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TECHNICAL MEMORANDUM

CLIENT:	Pleasant Valley MHP Inc.	**FILE NO.:**	21587
PROJECT:	Mobile Home Park Expansion	**DATE:**	01/09/2022
ADDRESS:	4701 Pleasant Valley Road, Vernon, BC		

Purpose: Development Feasibility Review – *Revision 2*

Observations: GeoPacific was onsite with Bill Smith on 07/07/2022 for a site meeting for review of the proposed development scope and site topography.

The proposed development site is located on or below the slope north of the existing Pleasant Valley Mobile Home Park, adjacent to and south of the north property line. The slope descends from north to south and generally runs south west, along the north property line. The slope is up to 15 m tall, generally increasing in height from west to east, and approaches a grade as steep as 1H:1V in localized areas.

We understand the proposed development consists of up to 22 more mobile home lots with up to 200 m of new road developed across two phases. The first phase is to include 12 units at the east half of the proposed development area. It is understood the units will be accessed by the existing internal roads within the park. Secondary access will be provided from the new laneway that runs through the Silver Star Gateway commercial development off of Silver Star Road. It is understood that grading changes will be required to allow for suitably sized flat mobile home pads with minor permanent cuts, fill slopes up to ~5.0 m tall, and possibly retaining walls.

The proposed development area is generally located on the side of a hill with variable grades. Lots at the east end of the site are generally on a flat platform above the crest of the slope, lots within the middle of the site are generally on a sidehill, and lots to the west of the site are generally below the slope, away from the toe.

Based on our experience in the area, and on the neighbouring site to the north the subsurface soil conditions are expected to consist of fill soils over loose to compact sands and gravels, followed by stiff clay dominant soils, which are then underlain by dense glacial till at depth. It is possible that the hillside is partially overlain by deleterious pre-existing fill soils to a limited depth as observed on the neighbouring site nearby.

Conclusions & Recommendations: Based on cursory review of the site and proposed development scope, the project is expected to be possible and feasible from a geotechnical perspective. There are no immediate geotechnical concerns that would cause the overall development to be infeasible; however, some geotechnical considerations will be required for slope stability.

A site-specific geotechnical investigation is required prior to finalization of geotechnical comments or design development. Test pits should be advanced throughout the development area through any surficial fill to determine the depth of the underlying competent stratum and its parameters. GeoPacific can provide a budget proposal for the detailed geotechnical investigation upon request. The investigation would be followed by a detailed geotechnical report making assessments and recommendations for design and construction of the development. The geotechnical report should be supplemented by a slope stability analysis to confirm the proposed slope conditions are stable with respect to seismic and static conditions in compliance with the EGBC Legislated Landslide Assessment Guidelines.

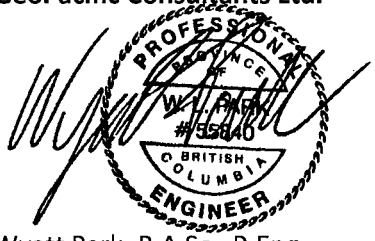
Due to the sloping nature of the site and the need for grading changes, a detailed grading plan for the proposed condition should be prepared by a qualified professional civil engineer. This grading plan should be forwarded to GeoPacific for review and incorporation into slope stability analysis and geotechnical report. GeoPacific recommends that for *conceptual/preliminary* grading plan preparation, the civil grading designer consider fill slopes not exceeding 2H:1V and permanent cut slopes not exceeding 3H:1V. Slope angles to be confirmed upon subsurface investigation and slope stability assessment. *Steeper cut and fill slopes can be considered on a case-by-case basis and could require stabilization measures such as rip rap facing.* It is anticipated that retaining walls can be used to achieve any grade changes that exceed the noted slope angles. GeoPacific can provide design for mechanically stabilized earth retaining walls upon request.

Preliminarily, living structures placed below existing slopes should be setback from the toe of the slope such that they are above a 2.5H:1V line drawn down from the crest of the adjacent slope. Setbacks must be confirmed based on the subsurface geotechnical investigation and detailed slope assessment.

Summary of Recommended Next Steps:

- Preliminary grading plan prepared by civil engineer (Others)
- Test pit investigation (GeoPacific)
- Slope stability analysis based on civil grading plan (GeoPacific)
- Detailed geotechnical report (GeoPacific)

Sincerely,
GeoPacific Consultants Ltd.



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Permit to Practice EGBC
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