September 10, 2022 GES Project No. 22011

Attention: Halfmoon Bay Living Ltd

Re: **FOLLOW-UP GEOTECHNICAL & HAZARD ASSESSMENT REPORT**
**UNDEVELOPED PROPERTY**
**TRUMAN ROAD, HALFMOON BAY, BC**

## 1.0 Introduction

As requested, GES Geotech Inc. (GES) conducted a second (follow-up) site reconnaissance on August 3, 2022. The first site reconnaissance took place on May 2, 2022, and its report has already been issued to the Client. Authorization to Proceed with this second site reconnaissance and reporting was provided by our Client, Will Dong, PEng, via text messages dated August 1, 2022.

## 2.0 Scope of Work

The second (follow-up) site reconnaissance was carried out by GES on August 3, 2022, to provide more detailed geotechnical information, focusing on lots located on Ross Road. The assessment included a site walkover and site reconnaissance, with particular focus on reviewing the existing site conditions along Ross Road. In addition, the information contained in the 1982 Golder Report was closely scrutinized, and pertinent information has been included in a site plan in this report for the sake of completeness.

## 3.0 Site Reconnaissance and Findings

We started our August 3 site visit by carrying out a walkover survey along Ross Road; see Figure 2. Once we reached the end of the subject property line, we hiked up to investigate the upper lots; see Figure 3. After that, we went over the lots along Truman Road; see Figure 1. Figure 4 shows the information included in Figures 1, 2 and 3, thus easing reference to all the pertinent geotechnical information collected and summarised from our August 3 detailed site reconnaissance.

During this site reconnaissance, we came across two test pits with a depth of around 3′ below ground surface (BGS) that had been excavated by others in the past, at some point in time prior to our arrival at the site. Neither of these two test pits was excavated by GES. After investigating the subsoils profiles at these two test pits, we found evidence of previous

historical rock sliding and general ground movement. The subsoils of these two test pits consisted of sands, gravels, and cobbles; see Photos 5 and 6 in Figures 2-3. Later, based on anecdotal information received from Will Dong (PEng), we were made aware that these test pits were dug to complete percolation testing.

Furthermore, on August 25, 2022, we received anecdotal information from Will Dong (PEng) regarding some construction done in the 90s, as well as percolation testing completed by INF Planning and Design Corporations (INF).

INF completed percolation testing on September 16, 2021 with Sunco Civil Consulting Ltd. 11 holes were dug to over 4′ deep. The results of the percolation testing show that the soil found was sandy gravel with a percolation rate of 2″ per minute.

Attached herein are also two maps of all the information provided by the map included in the 1982 Golder Report, the details of which were reviewed and verified; see Figures 5 and 6.

## 4.0 Limitations

The recommendations presented in this report are based on GES's interpretation and understanding of the site conditions, the two test pits that had been excavated by others in the past, and information provided by our Client for the proposed development. To properly understand the suggestions, recommendations and opinions expressed in this report, reference must be made to the report in its entirety. We cannot be responsible for use, by any party, of portions of the report without reference to the whole report.

## 5.0 Closure

This report has been prepared following generally accepted geotechnical engineering principles and practice. The main purpose of this report was to describe the subsurface soil and groundwater conditions and to provide Geotechnical Recommendations for the subdivision of the subject lot. This report has been completed for the exclusive use of Halfmoon Bay Living Ltd for their project located Truman Road, Halfmoon Bay, BC. Any use of the information contained in this report by third parties or for other than the intended purpose must first be approved in writing by GES.

We trust the information presented in this report meets your immediate requirements. Should you have any questions please do not hesitate to contact us.

**GES GEOTECH INC** – A Slate Holdings Company
EGBC Permit: 1001508

Prepared by:

Erfan Adeshi

Erfan Adeshi
Engineering Intern

Reviewed by:

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
Dr. M. MAHMOUD
# 23412
2023-09-13
EGBC Permit 1001508

Mahmoud Mahmoud, PhD, PEng, FEC, FGC (Hon.)
President

Attach:
- Figures 1-6

EA/MM/ea

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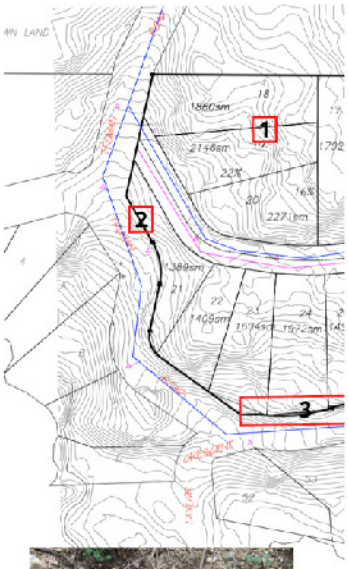
1 Rock terraces

2 Rock scarps. Evidence of significant potential for a future rock slide.




3 Rock scarps. Evidence of significant potential for a future rock slide. Joints present (Marked pink on the previous plan provided by GES, June 24, 2022)

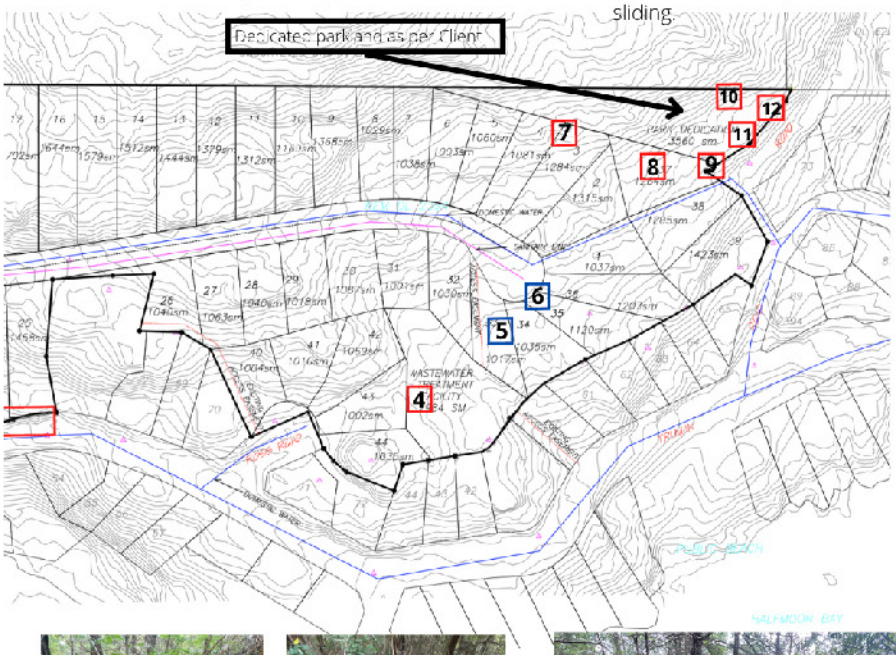
4 Broken rocks from previous human activity* and/or previous ground movements

5 Excavation pit (done by others) consisting of cobbles, gravels and sands

Figure 1: Map of the subject. Overlay done by GES.

12 Broken rocks from previous human activity* and/or previous ground movement.

11 As per Golder (1983): "Slope treatment is needed." GES concurs with this recommendation. More broken rocks, indicative of previous rock sliding.



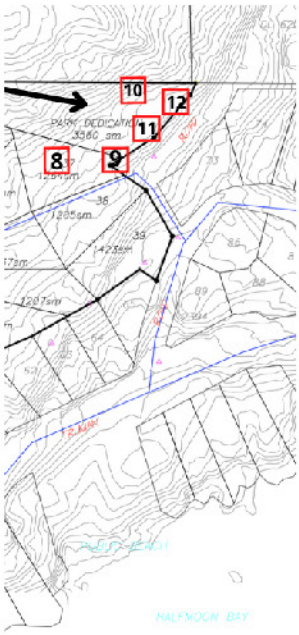

6 Excavation pit. (done by others). Consisting of cobbles, gravels and sands.

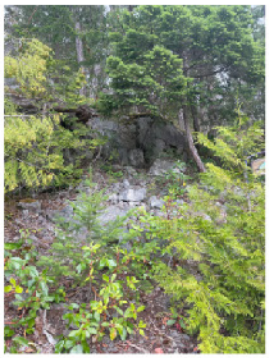
7 Evidence of previous rock slide

*Base

Figure 2: Map of the subject. Overlay done by GES.

**10** Gulley featuring remnant boulders from previous rock sliding



**9** Broken rocks from previous rock sliding

**8** Rock outcrops

Figure 3: Map of the subject. Overlay done by GES.

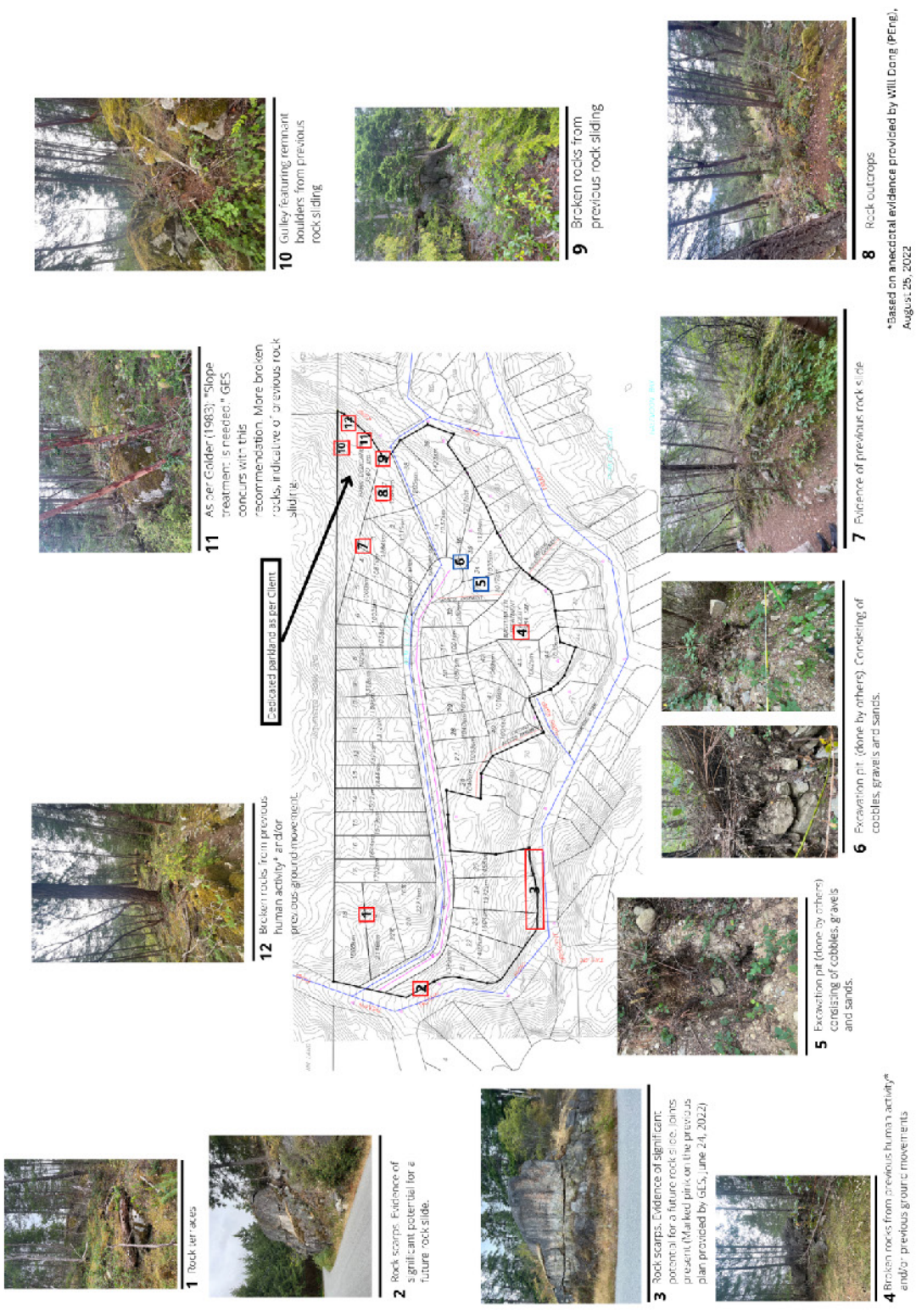



Figure 4: Map of the subject site (incorporating Figures 1-3).
Overlay done by GES.

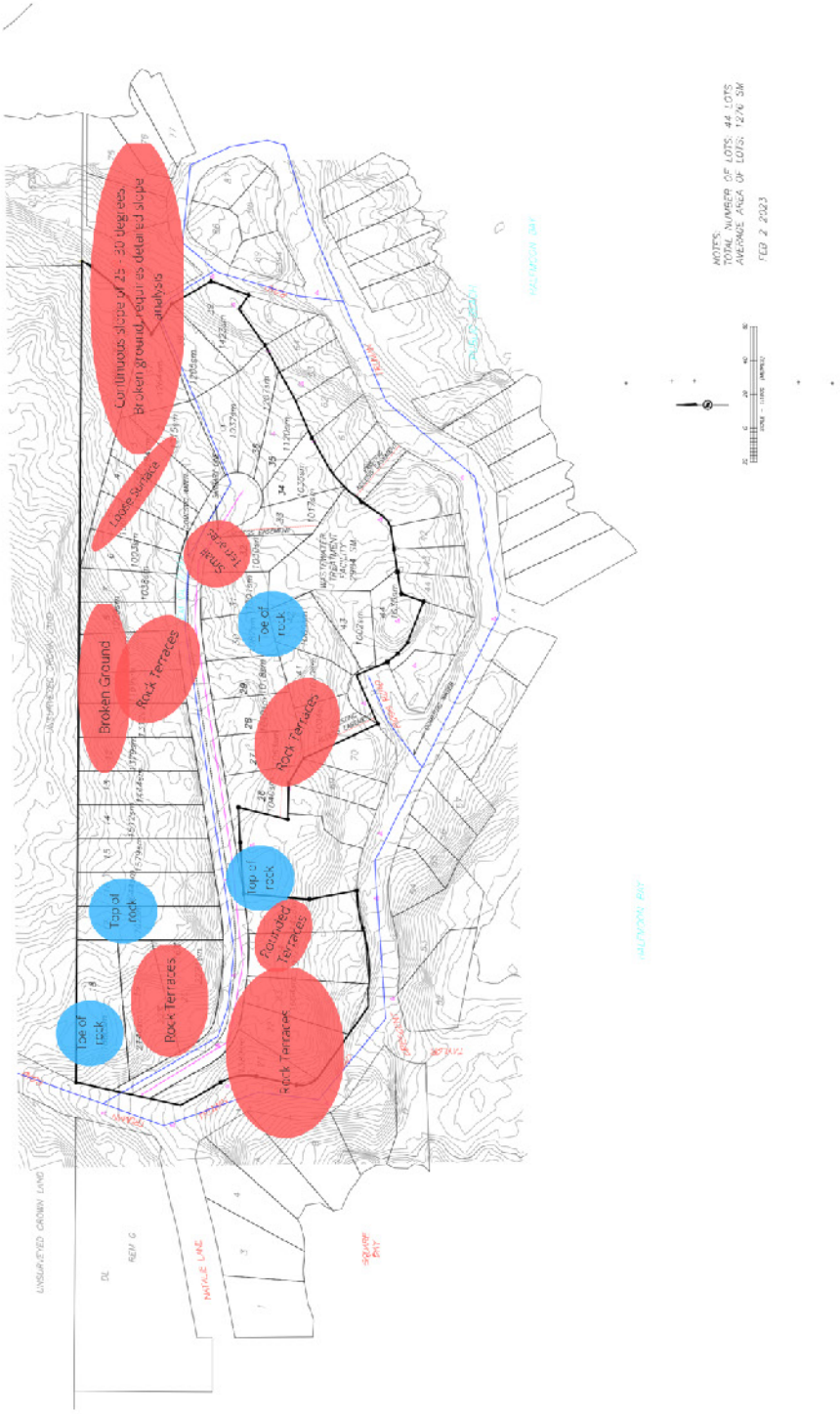



Figure 5: Enhanced version of the 1982 Golder Map, as summarized and verified by GES.

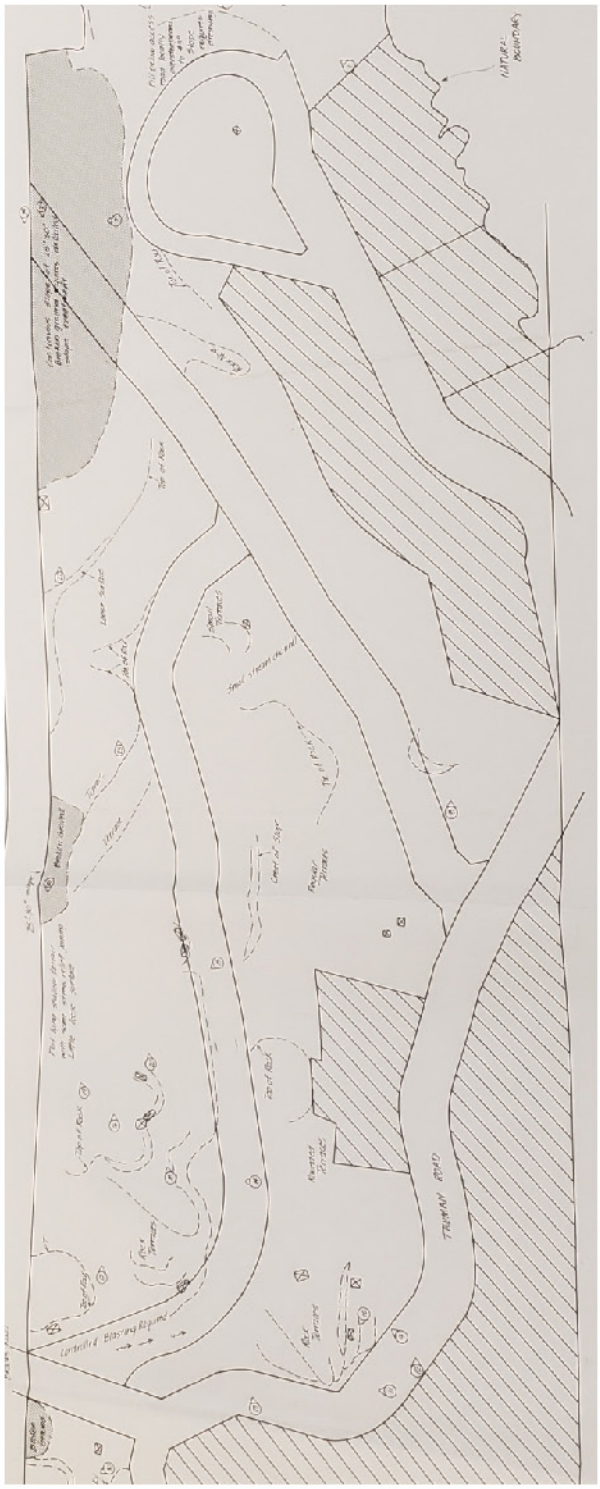



Figure 6: Original Copy of the 1982 Golder Map,
showing Pertinent Geological Features Mapped by Golder.