

DATE: February 9, 2023

FILE: 5330-20/SSCP

TO: Chair and Members
Sewage Commission

FROM: Russell Dyson
Chief Administrative Officer

Supported by Russell Dyson
Chief Administrative Officer

R. Dyson

RE: Sewer System Conveyance Bylaw Variances

Purpose

To provide a summary of bylaw variances that will be required for the Sewer System Conveyance Project (SSCP) per the existing procurement documents and receive support and direction from the Sewage Commission to pursue these required variances.

Recommendations from the Chief Administrative Officer:

1. THAT variances to Town of Comox bylaws regarding building setbacks and floodplain requirements are pursued to optimise the upgrades to the Comox Pump Station to minimize cost and impact to neighbours.
2. THAT an exemption to Comox Valley Regional District noise bylaws for horizontal directional drilling work are pursued to ensure construction risk and cost is minimised for this portion of the scope.

Executive Summary

As staff have continued to refine the design and construction plans for the SSCP through the procurement of the Design-Builder, requirements have been identified that do not align with governing bylaws in the Town of Comox (Town) and Comox Valley Regional District (CVRD) Electoral Area B. Significant advantages to implementing components of the project scope can be realized with variances/exemptions to bylaws, as described below:

- **Comox Pump Station (CXPS):** Due to site constraints, post-disaster requirements for the facility and escalating project costs, upgrades to the CXPS will only include electrical and mechanical upgrades to the station to accommodate flows to 2060. In the future a new CXPS, in a new location will be required. However even with this reduced scope for the CXPS, a number of variances are required from the Town:
 - *Zoning Bylaw:* Existing infrastructure does not meet setbacks required by Town Zoning bylaws, and setbacks cannot be accommodated for any additional above ground equipment that is required for the upgrade. A variance of 0m from property lines will be requested. This will maintain a 1.5m setback from nearest neighbour.
 - *Floodplain Bylaw:* Requires significant setbacks (akin to zoning bylaw) and a minimum height of 1.5m above ground for all new infrastructure. Raising height of new infrastructure would go against public engagement commitments and impact neighbours' views. A variance for 0m setbacks and to apply height restriction to only electrical components of additional equipment will be requested.

- **Horizontal Directional Drilling:** Horizontal Directional Drilling (HDD) work is loud and is operated continuously, 24 hours per day, to minimise construction risk, borehole collapse and construction costs. Noise is present at the entry/exit pits but not generally along the length of the bore. Both work sites are within Lazo North (Area B).
 - *Noise Bylaw:* The contractor will be required to implement best practice noise mitigation including building sound attenuation tents over noisy equipment, however noise bylaw levels will still not be able to be achieved

Once the Design-Builder’s construction plans and design drawings are submitted, the necessary variance and exemption work will be undertaken by staff. Variance applications will be submitted to the Town and a staff report will be taken through the Sewage Commission and CVRD Board to request a resolution that exempts the HDD work from CVRD’s noise bylaw.

Prepared by:

Concurrence:

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Government and Community Interests Distribution (Upon Agenda Publication)

City of Courtenay	✓
Town of Comox	✓
K’ómoks First Nation	✓

Background/Current Situation

As the SSCP has progressed, staff have continued to refine the design and construction plans for the SSCP through the procurement of the Design-Builder and requirements have been identified that do not align with governing bylaws. For each of the variances required, addition detail is provided in the sections below.

Comox Pump Station

- Scope: electrical and mechanical upgrade for influent flows forecasted for the year 2060. No upgrade to meet new seismic or floodplain requirements. Future rebuild of CXPS required.
- CXPS has no fee simple property that it is built on. Existing infrastructure built within two historical statutory rights of way (SRW) on public land (Appendix A):
 - SRW Plan 51139: Original Town of Comox sewage pump station and outfall
 - SRW Plan 41919: CVRD pump station and forcemain infrastructure
- Existing infrastructure does not meet setbacks required by Town bylaws. Per Appendix A, there is very little space between the existing building and the top of bank to the south and west (effectively the Natural Boundary) and the limit of the SRW on the east (1.55m from the nearest neighbour property line).
- Additional above ground infrastructure required at site – cheapest and lowest cost option is to place directly adjacent existing building at existing grade and screen from neighbours with fence and vegetation.
- Zoning bylaw setbacks cannot be accommodated for any additional above ground equipment.
- Floodplain bylaws cannot be accommodated for setbacks and if height requirements are accommodated they will require new equipment to be very tall (12 feet), impacting neighbours sight lines.

- Current contract requirements for Design-Builder is to keep all electrical components of additional equipment placed outside the existing building above height requirements for floodplain bylaw to ensure intent of bylaw is met. None of the additional equipment placed outside of existing building will be critical to pump station operation.
- Once the Design-Build drawings are complete for CXPS, these will be submitted to Town under the necessary variance applications.

Horizontal Directional Drilling

- HDD work is loud and is operated continuously, 24 hours per day, to minimise construction risk, borehole collapse and construction costs.
- The HDD work sites are both within Electoral Area B of the CVRD: one at the intersection of Hawkins Road/Torrence Road/Lazo Road and the other at the intersection of Morland Road and Baron Road SRW.
- The contractor will be required to implement best practice noise mitigation including building sound attenuation tents over noisy equipment; however, noise bylaw levels will not be able to be achieved.
- Once the Design-Builder construction plans are submitted, these will be submitted to CVRD staff for work duration and noise variances.

Options

Comox Pump Station

- Alternatives to setback requirements in zoning bylaw would require the building of a new CXPS. The project cannot afford a new CXPS. Any new CXPS will need to be built on a different site as the existing pump station site is very constrained and needs to continue operation until a new station is built.
- Alternatives to floodplain bylaws fit into two categories:
 - Setbacks: Same issue as zoning bylaw setbacks
 - Height: CVRD could build all additional infrastructure outside existing building elevated at 1.5m above existing ground to meet this component of bylaw; however, it would create sight-line issues for neighbours and would be more costly

Horizontal Directional Drilling

- To meet the bylaws, HDD work would need to only run between 8am and 9pm, approximately 50 per cent of standard work hours.
- This would approximately double the drilling cost of the HDD, the most costly portion of the project.
- It would also increase risk of borehole collapse, which would require more boring work, further extending drilling process and increasing costs even higher.

Financial Factors

Each of the variances listed above helps to reduce project costs and risks while still ensuring a successful and operable project upon project completion. The CXPS still has useful life in the existing asset, and the developed option maximizes the existing useful life while also delaying additional upfront capital costs. In the future a new CXPS will be required to be built in a new location and current seismic, post-disaster and Town bylaws will need to be met.

Strategic Considerations: Strategic Drivers and Regional Growth Strategy

CVRD Board Strategic Drivers:							
Fiscal Responsibility	✓	Climate Crisis and Environmental Stewardship and Protection		Community Partnerships		Indigenous Relations	

Fiscal Responsibility

- In light of escalating project costs, a careful review of the existing and useful service life of assets was reviewed. The proposed path forward balances costs and risks.

CVRD Regional Growth Strategy Goals:							
Housing		Ecosystems, Natural Areas and Parks		Local economic development		Transportation	
Infrastructure	✓	Food Systems		Public Health & Safety		Climate Change	✓

Infrastructure

- Throughout the SSCP project, any and all options have been reviewed looking at ways to deliver an affordable, effective and efficient project.

Climate Change

- Where practical to do so, as part of the SSCP, options for flood proofing and flood protection have been incorporated into the project scope. For the CXPS, flood-proofing is not practical nor fiscally responsible at this time.

Intergovernmental Factors

Variances for the CXPS will require approval by Town council and staff.

Citizen/Public Relations

Comox Pump Station

In July 2022, staff provided a detailed update to neighbours of the CXPS that included the following information:

- That the existing building would be retained
- That the new generator would be placed outside
- No flood proofing of the facility would be completed
- A new Comox Pump Station would be built at a different site within the next 40 years

These are all still valid except for the new generator being located outside. CVRD are hopeful to put the new generator inside the existing building (better solution than currently communicated) and only have ancillary infrastructure (odour control skid, fuel tank, washroom) outside of the existing building.

Once a Design-Builder is selected and CVRD have approved their designs for the CXPS, staff will re-engage with neighbours on the changes to the station.

Horizontal Directional Drilling

Significant public engagement has been rolled out for the HDD portion of the project, both at general open houses and specific engagement sessions with the Lazo Hill residents. This portion of

the project remains contentious, exemplified by the *Save the Quadra Sands Aquifer* posters. Whilst the work hours and noise generated from the HDD work is not a source of current concern, it is thought that the direct neighbours to the HDD work sites are also residents who have other concerns about the HDD, so this will exacerbate the issue for them.

Once a Design-Builder is selected and construction plans are produced, further engagement with neighbours will be necessary.

Attachments: Appendix A – Comox Pump Station site plan

**SKETCH PLAN SHOWING IMPROVEMENTS ON:
PART OF THE BED OF COMOX HARBOUR,
NANAIMO DISTRICT**

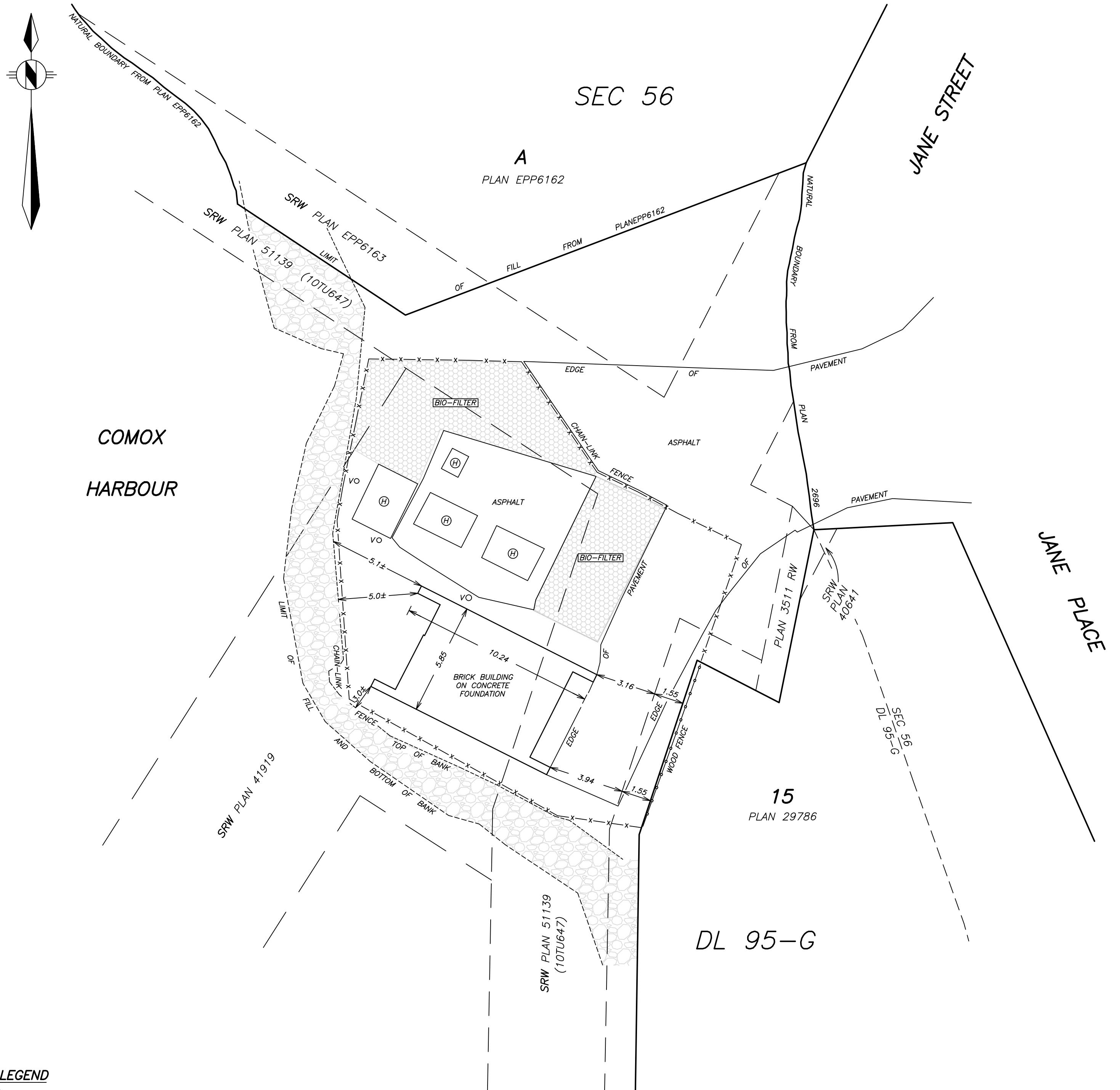
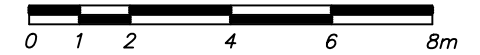
CIVIC ADDRESS:
81 JANE PLACE, COMOX, B.C.

THIS DOCUMENT SHOWS THE RELATIVE LOCATION OF THE SURVEYED STRUCTURES AND FEATURES WITH RESPECT TO THE BOUNDARIES OF THE PARCEL DESCRIBED. THIS DOCUMENT SHALL NOT BE USED TO DEFINE PROPERTY LINES OR PROPERTY CORNERS.

PARCEL BOUNDARIES SHOWN HAVE BEEN DERIVED FROM PLANS 29786 AND EPP6162

SCALE: 1:150

ALL DISTANCES ARE IN METRES



LEGEND

- (H) DENOTES HATCH
- VO DENOTES VENT

SURVEYED DECEMBER 8th and 12th, 2022
DATED DECEMBER 20, 2022

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BUILDING DIMENSIONS AND OFFSETS TO PROPERTY LINES ARE SHOWN TO EXTERIOR OF BUILDING WALLS.

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