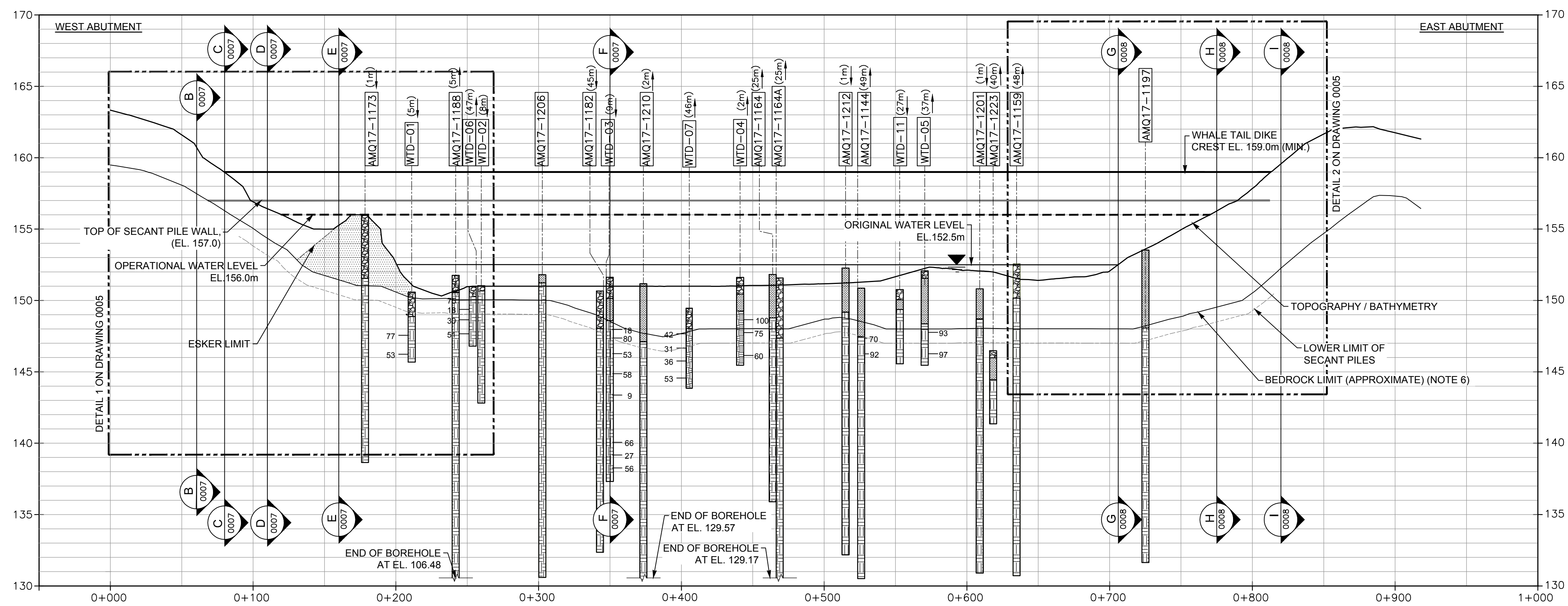
ISSUE REGISTER				ISSUE REGISTER				REVISION REGISTER				REFERENCE DRAWINGS			
ISSUE No	REV.	DATE (Y/M/D)	PURPOSE OF ISSUE	ISSUE No	REV.	DATE (Y/M/D)	PURPOSE OF ISSUE	No	REVISION DESCRIPTION	DATE (Y/M/D)	**	No	REVISION DESCRIPTION	DATE (Y/M/D)	**
04	00	2018-05-07	ISSUED FOR CONSTRUCTION												
03	PC	2018-01-15	ISSUED FOR MDRB COMMENTS												
02	PB	2017-12-22	ISSUED FOR CLIENT COMMENTS												
01	PA	2017-12-05	ISSUED FOR INTERNAL COMMENTS												

6	6112-000-210-001_RC RECEIVED ON 2017-03-16
5	AMARUQ_UTMWF_03132017 RECEIVED ON 2017-03-14
4	GOLDER GENERAL WATERSHED CONFIGURATION RECEIVED ON 2015-01-13
3	LAKE ELEVATION RECEIVED FROM AEM AND SURVEYED ON AUGUST 2015
2	AMARUQ TOPOGRAPHY RECEIVED ON 2015-09-15
1	Amaruq Baseline Studies, Potentially Environmentally Significant Features. Project: DA14-053-04. Dougan & Associates.

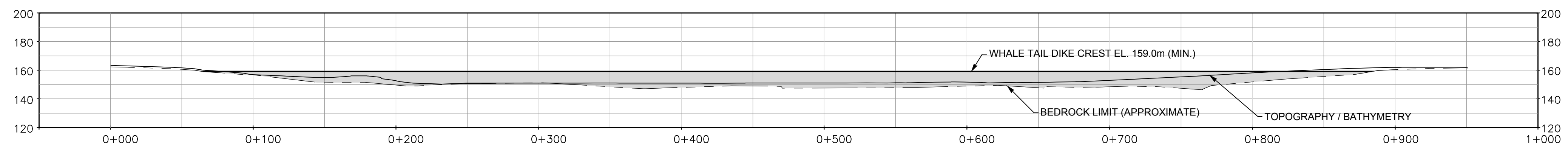
PROFESSIONAL SEAL	
PERMIT TO PRACTICE SNC-LAVALIN INC. Signature: [Signature] P.ENG. Date: 2018-05-07 PERMIT NUMBER: P 260 The Association of Professional Engineers, Geologists and Geophysicists of NTNU	

PREPARATION		APPROVAL	
DESIGNED	A. ARBAIZA, P. ENG.	PROJECT DISCIPLINE ENGINEER	G. HAILE, ENG.
DRAWN	D. LAN	PROJECT ENGINEERING MANAGER	Y. JALBERT, P. ENG.
CHECKED	Y. JALBERT/ L. MACPHIE	CLIENT	
DATE	2018-05-07	PERMIT TO PRACTICE	D. LEAHY, P. ENG.
SCALE	AS SHOWN		

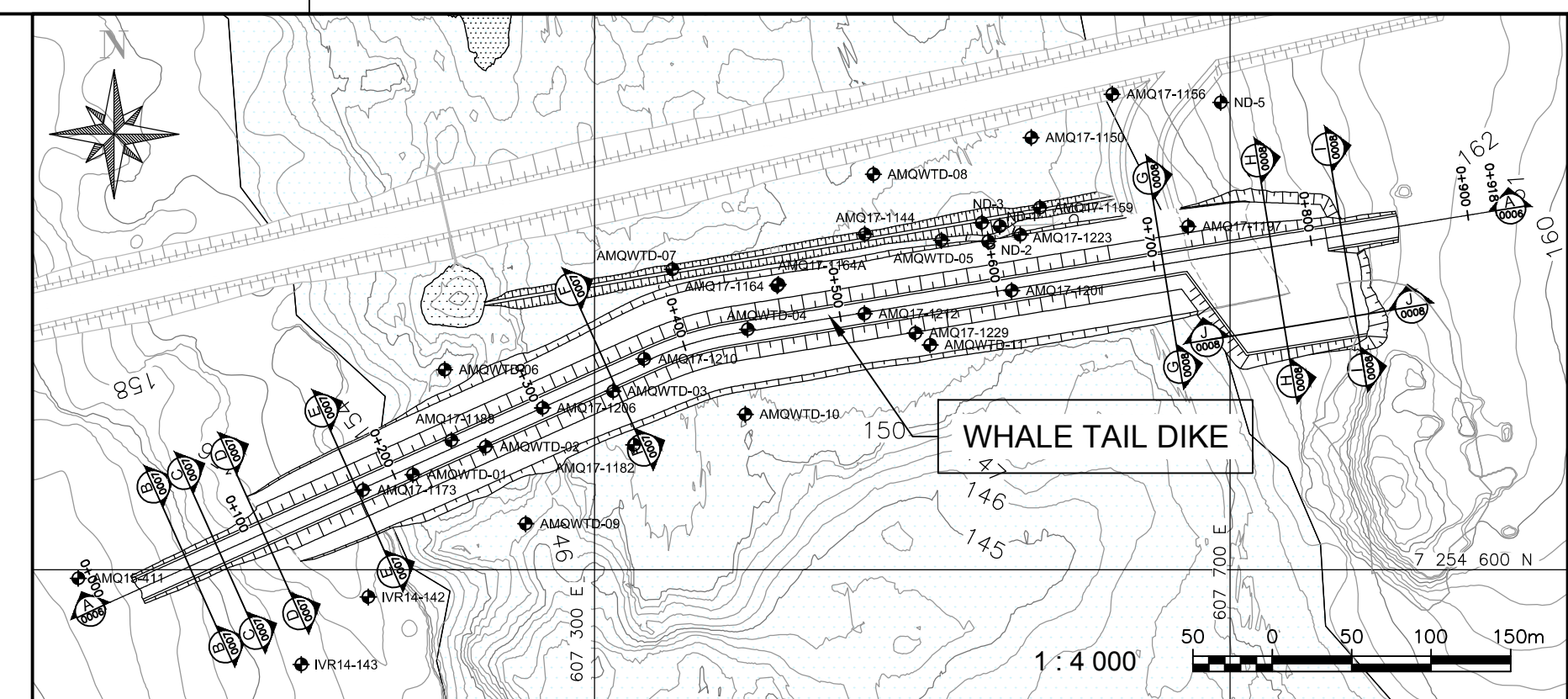
CLIENT		PROJECT	
		AGNICO EAGLE - MEADOWBANK DIVISION	
TITLE		WHALE TAIL DIKE EXCAVATION, STRIPPING AND BLASTING	
PROJECT No	651298	SUBDIVISION	2500
SUBJECT	4G DD	SERIAL	0005
REV.	00		



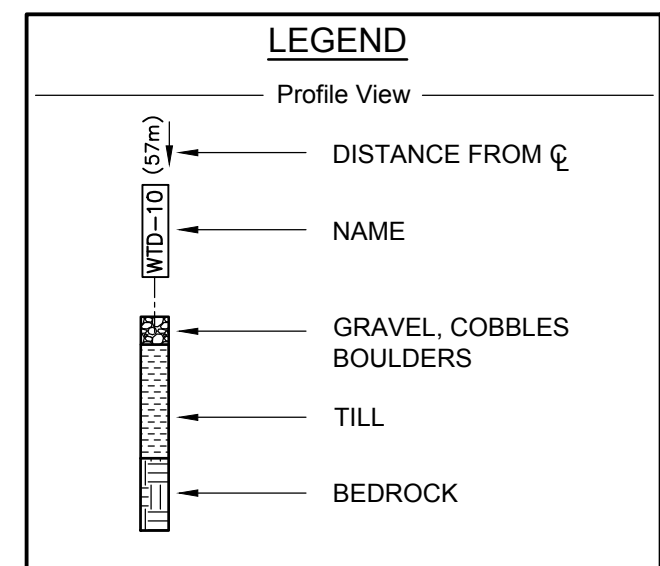
SECTION A-A PROFILE OF WHALE TAIL DIKE (NOTE 3)
SCALE HOR. 1: 2 000
VER. 1: 200



SECTION A-A PROFILE OF WHALE TAIL DIKE
SCALE HOR. 1: 2 000



KEY PLAN

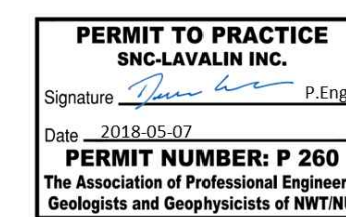


NOTES:

1. THIS DRAWING ILLUSTRATES THE KEY PLAN AND STRATIGRAPHIC PROFILE OF THE WHALE TAIL DIKE.
2. WORKS SHOWN ON THIS DRAWING SHALL BE EXECUTED IN ACCORDANCE WITH THE APPLICABLE TECHNICAL SPECIFICATIONS.
3. THE LOCATIONS OF THE BOREHOLES ARE SHOWN ON DRAWING 0003.
4. ALL ELEVATIONS AND COORDINATES ARE IN METERS.
5. SEE DRAWINGS 0007 AND 0008 FOR SECTIONS B-B TO J-J.
6. THE BEDROCK SURFACE WAS ESTIMATED USING THE FIELD INVESTIGATIONS FROM 2015 TO 2017 (INCLUDING THE DESTRUCTIVE BOREHOLES OF NOVEMBER 2017). THE BEDROCK SURFACE PROFILE SHOWN IS AN AVERAGE CONDITION, THIS DOES NOT ALWAYS MATCH THE BEDROCK SURFACE OF THE INDIVIDUAL LOGS.
7. THE TOP OF THE SECANT PILE WALL WILL BE AT EL. 157.0 WHICH CORRESPONDS TO THE DESIGN FLOOD.

[illegible]

PROFESSIONAL SEAL



SNC-LAVALIN
Mining & Metallurgy
5500, des Galeries Blvd., bur. 200, Quebec (Quebec), Canada G2K 2E1
Telephone: (418) 621-5500, Fax: (418) 621-8887

PREPARATION	APPROVAL
DESIGNED A. ARBAIZA, P. ENG.	PROJECT DISCIPLINE ENGINEER G. HALL, ENG.
DRAWN D. LAN	PROJECT ENGINEERING MANAGER Y. JALBERT, P. ENG.
CHECKED Y. JALBERT/L. MACPHEE	CLIENT
DATE 2018-05-07	PERMIT TO PRACTICE D. LEAHY, P. ENG.

CLIENT	
--------	--

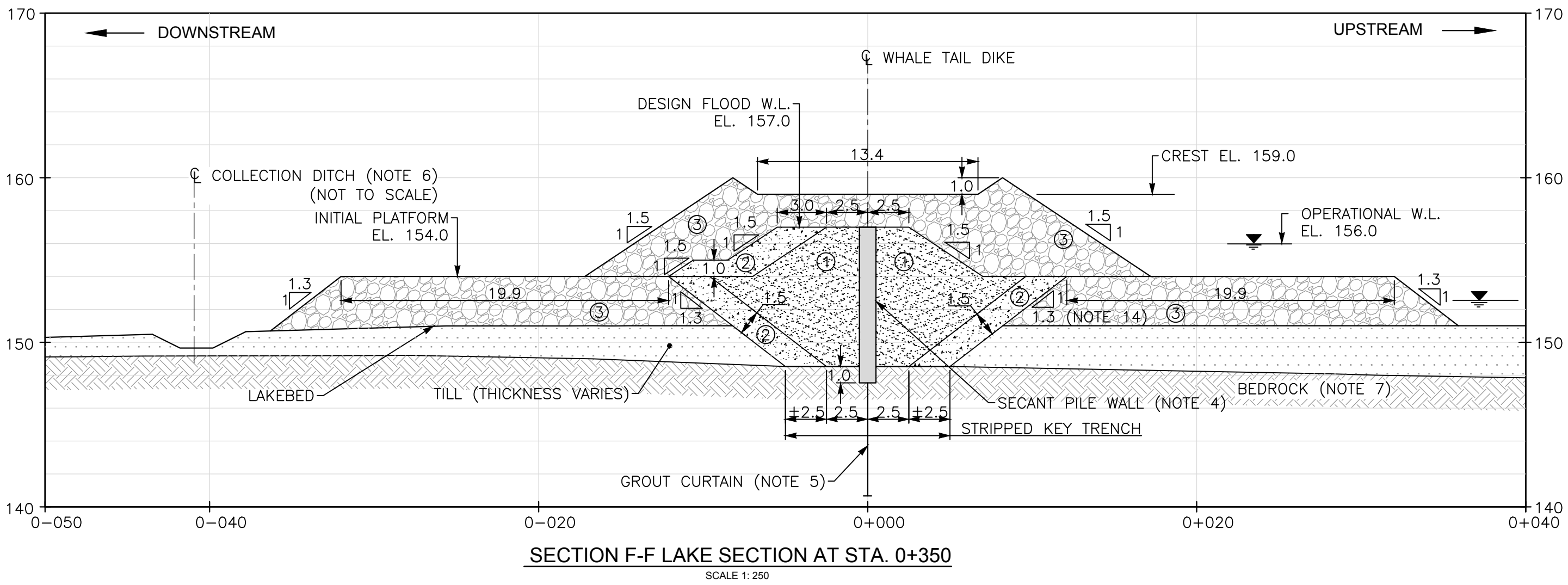
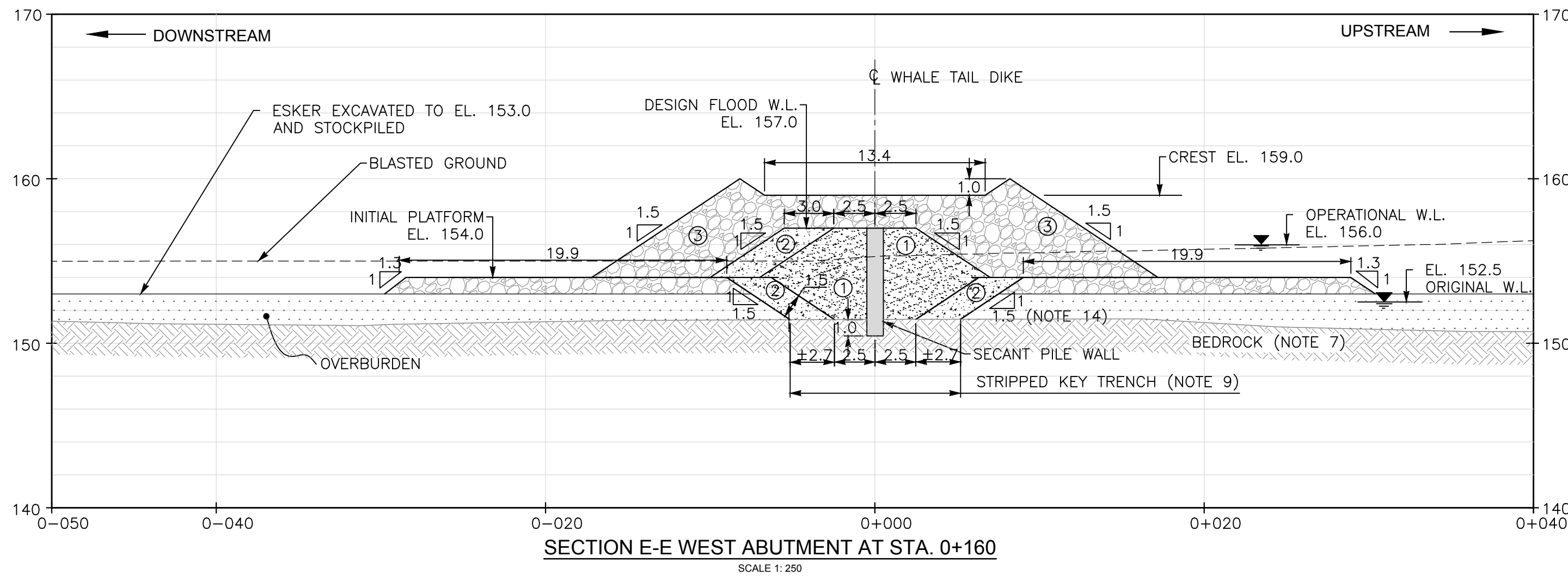
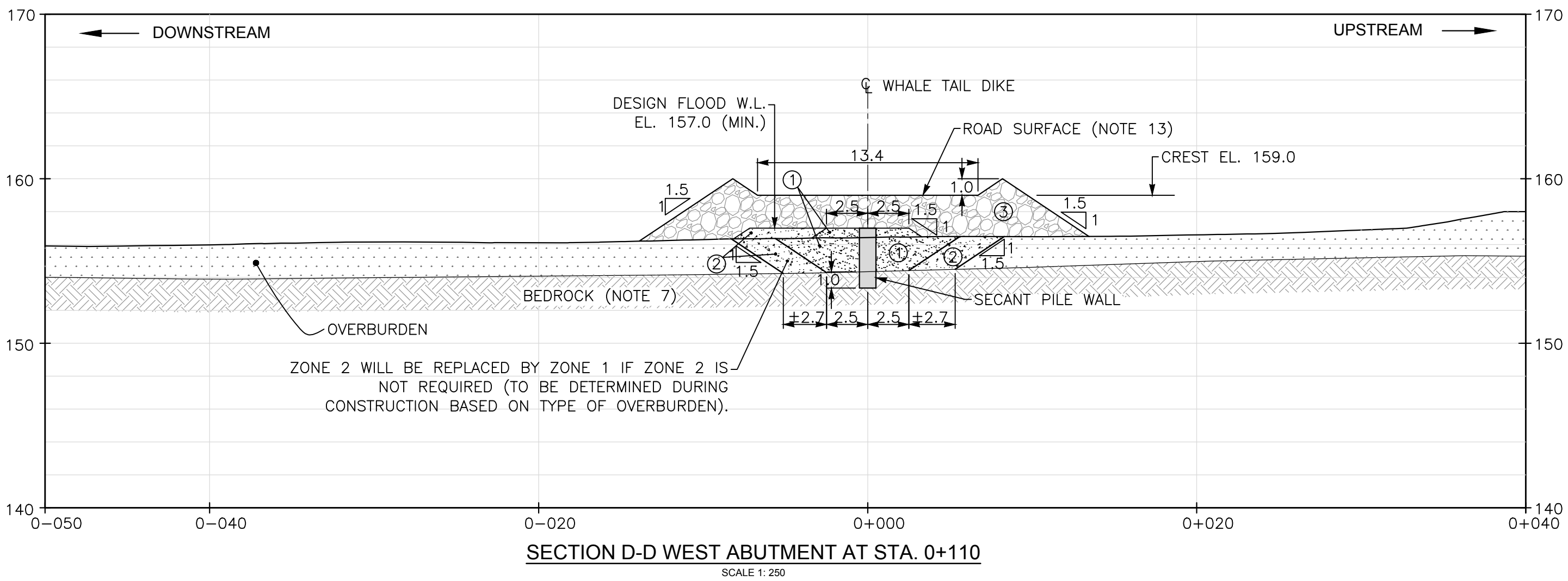
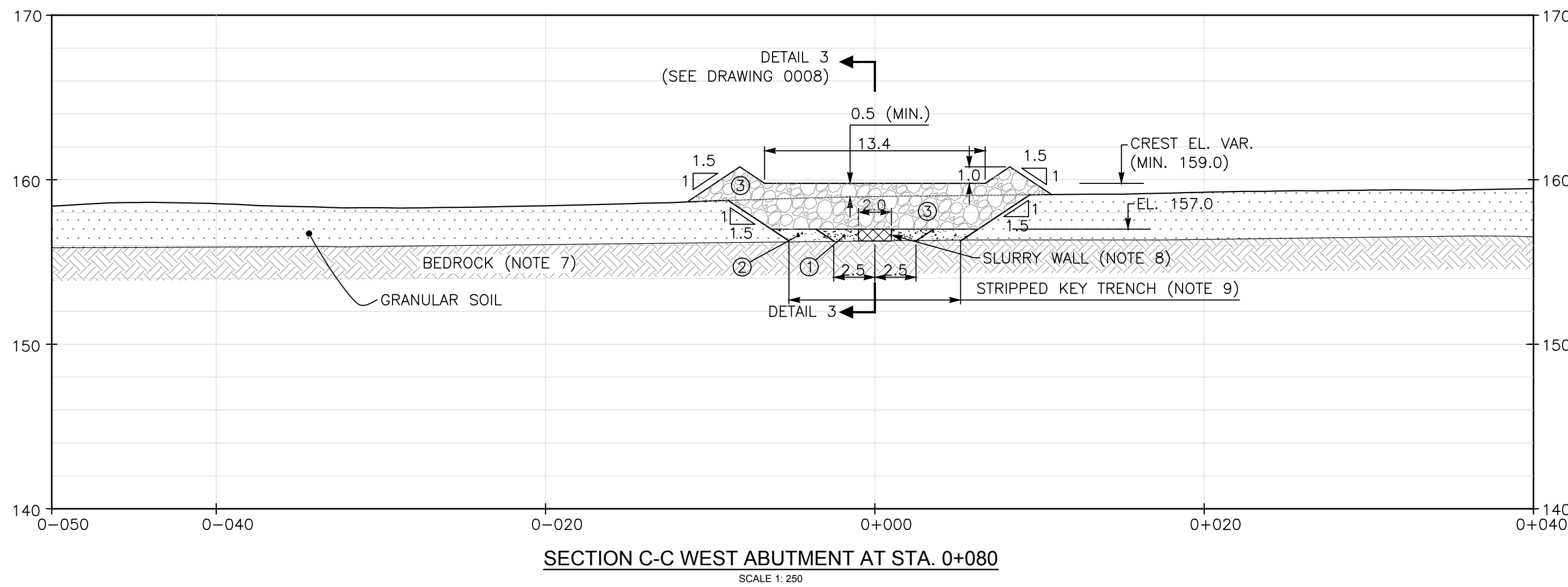
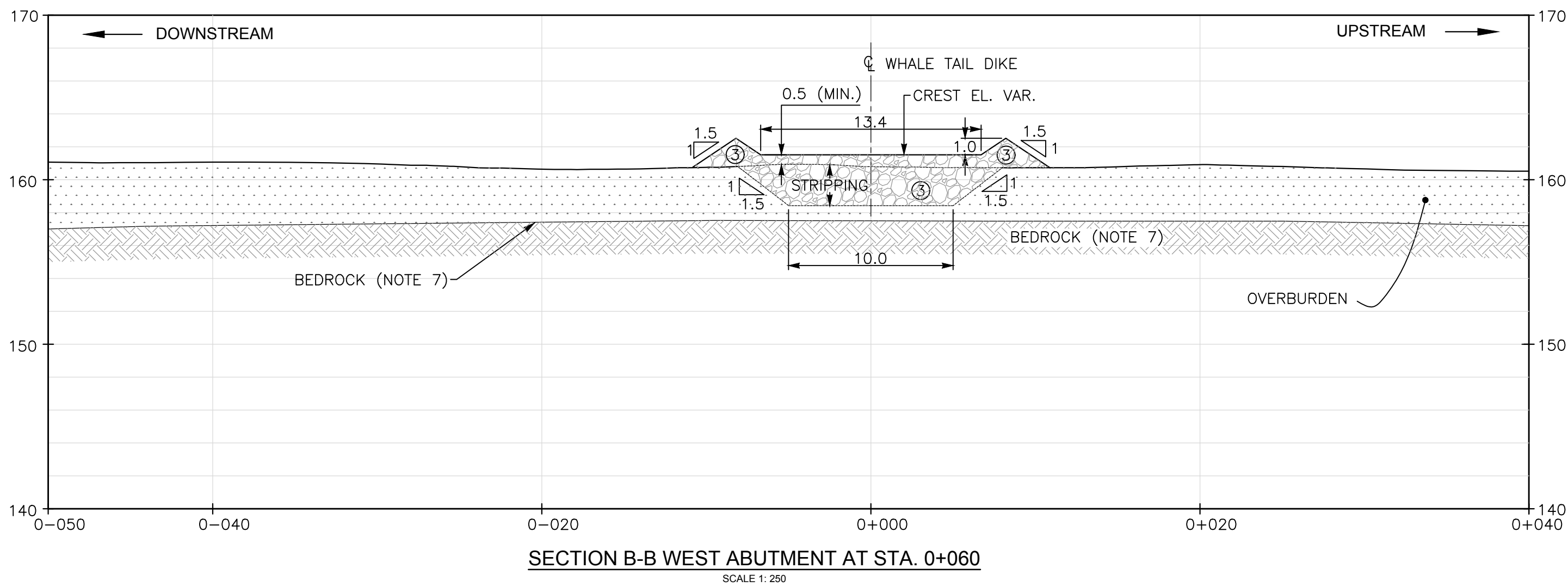


AGNICO EAGLE

PROJECT
AGNICO EAGLE - MEADOWBANK DIVISION
AMARUQ PROJECT

TITLE	PLAN AND STRATIGRAPHIC PROFILE OF WHALE TAIL DIKE
-------	--

PROJECT No	SUBDIVISION	SUBJECT	SERIAL	REV.
651298	2500	4G DD	0006	00



LEGEND FOR FILL MATERIAL

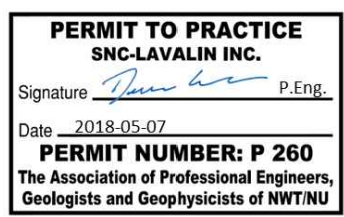
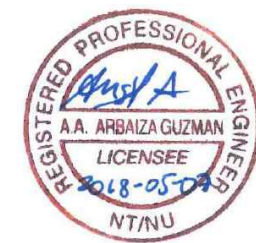
- ① FINE FILTER
- ② COARSE FILTER
- ③ ROCKFILL (NOTE 12)

NOTES:

- WORKS SHOWN ON THIS DRAWING SHALL BE EXECUTED IN ACCORDANCE WITH THE APPLICABLE TECHNICAL SPECIFICATIONS.
- ALL ELEVATIONS ARE IN METERS.
- SEE DRAWING 0003 FOR THE LOCATION OF SECTIONS B-B TO F-F.
- LOWER LIMITS OF PILES MAY BE ADJUSTED ON SITE BASED ON FIELD CONDITIONS. SECANT PILES SHOULD BE EXTENDED INTO BEDROCK (1m MIN.).
- GROUT CURTAIN DEPTH AND EXTENSION ALONG WTD ALIGNMENT TO BE DETERMINED PRIOR TO THE CONSTRUCTION. NO GROUTING WILL BE DONE IN FROZEN FOUNDATION.
- COLLECTION DITCH AT SECTION F-F TO BE CONSTRUCTED AFTER DEWATERING ON DOWNSTREAM SIDE OF WHALE TAIL DIKE. FINAL INVERT ELEVATION, CROSS SECTION GEOMETRY AND EXTENT OF EROSION PROTECTION MEASURES TO BE DETERMINED BY DESIGN ENGINEER AT TIME OF CONSTRUCTION.
- THE BEDROCK SURFACE AND ELEVATION WAS ESTIMATED. PRELIMINARY INVESTIGATION WILL HAVE TO BE DONE PRIOR TO THE CONSTRUCTION TO CONFIRM BEDROCK CONFIGURATION IN THE AREAS OF THE END OF THE SECANT PILE WALL.
- IN THE WEST ABUTMENT, CB SLURRY WALL WILL BE CONSTRUCTED FROM EL. 155.3m TO EL. 157.0 AND SECANT PILES WILL REACH BEDROCK AT EL. 155.5m.
- THE ESKER WILL BE STRIPPED AT THE KEY TRENCH LOCATION TO REACH THE BEDROCK IF POSSIBLE (FREEZING CONDITION MAY LIMIT THE EXCAVATION).
- WIDTH OF INITIAL PLATFORMS (19.9m) IS DEFINED BY AEM REQUIREMENTS FOR THE PASSAGE OF 100 TONNE TRUCKS (DUAL LANE). WIDTH OF WHALE TAIL DIKE (13.4m) IS DEFINED FOR PICKUP TRUCKS, DUAL LANE.
- LIMITS SHOWN FOR ALL SECTIONS ARE BASED ON INTERPRETATIONS AND WILL VARY BASED ON NEW FIELD INFORMATION (INVESTIGATION, STRIPPED BEDROCK LEVELS ETC.).
- THE MAXIMUM SIZE OF ZONE 3 ROCKFILL IS 1000mm. HOWEVER OVERSIZE ROCKFILL UP TO 1.5m IN DIAMETER IS ALLOWED IN THE EXTERIOR 15m OF THE ROCKFILL PLATFORMS WHERE THE PLATFORM THICKNESS IS GREATER THAN 2m.
- ROAD SURFACING TO CONSIST OF 0.3m OF MINUS 50mm CRUSHED ROCK PLACED ON THE FULL WIDTH OF THE DIKE AT FINAL ELEVATION.
- EXCAVATION SLOPES IN KEY TRENCH IN THE WET ARE AT 1.3H:1V. EXCAVATION SLOPES IN THE KEY TRENCH ABOVE LAKE LEVEL ARE AT 1.5H:1V.

ISSUE REGISTER				ISSUE REGISTER				REVISION REGISTER				REFERENCE DRAWINGS			
ISSUE No	REV.	DATE (Y/M/D)	PURPOSE OF ISSUE	ISSUE No	REV.	DATE (Y/M/D)	PURPOSE OF ISSUE	No	REVISION DESCRIPTION	DATE (Y/M/D)	**	No			
04	00	2018-05-07	ISSUED FOR CONSTRUCTION												
03	PC	2018-01-15	ISSUED FOR MDRB COMMENTS												
02	PB	2017-12-22	ISSUED FOR CLIENT COMMENTS												
01	PA	2017-12-09	ISSUED FOR INTERNAL COMMENTS.												

PROFESSIONAL SEAL



Mining & Metallurgy
5500, rue Gidener Blvd., bur. 200, Québec (Québec), Canada G2K 2E2
Telephone: (418) 621-5500, Fax: (418) 621-8887

PREPARATION

DESIGNED
A. ARBAIZA, P. ENG.

DRAWN
D. LAN

CHECKED
Y. JALBERT/L. MACPHE

DATE
2018-05-07

SCALE
AS SHOWN

APPROVAL

PROJECT DISCIPLINE ENGINEER
G. HAILE, ENG.

PROJECT ENGINEERING MANAGER
Y. JALBERT, P. ENG.

CLIENT

PERMIT TO PRACTICE
D. LEAHY, P. ENG.

CLIENT



PROJECT

AGNICO EAGLE - MEADOWBANK DIVISION

AMARUQ PROJECT

TITLE

WHALE TAIL DIKE

TYPICAL DESIGN SECTIONS

SHEET 1/2

PROJECT No 651298

SUBDIVISION 2500

SUBJECT 4G DD

SERIAL 0007

REV. 00