

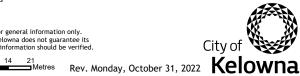


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This map is for general information only. The City of Kelowna does not guarantee its accuracy. All information should be verified.









# **MEMORANDUM**

**Date:** September 20, 2021 (address and Bylaw 12375 references updated Nov 16, 2022)

**File No.:** Z21-0083

**To:** Planning and Development Officer (AK)

From: Development Engineering Manager (RO)

Subject: 1150 Band Rd RR1 to RU2

The Development Engineering Branch has the following comments and requirements associated with this application to rezone 1150 Band Road to RU2 – Medium Lot Housing. The Development Technician for this file is Sarah Kelly (skelly@kelowna.ca).

#### 1. GENERAL

- a. The following requirements are valid for two (2) years from the reference date of this memo, or until the PLR has been closed, whichever occurs first. The City of Kelowna reserves the rights to update/change some or all items in this memo once these time limits have been reached.
- b. This proposed subdivision may require the installation of centralized mail delivery equipment. Please contact Arif Bhatia, Delivery Planning Officer, Canada Post Corporation, 530 Gaston Avenue, Kelowna, BC, V1Y 2K0, (250) 859-0198, arif.bhatia@canadapost.ca to obtain further information and to determine suitable location(s) within the development.
- c. These Development Engineering comments/requirements are subject to the review and requirements from the Ministry of Transportation and Infrastructure (MoTI).
- d. There is a possibility of a high-water table or surcharging of storm drains during major storm events. This should be considered in the design of the onsite system.

#### 2. DOMESTIC WATER AND FIRE PROTECTION

- a. The subject lot is within the Black Mountain Irrigation District (BMID) water supply area. The Developer is required to make satisfactory arrangements with BMID for all water and fire protection-related issues. All charges for service connections and upgrading costs, as well as any costs to decommission existing services, shall be the responsibility of the Developer.
- b. The Developer's Consulting Mechanical Engineer will determine the fire protection requirements of this proposed development and establish hydrant requirements and service needs. All fire flow calculations approved by BMID are to be shared with the Development Engineering Branch upon submittal of off-site civil engineering drawings.

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# Z21-008 he water system make be pable of supplying the domestic and fire flow demands of the project in apportance with the Subdivision, Development, & Servicing Bylaw No. 7900. Provide water flow calculations for this development to confirm bylaw conformance. ak Ensure building and at an elevation that ensures water pressure is within the bylaw pressure thin its Note: Private pumps are not acceptable for addressing marginal pressure.

# 3. SANITARY SEWER SYSTEM

- a. 1150 Band Rd is not connected to the City's sanitary sewer system. The Developer, at their expense, is required to connect to the City of Kelowna sanitary sewer system. The new service connection is to be completed with an inspection chamber (c/w Brooks Box) as per SS-S7. Only one service will be permitted for each legal lot.
- b. Sanitary main within Hume Ave is to be extended to provide connection for proposed subdivision. Servicing from rear yard sanitary main contained in easement on private properties to the west of 1150 Band Rd will not be permitted.

#### 4. STORM DRAINAGE

- a. This property is located within the City of Kelowna drainage service area. The hillside areas of Kelowna are not suitable for groundwater recharge or disposal of on/offsite drainage via infiltration. Roof or site drainage for this subdivision must discharge directly to the City of Kelowna's storm system. The City will not permit infiltration to ground except for foundation drainage. Each lot shall require a storm system service connection.
- b. Provide the following drawings:
  - A detailed Lot Grading Plan (indicate on the Lot Grading Plan any slopes that are steeper than 30% and areas that have greater than 1.0 m of fill);
  - A detailed Stormwater Management Plan for this subdivision; and, ii.
  - An Erosion and Sediment Control Plan is to be prepared by a Professional iii. Engineer proficient in the field of erosion and sediment control. The plan is to be prepared as per section 3.14 of Schedule 4 of Bylaw 7900. If a line item for ESC is not included in the Engineer's cost estimate for off-site work, then an additional 3% will be added to the performance security based on the total off-site construction estimate.
- c. On-site detention systems are to be compliant with Bylaw 7900, Schedule 4, Section 3.11.1 Detention Storage.
- d. As per Bylaw 7900, Schedule 4, Section 3.1.3 Climate Change, the capacity of storm works will include an additional 15 percent (15%) upward adjustment and applied to the rainfall intensity curve stage (IDF) in Section 3.7.2.
- e. Show details of dedications, rights-of-way, setbacks, and non-disturbance areas on the lot Grading Plan.
- f. Register right of ways on private properties for all the storm water infrastructure carrying, conveying, detaining and/or retaining storm water that is generated from the public properties, public road right of ways, and golf course lands.
- g. Identify clearly on a contour map, or lot grading plan, all steep areas (>30 %). Provide cross sections for all steep areas at each property corner and at locations where there are significant changes in slope. Cross sections are to be perpendicular to the contour of the slope. Show the proposed property lines on the cross sections. Not all areas have a clear



# Z21-0083 top of bank; and the reform field reconnaissance by City staff and the applicant may be needed to verify a suitable location for property lines.

Planner Initials ak If individual **Ke bow lines** are required, ensure that payment of connection fees has been completed (please provide receipt).

i. Where structures are designed or constructed below the proven high groundwater table, permanent groundwater pumping will not be permitted to discharge to the storm system. The City will approve designs that include provisions for eliminating groundwater penetration into the structure, while addressing buoyancy concerns. These design aspects must be reviewed and approved by the City Engineer.

#### 5. ROAD IMPROVEMENTS / SITE ACCESS

- a. Hume Ave to be constructed to a full urban standard (SS-R4) along the full frontage of the subject property; including curb and gutter, sidewalk, LED street lighting, burial of overhead wires and removal of poles, landscaped and irrigated boulevard, storm drainage system, pavement removal and replacement and re-location or adjustment of utility appurtenances if required to accommodate the upgrading construction.
- b. The Applicant will be responsible for decommissioning of existing Band Rd including removal of asphalt, removal of depressed curb and replacement with barrier curb, and installation of approved landscaping treatment.
- c. Grade the fronting road boulevards in accordance with the standard drawing. Major cut/fill slopes must start at the property lines.
- d. Landscaped boulevards, complete with underground irrigation, are required on proposed roadways. This will be included as a line item in the estimate for the Servicing Agreement performance security. Details and plant selection are to be approved by the City of Kelowna Parks department.
- e. Provide road markings and street name signs where required. The City will install all signs and road markings at the developer's expense. The developer will sign a third-party work order and pay the cost of traffic sign installation prior to the registration of the subdivision.
- f. Streetlights must be installed on all public roads. All streetlighting plans are to include photometric calculations demonstrating Bylaw 7900 requirements are met and approval by the Development Engineering Branch at the same time as other "issued for construction" drawings.

## 6. POWER AND TELECOMMUNICATION SERVICES

- a. All proposed service connections are to be installed underground. It is the developer's responsibility to make a servicing application with the respective electric power, telephone and cable transmission companies to arrange for these services, which would be at the applicant's cost.
- b. Before making application for approval of your subdivision plan, please make arrangements with Fortis for the pre-payment of applicable charges and tender a copy of their receipt with the subdivision application for final approval.
- c. If any road dedication affects lands encumbered by a Utility right-of-way (such as B.C. Gas, etc.) please obtain the approval of the utility prior to application for final subdivision approval. Any works required by the utility as a consequence of the road dedication must be incorporated in the construction drawings submitted to the City's Development Manager.

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Provide a geotochnical report prepared by a Professional Engineer competent in the field and hydro-geotechnical report prepared by a Professional Engineer competent in the field and hydro-geotechnical report prepared by a Professional Engineer competent in the field and hydro-geotechnical report prepared by a Professional Engineer competent in the field Planner a.

NOTE: The City is relying on the Geotechnical Engineer's report to prevent any damage to property and/or injury to persons from occurring as a result of problems with soil slippage or soil instability related to this proposed subdivision.

- b. The Geotechnical reports must be submitted to the Development Services Department (Subdivision Approving officer) for distribution to the Development Engineering Branch and Inspection Services Division prior to submission of Engineering drawings or application for subdivision approval.
  - Area ground water characteristics, including any springs and overland surface drainage courses traversing the property. Identify any monitoring required.
  - ii. Site suitability for development.
  - iii. Site soil characteristics (i.e. fill areas, sulphate content, unsuitable soils such as organic material, etc.).
  - Any special requirements for construction of roads, utilities and building structures. ίV.
  - Recommendations for items that should be included in a Restrictive Covenant. ٧.
  - vi. Recommendations for roof drains, perimeter drains and septic tank effluent on the site.
  - vii. Any items required in other sections of this document.
- c. If any blasting is proposed as part of this subdivision, a Soil Removal and Deposit Application must be made to the City for such works. The proposed blasting work is to comply with Amendment No. 1 to the Soil Removal and Deposit Regulation Bylaw No. 9612, specifically Section 6 PERMIT REQUIREMENTS – (k) and (g).
- d. Should any on-site retaining walls surpass the following limits, an Over Height Retaining Wall Permit will be required:

"Retaining walls on all lots, except those required as a condition of subdivision approval, must not exceed a height of 1.2 m measured from natural grade on the lower side, and must be constructed so that any retaining walls are spaced to provide a 1.2 m horizontal separation between tiers. The maximum number of tiers is two with a maximum total height of 2.4 m. Any multi-tier structure more than 2 tiers must be designed and constructed under the direction of a qualified professional engineer."

The design of all retaining walls is to conform with Engineer & Geoscientists British Columbia's Professional Practice Guidelines for Retaining Wall Design. Submission requirements for the Over Height Retaining Wall Permit include Engineer of Record documents (Appendix A of Retaining Wall Design Guideline) and any necessary independent reviews (as per EGBC's Documented Independent Review of Structural Designs).

e. Any modified slopes having a finished slope greater than 2H:V1 (50%) and an elevation change greater than 1.2 m must be installed under the direction of a qualified professional engineer.

Where walls are on the high side, the City's preference is that the walls remain setback and on private property. Where the walls hold up a public road, the City's preference is that additional dedication be provided, and the walls be owned by the City. Please design any geogrids or tiebacks so that they do not encroach into the required road ROW.

#### 8. ROAD DEDICATION/SUBDIVISION REQUIREMENTS

- a. The proposed development will trigger a road dedication of 15.0m for Hume Ave connection.
- b. Strata Lane must meet BCBC requirements for emergency access.
- c. Indicate on the site, the locations of the garbage and recycle bins. Provide turning movements for a MSU vehicle to confirm manoeuvrability on site.
- d. Provide all necessary Statutory Rights-of-Way for any utility corridors required, including those on proposed or existing City Lands.

# 9. DESIGN AND CONSTRUCTION

- a. Design, construction supervision and inspection of all off-site civil works and site servicing must be performed by a Consulting Civil Engineer and all such work is subject to the approval of the City Engineer. Drawings must conform to City standards and requirements.
- b. Engineering drawing submissions are to be in accordance with the City's "Engineering Drawing Submission Requirements" Policy. Please note the number of sets and drawings required for submissions.
- c. Quality Control and Assurance Plans must be provided in accordance with the Subdivision, Development & Servicing Bylaw No. 7900 (refer to Part 5 and Schedule 3).
- d. A "Consulting Engineering Confirmation Letter" (City document 'C') must be completed prior to submission of any designs.
- e. Before any construction related to the requirements of this subdivision application commences, design drawings prepared by a professional engineer must be submitted to the City's Works & Utilities Department. The design drawings must first be "Issued for Construction" by the City Engineer. On examination of design drawings, it may be determined that rights-of-way are required for current or future needs.

## 10. <u>SERVICING AGREEMENT FOR WORKS AND SERVICES</u>

 A Servicing Agreement is required for all works and services on City lands in accordance with the Subdivision, Development & Servicing Bylaw No. 7900. The applicant's Engineer, prior to preparation of Servicing Agreements, must provide adequate drawings and estimates for the required works. The Servicing Agreement must be in the form as described in Schedule 2 of the bylaw.



# Z21-0083 Part 3, "Security for works and Services", of the Bylaw, describes the Bonding and Insurance recipite from the Owner. The liability limit is not to be less than \$5,000,000 and the City kellowing on the insurance policy as an additional insured.

### 11. CHARGES, FEES, AND SECURITIES

- a. Development Cost Charges (DCC's) are payable.
- b. Fees per the "Development Application Fees Bylaw" include:
  - i. Street/Traffic Sign Fees: at cost (to be determined after design).
  - ii. Survey Monument Fee: \$50.00 per newly created lot (GST exempt).
  - iii. Survey Monument, Replacement Fee: \$1,200.00 (GST exempt) only if disturbed.
  - iv. Engineering and Inspection Fee: 3.5% of construction value (plus GST).

Nelson Chapman, P.Eng

Development Engineering Manager

