Box 100 | 7400 Prospect Street
Pemberton BC V0N 2L0
P: 604.894.6135 | F: 604.894.6136
Email: admin@pemberton.ca
Website: www.pemberton.ca

BOARD OF VARIANCE APPLICATION

Date of Application: June 30, 2021 VOP File Number: _____

APPLICANT INFORMATION:

Name: Coast Essential Construction Ltd Postal Address:

Phone: Reid Madiuk: 604-366-8116 Farhang Shahidi: 778-877-7150

Fax: _____ reid@coastessential.com

Cel: As above Email: farhang@coastessential.com

REGISTERED OWNER INFORMATION:

Name: 1283735 BC LTD Postal Address:

Phone: 1-416-846-2912 40543 Thunderbird Ridge

Fax: _____ Squamish, BC V8B 0G1

Cel: As above Email: sunshineprincess11@gmail.com

PROPERTY INFORMATION:

Civic Address: Legal Description: PID: 030-333-326, Lot 6, DL 211, EPS4695

7508 Pebble Creek Drive Zoning Designation: RSA-2

Pemberton, BC Section in Bylaw to be varied: _____

_____ 4.13 (a) viii. & 7.21 (a) i.

DESCRIPTION OF VARIANCE REQUESTED:

To vary Section 4.13 (a) viii. & Section 7.21 (a) i. to allow for wall heights greater than 1.2 m

to a maximum of 1.86 m see Site Plan A-01.2 & Site Section A01.4 2021-06-17

APPLICATION CHECKLIST:

Certificate of Title	☑ Yes	☐ No		Site Plan	☑ Yes	☐ No	☐ N/A
Application Fee	☑ Yes	☐ No		Property Within Agricultural Land Reserve	☐ Yes	☑ No	☐ N/A
Authorization Form	☑ Yes	☐ No	☐ N/A	Property Subject to Riparian Area Regulations	☐ Yes	☑ No	☐ N/A
Rationale for Variance	☑ Yes	☐ No	☐ N/A	Property Adjacent to Residential Properties	☑ Yes	☐ No	☐ N/A

I, Farhang Shahidi Coast Essential Construction Ltd hereby allow for the purposes of this application, any
(Applicant's name)

member(s) of the Board of Variance to view the property of the proposed variance upon request.

S.F.Shahidi
Signature

For Office Use Only

Roll No.: _____ Prospero No.: _____

Related Files: _____ Fee Submitted: $ _____ Receipt No.: _____

1 – 38920 Queens Way
Squamish, BC V8B 0K8
604-898-1093

Coast Essential Construction Ltd.
200 – 100 Park Royal
West Vancouver, BC
V7T 1A2

March 5, 2021
File: 1547

Attention: Mr. Reid Madiuk

Re: Preliminary Geotechnical Report, Proposed New Home, Lot 6, The Ridge, Pemberton, BC

1.0 INTRODUCTION

It is proposed to construct a new home on Lot 6 of The Ridge subdivision in Pemberton. The lot has legal description: Strata Lot 6 District Lot 211 Lillooet District Strata Plan EPS4695. SFA Geotechnical Inc. (SFA) has been engaged to provide geotechnical recommendations for the project.

The concept of the new home is in its preliminary stages, however, we understand that it is likely that the home is designed as a carriage home as the owners are developing the neighbouring lot to the east (Lot 7) with a new home. The home is to be constructed over reinforced concrete foundations with concrete foundation walls and wood frame construction above.

We understand that several retaining walls are to be included in the final design of the property and that the retaining walls may tie into the retaining walls proposed for Lot 7.

This report presents the results from our site visit completed on February 24, 2021 and provides preliminary geotechnical recommendations for the proposed home. Additional geotechnical recommendations may be required for the home and retaining walls once the project scope has been finalized.

This report has been prepared exclusively for our client, for their use, and the use of others on their design team, however, it remains the property of SFA Geotechnical Inc.

2.0 SITE DESCRIPTION

The lot is the 6th lot on the south side of the road accessing the subdivision. The property is bound to the north by the subdivision access road, to the south by a right of way, and to the east and west by undeveloped lots. The lot is undeveloped and generally slopes down to the south southwest.

The lot was filled simultaneously with Lot 7 to create a level bench of fill which extends across both lots. The intention of the fill placement was to create a level building surface on both properties. The fill was not placed under the supervision of an engineer of qualified professional.

3.0 FIELD INVESTIGATION

SFA visited the site on February 24, 2021 to for preliminary review. Four shallow test pits were completed at the neighbouring lot to help characterize the native subgrade, determine past site preparation efforts and

placement schedule of the in-situ fill.

4.0 SUBSURFACE CONDITIONS

4.1 Soil Conditions

Based on the test pits completed on the neighbouring lot and the native ground topography, the soil profile from the surface downwards is anticipated to consist of sand and gravel fill over topsoil, underlain by topsoil and weathered glacial till and in turn dense glacial till. The soil profile on the neighbouring lot is described as below:

Fill (Dredged River Sand and Gravel)

The dredged river sand and gravel is generally clean and well graded between medium grained sand and medium grained gravel. The particles are rounded and loosely packed. The fill is at least 3.5 m thick at the crest of the fill slope.

Topsoil

The fill is underlain by approximately 0.3 m to 0.45 m of organic topsoil. The topsoil contains roots up to 2 cm thick and is dark brown to black.

Glacial Till

The fill is underlain by glacial till which comprises poorly graded silty sand and gravel. The upper 0.5 m of the glacial till is weathered and loose. The glacial till becomes dense at approximately 1 m below the pre-filling ground surface where it grades from tan to grey in colour.

For a more detailed description of the subsurface conditions refer to the test hole logs in Appendix A.

4.2 Groundwater Conditions

Perched ground water was observed within the glacial till. Based on surrounding grades it is likely that perched water is present within this stratum during wetter months and following snow melt. The perched water flow into the test pits was minor.

5.0 DISCUSSION

5.1 General Comments

SFA visited the site on February 24, 2021 to review four shallow test pits on the neighbouring lot. The test pits indicate that the subgrade was not stripped of organics and that the fill appeared to be bulked into the site with no form of formal compaction.

A portion of the fill slope has failed, and the toe of the debris is downslope to the southwest. The scarp and adjacent slope are over steepened, and tension cracks exist up to 2 m back from the slope crest. The fill is not considered to be stable.

Provided the geotechnical consideration above are addressed as described below, we are of the opinion that the project is feasible from a geotechnical standpoint.

5.2 Site Grading Fill

The recently placed site grading fill is loose and was placed over organics. We understand that a project goal is to keep as much of the fill on site as possible. Therefore, it will be required to move the fill around the lot during the stripping of organics and construction of the home.

The fill slopes are not stable. Tension cracks indicate that the slope is moving, and failure could occur if the fill becomes saturated. If the face of the fill slope were to slide, the toe of the debris could extend beyond the property lines. We recommend that temporary fill slopes be reduced to 2.5H:1V to reduce the risk of slope failure.

Retaining walls will likely be required to achieved desired site grades and to accommodate the re-use of the fill which has been placed on the site. We estimate that the retaining walls will exceed 1.2 m in height and therefore will need to be engineered and a variance will be required from the Village of Pemberton in advance of their construction. Retaining walls will likely be constructed continuously with the retaining walls for Lot 7.

If it is decided that engineered retaining walls are required SFA would be able to provide retaining wall design and drawings once final site grading is known.

6.0 DESIGN RECOMMENDATIONS

6.1 SITE PREPARATION

6.1.1 Stripping

Site stripping should be completed beneath foundations, retaining walls, pavement sections, and hard landscaping. Site stripping includes removal of any recently placed fill, organics, topsoil, weathered glacial till, and any other material considered to compromise the design recommendations stated herein to expose the underlying dense glacial till. We recommend that all foundations be lowered, if necessary, so that they are supported on a level subgrade of native silty sand and gravel glacial till.

SFA should be contacted to review stripped subgrade prior to placement of formwork.

The recently placed sand and gravel fill appears suitable for re-use as structural backfill which could be placed and compacted beneath grade supported slabs and for general backfill around the buildings.
During stripping the sand and gravel fill should be carefully separated from the underlying topsoil and weathered glacial till.

6.1.2 Engineered Fill

Any grade reinstatement beneath foundations, grade supported slabs, or pavement sections should be completed with “engineered fill”. In the context of this report any “engineered fill” is defined as clean sand to sand and gravel fill, containing less than 8% fines, compacted in lifts to a minimum standard of 95% of its Modified Proctor Maximum Dry Density (ASTM D698) while at a moisture content that is within 2% of its optimum for compaction.

All fill materials should be placed and compacted under the review of SFA.

6.1.3 Excavations

We anticipate that the excavation could be up to one and a half levels on the northeast side, decreasing in depth towards the southwest. The final excavation cut height should be determined once a site survey and proposed foundation grades are available.

Much of the excavation will likely be in dense glacial till. It is assumed that excavations would be sloped.

All excavations and trenching must conform to WorkSafeBC requirements or a professional engineer must review any excavations exceeding 1.2 m in depth prior to worker entry.

6.2 Foundations

6.2.1 Spread Foundations

It is expected that foundations will be supported on the native subgrade soils of glacial till. Following the recommended site preparation, the subgrade soils are considered suitable to support conventional spread foundations at a serviceability limit state (SLS) bearing pressure of up to 175 kPa and a factored ultimate limit state (ULS) of 350 kPa.

All foundation subgrades must be reviewed by SFA prior to foundation construction.

6.2.2 Settlement of Foundations

Post construction settlements are estimated to be less than 25 mm with differential settlements of less than 1 in 300.

6.2.3 Seismic Design of Foundations

We expect the subgrade conditions underlying the site to be classified as Site Class C as defined in Table 4.1.8.4A of the 2018 British Columbia Building Code (2018 BCBC).

The subsurface soils beyond the depth of foundations are **not** considered prone to ground liquefaction or other forms of ground softening caused by earthquake induced ground motions.

6.2.4 Frost Protection

All foundations should be located a minimum of 0.6 m below site grades for frost protection.

6.3 Concrete Slabs on Grade

All grade supported concrete slabs, should be underlain by a minimum of 150 mm of 19 mm clear crushed gravel, to help prevent moisture from accumulating below the slab, placed over compacted “engineered fill” as described in this report. The gravel should be compacted in place. We recommend that a poly moisture barrier be placed overlying the gravel beneath the grade supported slabs to help reduce moisture within the concrete.

6.4 Foundation Drainage

We recommend that the building design include a conventional perimeter drainage system to help intercept and water at foundation-level and to ensure that groundwater does not accumulate below the floor slabs or

adjacent to foundation walls. The under-slab fill should have a hydraulic connection to the perimeter drain to help ensure water does not build up below the slab or adjacent to foundation walls. This can be achieved with weep holes or by placing gravel below foundations.

6.5 Backfill

Backfill adjacent to the foundations should be completed with free draining material such as clean sand and gravel or crushed rock fill containing less than 5% fines. The backfill should be compacted in lifts. In areas where the backfill will support hard landscaping or pavement areas the material should be compacted to a minimum of 95% of its Modified Proctor Maximum Dry Density while at a moisture content that is within 2% of its optimum for compaction.

6.6 Earth Pressures on Buried Walls

We recommend that buried walls be designed for static and seismic earth pressures. We recommend that the wall be designed for a static pressure distribution of 5.0H (kPa) triangular, where H is the height of the restrained soil in metres. Dynamic loading induced by the design earthquake should be added to the static loads and should be taken as 1.7H (kPa) inverted triangular. The preceding loading recommendations assume that the backfill is a clean, free draining sand and gravel, the backfill is level behind the wall, and the wall is frictionless.

Our calculations assume that a back-of-wall drainage system will be installed to prevent the build up of any water pressure behind the walls. All earth pressures provided herein are based on unfactored soil parameters and are therefore unfactored loads.

6.0 FIELD REVIEWS

As is normally required for municipal Letters of Assurance, SFA Geotechnical Inc. will carry out sufficient field reviews during construction to ensure that the geotechnical design recommendations contained within this report have been adequately communicated to the design team and to the contractors implementing the design. These field reviews are not carried out for the benefit of the contractors and therefore do not in any way effect the contractors' obligations to perform under the terms of his/her contract.

It is the contractors' responsibility to advise SFA Geotechnical Inc. (a minimum of 24 hours in advance) that a field review is required. Geotechnical field reviews are normally required at the time of the following:

1. Site Stripping	Review of excavation and stripped subgrade
2. Subgrade	Review of foundation subgrade
3. Backfill / Frost Depth	Review of adequacy of backfill and frost protection
4. Slab-on-grade	Review of subgrade preparation for any grade supported concrete slabs

It is critical that these reviews are carried out to ensure that our intentions have been adequately communicated. It is also critical that contractors working on the site view this document in advance of any work being carried out so that they are familiar with the sensitive aspects of the project. It is the responsibility of the developer to notify SFA Geotechnical Inc. when conditions or situations not outlined within this document are encountered.

Additional field reviews will be required for the proposed retaining walls. Once site grading is available and retaining wall designs are complete the number of additional field reviews required can be estimated.

7.0 CLOSURE

This report is prepared solely for use by our client and their design team for this project as described to the general standards of similar work for similar projects in this area and no other warranty of any kind is expressed or implied. SFA Geotechnical Inc. accepts no responsibility for any other use of this report.

We are pleased to assist you with this project, and we trust this information is helpful and sufficient for your purposes at this time. However, please do not hesitate to call the undersigned if you should require any clarification or additional details.

For:
SFA Geotechnical Inc.

Jaret Bull, M.A.Sc.
Project Manager

Reviewed by: March 5 /2021

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
S. M. FOFONOFF
30836

Steven Fofonoff, M.Eng., P.Eng.
Principal

PREPARED FOR:
COAST ESSENTIAL CONSTRUCTION

7508 PEBBLE CREEK DRIVE (LOT 6)

RETAINING WALL DESIGN

PEMBERTON, BC

ISSUED FOR DISCUSSION

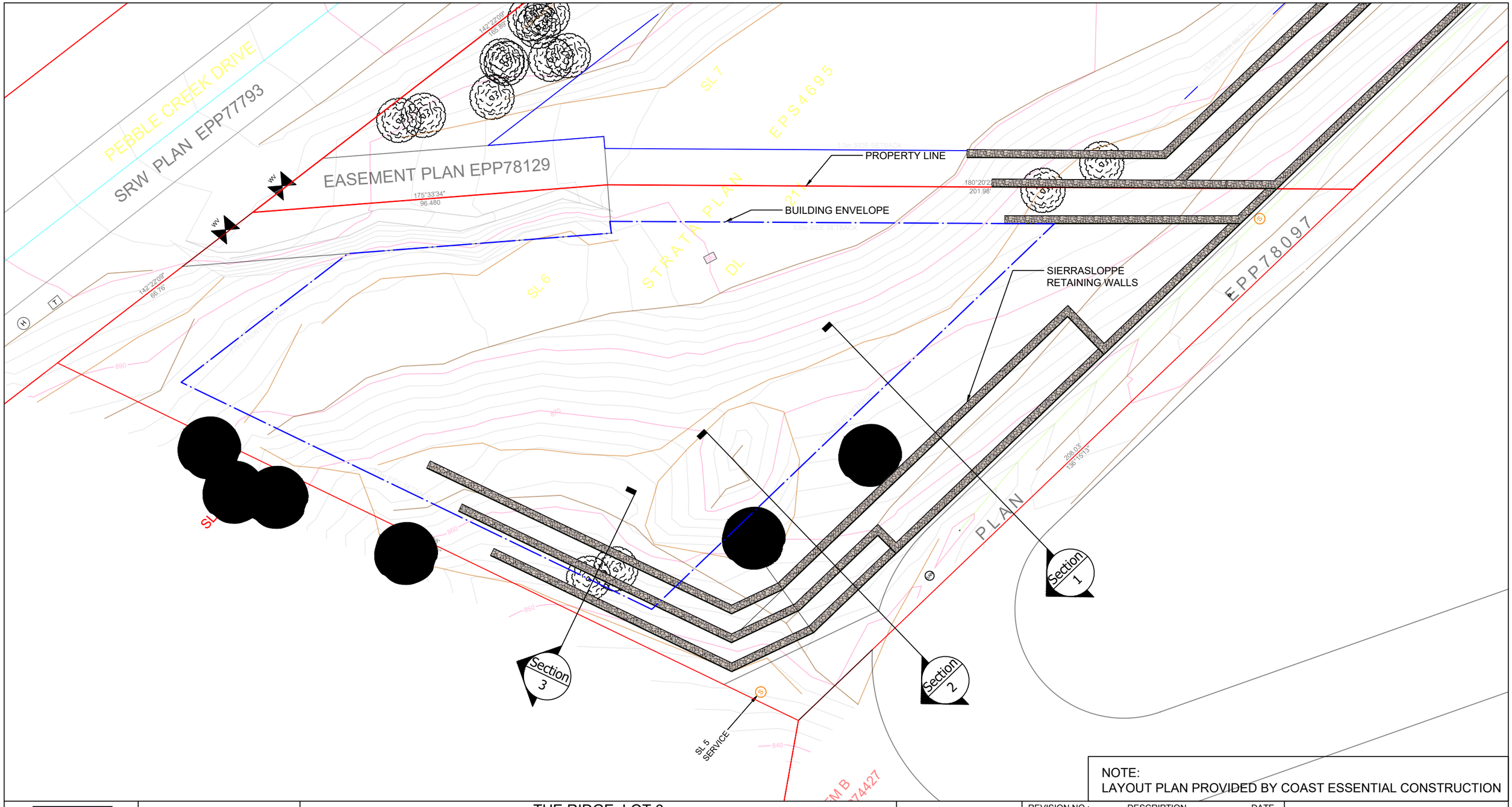
JOB NO: 1547

DRAWING NO: 1547-6-00

DATE: MAY 25, 2021

SFA GEOTECHNICAL

SFA GEOTECHNICAL INC
#1 - 38920 Queens Way
Squamish, BC V8B 0K8
604 898 1093



NOTE:
LAYOUT PLAN PROVIDED BY COAST ESSENTIAL CONSTRUCTION

SFA GEOTECHNICAL ENGINEERING

SFA GEOTECHNICAL INC
#1 - 38920 Queens Way
Squamish, BC V8B 0K8
604 898 1093

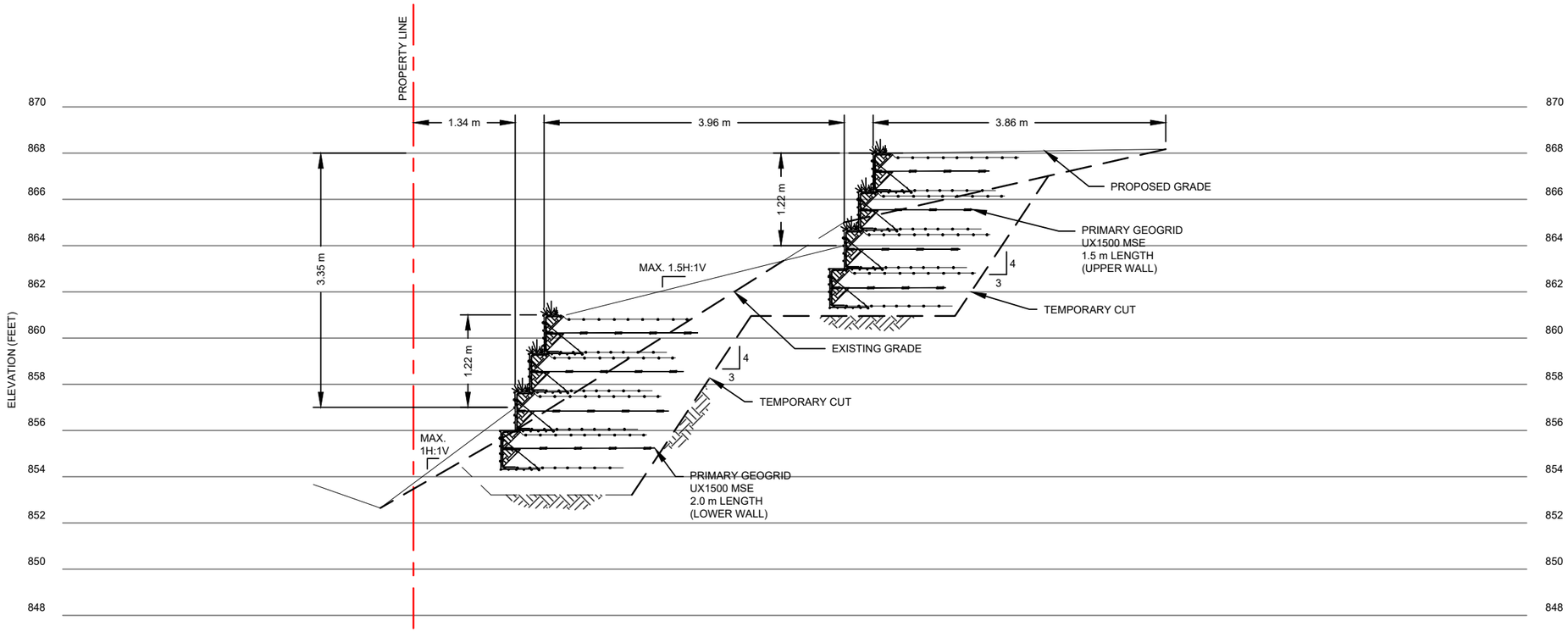
THE RIDGE, LOT 6
PEMBERTON, BC
RETAINING WALL
PLAN VIEW

DRAWN BY:	WG
REVIEWED BY:	SF
DATE:	MAY 14, 2021
SCALE:	NTS

REVISION NO.:	DESCRIPTION	DATE
A	ISSUED FOR DISCUSSION	MAY 25, 2021

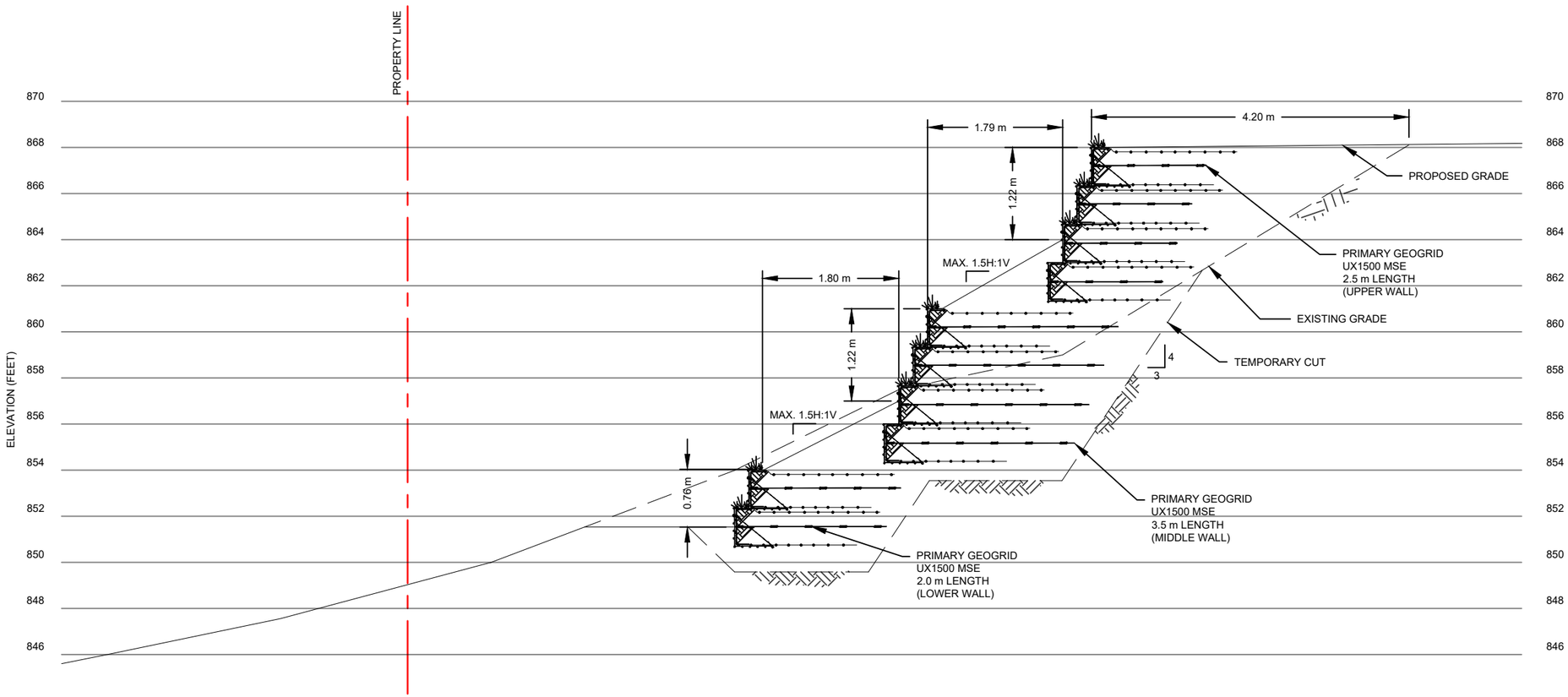
JOB NO: 1547

DRAWING NO: 1547-6-01



SECTION 1

SFA GEOTECHNICAL ENGINEERING	**SFA GEOTECHNICAL INC** #1 - 38920 Queens Way Squamish, BC V8B 0K8 604 898 1093	THE RIDGE, LOT 6 PEMBERTON, BC **RETAINING WALL** **SECTION VIEW**	DRAWN BY: WG REVIEWED BY: SF DATE: MAY 14, 2021 SCALE: NTS	REVISION NO.: / DESCRIPTION / DATE A / ISSUED FOR DISCUSSION / MAY 25, 2021	JOB NO: 1547 DRAWING NO: 1547-6-04



SECTION 2

SFA GEOTECHNICAL ENGINEERING

SFA GEOTECHNICAL INC
#1 - 38920 Queens Way
Squamish, BC V8B 0K8
604 898 1093

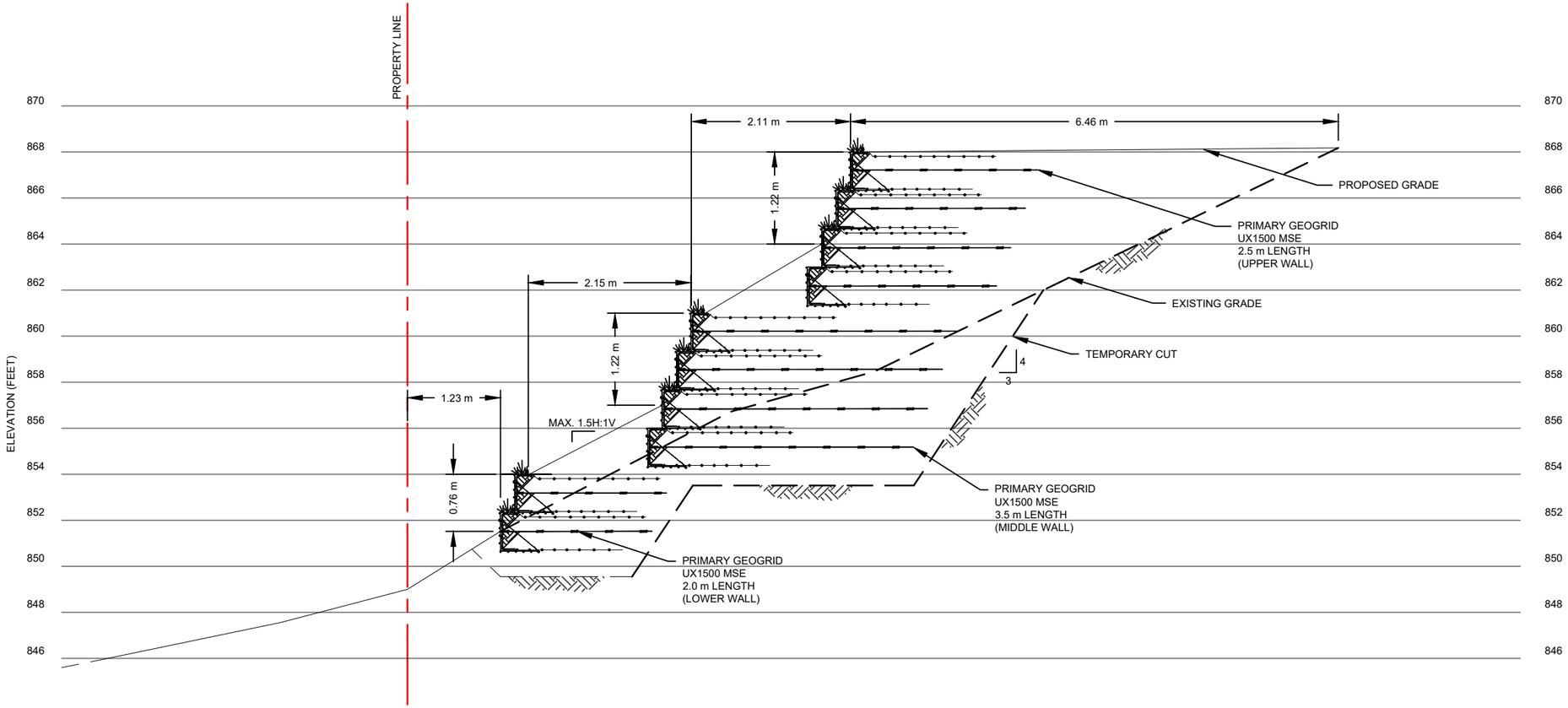
THE RIDGE, LOT 6
PEMBERTON, BC
RETAINING WALL
SECTION VIEW

DRAWN BY:	WG
REVIEWED BY:	SF
DATE:	MAY 14, 2021
SCALE:	NTS

REVISION NO.:	DESCRIPTION	DATE
A	ISSUED FOR DISCUSSION	MAY 25, 2021

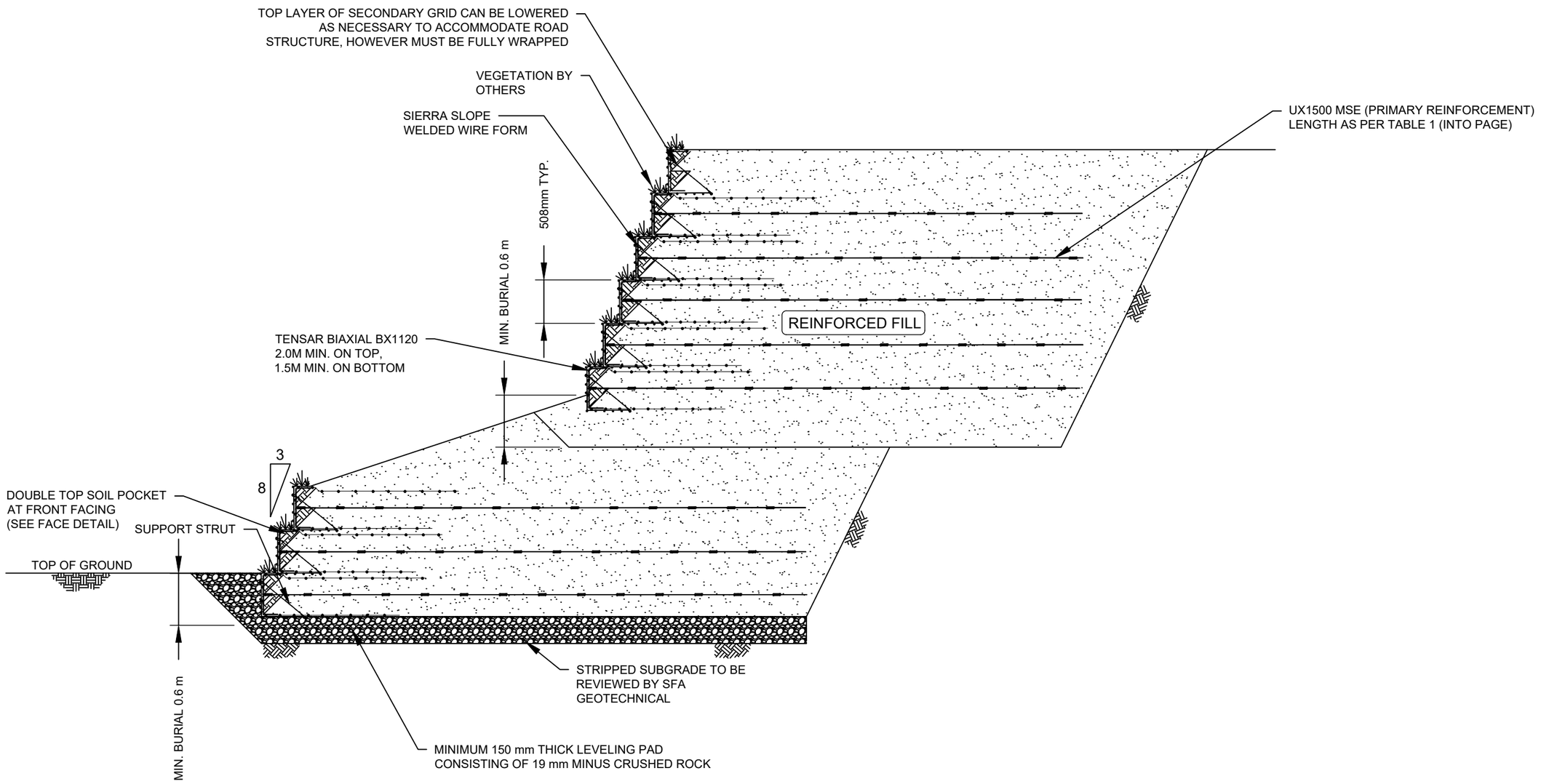
JOB NO: 1547

DRAWING NO: 1547-6-05



SECTION 3

SFA GEOTECHNICAL ENGINEERING	**SFA GEOTECHNICAL INC** #1 - 38920 Queens Way Squamish, BC V8B 0K8 604 898 1093	THE RIDGE, LOT 6 PEMBERTON, BC **RETAINING WALL** **SECTION VIEW**	DRAWN BY: WG REVIEWED BY: SF DATE: MAY 14, 2021 SCALE: NTS	REVISION NO.: / DESCRIPTION / DATE A / ISSUED FOR DISCUSSION / MAY 25, 2021	JOB NO: 1547 DRAWING NO: 1547-6-06



SFA GEOTECHNICAL ENGINEERING

SFA GEOTECHNICAL INC
#1 - 38920 Queens Way
Squamish, BC V8B 0K8
604 898 1093

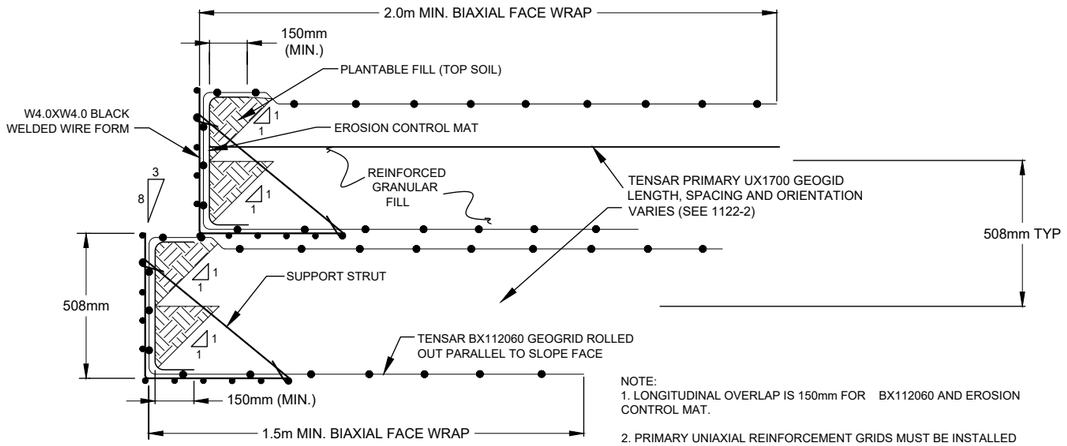
THE RIDGE, LOT 6
PEMBERTON, BC
RETAINING WALL
TYPICAL SECTION

DRAWN BY:	WG
REVIEWED BY:	SF
DATE:	MAY 14, 2021
SCALE:	NTS

REVISION NO.:	DESCRIPTION	DATE
A	ISSUED FOR DISCUSSION	MAY 25, 2021

JOB NO: 1547

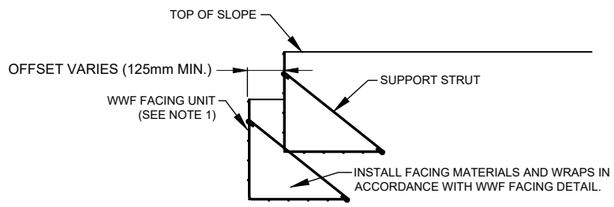
DRAWING NO: 1547-6-07



NOTE:
1. LONGITUDINAL OVERLAP IS 150mm FOR BX112060 AND EROSION CONTROL MAT.

2. PRIMARY UNIAXIAL REINFORCEMENT GRIDS MUST BE INSTALLED WITHOUT OVERLAPS ON THEIR SIDES.

SIERRA SLOPE WELDED WIRE STEPPED FACE DETAIL



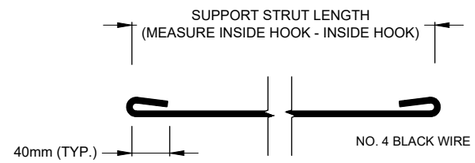
NOTES:

1. SEE WELDED WIRE FORM (WWF) FACING DETAIL FOR FACING MATERIALS AND DIMENSIONS.

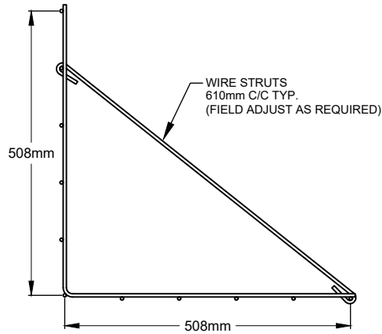
2. SET TOPMOST WWF FACING UNIT INSIDE WWF FACING UNIT BELOW TO FOLLOW GRADE.

3. HORIZONTAL WIRES OF TOPMOST WWF FACING UNIT MAY BE CUT TO ALLOW INSTALLATION OVER STRUTS OF WWF FACING UNIT BELOW

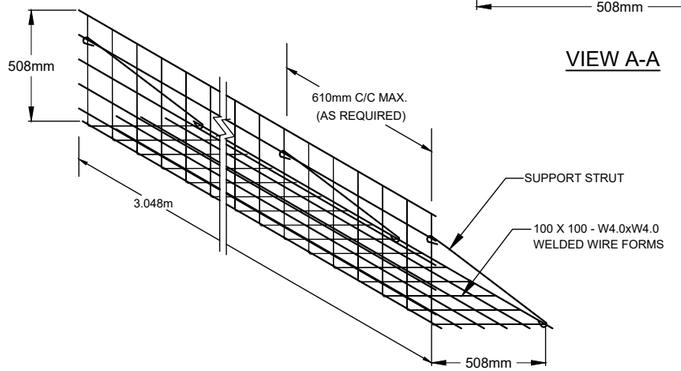
SIERRA SLOPE NESTING DETAIL FOR TOP OF SLOPE (WHERE REQUIRED)



SUPPORT STRUT

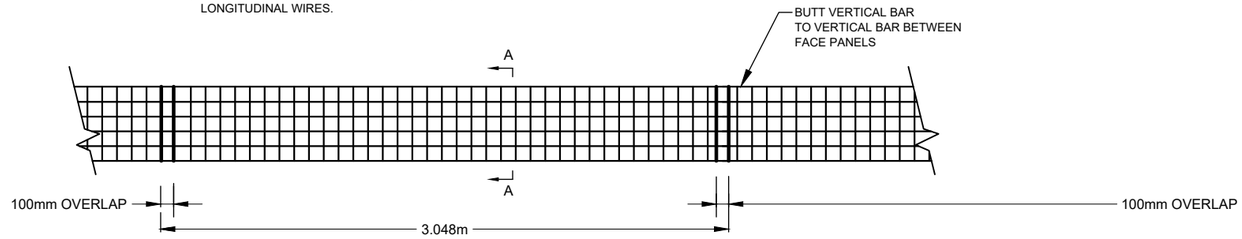


VIEW A-A



Notes:

1. FACING TO CONSIST OF PREFABRICATED W 4X4-W4.0XW4.0 FORMS.
2. ALL FORMS AND STRUTS WILL BE FABRICATED WITH BLACK WIRE.
3. OVERALL LENGTH OF WIRE FORMS IS 3.048m.
4. STRUT LENGTH AND CROSS-SECTIONAL FORM DIMENSIONS TO BE PROVIDED IN FABRICATOR'S SHOP DRAWINGS.
5. STRUT TO HOOK ACROSS INTERSECTION OF TRANSVERSE AND LONGITUDINAL WIRES.



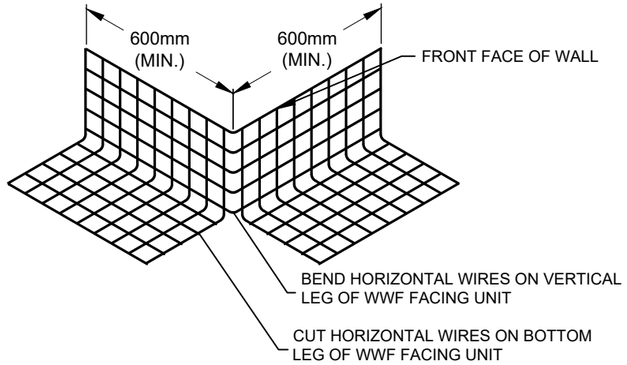
WELDED WIRE FORM DETAIL

SFA GEOTECHNICAL ENGINEERING	**SFA GEOTECHNICAL INC** #1 - 38920 Queens Way Squamish, BC V8B 0K8 604 898 1093	THE RIDGE, LOT 6 PEMBERTON, BC **RETAINING WALL** **TYPICAL DETAILS (1/2)**	DRAWN BY: WG REVIEWED BY: SF DATE: MAY 14, 2021 SCALE: NTS

REVISION NO.:	DESCRIPTION	DATE
A	ISSUED FOR DISCUSSION	MAY 25, 2021

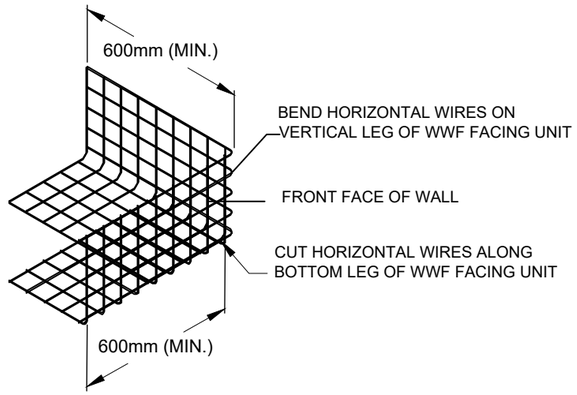
JOB NO: 1547

DRAWING NO: 1547-6-08



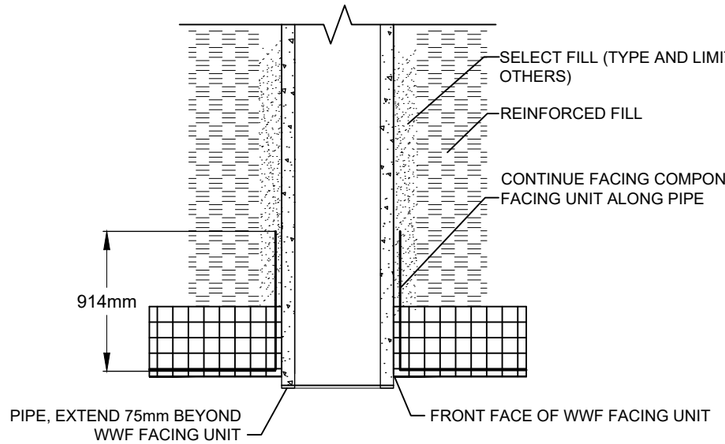
NOTE: MAINTAIN 600mm (MIN.) OF WIRE FORM ON EACH SIDE OF BEND.

WELDED WIRE FORM INSIDE CORNER UNIT

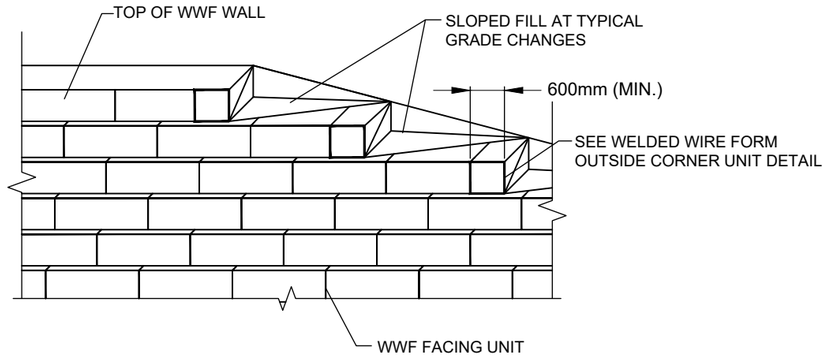


NOTE: MAINTAIN 600mm (MIN.) OF WIRE FORM ON EACH SIDE OF BEND.

WELDED WIRE FORM OUTSIDE CORNER UNIT

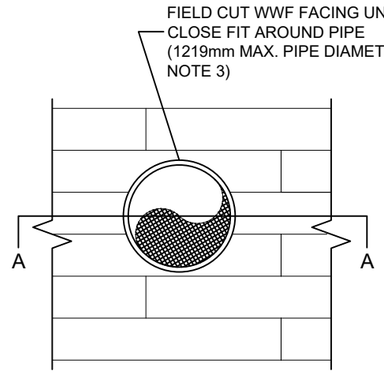


SECTION A-A



NOTES:
1. SEE WELDED WIRE FORM (WWF) FACING DETAIL AND WWF OUTSIDE CORNER UNIT DETAIL FOR FACING MATERIALS AND DIMENSIONS.
2. INSTALL ADJACENT WWF FACING UNITS TO PROVIDE 100mm OVERLAP OF HORIZONTAL WIRES.

TOP OF WWF WALL, FINISHING DETAIL



ELEVATION VIEW

NOTES:
1. SEE WELDED WIRE FORM (WWF) FACING UNIT DETAIL FOR FACING MATERIALS AND DIMENSIONS.
2. SEE ELEVATION VIEW FOR GEOGRID TYPE, LOCATION, AND DIMENSIONS.
3. TERMINATE GEOGRIDS NO MORE THAN 75mm FROM PIPE.
4. CONTRACTOR RESPONSIBLE TO INSTALL PIPE WITH LEAK-PROOF JOINTS.

PIPE PENETRATION DETAIL AT WWF WALL FACE

SFA GEOTECHNICAL ENGINEERING

SFA GEOTECHNICAL INC
#1 - 38920 Queens Way
Squamish, BC V8B 0K8
604 898 1093

THE RIDGE, LOT 6
PEMBERTON, BC
RETAINING WALL
TYPICAL DETAILS (2/2)

DRAWN BY:	WG
REVIEWED BY:	SF
DATE:	MAY 14, 2021
SCALE:	NTS

REVISION NO.:	DESCRIPTION	DATE
A	ISSUED FOR DISCUSSION	MAY 25, 2021

JOB NO: 1547

DRAWING NO: 1547-6-07

1. GENERAL

1.1. In these Notes, the Engineer is SFA Geotechnical.

1.2. These notes must be read in conjunction with 1547-6-01 to 1547-6-07.

1.3. The work described and shown involves the supply and installation of geogrid reinforced retaining walls with NILEX SIERRA SLOPE.

1.4. The retaining wall will be installed on an excavated, natural, undisturbed subgrade, or approved subgrade fill at the locations shown in the Architectural Drawings.

1.5. The Contractor shall confirm the locations and conditions of all man-made structures which could be affected or damaged by the work. Structures which may be affected or damaged by the work must be reported to the Engineer in advance of the work to take place. The Engineer may change the design or approve of modifications to installation techniques proposed by the Contractor to preclude damage or conflict with existing structures.

2. MATERIALS

2.1. The proposed retaining wall have been designed on the basis of Nilex Sierra Slope retaining walls inclined at 3H:8V as indicated in the design drawings. Alternate methods of support system will require redesign of the walls by the Engineer and may not be substituted without written authorization from the Engineer.

2.2. GEOGRID - The retaining walls have been designed on the basis of Tensar UX1500 with a long term design strength (a maximum allowable design strength of 52 kN/m for an 120 year design life. Alternative geogrid will require a redesign of the wall by the Engineer and may not be substituted without written authorization of the engineer. Geogrid coverage shall be 100%.

2.3. LEVELING PAD - Leveling pad fill shall consist of at least 300 mm of 19 mm minus crushed gravel.

2.4. FOUNDATION SOIL - FOUNDATION SOIL shall consist of native soils approved by the Engineer. Any grade reinstatement of the subgrade shall be completed using leveling pad materials.

2.5. REINFORCED BACKFILL - REINFORCED BACKFILL should consist of 75 mm minus pit run sand and gravel containing less then 2% fines or material otherwise approved by SFA.

2.6. RETAINED BACKFILL - RETAINED backfill should consist of clean sand or sand and gravel fill, with less than 5% fines.

3. EXECUTION

3.1. The native soils shall be sloped at MAX 3H:4V. The cut slopes may need to be flatter to satisfy soil conditions encountered.

3.2. The Engineer will inspect the excavation and approve subgrade prior to the placement of any fill soils.

3.3. The first course of the facing units shall be placed on the approved subgrade and alignment and level checked.

3.4. The reinforced backfill shall be placed and compacted behind the facing units and to the extent to the reinforced backfill shown in the cross sections.

3.5. Where the geogrid reinforcement is required, the geogrid reinforcement shall be placed to the facing units as per the manufactures instructions. The length and spacing of the geogrid reinforcement is shown on the cross sections.

3.6. Minimum burial depth shall be achieved after the first course of facing units is completed.

3.7. The geogrid reinforcement shall be placed at the elevations and to the extent shown on the cross sections or as directed by the Engineer.

3.8. The geogrid shall be laid horizontally in the direction perpendicular to the face of the retaining wall. The geogrid shall be pull taut, free of wrinkles and anchored prior to the backfill placement on the geogrid.

3.9. The geogrid reinforcement shall be continuous (COVERAGE RATIO OF 100%) throughout the embedment lengths with no overlap. Spliced connections between shorter pieces of geogrid are not permitted.

3.10. Where georid layers overlap a minimum of 75 mm of gravel should be placed between the layers.

3.11. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid.

3.12. Reinforced and retained backfill shall be placed and compacted in lifts not to exceed 300 mm.

3.13. Reinforced and retained backfill shall be compacted to 95% of the maximum density as determined by ASTM 1557 (Modified Proctor) or equivalent. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be within 2% of the optimum moisture content for compaction.

3.14. Only lightweight hand-operated equipment shall be allowed within 1.0 m of the front face of the facing units.

3.15. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 150 mm is required prior to operation of tracked vehicles over the geogrid. Track vehicles should not turn while on the geogrid to prevent tracks from displacing the fill and geogrid and damage or slack to result in the geogrid.

4. CONSTRUCTION INSPECTION

The Contractor shall notify SFA Geotechnical Inc. a minimum 48 hours in advance of the commencement of the following aspects of the work:

- Site Stripping & Foundation Excavation
- Placement of the initial course of the facing units
- Drain Pipe Placement & Backfill Placement and Compaction behind wall
- Geogrid Placement

SFA GEOTECHNICAL ENGINEERING

SFA GEOTECHNICAL INC
#1 - 38920 Queens Way
Squamish, BC V8B 0K8
604 898 1093

THE RIDGE, LOT 6
PEMBERTON, BC
RETAINING WALL NOTES

DRAWN BY:	WG
REVIEWED BY:	SF
DATE:	MAY 14, 2021
SCALE:	NTS

REVISION NO.:	DESCRIPTION	DATE
A	ISSUED FOR DISCUSSION	MAY 25, 2021

JOB NO: 1547

DRAWING NO: 1547-6-08

Coast Essential Construction

200-100 Park Royal
West Vancouver BC
V7T1A2
604 366 8116
reid@coastessential.com
coastessential.com

7508 Pebble Creek Drive
Lot 6, The Ridge

Landscape Plan and Cost Estimate

June 15, 2021

Village of Pemberton
Box 100, 7400 Prospect Street
Pemberton, BC, V0N2L0

Dear Development Services Team,

The following plant list is the planned landscape planting scheme outlined on the design drawings, and estiamted to cost approximately $6,500 plus taxes at current prices.

Trees:

• Pinus Nigra	1.5 m to 2 m	Quantity 9
• Pacific Dogwood	5 cm cal.	Quantity 3
• Quaking Aspen	5 cm cal.	Quantity 1
• Multi stem Vine Maple	2 m	Quantity 1

Shrubs:

• Mugo Pines	#2 pot	Quantity 9
• Yellow Twig Dogwood	#2 pot	Quantity 14
• Nootka Rose	#2 pot	Quantity 9
• Mock Orange	#5 pot	Quantity 1
• Oregon Grape (Mahonia Nervosa)	#2 pot	Quantity 12

Groundcover

• Kinnickinnick	4” pot	Quantity 144

Softscape:

- To include all required top soils and mulch

Estimated Cost:

- $6,500 plus taxes at current prices.

Letter of Agency

Civic Address: 7508 Pebble Creek Drive, Pemberton, BC

PID#: 030-333-326

Legal Description: LOT 6 PLAN EPS4695 DISTRICT LOT 211 LILOOET LAND DISTRICT

(the "Subject Lands")

Registered Owner: 1283735 BC LTD

I, Rachael Mirvish, being the Registered Owner (or duly authorized representative of the Registered Owner) of the Subject Lands, hereby authorize Coast Essential Construction Ltd to act as Agent and authorized signatory for the Registered Owner in respect of all matters relating to the development application of the Subject Lands as may be required by the Village of Pemberton.

R. Mirvish

Signature of Registered Owner

June 23 2021

Date

Village of PEMBERTON

CIVIC ADDRESS MAPS

THE RIDGE AND SUNSTONE

N

Not for legal reference.
Revised:May 28, 2019

0 40 80 120 160 200
Meters

Scale 1 : 50,000

BRITISH COLUMBIA BUILDING CODE 2018

SCHEDULE B

Forming Part of Subsection 2.2.7., Division C of the British Columbia Building Code

Building Permit Number
(for authority having jurisdiction's use)

ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW

Notes: (i) This letter must be submitted prior to the commencement of construction activities of the components identified below. A separate letter must be submitted by each *registered professional of record*.
(ii) This letter is endorsed by: Architectural Institute of BC, Association of Professional Engineers and Geoscientists of the Province of BC, Building Officials' Association of BC, and Union of BC Municipalities.
(iii) In this letter the words in italics have the same meaning as in the British Columbia Building Code.

To: The *authority having jurisdiction*

The Village of Pemberton
Name of Jurisdiction (Print)

Re: Retaining Walls
Name of Project (Print)

7508 Pebble Creek Drive (Lot 6 - The Ridge)
Address of Project (Print)

The undersigned hereby gives assurance that the design of the

(Initial those of the items listed below that apply to this *registered professional of record*. All the disciplines will not necessarily be employed on every project.)

_____ **ARCHITECTURAL**
_____ **STRUCTURAL**
_____ **MECHANICAL**
_____ **PLUMBING**
_____ **FIRE SUPPRESSION SYSTEMS**
_____ **ELECTRICAL**
_____ **GEOTECHNICAL — temporary**
_____ **GEOTECHNICAL — permanent**

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
S. M. FOFONOFF
30836

(Professional's Seal and Signature)

June 10, 2021
Date

components of the plans and supporting documents prepared by this *registered professional of record* in support of the application for the *building* permit as outlined below substantially comply with the British Columbia Building Code and other applicable enactments respecting safety except for construction safety aspects.

The undersigned hereby undertakes to be responsible for *field reviews* of the above referenced components during construction, as indicated on the "SUMMARY OF DESIGN AND FIELD REVIEW REQUIREMENTS" below.

_____
CRP's Initials

Schedule B - *Continued*

Building Permit Number
(for authority having jurisdiction's use)

7508 Pebble Creek Drive (Lot 6 - The Ridge)
Project Address

Geotechnical
Discipline

The undersigned also undertakes to notify the *authority having jurisdiction* in writing as soon as possible if the undersigned's contract for *field review* is terminated at any time during construction.

I certify that I am a *registered professional* as defined in the British Columbia Building Code.

Steven Fofonoff, P.Eng.
Registered Professional of Record's Name (Print)

1-38920 Queens Way
Address (Print)

Squamish, BC V8B 0K8
Address (Print) (continued)

604-785-8957
Phone Number

(Professional's Seal and Signature)

June 10, 2021
Date

(If the *Registered Professional of Record* is a member of a firm, complete the following.)

I am a member of the firm SFA Geotechnical Inc.
and I sign this letter on behalf of the firm. (Print name of firm)

Note: The above letter must be signed by a *registered professional of record*, who is a *registered professional*. The British Columbia Building Code defines a *registered professional* to mean

(a) a person who is registered or licensed to practise as an architect under the Architects Act, or
(b) a person who is registered or licensed to practise as a professional engineer under the Engineers and Geoscientists Act.

CRP's Initials

Schedule B - *Continued*

Building Permit Number
(for authority having jurisdiction's use)

7508 Pebble Creek Drive (Lot 6 - The Ridge)
Project Address

Geotechnical
Discipline

SUMMARY OF DESIGN AND FIELD REVIEW REQUIREMENTS

(Initial applicable discipline below and cross out and initial only those items not applicable to the project.)

ARCHITECTURAL

1.1 Fire resisting assemblies
1.2 *Fire separations* and their continuity
1.3 *Closures*, including tightness and operation
1.4 Egress systems, including *access to exit* within *suites* and *floor areas*
1.5 Performance and physical safety features (guardrails, handrails, etc.)
1.6 Structural capacity of architectural components, including anchorage and seismic restraint
1.7 Sound control
1.8 Landscaping, screening and site grading
1.9 Provisions for firefighting access
1.10 *Access* requirements for *persons with disabilities*
1.11 Elevating devices
1.12 Functional testing of architecturally related fire emergency systems and devices
1.13 Development Permit and conditions therein
1.14 Interior signage, including acceptable materials, dimensions and locations
1.15 Review of all applicable shop drawings
1.16 Interior and exterior finishes
1.17 Dampproofing and/or waterproofing of walls and slabs below *grade*
1.18 Roofing and flashings
1.19 Wall cladding systems
1.20 Condensation control and cavity ventilation
1.21 Exterior glazing
1.22 Integration of building envelope components
1.23 Environmental separation requirements (Part 5)
1.24 Building envelope, Part 10 – ASHRAE, NECB or Energy Step Code requirements
1.25 Building envelope, testing, confirmation or both as per Part 10 requirements

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
S. M. FOFONOFF
30836
(Professional's Seal and Signature)

June 10, 2021
Date

STRUCTURAL

2.1 Structural capacity of structural components of the *building*, including anchorage and seismic restraint
2.2 Structural aspects of *deep foundations*
2.3 Review of all applicable shop drawings
2.4 Structural aspects of unbonded post-tensioned concrete design and construction

MECHANICAL

3.1 HVAC systems and devices, including high *building* requirements where applicable
3.2 *Fire dampers* at required *fire separations*
3.3 Continuity of *fire separations* at HVAC penetrations
3.4 Functional testing of mechanically related fire emergency systems and devices
3.5 Maintenance manuals for mechanical systems
3.6 Structural capacity of mechanical components, including anchorage and seismic restraint
3.7 Review of all applicable shop drawings
3.8 Mechanical systems, Part 10 – ASHRAE, NECB or Energy Step Code requirements
3.9 Mechanical systems, testing, confirmation or both as per Part 10 requirements

CRP's Initials

Schedule B - *Continued*

Building Permit Number
(for authority having jurisdiction's use)

7508 Pebble Creek Drive (Lot 6 - The Ridge)
Project Address

Geotechnical
Discipline

PLUMBING

4.1 Roof *drainage systems*
4.2 Site and foundation *drainage systems*
4.3 *Plumbing systems* and devices
4.4 Continuity of *fire separations* at plumbing penetrations
4.5 Functional testing of plumbing related fire emergency systems and devices
4.6 Maintenance manuals for *plumbing systems*
4.7 Structural capacity of plumbing components, including anchorage and seismic restraint
4.8 Review of all applicable shop drawings
4.9 Plumbing systems, Part 10 – ASHRAE, NECB or Energy Step Code requirements
4.10 Plumbing systems, testing, confirmation or both as per Part 10 requirements

FIRE SUPPRESSION SYSTEMS

5.1 Suppression system classification for type of *occupancy*
5.2 Design coverage, including concealed or special areas
5.3 Compatibility and location of electrical supervision, ancillary alarm and control devices
5.4 Evaluation of the capacity of city (municipal) water supply versus system demands and domestic demand, including pumping devices where necessary
5.5 Qualification of welder, quality of welds and material
5.6 Review of all applicable shop drawings
5.7 Acceptance testing for "Contractor's Material and Test Certificate" as per NFPA Standards
5.8 Maintenance program and manual for suppression systems
5.9 Structural capacity of sprinkler components, including anchorage and seismic restraint
5.10 For partial systems — confirm sprinklers are installed in all areas where required
5.11 Fire Department connections and hydrant locations
5.12 Fire hose standpipes
5.13 Freeze protection measures for fire suppression systems
5.14 Functional testing of fire suppression systems and devices

ELECTRICAL

6.1 Electrical systems and devices, including high building requirements where applicable
6.2 Continuity of *fire separations* at electrical penetrations
6.3 Functional testing of electrical related fire emergency systems and devices
6.4 Electrical systems and devices maintenance manuals
6.5 Structural capacity of electrical components, including anchorage and seismic restraint
6.6 Clearances from *buildings* of all electrical utility equipment
6.7 Fire protection of wiring for emergency systems
6.8 Review of all applicable shop drawings
6.9 Electrical systems, Part 10 – ASHRAE, NECB or Energy Step Code requirements
6.10 Electrical systems, testing, confirmation or both as per Part 10 requirements

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
S. M. FOFONOFF
30836

(Professional's Seal and Signature)

June 10, 2021
Date

GEOTECHNICAL — Temporary

7.1 *Excavation*
7.2 Shoring
7.3 Underpinning
7.4 Temporary construction dewatering

GEOTECHNICAL — Permanent

8.1 Bearing capacity of the *soil*
8.2 Geotechnical aspects of deep foundations
8.3 Compaction of engineered fill
8.4 Structural considerations of *soil*, including slope stability and seismic loading
8.5 Backfill
8.6 Permanent dewatering
8.7 Permanent underpinning

CRP's Initials

HUB International Insurance Brokers
299 3rd Ave. Kamloops BC
T: (250) 372-3155
F: (250) 372-1962
www.hubinternational.com

Certificate of Liability Insurance

This certificate of Insurance neither affirmatively nor negatively amends, extends or alters the coverage afforded by the policies scheduled herein. It is furnished as a matter of information only, confers no rights upon the holder and is issued with the understanding that the rights and liabilities of the parties will be governed by the original policy or policies as they may be lawfully amended by endorsement.

Certificate Holder
To Whom it May Concern
"Proof of Insurance Only"

Name and address of Insured
SFA Geotechnical Inc
#1-38920 Queens Way
Squamish BC V8B 0K8

Type of Insurance	Insurer	Policy Number	Deductible		Limits of Liability
Commercial General Liability, Contractual Liability Endorsement	Certain Underwriters at Lloyds under UMR No.B0572NA20BN03	178514856	$1,000 Bodily Injury/Property Damage Deductible		$ 5,000,000 Bodily Injury & Property Damage – Each Occurrence $ 5,000,000 Personal and Advertising Injury – Aggregate $ 5,000,000 Aggregate Limit $ 5,000,000 Non-Owned Automobile Liability $ 250,000 Tenants Legal Liability Endorsement – any one premises
Error & Omissions Liability	Certain Underwriters at Lloyds under UMR No.B0572NA20BN03	178514856	$1,000		$ 5,000,000 Each Claim $ 5,000,000 Aggregate Limit Retroactive Date: March 1,2018

Policy Effective Date: March 1, 2021 **to Policy Expiry Date: March 1, 2022**

Operations Covered: Geotechnical Engineer

Additional Insured(s): n/a

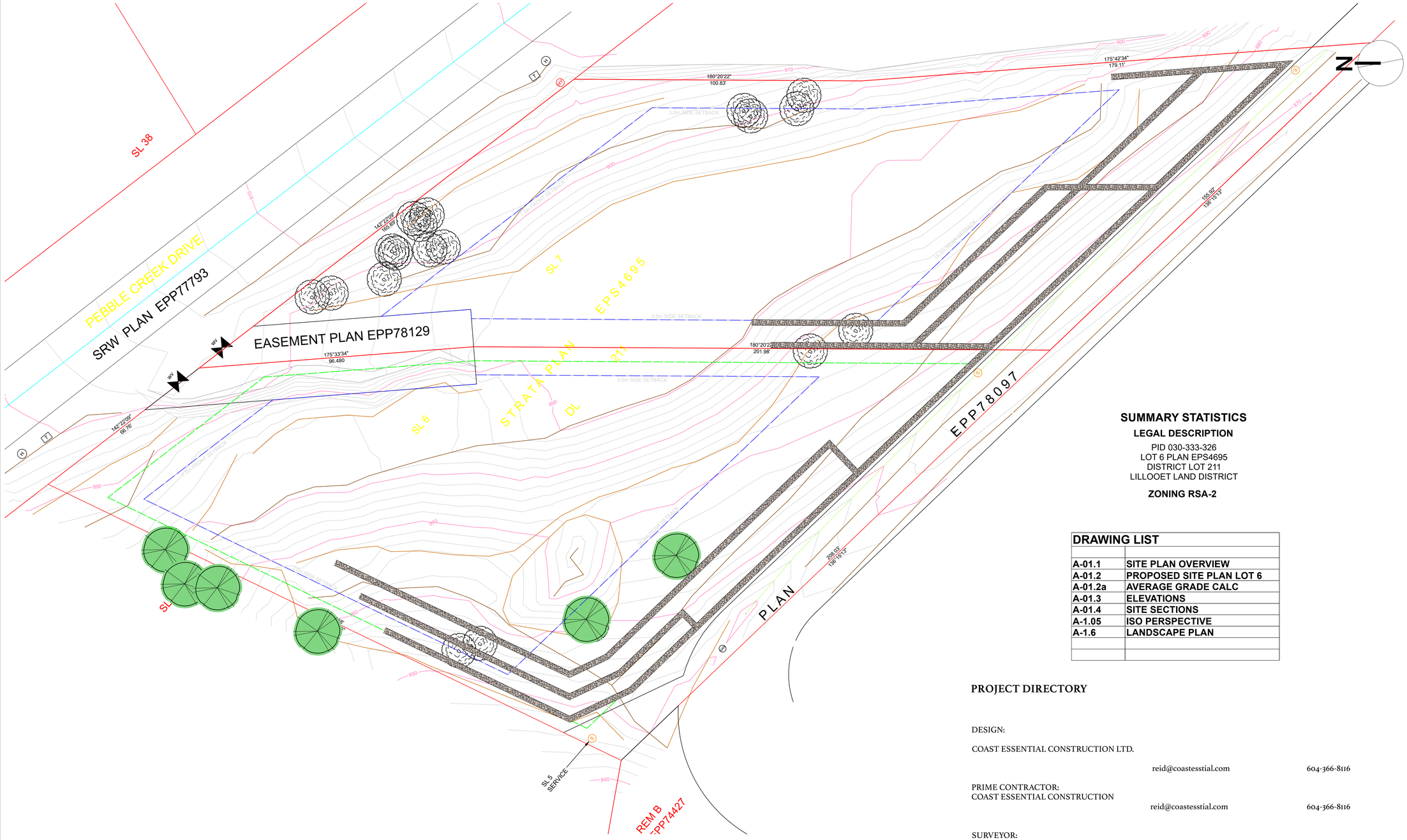
CANCELLATION NOTICE:
Should the above described policy be cancelled before the expiration date thereof, the Insurer will endeavour to mail -------days written notice to the Certificate Holder, but failure to mail such notice shall impose no obligation or liability of any kind upon either the Insurer or HUB International Insurance Brokers.

Issued at: Kamloops BC

Date: March 1, 2021

HUB International Insurance Brokers

Chad Belbin - Authorized Representative



1 SITE PLAN OVERVIEW
Scale: 1/16" = 1'-0"

SUMMARY STATISTICS

LEGAL DESCRIPTION

PID 030-333-326
LOT 6 PLAN EPS4695
DISTRICT LOT 211
LILLOOET LAND DISTRICT

ZONING RSA-2

DRAWING LIST

PROJECT DIRECTORY

DESIGN:

COAST ESSENTIAL CONSTRUCTION LTD. reid@coastesstial.com 604-366-8116

PRIME CONTRACTOR:
COAST ESSENTIAL CONSTRUCTION reid@coastesstial.com 604-366-8116

SURVEYOR:
HIGH MARK LAND SURVEYOURS mike@hsme.ca 604-902-8245

GEOTECHNICAL ENGINEER:
SFA ENGINEERING steven@sfaengineering.ca 604-785-8957

STRUCTURAL ENGINEER:

TWIN PEAKS ENGINEERING btowsey@twinpeaksengineering.com 604-967-1701

No.	Date	By	Revision Notes

No.	Date	Issue Notes
2	2021-06-17	ISSUED FOR VARIANCE

Coast Essential Construction

Design Firm

COAST ESSENTIAL CONSTRUCTION

UNIT 110
39279 QUEENS WAY
SQUAMISH BC V8B 0T5

Consultant

Project Title

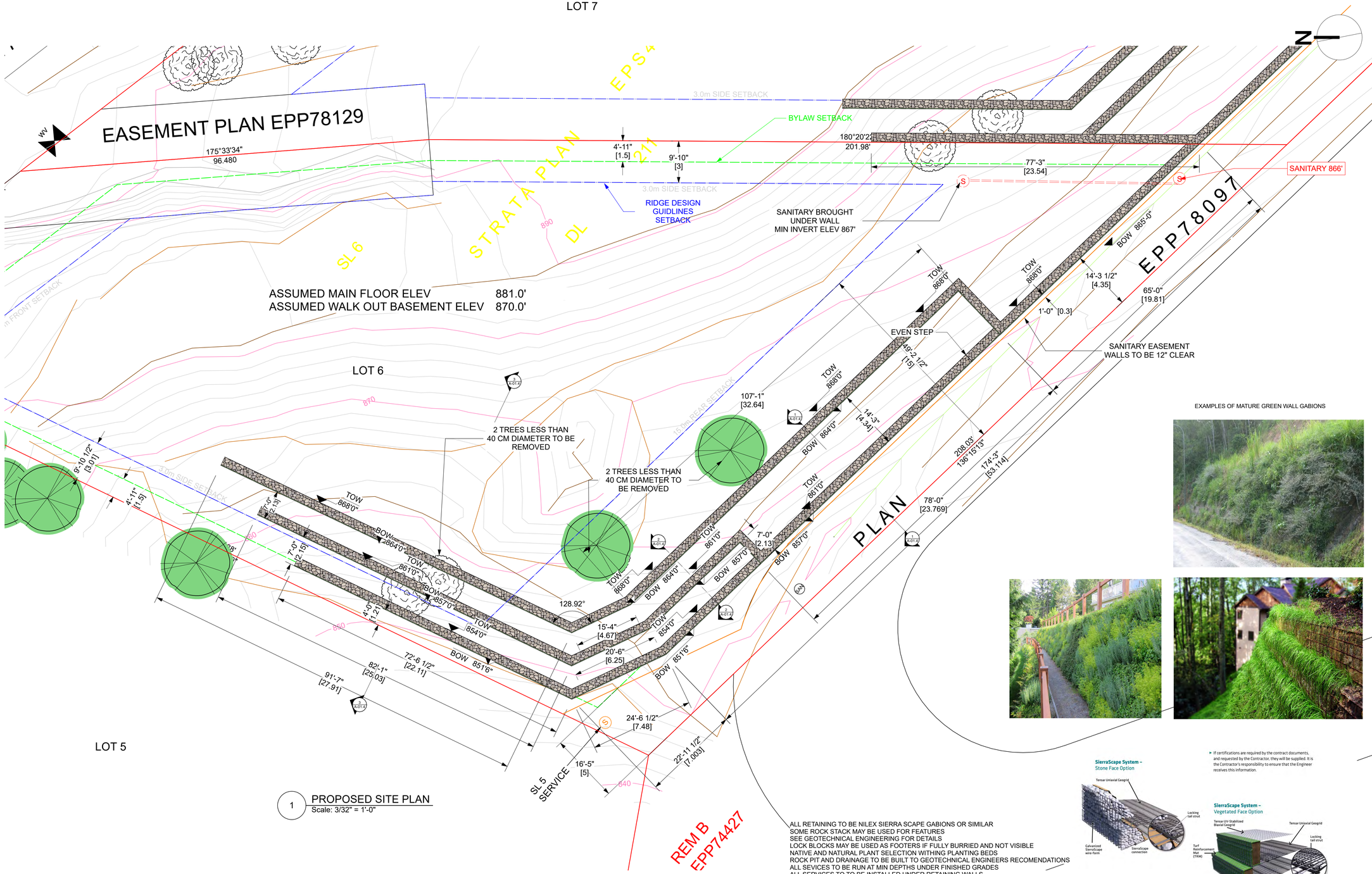
THE RIDGE LOT 6
7508 PEBBLE CREEK DRIVE
PEMBERTON BC

Sheet Title

SITE PLAN OVERVIEW

Project Manager: REID MADIUK	Project ID: Project ID
Drawn By:	Scale: 1/16" = 1'-0"
Reviewed By:	Sheet No.: A-01.1
Date: 2021-06-17	of 10
CAD File Name:	

THE RIDGE LOT 6 COMBINED.vwx



1 PROPOSED SITE PLAN
Scale: 3/32" = 1'-0"

EXAMPLES OF MATURE GREEN WALL GABIONS

ALL RETAINING TO BE NILEX SIERRA SCAPE GABIONS OR SIMILAR
SOME ROCK STACK MAY BE USED FOR FEATURES
SEE GEOTECHNICAL ENGINEERING FOR DETAILS
LOCK BLOCKS MAY BE USED AS FOOTERS IF FULLY BURRIED AND NOT VISIBLE
NATIVE AND NATURAL PLANT SELECTION WITHING PLANTING BEDS
ROCK PIT AND DRAINAGE TO BE BUILT TO GEOTECHNICAL ENGINEERS RECOMENDATIONS
ALL SEVICES TO BE RUN AT MIN DEPTHS UNDER FINISHED GRADES
ALL SERVICES TO TO BE INSTALLED UNDER RETAINING WALLS
WITH CLEANOUTS AND LOCATIONS MARKED

▸ If certifications are required by the contract documents, and requested by the Contractor, they will be supplied. It is the Contractor's responsibility to ensure that the Engineer receives this information.

No.	Date	By	Revision Notes

No.	Date	Issue Notes
2	2021-06-17	ISSUED FOR VARIANCE

Coast Essential Construction

Design Firm

COAST ESSENTIAL CONSTRUCTION

UNIT 110
39279 QUEENS WAY
SQUAMISH BC V8B 0T5

Consultant

Project Title

THE RIDGE LOT 6
7508 PEBBLE CREEK DRIVE
PEMBERTON BC

Sheet Title

PROPOSED SITE PLAN LOT 6

Project Manager: REID MADIUK	Project ID: Project ID
Drawn By:	Scale: AS NOTED
Reviewed By:	Sheet No.: A-01.2 of 10
Date: 2021-03-22	
CAD File Name:	

THE RIDGE LOT 6 COMBINED.vwx

Natural

WALL 1

Point	Elevation		Elevation	Average		Length	
A	854.50	+	847.00	850.75	x	72.50	61679.38
B	847.00	+	852.00	849.50	x	24.50	20812.75
C	852.00	+	853.00	852.50	x	30.83	26282.58
D	853.00	+	0.00	426.50	x	0.00	0.00
E	0.00	+	0.00	0.00	x	0.00	0.00
F	0.00	+	0.00	0.00	x	0.00	0.00
						127.83	108774.70

Average Natural Grade = 850.93 ft

Natural

WALL 2

Point	Elevation		Elevation	Average		Length	
A	862.50	+	851.00	856.75	x	82.13	70360.59
B	851.00	+	854.50	852.75	x	20.50	17481.38
C	854.50	+	859.00	856.75	x	29.25	25059.94
D	859.00	+	853.00	856.00	x	7.00	5992.00
E	853.00	+	862.50	857.75	x	78.20	67076.05
F	861.00	+	0.00	430.50	x	0.00	0.00
						217.08	185989.96

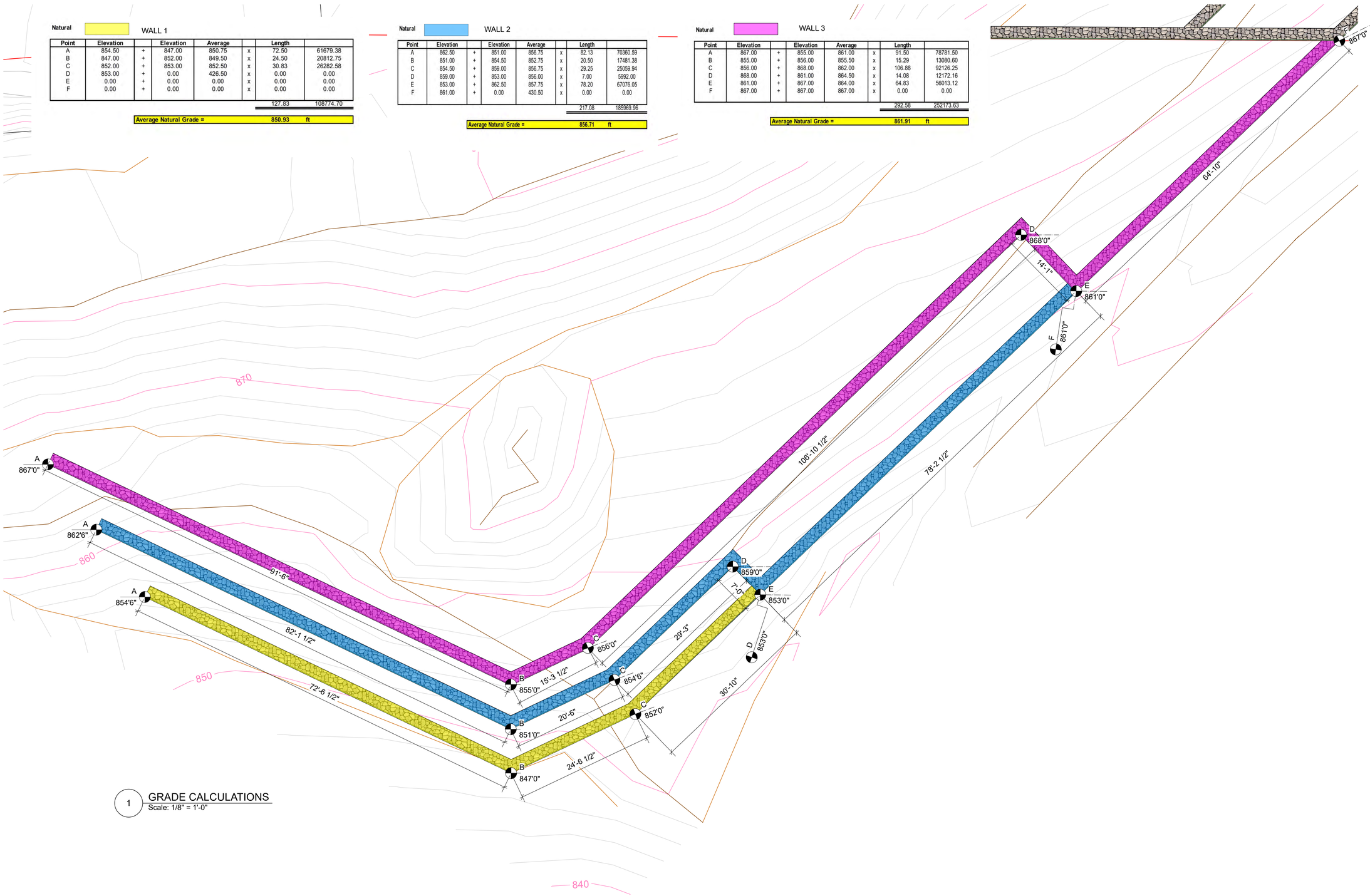
Average Natural Grade = 856.71 ft

Natural

WALL 3

Point	Elevation		Elevation	Average		Length	
A	867.00	+	855.00	861.00	x	91.50	78781.50
B	855.00	+	856.00	855.50	x	15.29	13080.60
C	856.00	+	868.00	862.00	x	106.88	92126.25
D	868.00	+	861.00	864.50	x	14.08	12172.16
E	861.00	+	867.00	864.00	x	64.83	56013.12
F	867.00	+	867.00	867.00	x	0.00	0.00
						292.58	252173.63

Average Natural Grade = 861.91 ft



1 GRADE CALCULATIONS
Scale: 1/8" = 1'-0"

No.	Date	By	Revision Notes
2	2021-06-17		ISSUED FOR VARIANCE

No.	Date	Issue Notes

Coast Essential Construction

Design Firm

COAST ESSENTIAL CONSTRUCTION

UNIT 110
39279 QUEENS WAY
SQUAMISH BC V8B 0T5

Consultant

Project Title

THE RIDGE LOT 6
7508 PEBBLE CREEK DRIVE
PEMBERTON BC

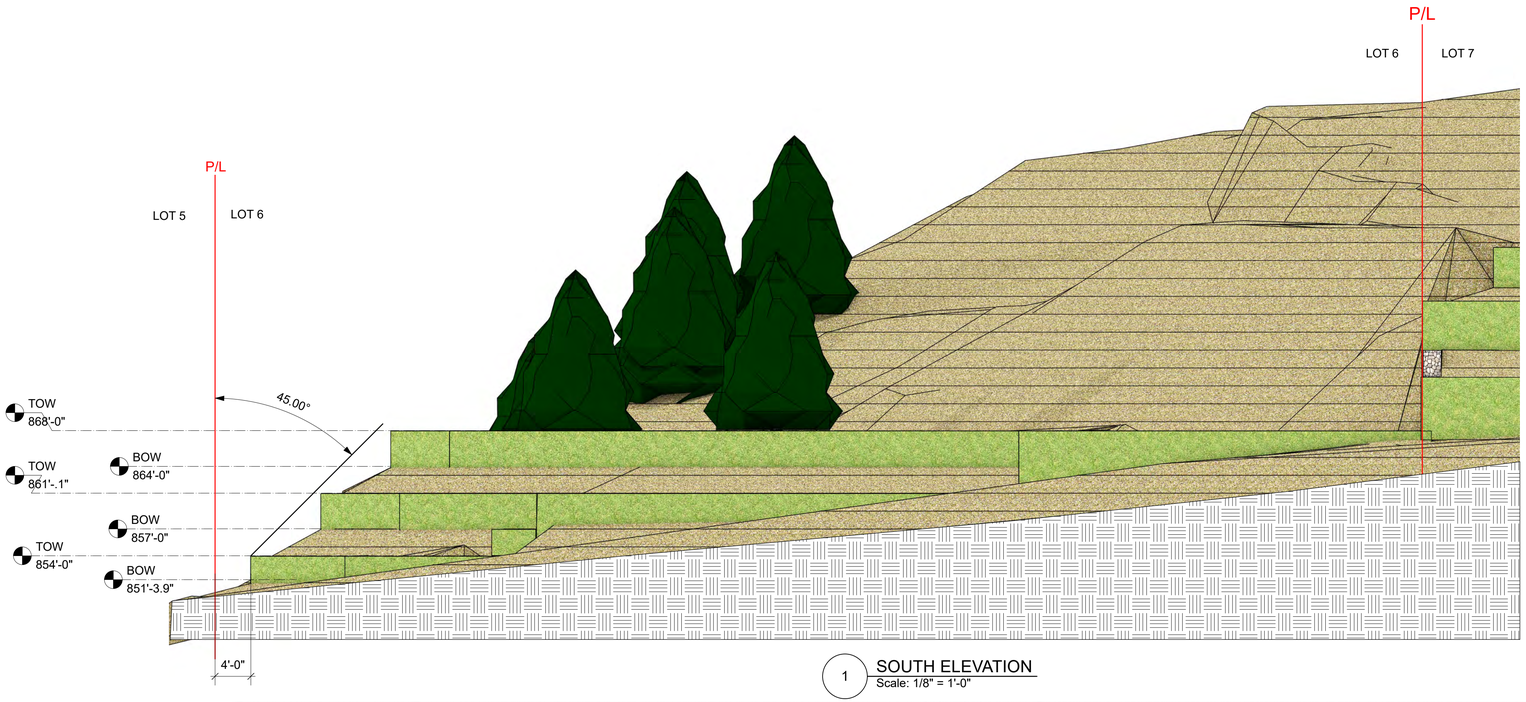
Sheet Title

AVERAGE GRADE CALC

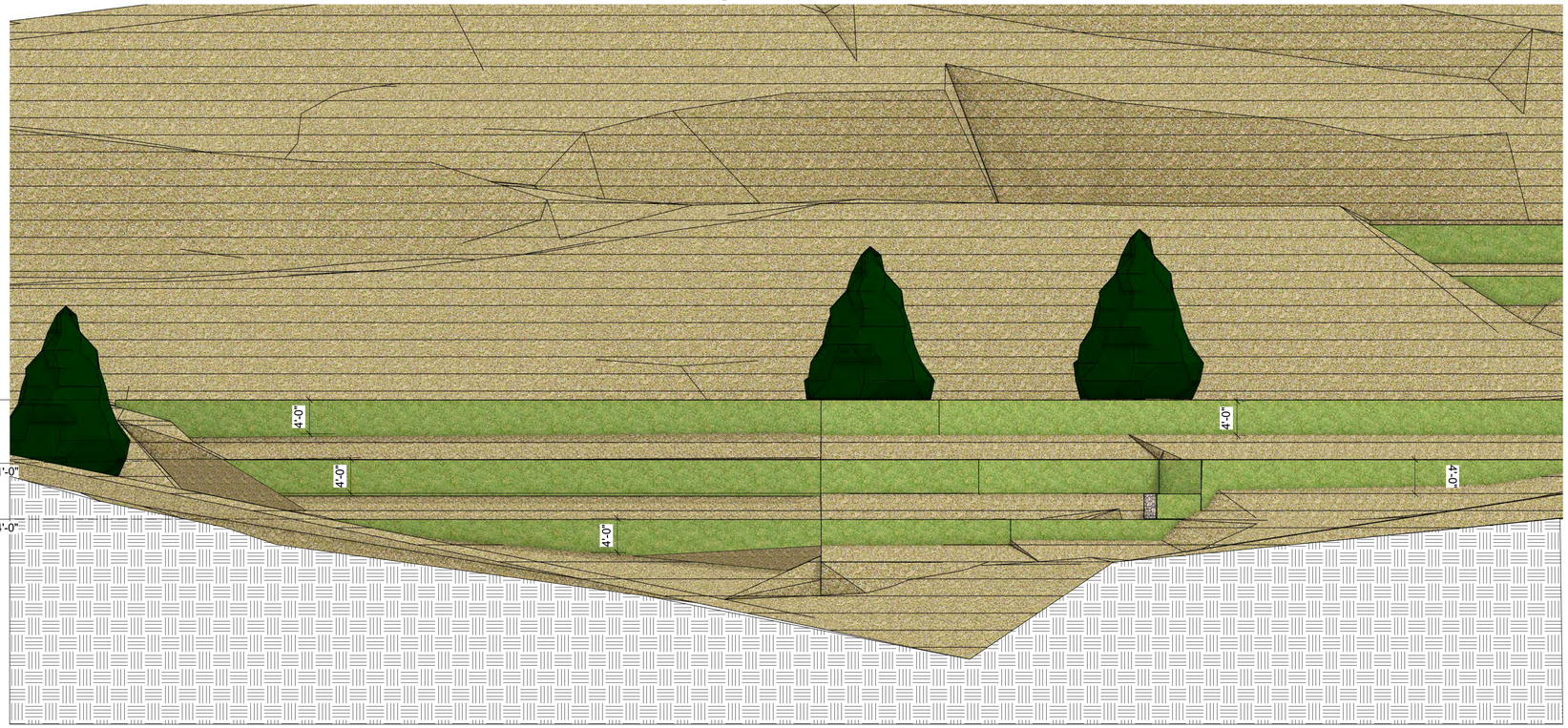
Project Manager	Project ID
REID MADIUK	Project ID
Drawn By	Scale
	1/8" = 1'-0"
Reviewed By	Sheet No.
	A-01.2a
Date	of
2021-06-15	10

CAD File Name

THE RIDGE LOT 6 COMBINED.vwx



1 SOUTH ELEVATION
Scale: 1/8" = 1'-0"



2 WEST ELEVATION
Scale: 1/8" = 1'-0"

No.	Date	By	Revision Notes

No.	Date	Issue Notes
2	2021-06-17	ISSUED FOR VARIANCE

Coast Essential Construction

Design Firm

COAST ESSENTIAL CONSTRUCTION

UNIT 110
39279 QUEENS WAY
SQUAMISH BC V8B 0T5

Consultant

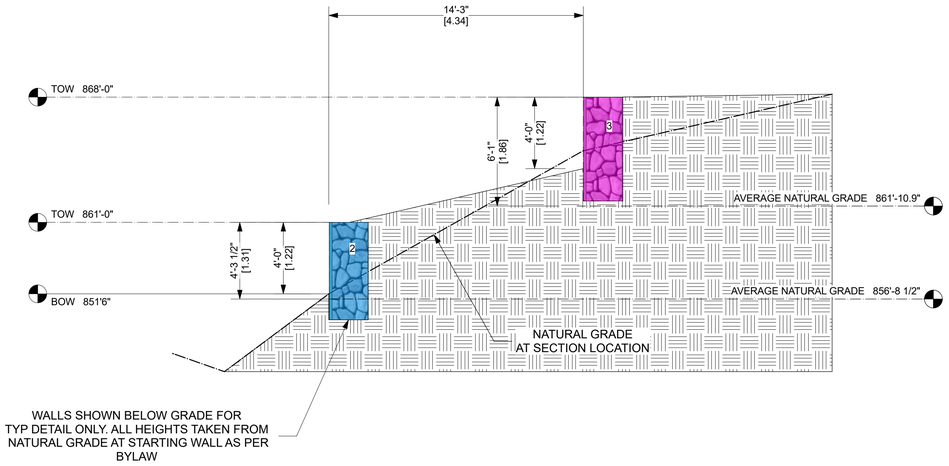
Project Title

THE RIDGE LOT 6
7508 PEBBLE CREEK DRIVE
PEMBERTON BC

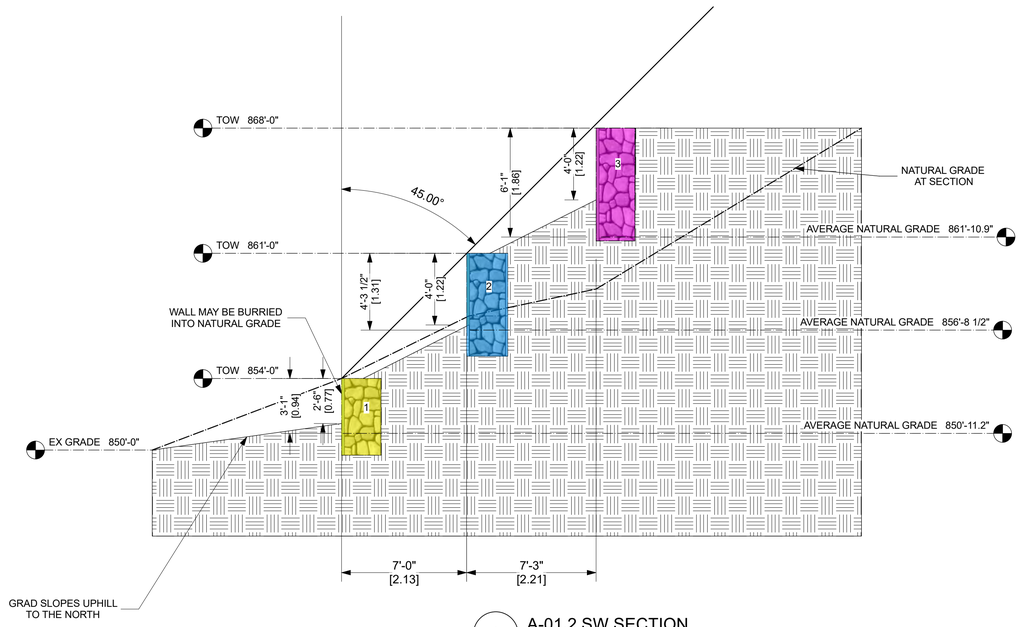
Sheet Title

ELEVATIONS

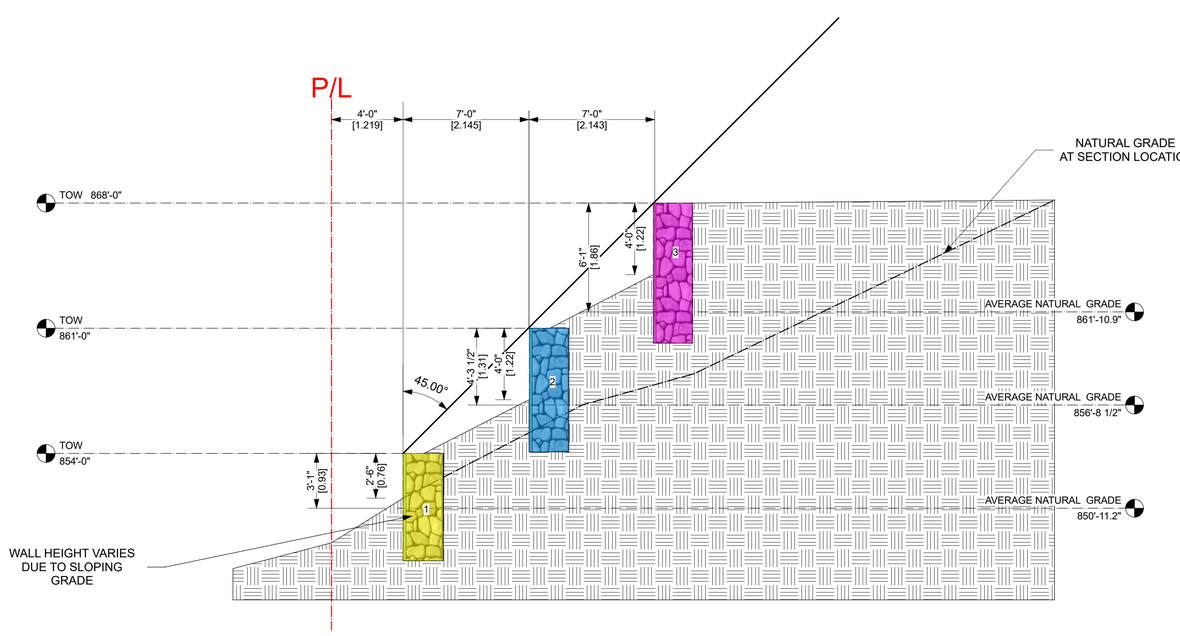
Project Manager: REID MADIUK	Project ID: Project ID
Drawn By:	Scale: 1/8" = 1'-0"
Reviewed By:	Sheet No.: A-01.3
Date: 2021-03-16	of 10
CAD File Name: THE RIDGE LOT 6 COMBINED.vwx	



1 A-01.2 SITE SECTION SOUTH
Scale: 1/4" = 1'-0"



2 A-01.2 SW SECTION
Scale: 1/4" = 1'-0"



3 A-01.2 SITE SECTION WEST
Scale: 1/4" = 1'-0"

7.21 Retaining Walls

(a) In a *residential zone*, a single retaining wall shall:

i. Not exceed a Height of 1.2 m measured from the average *natural grade* level at its base; and

ii. Not be located within 0.6 m, measured horizontally, of any other retaining wall.

PART 22: RETAINING STRUCTURES

22.1. A *registered professional* shall undertake the design and conduct *field reviews* of the construction of a *retaining wall* greater than 1.2 meters in height.

22.2. Sealed copies of the design plan and *field review* reports prepared by the *registered professional* for all *retaining walls* greater than 1.2 meters in height shall be submitted to the *Chief Building Official* prior to acceptance of the works.

SEE GEOTECHNICAL DRAWINGS FOR SPECIFICATIONS

MAXIMUM EXPOSED WALL HEIGHT OF 4'0" (1.22M) FACE

No.	Date	By	Revision Notes

No.	Date	Issue Notes
2	2021-06-17	ISSUED FOR VARIANCE

Coast Essential Construction

Design Firm

COAST ESSENTIAL CONSTRUCTION

UNIT 110
39279 QUEENS WAY
SQUAMISH BC V8B 0T5

Consultant

Project Title

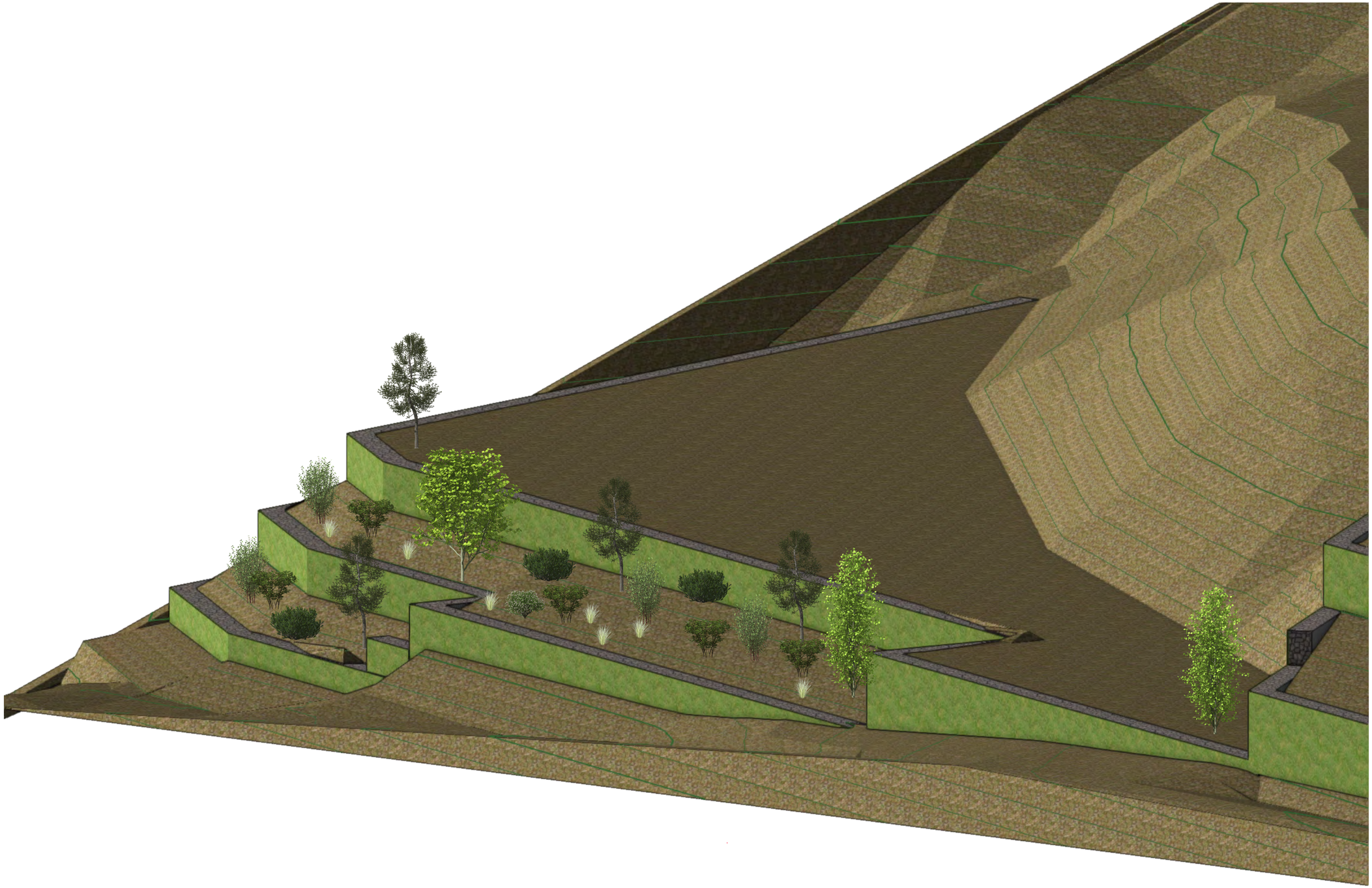
THE RIDGE LOT 6
7508 PEBBLE CREEK DRIVE
PEMBERTON BC

Sheet Title

SITE SECTIONS

Project Manager: REID MADIUK	Project ID: Project ID
Drawn By:	Scale: 1/4" = 1'-0"
Reviewed By:	Sheet No.: A-01.4
Date: 2021-04-07	of 10
CAD File Name:	

THE RIDGE LOT 6 COMBINED.vwx



No.	Date	By	Revision Notes

No.	Date	Issue Notes
2	2021-06-17	ISSUED FOR VARIANCE

Coast Essential Construction

Design Firm

COAST ESSENTIAL CONSTRUCTION

UNIT 110
39279 QUEENS WAY
SQUAMISH BC V8B 0T5

Consultant

Project Title

THE RIDGE LOT 6
7508 PEBBLE CREEK DRIVE
PEMBERTON BC

Sheet Title

ISO PERSPECTIVE

Project Manager: REID MADIUK	Project ID: Project ID
Drawn By:	Scale: 1:48
Reviewed By:	Sheet No.: A-1.05
Date: 2021-06-14	of 10
CAD File Name: THE RIDGE LOT 6 COMBINED.vwx	

1 LANDSCAPE PLAN
Scale: 1/8" = 1'-0"

THE CLIENT IS RESPOSIBLE FOR CHECKING ALL DIMENSIONS AND SHALLNOTIFYCEC OF ANY DISCREPENCIES. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. ALL WINDOW AND DOOR SIZES ARE APPROXIMATE AND THE MANIFACTURER SHALL SUPPLY THE BUILDER WITH ACTUAL ROUGH OPENING DIMENSIONS.

No.	Date	By	Revision Notes

No.	Date	Issue Notes
2	2021-06-17	ISSUED FOR VARIANCE

Coast Essential Construction

Design Firm

COAST ESSENTIAL CONSTRUCTION

UNIT 110
39279 QUEENS WAY
SQUAMISH BC V8B 0T5

Consultant

Project Title

THE RIDGE LOT 6
7508 PEBBLE CREEK DRIVE
PEMBERTON BC

Sheet Title

LANDSCAPE PLAN

Project Manager: REID MADIUK	Project ID: Project ID
Drawn By:	Scale: 1:1
Reviewed By:	Sheet No.: A-1.6
Date: 2021-06-15	of 10
CAD File Name: THE RIDGE LOT 6 COMBINED.vwx	

TITLE SEARCH PRINT 2021-06-17, 14:56:48

File Reference: Requestor: Martha McLellan

Declared Value $400000

CURRENT INFORMATION ONLY - NO CANCELLED INFORMATION SHOWN

Title Issued Under	STRATA PROPERTY ACT (Section 249)
Land Title District	KAMLOOPS
Land Title Office	KAMLOOPS
Title Number	CA8777455
From Title Number	CA6602026
Application Received	2021-02-17
Application Entered	2021-02-19

Registered Owner in Fee Simple

Registered Owner/Mailing Address: 1283735 B.C. LTD., INC.NO. BC1283735
BOX 2563
GARIBALDI HIGHLANDS, BC
V0N 1T0

Taxation Authority

North Shore - Squamish Valley Assessment Area
Pemberton, Village of
Pemberton Valley Dyking District

Description of Land

Parcel Identifier: 030-333-326

Legal Description:

STRATA LOT 6 DISTRICT LOT 211 LILLOOET DISTRICT STRATA PLAN EPS4695
TOGETHER WITH AN INTEREST IN THE COMMON PROPERTY IN PROPORTION TO THE UNIT ENTITLEMENT OF THE STRATA LOT AS SHOWN ON FORM V

Legal Notations

HERETO IS ANNEXED EASEMENT CA2874965 OVER LOT 2, PLAN EPP21848
AS TO PART FORMERLY LOT 3 PLAN EPP21848

HERETO IS ANNEXED EASEMENT CA6555927 OVER THAT PART OF STRATA LOT 7 LD STRATA PL EPS4695 SHOWN ON PL EPP78129

Charges, Liens and Interests

Nature:	EASEMENT
Registration Number:	CA2874965
Registration Date and Time:	2012-11-19 15:13
Remarks:	INTER ALIA APPURTENANT TO LOT 3, PLAN EPP21848, AS TO PART FORMERLY LOT 2 PLAN EPP21848

Nature:	COVENANT
Registration Number:	CA4950098
Registration Date and Time:	2016-01-26 17:04
Registered Owner:	VILLAGE OF PEMBERTON
Remarks:	INTER ALIA MODIFIED BY CA7195407

Nature:	STATUTORY RIGHT OF WAY
Registration Number:	CA5871774
Registration Date and Time:	2017-03-15 10:06
Registered Owner:	BRITISH COLUMBIA HYDRO AND POWER AUTHORITY
Remarks:	INTER ALIA AS TO PART FORMERLY LOT 2 PLAN EPP21848

Nature:	STATUTORY RIGHT OF WAY
Registration Number:	CA5871775
Registration Date and Time:	2017-03-15 10:06
Registered Owner:	TELUS COMMUNICATIONS INC.
Remarks:	INTER ALIA AS TO PART FORMERLY LOT 2 PLAN EPP21848

Nature:	COVENANT
Registration Number:	CA6513043
Registration Date and Time:	2017-12-14 15:57
Registered Owner:	VILLAGE OF PEMBERTON
Remarks:	INTER ALIA

Nature:	COVENANT
Registration Number:	CA6513049
Registration Date and Time:	2017-12-14 15:57
Registered Owner:	VILLAGE OF PEMBERTON
Remarks:	INTER ALIA

Nature:	COVENANT
Registration Number:	CA6513055
Registration Date and Time:	2017-12-14 15:57
Registered Owner:	VILLAGE OF PEMBERTON
Remarks:	INTER ALIA

Nature:	RESTRICTIVE COVENANT
Registration Number:	CA6513056
Registration Date and Time:	2017-12-14 15:57
Remarks:	INTER ALIA APPURTENANT TO PCL A (DD W34182F PL A21) DL 211 LILLOOET DISTRICT

Nature:	STATUTORY BUILDING SCHEME
Registration Number:	CA6555908
Registration Date and Time:	2018-01-09 14:58
Remarks:	INTER ALIA

Nature:	EASEMENT
Registration Number:	CA6555917
Registration Date and Time:	2018-01-09 14:58
Remarks:	INTER ALIA PART IN PLAN EPP78097 APPURTENANT TO THE COMMON PROPERTY STRATA PLAN EPS4695

Nature:	EASEMENT
Registration Number:	CA6555926
Registration Date and Time:	2018-01-09 14:58
Remarks:	PART IN PLAN EPP78129 APPURTENANT TO STRATA LOT 7 LD STRATA PL EPS4695

Nature:	MORTGAGE
Registration Number:	CA7093931
Registration Date and Time:	2018-09-27 16:37
Registered Owner:	379489 ONTARIO STREET HOLDINGS LTD. INCORPORATION NO. C0436510 AS TO AN UNDIVIDED 400/650 INTEREST
Registered Owner:	HARRY BING PARK JUNG LINDA GAIL JUNG AS TO AN UNDIVIDED 250/650 INTEREST AS JOINT TENANTS
Remarks:	INTER ALIA

Nature:	ASSIGNMENT OF RENTS
Registration Number:	CA7093932
Registration Date and Time:	2018-09-27 16:37
Registered Owner:	379489 ONTARIO STREET HOLDINGS LTD. INCORPORATION NO. C0436510 AS TO AN UNDIVIDED 400/650 INTEREST
Registered Owner:	HARRY BING PARK JUNG LINDA GAIL JUNG AS TO AN UNDIVIDED 250/650 INTEREST AS JOINT TENANTS
Remarks:	INTER ALIA

Duplicate Indefeasible Title	NONE OUTSTANDING
Transfers	NONE
Pending Applications	NONE

Coast Essential Construction

110 – 39279 Queens Way
Squamish, BC
V8B 0T5

604-366-8116
info@coastessential.com
coastessential.com

Letter to the Board of Variance:
7508 Pebble Creek Drive, Lot 6, The Ridge

June 30, 2021

Village of Pemberton
Box 100, 7400 Prospect Street
Pemberton, BC, V0N 2L0

Dear Board of Variance,

This letter outlines our rationale and justification for the vairance requests outlined below for the proposed residential construction at 7508 Pebble Creek Drive. This variance permit would cover the construction of a series of landscape reatining walls at the southern edge of the property taller than those currently permitted by Sections 4.13 and 7.21 of Village Zoning Bylaw No.832, 2018. With our intent being a design solution that we feel is preferable to a bylaw compliant alternative.

Section 4.13 (a) viii. allows a retaining wall to a maximum height of 1.2 meters (m) to be sited on any portion of a lot, and Section 7.21 (a) i. allows a retaining wall up to 1.2 m in height when measured from the average natural grade at it's base, and not within 0.6 m horizontally of any another retaining wall.

The folowing variances are being requested on the walls denoted on the plan and section drawings, and the table below:

- To vary Section 4.13 (a) viii. to allow for wall heights greater than the 1.2 m (3.94 ft) allowed to a maximum of 1.86 m (6.10 ft), a maximum relaxation of 0.66 m (2.12 ft), to be sited on the lot in general complicance with location on the Site Plan A-01.2 and Site Section A-01.4, 2021-06-17, or in a location approved by Building Permit; and
- To vary Section 7.21 (a) i. to relax the maximum height of a retaining wall, from 1.2 m (3.94 ft) to maximum of 1.86 m (6.10 ft), a a maximum relaxation of 0.66 m (2.12 ft).

	Maximum Height from Average Natural Grade	**Relaxation Requested**	**Maximum Exposed Face of Wall Showing on Completion**
Wall 2 (Blue)	1.31 m (4.29 ft)	0.09 m (0.29 ft)	1.22 m (4.00 ft)
Wall 3 (Purple)	1.86 m (6.10 ft)	0.66 m (2.12 ft)	1.22 m (4.00 ft)

Coast Essential Construction

110 – 39279 Queens Way
Squamish, BC
V8B 0T5

604-366-8116
info@coastessential.com
coastessential.com

The proposed walls have been designed in conjunction with input from our geotechnical engineers for the project, their independent review and recommendations for our design are submitted alongside this request, and designed in a manner that we feel matches the existing contours of the lot more so than would have been possible when constructing a bylaw compliant arrangement.

We feel the plan presented provides an aesthetically suitable solution which matches the natural conturs of the landscpae and is inline with the Village of Pemberton's Hillside Development Design Guidelines (April 2020). Whilst the current bylaws, which allow for a single retaining wall to a maximum of 1.2 m in height, not located within 0.6 m horizontally of any other retainng wall, or 1V:0.5H, presents design constraints which make the creation of retaining walls matching natural conturs difficult to achieve without arriving at a staircase-like solution.

Additionally, our submitted plan creates a greater amount of usable property in the form of a flatter, less tiered, landscpae design which improves accessibilty around the proposed dwelling. It also allows for efficient and effective distribution of existing fill material within the lot, reducing the need for removal of spoil during excation and importing of replacement fill for backfilling later on, both of which minimising the project's need for heavy vehicle traffic.

In conjunction with this letter and our appilcation we have also submitted the following information in relation to this variance request:

- A completed application form
- A site plan
- Retaining wall design drawings
- Retaining wall and landscape plan visual renderings
- Geotehcnical review and design guidance
- A landscape plan
- A landscape cost estimate
- Certificate of title, dated 2021-06-17
- Owners Authorization Form
- Site photos (included below)

As a reference for council, we are also submitting a similar development variance permit request for the adjacent property, 7510 Pebble Creek Drive, which shares an owner with this lot. The two properties will employ a similar aesthetic in their landscape retaining design, with the extent of retaining varying to account for the individual lot characteristics.

110 – 39279 Queens Way
Squamish, BC
V8B 0T5

604-366-8116
info@coastessential.com
coastessential.com

Figure 1 – Photo from within lot showing current conditions and steepness of grade.

Figure 2 – Current conditions at southeastern property line looking northwest. Show the lot's steep banks and tiered topography at present.

110 – 39279 Queens Way
Squamish, BC
V8B 0T5

604-366-8116
info@coastessential.com
coastessential.com

Figure 3 – Current conditions at southeastern corner of the property line looking west. Steep banks and vegetation growth alongside the access road at the rear of the property

Figure 4 – Midpoint of southern property line facing north.

Coast Essential Construction

110 – 39279 Queens Way
Squamish, BC
V8B 0T5

604-366-8116
info@coastessential.com
coastessential.com

Figure 5 – Neighbouring Lot 7, facing west showing relative scale of a neighbouring property's retaining. Example of existing wall more than 1.2m in height.

Figure 6 – Local retaining wall example 1 of 6. Example of well executed terraced walls. Location: The Ridge.

110 – 39279 Queens Way
Squamish, BC
V8B 0T5

604-366-8116
info@coastessential.com
coastessential.com

Figure 7 – Local retaining wall example 2 of 6. Walls over height but including terrace for planting. Location: main access to The Ridge.

Figure 8 – Local retaining wall example 3 of 6. Example of how each row of gabions step back to easily achieve a 1H:1V slope. Location: main access to The Ridge.

110 – 39279 Queens Way
Squamish, BC
V8B 0T5

604-366-8116
info@coastessential.com
coastessential.com

Figure 9 – Local retaining wall example 4 of 6. Example of 1H:1V slope. Although considered acceptable, this solution is not aesthetically pleasing, and prone to erosion. Terraced retaining provides better vegetation cover, less erosion, and a more pleasing appearance. Viewed from Sunstone Development.

Figure 10 – Local retaining wall example 5 of 6.
Example of an unretained slope. Viewed from Sunstone Development.

Coast Essential Construction

110 – 39279 Queens Way
Squamish, BC
V8B 0T5

604-366-8116
info@coastessential.com
coastessential.com

Figure 11 – Local retaining wall example 6 of 6. Developer built wall in Sunstone for road access. As all hillside developments will require road access, so do homes. Lots sloping in two directions require retaining across the slopes from a high wall to a low wall in order to use the lot efficiently.

PEBBLE CREEK DRIVE
SRW PLAN EPP77793

SL 37

SL 36

SL 5

SL 6

SL 7

SL 8

SL 8

EASEMENT PLAN EPP78129

142°22'09"
66.76'

142°22'09"
165.89'

135°33'34"
98.48'

180°00'22"
102.83'

222.89'
205°44'40"

180°00'22"
207.98'

177°42'24"
179.11'

208.03'
136°15'13"

155.92'
136°15'13"

7.5m FRONT SETBACK

3.0m SIDE SETBACK

15.0m REAR SETBACK

STRATA PLAN EPS4695

DL 211

SL 5
SERVICE

REM B
PLAN EPP74427

EPP78097

SCALE 1/16" = 1'

20 0 20 40 60

LEGEND:

- ROAD SHOULDER
- C/L ROAD
- TOP BANK
- TOE BANK
- C/L DITCH
- TOP ROCK WALL
- BOTTOM ROCK WALL
- CULVERT
- ELECTRICAL MANHOLE (H)
- SANITARY MANHOLE (SAN)
- WATER VALVE (WV)
- SANITARY SERVICE (S)
- HYDRO/TEL STUB (HY)
- UTILITY BOX (T)
- TREE DIA. > 6"

STRATA LOT 6

PID # : 030-333-326

CIVIC ADDRESS : 7508 Pebble Creek Drive, Pemberton, BC

CHARGES, LIENS AND INTERESTS : CA2874965, CA4950098, CA5871774, CA5871775, CA6513043 CA6513049, CA6513055, CA6513056, CA6555908 CA6555917, CA6555926, CA7093931, CA7093932

STRATA LOT 7

PID # : 030-333-334

CIVIC ADDRESS : 7510 Pebble Creek Drive, Pemberton, BC

CHARGES, LIENS AND INTERESTS : CA2874965, CA4950098, CA5871774, CA5871775, CA6513043 CA6513049, CA6513055, CA6513056, CA6555908 CA6555917, CA6555927, CA7093931, CA7093932

NOTES:
BEARINGS ARE GRID, DERIVED FROM STRATA PLAN EPS4695

DISTANCES & ELEVATIONS ARE IN FEET UNLESS OTHERWISE NOTED

ELEVATIONS ARE ORTHOMETRIC, DERIVED FROM STATIC GPS OBSERVATIONS USING THE HT 2.0 GEOID MODEL.

FIELD WORK WAS COMPLETED ON FEBRUARY 15th, 2021

CONTOUR INTERVAL IS 2.0'

SETBACK INFORMATION OBTAINED FROM SCHEDULE D OF STRATA DOCUMENTS. MUST BE CONFIRMED WITH VILLAGE OF PEMBERTON

THIS TOPOGRAPHIC PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROFESSIONAL REFERENCE MANUAL. CERTIFIED CORRECT ON THE 15th of FEBRUARY, 2021

_____ B.C.L.S.

"THIS DOCUMENT IS NOT VALID UNLESS ORIGINALLY SIGNED AND SEALED"

REV	DESCRIPTION	DATE	DRAWN
–	INITIAL	FEB 18/21	MV

TOPOGRAPHIC PLAN

OF STRATA LOT 6 AND 7, DL 211, LILLOOET DISTRICT STRATA PLAN EPS4695

SCALE	SIZE	JOB	SHEET	FILE
1/16":1'	ANSI D	J21006	1 OF 1	T21007D