
CITY OF KELOWNA

MEMORANDUM

Date: April 6, 2023
File No.: Z22-0035
To: Planning and Development Officer (JI)
From: Development Engineering Manager (NC)
Subject: 285 Robson Rd W & 280 Rutland Rd S



RU1 to RM5r

The Development Engineering Branch has the following comments and requirements associated with this application to rezone the subject properties from the RU1 – Large Lot Housing to the RM5r – Medium Density Multiple Housing (Residential Rental Tenure only) zone for a 5 storey 106 unit apartment. 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 application 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 development 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. This property is located within the 800m MoTI Highway Buffer therefore, Development Engineering comments/requirements are subject to the review and requirements from the Ministry of Transportation and Infrastructure (MoTI).
- d. The Developer will be required to provide excess and extended sanitary servicing along the Robson Rd frontage of the proposed development. See Sanitary Sewer section of memo for further details.
- e. 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.
- f. Consolidation of the subject lots and dedication of 2.5m of road along the full Rutland Rd S frontage of all lots will be a requirement of this development.

2. DOMESTIC WATER AND FIRE PROTECTION


- a. The subject lot is located within the Rutland Waterworks District (RWD) service area. The developer is required to make satisfactory arrangements with RWD for all water and fire protection-related issues. All charges for service connection 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 RWD are to be shared with the Development Engineering Branch upon submittal of off-site civil engineering drawings.
- c. The water system must be capable of supplying the domestic and fire flow demands of the project in accordance with the Subdivision, Development, & Servicing Bylaw No. 7900. Provide water flow calculations for this development to confirm bylaw conformance (150 L/s for apartments & townhouses).

3. SANITARY SEWER SYSTEM

- a. Our records indicate that both of the subject lots are currently serviced with 150-mm diameter sanitary sewer services off Rutland Rd S. The Applicant's Consulting Mechanical Engineer will determine the requirements of the proposed development and establish the service needs.
- b. Only one service will be permitted for this development. Service must be complete with an inspection chamber and brooks box (as per SS-S7 & SS-S9), at the applicants cost.
- c. Drawing set included in rezoning application depicts existing sanitary main within Robson Rd W however, there is currently no sanitary infrastructure in this location.
- d. The City requires excess and extended services along the Robson Rd frontage of the proposed development. The excess and extended services shall include:
 - i. Design and installation of a public sanitary sewer collection system along the frontage of the subject lots up to a terminal manhole. Final location of manhole to be determined.
 - ii. Service connections (as per SS-S7) up to property line for all lots along the required sewer collection system

The City will compensate the developer for the cost of installation of the excess and extended portion of the works. Costs for directly attributable components shall be borne by the developer.

- i. Remuneration will based on actual construction costs and be transferred to the developer at the time of substantial completion.
- ii. The cost of excess and extended services shall not be included in the calculation of the City Engineering Administration and Inspection Fee.
- iii. The entire cost of all works shall be included when determining the performance security.


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- iv. The developer is to commit to a competitive bidding process for the off-site sewer-related works.

The City reserves the right to complete the public sanitary sewer works in advance of completion by the developer, if necessary.

4. **STORM DRAINAGE**

- a. This property is located within an area identified by the City of Kelowna as possibly suited for groundwater recharge. Service connection to the City storm system, complete with onsite detention and flow control, is required for all multi-family land uses. The City will not permit infiltration to ground except for foundation drainage, safe use of infiltration is to be confirmed with submission of a geotechnical report provided by a Professional Engineer competent in the field of hydro-geotechnical engineering.
- b. The Developer's consulting civil engineer must provide a stormwater management plan for the site, which meets all requirements of the Subdivision, Development, and Servicing Bylaw No. 7900. SWMP must include lot grading plan, minimum basement elevations (MBE), and onsite drainage systems.
- c. Provide the following drawings:
 - i. 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);
 - ii. A detailed Stormwater Management Plan for this subdivision; and,
 - iii. An Erosion and Sediment Control Plan is to be prepared by a Professional 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.
- d. On-site detention systems are to be compliant with Bylaw 7900, Schedule 4, Section 3.11.1 *Detention Storage*.
- e. 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.
- f. Show details of dedications, rights-of-way, setbacks and non-disturbance areas on the lot Grading Plan.
- g. 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.
- h. 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.

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5. ROAD IMPROVEMENTS


- a. Rutland Rd S is classified in the 2040 OCP as a major arterial, an Active Transportation Corridor, and transit route therefore no access will be permitted off this frontage. Rutland Rd S must be upgraded along the full frontage, required upgrades are to include removal of driveways, curb and gutter, sidewalk, storm drainage system, fillet paving, LED street lighting, landscaped and irrigated boulevard, and pavement removal, replacement, and re-location or adjustment of utility appurtenances if required to accommodate the upgrading construction.
- b. Robson Rd W is classified in the 2040 OCP as a local road and must be upgraded to an urban standard along the full frontage of the subject property. Required upgrades are to include curb and gutter, sidewalk, storm drainage system, fillet paving, LED street lighting, landscaped and irrigated boulevard, pavement removal, replacement, and re-location or adjustment of utility appurtenances if required to accommodate the upgrading construction.
- c. Road cross sections for both Robson Rd W and Rutland Rd S will be provided to consulting engineer, upon request, at time of detailed offsite design.
- d. The existing BC Transit stop fronting the subject lots on Rutland Rd S is to be upgraded and designed as per BC Transit's Infrastructure Design Guide for a "Typical bus stop and furnishing layout", including:
 - i. Accessibility requirements to be met (tactile warning strip, information panels, boarding platforms, etc.)
 - ii. It is recommended to provide min 3.2m width instead of 3m for Transit waiting pad and sidewalk, for constructability proposes.
 - iii. A bus shelter is requested but may be considered in the future, therefore the waiting pad, space and include pre-ducting for future shelter is still required.

Further details on the requirements for the bus pad and bus shelter can be requested from the Development Technician on this file.

- e. All Landscape and Irrigation plans require design and inspection by a Qualified Professional registered with the BCSLA and the IABC, are to be included as a line item in the estimate for the Servicing Agreement performance security. Landscape and irrigation plans require approval by the Development Engineering Branch at the same time as other "issued for construction" drawings.
- f. Streetlights must be installed on all public roads. All streetlighting plans are to include photometric calculations demonstrating Bylaw 7900 requirements are met and require approval by the Development Engineering Branch at the same time as other "issued for construction" drawings.

6. POWER AND TELECOMMUNICATION SERVICES

- a. All proposed distribution and 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.

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- b. Burial of existing overhead wires will be required along the frontage of Robson Rd. Developer must make arrangements with the applicable power, telephone, and cable transmission companies to arrange for this work. Designs must be submitted to the Development Engineering Branch at the same time as other “issued for construction” drawings.
- c. If any road dedication or closure affects lands encumbered by a Utility right-of-way (such as Hydro, Telus, Gas, etc.) please obtain the approval of the utility. Any works required by the utility as a consequence of the road dedication or closure must be incorporated in the construction drawings submitted to the City's Development Manager.
- d. Re-locate existing poles and utilities, where necessary including within lanes. Remove aerial trespass(es).

7. GEOTECHNICAL STUDY

- a. At time of Building Permit, the Applicant is required to provide a comprehensive geotechnical report, prepared by a Professional Engineer competent in the field of hydro-geotechnical engineering to address the items below:
 - i. 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.).
 - iv. Any special requirements for construction of roads, utilities, and building structures.
 - v. Recommendations for items that should be included in a Restrictive Covenant.
 - vi. Recommendations for roof drains and perimeter drains.
 - vii. Recommendations for erosion and sedimentation controls for water and wind.
 - viii. Any items required in other sections of this document.
- b. Geotechnical reports must be submitted to the Planning and Development Services Department (Planning & Development Officer) for distribution to the Works & Utilities Department and Inspection Services Division prior to submission of Engineering drawings or application for subdivision approval.

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.

- c. Should any on-site retaining walls surpass the following limits, an Over Height Retaining Wall Permit will be required:

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“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.”


- d. 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 tie-backs so that they do not encroach into the required road ROW.

8. DEVELOPMENT RELATED ISSUES / SITE ACCESS

- a. No driveway access will be permitted off Rutland Rd S. All vehicular access to the development site is to be provided from Robson Rd W. Only one driveway will be permitted with a maximum width of 6m.
- b. Indicate on the site, the locations of loading bays as well as garbage and recycle bins. Provide turning movements for a HSU vehicle to confirm manoeuvrability on site without requiring reverse movement onto Robson Rd W. Garbage pickup from street is not permitted.
- c. Perimeter access must comply with the BC Building Code. Fire Truck access designs and proposed hydrant locations will be reviewed by the Fire Protection Officer.
- d. A 2.5m road dedication is required along the full Rutland Rd S frontage of the subject lots to achieve to future 25m Core Area Major Arterial ROW.

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).

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- 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. **SERVICING AGREEMENT FOR WORKS AND SERVICES**

- a. 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.
- b. Part 3, “Security for Works and Services”, of the Bylaw, describes the Bonding and Insurance requirements of the Owner. The liability limit is not to be less than \$5,000,000 and the City is to be named 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 Marking/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 frontage upgrades (plus GST).



Nelson Chapman, P.Eng.
Development Engineering Manager

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