

AECOM 2540 Kensington Road NW Calgary, AB, Canada T2N 3S3 www.aecom.com

403 270 9200 tel 403 270 0399 fax

May 31, 2010

Richard Dwyer Licensing Administrator Nunavut Water Board P.O. Box 119 Gjoa Haven, NU X0B 1J0

Dear Richard:

Project No: 1BR-PEL0510

Regarding: Response to Letter Dated May 4, 2010 to Douglas Craig

AECOM is proving the following clarifications and additional information as per the request in the letter from the Nunavut Water Board dated May 4, 2010 regarding the renewal application for the landfill monitoring at the CAM-4, Pelly Bay DEW Line site. Please see the following responses to the requests for information:

An updated Spill Contingency Plan that reflects the current status of the site. See attached.

The 2009 Annual Report including the results of the 2009 Monitoring Program.

The 2009 Annual Monitoring Report for the CAM-4 site has been received by DCC, but it has not yet been sent to the NWB. As has been the case for the past several years, the monitoring reports for all of the former DEW Line sites undergoing long term monitoring are submitted as a package once all of the reports have been received by DCC and reviewed by the Environmental Working Group, which includes representatives from the NTI.

As builts for the Tier II Soil Disposal Facility and Non-Hazardous Waste Landfill. See attached.

The Tier II Soil Disposal Facility has some leeching and staining present, the applicant should address whether this is expected and is due to upper layer flow or whether Tier II contaminants are leaching.

There is no leaching present at the Tier II Soil Disposal Facility. There was some seepage noted; however, seepage is not the same as leaching. Seepage is a geotechnical engineering term used to indicate areas where there is water or fluid moving through the soil pore spaces. Leaching is caused by percolation of surface water through a landfill and indicates that there are contaminants present, which based on the monitoring data for this facility, there is not. The Tier II Facility at CAM-4 has been closed for only 3 years, and it has not yet reached a completely frozen state, which could allow



for some seepage through the cover materials, over top of the covering liner. Typically, complete freezing occurs after approximately 5 years. The staining observed is due to the high iron content of the granular covering materials.

Provide criteria used to determine whether a constructed facility has failed and therefore requires immediate repair.

A failure of constructed facility requiring immediate repair could only be caused by a catastrophic event. The intent of the landfill monitoring program is to identify even small changes, when compared to both the baseline and background data, that could indicate that the landfill is not performing as designed, so that appropriate maintenance measures can be taken, if required. The detection limits selected for the landfill monitoring criteria are very low, and were intended to give a very early indication if there are any issues associated with the constructed facilities.

Will the applicant be implementing the various recommendations made in the March 4, 2009 Summary of Recommendations Letter?

Most of the recommendations presented in the EWG Summary of Recommendations Letter were implemented. Regarding the Station Area Non-Hazardous Waste Landfill, soil and groundwater samples were collected as part of the routine landfill monitoring program in 2009, therefore no additional samples were required, and the EWG did not request additional work after the 2009 season. Background information, including the site investigation reports, was provided to the EWG previously, and no further background information was provided.

Regarding the DCC Tier II Soil Disposal Facility, updated site plans were provided showing the locations of the sampling points.

The arsenic result for the Upper Site Landfill was provided to the EWG.

We trust the information provided is sufficient. Please feel free to contact the undersigned if you have any further questions or comments.

AECOM Canada Ltd.

Eva Schulz, P.Ag. Environmental Scientist

Eva.Schulz@aecom.com

Encl. Spill Contingency Plan, As-built Drawings

cc: Nahed Farah, DCC



DEW LINE CLEAN UP PROJECT

		DRA	WING INDEX		
DRAWING No.	TITLE	DRAWING No.	TITLE	DRAWING No.	TITLE
SITING		SITING			
H-P44/1-9101-101	SITE VICINITY PLAN	HP44/1-9101-118	UPPER SITE LANDFILL CROSS SECTIONS SHEET 1	H-P44/1-9101-134	MISCELLANEOUS DETAILS SHEET 1
H-P44/1-9101-102	OVERALL SITE PLAN	H-P44/1-9101-119	UPPER SITE LANDFILL CROSS SECTIONS SHEET 2	H-P44/1-9101-135	MISCELLANEOUS DETAILS SHEET 2
HP44/1-9101-103	PROJECT LAYOUT SHEET 1	H-P44/1-9101-120	ABANDONED CAMP LANDFILL PLAN AND CROSS SECTIONS	STRUCTURAL	
H-P44/1-9101-104	PROJECT LAYOUT SHEET 2	H-P44/1-9101-121	LOWER SITE LANDFILL NORTH LOBE PLAN AND CROSS SECTION	H-P44/1-9101-201	STATION AREA DEMOLITION SITE PLAN
H-P44/1-9101-105	STATION AREA SITE PLAN	H-P44/1-9101-122	LOWER SITE LANDFILL KEY TRENCH EXCAVATION PLAN & GRADING/INSTRUMENTATION PLAN	H-P44/1-9101-202	AIRSTRIP AREA DEMOLITION SITE PLAN
H-P44/1-9101-106 ABANDONED CAMP AREA SITE PLAN		H-P44/1-9101-123	LOWER SITE LANDFILL KEY TRENCH CENTRELINE PROFILE	H-P44/1-9101-203	WAREHOUSE PLAN, SECTION AND ELEVATION
H-P 44/ 1-9101-107	LOWER SITE LANDFILL AREA SITE PLAN LOWER SITE LANDFILL CROSS SECTIONS SHEET 1		H-P44/1-9101-204	GARAGE PLAN-AND-SECTION	
H-P44/1-9101-108	BARROW LAKE SHORE AREA SITE PLAN	H-P44/1-9101-125	LOWER SITE LANDFILL		HEATED VEHICLE STORAGE ELEVATIONS AND SECTION
H-P44/1-9101-109	AIRSTRIP AREA SITE PLAN	H-P44/1-9101-126	LOWER SITE NON-HAZARDOUS WASTE LANDFILL CROSS SECTION	H-P44/1-9101-206	MODULE TRAIN UNITS 1A-25 PLAN
H-P44/1-9101-110	STATION AREA NON-HAZARDOUS WASTE LANDFILL CROSS SECTION	H-P44/1-9101-127	LANDFARM PLAN	H-P44/1-9101-207 MODULE TRAIN UNITS 1 ELEVATIONS	
TIER II DISPOSAL FACILITY H-P44/1-9101-111 KEY TRENCH EXCAVATION PLAN & GRADING/INSTRUMENTATION PLAN		H-P44/1-9101-127A	LANDFARM CROSS SECTION	H-P44/1-9101-208	RADAR TOWER/RADOME PLAN AND SECTION
H-P44/1-9101-112	TIER II DISPOSAL FACILITY KEY TRENCH CENTRELINE PROFILE	H -P44/1-9101-128	CONTAMINATED AREAS SECTION AND DETAILS SHEET 1	H-P44/1-9101-209	COMMUNICATION DISH ELEVATIONS
H-P44/1-9101-113	TIER II DISPOSAL FACILITY CROSS SECTIONS SHEET 1	H -P44/1-9101-129	CONTAMINATED AREAS SECTION AND DETAILS SHEET 2	H -P44/1-9101-210	QML STORAGE SHED AND POL PUMPHOUSE PLANS, SECTION AND ELEVATIONS
H-P44/1-9101-114	TIER II DISPOSAL FACILITY CROSS SECTIONS SHEET 2	H-P44/1-9101-130	CONTAMINATED AREAS SECTION AND DETAILS SHEET 3	H-P44/1-9101-211	FUEL TANKS PLAN AND ELEVATIONS
H-P44/1-9101-115	UPPER SITE LANDFILL EXCAVATION PLAN & CROSS SECTIONS	H -P44/1-9101-131	CONTAMINATED AREAS SECTION AND DETAILS SHEET 4	H -P44/1-9101-212	AIRSTRIP ANCILLARY FACILITIES STANDARD DETAILS
H-P44/1-9101-116	UPPER SITE LANDFILL KEY TRENCH EXCAVATION PLAN & GRADING/INSTRUMENTATION PLAN	H -P44/1-9101-132	CONTAMINATED AREAS SECTION AND DETAILS SHEET 5		
H-P44/1-9101-117	UPPER SITE LANDFILL KEY TRENCH CENTRELINE PROFILE	H -P44/1-9101-133	CONTAMINATED AREAS SECTION AND DETAILS SHEET 6		STY THE QUEEN IN RIGHT OF 2009, AS REPRESENTED BY THE

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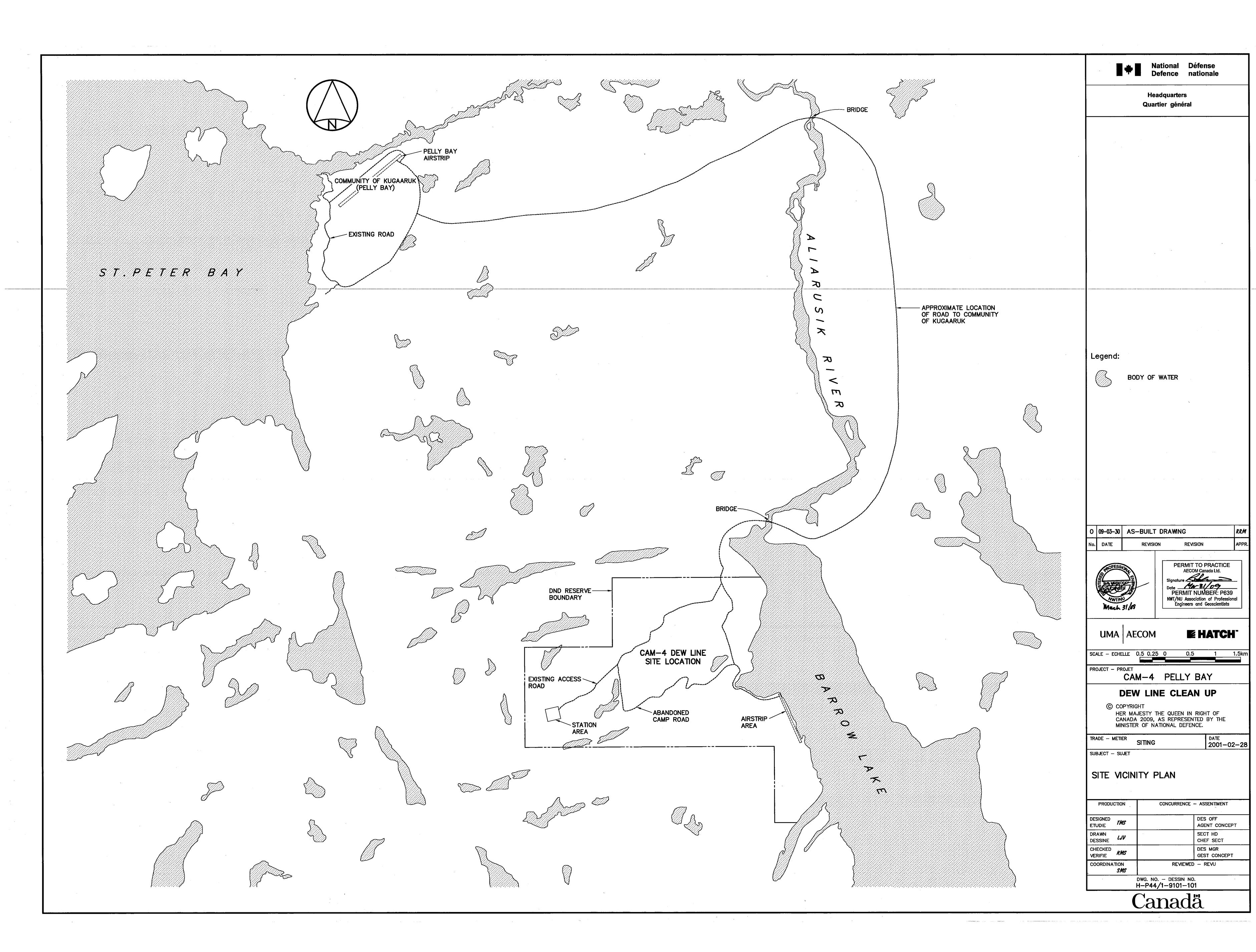


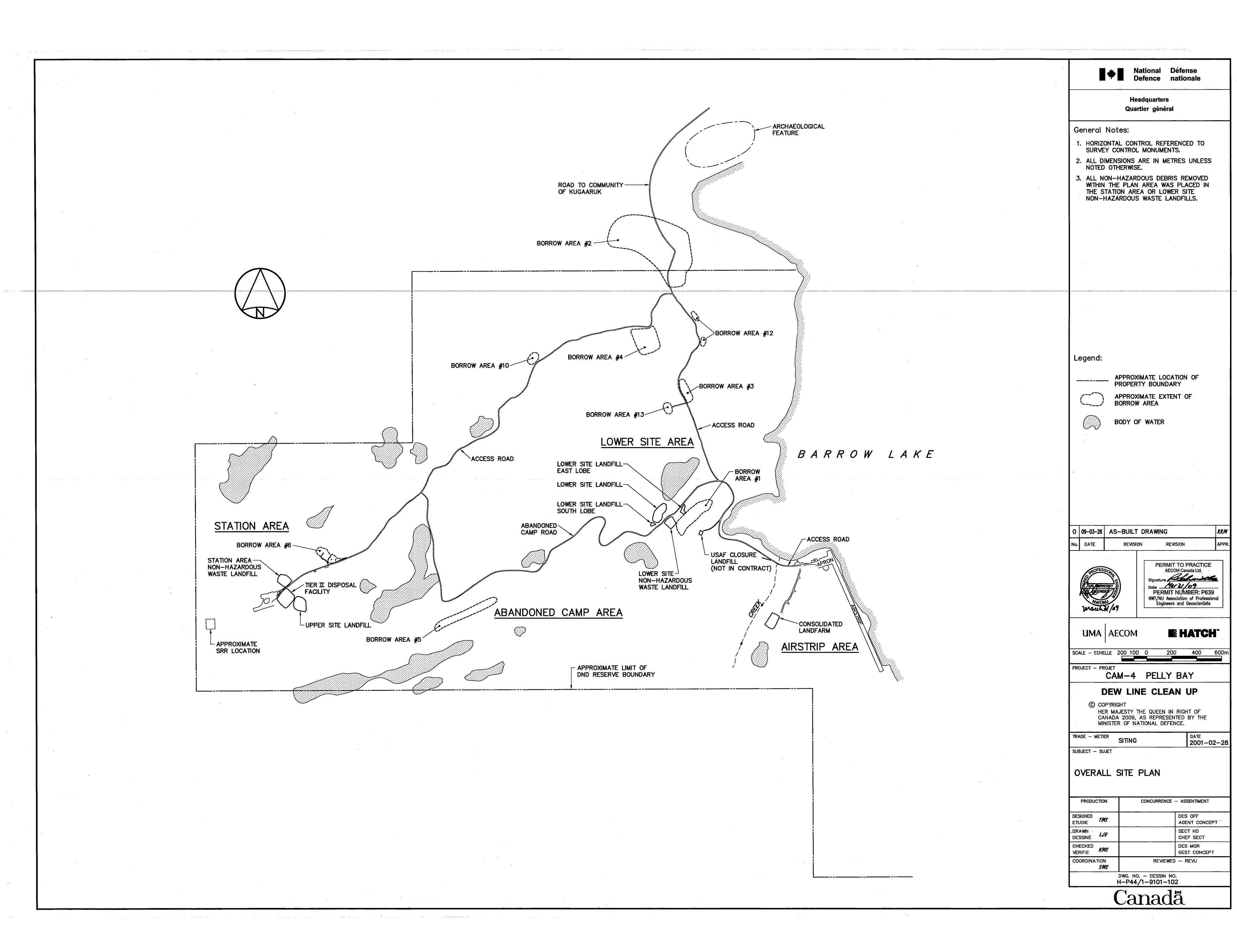
CAM-4 PELLY BAY AS-BUILT DRAWINGS

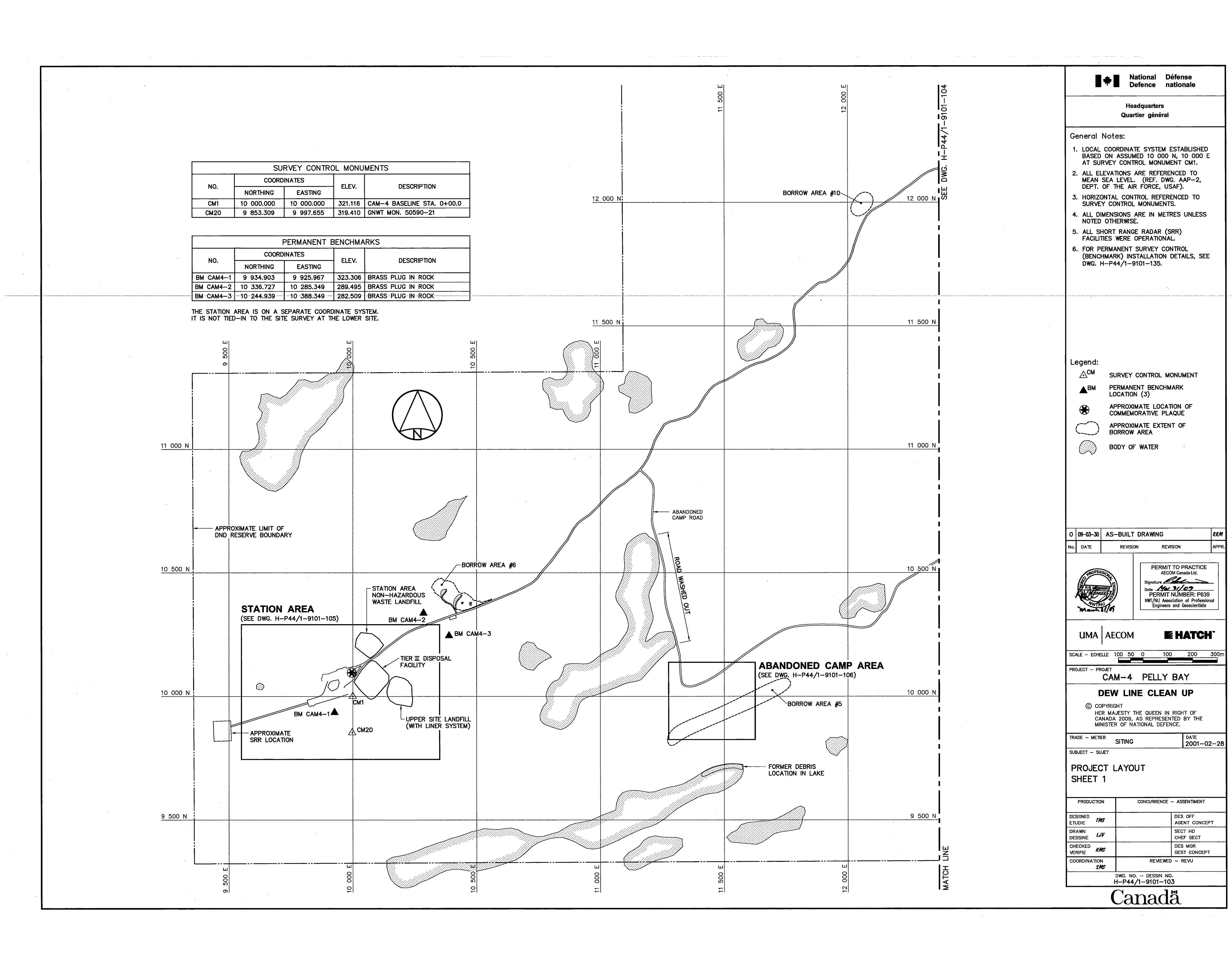
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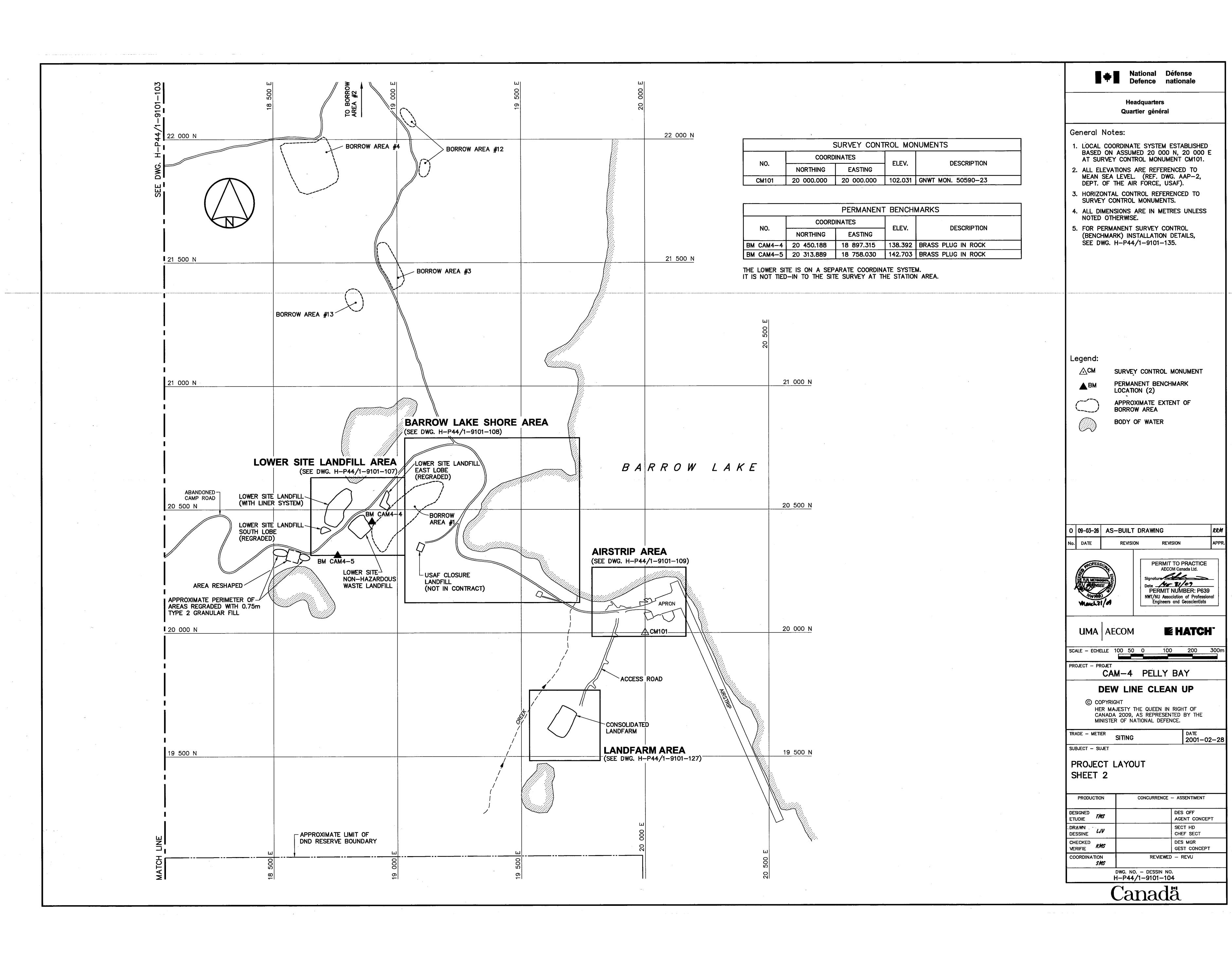
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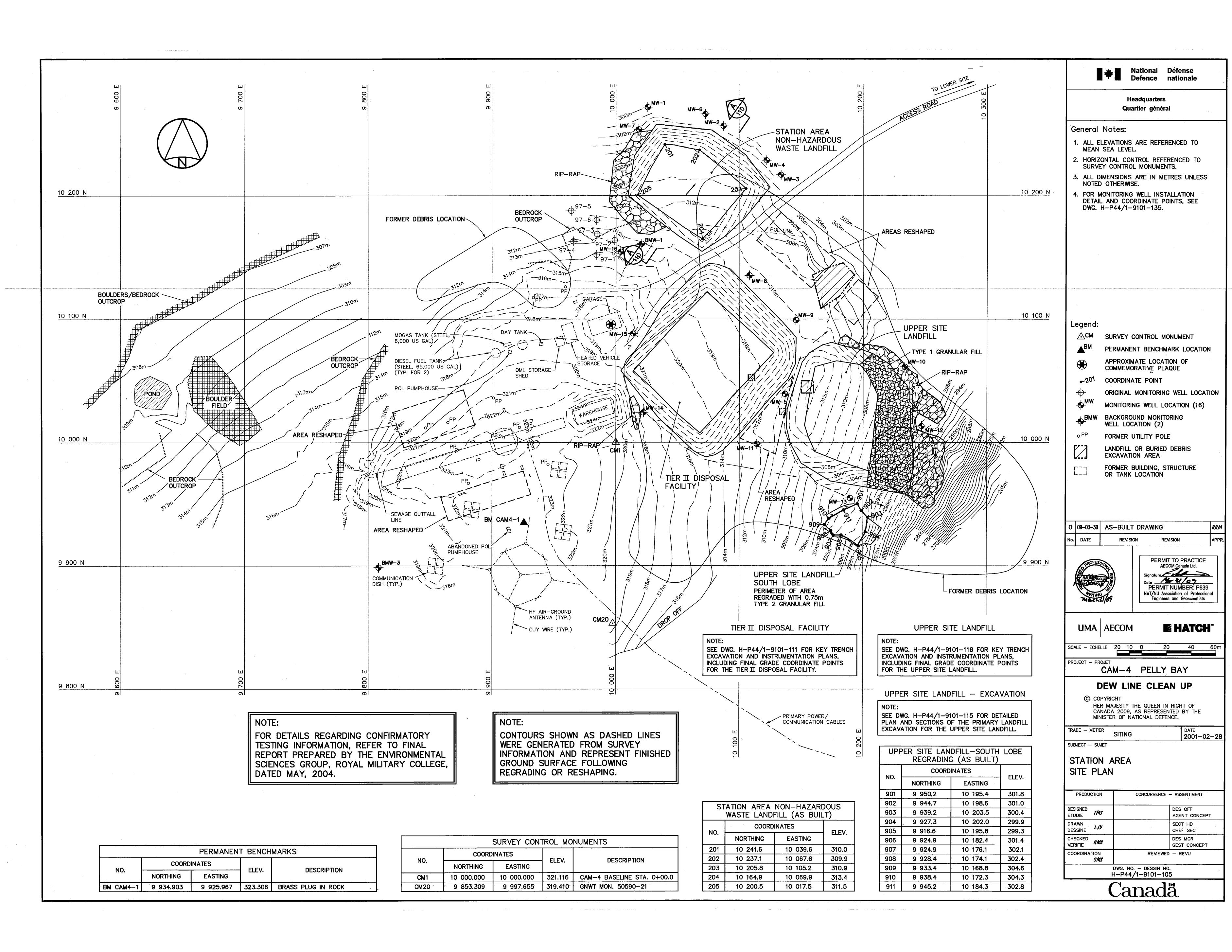
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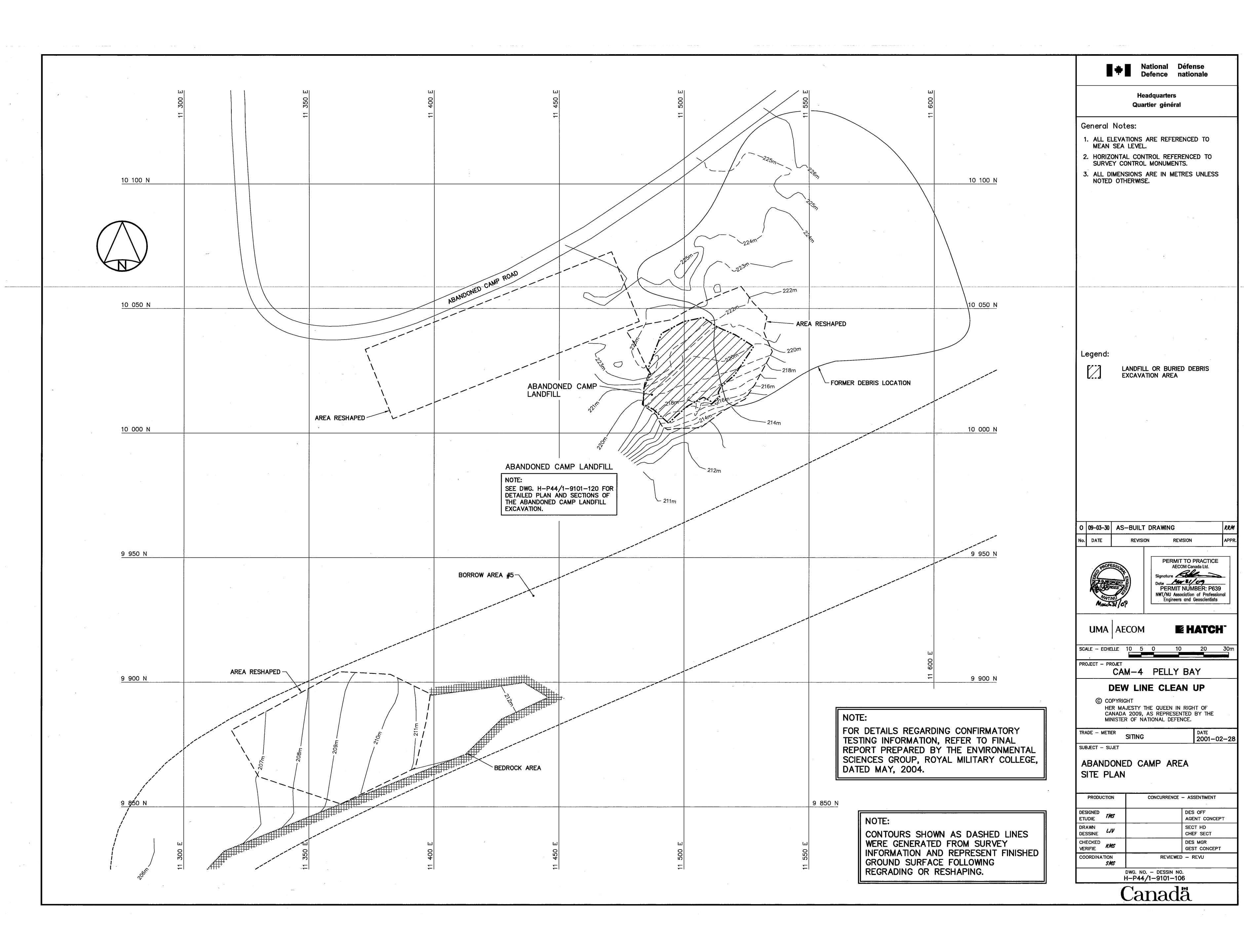


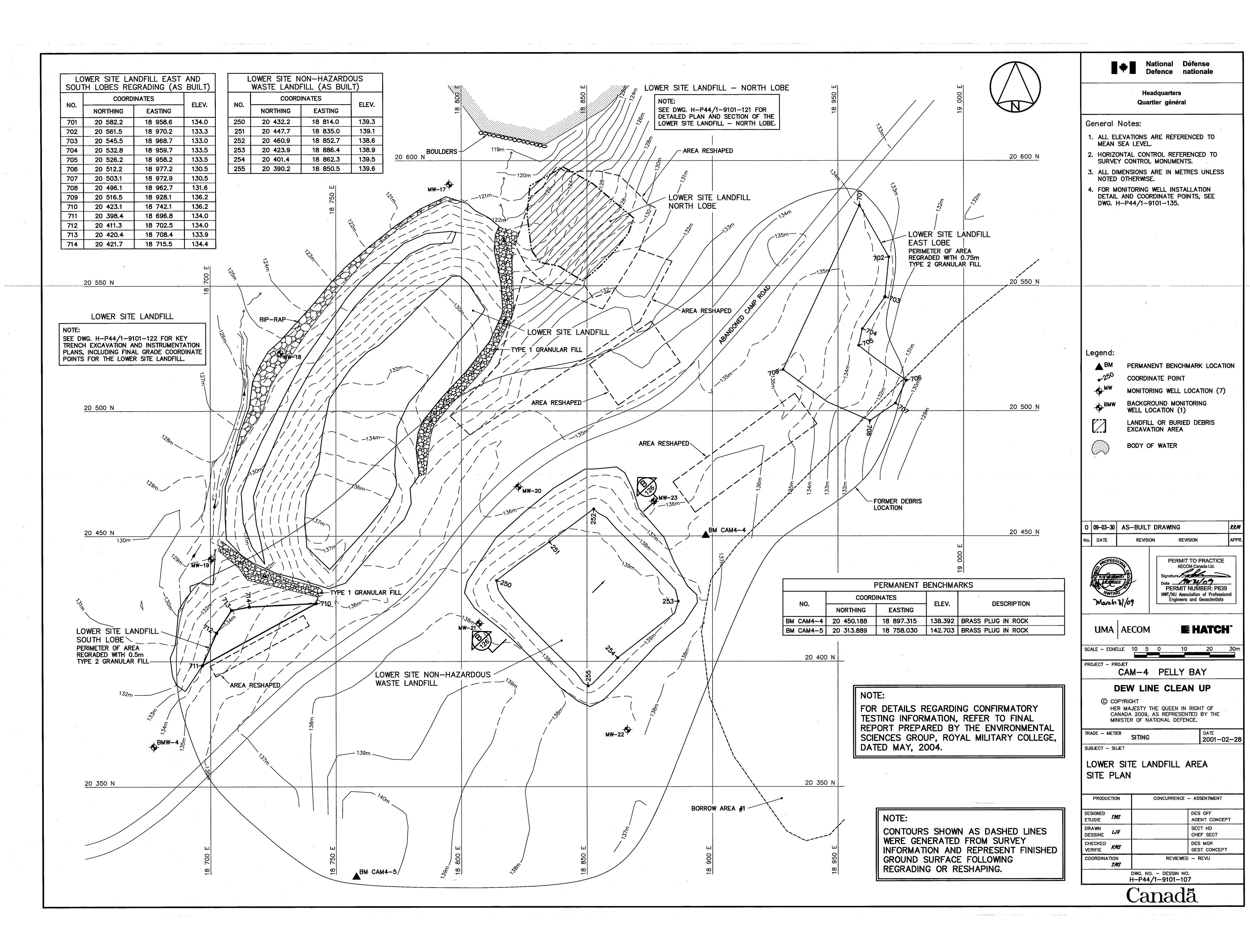


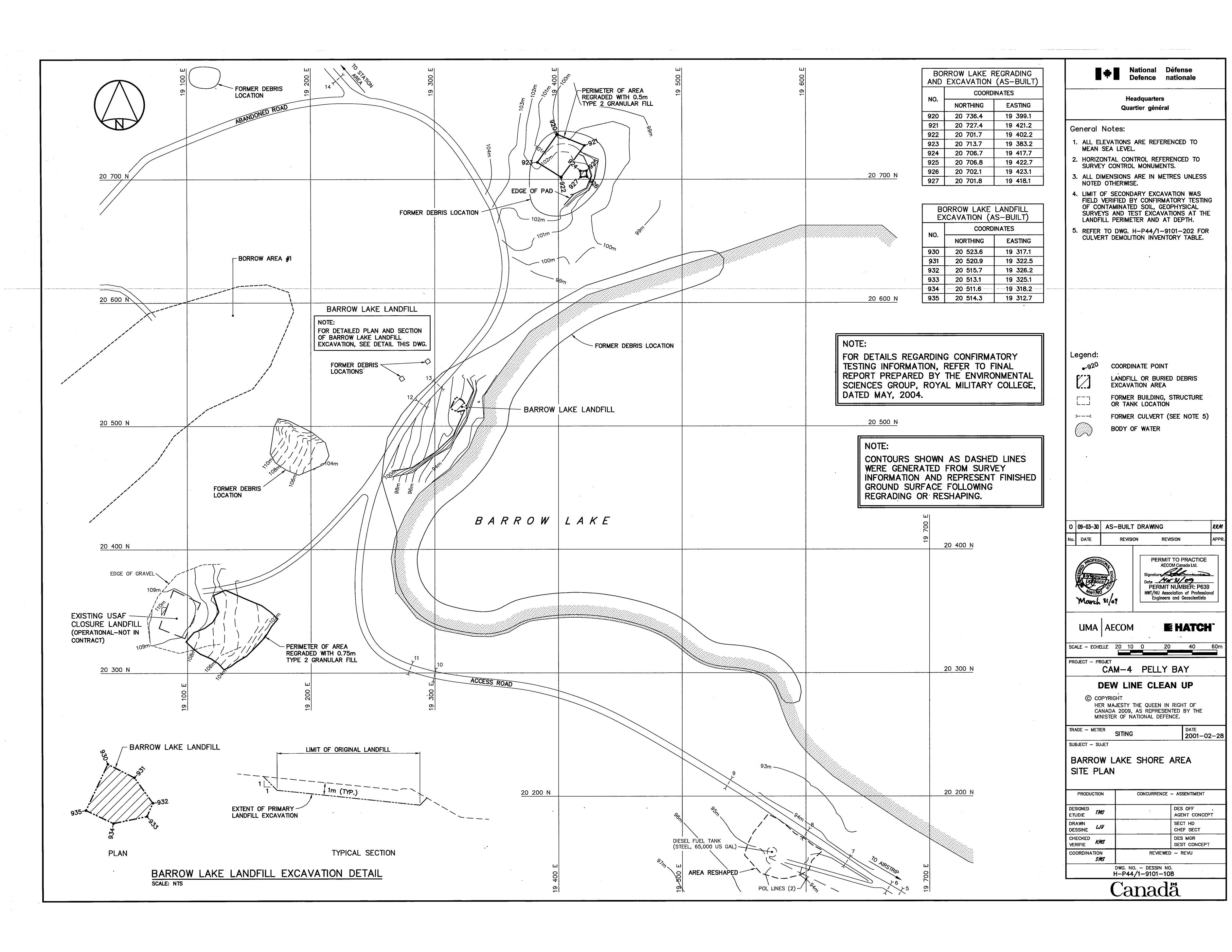


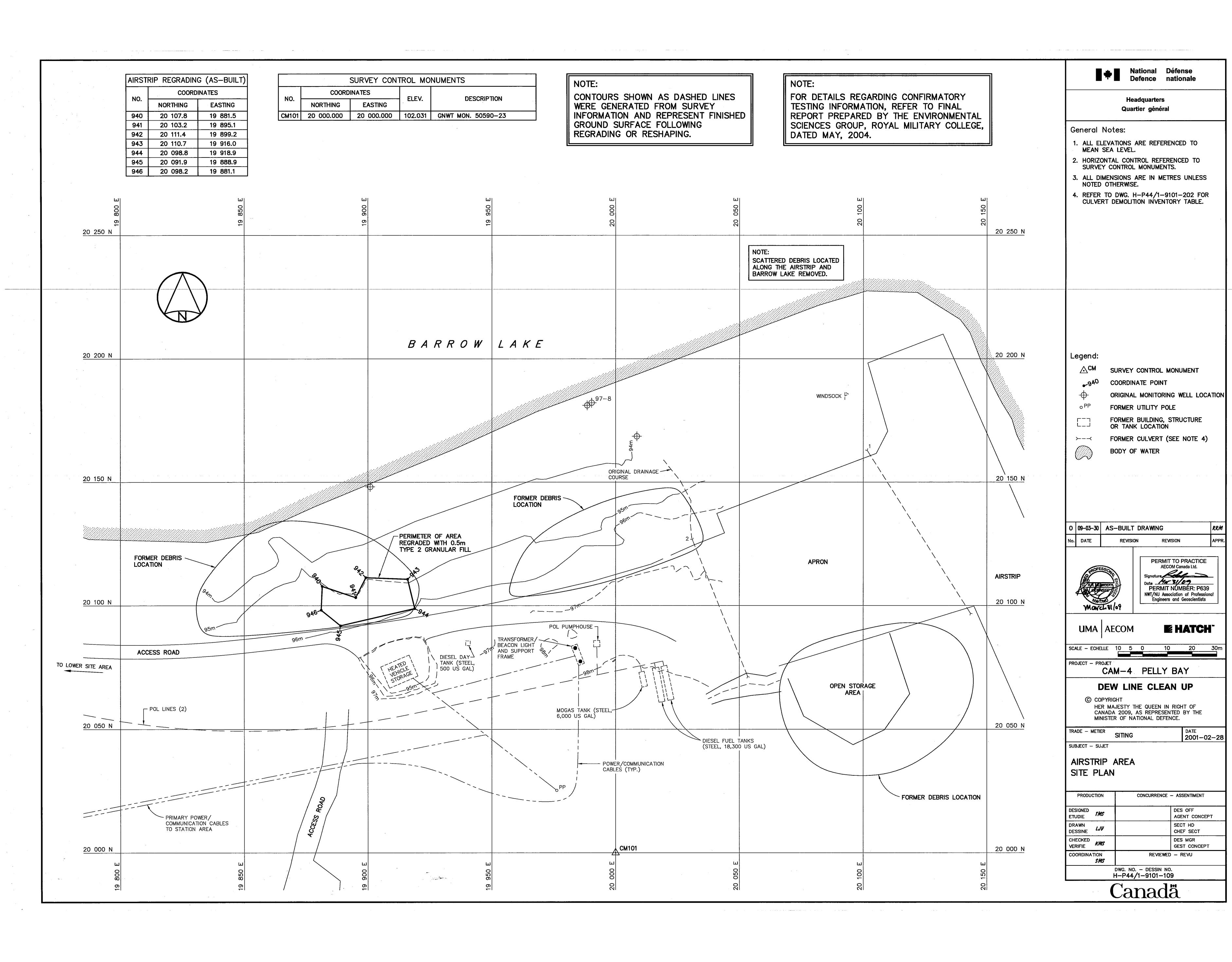


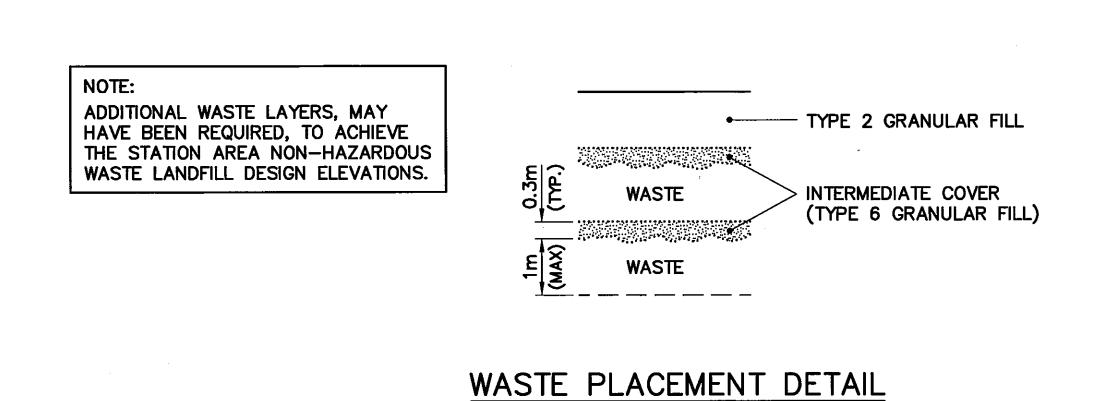




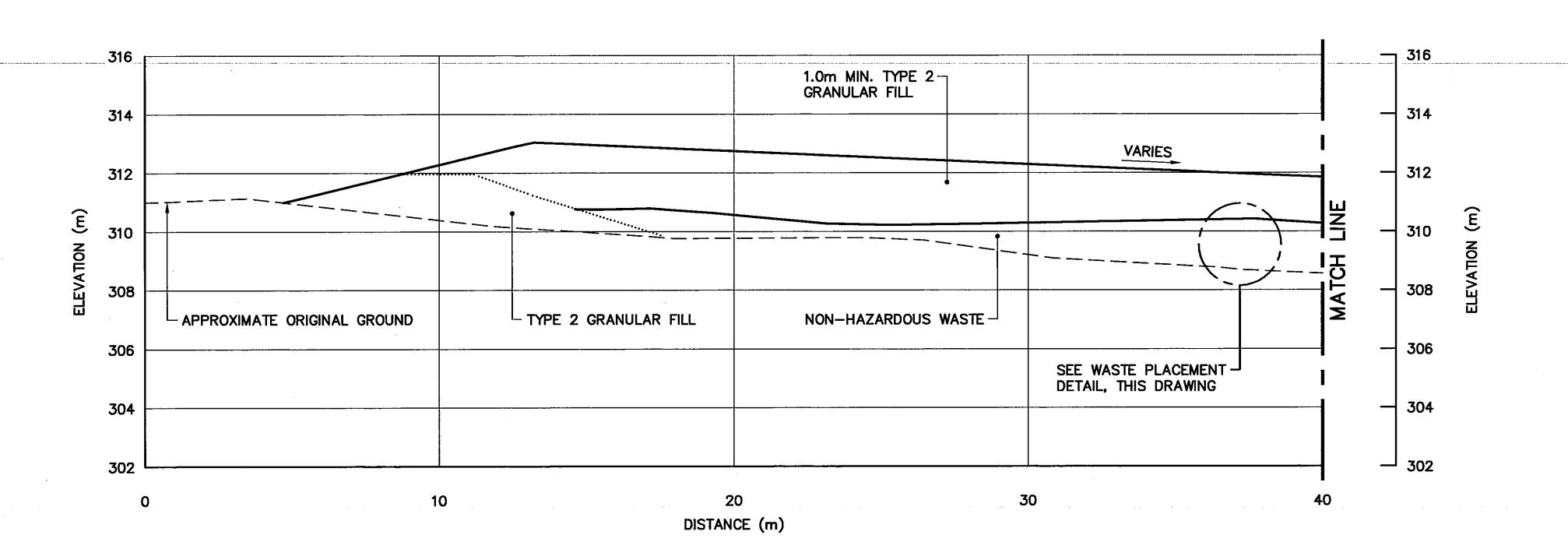


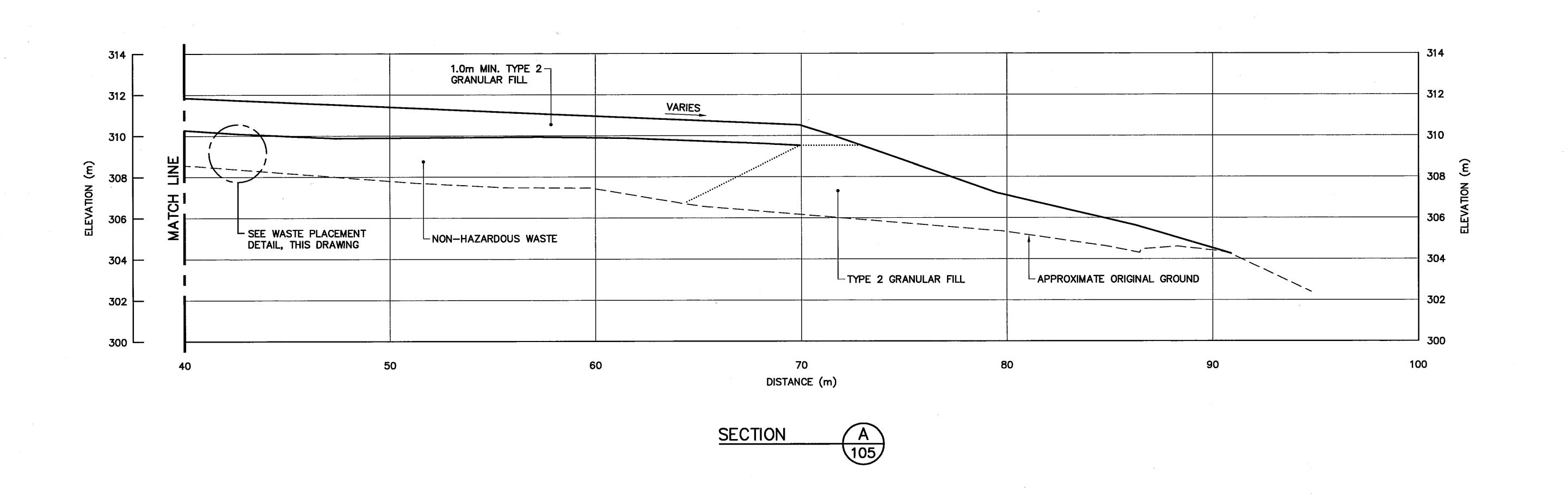






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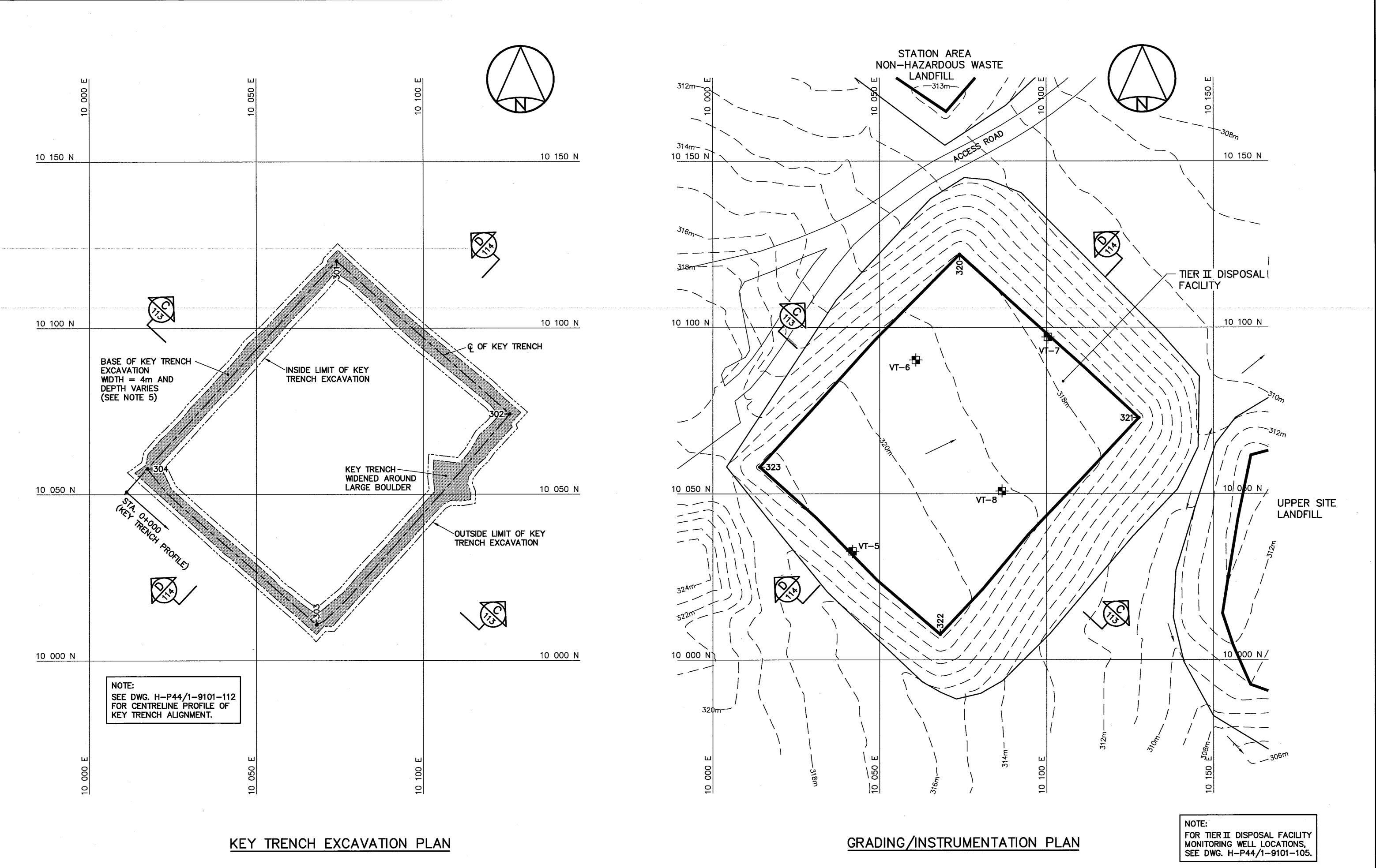
National Défense Defence nationale Headquarters Quartier général General Notes: 1. ALL ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL. 2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE. Legend: GENERATED BASED ON AS-BUILT SURVEY INFORMATION CONSTRUCTED AS PER DESIGN, NO AS-BUILT SURVEY INFORMATION O 09-03-30 AS-BUILT DRAWING No. DATE REVISION PERMIT TO PRACTICE
AECOM Canada Ltd.

Signature
Date
PERMIT NUMBER: P639 NWT/NU Association of Professional Engineers and Geoscientists March 31/07 **E HATCH** SCALE - ECHELLE 2 1 0 PROJECT - PROJET CAM-4 PELLY BAY **DEW LINE CLEAN UP** © COPYRIGHT HER MAJESTY THE QUEEN IN RIGHT OF CANADA 2009, AS REPRESENTED BY THE MINISTER OF NATIONAL DEFENCE. DATE 2001-02-28 TRADE - METIER SUBJECT - SUJET STATION AREA NON-HAZARDOUS WASTE LANDFILL CROSS SECTION CONCURRENCE - ASSENTIMENT PRODUCTION DES OFF AGENT CONCEPT DESIGNED TMS DRAWN DESSINE LJV CHEF SECT CHECKED KMS DES MGR GEST CONCEPT

COORDINATION SMS

REVIEWED - REVU

DWG. NO. - DESSIN NO. H-P44/1-9101-110



	KE	KEY TRENCH EXCAVATION (AS BUILT)			
	NO	COORDINATES			
NO. NORTHING EAST		EASTING			
	301	10 120.1	10 074.0		
	302	10 074.2	10 125.9		
	303	10 010.8	10 068.0		
	304	10 057.8	10 017.4		

NOTE:

CONTOURS SHOWN AS DASHED LINES WERE GENERATED FROM SURVEY INFORMATION AND REPRESENT FINISHED GROUND SURFACE FOLLOWING REGRADING OR RESHAPING.

FINA	L LANDFILL S	URFACE (AS-	-BUILT)	
NO	COORD	ELEV.		
NO.	NORTHING	EASTING	ELEV.	
320	10 121.9	10 073.9	318.1	
321	10 072.8	10 127.6	317.4	
322	10 007.7	10 068.1	320.4	
323	10 058.0	10 014.1	321.2	

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NO .	COORE	DINATES ELEV.	
NO.	NORTHING	EASTING] [[.
VT-5	10 032.7	10 041.9	320.9
VT-6	10 090.2	10 060.8	319.3
VT-7	10 097.1	10 100.4	317.8
VT-8	10 050.8	10 086.6	319.1

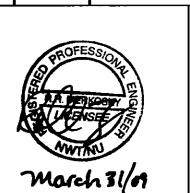
General Notes:

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- SURVEY CONTROL MONUMENTS.
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- 4. FOR VERTICAL THERMISTOR INSTALLATION DETAIL, SEE DWG. H-P44/1-9101-135.
- 5. KEY TRENCH EXTENDS BELOW ORIGINAL GROUND TO SOUND BEDROCK OR SATURATED GROUND (DEPTH VARIES). SEE DWG. H-P44/1-9101-112.

Legend:

COORDINATE POINT VERTICAL THERMISTOR INSTALLATION (4)

0 09-03-30 AS-BUILT DRAWING



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DATE 2001-02-28

GEST CONCEPT

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CAM-4 PELLY BAY

DEW LINE CLEAN UP

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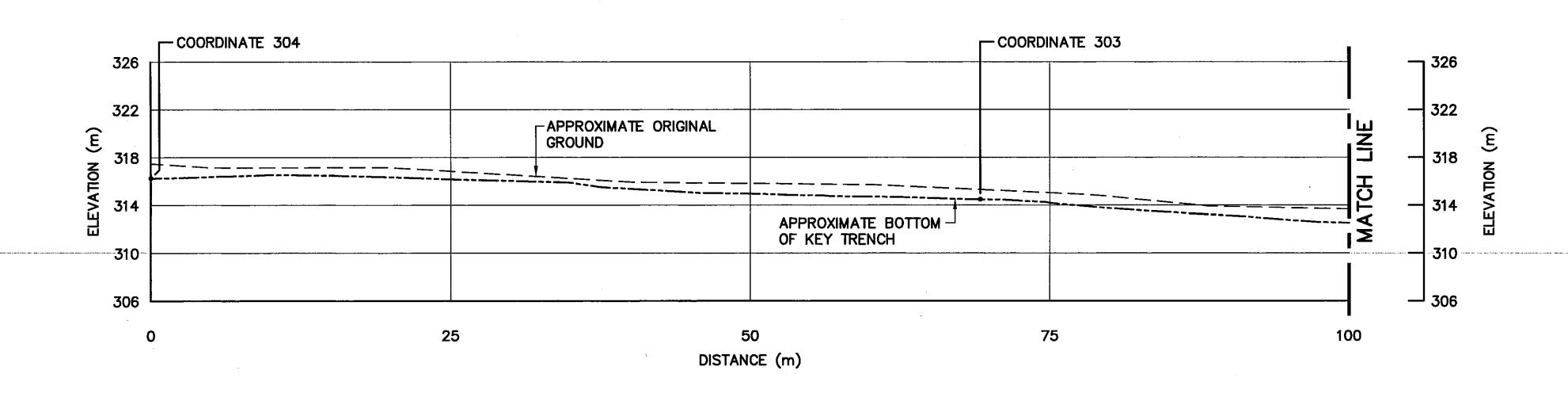
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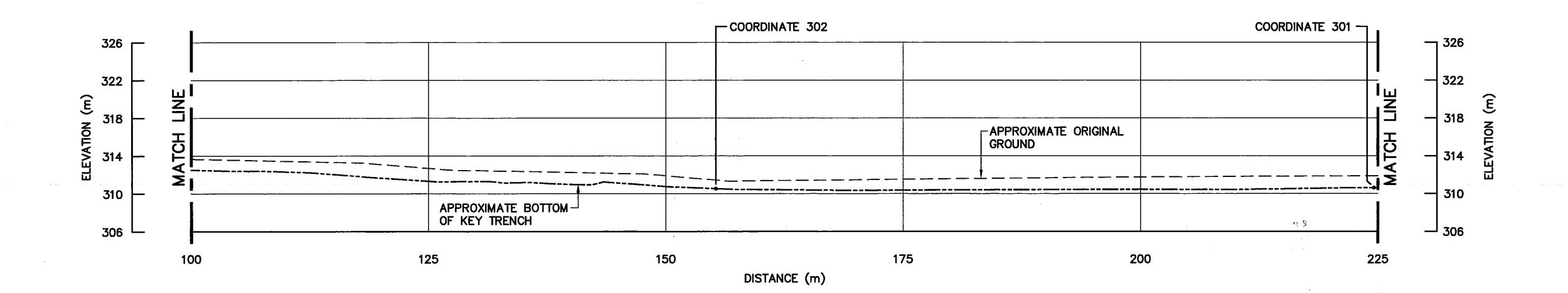
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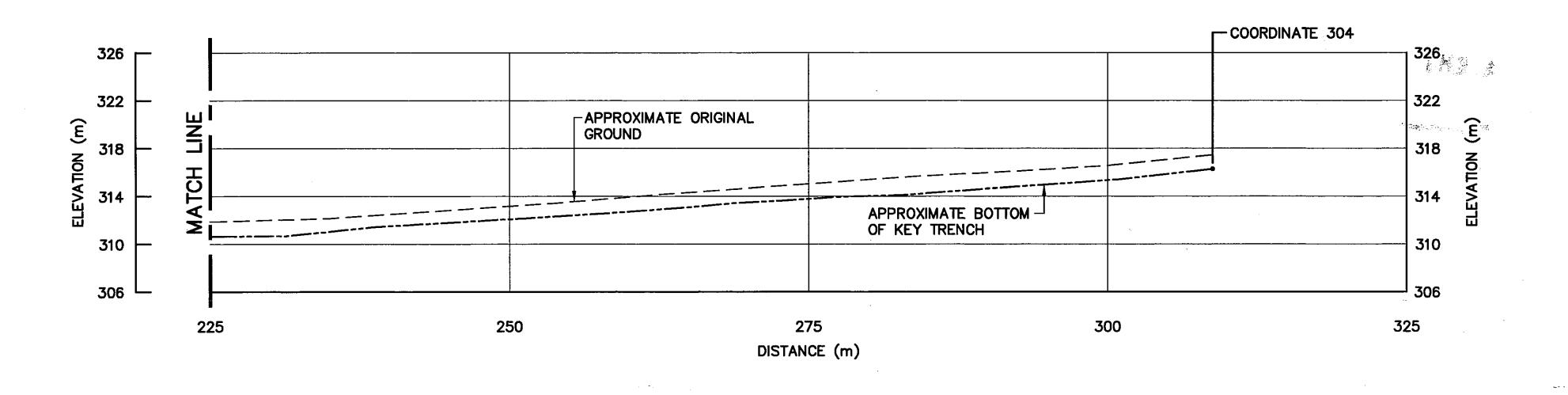
TIER II DISPOSAL FACILITY KEY TRENCH EXCAVATION PLAN &

GRADING/INSTRUMENTATION PLAN CONCURRENCE - ASSENTIMENT DES OFF DESIGNED TMS AGENT CONCEPT DRAWN DESSINE SECT HD CHEF SECT CHECKED KMS DES MGR

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General Notes:

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O 09-03-30 AS-BUILT DRAWING

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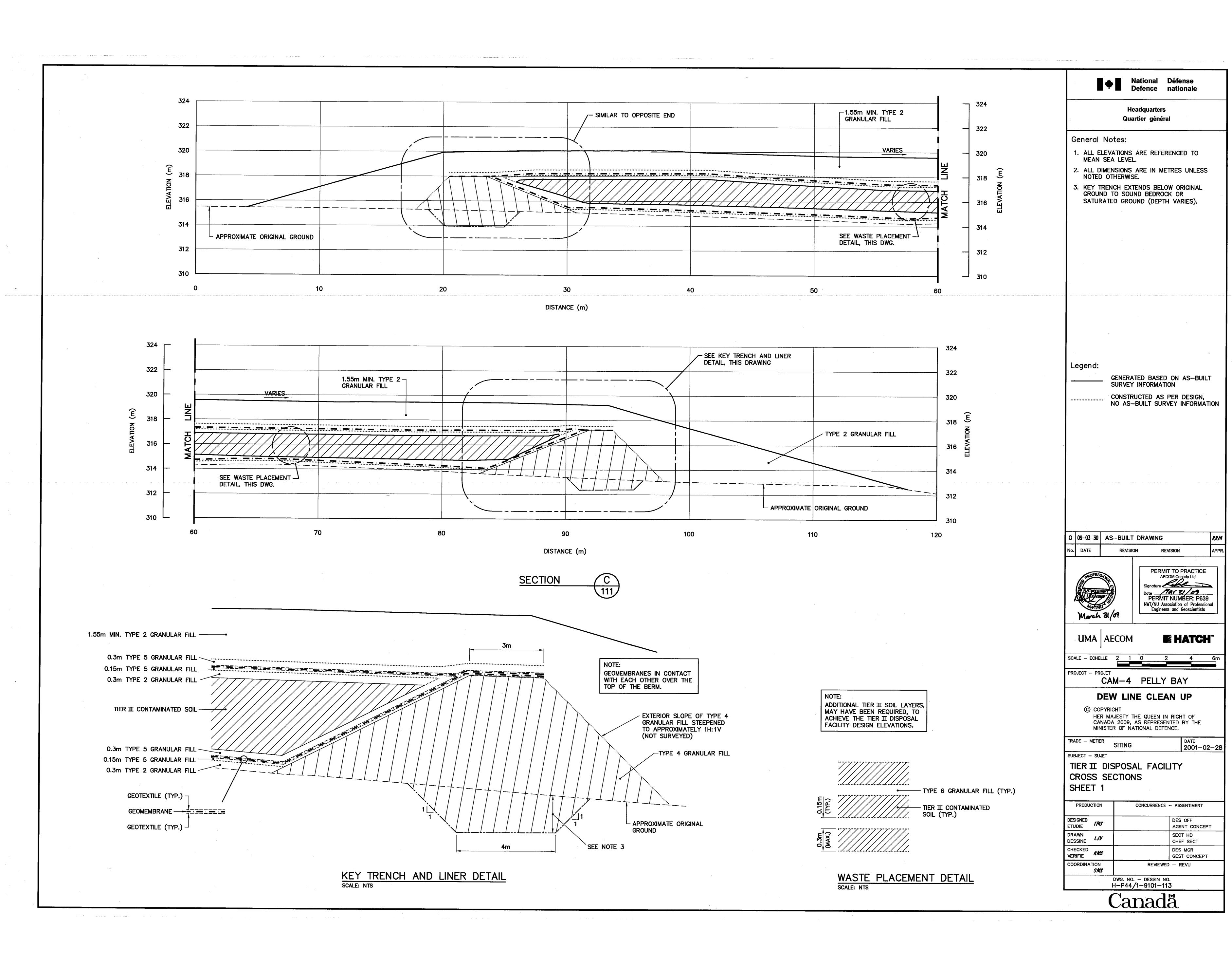
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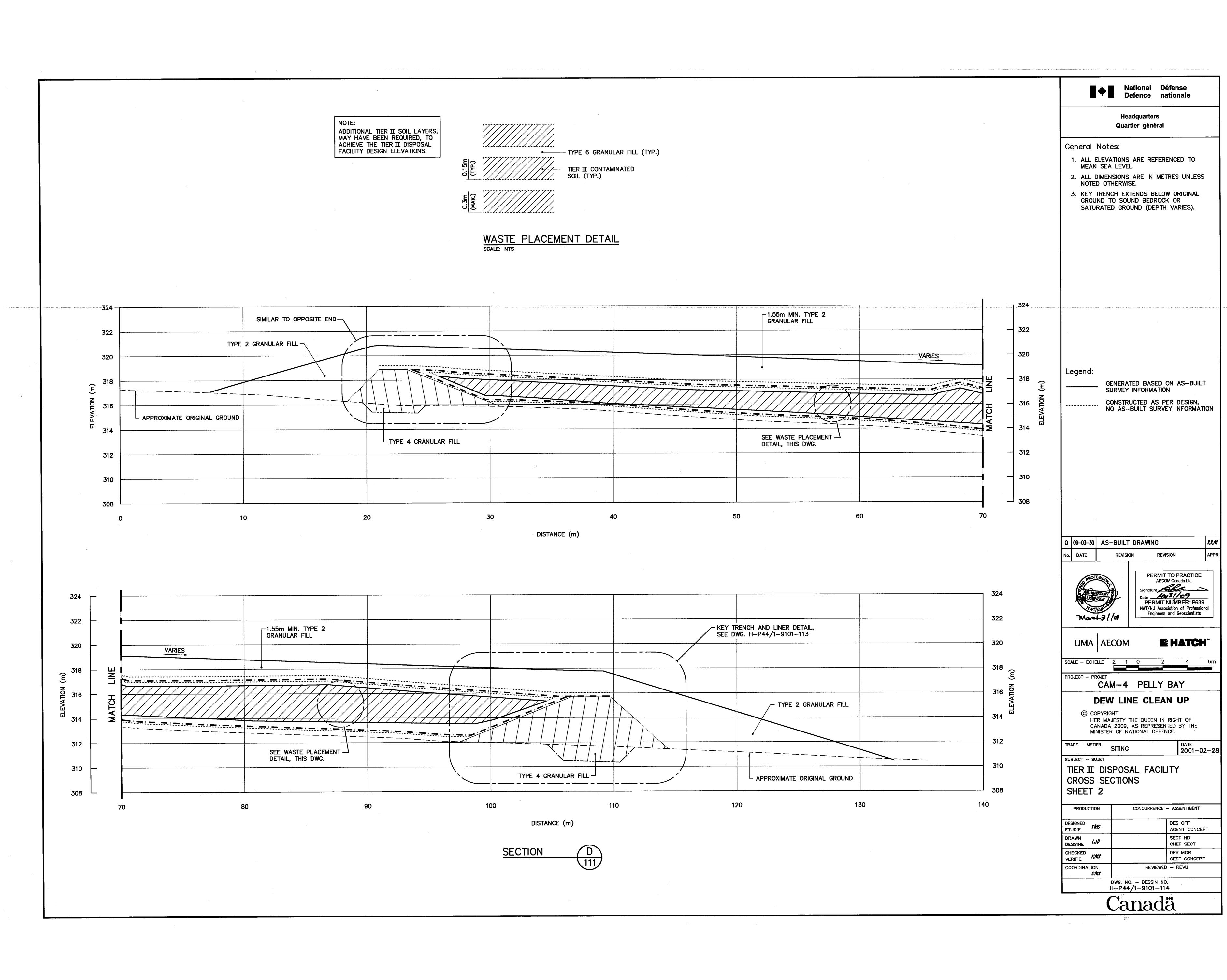
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KEY TRENCH CENTRELINE PROFILE

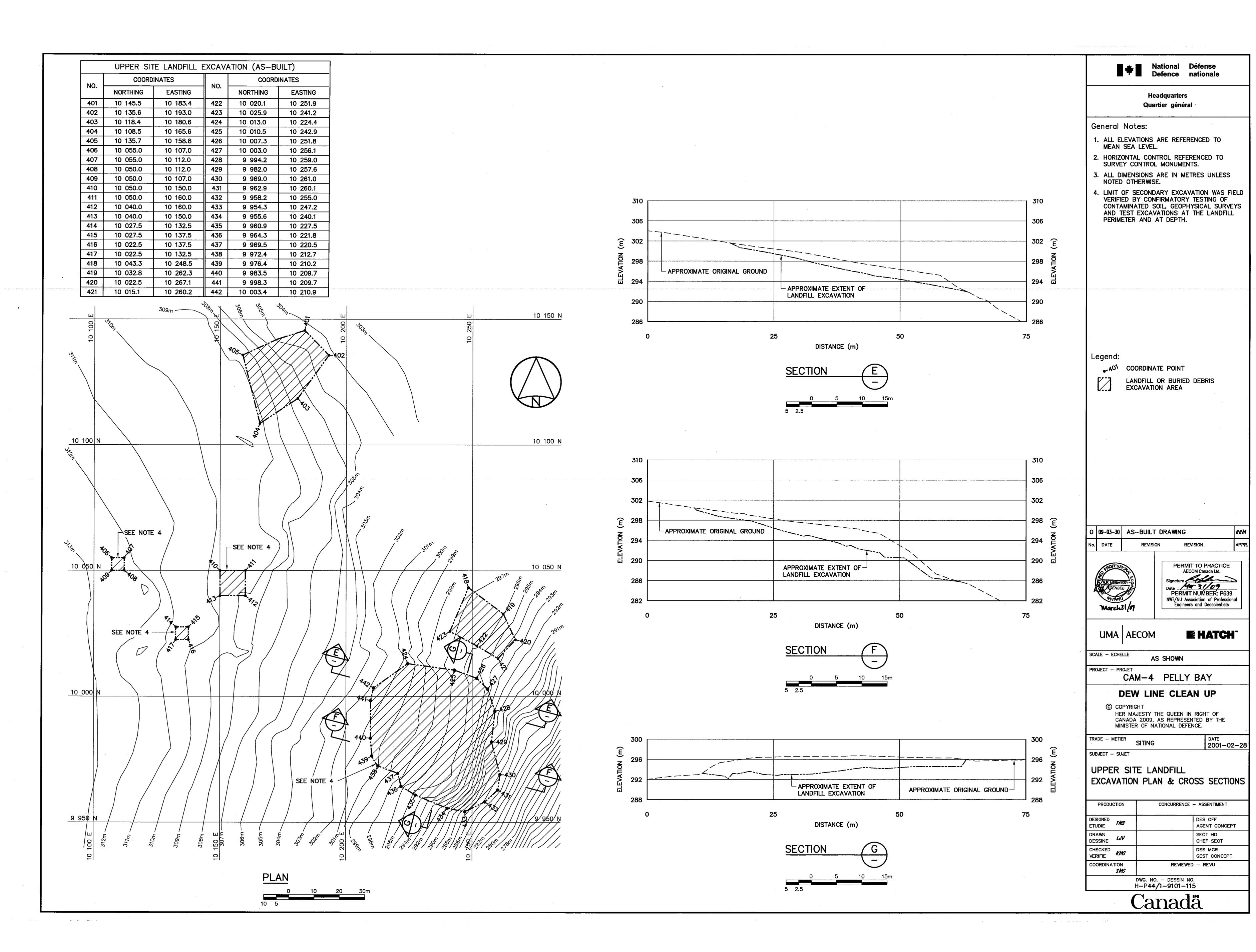
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COORDINATION SMS	REVIEWED - REVU

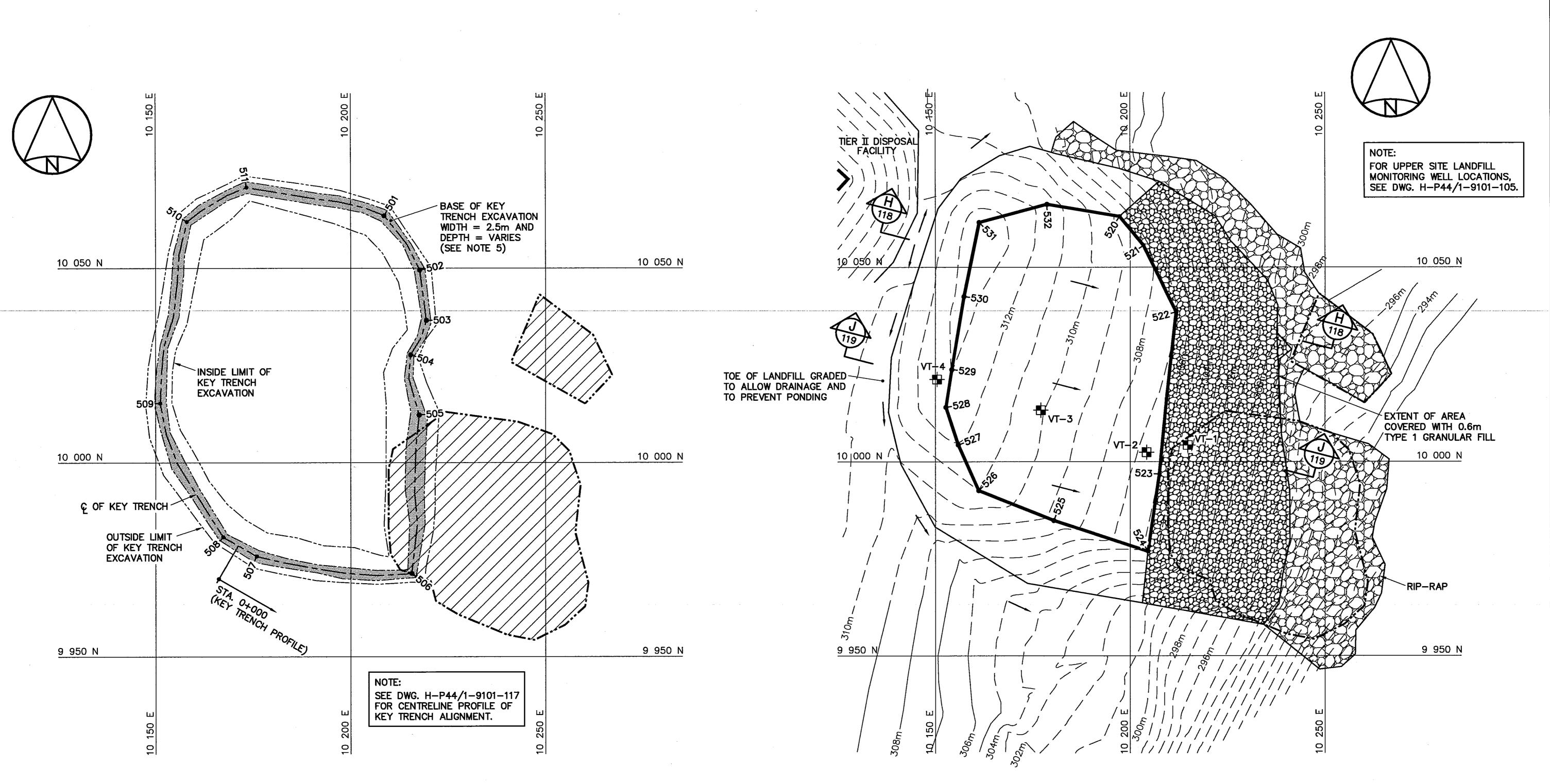
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KEY TRENCH EXCAVATION PLAN

KEY TRENCH EXCAVATION (AS BUILT)			
NO.	COORD	INATES	
NO.	NORTHING	EASTING	
501	10 063.5	10 208.6	
502	10 049.5	10 217.7	
503	10 036.6	10 219.4	
504	10 027.7	10 215.4	
505	10 012.3	10 217.6	
506	9 971.5	10 215.7	
507	9 975.9	10 175.9	
508	9 980.8	10 167.4	
509	10 015.3	10 151.2	

10 158.1

10 173.4

10 062.0

10 070.8

510

VER	TICAL THERM	ISTORS (AS-I	BUILT)
NO. NORTI	COORD	ELEV.	
	NORTHING	EASTING	ELEV.
VT-1	10 004.3	10 214.8	304.4
VT-2	10 002.4	10 204.2	306.7
VT-3	10 013.3	10 177.1	310.1
VT-4	10 021.2	10 150.4	312.8

CONTOURS SHOWN AS DASHED LINES WERE GENERATED FROM SURVEY INFORMATION AND REPRESENT FINISHED GROUND SURFACE FOLLOWING REGRADING OR RESHAPING.

FINA	L LANDFILL S	URFACE (AS-	-BUILT)	
NO.	COORD	COORDINATES		
I NO.	NORTHING	EASTING	ELEV.	
520	10 063.1	10 197.2	308.8	
521	10 055.6	10 203.4	308.4	
522	10 038.5	10 211.8	307.2	
523	9 996.8	10 207.5	306.0	
524	9 976.9	10 204.6	305.8	
525	9 984.9	10 180.4	308.8	
526	9 992.5	10 161.1	311.0	
527	10 004.3	10 155.9	311.9	
528	10 014.0	10 152.7	312.9	
529	10 023.7	10 154.2	313.0	
530	10 042.5	10 157.3	313.4	
531	10 061.5	10 161.2	313.8	
532	10 066.2	10 178.7	311.6	

GRADING/INSTRUMENTATION PLAN

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General Notes:

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- NOTED OTHERWISE. 4. FOR VERTICAL THERMISTOR INSTALLATION DETAILS, SEE DWG. H-P44/1-9101-134.
- 5. KEY TRENCH EXTENDS BELOW ORIGINAL GROUND TO SOUND BEDROCK OR SATURATED GROUND (DEPTH VARIES). SEE DWG. H-P44/1-9101-117.

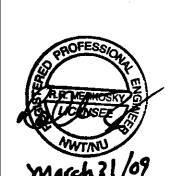
Legend:

COORDINATE POINT

VERTICAL THERMISTOR INSTALLATION (4)

LANDFILL OR BURIED DEBRIS EXCAVATION AREA

0 09-03-30 AS-BUILT DRAWING



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DATE 2001-02-28

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CAM-4 PELLY BAY

DEW LINE CLEAN UP

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TRADE - METIER SUBJECT - SUJET

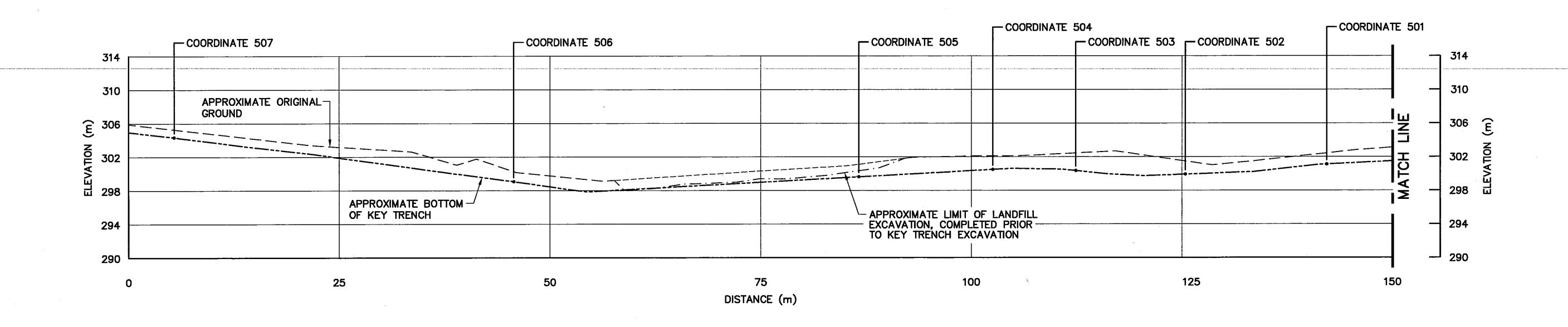
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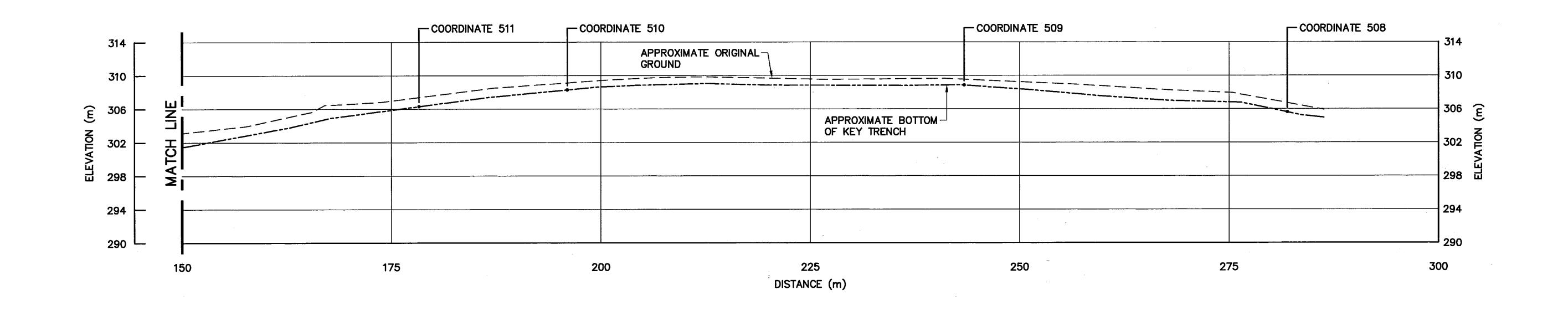
CONCURRENCE - ASSENTIMENT DESIGNED TMS DES OFF AGENT CONCEPT DRAWN DESSINE LJV CHEF SECT CHECKED KMS DES MGR GEST CONCEPT COORDINATION

DWG. NO. - DESSIN NO. H-P44/1-9101-116

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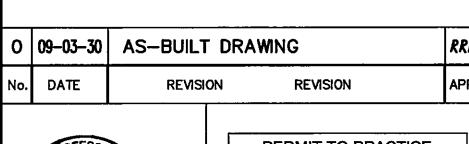
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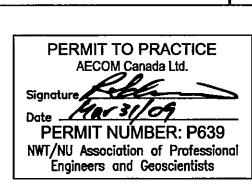
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DATE 2001-02-28

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CAM-4 PELLY BAY

DEW LINE CLEAN UP

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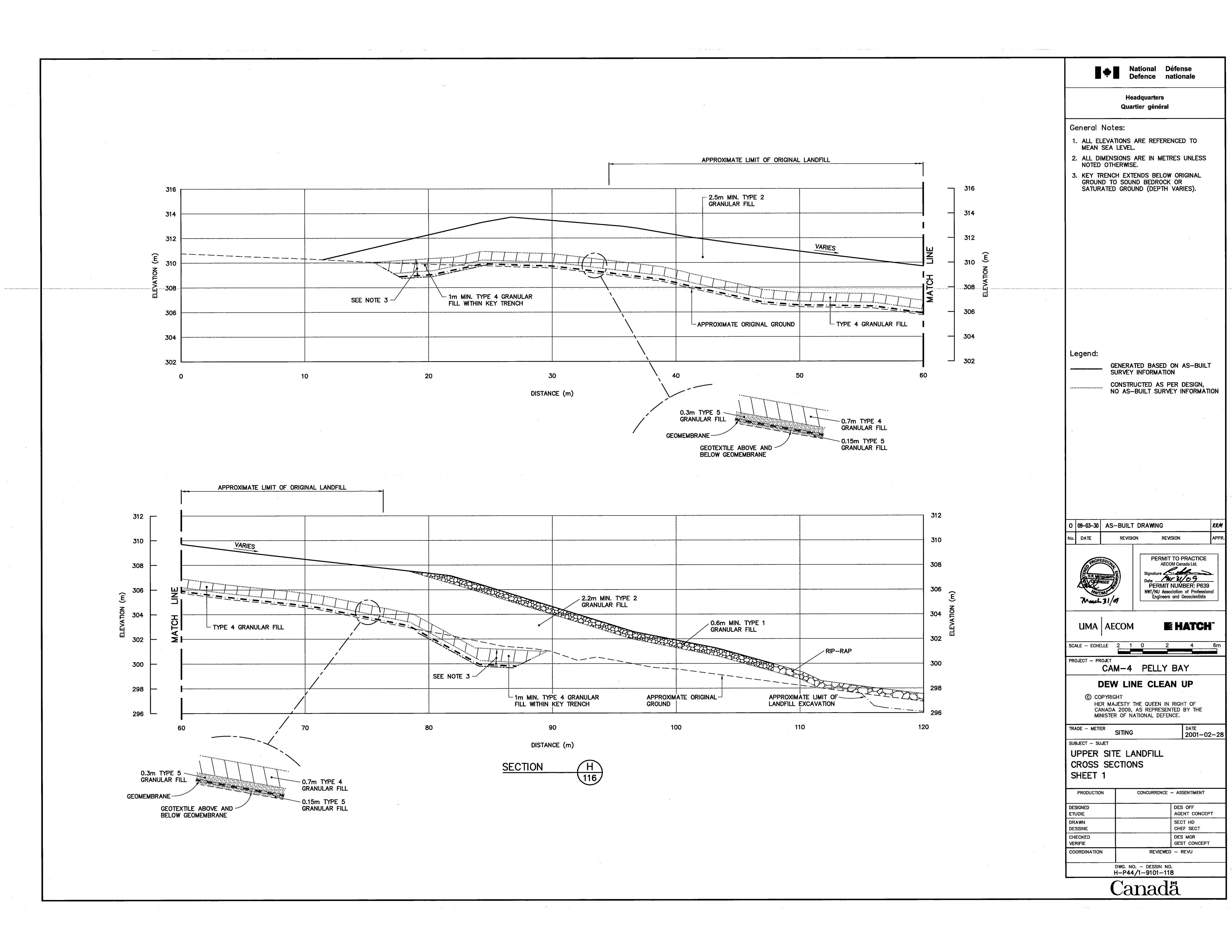
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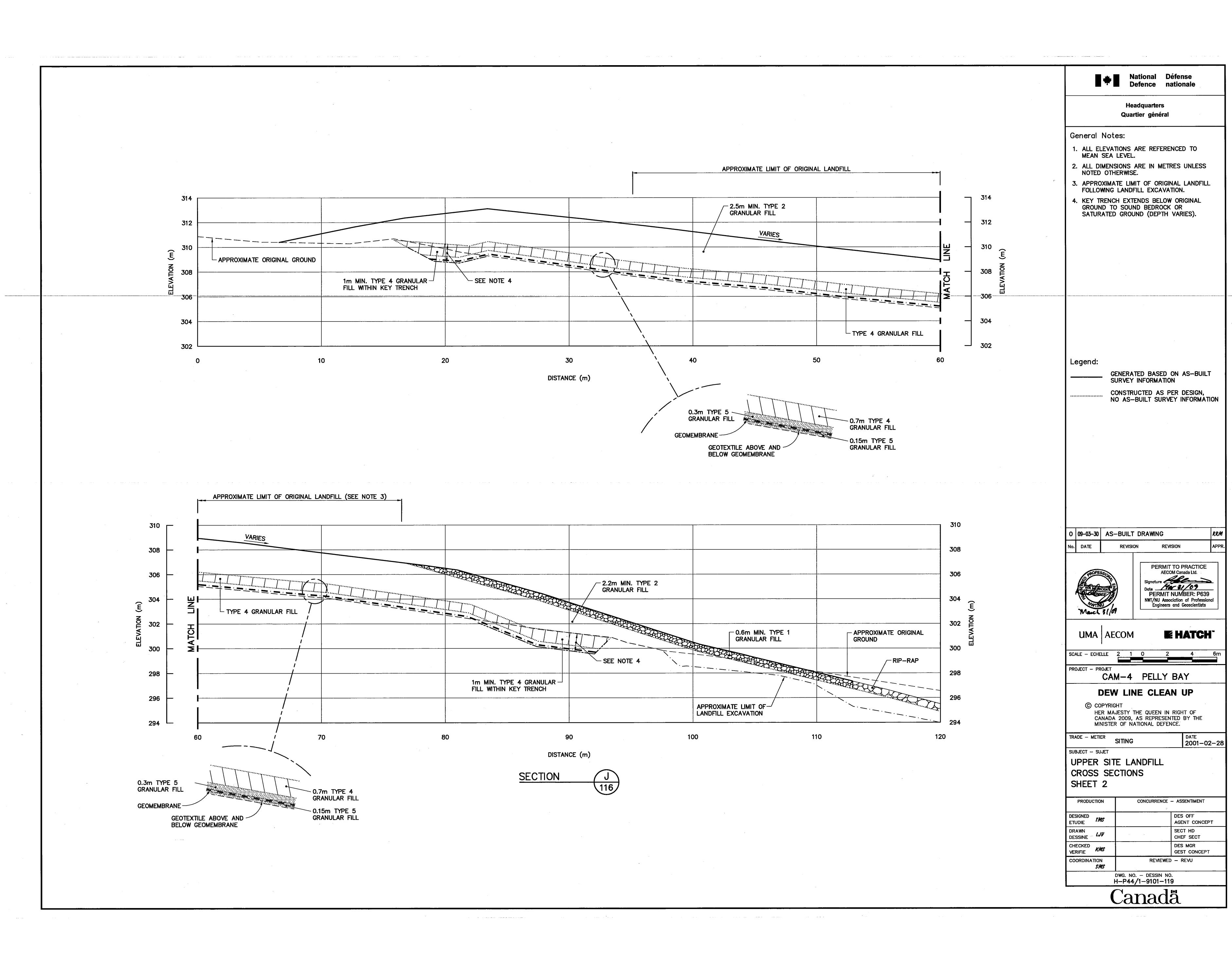
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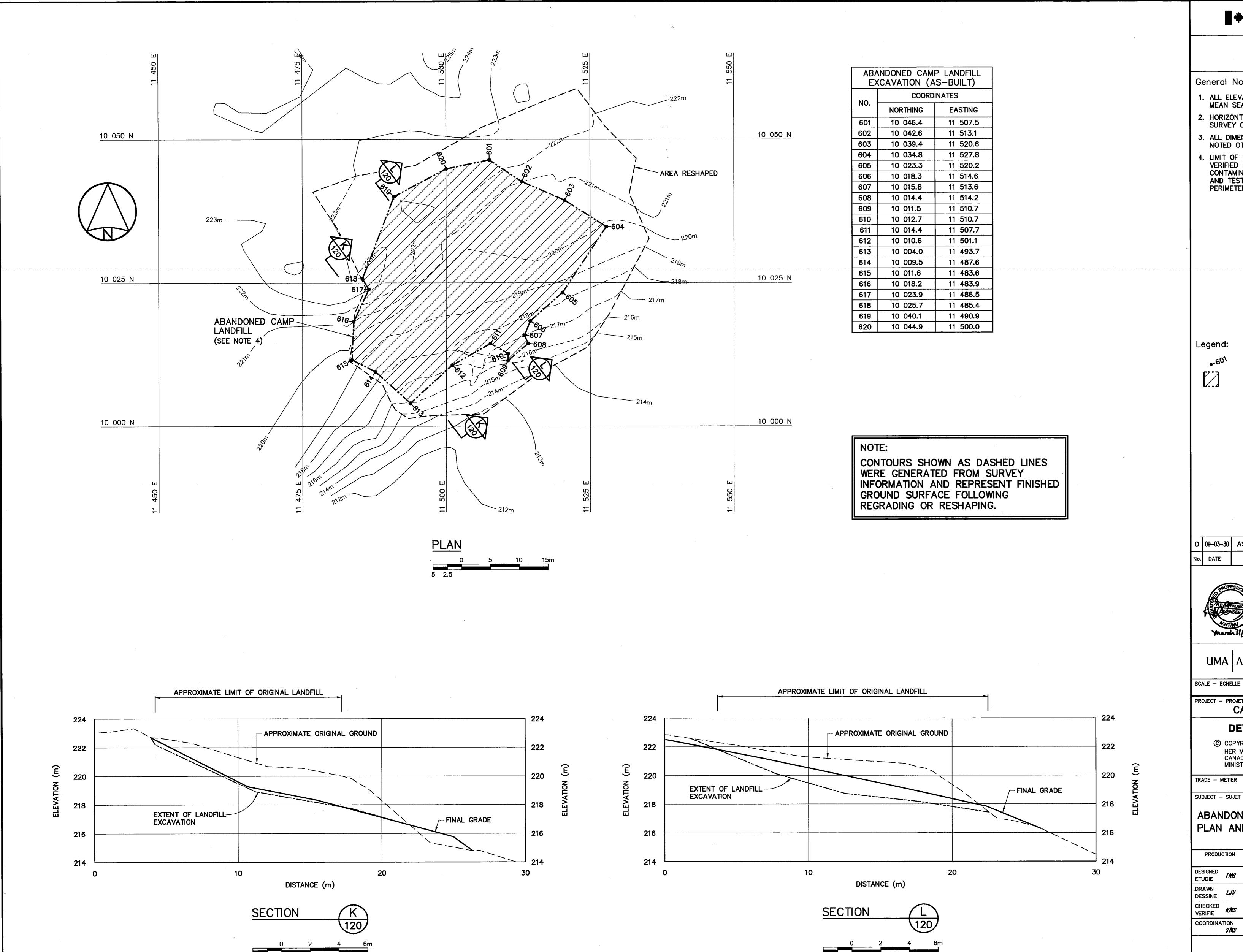
SUBJECT — SUJET

UPPER SITE LANDFILL
KEY TRENCH CENTRELINE PROFILE

PRODUCTION		CONCURRENCE - ASSENTIMENT
DESIGNED ETUDIE	TMS .	DES OFF AGENT CONCEPT
DRAWN DESSINE	LJV	SECT HD CHEF SECT
CHECKED VERIFIE	KMS	DES MGR GEST CONCEPT
COORDINA	TION SMS	REVIEWED — REVU







Headquarters Quartier général

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- 4. LIMIT OF SECONDARY EXCAVATION WAS FIELD VERIFIED BY CONFIRMATORY TESTING OF CONTAMINATED SOIL, GEOPHYSICAL SURVEYS AND TEST EXCAVATIONS AT THE LANDFILL PERIMETER AND AT DEPTH.

Legend:

COORDINATE POINT

LANDFILL OR BURIED DEBRIS EXCAVATION AREA

0 09-03-30 AS-BUILT DRAWING



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E HATCH

CAM-4 PELLY BAY

AS SHOWN

DEW LINE CLEAN UP

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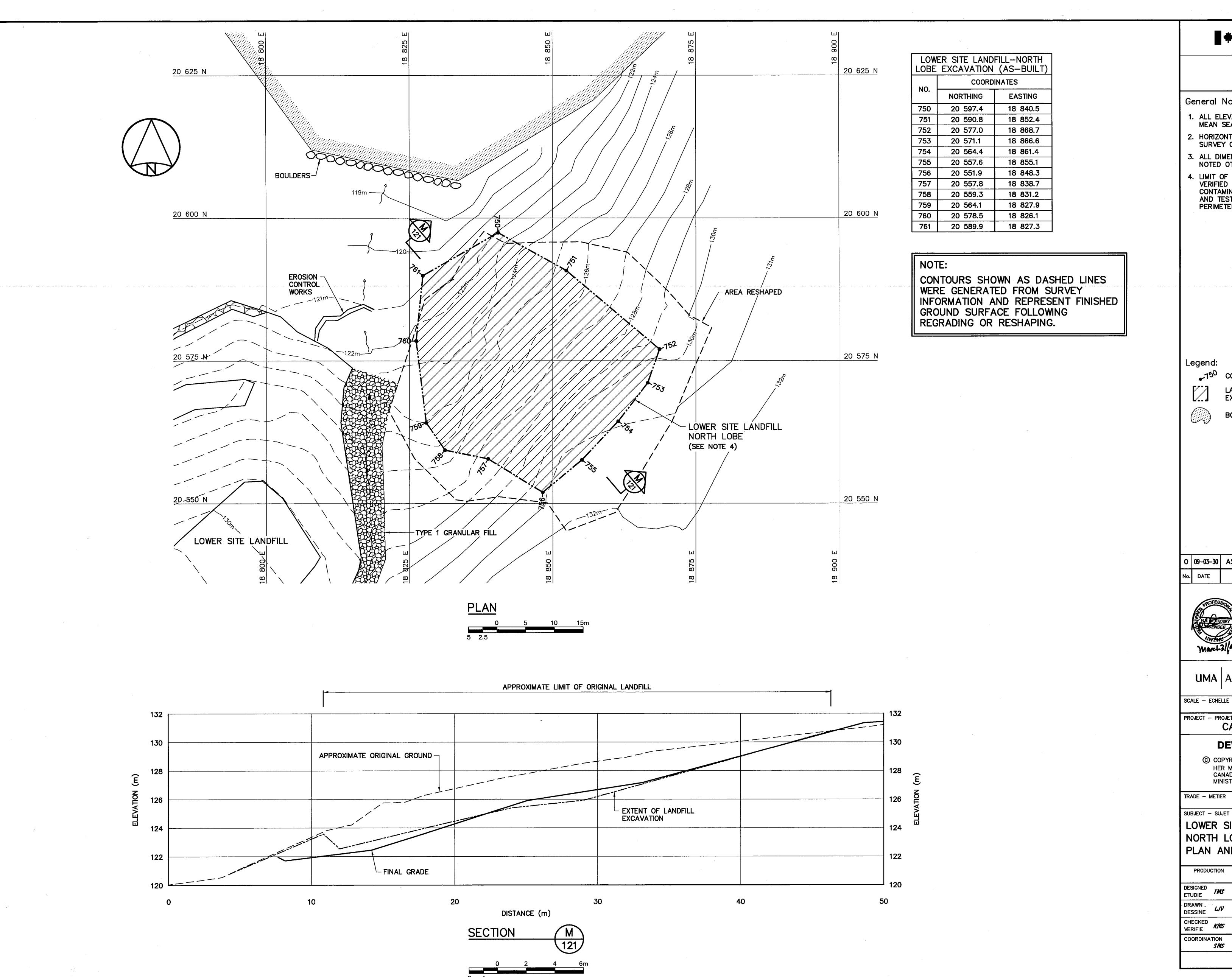
MINISTER OF NATIONAL DEFENCE.

DATE 2001-02-28 TRADE - METIER

ABANDONED CAMP LANDFILL

PLAN AND CROSS SECTIONS

CONCURRENCE - ASSENTIMENT DESIGNED FMS DES OFF AGENT CONCEPT DRAWN DESSINE SECT HD CHEF SECT CHECKED KMS DES MGR GEST CONCEPT COORDINATION REVIEWED - REVU DWG. NO. - DESSIN NO. H-P44/1-9101-120



National Défense Defence nationale

Headquarters Quartier général

General Notes:

- 1. ALL ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL.
- 2. HORIZONTAL CONTROL REFERENCED TO SURVEY CONTROL MONUMENTS.
- 3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- 4. LIMIT OF SECONDARY EXCAVATION WAS FIELD VERIFIED BY CONFIRMATORY TESTING OF CONTAMINATED SOIL, GEOPHYSICAL SURVEYS AND TEST EXCAVATIONS AT THE LANDFILL PERIMETER AND AT DEPTH.

__150 COORDINATE POINT

LANDFILL OR BURIED DEBRIS EXCAVATION AREA

BODY OF WATER

0 09-03-30 AS-BUILT DRAWING



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Date PERMIT NUMBER: P639 NWT/NU Association of Professional Engineers and Geoscientists

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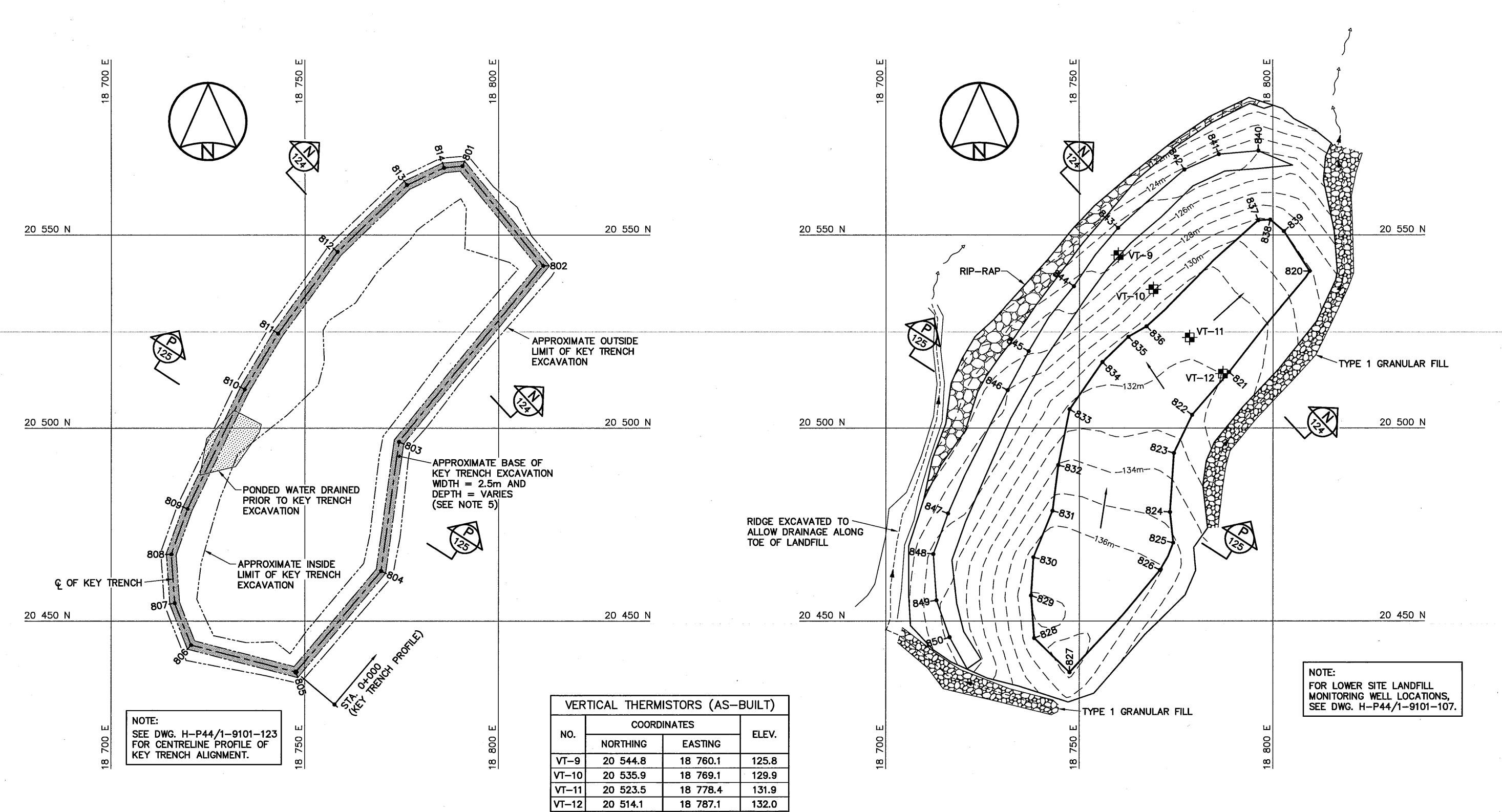
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LOWER SITE LANDFILL

NORTH LOBE PLAN AND CROSS SECTION

CONCURRENCE - ASSENTIMENT PRODUCTION DES OFF DESIGNED ETUDIE *TMS* AGENT CONCEPT DRAWN LJV DESSINE SECT HD CHEF SECT CHECKED KMS DES MGR GEST CONCEPT COORDINATION REVIEWED - REVU

DWG. NO. - DESSIN NO. H-P44/1-9101-121



KEY TRENCH EXCAVATION PLAN

KEY TRENCH EXCAVATION (DESIGN)*				
NO	COORD	INATES		
NO.	NORTHING	EASTING		
801	20 567.8	18 790.7		
802	20 542.0	18 811.4		
803	20 496.4	18 774.4		
804	20 462.9	18 769.8		
805	20 436.8	18 747.7		
806	20 443.8	18 720.7		
807	20 454.6	18 716.5		
808	20 467.3	18 715.6		
809	20 479.1	18 719.8		
810	20 510.0	18 734.5		
811	20 524.5	18 743.1		
812	20 545.6	18 758.4		
813	20 562.9	18 776.4		
814	20 567.4	18 786.0		

* NOTE: KEY TRENCH ALIGNMENT CONSTRUCTED AS PER DESIGN, NO AS-BUILT SURVEY INFORMATION.

NOTE:

CONTOURS SHOWN AS DASHED LINES WERE GENERATED FROM SURVEY INFORMATION AND REPRESENT FINISHED GROUND SURFACE FOLLOWING REGRADING OR RESHAPING.

GRADING/INSTRUMENTATION	PLAN

COOPE		COORDINATES			COORDINATES		
NO.	COOKD	T	ELEV.	NO.	COOKD	INAILS	ELEV.
	NORTHING	EASTING			NORTHING	EASTING	
820	20 540.6	18 809.4	129.1	836	20 526.3	18 767.3	131.3
821	20 514.5	18 788.7	131.9	837	20 553.8	18 796.2	129.2
822	20 503.4	18 779.1	132.2	838	20 554.0	18 799.3	128.8
823	20 493.5	18 774.4	133.4	839	20 551.0	18 802.8	129.0
824	20 478.2	18 773.4	134.7	840	20 571.8	18 796.3	125.0
825	20 470.3	18 774.2	135.1	841	20 570.9	18 786.0	124.4
826	20 463.2	18 770.8	136.1	842	20 566.9	18 777.1	124.3
827	20 436.7	18 747.5	137.3	843	20 551.8	18 760.0	125.5
828	20 445.6	18 738.4	137.0	844	20 536.7	18 748.6	126.3
829	20 456.6	18 737.6	137.0	845	20 519.9	18 736.9	127.9
830	20 466.5	18 738.2	136.5	846	20 509.8	18 731.5	129.0
831	20 478.6	18 743.1	135.6	847	20 477.9	18 716.1	129.8
832	20 490.4	18 744.6	134.1	848	20 467.3	18 712.3	130.4
833	20 504.9	18 747.5	132.2	849	20 455.4	18 713.1	130.9
834	20 517.1	18 755.9	131.6	850	20 445.8	18 716.5	131.3
835	20 523.6	18 762.6	131.3	-			



National Défense Defence nationale

Headquarters Quartier général

General Notes:

- 1. ALL ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL.
- 2. HORIZONTAL CONTROL REFERENCED TO SURVEY CONTROL MONUMENTS.
- 3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- 4. FOR VERTICAL THERMISTOR INSTALLATION DETAILS, SEE DWG. H-P44/1-9101-134.
- 5. KEY TRENCH EXTENDS BELOW ORIGINAL GROUND TO SOUND BEDROCK OR SATURATED GROUND (DEPTH VARIES). SEE DWG. H-P44/1-9101-123.



COORDINATE POINT



O 09-03-30 AS-BUILT DRAWING No. DATE



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Signature

Date
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NWT/NU Association of Professional
Engineers and Geoscientists

DATE 2001-02-28

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DEW LINE CLEAN UP

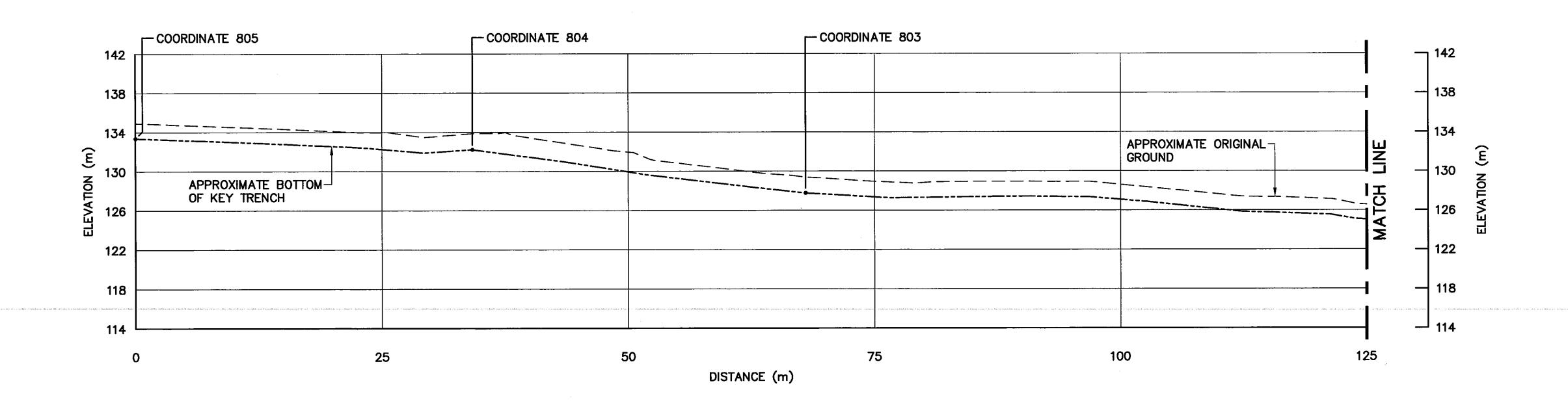
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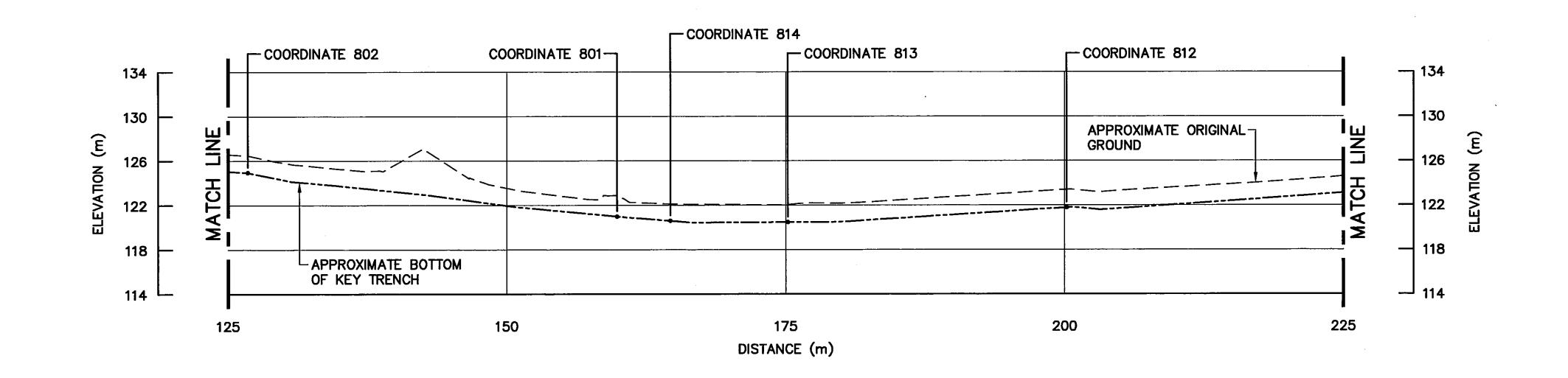
TRADE — METIER SUBJECT - SUJET

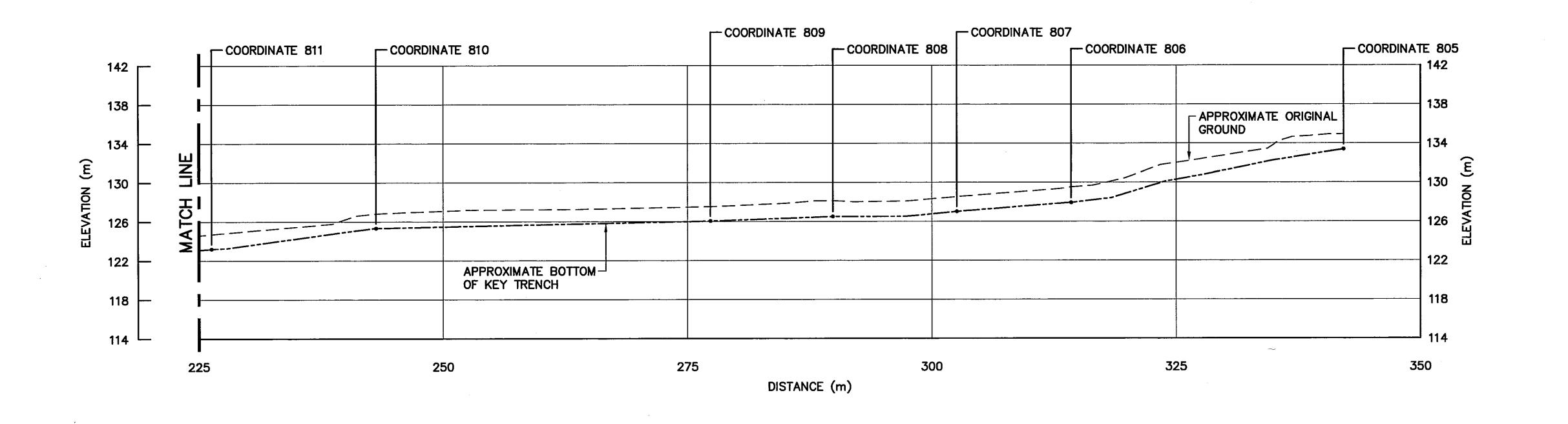
LOWER SITE LANDFILL KEY TRENCH EXCAVATION PLAN & GRADING/INSTRUMENTATION PLAN

CONCURRENCE - ASSENTIMENT PRODUCTION DESIGNED TMS DES OFF AGENT CONCEPT DRAWN DESSINE CHEF SECT CHECKED VERIFIE KMS DES MGR GEST CONCEPT COORDINATION REVIEWED - REVU

DWG. NO. - DESSIN NO. H-P44/1-9101-122







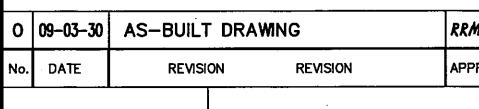
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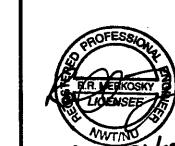
National Défense

Headquarters Quartier général

General Notes:

- 1. ALL ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL.
- 2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- 3. KEY TRENCH EXTENDS BELOW ORIGINAL GROUND TO SOUND BEDROCK OR SATURATED GROUND (DEPTH VARIES).





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SCALE - ECHELLE 5 2.5 0

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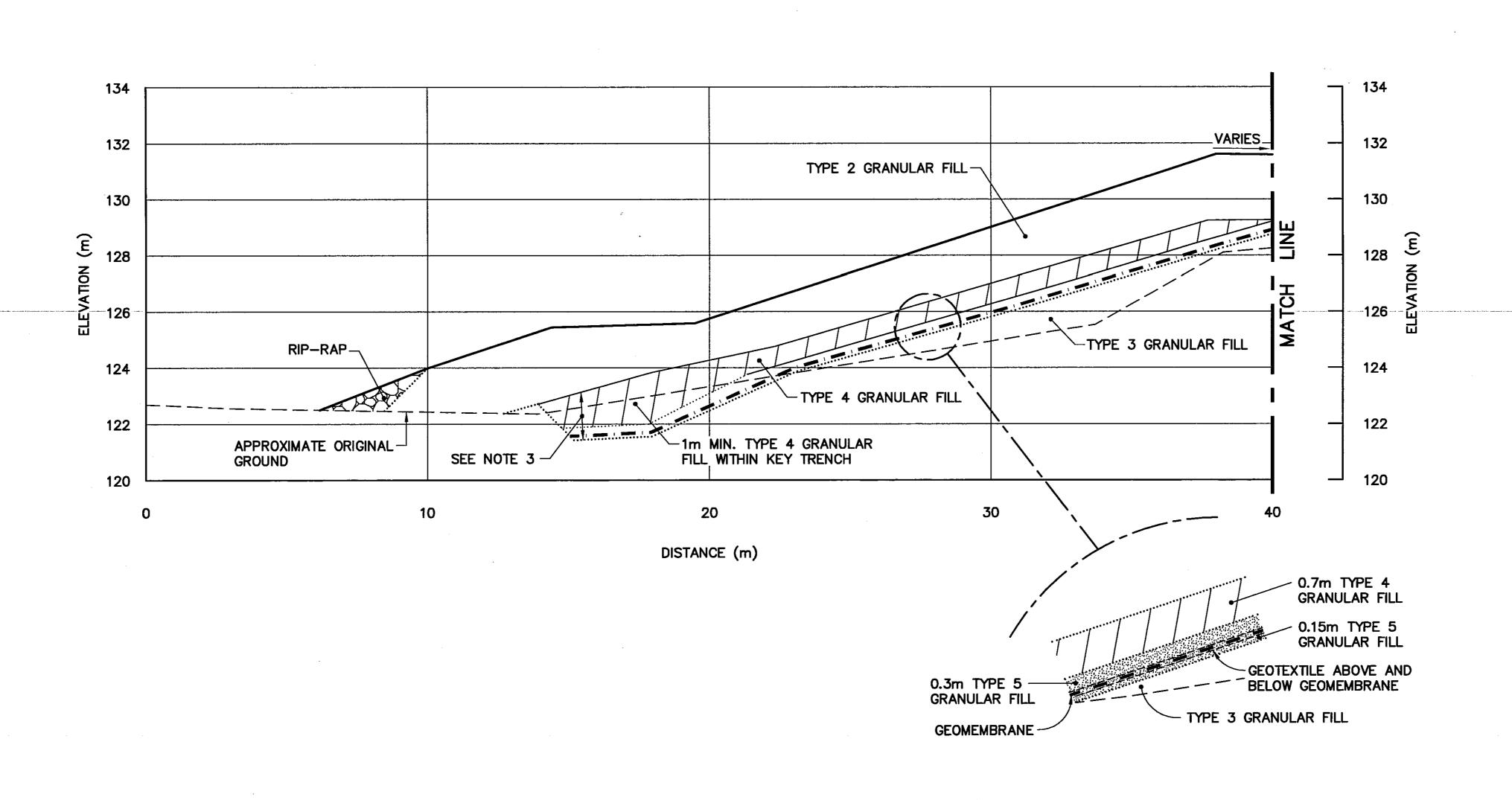
MINISTER OF NATIONAL DEFENCE.

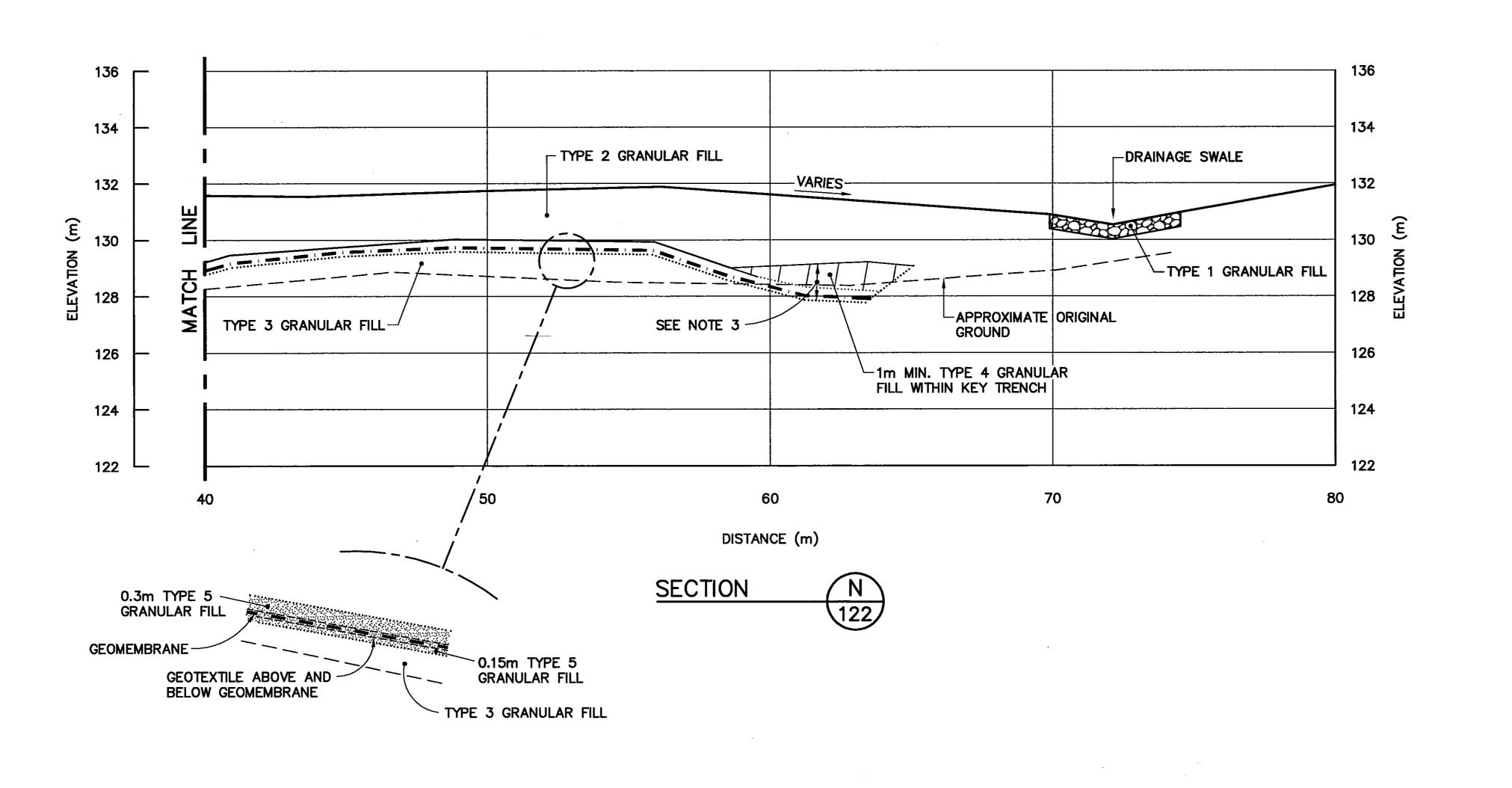
TRADE - METIER SITING

SUBJECT - SUJET

LOWER SITE LANDFILL
KEY TRENCH CENTRELINE PROFILE

PRODUCTION	CONCURRENCE - ASSENTIMENT	
DESIGNED TMS		DES OFF AGENT CONCEPT
DRAWN DESSINE LJV		SECT HD CHEF SECT
CHECKED KMS VERIFIE		DES MGR GEST CONCEPT
COORDINATION SMS	REVIEWED	- REVU
	DWG. NO DESSIN NO. H-P44/1-9101-123	





National Défense Defence nationale

Headquarters

General Notes:

1. ALL ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL.

Quartier général

- 2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- 3. KEY TRENCH EXTENDS BELOW ORIGINAL GROUND TO SOUND BEDROCK OR SATURATED GROUND (DEPTH VARIES).

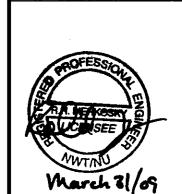
Legend:

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.... CONSTRUCTED AS PER DESIGN,
NO AS-BUILT SURVEY INFORMATION

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TRADE - METIER

SUBJECT - SUJET

LOWER SITE LANDFILL CROSS SECTIONS

SHEET 1

PRODUCTION

CONCURRENCE - ASSENTIMENT

DESIGNED TMS
ETUDIE

DRAWN
DESSINE

CHECKED KMS

CONCURRENCE - ASSENTIMENT

DES OFF
AGENT CONCEPT

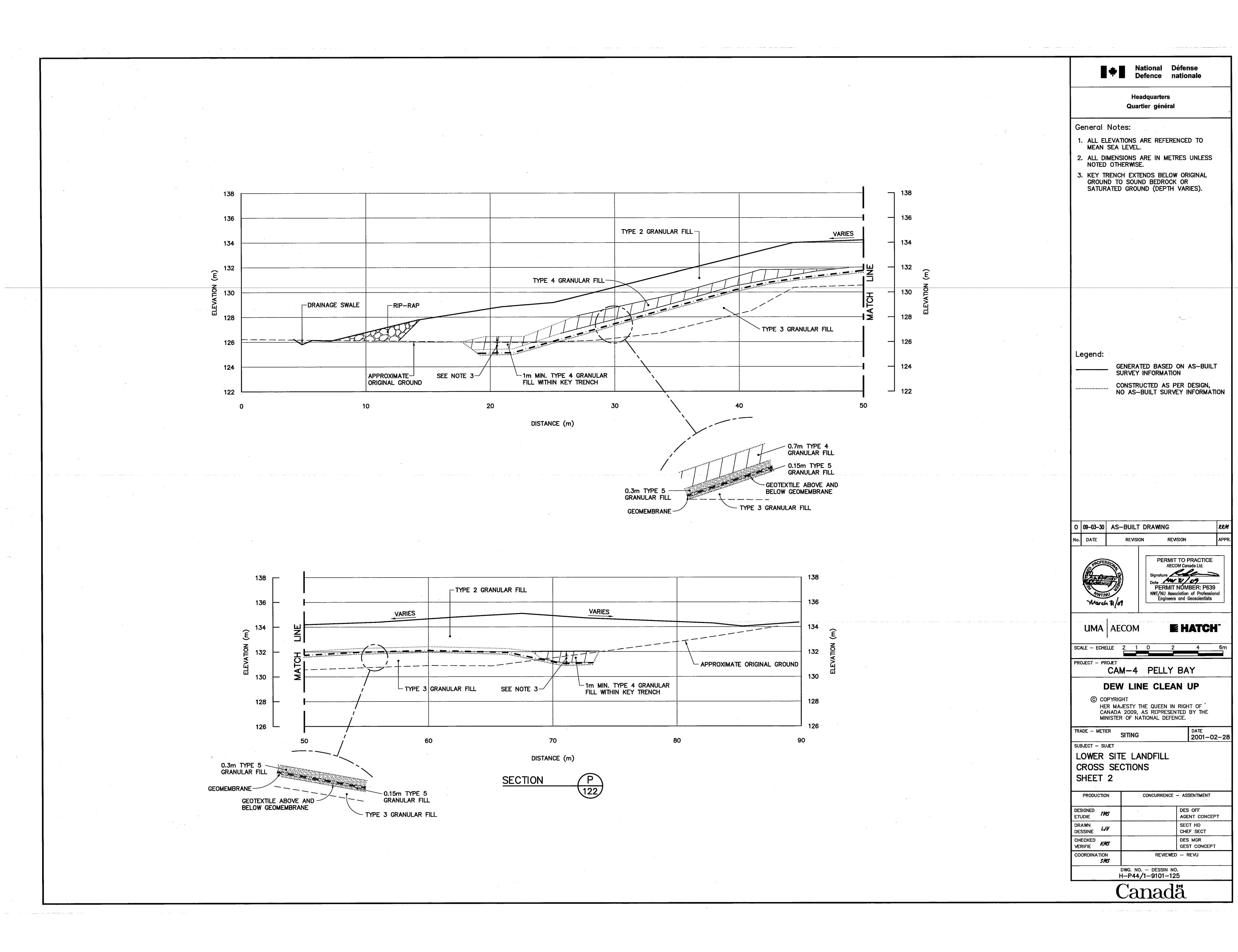
SECT HD
CHEF SECT

DES MGR
GEST CONCEPT

COORDINATION
SMS

REVIEWED - REVU

DWG. NO. - DESSIN NO. H-P44/1-9101-124



ADDITIONAL WASTE LAYERS, MAY
HAVE BEEN REQUIRED, TO ACHIEVE
THE LOWER SITE NON—HAZARDOUS
WASTE LANDFILL DESIGN ELEVATIONS. TYPE 2 GRANULAR FILL > INTERMEDIATE COVER (TYPE 6 GRANULAR FILL) WASTE PLACEMENT DETAIL SCALE: NTS 142 TYPE 2 GRANULAR FILL VARIES L SEE WASTE PLACEMENT DETAIL, THIS DRAWING APPROXIMATE ORIGINAL GROUND └ NON-HAZARDOUS WASTE └ TYPE 2 GRANULAR FILL 134 TYPE 2 GRANULAR FILL 132 132 20 40 50 60 70 DISTANCE (m) B 107 SECTION CHECKED KMS

Headquarters Quartier général General Notes: 1. ALL ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL. 2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE. Legend: GENERATED BASED ON AS-BUILT SURVEY INFORMATION CONSTRUCTED AS PER DESIGN, NO AS-BUILT SURVEY INFORMATION RRM APPR. 0 09-03-30 AS-BUILT DRAWING REVISION REVISION PERMIT TO PRACTICE AECOM Canada Ltd. Signature

Date

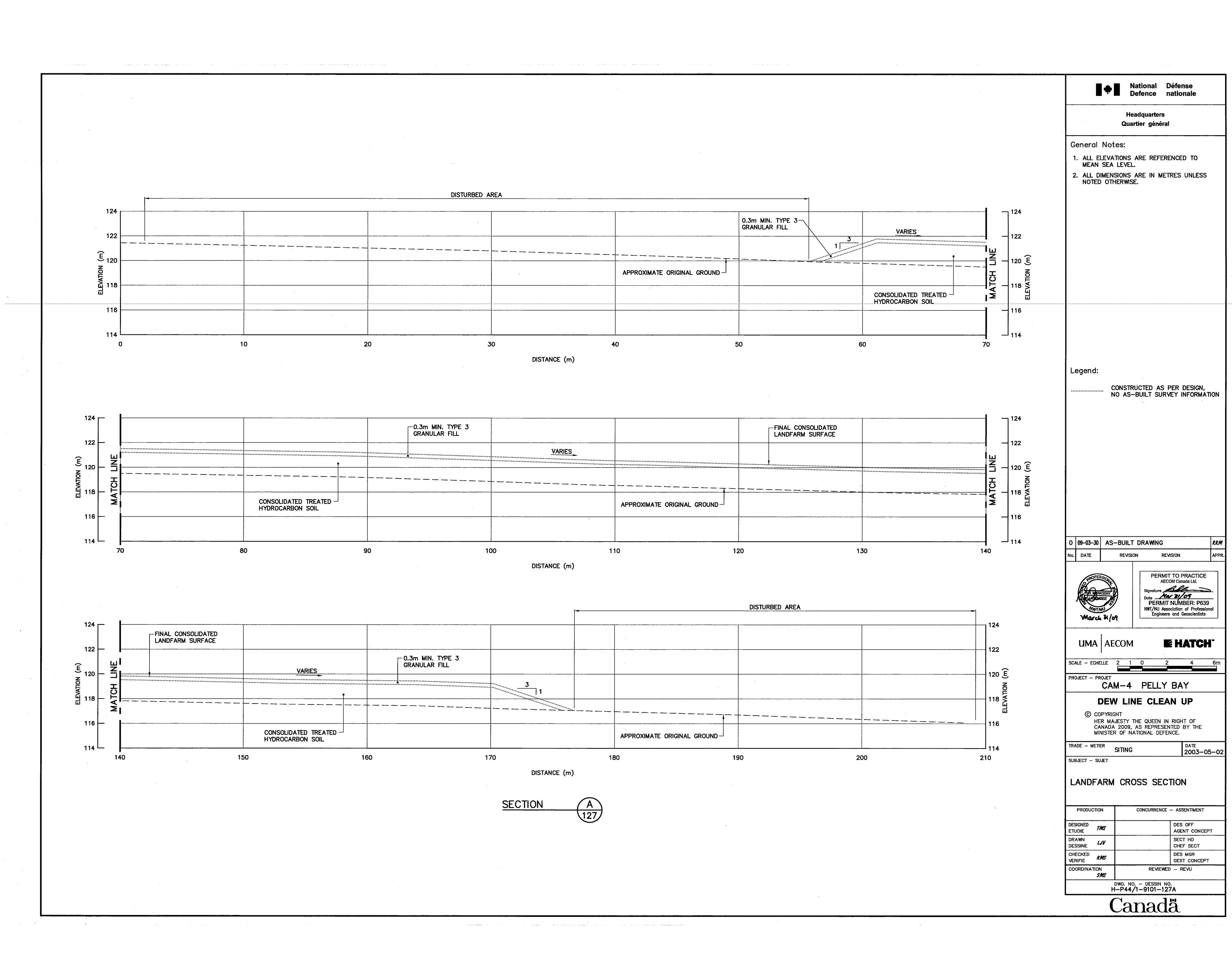
PERMIT NUMBER: P639

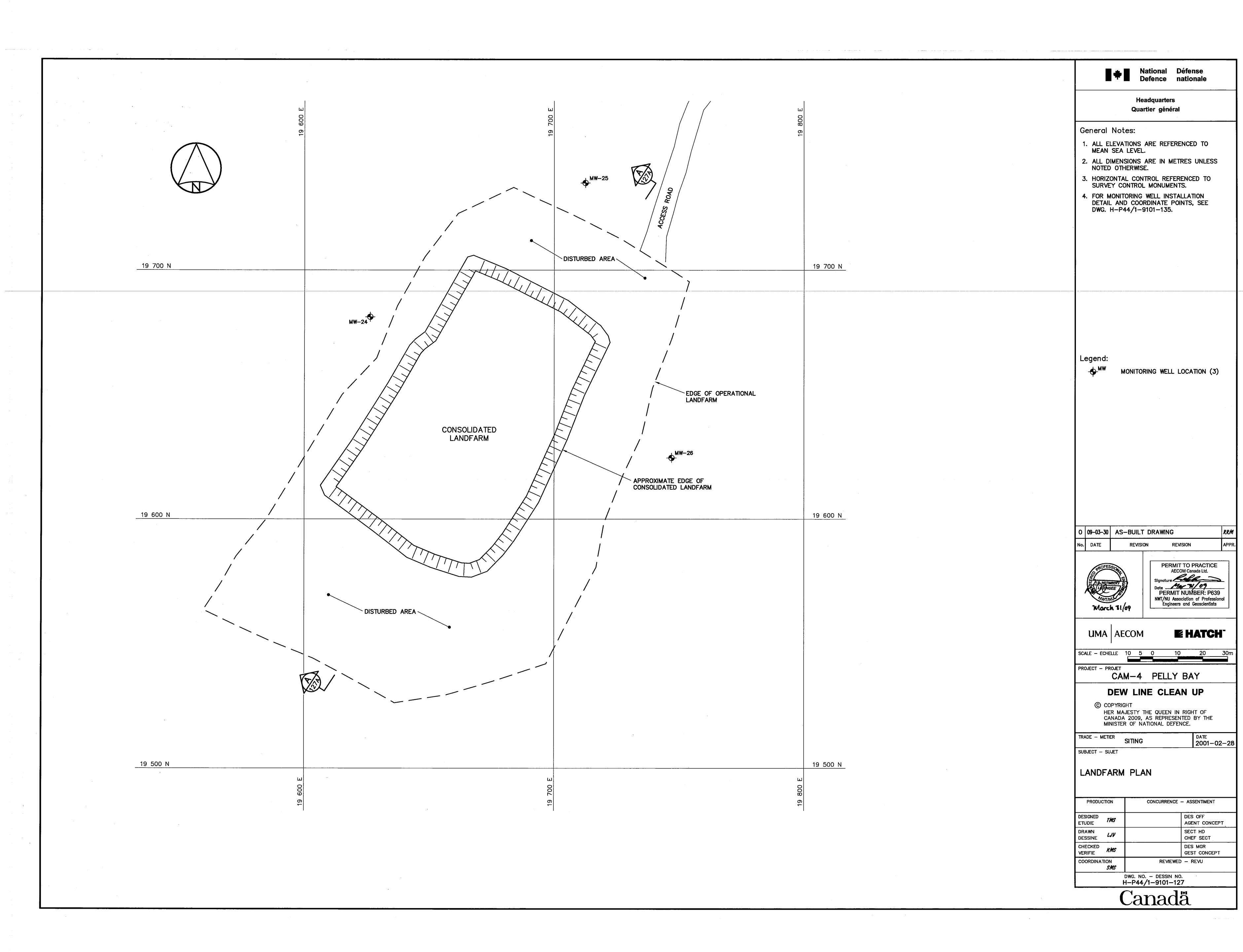
NWT/NU Association of Professional
Engineers and Geoscientists **E** HATCH SCALE - ECHELLE CAM-4 PELLY BAY **DEW LINE CLEAN UP** HER MAJESTY THE QUEEN IN RIGHT OF CANADA 2009, AS REPRESENTED BY THE MINISTER OF NATIONAL DEFENCE. DATE 2001-02-28 TRADE - METIER SUBJECT - SUJET LOWER SITE NON-HAZARDOUS WASTE LANDFILL CROSS SECTION CONCURRENCE - ASSENTIMENT PRODUCTION DES OFF AGENT CONCEPT DESIGNED TMS DRAWN DESSINE SECT HD CHEF SECT DES MGR GEST CONCEPT

COORDINATION

REVIEWED — REVU

DWG. NO. - DESSIN NO. H-P44/1-9101-126





•		LE 1 TOR INSTALLATION				
INSTRUMENT APPROXIMATE DEPTH BELOW COMMENTS FINAL GRADE (m)						
UPPER SITE LANDFILL						
VT-2	4.7	IN KEY TRENCH				
VT-3 5.0 IN KEY TRENCH						
LOWER SITE LANDFILL						
VT-11 4.0 IN KEY TRENCH						

NOTE: ALL THERMISTOR STRINGS INSTALLED TO BASE LINER UNLESS NOTED OTHERWISE.

VERTICAL	TABLE 1B THERMISTOR INS	TALLATION			
INSTRUMENT FINAL GRADE BASE LINER No. ELEVATION (m) ELEVATION (m)					
UPPER SITE LANDS	TLL	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
VT-2	306.7	303.1			
VT-3	310.1	306.4			
LOWER SITE LANDE	7LL				
VT-11	131.9	129.7			

- LOCKING CAP WITH LOCK

V	TABL ERTICAL THERMIS	E 2 TOR INSTALLATION		
INSTRUMENT APPROXIMATE DEPTH BELOW COMMENTS FINAL GRADE (m)				
LOWER SITE LANDI				
VT-10	O 3.8 ON PLATEAU			

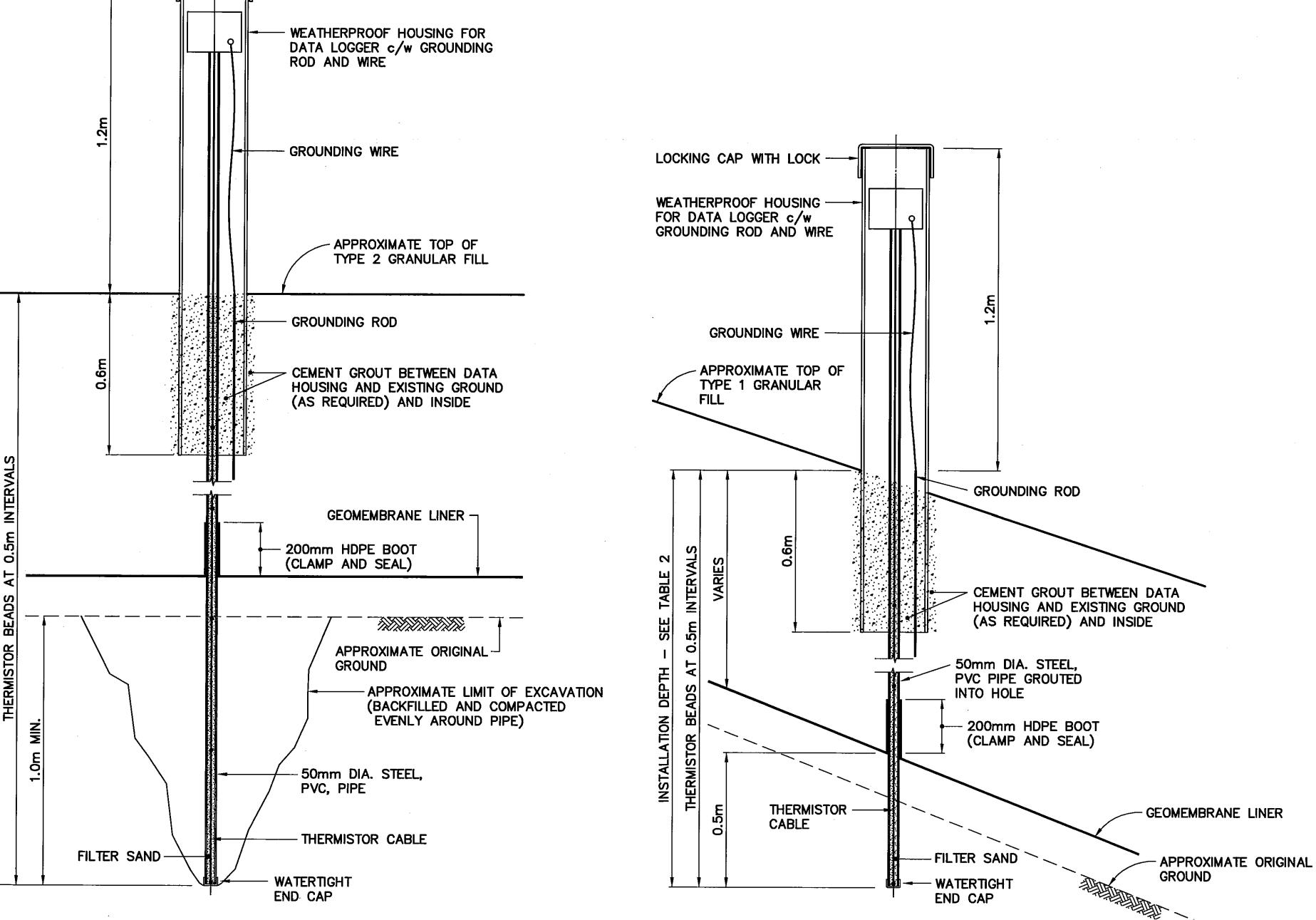
NOTE: ALL THERMISTOR STRINGS INSTALLED TO BASE LINER UNLESS NOTED OTHERWISE.

TABLE 2B VERTICAL THERMISTOR INSTALLATION				
VENTIONE	TILINIISTON INS	IALLATION		
INSTRUMENT FINAL GRADE BASE LINER No. ELEVATION (m) ELEVATION (m				
LOWER SITE LANDF	ILL			
VT-10	129.9	126.8		

TABLE 3 VERTICAL THERMISTOR INSTALLATION				
INSTRUMENT APPROXIMATE DEPTH BELOW COMMENTS FINAL GRADE (m)				
UPPER SITE LANDF	ILL			
VT-1	5.5	INSTALLED THROUGH CENTERLINE BERM TO INVERT OF KEY TRENCH		
VT-4	4.2	INSTALLED THROUGH CENTERLINE BERM TO INVERT OF KEY TRENCH		
LOWER SITE LANDF	ILL			
VT-9	4.0	INSTALLED THROUGH CENTERLINE BERM TO INVERT OF KEY TRENCH		
VT-12	4.4	INSTALLED THROUGH CENTERLINE BERM TO INVERT OF KEY TRENCH		

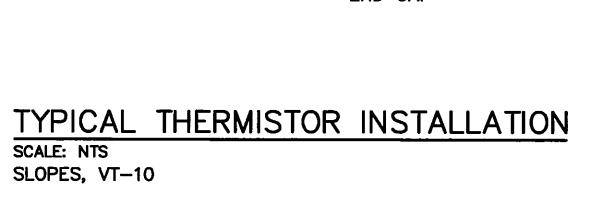
NOTE: ALL THERMISTOR STRINGS INSTALLED TO BASE LINER UNLESS NOTED OTHERWISE.

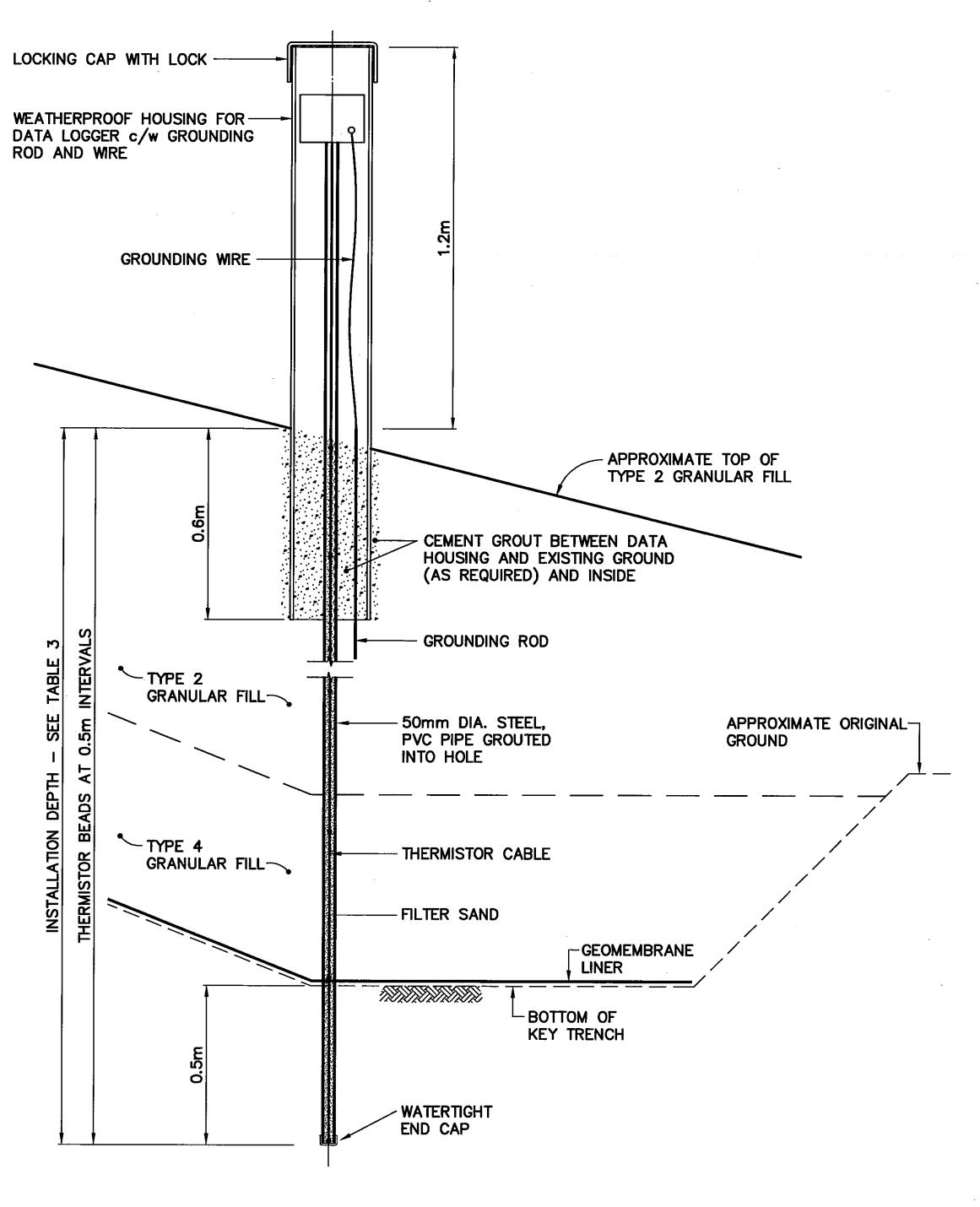
TABLE 3B VERTICAL THERMISTOR INSTALLATION							
INSTRUMENT FINAL GRADE TRENCH BOTTOM FINAL BEAD ELEVATION (m) ELEVATION (m)							
UPPER SITE LAND	FILL						
VT-1	304.4	300.1	299.9				
VT-4	312.8	308.7	309.3				
LOWER SITE LANDFILL							
VT-9 125.8 121.9 121.8							
VT-12							



TYPICAL THERMISTOR INSTALLATION SCALE: NTS

PLATEAU, VT-2, VT-3 AND VT-11





TYPICAL THERMISTOR INSTALLATION

KEY TRENCH, VT-1, VT-4, VT-9 AND VT-12

Headquarters Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.

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EHATCH SCALE - ECHELLE AS SHOWN

CAM-4 PELLY BAY

DEW LINE CLEAN UP

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DATE 2001-02-28

TRADE - METIER SUBJECT - SUJET

MISCELLANEOUS DETAILS SHEET 1

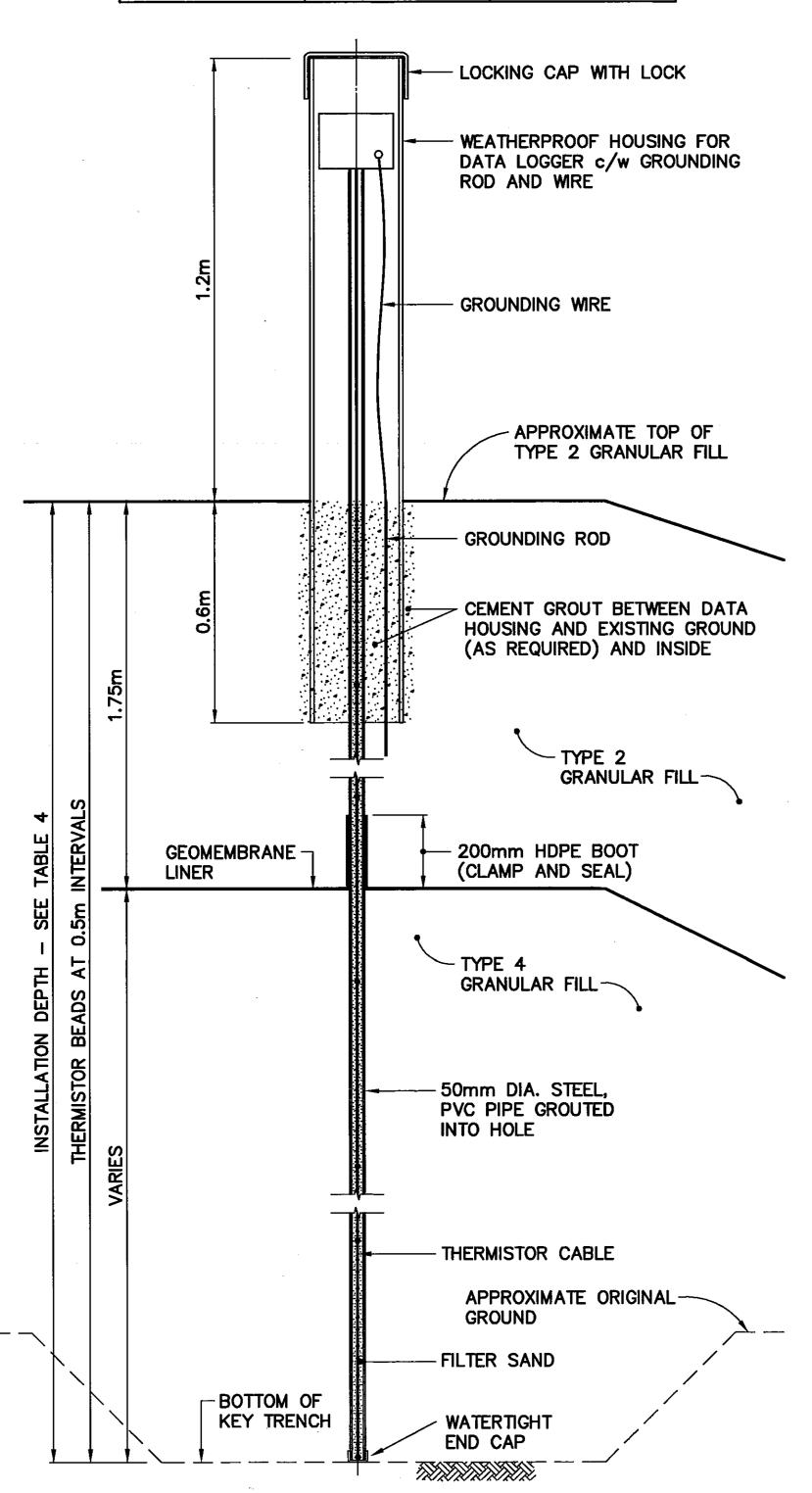
CONCURRENCE - ASSENTIMENT DESIGNED ETUDIE TMS DES OFF AGENT CONCEPT DRAWN SECT HD DESSINE CHEF SECT CHECKED KMS DES MGR GEST CONCEPT COORDINATION REVIEWED - REVU

DWG. NO. - DESSIN NO. H-P44/1-9101-134 Canadä

<u></u>					
TABLE 4 VERTICAL THERMISTOR INSTALLATION					
INSTRUMENT APPROXIMATE DEPTH BELOW COMMENTS FINAL GRADE (m)					
TIER II DISPOSAL F	ACILITY				
VT-5 5.5 INSTALLED THROUGH CENTERLINE BERM TO INVERT OF KEY TRENCH					
VT-6	4.0	INSTALLED TO 1.0m ABOVE ELEVATION OF BOTTOM LINER			
VT-7 8.0 AS PER VT-5					
VT-8 4.0 AS PER VT-6					

NOTE: ALL THERMISTOR STRINGS INSTALLED TO BASE LINER UNLESS NOTED OTHERWISE.

TABLE 4B VERTICAL THERMISTOR INSTALLATION				
INSTRUMENT FINAL GRADE BASE LINER ELEVATION (m)				
TIER II DISPOSAL F	ACILITY			
VT-5	320.9	319.2		
VT-6	319.3	314.6		
VT-7	317.8	316.1		
VT-8	319.1	313.9		



TYPICAL THERMISTOR INSTALLATION SCALE: NTS TIER II DISPOSAL FACILITY, VT-5 TO VT-8

			<u>.</u>	
	STATION AREA NON-HAZARDOUS WASTE LANDFILL MONITORING WELLS (AS-BUILT)			
NO	COORD	INATES	ELEV.	
NO.	NORTHING	EASTING	ELEV.	
MW-1	10 271.7	10 025.7	300.1	
MW-2	10 256.6	10 086.9	_	
MW-3	10 217.0	10 133.3		
MW-4	10 228.7	10 121.7	303.8	
MW-6	10 266.2	10 072.3	301.9	
MW-7	10 253.7	10 018.5	302.3	
MW-16	10 154.5	10 003.8	313.7	

NOTE: FOR MONITORING WELL LOCATIONS, SEE DWG. H-P44/1-9101-105.

МС		SAL FACILITY LLS (AS-BUII	_T)
10	COORD	INATES	ELEV
NO.	NORTHING	EASTING] ELEV
MW-5	10 039.3	10 136.9	310.9
MW-8	10 135.4	10 107.9	310.2
MW-9	10 099.2	10 145.6	310.1
MW-11	9 998.8	10 114.0	312.6
MW-14	10 024.4	10 022.3	317.8
MW-15	10 088.3	10 013.9	317.7
	_		

NOTE: FOR MONITORING WELL LOCATIONS, SEE DWG. H-P44/1-9101-105.

NOTE:

29 MONITORING WELLS

N AREA NON-HAZARDOUS WASTE LANDFILL		M	UPPER SIT ONITORING W E	E LANDFILL LLS (AS-BUI	
ORING WELLS (AS-BUILT)			COORD	COORDINATES	
COORD	INATES	ELEV.	NO.	NORTHING	EASTING
ORTHING	EASTING		MW-10	10 061.4	10 233.7
271.7	10 025.7	300.1	MW-12	10 013.3	10 247.3
256.6	10 086.9	_	MW-13	9 954.9	10 189.6
217.0	10 133.3	-	NOTE:	EOD MONITORING	WELL LOCATION
228.7	10 121.7	303.8	SEE DWG. H-P44/1-9101-105		
266.2	10 072.3	301.9			
			i e e e e e e e e e e e e e e e e e e e		

	I .	
LO		_
LACKUTOR		

MC	LOWER SITE NITORING WE		_T)
NO	COORD	INATES	ELEV.
NO.	NORTHING	EASTING	ELEV.
MW-17	20 590.5	18 795.2	120.4
MW-18	20 523.2	18 727.9	125.3
MW-19	20 440.8	18 700.3	129.0

ELEV.

295.9 302.4

NOTE: FOR MONITORING WELL LOCATIONS, SEE DWG. H-P44/1-9101-107.

LOWER SITE NON-HAZARDOUS WASTE LANDFILL MONITORING WELLS (AS-BUILT)			
NO.	COORD	INATES	ELEV.
	NORTHING	EASTING	ELEV.
MW-20	20 469.7	18 822.7	135.4
MW-21	20 415.1	18 807.1	138.0
MW-22	20 372.7	18 866.1	137.8
MW-23	20 463.9	18 876.7	135.9

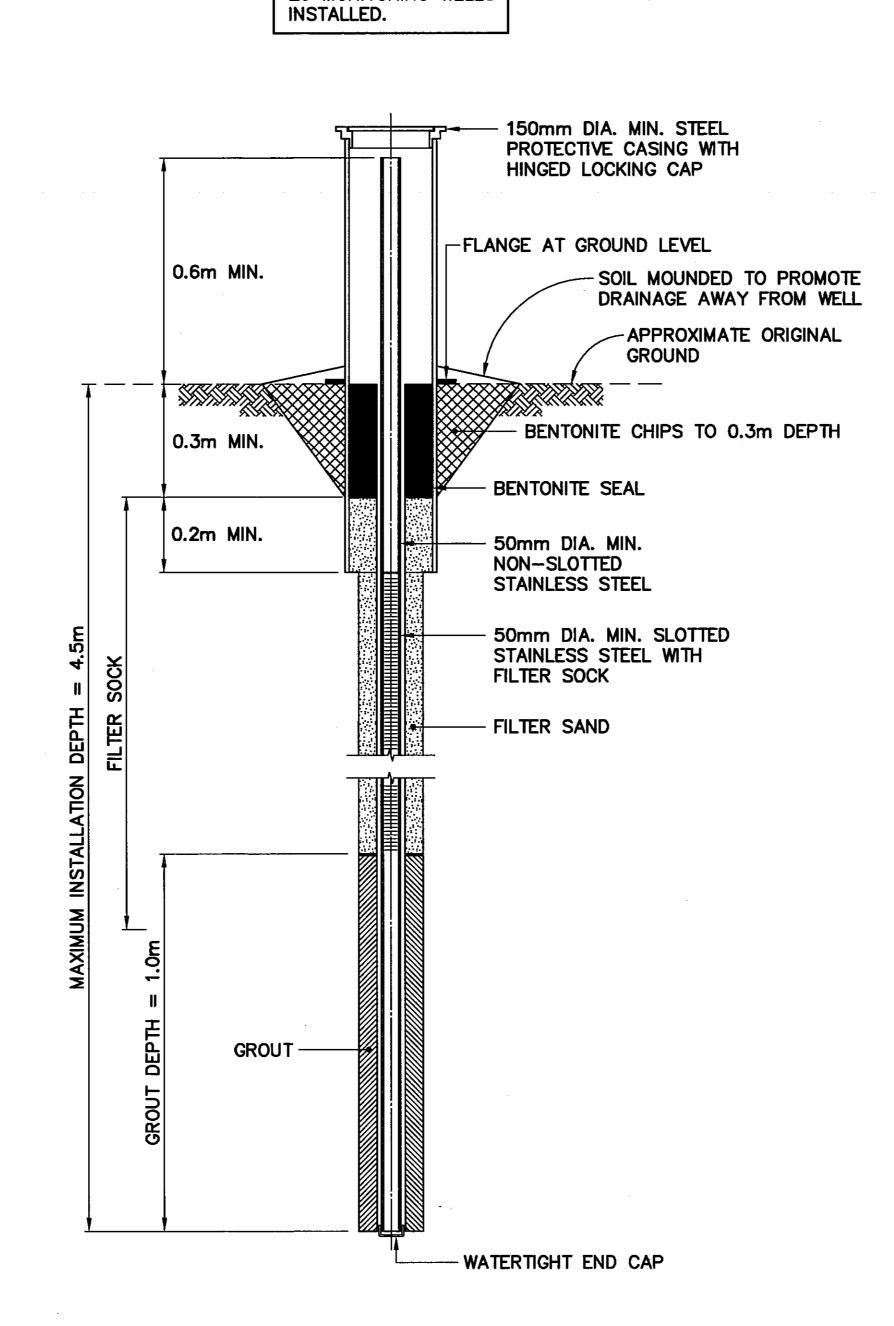
NOTE: FOR MONITORING WELL LOCATIONS, SEE DWG. H-P44/1-9101-107.

MOI	LAND NITORING WEI		LT)
NO	COORDI	NATES	
NO.	NORTHING	EASTING	- ELEV.
MW-24	19 681.2	19 626.3	116.0
MW-25	19 735.0	19 712.6	114.6
MW-26	19 624.6	19 747.0	116.8

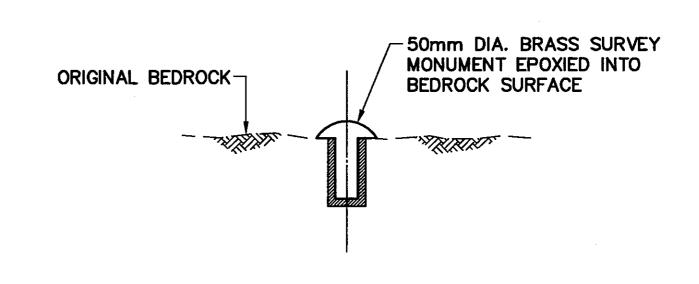
NOTE: FOR MONITORING WELL LOCATIONS, SEE DWG. H-P44/1-9101-127.

MISCELLANEOUS BACKGROUND MONITORING WELLS (AS-BUILT)			
NO	COORD	INATES	ELEV.
NO.	NORTHING	EASTING	
BMW-1	10 161.0	10 020.8	312.1
BMW-3	9 898.7	9 808.4	319.5
BMW-4	20 365.9	18 677.3	133.9

NOTE: FOR MONITORING WELL LOCATIONS, SEE DWG. H-P44/1-9101-105 AND DWG. H-P44/1-9101-107.



TYPICAL MONITORING WELL ALSO, TYPICAL BACKGROUND MONITORING WELL INSTALLATION



NOTE: 5 PERMANENT SURVEY CONTROL MONUMENTS INSTALLED.

TYPICAL PERMANENT SURVEY CONTROL MONUMENT SCALE: NTS ALSO CALLED PERMANENT BENCHMARK



Headquarters Quartier général

General Notes:

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.

0 09-03-30 AS-BUILT DRAWING RRM No. DATE REVISION REVISION PERMIT TO PRACTICE AECOM Canada Ltd. Signature

Date

PERMIT NUMBER: P639 NWT/NU Association of Professional Engineers and Geoscientists March 31/09

UMA | AECOM

E HATCH

SCALE - ECHELLE AS SHOWN

CAM-4 PELLY BAY **DEW LINE CLEAN UP**

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TRADE - METIER DATE 2001-02-28 SUBJECT - SUJET

MISCELLANEOUS DETAILS SHEET 2

CONCURRENCE - ASSENTIMENT DESIGNED ETUDIE TMS DES OFF AGENT CONCEPT DRAWN DESSINE LJV SECT HD CHEF SECT CHECKED KMS DES MGR GEST CONCEPT COORDINATION REVIEWED - REVU DWG. NO. - DESSIN NO. H-P44/1-9101-135

