DEVELOPMENT PERMIT WITH VARIANCES NO. 3-25

To: **Rodrick Leonard Harris**
[redacted] Castlegar, BC V1N 4K6

1. This Permit is issued subject to compliance with all the bylaws of the Municipality applicable thereto, except as specifically varied or supplemented by this Permit.

2. This Permit applies to and only to those lands within the Municipality described below, and all buildings, structures, and other development thereon (the "Land") and located as shown on Schedule 1:

Lot 16 District Lot 7174 Kootenay District Plan 2043 Except (1) Parcel A (See 67683I) and (2) Part Included in Plan 5434 (PID: 012-395-021)

3. This Permit authorizes the construction of a Warehouse – Small as shown in the schedules of this permit, subject to the conditions, requirements and standards imposed and agreed to in this Permit.

Variances

4. The City of Castlegar Zoning Bylaw No. 1428, 2024 is hereby varied as follows:

a) 7.11.5. iv) a) Minimum Setbacks - Rear Setback to Lot Line for **principal building:** from 6.0m to 1.6m, as shown on Schedule 2.

b) 8.4.4. Off-Street Parking Spaces within a Front Yard in the C3 and C4 Zones – Setback: from minimum 2.0m to: varies from 2.0m to 0.8m as necessary to accommodate minimum parking space and aisle widths, as shown on Schedule 2.

c) 8.12.1 Table 6: Parking Space Requirements - Industrial Uses - Warehousing & Storage Facilities: from 12 to 4 parking spaces, one of which being an accessible parking space.

Conditions of Permit

5. The Permittee, as a condition of the issuance of this Permit, agrees that:

a) The site will be developed in accordance with the recommendations contained in the **Geotechnical Report** prepared by Zeberoff Engineering Ltd stamped March 24, 2025, attached to and forming part of this permit as Schedule 4, including but not limited to the following:

i. The footings are excavated to a minimum depth of 30in from existing grade elevation; and that,

ii. The native material of the footing excavation is compacted with a minimum 500lb compactor prior to placement of concrete formwork.

b) The development substantially conforms to the **Exterior Elevations** prepared by Exciting Home Plans dated May 14, 2025, as shown on pages A5 & A6, included as Schedule 3, including but not limited to:

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i. Exterior finishing materials shall consist of FireSmart materials as follows:

- Metal vertical siding on the building face;
- Stucco exterior on the interior and rear building faces;
- Stone masonry veneer accent on the lower portion of the front building face and wrapped around the interior sides;
- Stone masonry veneer finishing on the front columns with wood accent brackets;
- Prefinished aluminum trim and soffits.

ii. The **Building Façade** shall be generally in accordance with the colours and textures in the renderings as shown on the 3D Exterior Rendering dated October 24, 2024.

c) The development substantially conforms to the **Site Plan** prepared by Exciting Home Plans dated May 14, 2025 included as Schedule 2, including but not limited to:

i. **Parking** shall be provided in accordance with the Site Plan, including but not limited to the following:

- **Curbs and wheel stops** shall be provided to protect landscape strip areas and internal sidewalks from overhanging vehicles, in accordance with 8.7.7. of the City of Castlegar Zoning Bylaw 1428, 2024.

ii. **Landscaping** shall be in accordance with the Site Plan and the following conditions of permit:

- Pedestrian considerations shall be provided, including provision of **internal sidewalk**, as detailed;
- **Landscape strips** shown along the frontage with 6th Avenue shall be filled and maintained with decorative rock 3-6 inches in diameter, of a sufficient volume to deter the growth of vegetation, in satisfaction of regulation 8.4.4 of City of Castlegar Zoning Bylaw 1428, 2024;
- **Fencing** may be provided along the north, east and south lot lines to enclose the rear and side yards. Such fencing shall be black chain link or better and shall comply with 4.2.1.b) and 4.2.5 of the City of Castlegar Zoning Bylaw 1428, 2024;
- **Performance Security** for landscaping shall be provided prior to issuance of building permit. A quote for materials and labour based on industry standard costs shall be provided to the City for calculation of the security. The security will be calculated and held in accordance with Part 7 of the Development Procedures and Fees Bylaw 1418, 2024.

d) **Garbage & Recycling** shall be centralized on the site, either incorporated into the building or be wildlife proof and attractively screened from the street, in accordance with Policy 7.7.6 of the General Form & Character Guidelines and Wildlife Attractant Control Bylaw No. 1411, 2024.

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i. Any **screening** is subject to compliance with Section 4.2.1 of City of Castlegar Zoning Bylaw No. 1428, 2024.

ii. Any screening shall be **subject to review and approval** by the City for consistency with the applicable development permit area guidelines prior to construction.

e) **Exterior Lighting Fixtures** shall minimize light pollution and the amount of light falling onto abutting properties and transportation corridors in accordance with 8.7.4 of the City of Castlegar Zoning Bylaw No. 1428, 2024.

f) **Signs** shall be in conformance with the following conditions of Permit:

i. Any **Window signage** must not cover more than 20% of each glazing area except if required due to licensing requirements, in conformance with Policy 7.9.14. of the Regional Mixed-Use Development Permit Area.

ii. All **illuminated signage** shall emit low levels of indirect light or be equipped with automatic dimmer switches and shall not direct nuisance light into abutting properties, the rail corridor, or road right-of-way, in accordance with Section 21 of the City of Castlegar Sign Bylaw No. 1254.

iii. **Signs** that are illuminated will be turned off outside of business hours.

iv. Signs shall be subject to the issuance of a **Sign Permit** in accordance with City of Castlegar Sign Bylaw No. 1254.

g) **Offsite Works & Services** shall be provided subject to a Works & Services Agreement, in accordance with Subdivision and Development Servicing Bylaw 1018, to the satisfaction of the Manager of Engineering and Infrastructure prior to issuance of occupancy.

i. Two **Driveway Letdowns** for a boulevard crossing no wider than 7.2 m at the Lot Line per letdown.

ii. **Curb & Sidewalk** consistent with the existing infrastructure on the east side of 6th Avenue, running between the two driveway letdowns.

iii. **Storm Drainage** shall be provided on site in accordance with Subdivision and Development Servicing Bylaw 1018, subject to building permit.

7. Notice of this Permit shall be filed in the Land Title Office at Kamloops, B.C. under Section 503 of the *Local Government Act*, and upon such filing, the terms of this Permit or any amendment hereto shall be binding upon all persons who acquire an interest in the Land affected by this Permit.

8. If the Permittee does not commence the construction permitted by this Permit within two years of the date of this Permit, this Permit shall lapse.

9. The Land shall be developed strictly in accordance with the terms, conditions and provisions of this Permit and any plans and specifications attached hereto which shall form a part hereof.

10. This Permit prevails over the provisions of the Bylaw in the event of conflict.

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11. **This Permit is not a Building Permit or a Sign Permit.**

Approval and issuance of this permit given on the ___ day of _____, 2025.

Except as specifically provided above, this permit in no way relieves the owner or occupier of the responsibility of adhering to all other legislation of the responsible authorities which may apply to the land.

X _____	X _____
Maria McFaddin Mayor	Bree Seabrook Director of Corporate Services

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Schedule 1
Location Map

CASTLEGAR

Subject Property

Parcels

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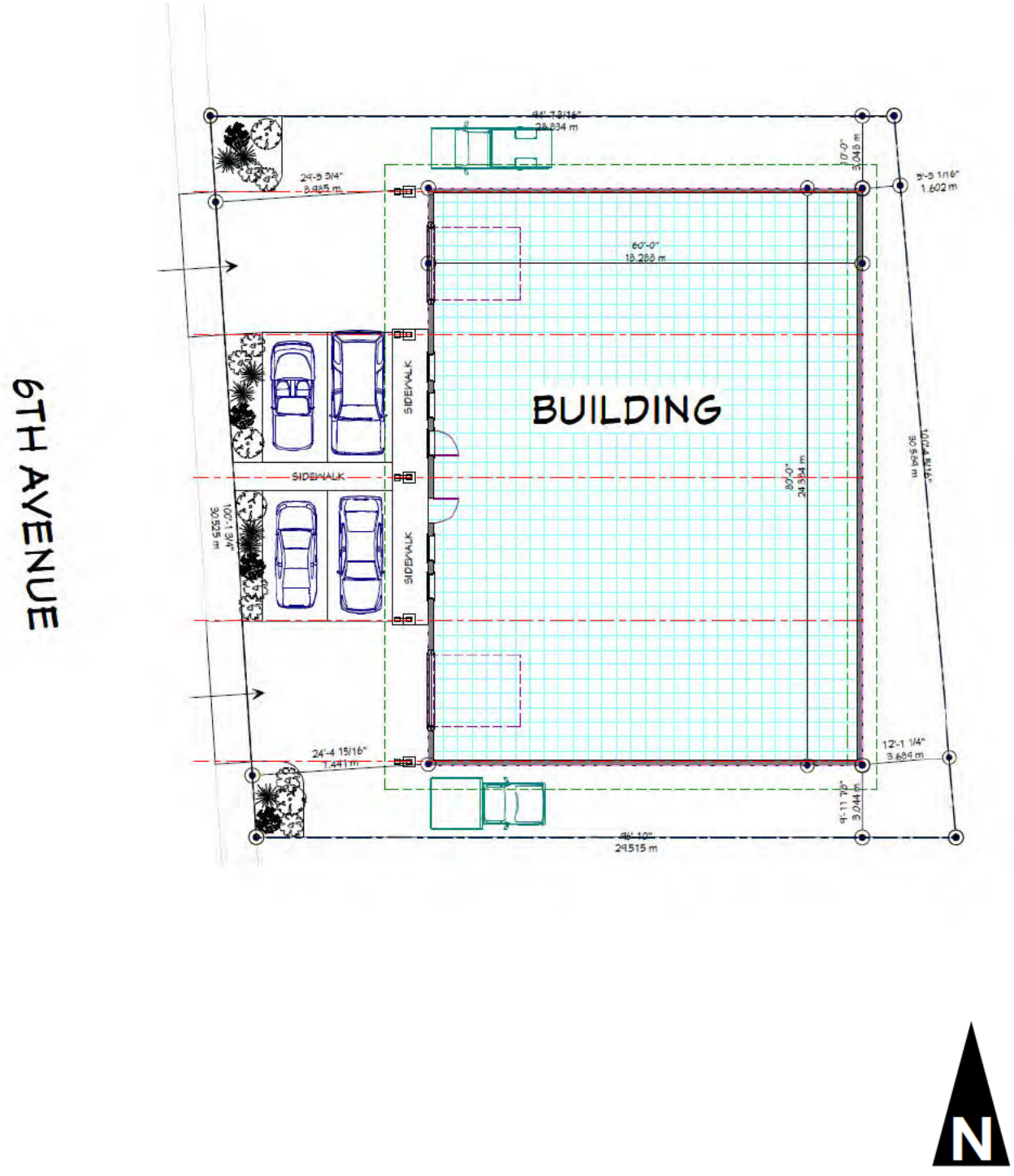
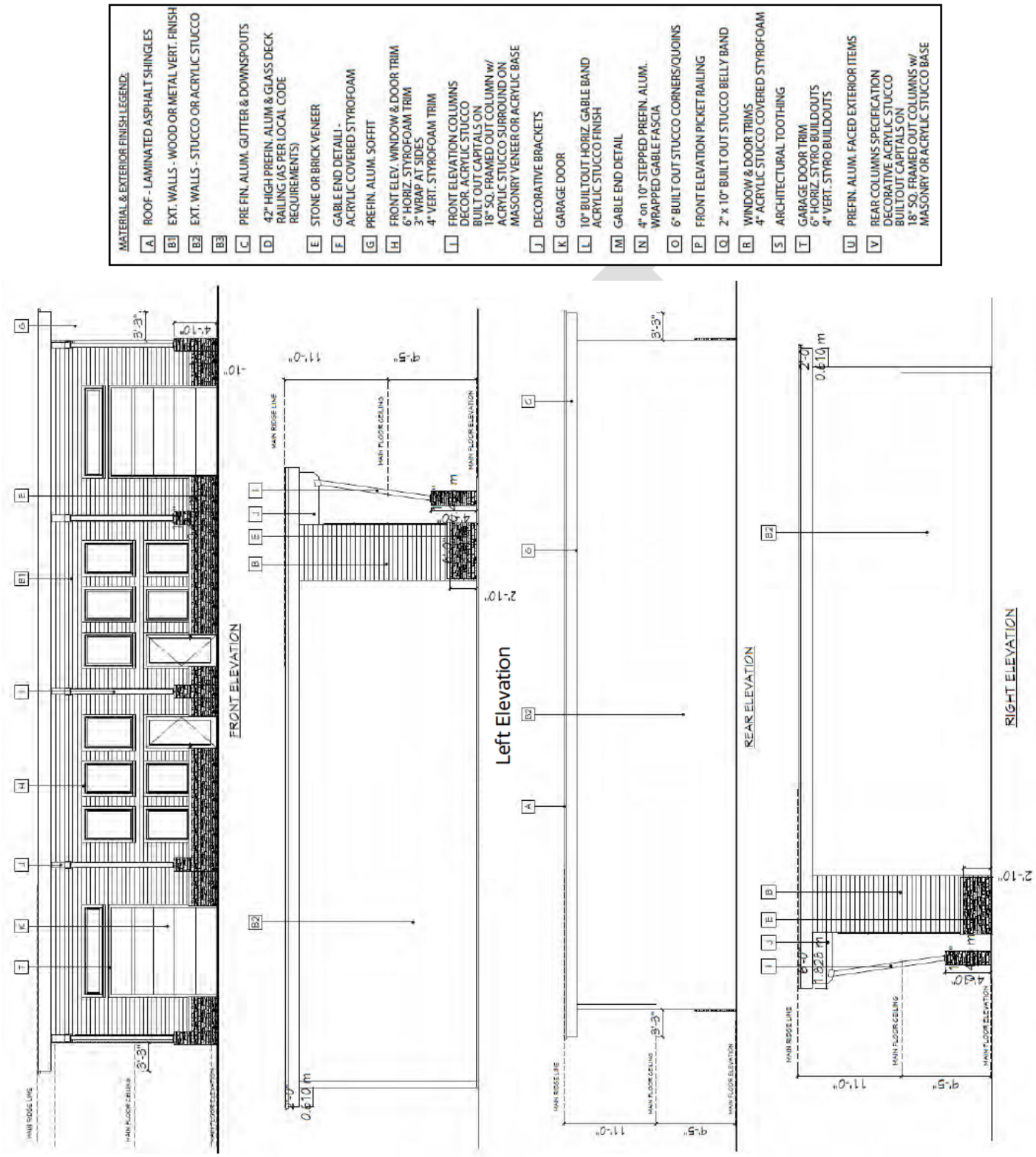
Schedule 2
Site Plan (excerpted for convenience)



Schedule 3

Exterior Elevations (excerpted for convenience)



Schedule 4
Geotechnical Report

Zeberoff Engineering Ltd.

EGBC Permit to Practice: 1001887
1865 Passcreek Rd, Castlegar BC
admin@a2zengtech.com 250 505 8124

Attention: Rod Harris

Date: March 20, 2025 **Project#** X25-04

Reference: Site-Specific Geotechnical Engineering Subsurface and Site Investigation for a proposed commercial building development - Rev.1

Address:
2241 6th Ave, Castlegar BC
LOT 16, PLAN NEP2043, DISTRICT LOT 7174, KOOTENAY LAND DISTRICT, EXC (1) PCL A (SEE 167683I) & (2) PL 5434

1. INTRODUCTION

A commercial building is to be constructed at the subject address. A proposed rendering is shown below:

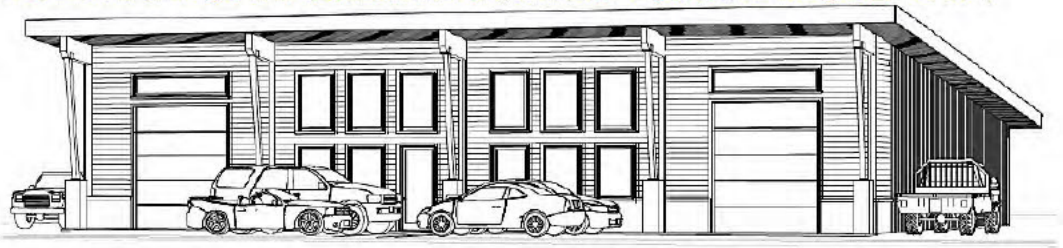


Figure 1

According to the City of Castlegar 1427 Official Community Plan (OCP) Bylaw, a Geotechnical Assessment is required. The OCP provides a map (Map 13) of the Castlegar area for regions that are categorized as a steep slope (> 20% or 11.3°). An overlay of the subject property onto this map is shown as follows:

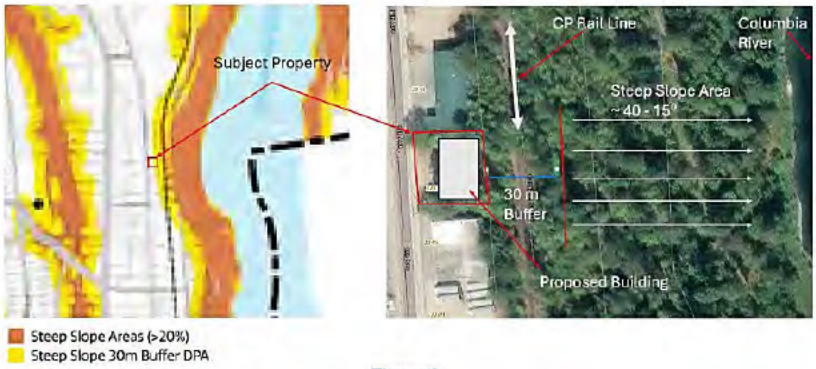


Figure 2

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2. BACKGROUND – Castlegar's Geological and Topographic Context

Castlegar is located at the confluence of the Columbia and Kootenay Rivers and sits in a steep-sided valley within the West Kootenay region of BC.

- **Geology:** The region features a mix of bedrock (e.g., granitic and metamorphic rocks from the Selkirk Mountains) overlain by surficial deposits such as glacial till, glaciolacustrine silts/clays, and alluvial sands/gravels near the river.

- **Slope Angles:** The Columbia River valley near Castlegar includes slopes ranging from gentle near the riverbanks (e.g., 5–15°) to steeper inclines (e.g., 20–40° or more) on valley walls, based on typical river valley topography in the Kootenays.

- **Seismic Hazard**: Castlegar falls within a moderate-to-high seismic zone in BC, with peak ground accelerations (PGA) estimated around 0.2–0.5g for 2% in 50-year events.

- **Historic Landslides on the Columbia River:** No major modern landslides are widely reported directly on the Columbia River in Canada. The Columbia's steep valleys near Castlegar and Revelstoke likely host smaller, unreported slides. The Bonneville landslide (AD 1421–1455) dammed the Columbia in Washington, but its deposits extend into Canada's historical narrative via Indigenous stories (e.g., "Bridge of the Gods"). The Bonneville landslide was most likely caused by a local crustal earthquake (M6.5–7) between AD 1421–1455, possibly on the Gate Creek Fault, destabilizing a geologically weak, steep slope (1000 m) of basalt over clay-rich rock.

  No catastrophic landslides directly on the Columbia River in Canada are prominently recorded post-1900. The 2021 atmospheric river event caused slides near Hope (Highway 1), but these are Fraser-adjacent, not Columbia-specific. Near Castlegar, steep slopes and glacial deposits suggest past slides, though local records (e.g., municipal archives) aren't publicly detailed. Revelstoke's dam construction history notes slope stabilization efforts, implying minor slides. The 1946 Vancouver Island earthquake (M7.2) triggered ~360 landslides, mostly rock falls, but these are coastal, with none recorded directly on the Columbia River as a result of this earthquake.

3. OBSERVATIONS – Site Specific Geology

On March 11, 2025, Mr. Anthony Zeberoff, P.Eng conducted a geotechnical engineering site visit at the subject address. The following field work was conducted:

- The property, and adjacent areas, were ground traversed
- A subsurface soil investigation was conducted

3.1. Ground Traverse

The property and adjacent areas were foot traversed. The lot is bare and flat, with a gradual ~1% slope at the east end of the lot. There were no sink holes. The adjacent north and south lots, which have existing buildings, were examined for foundation cracks – no cracks were observed, suggesting no recent ground settlement. The

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CP rail runs north-south 16 m east of the property edge. The railroad tracks showed no signs of depression or settlement.

Approximately 15 m east of the CP railroad, the slope of the bank (60 m high in total) drops off quickly to 35-40° for a 20 m descent, then tapers to 10-15° for another 20 m descent, then terminates with the Columbia river for the remaining 20 m at a 2-5° angle. Trees along this slope were examined. Trees adapt to their environment, and their physical characteristics, such as trunk shape, root exposure, or lean, can signal gradual slope instability. Predominantly, the tree trunks along the bank were not curved, the trees were not leaning, and there were no exposed roots. The tree age ranged from recent to old growth (200 years +). There were no tension cracks or tree damage observed. These observations indicate that the bank is not creeping or eroding.

At the shore of the river with the bank's trough, erosion was noted. At the time of the site visit water levels were low in the Columbia River. The approximate elevation change of the Columbia River, due primarily to the Hugh Keenlyside Dam, is 2-5 meters annually. The observed erosion was within this elevation change. No further erosion was observed and the trough of the bank appeared stable.

3.2. Subsurface Investigation

Three observation holes were dug using a 65D excavator to a depth of 6-8' at the following locations:

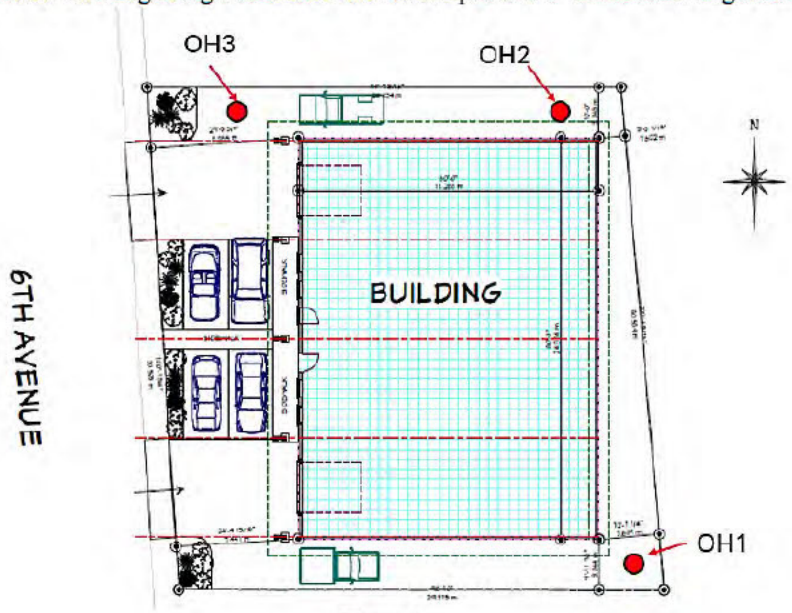

Figure 3

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Test logs are as follows:

ID	Description	Photos
OH1	Topsoil depth: 10-30cm Rooting depth: 100 cm Loamy sand/mixed organics: 30-50 cm Cobbles + Coarse Sand: 50-150 cm	 
OH2	Topsoil depth: 10-30cm Rooting depth: 100 cm Loamy sand/mixed organics: 30-50 cm Cobbles + Coarse Sand: 50-150 cm	 
OH3	Topsoil depth: 10-30cm Rooting depth: 30 cm Cobbles + Coarse Sand: 30-150 cm	 

Visual inspection of the test pits revealed a variation/mix (poorly graded) of soil material to a depth of approximately 50-60 cm from grade at the east end of the proposed development, while at the west end the variation/mix was approximately 30 cm. This suggests that fill-material may have occurred to flatten the lot previously. At soil depths below 60 cm, the material was a well grade coarse-fine-cobble grained mixture. Well-graded soils often form in environments where sediments are transported by varied mechanisms, such as rivers with fluctuating energy. High-energy flows (e.g., spring floods) carry gravel and sand, while low-energy phases deposit silt and clay. The Columbia River in British Columbia, with its glacial history, could produce well-graded soils through seasonal meltwater surges and quieter deposition phases.

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4. RISK ASSESSMENT

The City of Castlegar's 1427 OCP Bylaw, specifically Map 13, designates a 30 m buffer zone. The development area is at the outside edge of this buffer zone, not within it, which can be seen in figure 2.

The current development is located approximately 33 m from the crest of the steep slope area. There are many existing buildings along 6th Avenue in Castlegar BC that are approximate to this buffer zone. Regarding site-specific aspects, there are no current concerns regarding settlement or ground creep as mentioned in the aforementioned observations. Therefore, no mitigation works are required for the proposed development. Furthermore, based on the above observations, a full landslide assessment of the Columbia River bank is not required.

Compaction, stability, and drainage of the soil matrix was considered for foundation construction purposes. The variety of particle sizes (well-graded) allows smaller particles to fill voids between larger ones, leading to higher density and shear strength when compacted. This makes well-graded soils ideal for construction bases, as they resist settlement and deformation. The soil at depths below 60 cm is considered to have moderate to high permeability—better than clay-rich soils.

Based on the observations, the site is considered to be low risk for the proposed development.

5. CONCLUSIONS

- The proposed development is outside the 30 m buffer zone identified in Bylaw 1427
- No potential failure modes were identified.
- The proposed development is considered safe for the intended use under the context of ground creep/settlement and erosion.
- The subsurface investigation showed a variation/mix (not well graded) of soil material at the east end of the proposed development, while at the west end it was marginal. This suggests that fill-material may have been present to flatten the lot previously. In the context of soil bearing capacity, and placement of footings for future development, **it is required that footings are excavated to a minimum depth of 30" from existing grade elevation.** Furthermore, upon excavation to the minimum depth indicated above, the native material is to be compacted with a minimum 500 lb compactor prior to placement of concrete formwork.

6. REFERENCES

[1] Official Community Plan, Bylaw No 1427, V5, 2025, City of Castlegar
[2] Landslide Assessments in British Columbia, EGBC, V4.1
[3] Canadian Foundation Engineering Manual (Canadian Geotechnical Society 2006)
[4] Geotechnical Engineering Services for Building Projects, EGBC, V2.1
[5] British Columbia Geological Survey Geofile 2009 - 06

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7. CLOSURE

This memo has been prepared for the exclusive use of Rod Harris (Owner) and the City of Castlegar. Interpretation of any part of this memo should be made in consultation with Zeberoff Engineering. Any use or reliance of this memo by a third party (outside of the exclusive parties as stated above) is the responsibility of the said party and Zeberoff Engineering accepts no responsibility for any damages suffered by said party as a result of decisions made or actions taken based on this memo.

Should you have any questions about the above findings or wish to discuss this further, please contact our office.

Yours Truly,

Zeberoff Engineering Ltd.

2025-03-24

Anthony Zeberoff, P.Eng