Attachment B

CITY OF MISSION

ENGINEERING & PUBLIC WORKS
TECHNICAL MEMORANDUM

FILE: 08-3310-28-37

P2023-037 / DP23-034

March 31, 2025

To: File Manager, Planning Department

From: Engineering Technologist, Engineering & Public Works Department

Re: Engineering Requirements for Development Permit at 9118 Cedar Street

INTRODUCTION:

The following comments contain requirements for the sole purpose of identifying required works and services to enable the subject property to develop a 33-unit townhouse development. The following works and services for this rezoning and development permit proposal are in accordance with the standards contained within the City of Mission's (COM) Development and Subdivision Control Bylaw (DSCB) 5650-2017 as amended, Water Bylaw 2196-1990 as amended (Water Bylaw), Sewer Bylaw 5033-2009 as amended (Sewer Bylaw), Solid Waste Management Bylaw 5526-2015 as amended (SWMB), the Soil Removal Bylaw 3088-1997 as amended, the Fire Sprinkler Bylaw 5679-2017, the Cedar Valley Local Area Plan (CVLAP), the Cedar Valley Engineering Plan (CVEP) 5807-2018-5670, the Official Community Plan Bylaw 5670-2017 as amended (OCP) and the Development Cost Charges (DCC) Best Practices Guide. Additional requirements as specified by other stakeholder authorities are considered to be above and beyond the scope of these comments.

This development is currently out of sequence from a CVEP servicing perspective. The applicant has submitted a conceptual servicing plan (CSP) that varies from the CVEP with respect to road construction, road access, and drainage servicing.

The City has received a re-referral package dated March 27, 2025, including a site plan and a conceptual servicing plan dated November 27, 2024

ENGINEERING STANDARDS:

Engineered design must be prepared and submitted in general conformance with the DSCB.

See the DSCB, Schedule C, Section 2 – Engineering Standards, Section 13 – Construction Drawing Submissions as amended, and AutoCAD Templates available for download on the City's website via the Land Development and Planning AutoCAD Standards web page.

Provide a signed Form F-5 – Commitment by Owner and Consulting Engineer. Incomplete drawing submissions may be returned without review.

DOMESTIC WATER REQUIREMENTS:

Municipal water is available on Cedar Street

Municipal water may be available using Future Road "2F" in the CVEP.

Connection to the municipal system is required. The CoM does not guarantee fire-flow requirements. The Developer will prove the limitations of the existing system by whatever means deemed appropriate and shall ensure the development is adequately serviced at the Developer's sole expense.

City records indicate an existing 250mmØ ductile iron pipe. Records also note two regional watermains which the Developer is not permitted to tie into.

As a condition of Development, the following will apply:

Demand modelling will be required. All upgrades and/or deficiencies identified by the finalized modeling results shall be completed/corrected at the Developer's sole expense and will be a condition of subdivision/development.

The proposed development requires an adequately sized, single-point service connection with water metering to be designed and installed at the building permit stage.

In accordance with the Water Bylaw, the existing 19mm water services to the parent lots shall be capped at the main by City crews at the Developer's sole expense.

Engineered design is required. See DSCB, Section 3.

STORM SEWER REQUIREMENTS:

Municipal storm service is available on Cedar Street.

Per the CVEP, municipal storm service for this property has been planned to come from future-planned Road 2F. The catchment area for this property is associated with DCC-specific charges for CVEP Major Project D4.

Connection to the municipal system is required. The CoM does not guarantee depth at property line. The developer shall prove out the limitations of the existing system by whatever means deemed appropriate and shall ensure the development is adequately serviced at the developer's sole expense.

City records indicate two existing mains on Cedar Street: a 300mm diameter concrete pipe immediately adjacent to the site and a 375mm diameter Corrugated Metal Pipe (CMP) pipe on the west side of the roadway.

As a condition of Development, the following will apply:

To advance this project out of sequence with the CVEP, the storm service for this property will have to be directed to Cedar Street in general accordance with the submitted CSP. Unanticipated upgrades to existing infrastructure on Cedar Street may be required (CVEP drainage catchment area 2E). These works may be eligible for DCC Credits.

The developer is required to design a storm water system utilizing Best Management Practices (BMPs) that will reduce the site's 10-year post-development runoff rate to its 10-year pre-development runoff rate. Installation of the system shall occur at the building permit stage.

Engineered design is required. See DSCB, Sections 4 and 5.

Designs shall be accompanied by a report from a fully qualified professional engineer which clearly identifies the specific opportunities and constraints for implementing best management practices for the subdivision, demonstrates that groundwater recharge and/or other appropriate best management practices are sustainable and have been maximized for the particular site, and provides examples of similar installations which demonstrate the sustainability, ability to construct, and ease of maintenance of the works to be constructed.

In particular, when implementing the City ground water recharge guidelines, the applicant shall be responsible for conducting a hydrological investigation to estimate infiltration rates, soil permeability, and determine the location of the water table and its seasonal variations. This information is to be included in any engineering drawing submittals as it is critical to the design of BMPs, building envelopes, and minimum building elevations.

Proposed measures shall be subject to acceptance by the Director of Engineering and Public Works and/or the senior Building Inspector.

SANITARY SEWER REQUIREMENTS:

Municipal sanitary service is available to be extended across the site frontage on Cedar Street.

Municipal sanitary service for this property shall come from Cedar Street via a main extension from Rosetta Avenue to the development site.

City records indicate an existing, small diameter force main is adjacent to the site. The force main shall be rerouted to outlet into a new terminal manhole at the north end of the site, in general accordance with the submitted CSP.

As a condition of Development, the following will apply:

To advance this project out of sequence with the CVEP the Developer will be required to design and construct a sanitary main extension from Rosetta Avenue across the development frontage in general accordance with the submitted CSP.

Engineered design is required. See DSCB, Schedule C, Sections 6 and 7 as amended.

ROAD WORK REQUIREMENTS:

Cedar Street provides paved access to the site. Per the CVEP, permanent, primary access for this property shall come from future-planned Road 2F.

> The DSCB Introduction, Section 9.7 – Highway Dedication, states the following: "*The required highway dedications for various classifications of highways in a Subdivision/Development shall be as specified in Schedule A hereto. The Municipality shall advise the Owner of the classification of each highway in a proposed Subdivision/Development and the required highway dedication.*"
>
> **<u>Cedar Street</u>**
>
> Cedar Street is classified as an arterial road in the Mission Mobility 2050 Transportation Master Plan. Cedar Street currently has a 20.1m dedication adjacent to the proposed development and as such, the Developer will be required to dedicate an additional 4.0m of Highway Dedication adjacent to Cedar Street. Cedar Street will be constructed to a 4-Lane Arterial Standard following a modified cross section based on DSCB Standard Drawing SS-R01 within an ultimate 28.6 m ROW. The design will be complete with road drainage, active transportation infrastructure as per Mission Mobility 2050 (multi-use path), underground hydro, gas, telephone, street lighting (for all road users), signage, and boulevard landscaping and tree planting as per the modified cross section available from the Engineering and Public Works Department.
>
> The Developer will be responsible for constructing the appropriate infrastructure offsite to achieve the modified arterial road cross section. A security deposit for offsite works is required as per DSCB Schedule C, Section 1.6.3.

Road 2F

Road 2F will be designed to a modified Local Road Standard based on SS-R04 within a 18.0m ROW, and the developer is ultimately required to dedicate a portion of land and take responsibility for a preliminary design and cost-of-construction of future-planned Road 2F.The design will be complete with road drainage, sidewalk, underground hydro, gas, telephone, streetlighting and boulevard tree planting as per the modified cross section available from the Engineering and Public Works Department. Road 2F will be secured with a Statutory Right-of-Way over the property and will be constructed by others in the future. Once constructed, it is expected that the primary access to this development will be closed at Cedar Street and switched over to Road 2F. To secure this commitment, the developer shall install a set of closable gates at the Cedar Street entrance. A cash-in-lieu contribution towards the construction of future-planned Road 2F will be required.

Engineered design is required. See DSCB Schedule C, Sections 8, 9, 10, and 11.

STREET LIGHTING:

In accordance with the DSCB, Schedule B-1, Ornamental Street Lighting is a requirement of subdivision/development.

Street Lighting design will complement Roadway Design and be in general conformance with the DSCB.

Engineered design is required. See the DSCB, Schedule C, Section 9 – Street Lighting, as amended.

BOULEVARD TREE PLANTING AND LANDSCAPING:

In accordance with the DSCB, Schedule B & B-1, Boulevard tree planting and offsite landscaping is a requirement of subdivision/development.

Engineered design is required. See the DSCB, Schedule C, Section 11 – Boulevard Tree Planting and Section 12 – Specifications and Standards for Landscaping, as amended.

POWER, GAS & TELECOMMUNICATIONS:

In accordance with the DSCB, Schedule B and B-1, Underground electrical, natural gas distribution, and telephone systems are a requirement of subdivision/development.

The Developer's engineer and/or third-party utility company must certify to the Approving Officer that the Power, Gas, and Telecommunications have been designed and constructed/secured in accordance with good engineering practice prior to approval of the subdivision.

See the DSCB INTRODUCTION, Section 9.5 Power, and Telecommunications Distribution, as amended.

LOT GRADING:

Lot grading in accordance with Schedule E of the DSCB is applicable. Manipulation and/or disturbing of the lands will not occur until permits and approvals for Development have been granted. The proposed measures will be subject to approval by the Municipal Engineer and/or Senior Building Official.

LATECOMER CHARGES:

Pursuant to the Local Government Act Section 507(2) the local government will not require that the owner of the land that is to be developed provide excess or extended services and as such, Latecomer Charges shall not apply.

ENVIRONMENTAL REQUIREMENTS:

As per section 4.4.1 of the Cedar Valley Local Area Plan, a QEP shall prepare a preliminary bio-inventory on the entire development site before it is disturbed in any way. In addition, a Development Permit will be required under Development Permit Area E1; which would be largely satisfied by the submission of the preliminary bio-inventory. The applicant should review the new development area guidelines. The primary principle of these guidelines is to incorporate the findings of the preliminary bio-inventory into site design. Submission of a site plan without a preliminary bio-inventory would suggest that this has not been taken into consideration. Nonetheless, this site design appears to respect the PNA boundary.

To facilitate this development, no mature trees will be retained; however, 32 ornamental trees will be replanted. This is a common trend in the neighbourhood. Tree retention should be prioritized to ensure that some mature trees remain in the urban canopy. Coupled with a significant increase in impervious surfaces, this development will contribute to the reduction of remaining wildlife habitats and creation of heat islands.

This development is located within the City provided curbside collection area and the current layout is conducive to curbside collection from each unit. Providing the following conditions are met:

- Ensure a 12m turning radius at the complex access and egress points.
- Ensure the hammerhead designs are compliant with DSCB drawings to enable safe truck maneuvering.

It should be noted that waste collection bins are required to be stored in a wildlife resistant enclosure on non-collection days as per the Solid Waste Management Bylaw 5526-2015 . Garages should be designed large enough to accommodate storage of bins.

Curbside collection involves the weekly collection of compost and recyclables and the bi-weekly (= every two weeks) collection of up to two 80-litre bins of garbage, as well as a separate container glass bin. Curbside collection requires individual units to feature sufficient animal-resistant, enclosed storage space to prevent access by wildlife. Room for bin placement on collection day should also be considered.

Utility fees for waste collection will be applied per dwelling unit.

I have reviewed the Environmental and Waste Management Requirements.

Kyle D'Appolonia, Environmental Coordinator

OTHER COMMENTS:

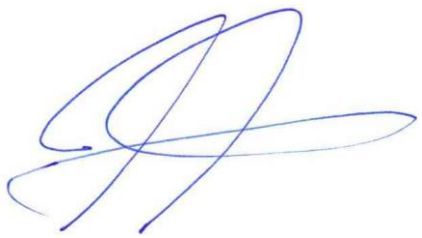
As per the CVEP, the proposed site is adjacent to two Major Pedestrian Routes (Map 02) on Cedar Street and future-planned Road 2F. Currently, the nearest sidewalk facility is 625 meters south (Tunbridge Avenue). The closest public elementary school (Albert McMahon) lies 1.3 kilometers away, and a private school is also situated 250 meters south on the opposite side of the road. To proceed with this project out of sequence with the CVEP, a 1.5-meter-wide asphalt pedestrian facility must be designed and constructed at the developer's sole expense, spanning from the southern limit of the subject property to the north property line of 8924 Cedar Street (approximately 325 meters).

A demolition permit shall be secured with the building dept for each applicable structure to be removed.

A plumbing inspection shall be secured with the building dept for each septic system to be removed.

RECOMMENDATION:

From an engineering point of view, the application may proceed to adoption once the servicing requirements have been met as per the DSCB, Introduction, Items 10 and/or 11.



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