



Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

ESQUIMALT GRAVING DOCK
WATERLOT
REMEDIATION PROJECT PHASE 1C

COMPENSATORY FISH
HABITAT CONSTRUCTION
DUNN’S NOOK
COLWOOD, BC

PROJECT NO. R.018400.001

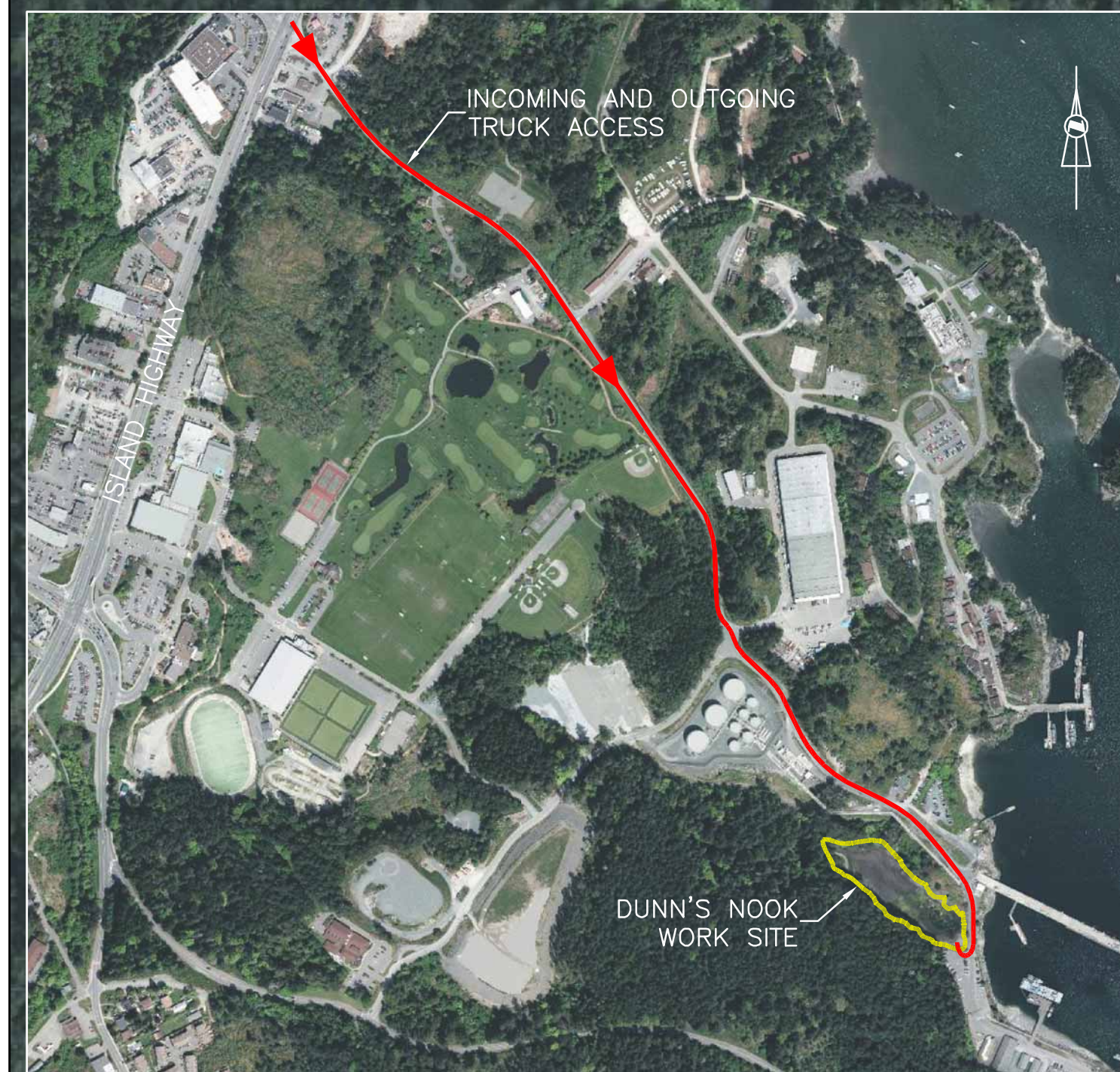
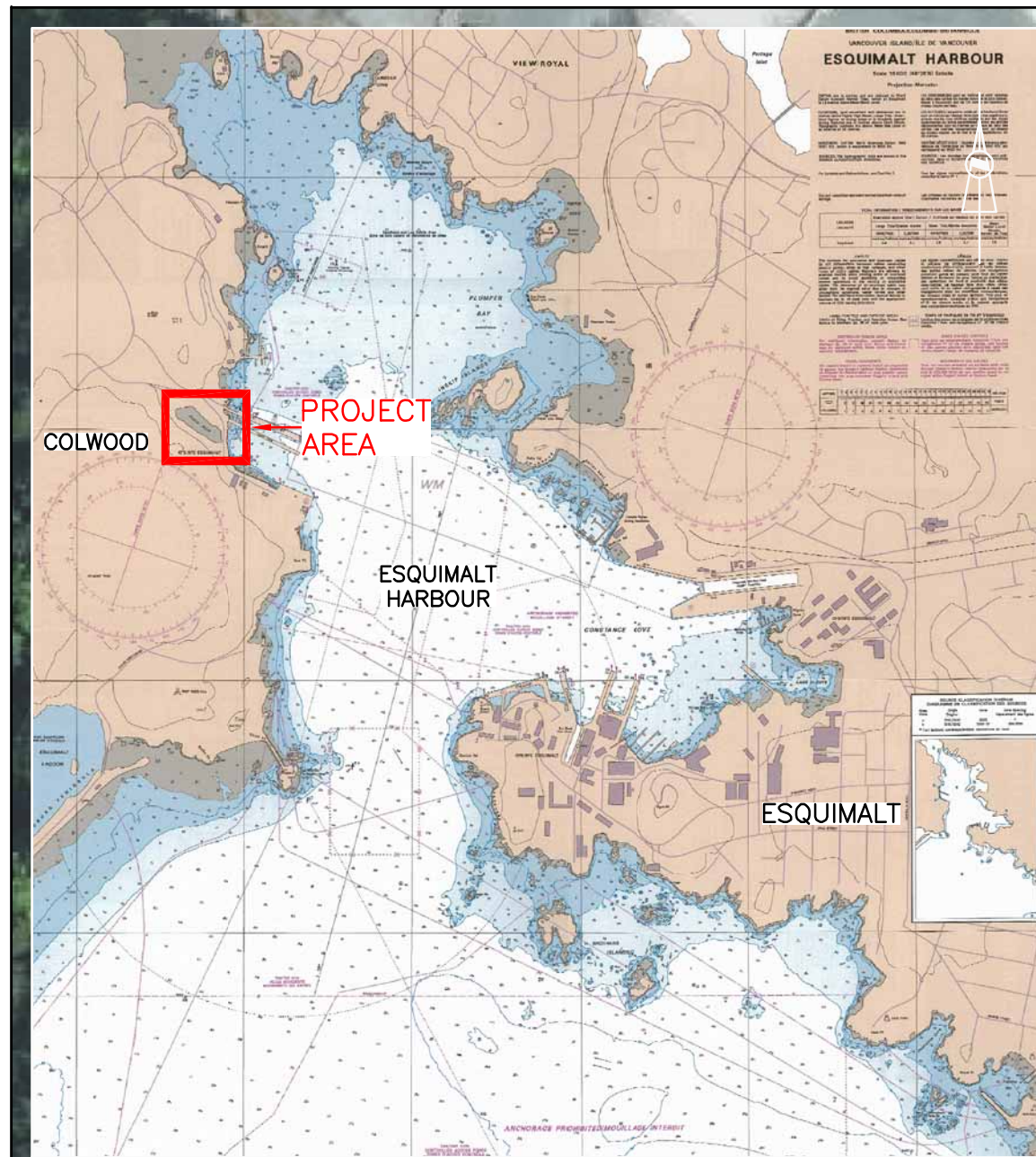
DRAWING LIST

DRAWING NO.	TITLE	DATE
C-1	TITLE PAGE	MAY 01, 2013
C-2	EXISTING SITE CONDITIONS	MAY 01, 2013
C-3	FILL AND HABITAT PLAN	MAY 01, 2013
C-4	PROFILES & AGGREGATES/GRANULAR MATERIALS SPECS	MAY 01, 2013
C-5	FILL SECTIONS	MAY 01, 2013
C-6	INSET PLAN – EROSION PROTECTION BERM	MAY 01, 2013
C-7	REMEDIAL EXCAVATION PLAN & SECTIONS	MAY 01, 2013
C-8	PLANTING PLAN	MAY 01, 2013
C-9	EXISTING CULVERTS	MAY 01, 2013



PLAN

SCALE: 1:1000
0m 20m 40m 60m 80m 100m



REFERENCE DRAWINGS

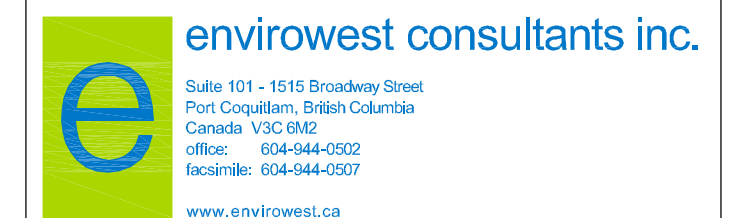
- Sheet No. 010037605-CNSI01-R04. "Topographic Survey Geodetic Datum". March 05, 2013. Focus.
- Figure 3: Archaeological Impact Assessment - Results. Esquimalt Graving Dock Waterlot Remediation Project. Archaeological Impact Assessment for the Esquimalt Graving Dock Fish Habitat Compensation Plan, Dunn's Nook, Colwood, BC. Golder Associates Ltd. Report No. 12-1477-0005/3000/3000. March 11, 2013.
- Figure 10: Site Access. Basis of Design Report. Esquimalt Graving Dock Waterlot Remediation Project. Dunn's Nook 99% Habitat Compensation Design. March 28, 2013.
- Figure 11: Approximate Location of Utilities. Basis of Design Report. Esquimalt Graving Dock Waterlot Remediation Project. Dunn's Nook 99% Habitat Compensation Design. March 28, 2013.
- Map No. 3419. "Esquimalt Harbour". June 27, 2003. The Canadian Hydrographic Service.
- 2011 Ortho Photograph From CRD Atlas.

NOTES

- Locations of utilities are approximate only and it is the Contractor's responsibility to determine the presence and location of utilities and obtain any necessary clearances and permits prior to construction.
- Vehicle access across Wilfert Road is to be maintained for other users of the Colwood property at all times during construction and the Contractor is required to employ suitable traffic management measures to safely undertake and co-ordinate the Works.
- Information regarding site conditions provided in data reports appended to specifications.

LEGEND

High Water Mark	Overhead Powerline/Power Cable	Water Valve
Fence	Storm Drain	Power Pole
Culvert	Water Main	Catch Basin
Gas Line	Borehole Location	



5		
4		
3		
2		
1	100% Submission	13/05/01
0	99% Submission	13/03/25

Revision/ Revision	Description/Description	Date/Date
A	detail number numéro de détail	A
B	source drawing no. de dessin no.	B
C	detail on drawing no. détail sur dessin no.	C

Client/client

PUBLIC WORKS AND
GOVERNMENT SERVICES CANADA

Project title/Titre du projet

COMPENSATORY FISH
HABITAT CONSTRUCTION
DUNN'S NOOK
COLWOOD, BC
PROJECT # R.018400.001

Consultant Signature Only

Designed by/Concept par
Mark A. Adams

Drawn by/Dessiné par
Scott D. Jesse

PWGSC Project Manager/Administrateur de Projets TPSGC
Andrew Mylly

Regional Manager, Environmental Services
Gestionnaire régionale, Services environnementaux, TPSGC
Colin Kingman

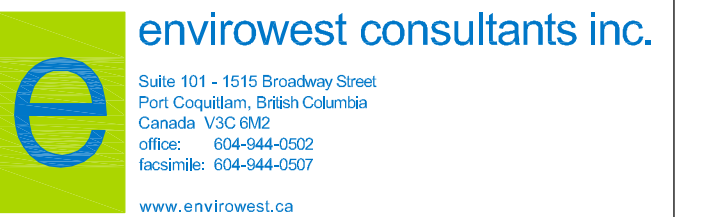
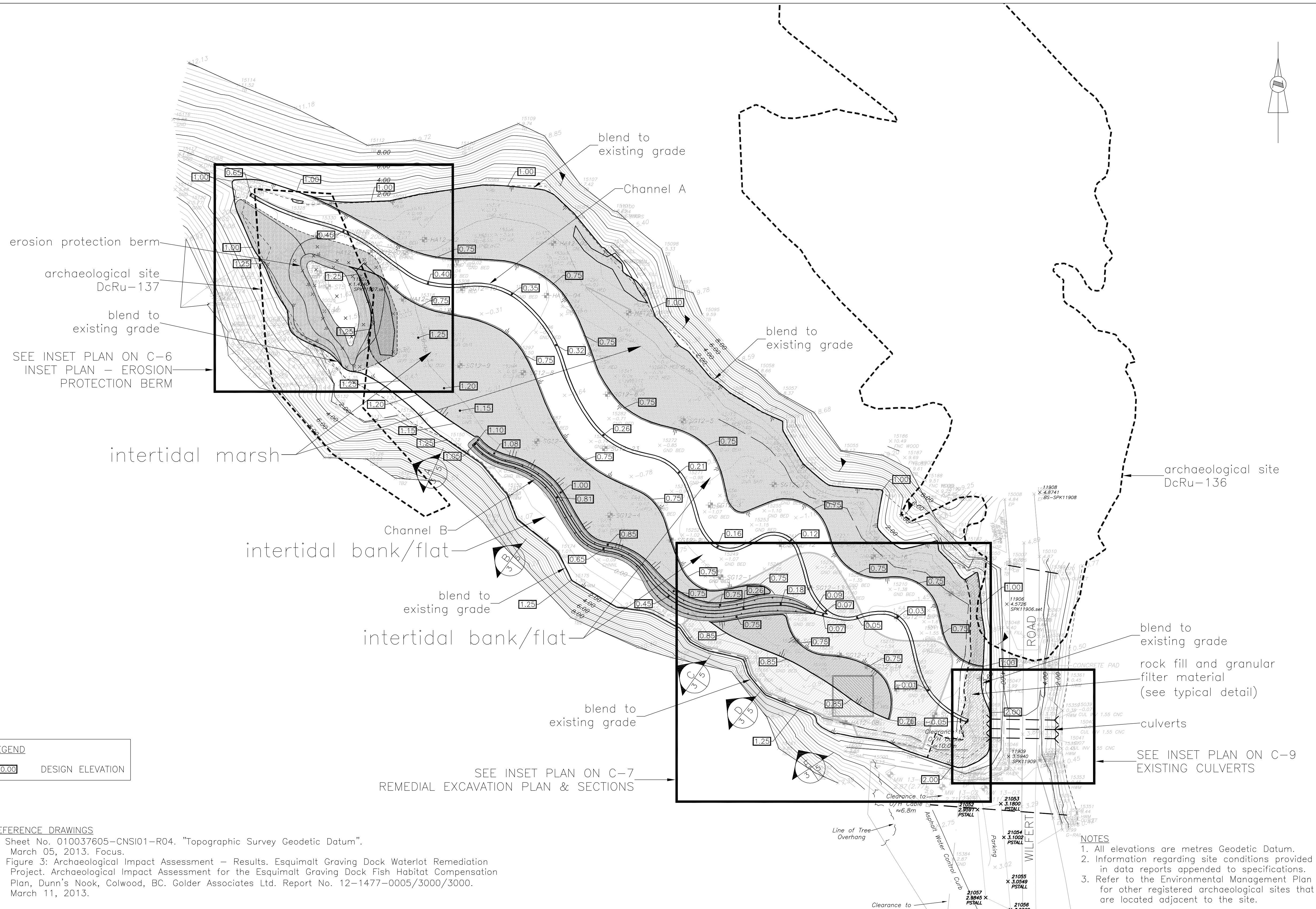
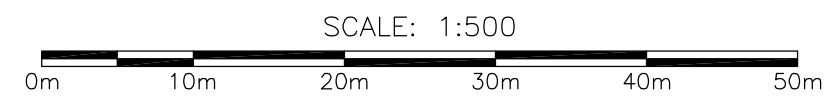
Drawing title/Titre du dessin

DUNN'S NOOK
HABITAT COMPENSATION
EXISTING SITE CONDITIONS

100% DESIGN

Project No./No. du projet	Sheet/Fauille	Revision no./ La Révision no.
492-12	C-2 OF 9	1

PLAN



5		
4	100% Submission	13/05/01
3	95% Submission	13/03/25
2	95% Submission	13/02/12
1	60% Submission	12/11/30
0	30% Submission	12/08/29

Revision/ Révision	Description/Description	Date/Date
A	A detail number numéro de détail	A
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HABITAT CONSTRUCTION
DUNN'S NOOK
COLWOOD, BC
PROJECT # R.018400.001**

Consultant Signature/Only

Designed by/Concept par
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Drawn by/Dessiné par
Scott D. Jesse

PWGSC Project Manager/Administrateur de Projets TPSGC
Andrew Mylly

Regional Manager, Environmental Services
Gestionnaire régionale, Services environnementaux, TPSGC
Colin Kingman

Drawing title/Titre du dessin

**DUNN'S NOOK
HABITAT COMPENSATION
FILL AND HABITAT PLAN**

100% DESIGN

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
492-12	C-3 OF 9	4



5		
4	100% Submission	13/05/01
3	99% Submission	13/03/25
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1	60% Submission	12/11/30
0	30% Submission	12/08/29

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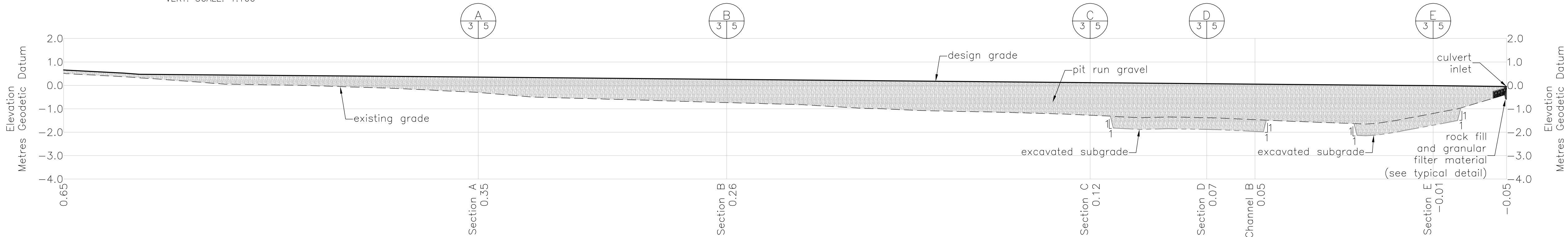
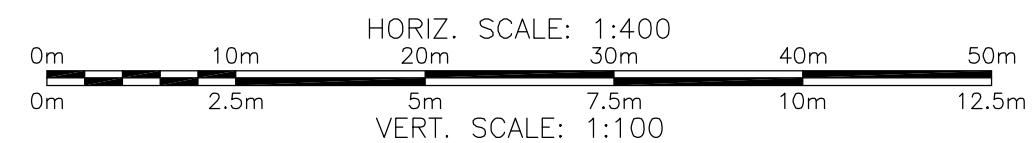
Regional Manager, Environmental Services
Gestionnaire régionale, Services environnementaux, TPSGC
Collin Kingman

Drawing title/Titre du dessin

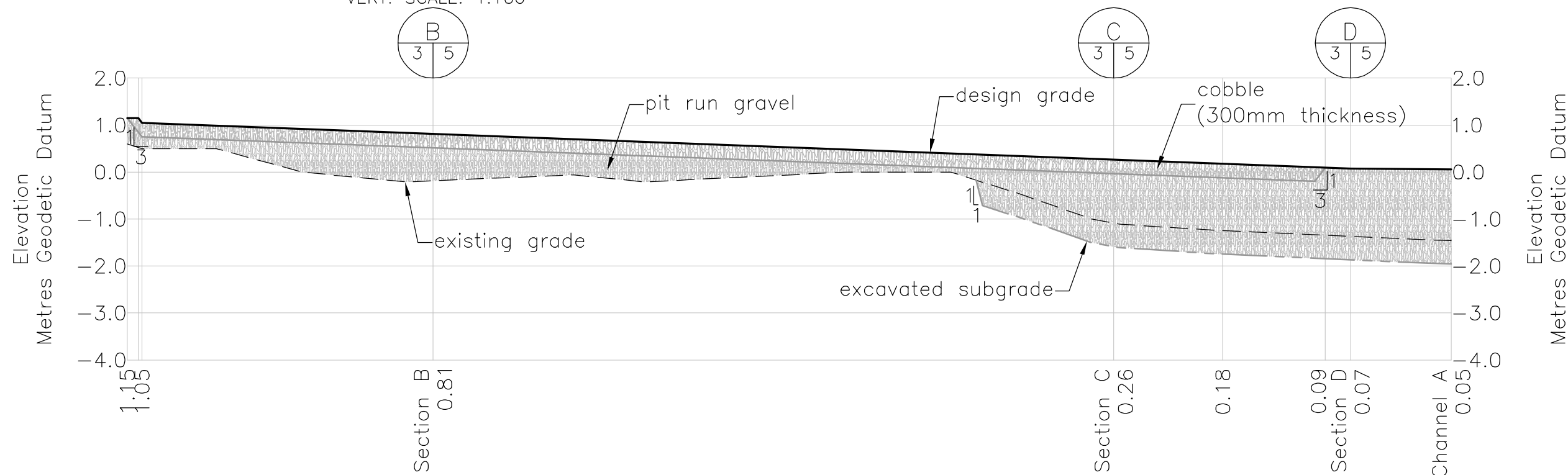
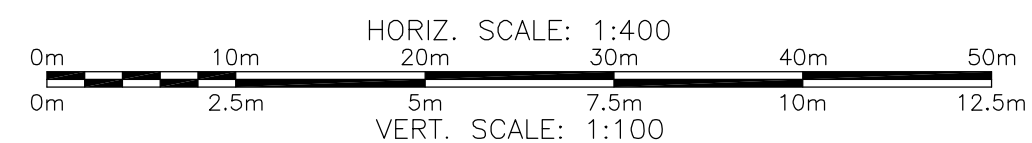
DUNN'S NOOK
HABITAT COMPENSATION
PROFILES & AGGREGATES/GRANULAR
MATERIALS SPECIFICATIONS
100% DESIGN

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
492-12	C-4 OF 9	4

CHANNEL A — PROFILE



CHANNEL B — PROFILE



ROCK FILL

- Rock Fill is to be from an approved source and is to be a well graded quarried rock, hard and durable, and free of any soil or debris, as per specification 31 23 23.
 - The specific gravity (bulk saturated-surface-dry-basis, ASTM C127) is to be at least 2.60.
 - Rock Fill is to conform to the following gradation that is to produce a smooth curve without sharp breaks when plotted within the defined limits.
- | Sieve Designation | Rock Fill | Percent Passing |
|-------------------|-----------|-----------------|
| 150mm | | 100 |
| 100mm | | 85-100 |
| 19mm | | 35-50 |
| 4.75mm | | 0-15 |
| 2.00mm | | <5 |
- Neither the breadth nor the thickness of any single piece of material larger than 100mm nominal size is to be less than one-third of its length. A maximum of 2.0 percent by weight of such pieces will be permitted.
 - Rock Fill is to be maintained free of contamination with other materials throughout the construction process.
 - Rock Fill is to be placed and compacted within the interstices of large rock to the plane of the existing slope. Machine compaction is to be conducted using the back side of the bucket of an excavator until resistance of rock fill is achieved.

SAND

- Sand is to be from an approved source and is to be graded round material, hard and durable, and free of any foreign soil or debris, as per specification 31 23 23.
 - Sand is to conform to the following gradation that is to produce a smooth curve without sharp breaks when plotted within the defined limits.
- | Sieve Designation | Sand | Percent Passing |
|-------------------|------|-----------------|
| 2.00mm | | 90-100 |
| 0.30mm | | 60-80 |
| 0.15mm | | 30-50 |
| 0.075mm | | 10-20 |
- Sand is to be maintained free of contamination with other materials throughout the construction process.
 - Machine compaction of Sand is to be conducted by tamping (2 tamps) lift of Sand with the back-side of a cleanout bucket of a tracked excavator.
 - Finished surfaces of Sand are to be within +/-25mm of the design grade measured normal to finished grade, but not uniformly high or low.

PIT RUN GRAVEL

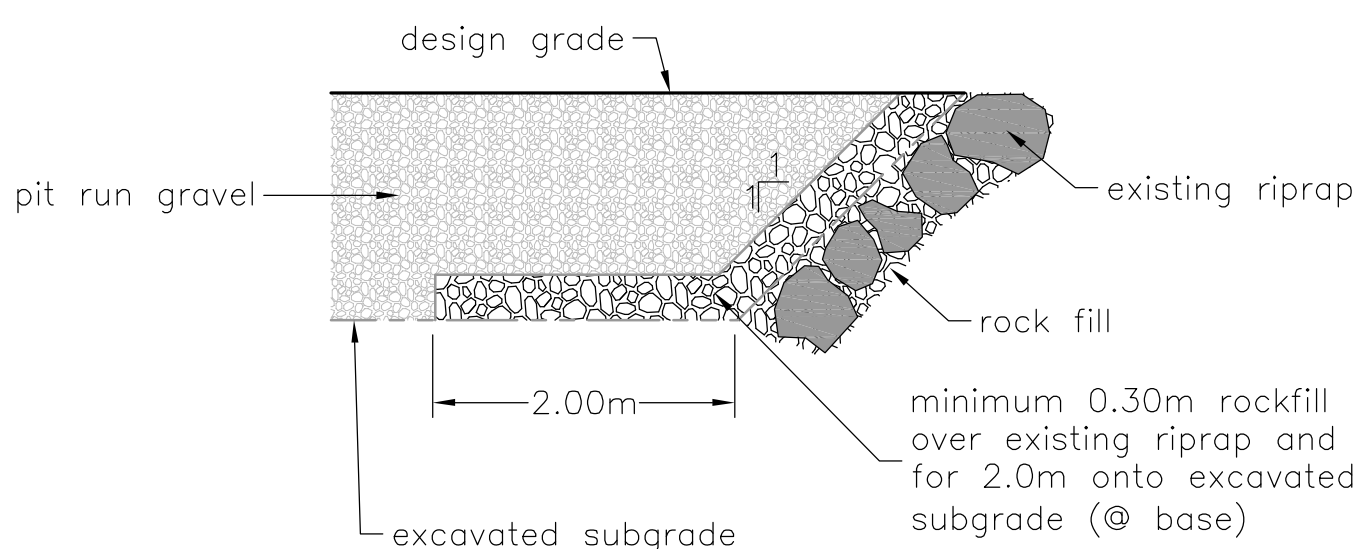
- Pit Run Gravel is to be from an approved source and is to be graded round material, hard and durable, and free of any foreign soil or debris, as per specification 31 23 23.
 - Pit Run Gravel is to conform to the following gradation that is to produce a smooth curve without sharp breaks when plotted within the defined limits.
- | Sieve Designation | Pit Run Gravel | Percent Passing |
|-------------------|----------------|-----------------|
| 75mm | | 70-90 |
| 50mm | | 50-70 |
| 25mm | | 30-50 |
| 4.75mm | | 20-40 |
| 2.36mm | | 10-30 |
| 0.075mm | | 2-8 |
- Pit Run Gravel is to be maintained free of contamination with other materials throughout the construction process.
 - Pit Run Gravel is to be placed and compacted in continuous horizontal lifts not exceeding 300mm loose depth. Machine compaction of each lift is to be conducted by passing over material with a tracked machine for 4 consecutive passes over the entire lift of material.
 - Finished surfaces of Pit Run Gravel are to be within +/-50mm of the design grade measured normal to finished grade, but not uniformly high or low.

COBBLE

- Cobble is to be from an approved source and is to be graded round material, hard and durable, and free of any foreign soil or debris, as per specification 31 23 23.
 - Cobble is to conform to the following gradation that is to produce a smooth curve without sharp breaks when plotted within the defined limits.
- | Sieve Designation | Cobble | Percent Passing |
|-------------------|--------|-----------------|
| 300mm | | 100 |
| 150mm | | 35-50 |
| 75mm | | <5 |
- Cobble is to be maintained free of contamination with other materials throughout the construction process.
 - Finished surfaces of Cobble are to be within +/-50mm of the design grade measured normal to finished grade, but not uniformly high or low.

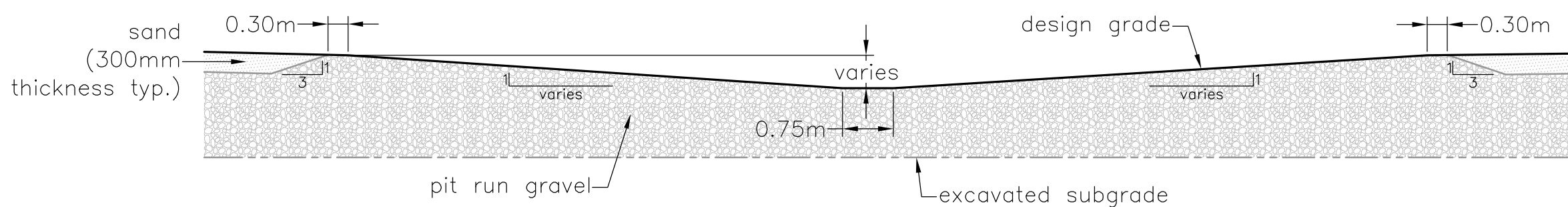
ROCK FILL AND GRANULAR FILTER MATERIAL — TYPICAL DETAIL

N.T.S.



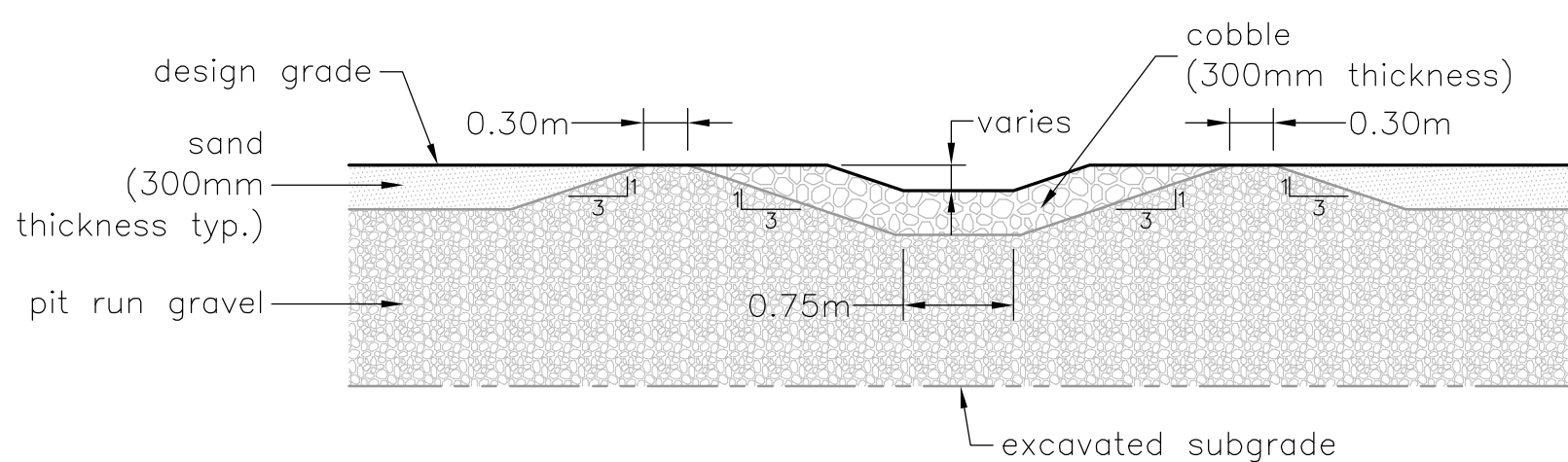
CHANNEL A — TYPICAL SECTION

N.T.S.





CHANNEL B — TYPICAL SECTION

N.T.S.





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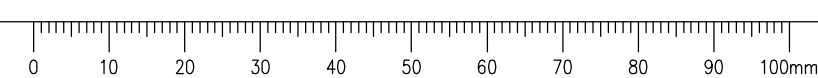
**PUBLIC WORKS AND
GOVERNMENT SERVICES CANADA**

**COMPENSATORY FISH
HABITAT CONSTRUCTION
DUNN'S NOOK
COLWOOD, BC
PROJECT # R.018400.001**

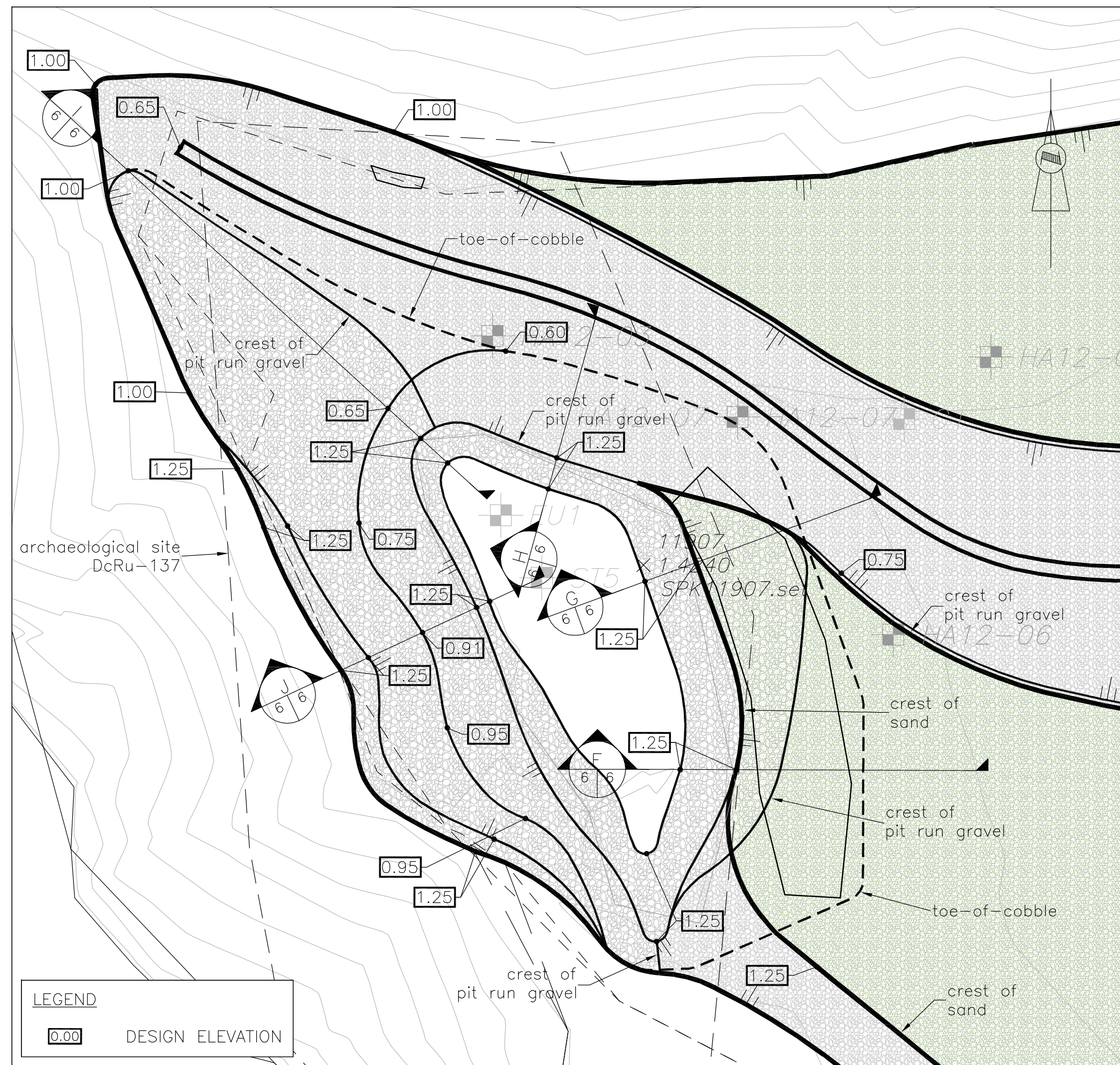
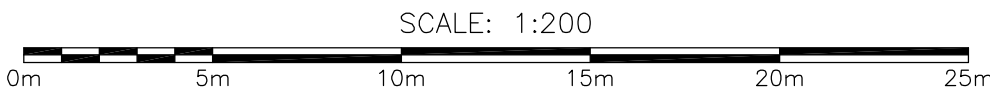
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100% DESIGN

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492-12	C-5	4
	OF 9	



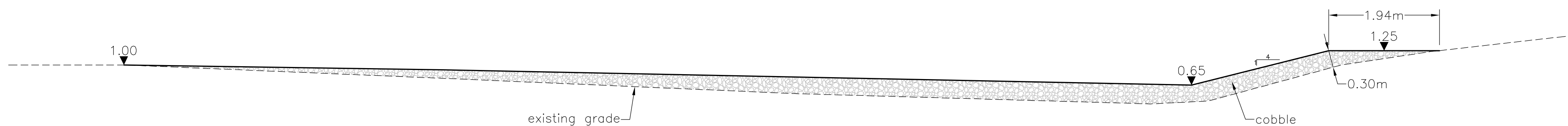
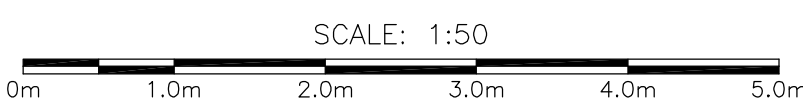
INSET PLAN



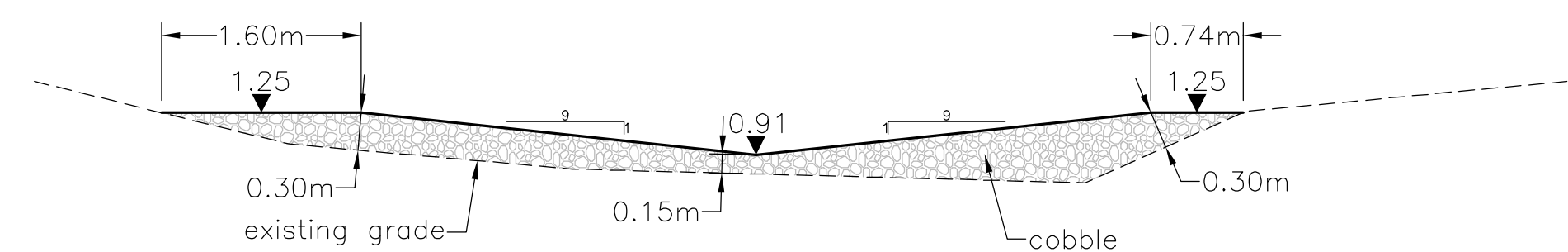
REFERENCE DRAWINGS

- Sheet No. 010037605-CNSI01-R04. "Topographic Survey Geodetic Datum". March 05, 2013. Focus.
- Figure 3: Archaeological Impact Assessment - Results. Esquimalt Graving Dock Waterlot Remediation Project. Archaeological Impact Assessment for the Esquimalt Graving Dock Fish Habitat Compensation Plan, Dunn's Nook, Colwood, BC. Golder Associates Ltd. Report No. 12-1477-0005/3000/3000. March 11, 2013.

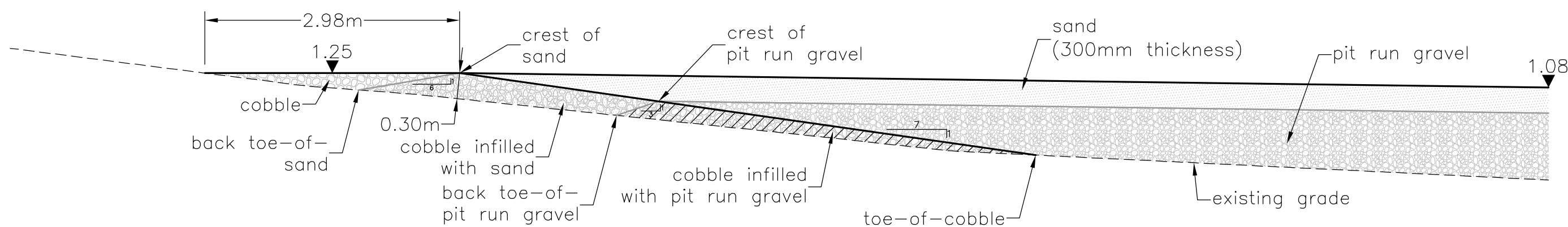
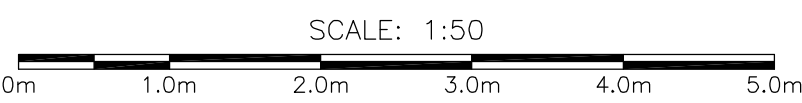
SECTION I



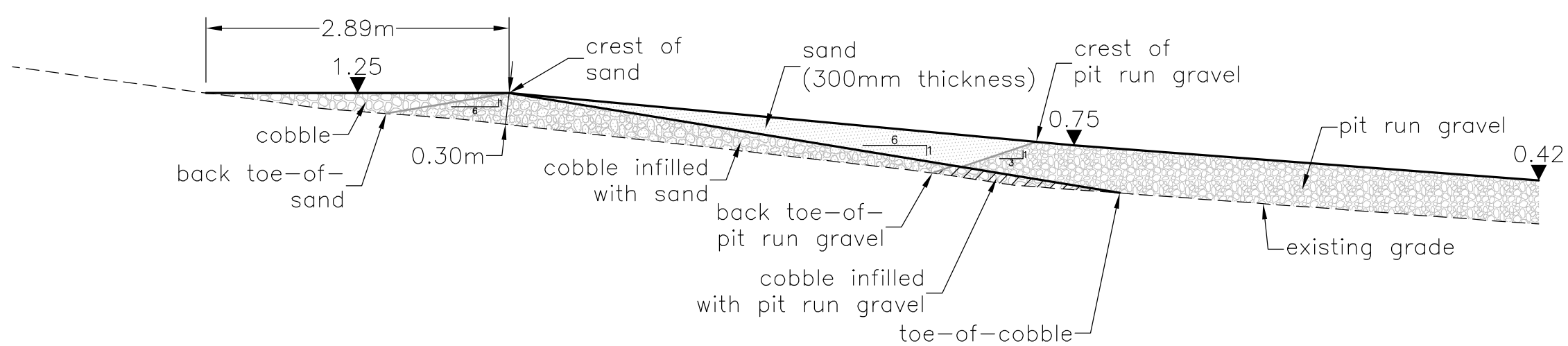
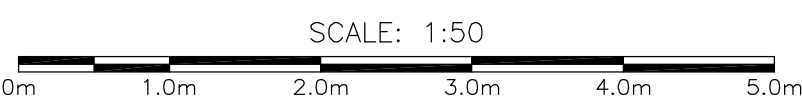
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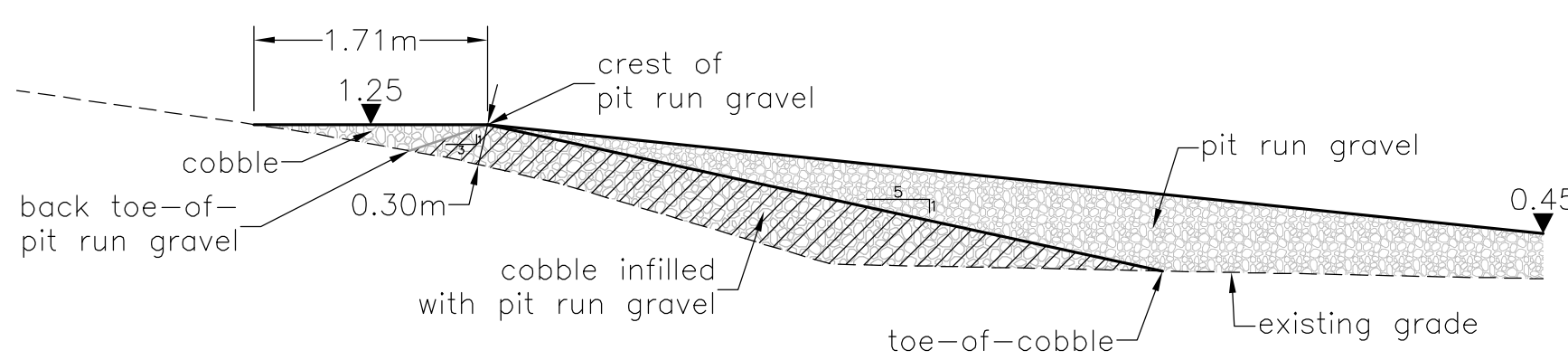
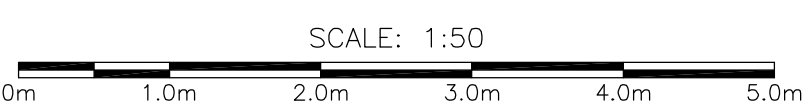
SECTION F



SECTION G



SECTION H



NOTES

- All elevations are metres Geodetic Datum.
- Information regarding site conditions provided in data reports appended to specifications.
- Refer to the Environmental Management Plan for other registered archaeological sites that are located adjacent to the site.

5		
4		
3		
2	100% Submission	13/05/01
1	95% Submission	13/03/25
0	95% Submission	13/02/12
Revision/	Description/Description	Date/Date

A	A detail number	A
B	source drawing no.	B
C	detail on drawing no.	C

Client/client

PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

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**COMPENSATORY FISH HABITAT CONSTRUCTION
DUNN'S NOOK
COLWOOD, BC
PROJECT # R.018400.001**

Consultant Signature Only

Designed by/Concept par
Mark A. Adams

Drawn by/Dessiné par
Scott D. Jesse

PWGSC Project Manager/Administrateur de Projets TPSGC
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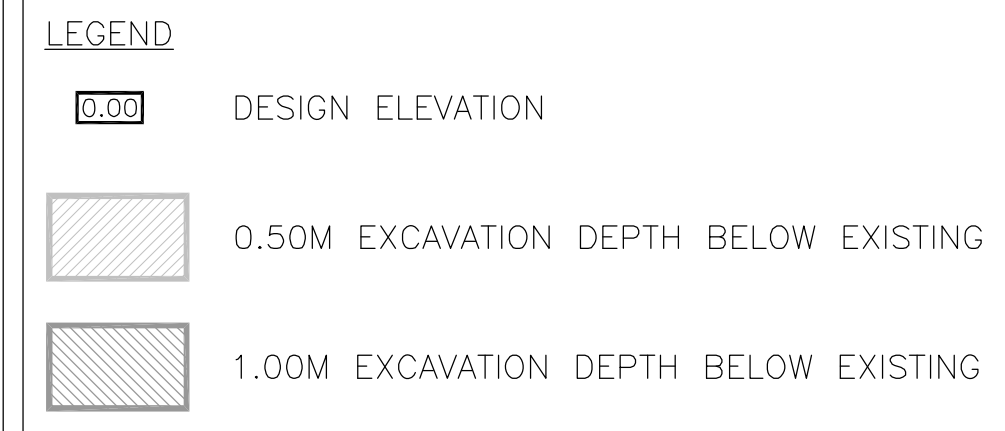
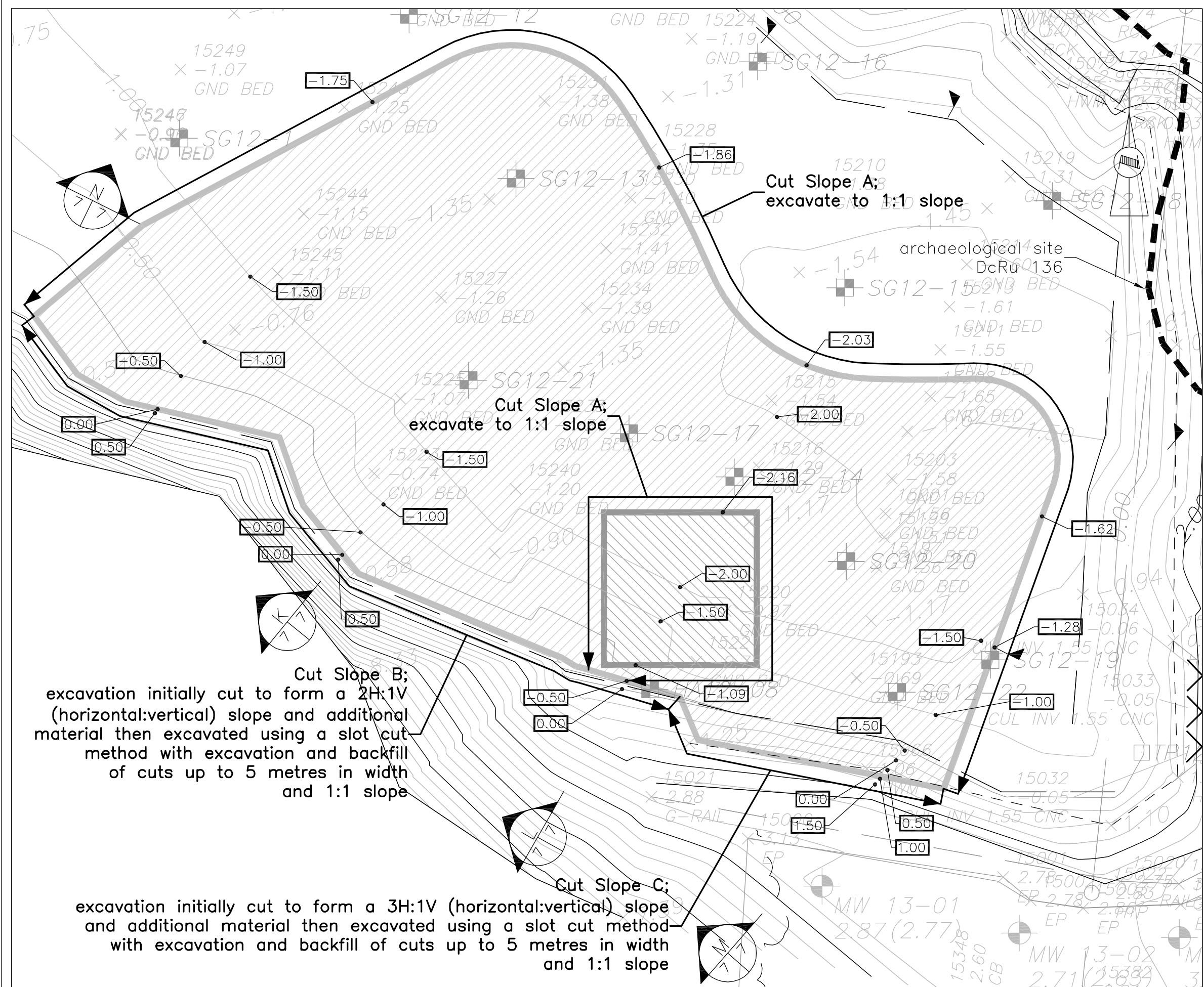
Drawing title/Titre du dessin

**DUNN'S NOOK
HABITAT COMPENSATION
INSET PLAN - EROSION PROTECTION BERM**

100% DESIGN

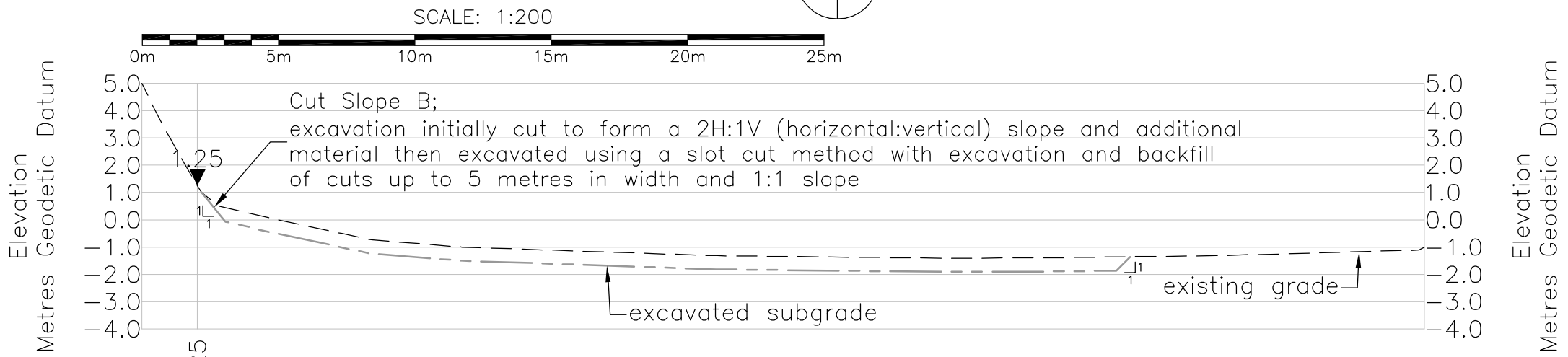
Project No./No. du projet 492-12	Sheet/Fauille C-6 OF 9	Revision no./La Révision no. 2
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INSET PLAN

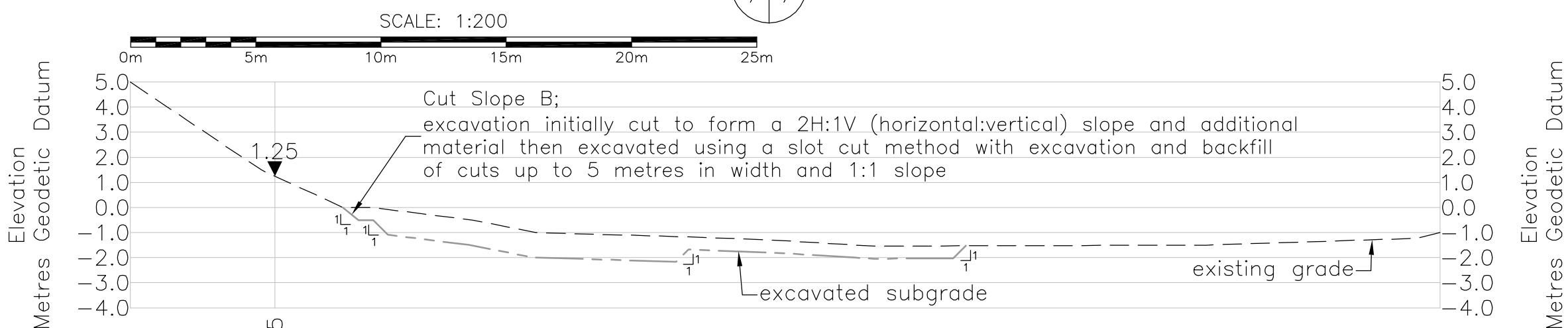


- REFERENCE DRAWINGS**
1. Sheet No. 010037605-CNSI01-R04. "Topographic Survey Geodetic Datum". March 05, 2013. Focus.
 2. Figure 3: Archaeological Impact Assessment – Results. Esquimalt Graving Dock Waterlot Remediation Project. Archaeological Impact Assessment for the Esquimalt Graving Dock Fish Habitat Compensation Plan, Dunn's Nook, Colwood, BC. Golder Associates Ltd. Report No. 12-1477-0005/3000/3000. March 11, 2013.
 3. Figure 3: Remedial Excavation Based on Site-Specific Assessment. EGD Waterlot Remediation Project Phase 1C: Dunn's Nook Habitat Compensation – Summary of Risk Management/Remedial Options for Contaminated Sediments. Golder Associates Ltd. Project No. 11-1436-0061/24000; Task/Submission No. 24002_001. February 22, 2013.

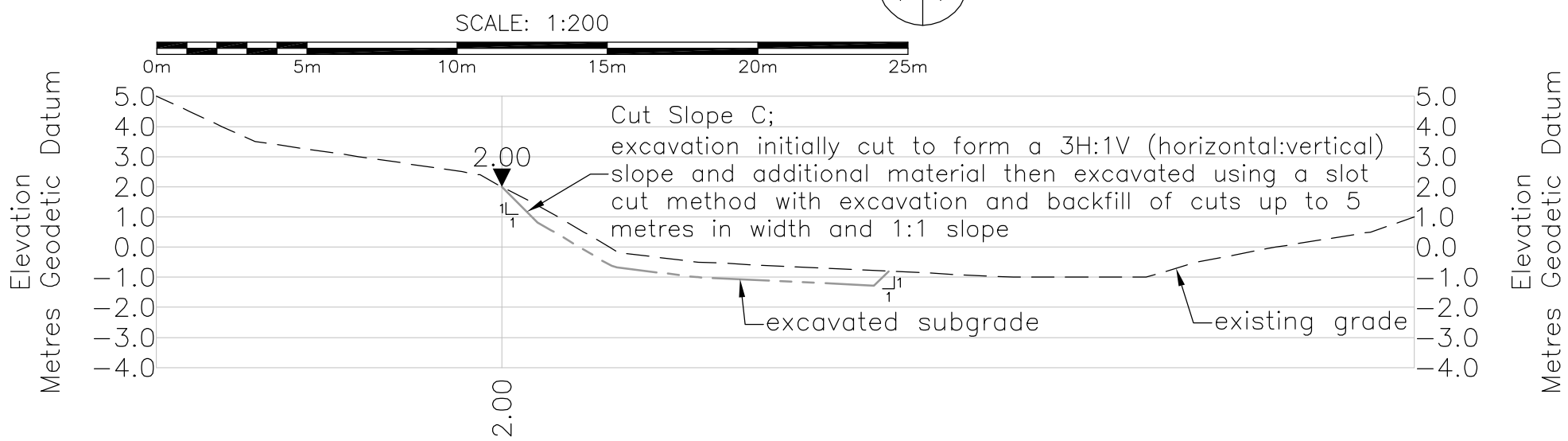
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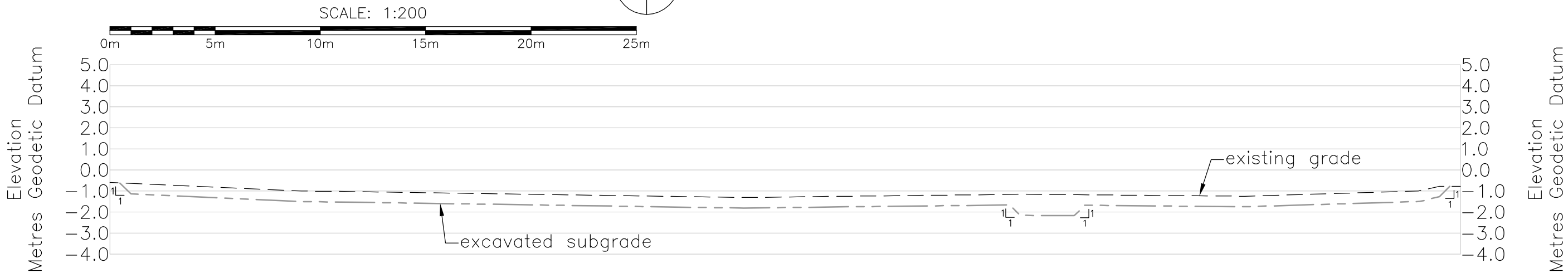
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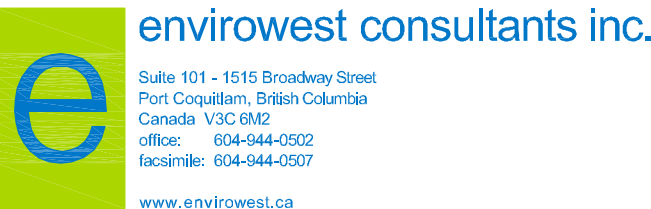
SECTION M



SECTION N



- NOTES**
1. All elevations are metres Geodetic Datum.
 2. Information regarding site conditions provided in data reports appended to specifications.



5		
4		
3	100% Submission	13/05/01
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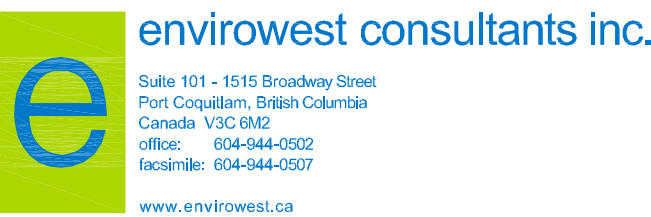
PWGSC Project Manager/Administrateur de Projets TPSGC
Andrew Mylly

Regional Manager, Environmental Services
Gestionnaire régionale, Services environnementaux, TPSGC
Colin Kingman

Drawing title/Titre du dessin

**DUNN'S NOOK
HABITAT COMPENSATION
REMEDIAL EXCAVATION PLAN & SECTIONS**

100% DESIGN		
Project No./No. du projet 492-12	Sheet/Feuille C-7 OF 9	Revision no./La Révision no. 3



5		
4		
3	100% Submission	13/05/01
2	99% Submission	13/03/05
1	95% Submission	13/02/12
0	60% Submission	12/11/30

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DUNN'S NOOK
HABITAT COMPENSATION
PLANTING PLAN

100% DESIGN

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
492-12	C-8 OF 9	3

PLAN

SCALE: 1:500
0m 10m 20m 30m 40m 50m

archaeological site
DcRu-137

archaeological site
DcRu-136

culverts

PLANT SPECIES LIST AND SPECIFICATIONS

SYMBOL	COMMON NAME	LATIN NAME	NUMBER	STOCK	PLANTING INSTRUCTIONS
	salt grass	<i>Distichlis spicata</i>	40593	77 415D plug; well established	0.35m centre-to-centre spacings

GENERAL LANDSCAPE SPECIFICATIONS

- Plant material and the planting of such material are to be in accordance with the British Columbia Landscape Standard (seventh edition) jointly published by the British Columbia Society of Landscape Architects and the British Columbia Landscape Nursery Association.
- All plant material is to be inspected and approved by the contract authority prior to installation.

REFERENCE DRAWINGS

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numero de detail

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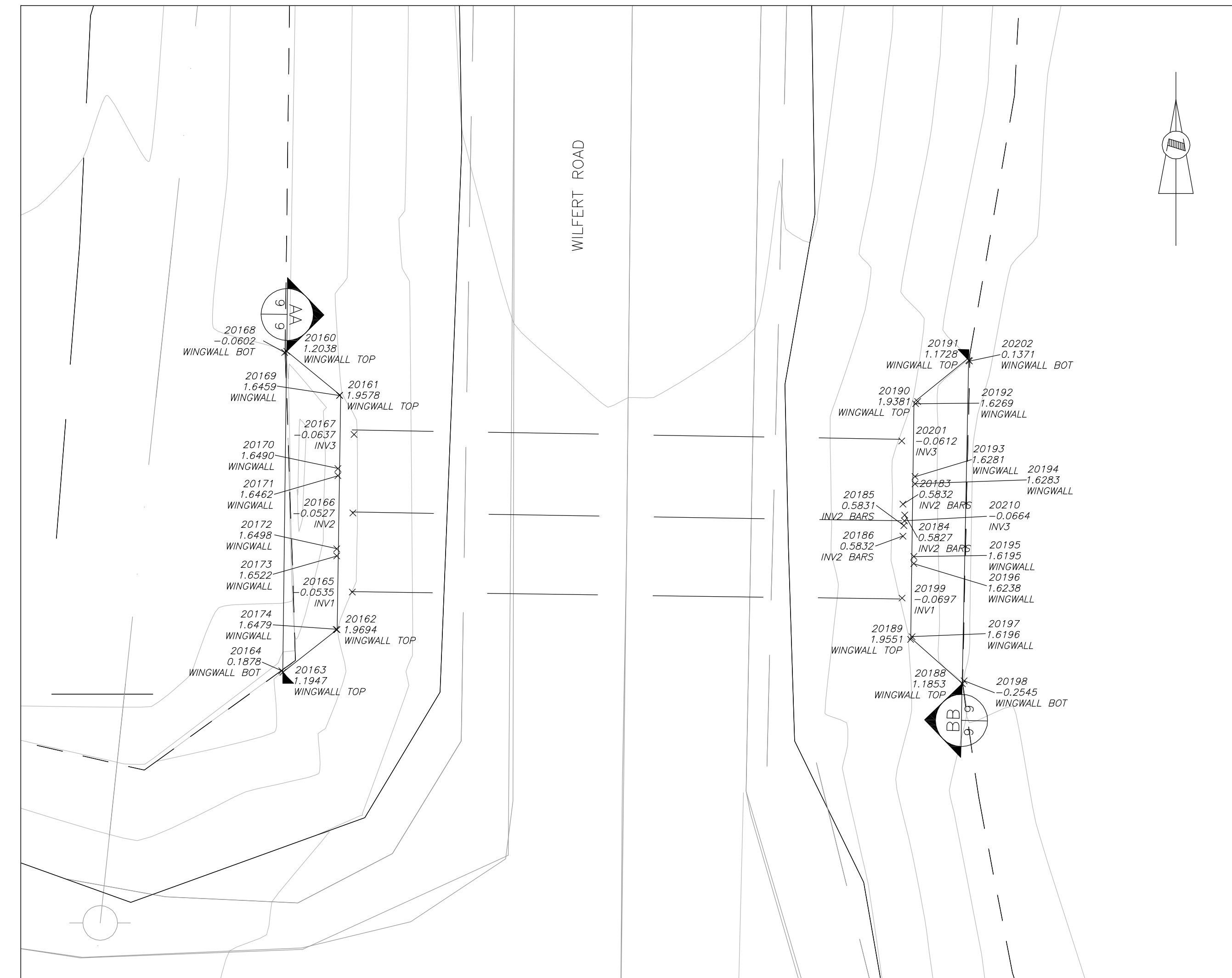
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492-12	C-9	1



Sheet No. 010037605-CNSI01-R04. "Topographic Survey Geodetic Datum".
March 05, 2013. Focus.

A photograph of a concrete bunker with three arched openings, each covered by a rusty metal grate. The structure is surrounded by a field of low-lying vegetation and rocks.

1. All elevations are metres Geodetic Datum.
2. Information regarding site conditions provided in data reports appended to specifications.