

## GEOTECHNICAL MEMORANDUM

**Project No:** 12018-1

**Project:** Geotechnical Assessment

**Project Address:** 7235 Wallace Drive – C.Saanich, BC

**Date:** July 9, 2024

**Client:** Silver Rill Corn

**Contact:** Clayton Fox

**Email:** clayton@silverrillcorn.com

### RE: PROPOSED SOIL DEPOSIT PERMIT

As requested, we attended the referenced site on April 17, 2024, to review the site conditions and discuss potential fill placement as required for geotechnical review in support of a Soil Deposit Permit, pursuant to *Central Saanich Bylaw No 1554*. Our associated observations, comments and recommendations in this regard are contained herein. Our work has been carried out in accordance with, and is subject to, the accepted Terms of Engagement.

#### SITE CONDITIONS AND PROPOSED SOIL DEPOSIT

The approximately 7.8 Ha site is located within the central area of Central Saanich, is designated as ALR land use (Zoned A1), and is generally bounded by Wallace Drive to the north, rural residential/farmland to the east and west, and a road right-of-way to the south. The terrain is relatively flat, to gently sloping, from north to south. The proposed development of the site is located within the northcentral area to the east of an existing agricultural storage building.

Based on site discussions, the proposed work being considered is to elevate the grade in the order of 1.0 m within an area not exceeding 1000 m<sup>2</sup>, which we understand is the threshold for Agricultural Land Reserve exemption. The fill area is shown on the attached design drawings with a footprint of 27 m by 37 m (999 m<sup>2</sup>).

At the time of our visit, we observed several test pits had been excavated throughout the area of the proposed footprint in advance of our attendance. The soils present within the test pits were relatively consistent across the area and consisted of approximately 0.3 to 0.5 m of dark brown, organic silty topsoil over native brown/grey, moist to wet, firm clayey silt, with variable sand. Several of the pits had standing water up to 0.3 m depth, being deeper where the pits had extended below the topsoil/silt horizon. The attached select site photographs show the relatively uniform conditions.

Based on the proposed area for fill placement we estimate an imported volume of approximately 1375 m<sup>3</sup> once surficial organic soils (to be kept on site) have been removed over the native clay mineral soils (assumed removal depth 0.5 m). Pursuant to *Central Saanich Bylaw No. 1544 Section 4*, a soil deposit permit would be required for the proposed imported fill placement.

For the permit approval the bylaw states the following information must be provided in the submission:

*Every application for a Permit shall be accompanied by detailed plans, data, and specifications for the proposed site prepared by a Professional Engineer to a scale of not more than 1:1000, showing the contour of the ground in its current state with vertical contours at such intervals as the Engineer may determine, according to reasonable engineering standards, and shall contain the following information regarding the proposed Soil Removal or Deposit Area, the form and sufficiency of which must be to the satisfaction of the Engineer, {Bylaw No. 1776, 2012} except to the extent that the Engineer determines that the information is not reasonably necessary in view of the scale or location of the proposed soil removal or deposit: {Bylaw No. 1934, 2018}*

*a. all pertinent features including buildings, structures, tree cover, roads, lanes, bridges, and natural watercourses;*

*b. the proposed slopes which will be maintained upon completion of the Soil deposit or removal operation, including information on the angle of repose of finished slopes; {Bylaw No. 1719, 2010}*

*c. the proposed methods to control the erosion of the banks of the excavation or fill;*

*d. the proposed methods of drainage control during the excavation or fill;*

*e. the proposed methods and locations of access to the site during the excavation or fill;*

*f. the proposed contour of the ground in its final state upon completion of the operation with vertical contours as specified above and showing the method of access and methods of permanent drainage on a separate plan, including an analysis of the impact of the proposed work on local drainage patterns and the consistency of the proposed work with the District's Integrated Stormwater Management Plan, prepared by a certified hydrologist or other professional specified by the Engineer; {Bylaw No. 1719, 2010}*

*g. the proposed location of machinery, buildings, scales, and all other proposed structures and improvements;*

*h. the proposed location of Buffer Zones and tree cover, and the location and grade width of berms;*

*i. water table elevations;*

*j. the proposed method of extraction and processing, including sorting, washing, crushing, and any other proposed processing activities;*

*k. the proposed schedule for the removal or deposit of soil, indicating the amounts to be either removed or deposited on a weekly basis;*

*l. the proposed routes over District highways (roads) to and from a Soil Removal or Deposit Area;*

*m. a Traffic Management Plan, prepared by a Professional Engineer or other professional specified by the Engineer, which would include but not be limited to a description of the frequency of trucks, signage, placement of safety control devices, traffic control measures that will minimize the disruption created and other information related to traffic safety in the surrounding area as determined by the Engineer, taking into account the scale and location of the proposed soil removal or deposit; and (Bylaw No. 1934, 2018)}*

*n. in the case of proposed deposit on or removal from ALR Land, information on the past and proposed farming activity of the applicant, the relationship of the deposit or removal to existing or proposed farming activity on the land including an assessment of the origin of any deposited soil and its impact on the agricultural capability of the land, and including a farm plan or similar report specified by the Engineer prepared by a certified agrologist or other professional specified by the Engineer, identifying the positive benefit of the proposed deposit or removal to agriculture. {Bylaw No. 1719, 2010}*

In accordance with the above, we have prepared engineered drawings in support of the soil deposit permit. The drawings were prepared based on available information and are only applicable for the proposed fill placement. At this time, there are no specific plans for the source of the proposed fills for importing and therefore a traffic management plan has not been prepared, however, based on the rural setting and site access conditions it is anticipated that traffic management would not generally be necessary unless the rate of material import is atypical.

We consider the proposed fill placement to be feasible from a geotechnical perspective and that such will not alter the existing stability or drainage conditions at the site.

If there are any questions or comments with respect to the above, please contact us.

Regards,  
Ryzuk Geotechnical

Andrew Jackson, P.Geo. P.Eng.  
Lead Geoscientist / Engineer

PTPN: 1002996

Attached – Soil Deposit Permit Drawings

*The above does not constitute approval to proceed with the noted work if such is perceived to be an extra to a Contract, or if the work requires approvals/permits from approving authorities.*



Northern portion of area looking east from northwest corner

*The above does not constitute approval to proceed with the noted work if such is perceived to be an extra to a Contract, or if the work requires approvals/permits from approving authorities.*





Southern portion of area looking east from southwest corner

*The above does not constitute approval to proceed with the noted work if such is perceived to be an extra to a Contract, or if the work requires approvals/permits from approving authorities.*





Typical shallow test pit into native clay with ponded water

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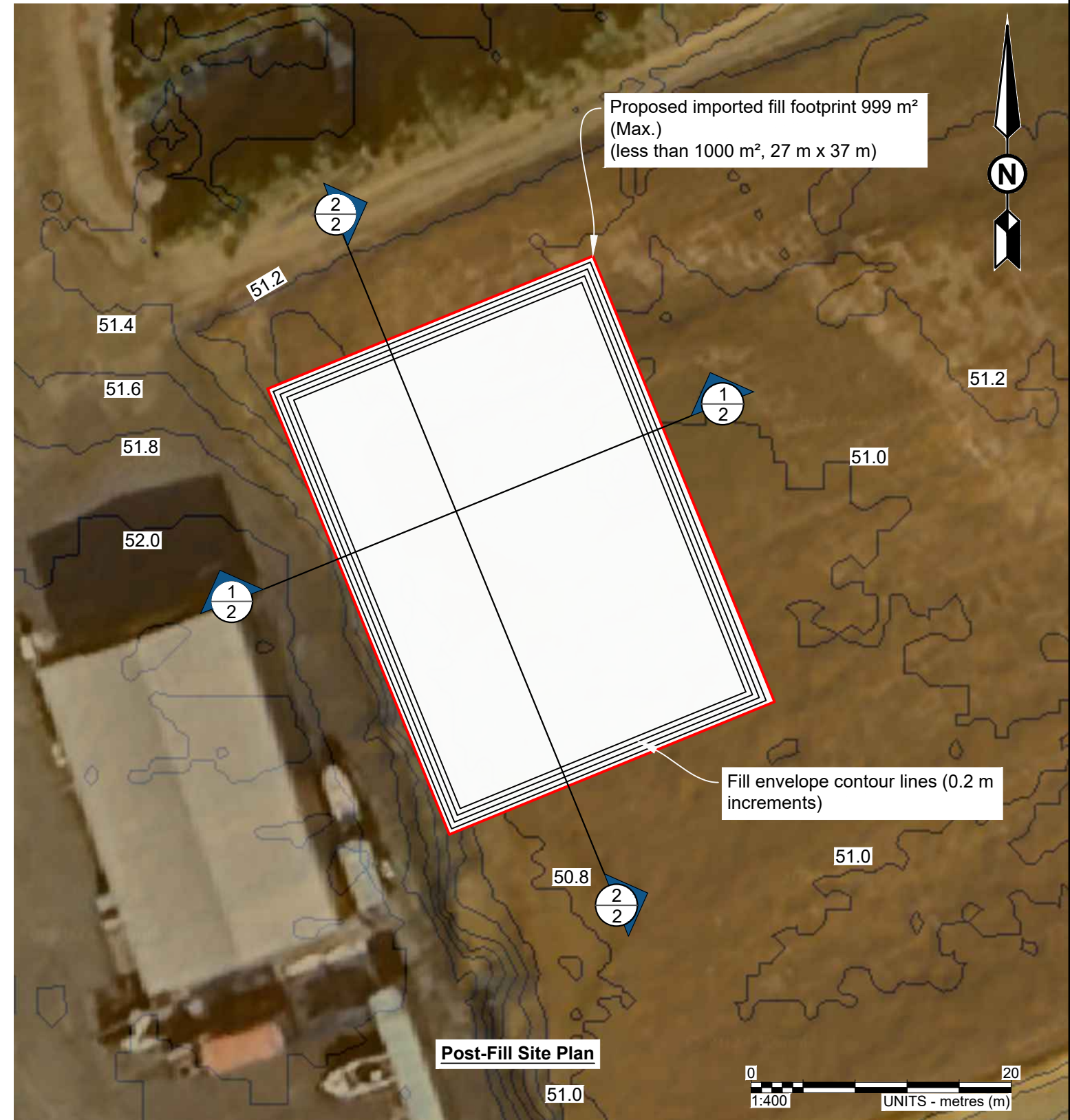
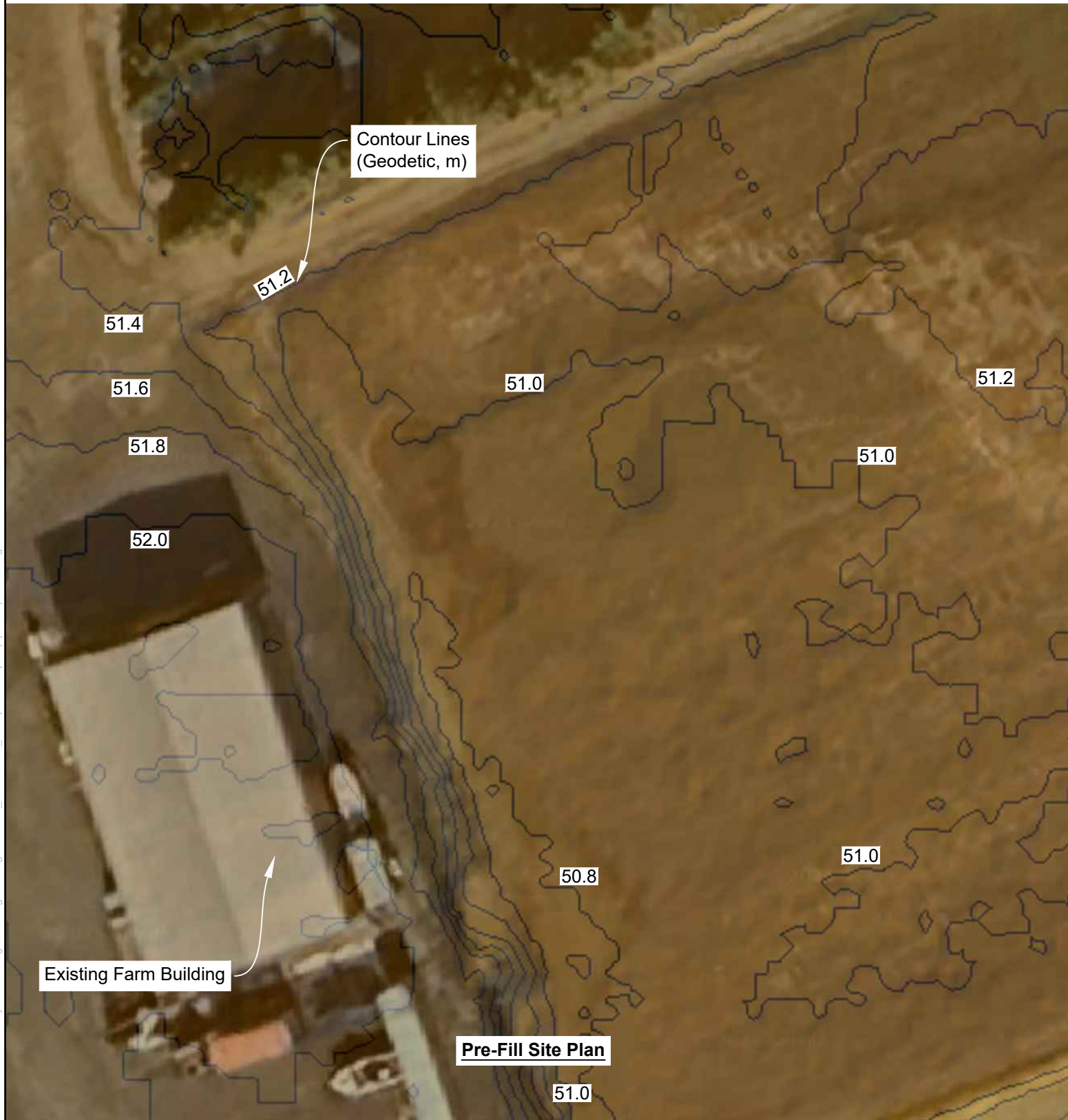




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**NOTES**

1. This drawing is scaled for 11x17 sheet and does not require further scaling to fit. Scales will differ if printed on different sheet size.
2. Background terrain imagery taken from LIDAR and modified in HEC-RAS v 6.5.
3. Refer to Ryzuk report dated May 10, 2024 for project scope and details.

**RYZUK**  
GEOTECHNICAL  
ENGINEERING & MATERIALS TESTING

#6-40 CADILLAC AVENUE - VICTORIA, BC V8Z 1T2  
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mail@ryzuk.com

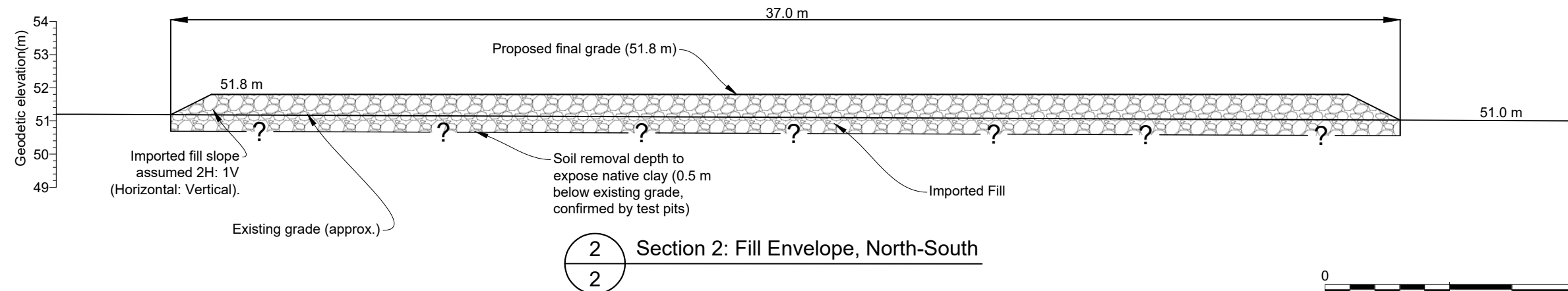
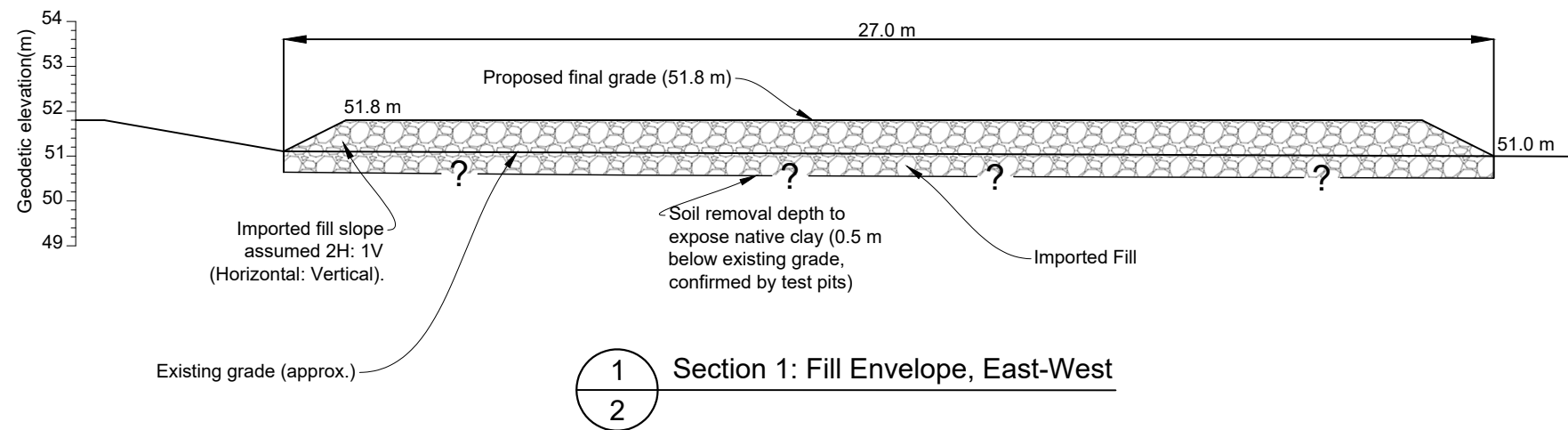
REV.	DESCRIPTION	YY/MM/DD	DRAWN BY
1	ISSUED FOR PERMIT REVIEW.	24/07/09	JBAL
0	ISSUED FOR PERMIT REVIEW.	24/06/13	JBAL

SEAL

PTPN: 1002996

PROJECT No.	12018-1	CLIENT	Silver Rill Corn
FOR/LEAD	ARJ	PROJECT TITLE	Geotechnical Assessment
REVIEW		PROJECT ADDRESS	7235 Wallace Drive - Central Saanich, BC
SCALE	1:400	DRAWING PACKAGE	Fill Deposit Plan
SHEET No.	01 of 02	SHEET NAME	Pre/Post Fill Site Plan

R:\Ryzuk Data\8-12000 to 8-12999\12018-1 7235 Wallace Drive\Working Drawings\12018-1\_2024-07-02\_fill\_deposit\_site\_plan(updated).JBAL.dwg



Notes:

- 1.0 Terrain contours taken from LIDAR and modified in HEC-RAS v 6.5.
- 2.0 Source: LiDARBC file: bc\_092b053\_xl1m\_utm10\_2019.tif  
Year: 2019  
Spacing: 1.0 m
- 3.0 Additional LiDAR data specifications, data quality, and data retrieval dates can be found from the following link:  
[https://www2.gov.bc.ca/assets/gov/data/geographic/topography/elevation/specifications\\_for\\_digital\\_elevation\\_models\\_for\\_the\\_province\\_of\\_british\\_columbia\\_30.pdf](https://www2.gov.bc.ca/assets/gov/data/geographic/topography/elevation/specifications_for_digital_elevation_models_for_the_province_of_british_columbia_30.pdf)

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EOR/LEAD	ARJ	PROJECT TITLE	Geotechnical Assessment
REVIEW		PROJECT ADDRESS	7235 Wallace Drive - Central Saanich, BC
SCALE	1:150	DRAWING PACKAGE	Fill Deposit Plan
SHEET No.	02 of 02	SHEET NAME	Section View

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