

FRASER VALLEY REGIONAL DISTRICT

BOARD OF DIRECTORS

REVISED AGENDA

Thursday, September 17, 2020
(Immediately following the FVRHD Open Meeting)
FVRD Boardroom, 45950 Cheam Avenue, Chilliwack, BC

Pages

1. CALL TO ORDER

2. APPROVAL OF AGENDA, ADDENDA AND LATE ITEMS

All/Unweighted

MOTION FOR CONSIDERATION

THAT the Agenda, Addenda and Late Items for the Fraser Valley Regional District Board Open Meeting of September 17, 2020 be approved;

AND THAT all delegations, reports, correspondence committee and commission minutes, and other information set to the Agenda be received for information.

3. DELEGATIONS AND PRESENTATIONS

3.1 Canadian Health and Fitness Institute 10 - 28

- Presentation by John Weston, Board member of the Canadian Health and Fitness Institute with respect to the organizations application to the Federation of Canadian Municipalities' Green Municipal Fund

3.2 Draft Regional Growth Strategy 29 - 49

- Presentation by Alison Stewart, Manager of Strategic Planning and Robin Beukens, Planner II with respect to the Draft Regional Growth Strategy

3.2.1 Draft Regional Growth Strategy 50 - 125

FOR INFORMATION ONLY

- Corporate report dated September 9, 2020 from Robin

Beukens, Planner II

- Appendix 1 - Regional Growth Strategy Draft
- Appendix 2 - Regional Growth Strategy Update

4. BOARD MINUTES & MATTERS ARISING

4.1 Draft Fraser Valley Regional District Board Meeting Minutes - July 28, 2020 126 - 143

All/Unweighted

MOTION FOR CONSIDERATION

THAT the Minutes of the Fraser Valley Regional District Board Open Meeting held July 28, 2020 be adopted.

4.2 Draft Electoral Area Services Committee Meeting Minutes dated July 14, 2020 144 - 152

[EASC-SEPT 2020] THAT the draft minutes of the July 14, 2020 Electoral Area Services Committee be referred back to staff.

5. CORPORATE ADMINISTRATION

5.1 Appointment of Head of Freedom of Information and Protection of Privacy and Privacy Officer 153 - 154

All/Unweighted

- Corporate report dated September 17, 2020 from Jennifer Kinneman, Chief Administrative Officer

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District Board appoint and designate Jaime Reilly as Head of Freedom of Information and Protection of Privacy and Privacy Officer, in accordance with the *Freedom of Information and Protection of Privacy Act*,

AND THAT all other previous statutory designations with respect to the *Freedom of Information and Protection of Privacy Act* be rescinded.

5.2 Establishment of a Parcel Tax Roll Review Panel 155 - 157

All/Unweighted

- Corporate report dated September 17, 2020 from Jaime Reilly, Manager of Corporate Administration

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District Board establish a Parcel Tax Roll Review Panel pursuant to Section 204 of the *Community Charter* for the purpose of reviewing, correcting and authenticating the following parcel tax

bylaws:

- Fraser Valley Regional District Cultus Lake Integrated Water Supply and Distribution System Service Area Parcel Tax Bylaw No. 1417, 2017;
- Fraser Valley Regional District Cultus Lake Integrated Water Supply and Distribution Capital Construction Service Area Parcel Tax Bylaw No. 1447, 2017;
- Fraser Valley Regional District South Cultus Lake Sewage Treatment Service Area Parcel Tax Establishment Bylaw No. 1497, 2018;
- Fraser Valley Regional District Lake Errock Water System Capital Construction Service Area Parcel Tax Establishment Bylaw No. 1496, 2018;
- Fraser Valley Regional District Popkum Sewer Service Area Parcel Tax Establishment Bylaw No. 1498, 2018; and
- Fraser Valley Regional District Popkum Sewer Parcel Tax Establishment Bylaw No. 1574, 2020.

AND THAT Director Wendy Bales, Director Bill Dickey and Director Taryn Dixon be appointed as members of the Parcel Tax Roll Review Panel;

AND FINALLY THAT the sitting of the Parcel Tax Roll Review Panel take place on Thursday, November 12 at 10am in the Fraser Valley Regional District Boardroom.

6. PERMITS

[OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO BE HEARD]

6.1 Form and Character Development Permit 2020-07 for a proposed commercial development at 52964 Yale Road Electoral Area D and Development Variance Permit 2020-12 for a reduction of one (1) required parking space.

158 - 242

EAs/Unweighted

- Corporate report dated September 9, 2020 from David Bennett, Planner II
- Schedule B - Site Plan
- Schedule C - Landscape Plan
- Schedule D - Design Drawings
- Schedule E - Drainage Design Brief
- Schedule F - Exterior Lighting Impact
- Schedule G - On-Site Wastewater Treatment
- Schedule H - Geotechnical Assessment

- Zoning Compliance Letter
- Development Guidelines Letter
- Draft Development Permit
- Draft Variance Permit

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District Electoral Area Services Committee issue Form and Character Development Permit 2020-07 relating to the Form and Character of a Commercial Development at 52964 Yale Road Electoral Area D.

THAT the Fraser Valley Regional District Board issue Development Variance Permit 2020-12 to reduce the required number of parking space from 48 to 47 stalls for a Commercial Development at 52964 Yale Road Electoral Area D, subject to consideration of any comments or concerns raised by the public

- | | | |
|-----|---|-----------|
| 6.2 | <u>Development Variance Permit 2020-11 to increase the maximum height of new homes from 10 meters to 12 meters within "The Gardens" development on the site of the former Minter Gardens, Electoral Area D</u> | 243 - 261 |
|-----|---|-----------|

EAs/Unweighted

- Corporate report dated September 9, 2020 from David Bennett, Planner II
- Draft Permit
- DVP Application

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District Board refuse the requested Development Variance Permit for all lots backing on to Llanberis Way and issue the Development Variance Permit for the remainder of the lots within the development.

- | | | |
|-----|---|-----------|
| 6.3 | <u>Development Variance Permit 2020-13 to vary the definition of height to allow for a three storey single family home at 47040 Snowmist Drive, Electoral Area C</u> | 262 - 279 |
|-----|---|-----------|

EAs/Unweighted

- Corporate report dated September 9, 2020 from Julie Mundy, Planner I
- Draft Permit
- DVP Application

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District issue Development Variance Permit

2020-13 to vary the number of permitted storeys from two, to three, for a single family residence at 47040 Snowmist Drive, subject to consideration of any comments or concerns raised by the public.

6.4 Development Variance Permit 2020-14 to vary the requirements of Accessory Family Residential Use for the property located at 35990 Hyde Buker Road, Electoral Area G 280 - 297

EAs/Unweighted

- Corporate report dated September 9, 2020 from Gavin Luymes, Planning Technician
- Draft Permit
- DVP Application

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District Board issue Development Variance Permit 2020-14 to vary the requirements regarding the relationship between the property owner and occupant of an Accessory Family Residential Use to allow the daughter of a property owner to occupy the proposed accessory family residence at 35990 Hyde Buker Road, Electoral Area G, subject to consideration of any comments or concerns raised by the public;

AND THAT the Fraser Valley Regional District Board authorize its signatories to execute all legal instruments associated with this application.

6.5 Development Variance Permit 2020-15 to vary the front lot line setback for an animal shelter or part thereof at 53294 Yale Road, Electoral Area D 298 - 314

EAs/Unweighted

- Corporate report dated September 9, 2020 from Gavin Luymes, Planning Technician
- Draft Permit
- DVP Application

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District Board issue Development Variance Permit 2020-15 to vary the front lot line setback for an animal shelter or part thereof from 200 feet to 120 feet clear-to-sky to facilitate construction of a dairy barn at 53294 Yale Road, Electoral Area D, subject to the consideration of any comments or concerns raised by the public.

7. OTHER MATTERS

7.1 FVRD Air Quality Management Plan Discussion Paper 315 - 366

FOR INFORMATION ONLY

- Corporate report dated September 9, 2020 from Marina Richter, Environmental Policy Analyst
- Air Quality Planning for the Fraser Valley: A Discussion Paper

7.2 Mount Cheam Toilet Installation and Kiosk Replacement 367 - 371

FOR INFORMATION ONLY

- Corporate report dated September 9, 2020 from Meghan Jackson, Parks Technician II

7.3 Public Hearings during the COVID-19 Provincial State of Emergency 372 - 377

All/Unweighted

- Corporate report dated September 9, 2020 from David Bennett, Planner II

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District Board resolve to resume public hearings for rezoning and Official Community Plan amendment bylaws;

THAT Fraser Valley Regional District Board authorise the holding of public hearings by means of electronic communication;

AND THAT the Fraser Valley Regional District Board direct staff to develop electronic public hearing procedural rules to maximize clarity, transparency and access for the public, and to ensure that due process is maintained.

7.4 Agricultural Land Commission Application – Non-Farm Use (Fire Hose Repair Facility) at Ford Mountain Correctional Centre, 57657 Chilliwack Lake Road, Electoral Area E 378 - 388

EAs/Unweighted

- Corporate report dated September 9, 2020 from Andrea Antifaeff, Planner I
- ALC Application

MOTION FOR CONSIDERATION

THAT the application for non-farm use within the Agricultural Land Reserve at 57657 Chilliwack Lake Road (Ford Mountain Correctional Centre), Electoral Area E, be forwarded to the Agricultural Land Commission for consideration;

AND THAT the Agricultural Land Commission consider the staff report dated September 9, 2020 under file number 3015-20-2020-03.

7.5 Agricultural Land Commission Application – Proposed Two (2) Lot Subdivision at 550 Blatchford Road, Electoral Area H 389 - 398

EAs/Unweighted

- Corporate report dated September 9, 2020 from Julie Mundy, Planner I

MOTION FOR CONSIDERATION

THAT the application for a two (2) lot subdivision within the Agricultural Land Reserve at 550 Blatchford Road, Electoral Area H be forwarded to the Agricultural Land Commission for consideration;

AND THAT the FVRD corporate report dated September 9, 2020 under file number 3015-20 2020-04, be forwarded to the Agricultural Land Commission

7.6 Chilliwack River Erosion Setback Line Update – Slesse Park Area

399 - 431

EAs/Unweighted

- Corporate report dated September 9, 2020 from Andrea Antifaeff, Planner I
- Technical Memorandum dated March 2, 2020 from Kerr Wood Leidal Associates Ltd., Consulting Engineers with respect to Chilliwack River Slesse Park Erosion Setback Line Update

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District Board direct staff to implement the findings of the *Chilliwack River Slesse Park Erosion Setback Line Update* report prepared by Kerr Wood Leidal Associates Ltd. by amending Chilliwack River Development Permit Area 2-E in *Fraser Valley Regional District Official Community Plan for Electoral Area E Bylaw No. 1115, 2011*;

AND THAT the Fraser Valley Regional District Board authorize the immediate use of the report for permitting purposes, to the extent possible, pending the update of the OCP and development permit area requirements;

AND FINALLY THAT the Fraser Valley Regional District Board direct staff to send a mail-out to all property owners within the study area to share the results of the report

7.7 Grant Application: Community Resiliency Investment Program

432 - 445

All/Unweighted

- Corporate report dated September 9, 2020 from Reg Dyck, Manager of Electoral Emergency Services
- Appendix 1

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District Board endorse a grant application of up to \$550,000 under the UBCM's Community Resiliency Investment program

(CRI) to reduce the risk of wildfires and mitigate their impacts on the FVRD.

7.8 Investing in Canada Infrastructure Program – British Columbia - Rural and Northern Communities Infrastructure October 2020 Grant Intake

446 - 448

- Corporate report dated September 17, 2020 from Sterling Chan, Manager of Engineering and Infrastructure

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District Board direct staff to submit grant applications under the Investing in Canada Infrastructure Program – British Columbia - Rural and Northern Communities Infrastructure intake for projects involving upgrades to the Canyon Alpine and Deroche Water Systems.

8. CONSENT AGENDA

8.1 CONSENT AGENDA - FULL BOARD

All/Unweighted

All staff reports respecting these items are available in the Directors Office and on the FVRD website.

MOTION FOR CONSIDERATION

THAT the following Consent Agenda item be endorsed:

8.1.1 EASC-SEPT 2020

THAT the Fraser Valley Regional District Board authorize a grant-in-aid in the amount of \$2,500 to the Sunshine Valley Volunteer Fire Department, funded from the 2020 Electoral Area “B” grant-in-aid budget, to put towards upgrades of their communications system.

Reference item 6.1 of September 9, 2020 EASC Agenda.

9. ADDENDA ITEMS/LATE ITEMS

10. REPORTS FROM COMMITTEE MEETINGS - FOR INFORMATION

10.1 Housing Needs Report Project Update

449 - 452

FOR INFORMATION ONLY

- Corporate report dated September 9, 2020 from Katelyn Hipwell, Planner II

11. REPORTS BY STAFF

12. REPORTS BY BOARD DIRECTORS

13. PUBLIC QUESTION PERIOD FOR ITEMS RELEVANT TO AGENDA

Email submissions can be made to info@fvrd.ca before 1 pm, September 16. Alternatively, you may participate in public question period live on Zoom, by phone or computer using the Zoom information provided on the FVRD website.

14. RESOLUTION TO CLOSE MEETING

All/Unweighted

MOTION FOR CONSIDERATION

THAT the meeting be closed to the public, except for Senior Staff and the Executive Assistant for the purpose of receiving and adopting Closed Meeting Minutes convened in accordance to Section 90 of the *Community Charter* and to consider matters pursuant to:

- Section 90(1)(k) of the *Community Charter* - negotiations and related discussions respecting the proposed provision of a Regional District service that are at their preliminary stages and that, in the view of the Board, could reasonably be expected to harm the interests of the Regional District if they were held in public;
- Section 90(2)(b) of the *Community Charter* - the consideration of information received and held in confidence relating to negotiations between the Regional District and a provincial government or the federal government or both, or between a provincial government or the federal government or both and a third party.

R E C E S S

15. RECONVENE OPEN MEETING

16. RISE AND REPORT

17. ADJOURNMENT

All/Unweighted

MOTION FOR CONSIDERATION

THAT the Fraser Valley Regional District Board Open Meeting of September 17, 2020 be adjourned.



CANADIAN HEALTH AND FITNESS INSTITUTE

INSTITUT CANADIEN DE LA SANTÉ ET DE L'ACTIVITÉ PHYSIQUE



ACTIVATING CANADIANS

A Case for completing a Feasibility Study for an Adventure and Innovation Campus (Phase 2 of CHFI Plan)

Click to advance to identified section

**FVRD Presentation
The Phase 2 Feasibility Study**

Slides 2-18

**Phase 1
Work Done to Date**

Slide 20

**Phase 3
Adventure Campus**

Slides 21-28

We're Happier
in Nature, "Off
Leash"

PUBLIC HEALTH IMPLICATIONS OF PROMOTING PHYSICAL ACTIVITY

Increasing physical activity reduces the incidence and severity of cardiovascular disease, diabetes, and mental illness. Despite all efforts and investments to date, the following circumstances have intensified over decades and now represent a genuine threat to the resilience of Canadians:

- 90% of Canadian children and 87% of adults are not active enough every day
- 1 in 3 Canadian children is overweight or obese, twice the rate of a generation ago
- Anxiety, depression, addictions, and mental illness are all on the rise
- Canadians have become increasingly disconnected from nature



ECONOMIC IMPLICATIONS OF PROMOTING PHYSICAL ACTIVITY

Evidence* extrapolated from American sources suggests that the outdoor recreation industry in Canada may represent between 1.2% and 10% of our national GDP, or between \$84 billion and \$170 billion (CDN) annually and has been growing in recent years at a faster rate than the GDP growth generally. Promoting physical activity promotes the economy, not just our people's physical, mental, and spiritual health.

* Source: [Outdoor Recreation Satellite Account, U.S. and Prototype for States, 2017](#) (Released September 20, 2019)

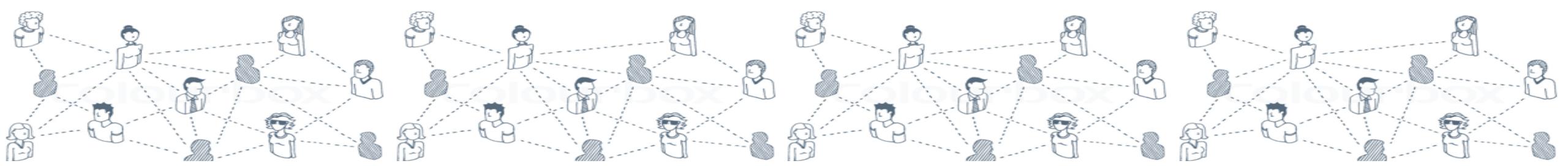


CANADIAN HEALTH AND FITNESS INSTITUTE

INSTITUT CANADIEN DE LA SANTÉ ET DE L'ACTIVITÉ PHYSIQUE

3





CHFI: A QUICK BACKGROUND

Feb 2010	Olympic and Paralympic Games in MP John Weston's riding
Dec 2014	<i>National Health and Fitness Day Act</i> passed (Over 500 cities have proclaimed to date)
Summer 2018	CHFI Founded as "NHFI", Ottawa
Feb 2019	Phone Conference for founding Directors, Advisors
June 2019	Workshop to confirm key principles; Jai Bawa's Concept Video released
Sept 2019	Institute's public launch
June 2020	Completion of Business Plan, Budget, Concept Deck
July 1, 2020	Institute rebranded as "CHFI"
Aug 2020	Board expands to 35
Sept 17, 2020	Briefing to FVRD
Oct 15, 2020	Virtual Celebrity Fundraiser Gala



CANADIAN HEALTH AND FITNESS INSTITUTE

INSTITUT CANADIEN DE LA SANTÉ ET DE L'ACTIVITÉ PHYSIQUE

4



Our **VISION**

To inspire active citizenship to enhance the physical, mental, and spiritual health of all Canadians and to Make Canada the Fittest Nation on Earth by December 31, 2030.

Our **MISSION**

To be a world-leading, evidence-based, sustainable innovation engine that enables the transformation of Canada into the healthiest and fittest nation on earth.

For CHFI definitions of “Health” and “Fitness”, please visit our website at www.chfi.fit



CANADIAN HEALTH AND FITNESS INSTITUTE

INSTITUT CANADIEN DE LA SANTÉ ET DE L'ACTIVITÉ PHYSIQUE

5



ACCOMPLISHED LEADERSHIP; NATIONAL RECOGNITION

We have attracted an array of impressive leaders from across Canada to sit on our Board of Directors and Board of Advisors. A full list of our leaders can be found on our [website](#).

Her Excellency the Governor General of Canada, Madame Julie Payette is the Institute's Viceregal Patron.



CANADIAN HEALTH AND FITNESS INSTITUTE

INSTITUT CANADIEN DE LA SANTÉ ET DE L'ACTIVITÉ PHYSIQUE



Main Presenter



JOHN WESTON

Founder of the Canadian Health and Fitness Institute, John has experience in law, politics, business, diplomacy, land development, and health and fitness. He has spent much of his life promoting the value of physical activity as core to a healthy personal and community life.

John served as M.P. for the riding that hosted the 2010 Olympic and Paralympic Games. With CHFI Advisors Pierre Lafontaine and Phil Marsh, he created the Parliamentary Fitness Initiative. With then-Senator Nancy Greene Raine, he quarterbacked the *National Health and Fitness Day Act*. 500 local governments have already proclaimed National Health and Fitness Day, the first Saturday in June each year.



CANADIAN HEALTH AND FITNESS INSTITUTE

INSTITUT CANADIEN DE LA SANTÉ ET DE L'ACTIVITÉ PHYSIQUE

7



Other Presenters

- [Jai Bawa](#) (Ottawa, Ontario) - jaiveer.bawa@architecture49.com
A49 Architect; Visionary; Design Professional; Design Manager
- [Glen Cowper](#) (St. Albert, Alberta) - qayaqski@gmail.com
Sport, Recreation and Physical Activity Policy and Infrastructure Analyst; and experienced outdoorsman
- [Monica Jako](#) (Toronto, Ontario) - jako.monica@gmail.com
Social Enterprise Incubator and Youth Educator
- [Rob Stewart](#) (New Westminster, British Columbia) - robstewart@icloud.com
Project Manager; Sports Medicine Event Planner; Athlete
- [Sam Waddington](#) (Chilliwack, British Columbia) - sam@mtwaddingtons.com
Entrepreneur; Adventurer; Wilderness and Trails Advocate; Founder, Fraser Valley Trails Alliance; and Former Chilliwack City Councillor
- [Donna Weston](#) (Vancouver, British Columbia) - dj.weston@shaw.ca
Business Executive; Strategist; Personal Trainer



The Five-Phase CHFI VISION – and Where the Study Fits

✓
Done

PHASE 1: SETTING THE FRAMEWORK: PRE-FEASIBILITY ANALYSIS	2009 - 20	\$500,000+	✓
PHASE 2: INVESTMENT READINESS AND FEASIBILITY STUDY	2020 - 21	\$490,000	
PHASE 3: NATIONAL ADVENTURE AND INNOVATION CENTRE and ACTIVITY INNOVATION NETWORK	2021 - 25	\$3.97 million	
PHASE 4: PROTOTYPE HUT-TO-HUT TRAIL SYSTEM	2021 - 25	\$34.5 million	
PHASE 5: CANADIAN ACTIVITY CENTRE OF EXCELLENCE	2023 - 27	\$600 million	



CANADIAN HEALTH AND FITNESS INSTITUTE

INSTITUT CANADIEN DE LA SANTÉ ET DE L'ACTIVITÉ PHYSIQUE

9

18



Three Key Things to Take Away from Today:

- The Opportunity
- The Timing
- How FVRD Can Assist



THE OPPORTUNITY: WHY FVRD?

In its pre-feasibility analysis (our Phase 1), CHFI determined that the project aligns well with the FVRD's publicly stated priorities:

- outdoor recreation,
- active living,
- tourism,
- economic development, and
- net-zero construction practices.

By investing 10% of the Study's budgeted cost, FVRD can trigger a valuable study worth an estimated \$490,000 and other benefits. Furthermore, the FVRD's contribution can be all or in part by value-in-kind.



CANADIAN HEALTH AND FITNESS INSTITUTE

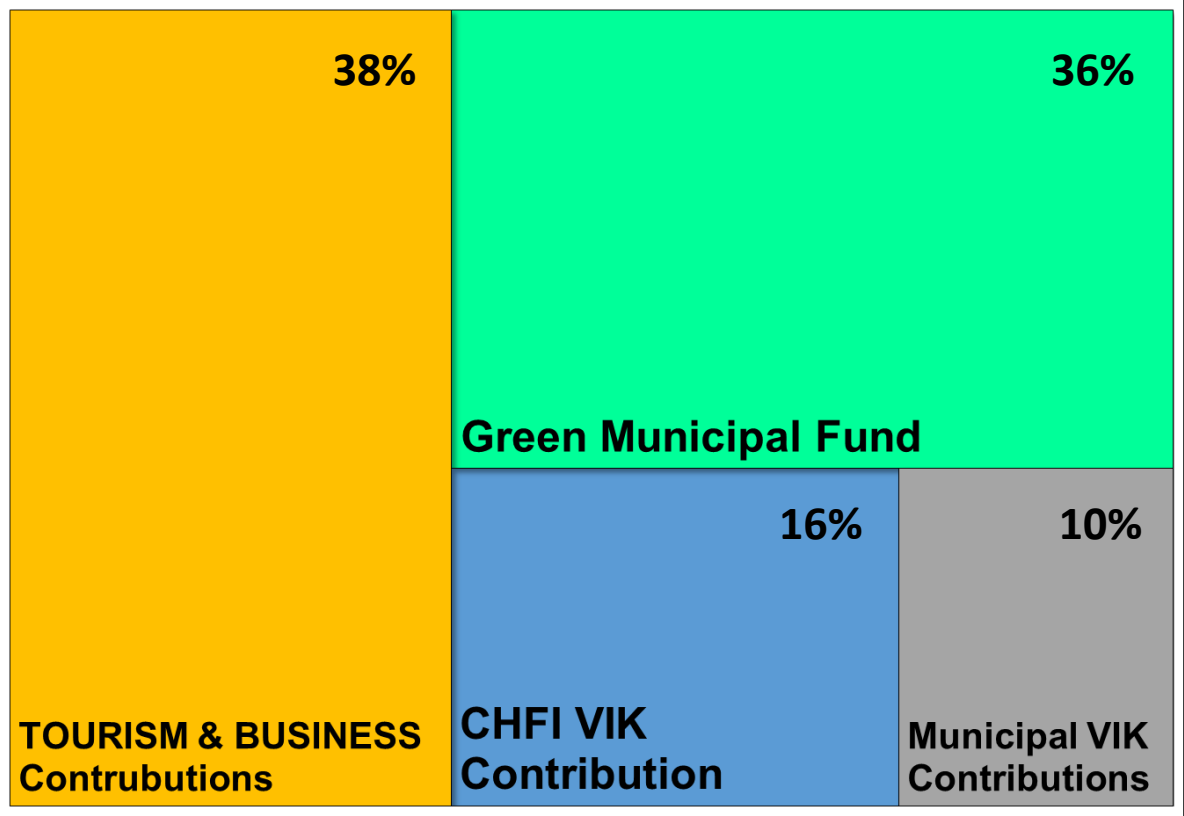
INSTITUT CANADIEN DE LA SANTÉ ET DE L'ACTIVITÉ PHYSIQUE

11

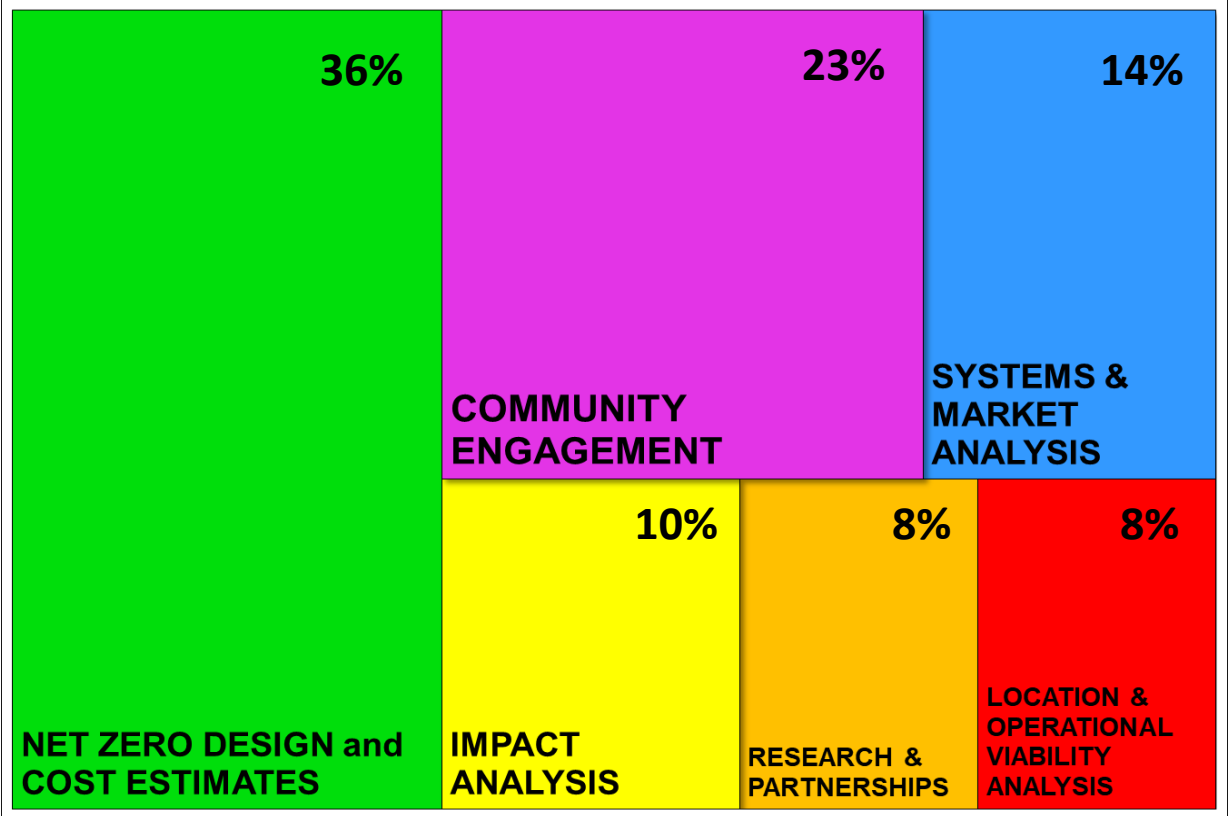


THE OPPORTUNITY: LEVERAGING VIK

Estimated Revenues/Contributions (\$490,000):



Estimated Expenses (\$490,000):



THE OPPORTUNITY COST: WHAT IS CHFI REQUESTING?

- Resolution required by Federation of Canadian Municipalities Green Municipal Fund
- Letter of support
- Value-in-Kind contribution* = \$49,000 (10% of overall cost of the Study)

*VIK contributions from FVRD and any independent municipality within FVRD are eligible to leverage for grant funding applications.

- Encourage Member Municipalities – a bonus but a potential distraction

WHAT IS CHFI NOT REQUESTING?

- We are not requesting grant dollars.
- We are not requesting endorsement or commitment of any resources to the project phases beyond the Feasibility Study. After the Study, the FVRD would exercise its usual independent due diligence in assessing the viability of actual project outlined in Phase 3.



CANADIAN HEALTH AND FITNESS INSTITUTE

INSTITUT CANADIEN DE LA SANTÉ ET DE L'ACTIVITÉ PHYSIQUE

13

22



THE OPPORTUNITY: WHAT IS THE STUDY SCOPE?

The following categories are proposed sections of the specific Study, all of which may fall within existing FVRD budget and program priority areas:

- Public and stakeholder engagement
- Data, mapping, land planning, access, and other technical services
- Outdoor Recreation Business and Partnership Analysis (public, not-for-profit, and private)
- Climate Change, Environmental, Water and Sustainability Analysis, including pre-design process, schematics and specifications for Net-Zero prototype modular buildings in an off-the-grid (serviced) site.
- Social, Economic and Environmental Impact Analysis



CANADIAN HEALTH AND FITNESS INSTITUTE

INSTITUT CANADIEN DE LA SANTÉ ET DE L'ACTIVITÉ PHYSIQUE

14

23



**Target Date:
October 1, 2020**

THE OPPORTUNITY: WHERE DO WE FIND FVRD-ALIGNED PRIORITIES?

The CHFI's analysis suggests there is positive alignment between the Feasibility Study and objectives laid out in key documents crafted by the FVRD and other regional entities:

- [FVRD - Regional Growth Strategy](#) (2014, update in-progress)
- [City of Chilliwack 2040 Community Plan](#)
- [City of Abbotsford 2019-2022 Strategic Plan](#) and [Community Resilience and Recovery Strategy \(2020-2022\)](#)
- [District of Mission Strategic Plan 2018-2022](#)
- FVRD Outdoor Recreation Development Report (2018-2020, report pending)
- [Experience The Fraser](#) and the Canyon To Coast Trail
- First Nations (supportive discussions underway)
- Tourism: [Fraser Valley Destination Development Strategy](#) and [Destination BC Goals](#)

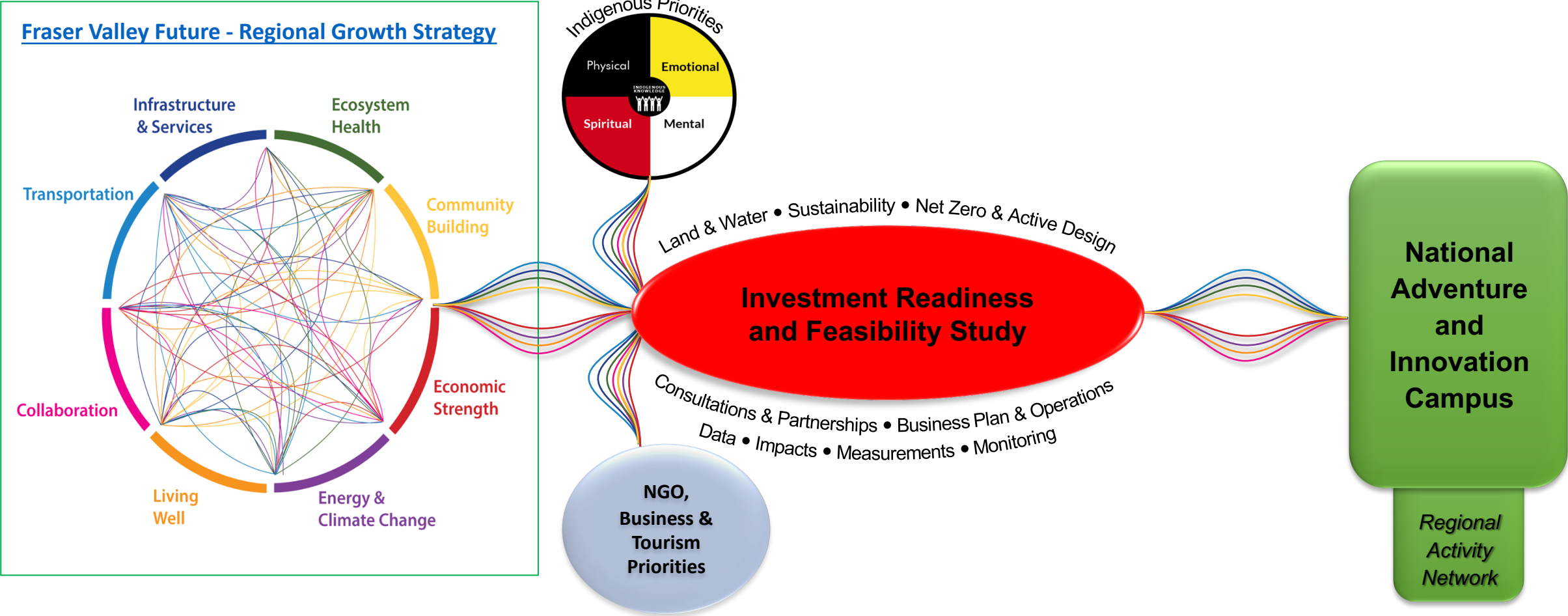


THE OPPORTUNITY: WHAT ARE OTHER BENEFITS TO FVRD?

- Leverage FVRD \$49,000 VIK investment to attract up to \$440,000 in cash and other VIK towards the \$489,000 total cost of the proposed **Feasibility Study**.
- Leverage financial and human resources to further engage regional First Nations; community and conservation stakeholders; and businesses in a project that could benefit all involved.
- Capture further social, economic and environmental impact data and analysis for the Fraser Valley Regional District in the **Impact Report** portion of the **Feasibility Study**.
- Capture valuable technical data and integrated design ideas from an off-the-grid, net-zero, facility analysis, specifically in terms of construction and sustainable energy and water utilization.
- Leverage significant investment to date by CHFI volunteers (over 5,000 hours).
- Promote physical activity to enhance physical, mental, and spiritual health of all residents and visitors.
- Build on the priorities of FVRD and regional Municipality while creating valuable evidence for future national and International tourism, infrastructure, business and economic development.



THE OPPORTUNITY: HOW WILL THE STUDY PROMOTE FV'S REGIONAL GROWTH STRATEGY?



What is the Timing?

- GMF has worked with CHFI for 18 months
- Increasingly expressed support as the project ideas developed
- Only last month indicated a soft deadline of Oct 1st



Wrapping Up: Three Key Things to Take Away

- **The Opportunity:** a study that brings to life much of the data and work performed by the FVRD in recent years plus a prospective project that would benefit residents in many priority FVRD areas, including health, fitness, water and energy management, and environmentally friendly architectural design.
- **The Timing:** GMF has signaled strong support for the CHFI project, particularly if we are able to submit an application for feasibility report funding now.
- **How FVRD Can Assist:** Resolution / Letter / Legwork (VIK)
- And a fourth: THANK YOU for listening!

Want more info? www.chfi.fit or contact us at info@chfi.fit; 604 329 6146 for more information.



CANADIAN HEALTH AND FITNESS INSTITUTE

INSTITUT CANADIEN DE LA SANTÉ ET DE L'ACTIVITÉ PHYSIQUE

19

28



FRASER VALLEY FUTURE 2050

DRAFT



Regional Growth Strategy

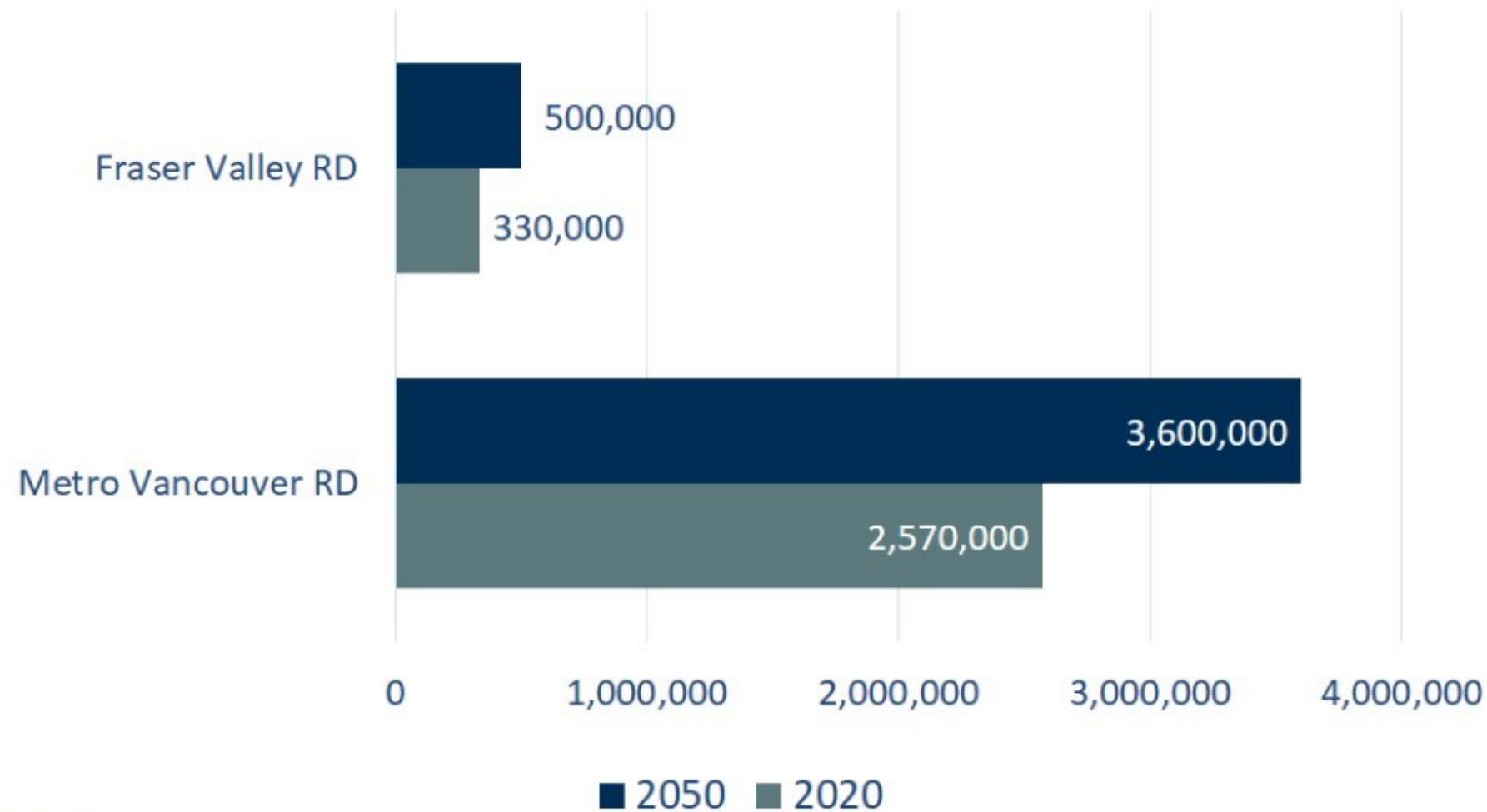


- *Identify common goals*
- *Promote coordination between municipalities, regional districts and indigenous communities*
- *Create stronger links to the Province*
- *Promote the region to investors, residents, and visitors*

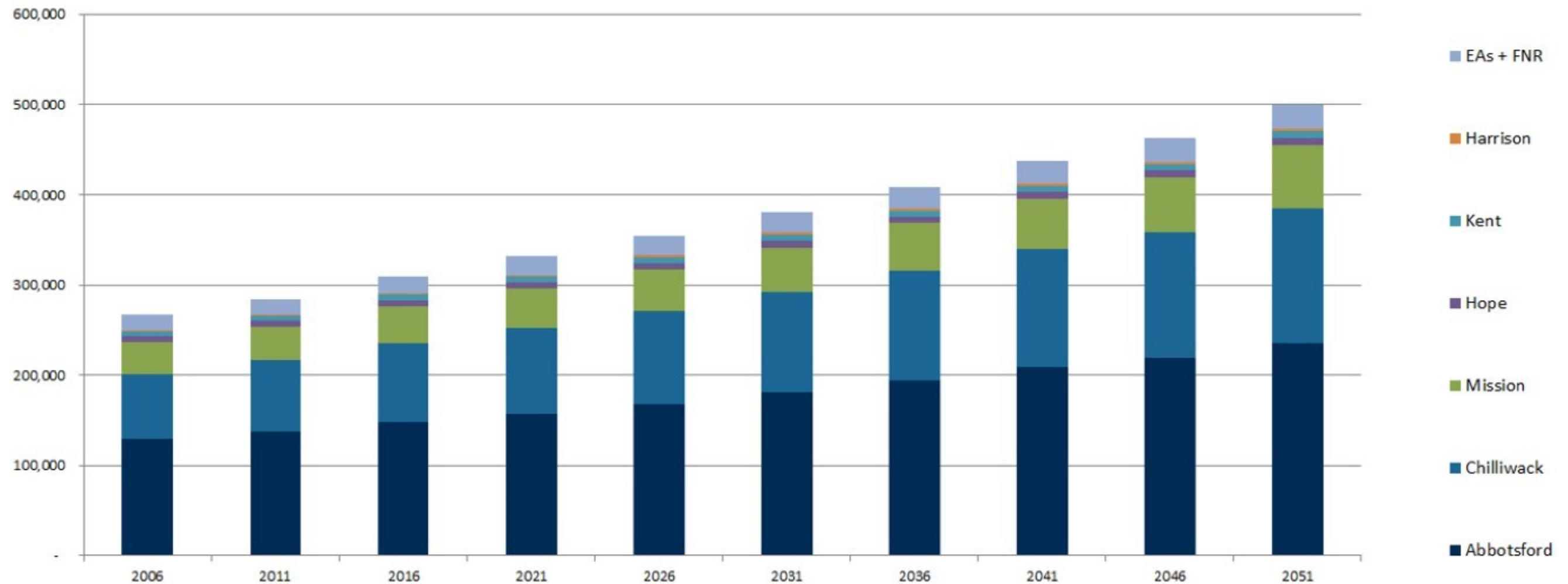
Lower Mainland Growth

2020-2050

2.9 million to 4.1 million



A Growing Region



Population **331,000** and growing

Key Guiding Principle



Engagement, Consultation & Public Input

- » Intergovernmental Advisory Committee
- » Municipal Councils
- » Indigenous Communities/Agencies
- » Public

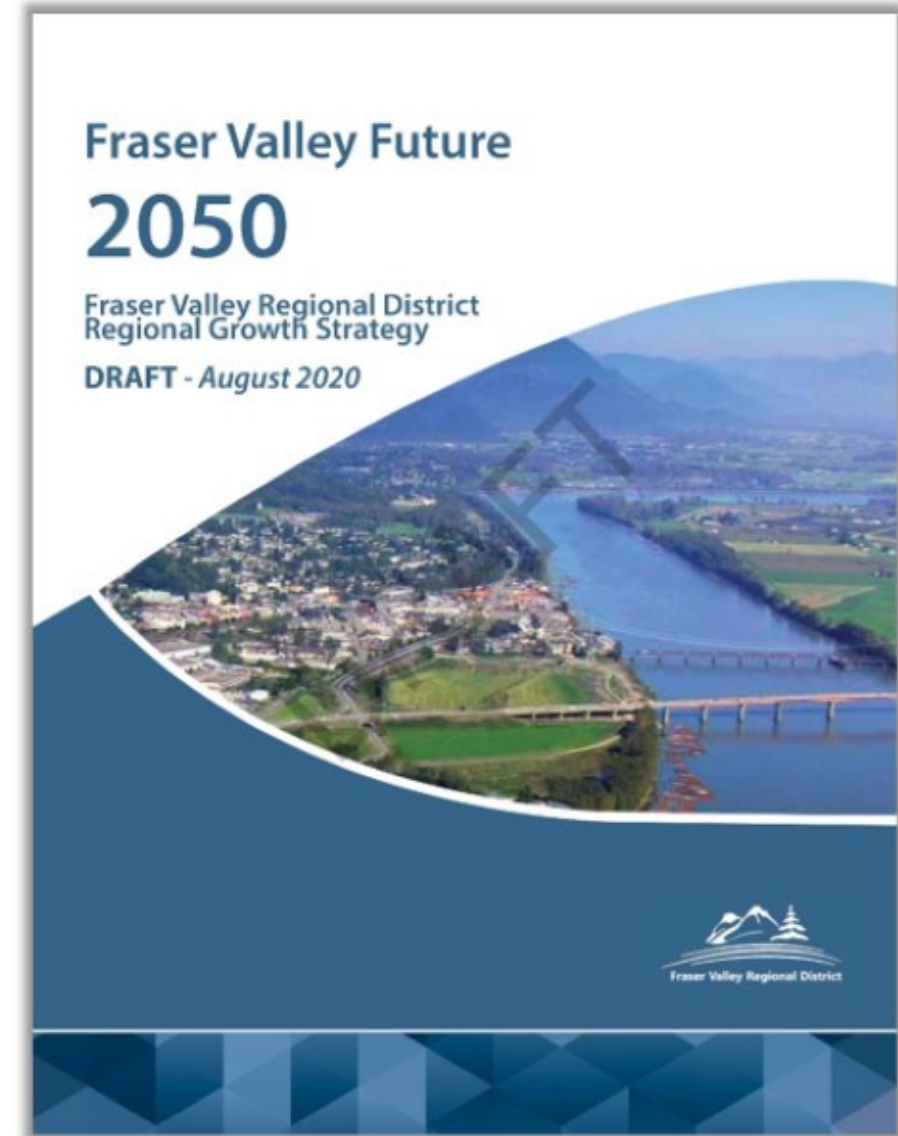
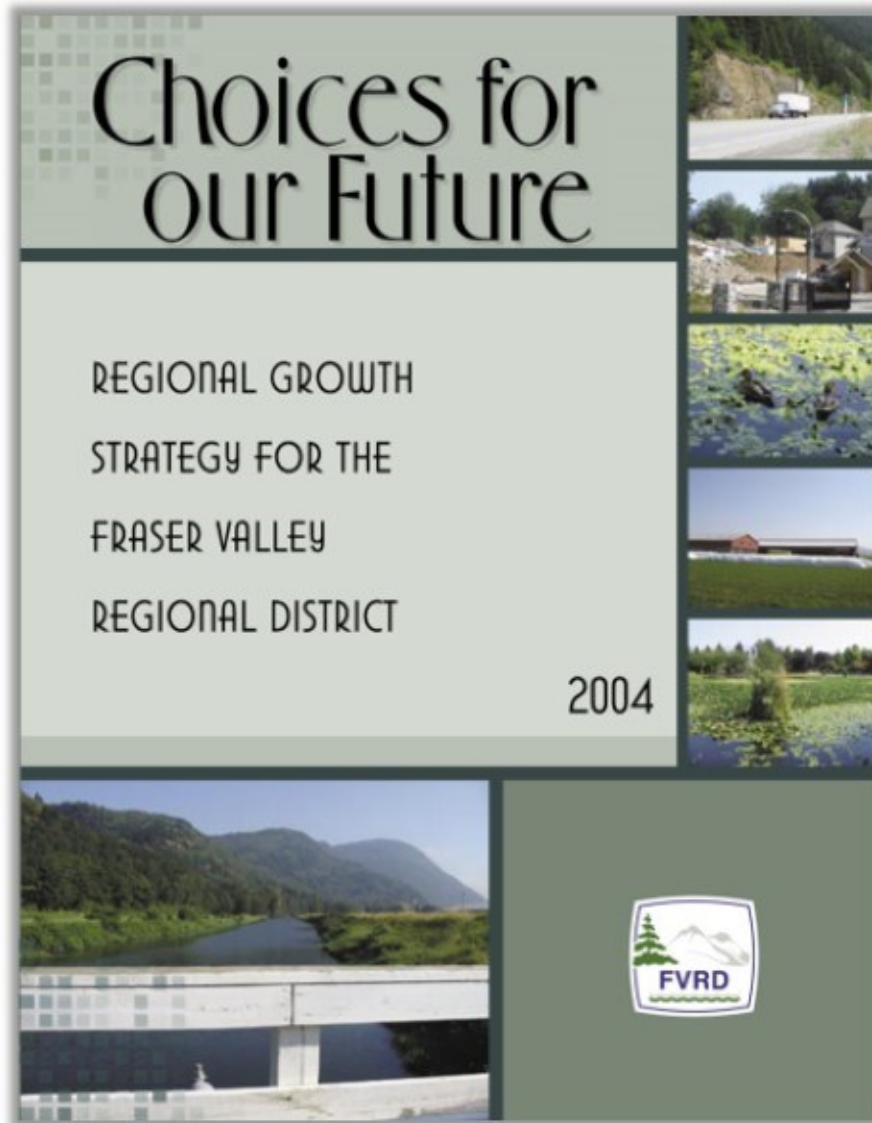


Indigenous Community Input

Most significant change from the 2004 plan & 2014 draft is recognizing Indigenous peoples and communities

Photo Credit: Jenn Kleingeltink

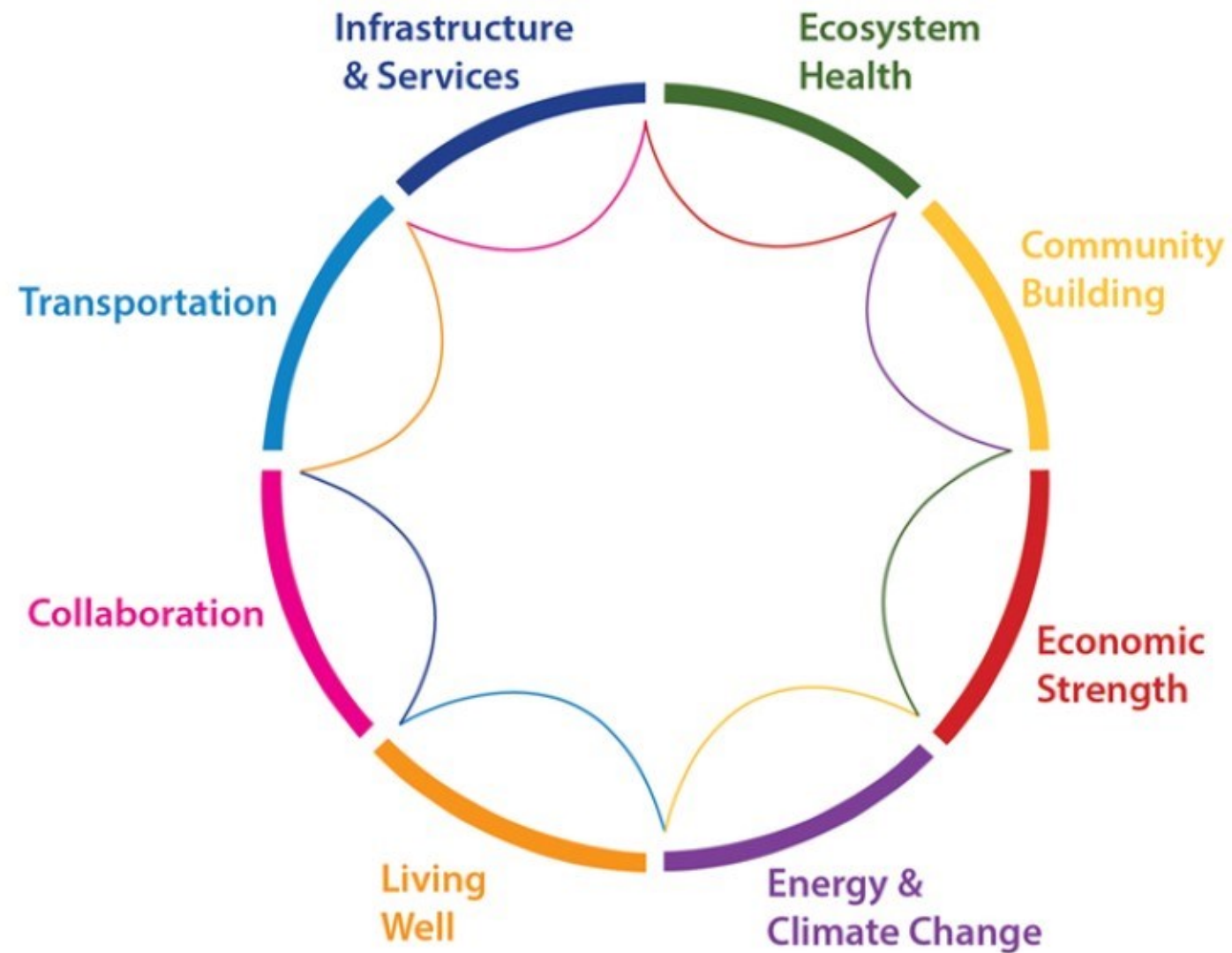
Regional Growth Strategy



Vision

“The Fraser Valley Regional District will be a network of healthy, vibrant, distinct, and sustainable communities that accept responsibly managed growth while being committed to protecting the land resource and the natural environment to ensure that a high quality of life is accessible to all.”

Draft RGS Goals



Collaboration

NEW SECTION

- » Goal: *To achieve our common goals for the future of the region by encouraging collaboration between jurisdictions, cultures, and neighbours.*
 - > *Strengthening relationships with Indigenous communities*
 - > *Working together to ensure success*
 - Local governments
 - Indigenous governments & communities
 - Senior governments
 - Community stakeholders



Sts'ailes drummers – East Sector Lands ceremony

Economic Strength & Resiliency

- » Goal: To realize the region's economic potential by providing opportunities in employment and education that will grow the economy by building on the region's strengths.
 - > *Employment and education*
 - > *Agricultural sector*
 - > *Clean economy/Industry*
 - > *Tourism*



Living Well

NEW SECTION

- » Goal: To ensure everyone is able to maintain a high quality of life, regardless of age, income, or ability
 - > *Promote healthy living*
 - > *Support arts and culture initiatives*
 - > *Protect and enhance parks & recreation lands*
 - *Including Experience the Fraser*



Community Building

- » Goal: To create compact, complete communities that strengthen urban cores, maintain rural character and offer choice and affordability in housing
 - > *Urban*
 - > *Rural*
 - > *Resort* (regional scale)
 - > *Affordable Housing & Homelessness*



Ecosystem Health

- » Goal: To Protect the air, water, and biodiversity on which we depend
 - > *Monitor, study, protect and improve air quality*
 - > *Protect watershed health*
 - > *Protect Biodiversity*



Transportation & Mobility

- » Goal: To develop an integrated, safe, and efficient transportation system for people and goods that promotes transit, walking and cycling, and minimizes the transportation system's impact on air quality.
 - > *Safe and efficient transportation options*
 - *Transit & multi-modal opportunities*
 - *Regional transportation priorities*
 - > *Active and alternative transportation*
 - *EV charging stations*
 - *More & safer opportunities to walk and bike*



Infrastructure & Services

- » Goal: To provide efficient, sustainable, and cost effective services that contribute to compact and sustainable growth.
 - > *Safe & efficient access to basic utilities*
 - > *Responsible management of solid waste*
 - > *Public safety through emergency management planning*
 - > *Minimize impact of large-scale utility corridors through the region*



Energy & Climate Change

NEW SECTION

- » Goal: To increase energy efficiency, and reduce greenhouse gas emissions in order to minimize the region's impact on climate change, and to mitigate impacts of climate change on our Region.
 - > *Promote energy efficiency and reduce greenhouse gas emissions.*
 - > *Develop the capacity to adapt to and mitigate the impact of climate change on the region.*



RGS Timeline



Implementation

» Update OCPs with Regional Context Statements



» RGS monitoring program



Questions?



To: Regional and Corporate Services Committee
From: Robin Beukens, Planner II

Date: 2020-09-09
File No: 6430-51-2011-01

Subject: Draft Regional Growth Strategy

INTENT

This report is intended to share the Draft Fraser Valley Regional District (FVRD) Regional Growth Strategy (Appendix 1) with the Board. This Draft represents the culmination of a number of years of input from member municipalities, Indigenous agencies, the Board and others. Staff is not looking for a recommendation, but has forwarded this document for board members to review, provide comments and to take into consideration in upcoming Board strategic planning sessions at the FVRD. The draft will return to the Board for more formal consideration once the latest round of consultation is completed.

STRATEGIC AREA(S) OF FOCUS

Support Environmental Stewardship

Foster a Strong & Diverse Economy

Support Healthy & Sustainable Community

Provide Responsive & Effective Public Services

BACKGROUND

The Regional Growth Strategy (RGS) is a strategic, high-level policy document for coordinating planning in the FVRD and for informing provincial priorities. An RGS is a framework for planning and coordinating the activities of local governments, the provincial government, and other agencies to ensure that the region as a whole is working toward a common future.

This report is a follow-up to a previous update report on the RGS process considered by the Board on March 18, 2020, shortly before the COVID-19 emergency was declared. The March report is included as Appendix 2 to provide additional information as to the process undertaken to-date, the applicable legislation and required content, among other things.

DISCUSSION

The Regional Growth Strategy is a strategic plan enabled by the *Local Government Act* that provides an overarching planning framework for coordinating the activities of local governments and the Provincial Government. It is a means to:

- Promote coordination among municipalities and regional districts that cross jurisdictional boundaries;
- Promote coordination among municipalities, regional districts and Indigenous communities as a means to establishing and maintaining meaningful and collaborative relationships;
- Strengthen links between regional districts and the Provincial ministries and agencies whose resources are needed to carry out projects and programs; and,
- Communicate the region's strengths to potential investors while demonstrating that local governments, Indigenous governments, and stakeholders are proactively addressing the key issues affecting the region's future. (FVRD Draft RGS p.4).

The 2020 draft RGS is an update of the existing *Choices for our Future* RGS, adopted in 2004. Many of the 2020 policies are similar to existing policy and have simply been updated to reflect new information, new plans, or have been reworded for clarity.

There are three new distinct policy areas and any new policies have come about as a result of one of three things: changes mandated through new legislation, input from the RGS engagement process, and/or because the policies address new opportunities or issues of regional concern that have arisen since 2004. The proposed updated RGS includes eight goals:

Collaboration	• To achieve our common goals for the future of the region by encouraging collaboration between jurisdictions, cultures, and neighbours. NEW
Economic Strength & Resiliency	• To realize the region's economic potential by providing opportunities in employment and education that will grow the economy by building on the region's strengths.
Living Well	• To ensure everyone is able to maintain a high quality of life, regardless of age, income, or ability. NEW
Community Building	• To create compact, complete communities that strengthen urban cores, maintain rural character and offer choice and affordability in housing.
Ecosystem Health	• To protect the air, water, and biodiversity on which we depend.
Transportation	• To develop an integrated, safe and efficient transportation system that supports compact urban development, promotes transit, walking and cycling and minimizes the transportation system's impact on air quality
Infrastructure & Services	• To provide efficient, sustainable, and cost effective services that contribute to compact and sustainable growth.
Energy & Climate Change	• To increase energy efficiency, lower energy costs, and reduce greenhouse gas emissions, in order to minimize the region's impact on climate change and to mitigate impacts of climate change on our region. NEW

Updates since the 2014 RGS Draft

The following updates have been made since the last draft RGS was shared with the Board in 2014. More detail on some of these items can be found in Appendix 2:

- Moved Collaboration from the eighth goal to the first goal to reflect the importance of collaboration in developing and implementing the RGS;
- Incorporated comments from member municipalities, adjacent regional districts and other stakeholders;
- Incorporated comments from the People of the River Referrals Office and enhanced the prominence of collaboration with Indigenous communities;
- Reviewed major Official Community Plan updates in Abbotsford and Mission;
- Incorporated the principles of the United Nations Declaration on the Rights of Indigenous Peoples;
- Referred internally to FVRD departments and incorporated feedback from the Electoral Area Planning, Engineering, Emergency Services, Environment, Intergovernmental Relations, and Outdoor Recreation Planning departments;
- Informally referred the draft RGS to the Ministry of Municipal Affairs and Housing and incorporated comments received as necessary; and
- Re-engaged People of the River Referrals office to discuss the updated draft and solicit advice on engagement with Indigenous communities in a COVID-19 environment.

COVID-19 challenges

COVID-19 has led to some challenges and changes to how engagement will occur. Engagement will be done remotely for the foreseeable future. Staff are exploring new methods of remote engagement recently used successfully by other organizations. These include tools such as Mural.com to facilitate an online version of a table top workshop exercise, and Zoom for targeted engagement with specific groups and organizations, which may include the use of Zoom breakout rooms to facilitate a larger group. Staff will be working on an Indigenous engagement plan and public engagement plan to map out the best way to move forward, as well as determining how to best facilitate group discussions such as the Intergovernmental Advisory Committee (IAC).

Fraser Valley Transportation Study

At its March 18, 2020 meeting, the Board was informed of the inclusion of a proposed *Fraser Valley Integrated Transportation and Land Use Plan* in both the throne speech and provincial budget. More recently the province has formally announced the *Fraser Valley Transportation Study (FVTS)* and specifically states:

"The Fraser Valley is a rapidly growing region and a vital national trade corridor. Supporting the growing transportation demands and rapid development in the Fraser Valley is a critical piece of COVID-19 economic recovery. "

At the staff level, the province has engaged with the FVRD and member municipalities as they have developed the structure and scope of the project. A formal terms of reference has not yet been provided but, through discussions, the province has been made aware of the broader RGS work program and the transportation needs at both the regional and municipal level. The FVRD will be working closely with the province to ensure that the RGS and FVTS are consistent and compatible. The FVRD looks forward to working with the province on this initiative, but it is important not to lose sight of the more immediate challenges that need to be addressed.

Next Steps

While many updates have been made since 2014, the RGS is still a draft document and revisions continue. Next steps include:

- Meetings with staff from member municipalities to informally discuss the draft plan and updated process.
- In consultation with member municipalities, finalize the updated Transportation Priorities.
- Reinstate the Intergovernmental Advisory Committee (further information is in the March RACS report included as Appendix 2) and meet to discuss the draft.
- Engagement with Indigenous communities.
- Public engagement (recognizing COVID-19 challenges).
- Legal review.
- Prior to third reading of the bylaw to adopt the RGS, referral to and formal acceptance by affected local governments (member municipalities and neighbouring regional districts).
- Adoption by bylaw by the FVRD Board.

COST

N/A

CONCLUSION

The latest draft of the RGS has been shared with staff from member municipalities and FVRD staff will be meeting to discuss the draft soon. It is important to note that this is a draft document and revisions continue. Staff are sharing the Draft RGS at this time to provide board members with the opportunity to review, provide comments and to utilize in upcoming FVRD strategic planning sessions.

COMMENTS BY:

Alison Stewart, Manager of Strategic Planning: Reviewed and supported

Stacey Barker, Director of Regional Services: Reviewed and supported.

Kelly Lownsborough, Chief Financial Officer/ Director of Financial Services: Reviewed and supported.

Jennifer Kinneman, Chief Administrative Officer: Reviewed and supported.

Fraser Valley Future 2050

Fraser Valley Regional District
Regional Growth Strategy

DRAFT - August 2020



Table of Contents



Abbotsford Airport Authority



Chilliwack Economic Partners Corporation

Table of Contents	2
Introduction	4
The Purpose of the Regional Growth Strategy	4
Context.....	5
Who we are.....	5
Population Estimates and Projections	7
Economic Outlook & Employment Projections	9
Housing Outlook & Projections Projections	10
Indigenous Peoples and Communities.....	12
Defining Growth.....	14
Vision	16
Goals	18
1.0 Collaboration.....	20
1.1 Continue to build and strengthen relationships with First Nations.....	20
1.2 Work together to ensure success.....	21
2.0 Economic Strength & Resiliency	22
2.1 Create opportunities for employment and education	23
2.2 Promote growth and development in agriculture.....	23
2.3 Protect employment lands	24
2.4 Work to attain the Region's full tourism potential.....	24
3.0 Living Well.....	26
3.1 Promote healthy living.....	26
3.2 Support arts and culture initiatives	26
3.3 Protect and enhance parks and recreation lands.....	27
4.0 Community Building.....	32
4.1 Concentrate growth in Urban Centres	32
4.2 Maintain the character of rural communities in Electoral Areas	33
4.3 Promote sustainable regionally-scaled resort development	34
4.4 Ensure housing choice and affordability	34
5.0 Ecosystem Health.....	40
5.1 Monitor, study, protect and improve air quality	40
5.2 Protect watershed health.....	40
5.3 Protect biodiversity	41

6.0 Transportation & Mobility	42
6.1 Create a region-wide transportation network.....	42
6.2 Promote active and alternative forms of transportation	43
7.0 Infrastructure & Services	48
7.1 Provide safe and efficient access to basic utilities.....	48
7.2 Ensure responsible management of solid waste	48
7.3 Ensure public safety through emergency management planning.....	49
7.4 Minimize the impact of large-scale utility corridors.....	49
8.0 Energy and Climate Change	52
8.1 Promote energy efficiency.....	52
8.2 Reduce the region's impact on climate change	52
Implementation	54
Regional Context Statements	54
Implementation Agreements	54
Monitoring and Evaluation.....	54
Amendment Process.....	55
 Tables and Figures	
Table 1. FVRD Population Growth Estimates 2011-2014.....	7
Table 2. FVRD Employment Growth Estimates	9
Table 3. FVRD Housing Unit Growth Estimates.....	10
Table 4. FVRD Dwelling Type	10
Figure 1. Current and Projected population of the FVRD	8
Figure 2. Relationship between the RGS and OCP's.....	54
Figure 3. RGS Minor Amendment Process.....	56
 Maps	
Map 1. FVRD Jurisdictions	6
Map 2. Indigenous Communities.....	13
Map 3. Urban Centres and Rural Communities.....	15
Map 4. Parks and Protected Areas	28
Map 5. Experience the Fraser Initiative	30
Map 6. Agricultural Land Reserve & Regional Growth Boundaries.....	36
Map 7. ALR and RGB by Municipality	38
Map 8. Regional Transportation Priorities.....	44
Map 9. Regional Transit Network	46
Map 10. Utility Corridors	50



Introduction

The Purpose of the Regional Growth Strategy

The Regional Growth Strategy (RGS) is a strategic plan enabled by the *Local Government Act* that provides an overarching planning framework for coordinating the activities of local governments and the Provincial government. It considers transit, housing, parks, economic development and environmental issues from a regional perspective with the goal of creating healthy, sustainable communities. As a long range vision with a 30 year scope, it aims to ensure the region as a whole is working toward a common future.

Regional growth strategies support the management of issues that affect more than one jurisdiction and can perform the following functions (among others):

- Promote coordination among municipalities and regional districts on issues that cross jurisdictional boundaries;
- Promote coordination among municipalities, regional districts and Indigenous communities as a means to establishing and maintaining meaningful and collaborative relationships;
- Strengthen links between regional districts and the Provincial ministries and agencies whose resources are needed to carry out projects and programs; and,
- Communicate the region's strengths to potential investors while demonstrating that local governments, Indigenous governments and stakeholders are

proactively addressing the key issues affecting the region's future.

In 2004, the Fraser Valley Regional District (FVRD) adopted "Choices for our Future", the region's first Regional Growth Strategy bylaw. However, much has changed since 2004. In 2010, a review of the RGS was initiated to reassess and adjust the region's long-term vision and objectives in light of new legislation, new growth, and changing demographics. This updated RGS reflects these changes.

The content and policies presented in this document are based on input from member municipalities, Indigenous communities, the general public, and other stakeholders throughout the region. Input was gathered through a series of open houses, surveys, workshops and direct communications.

The Regional Growth Strategy is intended for elected officials and staff from the Fraser Valley Regional District, electoral areas, member municipalities, neighbouring regional districts, Indigenous governments, other levels of government, as well as the general public and other stakeholders. The document outlines the vision and priorities of the region, and will be referenced when making both short-term and long-term decisions that have the potential to affect the region as a whole.

Per Section 445 of the *Local Government Act*, the RGS does not commit or authorize a regional district to proceed with any project or action specified within the plan.



Context

Who We Are

The Fraser Valley Regional District is comprised of six member municipalities and eight electoral areas and features a wide range of communities, from small rural hamlets to the fifth largest city in British Columbia (BC). Situated in Southern BC just east of Metro Vancouver, the boundaries of the FVRD extend from Abbotsford to Hope in the east, sharing our southern border with Washington State and extending north just past Boston Bar. The region's total land base is 13,361 square kilometres.

This region has a diverse population living within its boundaries. Indigenous Peoples have lived in the area for thousands of years, and more recent arrivals have come from countries around the globe. The lives and experiences of our residents are characterized by an equally diverse landscape of rugged mountains, sizeable rivers, and fertile valleys.

The FVRD is one of the fastest growing regional districts in British Columbia. As of 2019, the region is home to 320,000 residents. By 2051 the population could increase by as much as 56% to around 500,000. Anticipating and accommodating this growth over the next 30 years will offer both opportunities and challenges for the region.

Although the FVRD remains remarkably independent from the rest of the Lower Mainland, the region will increasingly face external pressures as a result of growth occurring within Metro Vancouver.

By 2050, the population of Metro Vancouver is expected to increase by over 40% to 3.6 million. Like any growth, this will create both challenges and opportunities for the FVRD. As the primary link between Metro Vancouver and the rest of Canada, the FVRD will continue to be impacted by major infrastructure projects traversing the region that are crucial to the flow of goods and services. Parks are facing overuse as more Metro Vancouver residents visit the FVRD to access nature and outdoor recreational opportunities. High housing prices in Metro Vancouver affect this region's ability to maintain affordable housing while protecting agricultural land. Even air quality is directly affected by development to the west.

However, the FVRD's unique relationship to Metro Vancouver offers advantages by putting the region within easy reach of a large market, generating new potential in the tourism industry and creating opportunities for collaboration when addressing issues such as air quality and housing affordability.

For additional information on the region, please see our Regional Snapshot series, designed to provide greater insight into the forces which are shaping growth and change in the region today. For a full list of snapshots currently in the series and the most recent monitoring report please visit us at www.fvrd.ca

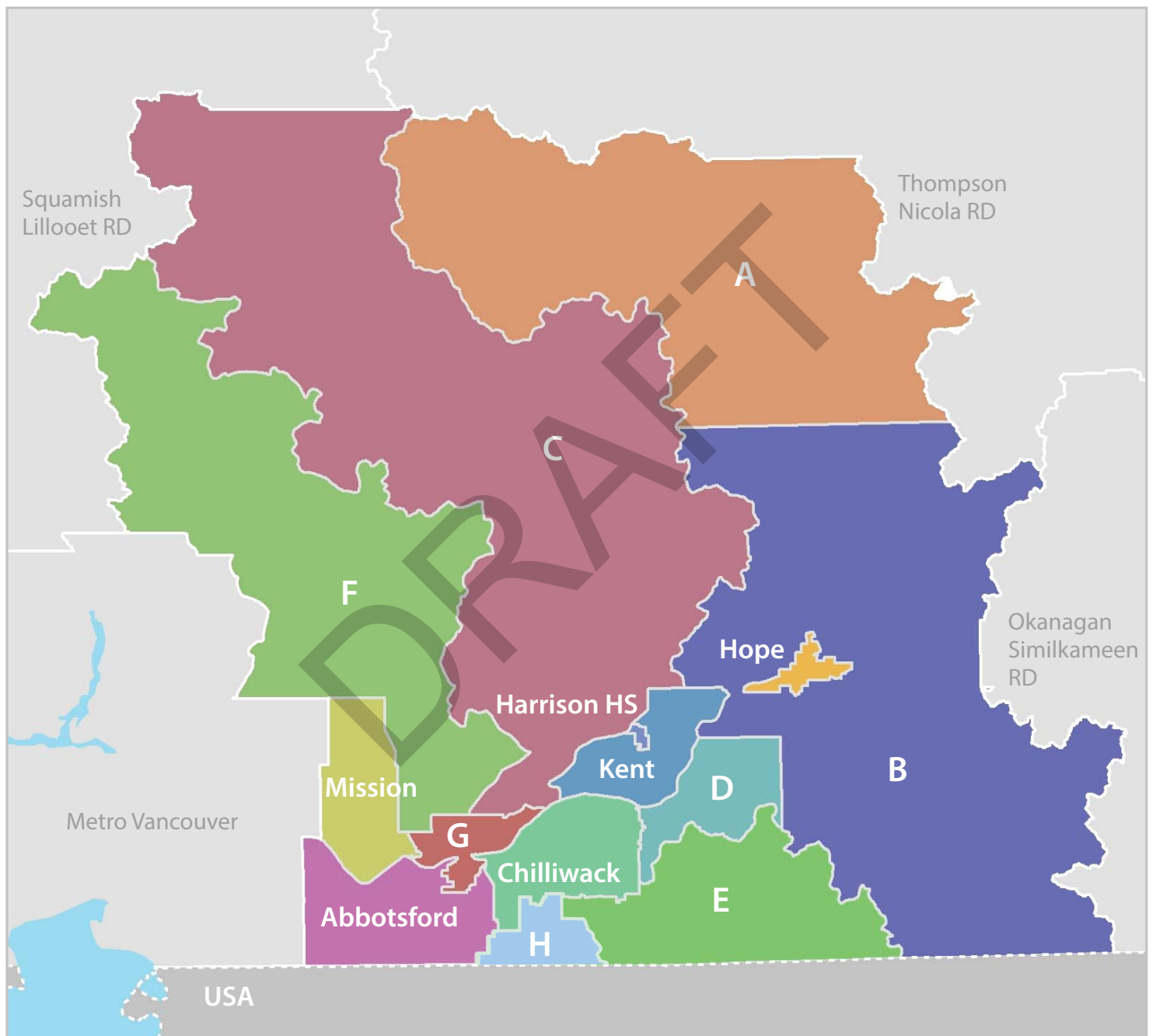


Cheryl Uphill



Nikki Rekman

Map 1. FVRD Jurisdictions





The Facts:

2016 Population:



309,000



Land Area:
13,361 km²

Population Estimates & Projections

The Lower Mainland has long been recognized as one of the fastest growing regions in Canada and is currently home to over 2.9 million residents. It is anticipated that the Lower Mainland's population will reach 4.1 million by 2051. At an estimated 309,000 in 2016, the FVRD makes up almost 11% of the Lower Mainland's population and is the third largest regional district in the province by population.

The FVRD is consistently one of the fastest growing regional districts in British Columbia. Growth has been continuous, with the most rapid period of growth taking place between 1971 and 2001. Since 2001, growth has moderated somewhat, but only in a relative sense. It is anticipated that the region will see an additional 190,000 residents from 2016 levels, a 61% increase in overall population, by 2051. Ninety-six percent of this growth will take place within the six member municipalities, with the remaining 4% taking place in the region's rural electoral areas (*see Table 1*). The region's Regional Growth Boundaries, delineated in the RGS, will help to contain this growth in established urban centres and foster the development of more compact and complete communities.

Table 1. FVRD Population Growth Estimates 2016-2051

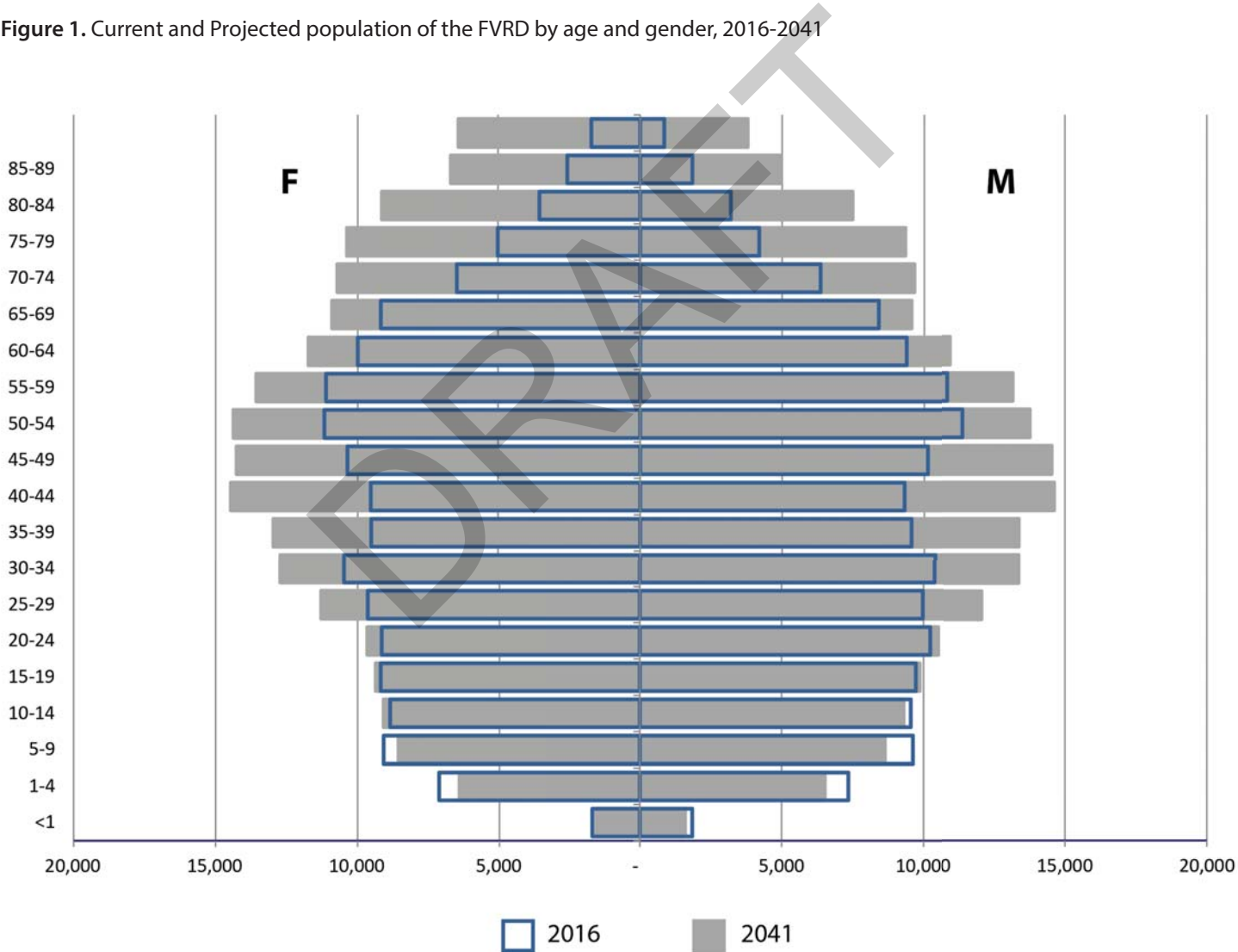
Population Growth Estimates				
	2016	2026	2041	2051
Abbotsford	148,056	172,767	214,935	237,422
Chilliwack	87,560	105,644	134,045	151,027
Mission	40,668	47,421	57,901	67,196
Hope	6,385	6,931	7,359	7,969
Kent	6,356	6,870	7,240	7,840
Harrison	1,514	1,750	2,027	2,196
EAs	10,775	12,515	14,674	15,578
Reserves	8,128	9,441	11,069	11,752
FVRD	309,442	363,338	449,249	500,979

High estimates (takes into account estimated Census undercount) including Corrections facilities population

Another important consideration for the RGS is the region's aging population. Over the next 20 years, the number of seniors in the region is expected to increase from 17% to 25% of the total population. By 2041, almost 100,000 residents, will be over the age of 65 (see Figure 1).

This demographic shift will impact housing demand, health care, municipal services, built-form, travel patterns, transportation mode share, transit use/demand and accessibility in the region. Rural areas will face the greatest challenges with a higher percentage of seniors and fewer resources to manage demands.

Figure 1. Current and Projected population of the FVRD by age and gender, 2016-2041



BC Stats PEOPLE 2019 projections

Economic Outlook & Employment Projections

Since the earliest days of British Columbia, employment in the region has centred around the agriculture and resource industry sectors. While these sectors are still an important, ongoing source of jobs, the region's employment base has expanded and diversified and now includes a wide variety of manufacturing, aerospace, service and high-tech fields. Many of these diversified industries have important connections to the older, more traditional sectors like agriculture, with its increasing dependence on technology.

The diversifying economy has not reached all corners of the Regional District. While larger communities like Abbotsford and Chilliwack are developing employment opportunities outside the traditional resource sectors, other communities have experienced difficult times as resource-dependent industries adapt to a changing global market.

Understanding the structure of the region's economy can inform a number of policy areas including education requirements, sustainable transportation options and social planning strategies. Goods producing industries play a much larger role in the FVRD than in neighbouring Metro Vancouver, with almost 30% of the labour force engaged in these industries. The larger communities of Abbotsford, Chilliwack and Mission are more diversified and often act as suppliers of commercial services to smaller communities and the electoral areas. The region's proximity to one of Canada's fastest growing metropolitan regions provides the FVRD with a ready market for a broad range of goods and services.

Longer term employment projections for the FVRD sees continued growth, primarily in the three largest urban centres: Abbotsford, Chilliwack and Mission. Employment is expected to increase regionally by approximately 100,000, or 74%, between 2016 and 2051. Of the job growth, approximately 52% will be in Abbotsford, 29% in Chilliwack, 12% in Mission with the remaining 6% in the rest of the region.

Table 2. FVRD Employment Growth Estimates

Employment Growth Estimates				
	2016	2026	2041	2051
Abbotsford	69,586	81,200	108,376	119,715
Chilliwack	37,650	45,426	60,769	69,989
Mission	17,487	20,391	26,325	31,231
Hope	2,299	2,495	2,829	3,143
Kent	2,733	2,954	3,253	3,600
Harrison	651	752	979	1,083
EAs and ICs*	5,066	5,884	6,586	6,991
FVRD	135,666	159,107	209,076	236,028

* High estimates - Employment projections not available for individual Electoral Areas or Indigenous communities (ICs)

Housing Outlook & Projections

The Region has seen increasing housing demand as the population continues to grow. This is partly driven by people moving to the FVRD seeking more affordable housing options in the Lower Mainland. Growth in the housing sector is projected to be strongest in the large municipalities but will also be seen in the electoral areas. Housing demand forecasts in the Region are linked to population forecasts. Therefore, housing demand is projected to continue to reflect the projected population growth in the Region.

Constrained by local geography and the Agricultural Land Reserve, a broad range of housing types and densities are being developed in the region's urban centres. New housing in the urban centres is increasingly shifting from mainly single family to multi-family housing forms. In addition, secondary suites, laneway housing and other housing options are increasing densities and affordability in traditional single family neighbourhoods.

Per S. 585.2 of the *Local Government Act*, all local governments must prepare housing needs reports (HNR). The reports must include information in relation to the demand for, and supply of housing within a local government area and will provide the basis for housing policies within municipal and electoral area Official Community Plans (OCP's) and Regional Growth Strategies. The first HNRs must be received by local governments by April 2022 and subsequent report must be prepared every 5 years thereafter.

In response to increasing homelessness and housing affordability concerns, local governments in the region are already engaged in developing housing strategies to address a range of needs across the housing continuum. These needs range from ensuring the supply of a broad range of housing types and preserving rental stock, to providing supportive housing and emergency shelter options for those most vulnerable. The FVRD has supported these efforts by undertaking homelessness counts and social housing inventories over the last decade. It is important to recognize, however, that housing affordability and homelessness is not only an "urban" issue and that rural homelessness in the region, including on Crown lands, is a concern.

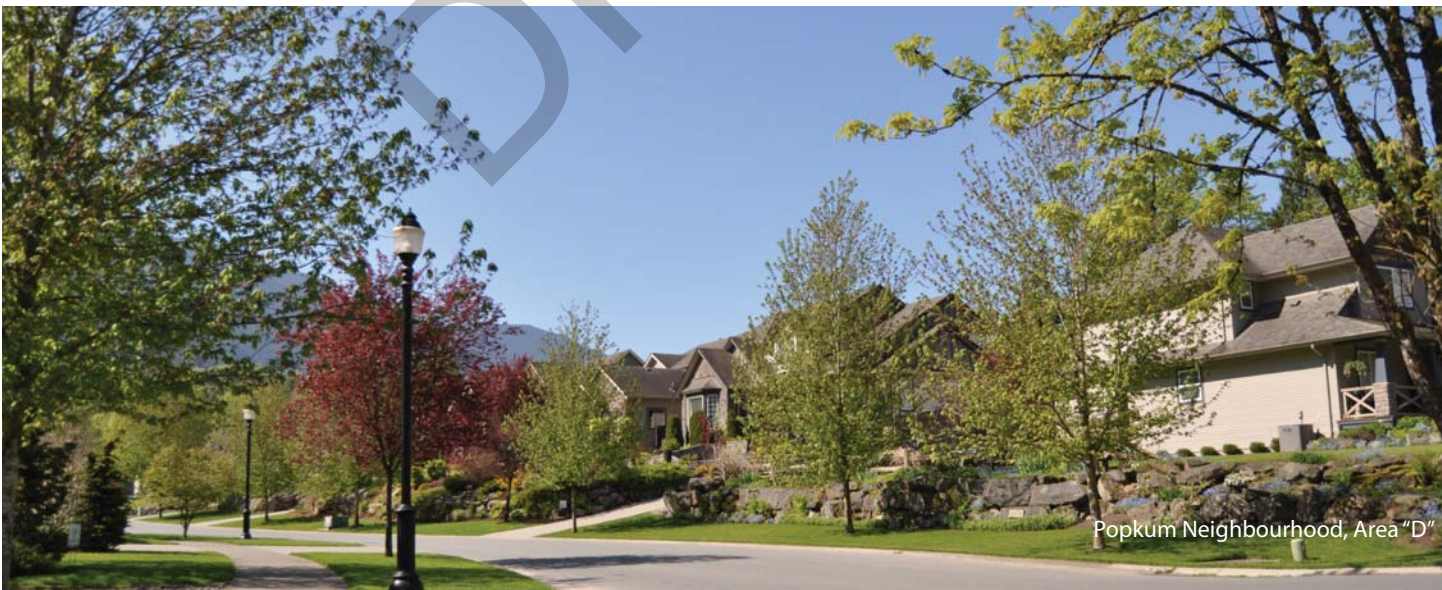
Table 3. FVRD Housing Unit Growth Estimates

Housing Growth Estimates				
	2016	2026	2041	2051
Abbotsford	52,403	61,149	76,074	84,033
Chilliwack	34,551	41,687	52,894	59,595
Mission	14,644	17,076	20,850	24,197
Hope	3,027	3,286	3,488	3,778
Kent	2,672	2,888	3,043	3,296
Harrison	760	878	1,017	1,102
EAs + ICs	8,365	9,716	11,392	12,095
FVRD	116,159	136,390	168,639	188,058

Table 4. FVRD Dwelling Types

2016 Dwelling Type (%)				
	Single Detached	Semi-Detached, Row, Suite	Apartment	Moveable
Abbotsford	40%	32%	27%	1%
Chilliwack	56%	23%	20%	1%
Mission	65%	25%	9%	0%
Hope	74%	9%	10%	7%
Kent	72%	14%	9%	4%
Harrison	71%	10%	18%	1%
EA's	82%	1%	0%	16%
FVRD	52%	25%	20%	2%

2016 Canada Census



Indigenous Peoples and Communities

The Past

Indigenous Peoples have inhabited the Fraser Valley for roughly 10,000 years¹. In Stó:lō communities, the connection to this place is said to date to 'time immemorial'.

Indigenous Peoples in the Fraser Valley numbered in the tens of thousands in the 17th century.² The extensive network of rivers, lakes and mountain ridges in the region were critical, providing a communication and transportation network between communities that ranged from the Pacific Ocean to the interior of British Columbia. To this day, the Fraser River plays a significant role in Indigenous Culture, providing an important connection to the spiritual world, and a place to practice cultural traditions.

Near the end of the 18th century, with the arrival of European settlers, Indigenous Peoples were exposed to smallpox, the first viral epidemic to reach Indigenous communities. Historians have estimated that nearly two-thirds of the Indigenous population in the Fraser Valley was lost in less than six weeks³.

Federal and provincial government policies and programs resulted in further fragmentation of Indigenous Communities through the Indian Act; notably the creation of bands and allocation of reserves, and the Residential Schools programs. The long term effects of these actions are still being felt today.

Governance

Today there are 30 Bands in the region, representing three broad language groups⁴. A number of these communities operate independently, while most manage services and programs through regional tribal councils, and other types of self-defined organizational structures and authorities.

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), to which Canada is a signatory, and the principles of which BC has designated to uphold through the Declaration on the Rights of Indigenous Peoples Act (DRIPA), outlines Indigenous rights of self-determination, lands and resources, and free, prior and informed consent.

The Fraser Valley Regional District recognizes and respects autonomy and self-governance of local Indigenous organizations as they work to strengthen their communities and toward realizing their visions for the future. The FVRD is committed to a collaborative, government-to-government relationship with Indigenous communities which is built around the principles of UNDRIP.

Economic

Indigenous communities are engaged in the regional economy in many different ways, including: natural resource development, educational and economic development partnerships, cultural tourism and others. The amount of Indigenous economic activity in the Fraser Valley reflects the range of economic opportunities available and the considerable potential for future growth.

Continued economic growth in the Region will continue to provide opportunities for Indigenous communities to diversify and expand their economies.

Partnerships

The Fraser Valley Regional District works with a number of local Indigenous communities on a wide range of initiatives and projects. These partnerships are enabled through a number of different agreements ranging from Memoranda of Understanding and Protocol Agreements to service agreements.

Throughout the Region, the FVRD has entered into agreements with local Indigenous communities for the delivery of a number of services, including but not limited to: liquid waste management, water, planning and building inspection services, animal control, regional transit and fire protection.

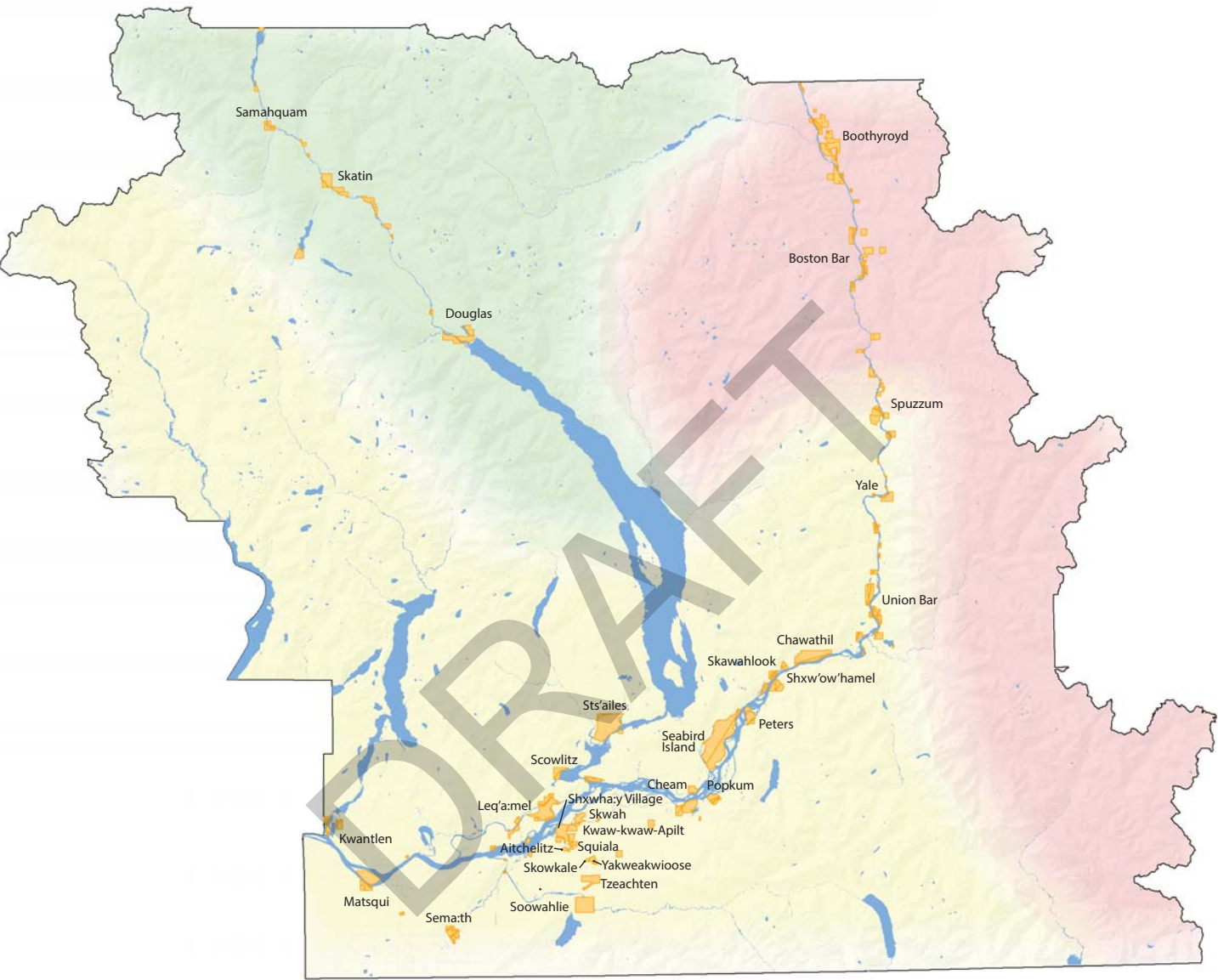
¹ A Stó:lō-Coast Salish Historical Atlas (2001), 16

² Ibid, 18

³ Ibid, 30

⁴ First Peoples' Language Map of B.C. (maps.fphlcc.ca/)

Map 2. Indigenous Communities



Cultural Regions

- Nlaka'pamux
- Stó:lō/Coast Salish
- Stl'alt'imc

Jurisdictional Boundaries

- Reserve Land
- FVRD Boundary

Source: First Peoples' Language Map of B.C. (maps.fphlcc.ca)

Defining Growth

Regional Vision

Growth can mean many different things depending on the context. One of the roles of the RGS is to understand the different growth patterns occurring within the region and to ensure that growth and development is appropriate within the larger regional context. It's then up to each municipality's Official Community Plan (OCP) to ensure that growth is appropriate for each community and neighbourhood.

Three categories help to define the different types of growth occurring in the region: Urban Centres, Rural Centres, and Rural Landscapes (*see Map 3*). Beyond these, extensive portions of the region are Provincial Crown Land, outside the authority of the FVRD.

Collaboration

The FVRD is committed to maintaining strong, collaborative, and respectful government-to-government working relationships with Indigenous communities, which is built around the principles of UNDRIP. The FVRD will foster opportunities for mutual understanding of governing structures, planning tools, traditions, roles and responsibilities while respecting the views and authority of each party, recognizing that we have a common interest in a sustainable and resilient future.

Regional Growth Boundary

The Regional Growth Boundary (RGB) is a tool for delineating areas with Urban Centres for future growth. Concentrating growth within the RGB contributes to the development of more compact, complete communities, a primary goal of the RGS.

Higher residential densities are encouraged and accommodated within the RGB where appropriate services exist. New high density developments should not be considered outside of the Regional Growth Boundary.

Urban Centres

Urban Centres are located in all six of the region's municipalities and are intended to accommodate most of the future residential, industrial, and commercial growth in the region. Definitions of urban growth vary across the region. However, there are common characteristics shared among each of the Urban Centres. These include:

- Identified areas for future growth
- Urban residential densities
- The inclusion of industrial and commercial lands
- Greater access to basic municipal services

Rural Communities and Resorts

Rural communities, are small areas of concentrated residential lots. Rural communities support lower densities, housing is primarily single family and access to services, such as transit, is limited. However, there may be opportunities to promote compact rural communities. Commercial land uses are generally limited and serve local residents or the traveling public. Growth in these areas is expected to be minimal for the next 30 years.

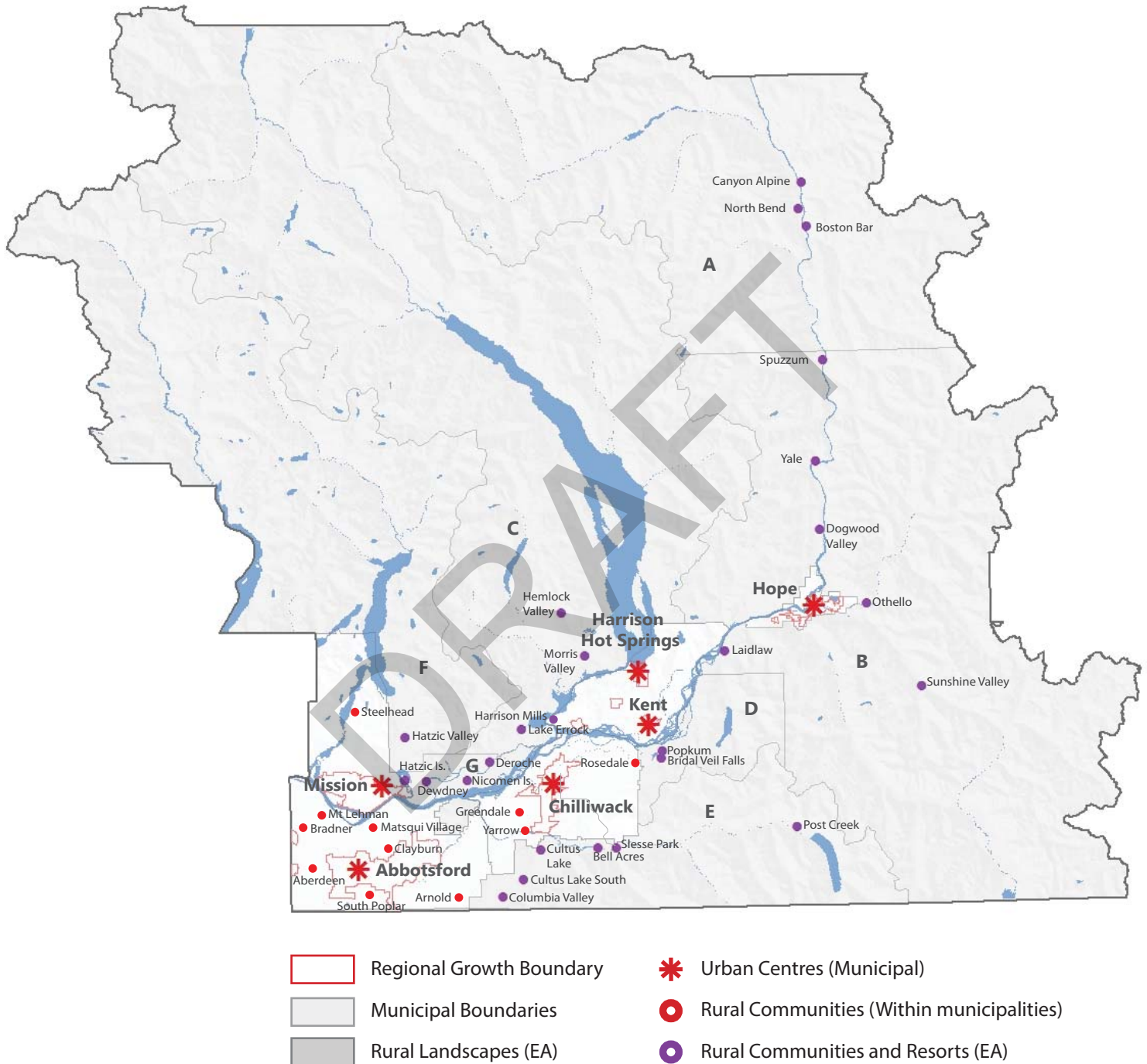
From ski hills to lake side resorts, resorts can take a variety of forms. Unlike rural communities, they are intended to serve a more seasonal community, attracting visitors from throughout the Lower Mainland. They are not intended to be served with more traditional community amenities such as schools or transit.

Rural Landscapes

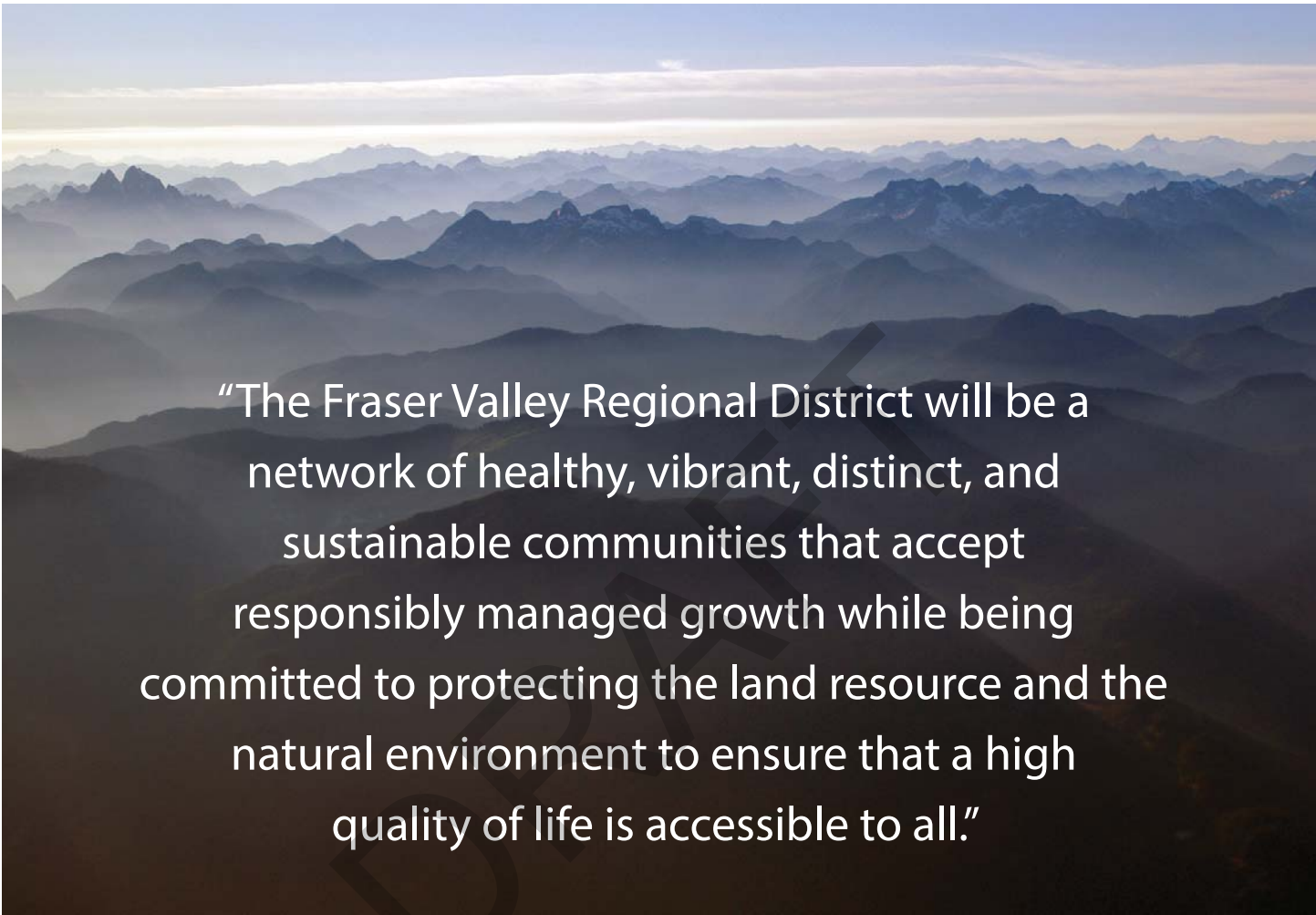
Lot sizes in the areas outside of urban and rural centres are intended to remain large with low residential densities, in order to protect the rural character of these more remote areas. These areas are characterized by large rural lots, parks, agricultural land and forested Crown land.

Located primarily in rural landscapes, Crown Land represents the vast majority of the FVRD's total land base.

Map 3. Urban Centres and Rural Communities



Vision



“The Fraser Valley Regional District will be a network of healthy, vibrant, distinct, and sustainable communities that accept responsibly managed growth while being committed to protecting the land resource and the natural environment to ensure that a high quality of life is accessible to all.”

Guiding Principles

Collaboration

This plan represents a common, collaborative vision for the future of the region. As such, it will take action on the part of many to ensure its success. The nature and structure of the plan emphasize the importance of partnerships in achieving plan goals. In some cases, action will be taken at the individual level and in others it will require cooperation from all parties.

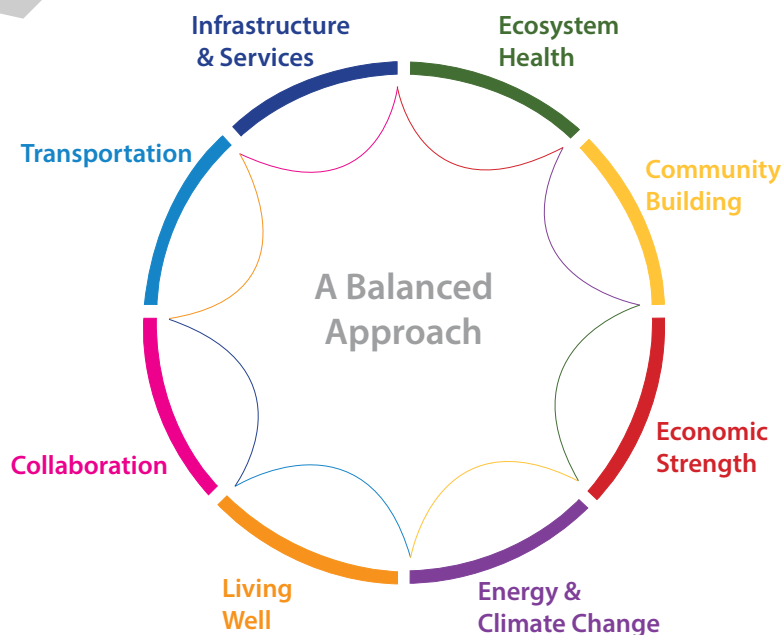
Collaboration among residents, member municipalities, neighbouring regional districts, Indigenous governments, the Province, and a range of stakeholders in creating and implementing this plan will ensure greater success in achieving the overall vision.



A Balanced Approach

A balanced approach to regional planning understands and takes into account the inherent complexities of goals and objectives that cross jurisdictional, cultural or geographical boundaries. The goals and objectives that follow depend upon a thoroughly collaborative approach to decision making that recognizes and values the unique challenges of each stakeholder.

Objectives outlined in this plan should not be considered as independent but as working, interconnected parts of a larger whole.



Goals

Collaboration

Goal: *To achieve our common goals for the future of the region by encouraging collaboration between jurisdictions, cultures, and neighbours.*

Economic Strength & Resiliency

Goal: *To realize the region's economic potential by providing opportunities in employment and education that will grow the economy by building on the region's strengths.*

Living Well

Goal: *To ensure everyone is able to maintain a high quality of life, regardless of age, income, or ability.*

Community Building

Goal: *To create compact, complete communities that strengthen urban cores, maintain rural character and offer choice and affordability in housing.*

Creating a strong, integrated region

In keeping with the guiding principles, it is important to recognize that the Regional Growth Strategy covers a wide range of topics, all of which are interconnected. Each individual action will influence decisions made in other areas. Embracing the interconnected nature of a regional growth strategy will highlight the complexities and challenges that come with regional planning, at the same time demonstrating its potential to strengthen and enrich regional relationships through collaborative action.

Ecosystem Health

Goal: *To protect the air, water, and biodiversity on which we depend.*

Transportation & Mobility

Goal: *To develop an integrated, safe, and efficient transportation system for people and goods that promotes transit, walking and cycling, and minimizes the transportation system's impact on air quality.*

Infrastructure & Services

Goal: *To provide efficient, sustainable, and cost effective services that contribute to compact and sustainable growth.*

Energy & Climate Change

Goal: *To increase energy efficiency and reduce greenhouse gas emissions in order to minimize the region's impact on climate change and to mitigate impacts of climate change on our region.*

1.0 Collaboration

Goal: *To achieve our common goals for the future of the region by encouraging collaboration between jurisdictions, cultures, and neighbours.*

Implementing the RGS will require all levels of government, including Indigenous governments, health authorities, non-profits, the private sector, and the public to work together on shaping the future of the region. It will take cooperation and strong partnerships to achieve the goals outlined in the RGS and to ensure that the region as a whole is working toward a common future.

By working together, local governments have a stronger voice when addressing common issues. Collaborating on service delivery and pooling resources where feasible will build regional resilience.

It is important for the region to plan collaboratively with Indigenous governments to find innovative and effective ways to meet the future needs of the region and Indigenous communities. Since 2001, the FVRD has signed five Memoranda of Understanding (MOU) with different Indigenous organizations for a range of purposes, from the sharing of bulk water to establishing and maintaining long-term cooperative relationships. A number of our municipalities also have MOU's and servicing agreements with adjacent Indigenous communities.

1.1 Build and strengthen relationships with Indigenous communities and governments

- a. Recognize that working with Indigenous communities will best serve all residents and facilitate cooperation by fostering a mutual understanding of governing structures, cultures, roles and responsibilities.
- b. Develop sustaining relationships with Indigenous communities and governments which embody the principles of UNDRIP, work together to develop a common vision for the future of the region and remain open, without prejudice to ongoing treaty negotiations, to innovative opportunities for information sharing, and coordination of planning and services in areas of mutual interest.
- c. Recognize and support work led by Indigenous governments, both established and developing self-governance structures, and advancing self-determination, as expressed in the principles of UNDRIP.
- d. Support establishing MOUs and service agreements between Indigenous and local governments that address issues of mutual concern, such as water and sewer systems that protect public health and the environment.

1.2 Work together to ensure success

- a. Collaborate with local governments, Indigenous governments, the Provincial government and stakeholders to develop services which provide mutual benefit and support to communities throughout the region.
- b. Collaborate to promote regional objectives, educate residents, pool resources, secure funding and investments, and to have a stronger voice.
- c. Recognize the importance of private and non-profit sectors in regional development, and foster partnerships with organizations and the business community that support the objectives of the RGS.
- d. Advocate for Provincial support in realizing the stated objectives of the RGS and petition for more flexibility in terms of funding eligibility and requirements.
- e. Determine a mechanism for ongoing liaison, engagement, and adaptation between different levels of government.



2.0 Economic Strength & Resiliency

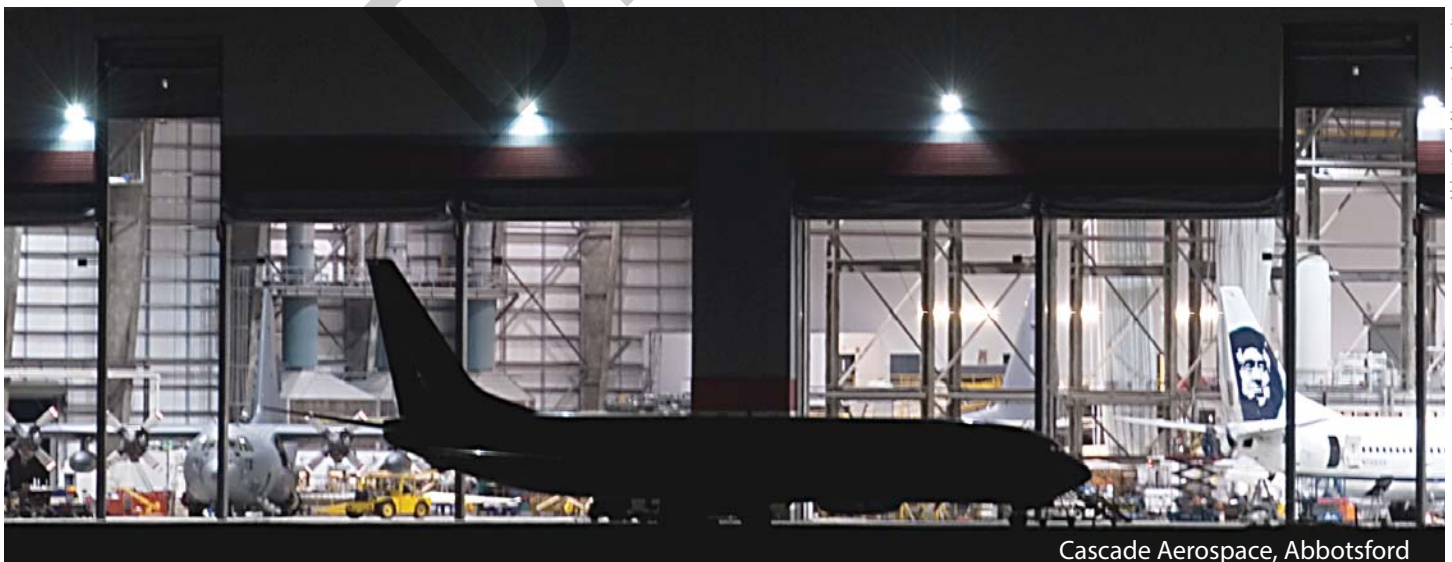
Goal: *To realize the region's economic potential by providing opportunities in employment and education that will grow the economy by building on the region's strengths.*

The economy of the Fraser Valley is strong, diverse and expanding. Over the past fifty years, the Region's economy has shifted from being resource based to one that is highly diversified. Building complete communities that provide residents with jobs and services close to where they live can improve employment opportunities and contribute to local self-sufficiency and resiliency.

Recognizing our economic strengths and building on them is key to ensuring a healthy economy in the future. The *Clean Economy in the Fraser Valley* study has confirmed that the Fraser Valley has a solid foundation and set of underlying strengths to grow the Region's clean economy. Agriculture remains at the core of the FVRD's economy, with the production of food and other agricultural products not only providing inputs to other sectors of the economy, but being itself a significant consumer of goods and services. The FVRD recognizes that 21st century agriculture will provide exciting opportunities in terms of technology and innovation and that we are well positioned to capitalize on our competitive advantage of a strong and diverse agricultural economy.

Ensuring a strong economy also requires anticipating future demand; one example being our growing tourism industry. The abundance of and accessibility to nature, a growing demand for recreation, and our close proximity to Vancouver, make the FVRD well situated to expand our share of the local tourism market. The Experience the Fraser Initiative (ETF) embodies this idea and is working to expand tourism opportunities throughout the region (*see page 30*). Manufacturing will continue to grow in the region and with population growth, there will be increased opportunities for employment in such areas as technology, health care, sales and services, business services and others.

A regional economy is only as strong as its labour force. Making post-secondary education more accessible in the region will help to ensure a stronger labour force in the future. Programs that train employees in both established fields and emerging ones will not only strengthen the regional economy but may be the incentive younger residents need to study, work and stay in the Fraser Valley.



2.1 Create opportunities for employment and education

- a. Promote the development of a strong employment base and favourable investment climate by recognizing economic drivers and being flexible enough to take advantage of changing markets and new opportunities.
- b. Support initiatives that contribute to growth of a diversified economy.
- c. Develop and maintain a skilled labour force.
- d. Provide educational and employment opportunities in fields that will enable and encourage younger generations to remain in the Fraser Valley.
- e. Support initiatives that provide employment opportunities in rural communities and electoral areas, including Indigenous communities.
- f. Encourage mixed-use development and development that locates employment centres near residential areas to increase accessibility and minimize commuting.
- g. Improve the viability of smaller communities, including Indigenous communities, and help them adapt to economic change by advocating for improvements to internet access and other basic services that encourage innovative entrepreneurship in remote locations.
- h. Support equal access to employment or educational programs and initiatives for Indigenous Peoples.
- i. Work with local governments, Indigenous communities, senior governments, the private sector and the public to implement the recommendations of the *Clean Economy in the Fraser Valley* study.

- j. Work with internet service providers, the Provincial and Federal Governments, and Indigenous communities to implement the recommendations from the FVRD's Rural Broadband Internet Connectivity Strategy to provide equal access to high speed internet for the FVRD's rural residents, businesses, and institutions.

2.2 Promote growth and development in agriculture

- a. Work with the Province and the Agricultural Land Commission to support the continued protection of agricultural lands.
- b. Work with the Provincial and Federal government to leverage our substantial agricultural research capacity to support and expand the region's agricultural-based economy.
- c. Work with municipalities and farm-based agencies to promote local agricultural production and increase public awareness of agricultural activities in the region.
- d. Encourage farm-based tourism and support efforts to strengthen the connection between farmers and residents.
- e. Work with the University of the Fraser Valley to further the potential of the Agriculture Centre of Excellence.
- f. Support the creation of Agricultural Area Plans to maximize the production potential of agricultural lands while protecting environmental and social values, and culturally significant sites.
- g. Work with local communities to minimize conflicts along the agricultural/urban interface.
- h. Work with the agriculture sector to address and mitigate climate change impacts identified in the *Fraser Valley BC Agriculture and Climate Change Regional Adaptation Strategies*.

2.3 Protect employment lands

- a. Expand economic growth and productivity by exploring opportunities for clustering industrial development in a manner that will create competitive advantages and foster collaboration between Indigenous communities, businesses, organizations, and government agencies.
- b. In collaboration with local governments, develop and maintain an employment lands inventory to ensure an adequate supply of industrial, agricultural, and commercial lands.
- c. Protect the supply of industrial lands from non-industrial conversion to ensure future needs can be met.
- d. Work with Indigenous governments and the Province to ensure sustainable management of natural resources by using an integrated management approach, developing natural resource plans for the region, and acknowledging cumulative impacts on the environment and culturally sensitive sites.
- e. Work with the Agricultural Land Commission and other stakeholders to develop innovative approaches to address urban land requirements without compromising the intent of the Agricultural Land Reserve.

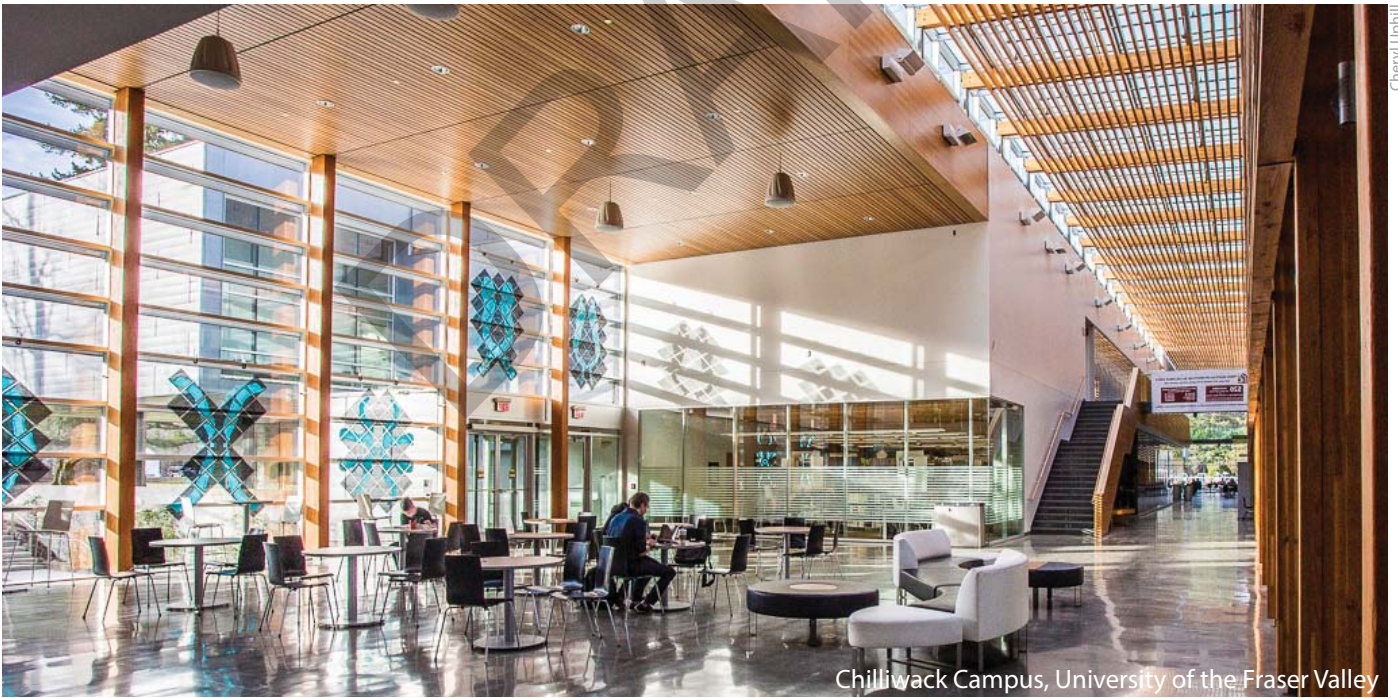
2.4 Work to attain the Region's full tourism potential

- a. Partner with member municipalities, Indigenous organizations, different levels of government, destination marketing organizations and stakeholders to develop and coordinate a regional tourism strategy that will promote and protect the region's natural, cultural, and agricultural heritage and attract both residents and employers.
- b. Partner with member municipalities, Indigenous organizations, Metro Vancouver, the Province, local businesses and other organizations to realize the vision of the Experience the Fraser initiative and support the development of projects and initiatives that contribute to its long-term success.
- c. In collaboration with member municipalities, Indigenous governments, and the Province, pursue high value parks and recreational assets that strengthen the region's recreational tourism portfolio.
- d. Support local ecotourism initiatives that promote the region's parks and natural areas, including the internationally recognized Chehalis Important Bird Area.



Abbotsford International Airport

Abbotsford Airport Authority



Cheryl Uphill

Chilliwack Campus, University of the Fraser Valley

3.0 Living Well

Goal: *To ensure everyone is able to maintain a high quality of life, regardless of age, income, or ability.*

An important factor in maintaining a high quality of life is the ability of residents to preserve an adequate level of physical and mental health that enables them to enjoy the many cultural, recreational, and social opportunities the region has to offer. Providing access to healthy food as well as traditional harvesting sites, offering opportunities for active living, encouraging social inclusion, and continuing support for community and regional cultural initiatives all contribute to living well.

Maintaining a high quality of life can be especially challenging for seniors who often have greater health concerns and fewer financial resources. Our aging population will influence how facilities and amenities are used but also the demand for different services. Anticipating and planning for a growing senior population is essential for maintaining high quality of life at every age.

An extensive and well managed outdoor recreation system is another factor in maintaining a high quality of life. Greenspace and trails are highly valued by the region's residents for a number of reasons: easy access to nature, the wide variety of recreational opportunities it offers, and or the health benefits it provides. It can also have cultural significance for Indigenous Peoples, containing harvesting and hunting sites, or areas where cultural activities are practiced.

The Lower Mainland's growing population and an escalating interest in outdoor recreation will only increase the demand for outdoor recreational opportunities in the region. As park usage climbs, pressures on the parks and trails will mount. Maintaining current services at existing recreation sites, adjusting to demographic-led shifts in usage, and finding suitable, accessible areas to designate as new parkland will be increasingly challenging.

Fortunately, the region will have opportunities to leverage our natural assets in a way that is both sustainable and economically advantageous. By planning ahead we can ensure that everyone has access to nature and outdoor recreation opportunities.

3.1 Promote healthy living

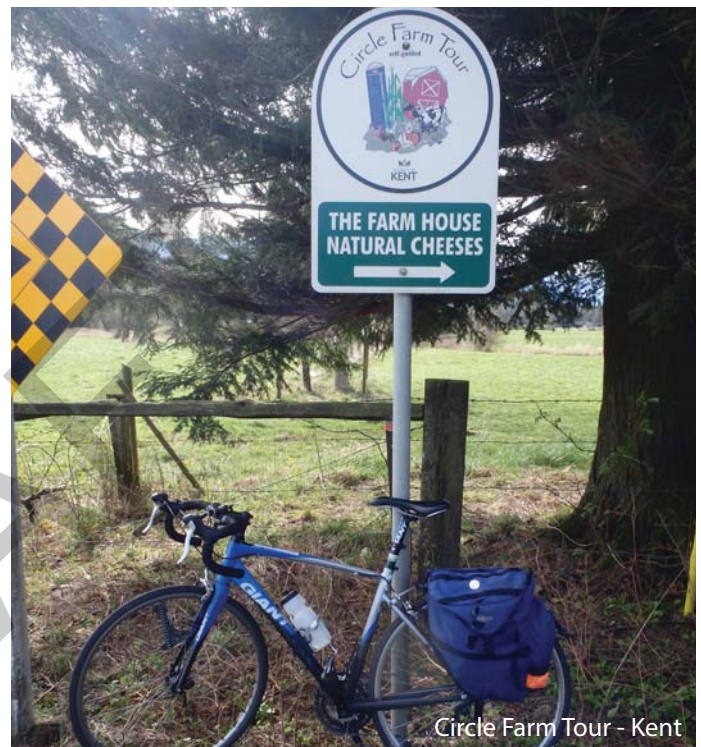
- a. Create an environment in which residents of all ages, abilities, incomes and cultures can access the mental, social, and physical support they need to live healthy and fulfilling lives.
- b. Support initiatives, programs, and research targeted at maintaining a healthy senior population in the region.
- c. Promote increased local access to healthy and affordable food.
- d. Encourage the development of a strategy to address food security at the regional level.
- e. Work with Indigenous organizations to ensure access to culturally significant harvesting and hunting areas.

3.2 Support arts and culture initiatives

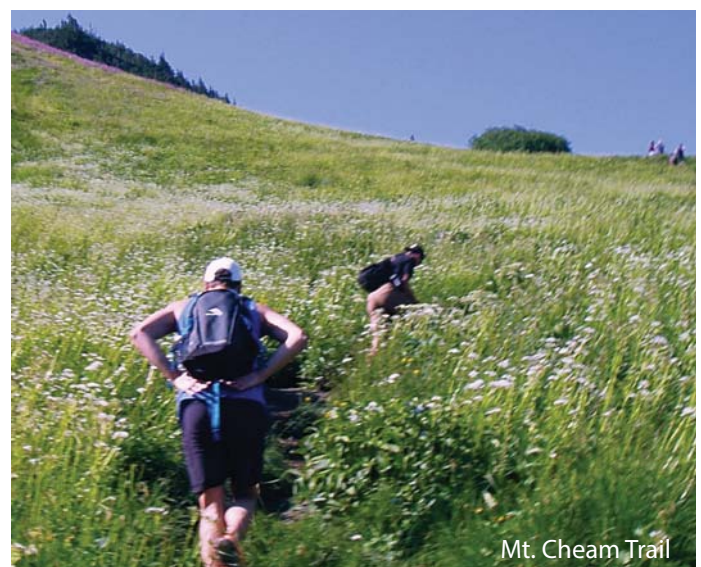
- a. Work with Indigenous organizations, non-profits and all levels of government to find innovative ways to support arts and cultural initiatives that promote cultural inclusion, increase opportunities to experience and celebrate the region and enhance quality of life.
- b. Create a strong regional identity that is based on and which highlights the region's cultural, natural, and agricultural assets.

3.3 Protect and enhance parks and recreation lands

- a. Work with member municipalities, electoral areas, Indigenous organizations, neighbouring regional districts, and the public to develop an accessible and integrated network of parks, greenspaces, and trail networks which accommodate the growing demand for recreational opportunities while minimizing the impact to the natural environment or adjacent communities, including communities on-reserve.
- b. Promote physical health and active living through parks and recreation programs and events.
- c. Support the Experience the Fraser project and its commitment to enhancing cultural and recreational opportunities along the Fraser through the development of partnerships, trail construction and improvements, and efforts to help celebrate the Fraser River and the communities that have been shaped by it.
- d. Implement the action steps of the *Regional Parks Strategic Plan* to guide regional park management, improvements, and acquisitions over the next decade.
- e. Recognize the regional, interregional, and international role of parks and recreation and encourage all levels of cooperation and support to maintain and enhance these lands and facilities.
- f. Implement the actions of the *Outdoor Recreation Management Plan*.
- g. Consider establishing a Regional Land Acquisition Strategy and fund for acquiring parks and recreation lands.

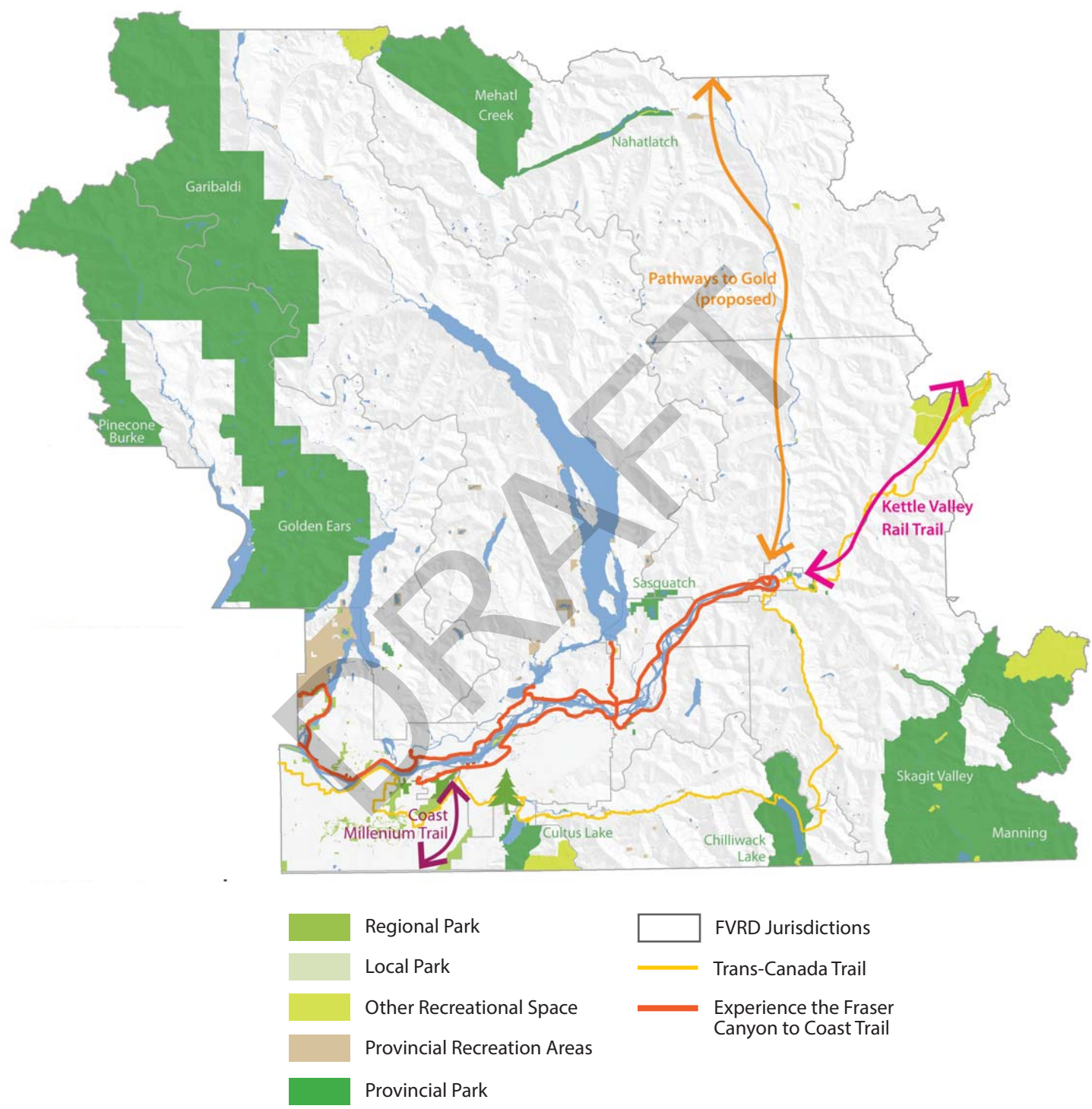


Circle Farm Tour - Kent



Mt. Cheam Trail

Map 4. Parks and Protected Areas





Chilliwack Dikes

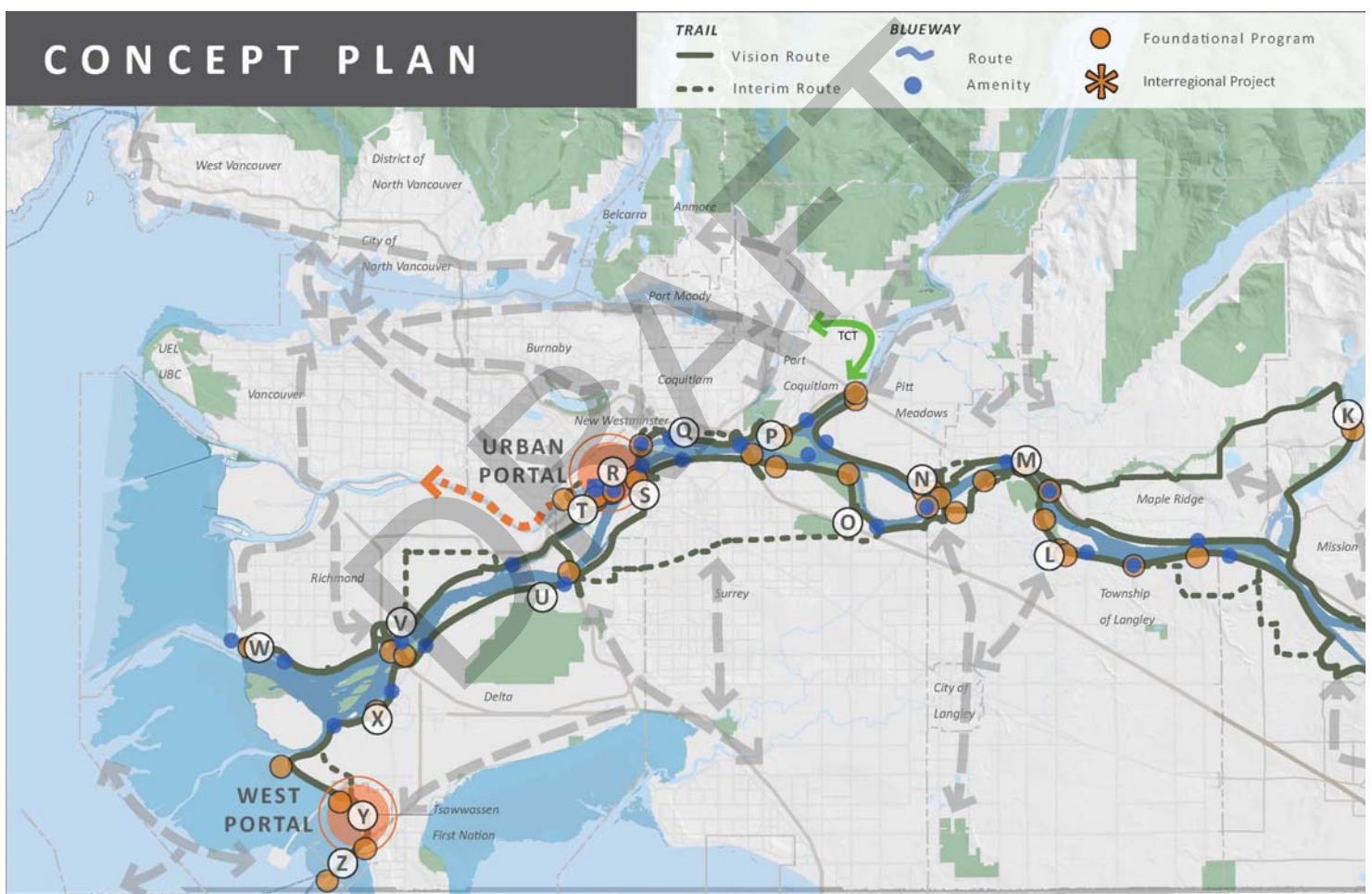


Mt. Cheam

Map 5. Experience the Fraser Initiative

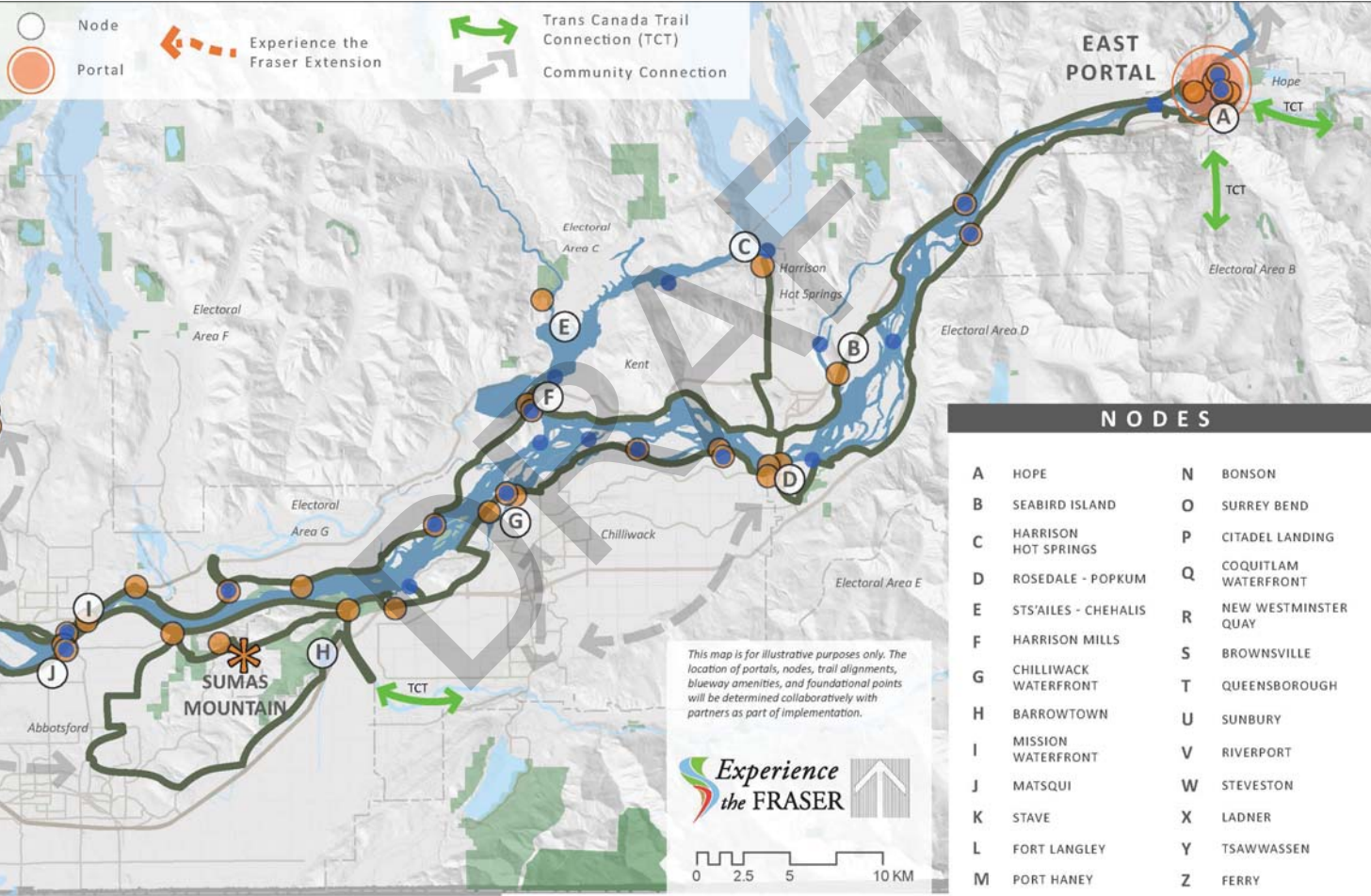
Experience the Fraser (ETF) is a unique vision to connect communities, parks, natural features, historic and cultural sites and experiences along the Lower Fraser River. The project is a partnership between the Province of British Columbia, Fraser Valley Regional District and Metro Vancouver to showcase the Fraser River as a world class recreational, cultural and heritage destination.

Since the beginning of ETF, many Indigenous communities within the Project Area have participated. The success of ETF is reliant on furthering existing and developing new partnerships among Indigenous communities, the private sector, citizens, and different levels of government.



Experience the Fraser is a long-term project that will be implemented by many, over decades. The ETF Concept Plan expresses the project's vision and goals and presents a framework for the development of both land and water based initiatives.

When completed, ETF will include more than 500 kilometres of trails and 15 sanctioned boat launches. In fact, one can experience the many kilometres of trails and other amenities that are already in place throughout the trail corridor.



4.0 Community Building

Goal: *To create compact, complete communities that strengthen urban cores, maintain rural character and offer choice and affordability in housing.*

Over the next 30 years the FVRD will absorb an additional 160,000 residents. The Regional Growth Boundary encompasses 1.5% of the region's total land base. It is expected that about 90% of this growth will occur within the Regional Growth Boundary, with the remaining growth occurring in the Region's more rural areas.

Encouraging the development of compact complete communities, whether urban or rural, will help to reduce our impact on the surrounding natural environment, promote a more active lifestyle, and enable more efficient distribution of services such as transit, utilities, and water, benefitting residents of all ages.

One important sign of a healthy community is housing diversity that meets the needs of all residents no matter their age, income or ability. Planning for a wide range of housing now will ensure demand for accessible, affordable, and adaptable housing will be met in the future.



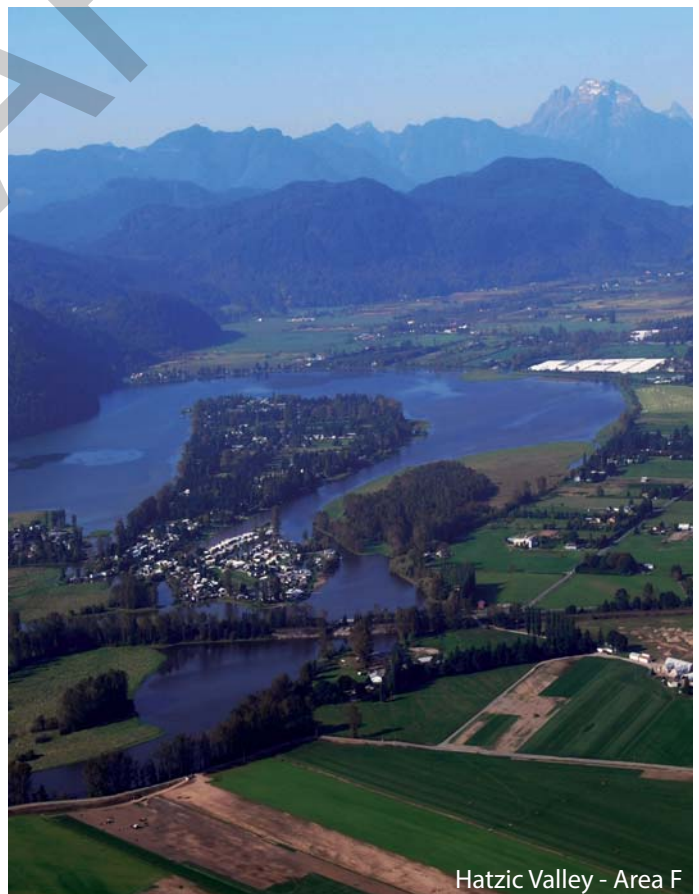
City of Abbotsford

4.1 Concentrate growth in Urban Centres

- a. Focus urban development within established Regional Growth Boundaries, around existing downtown cores and transit hubs, and require that amendments to the RGB's be referred to the FVRD Board (*see page 55 for Amendment Process*).
- b. Support Official Community Plans and Zoning Bylaws that integrate land uses with transit service and active transportation routes; and encourage infill, redevelopment, densification and mixed use as a means of creating more compact development patterns and housing affordability, particularly around downtown cores.
- c. Encourage mixed-use Transit Oriented Development (TOD) at key locations to support municipal and regional transit services.
- d. Encourage development that is sensitive to the sense of place, history, and unique character of each community.
- e. Support energy efficient development and urban design techniques that promote efficient use of energy resources and existing infrastructure.
- f. Support development patterns that minimize development costs and risks associated with geotechnical and environmental constraints.

4.2 Maintain the character of rural communities in Electoral Areas

- a. Concentrate growth within existing rural centres, and encourage compact, energy efficient development that minimizes infrastructure and development costs.
- b. Recognize the regional role of rural areas and communities in attracting and supporting tourism, providing recreation and natural resources, and encourage regional cooperation and support to ensure rural areas, often with limited resources, can continue to provide these services.
- c. Ensure adjacent land uses are compatible and minimize conflict where residential areas, including reserves, border natural resources operations on public, private, and Crown lands.
- d. Limit development in areas with geotechnical and environmental hazards to minimize any risk to public safety.
- e. Seek the cooperation of senior levels of government to create policies and programs that will improve the land use management of Crown Lands.



4.3 Promote sustainable regionally-scaled resort development

- a. Support resort developments that protect public investments by demonstrating financial self-sufficiency with regards to the provision of community-wide infrastructure and servicing.
- b. Support compact, complete resort development that provides for the needs of both visitors and residents, minimizes the ecological and cultural impact on surrounding natural environment, protects the scale and character of surrounding areas, and adheres to high energy efficiency standards.
- c. On a case by case basis, consider establishing a threshold at which it would be mutually beneficial for a resort development to consider transitioning to a resort municipality or other form of governance, and develop a process that will facilitate a smooth transition.
- d. Ensure resort development proposals have undergone meaningful engagement, collaboration, or partnership with Indigenous communities that meets the standard of free, prior, and informed consent.
- e. Require that emergency management plans be developed by project proponents to ensure the safety of resort residents, employees and visitors in the event of an emergency.

4.4 Ensure housing choice and affordability

- a. Work with local governments, Indigenous governments, and stakeholders to monitor and address housing affordability at a regional level.
- b. Ensure housing choice for residents of all ages, ability, and incomes by promoting innovation and diversity, and by encouraging the application of Provincial Adaptable Standards for new housing developments.
- c. Work with local governments to complete housing needs reports as per S.585.2 of the *Local Government Act*.
- d. Support proposals for new residential development which provide a component of seniors housing, affordable housing, special needs housing, and the use of adaptive housing construction methods.
- e. Continue working with community partners and other levels of government to address homelessness.
- f. Advocate for increased Federal and Provincial action to address homelessness, mental health, and addictions issues in the region.
- g. Promote home energy conservation and the use of energy efficiency measures as a means of reducing housing costs.



City of Chilliwack



Abbotsford - City in the Country



Garrison Crossing, Chilliwack

Map 6. Agricultural Land Reserve & Regional Growth Boundaries

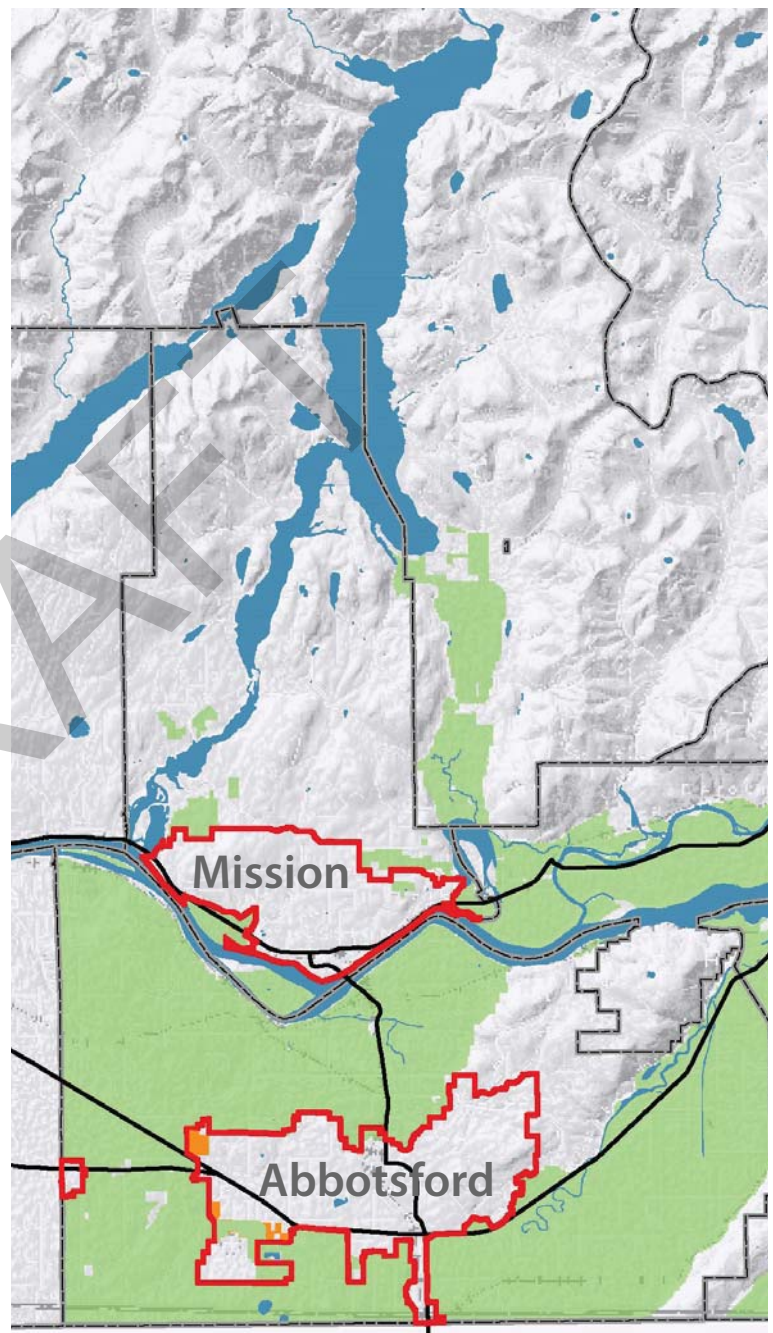
-  FVRD Jurisdictions
-  Regional Growth Boundary*
-  ALR Lands
-  Highways

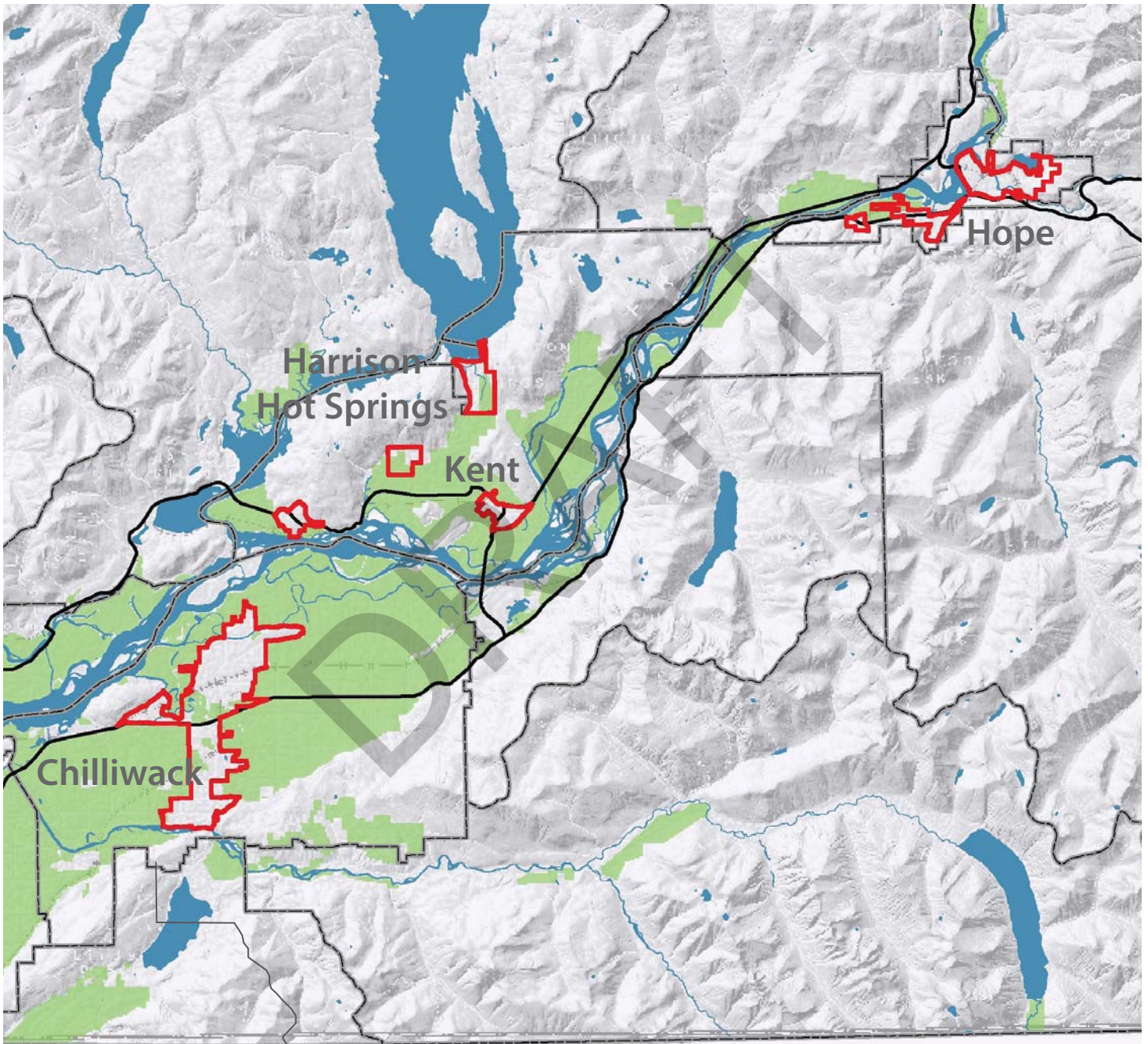
*The Regional Growth Boundary is intended to contain most of the future industrial, institutional, commercial, and residential growth over the next 30 years. Areas within the RGB are allocated for growth at higher urban densities and reflect Municipal OCPs.

Agricultural Land Reserve Special Status






-  Conditional Exclusion

Conditional exclusion: Lands excluded from the ALR subject to conditions established by the Agricultural Land Commission (ALC).





Map 7. Agricultural Land Reserve and Regional Growth Boundary by Municipality

-  FVRD Jurisdictions
-  Regional Growth Boundary
-  ALR Lands
-  Highways
-  Roads

Agricultural Land Reserve Special Status

-  Conditional Exclusion

Notes for Map 6 and Map 7:

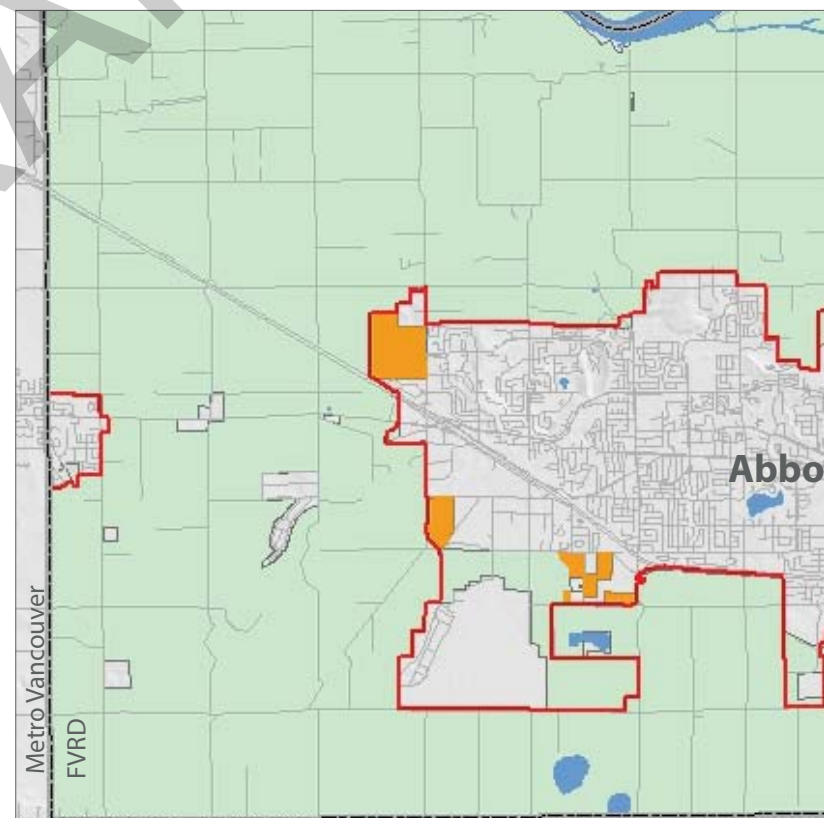
Conditional exclusion areas in the City of Abbotsford may be adjusted or removed subject to meeting ALC conditions. Land development decisions should not be based on this map.

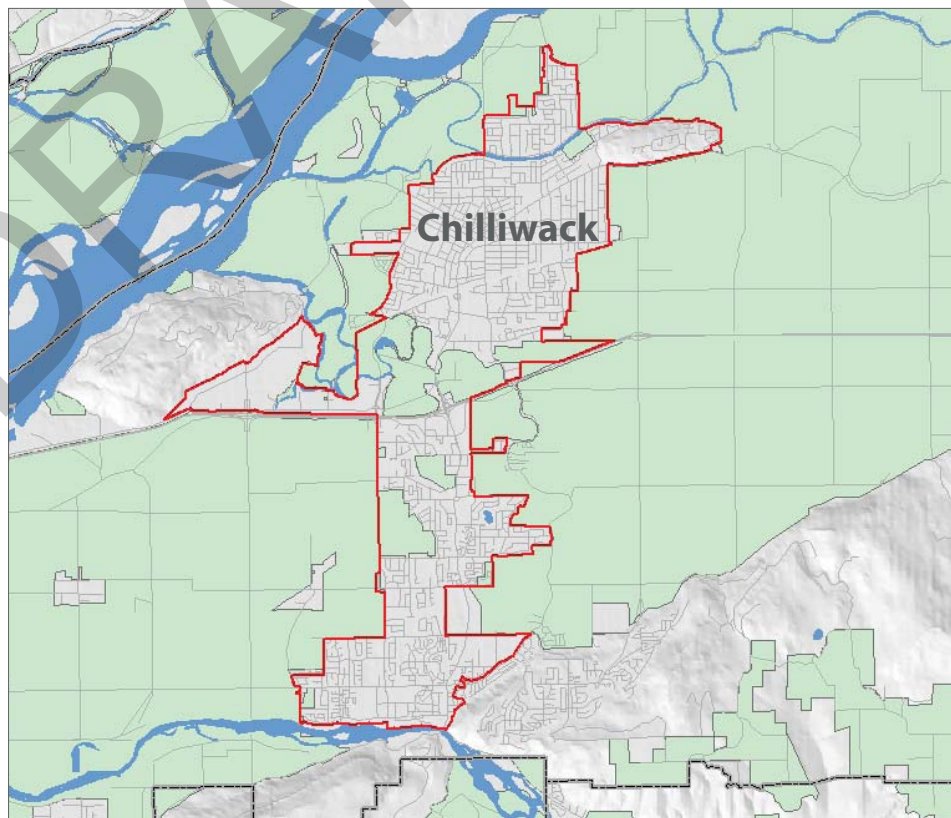
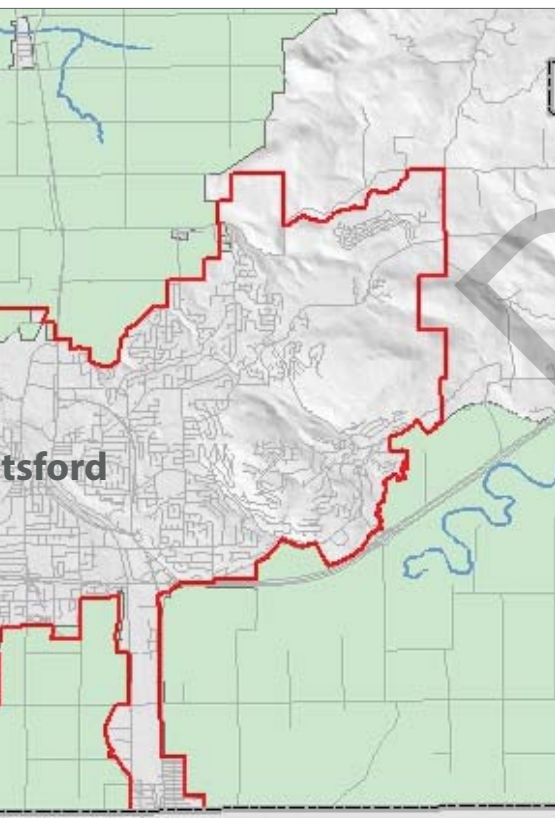
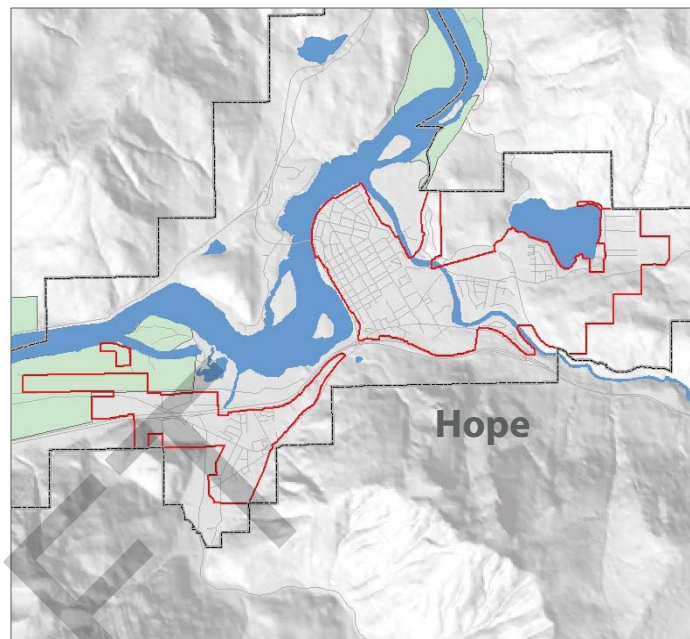
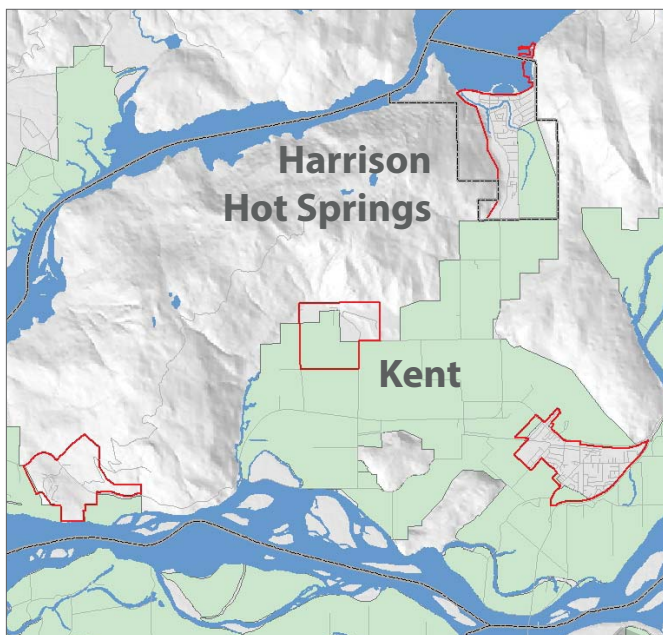
Furthermore, lands on this map may be impacted by various geotechnical and environmental constraints. No attempt is made here to indicate potential or existing development constraints.

Any non-agricultural development within the overlapping ALR/RGB areas must be consistent with the *Agricultural Land Commission Act* and related regulations.

Contact municipal planning departments for specific land use regulations that apply within each respective jurisdictions. The FVRD planning department should be contacted for lands outside municipal boundaries.

Reserve Lands are not subject to the RGS or ALC Act.





5.0 Ecosystem Health

Goal: *To protect the air, water, and biodiversity on which we depend.*

The exceptional natural environment of the Region supports some of the most productive forests in British Columbia, one of the largest salmon spawning populations in the Province and over 100 endangered or threatened species.

The region depends on high levels of biodiversity to provide the foundation for the continued health and sustainability of not only the natural environment, but of the region as a whole by providing us with needed resources, jobs, recreational opportunities, and improved quality of life. For Indigenous Peoples, the connection to the natural environment has significant cultural value, and plays an important role in ongoing spiritual well-being.

As the region's population grows and development pressures increase, balancing the impacts of growth with the cultural and ecological sensitivity of the environment, which supports these activities, will become an increasingly significant and critical challenge.

5.1 Monitor, study, protect and improve air quality

- a. Continue to study and monitor air quality throughout the region, and expand the monitoring network as needed.
- b. Support land use development, initiatives, and programs across all sectors that protect air quality and reduce harmful emissions.
- c. Update and implement the regional Air Quality Management Plan.
- d. Collaborate with Indigenous governments, Metro Vancouver, Whatcom County, local governments, and other stakeholders on a continuing basis to improve air quality in the Lower Mainland.

- e. Advocate for Provincial and Federal support of measures to protect the region's sensitive airshed.
- f. Educate the public on the causes and impacts of degraded air quality, and what they can do to improve air quality.

5.2 Protect watershed health

- a. Take water quality and ecological health into consideration in regional planning and resource management decisions.
- b. Support initiatives that restore and protect life supporting qualities of streams, rivers, lakes, wetlands and riparian areas in the region.
- c. Consider establishing a water quality monitoring system throughout the region.
- d. Support the implementation of best management practices for water conservation and storm water management, including green infrastructure.
- e. Protect surface and groundwater and maintain good soil health by supporting the implementation of best management practices that minimize soil contamination and erosion, and reduce runoff and leaching into aquifers and surface water.
- f. Continue to support initiatives that enhance the stewardship of soil, agricultural waste, water, air, and habitat resources, including agricultural lands.

5.3 Protect biodiversity

- a. Encourage compact development that respects environmental constraints and limits development in ecologically sensitive or hazardous areas.
- b. Encourage Indigenous governments, member municipalities, neighbouring regional districts, and the Province to identify and protect ecologically sensitive areas.
- c. Continue to partner with all levels of government, including Indigenous governments and non-profit organizations to engage volunteers, restore damaged habitat, and monitor long-term ecological health within the region.
- d. Continue working with stakeholders and adjacent jurisdictions on controlling the introduction and spread of invasive species in the region.
- e. Continue to educate the public, decision-makers and other stakeholders on the importance of ecological health and how it relates to human health.
- f. Advocate for Provincial and Federal support of measures to protect the region's ecological health.



6.0 Transportation & Mobility

Goal: *To develop a safe and efficient transportation system for people and goods that promotes transit, walking and cycling, and minimizes the transportation system's impact on air quality.*

The region's transportation network connects our communities and workplaces, facilitating the flow of goods and services that keep our economy moving forward. As the region strives for higher levels of choice and efficiency in transportation systems, integrated transportation and land use planning will be essential. While a wider range of transportation options will contribute to improved mobility for all residents, promoting compact, mixed-use development within established community centres can also reduce car dependency and encourage walking, cycling, and other forms of active transportation.

In 2010, over 54% of greenhouse gas emissions in the Fraser Valley came from transportation sources. To reduce GHG emissions, it will be necessary to decrease our dependency on the car. Reducing distances to jobs, schools, and services while at the same time expanding transportation options to include public transit while promoting active transportation such as walking and cycling has the potential to greatly reduce emissions and traffic congestion, reduce transportation costs, improve air quality, and support the health and wellness of residents and visitors.

The significant expansion of the Port of Vancouver will see a corresponding increase of rail traffic through the FVRD's urban and rural communities. Expanded rail capacity need not be at the expense of other transport modes within the region. Senior governments will need to work with the FVRD and its member municipalities to reduce conflicts between transport modes to ensure the efficient movement of goods and services throughout the region.

6.1 Create a region-wide network of affordable and convenient transportation options that safely and efficiently facilitates the movement of people and goods

- a. Encourage integrated transportation and land use planning to minimize infrastructure costs, support multi-modal transportation, and reduce GHG emissions.
- b. Maintain and improve existing transportation corridors by implementing the Region's Transportation Priorities (*see Map 8*).
- c. Work with BC Transit, TransLink and other regional partners to establish and expand - as required by growth - a reliable, accessible, affordable and regionally integrated public transit system that links communities both within and outside the region (*see Map 9*).
- d. Explore innovative ways to address transportation needs in rural areas.
- e. Establish a region-wide marketing campaign with the aim of increasing transit ridership.
- f. Work with local governments, Indigenous governments, and other stakeholders to set transportation standards and priorities, identify core transit corridors, protect Rights of Way and explore funding options.
- g. Consider developing a regional form of governance to manage shared transit networks.
- h. Provide on-going support to regional airports, including Abbotsford International, to ensure long-term viability.

- i. Encourage the integration of existing railway infrastructure and waterway transportation systems into regional plans.
- j. Lobby senior governments to expand the Gateway program beyond Metro Vancouver and into the Fraser Valley.

6.2 Promote active and alternative forms of transportation that prioritize pedestrians and cyclists

- a. Support development practices and land use policy that minimizes the use of cars and encourage walking, bicycling, and public transit within and between communities, including Indigenous communities on-reserves.
- b. Consider including multi-modal transportation (i.e. bike lanes, walking paths) as a part of the standard for all road upgrades for commuting and recreation purposes.
- c. Encourage investment in the necessary infrastructure (i.e. sidewalks, bike paths, trails, benches, and bus shelters) that will make walking, cycling, and transit more convenient and promote behavior change.
- d. Work with BC Hydro and other partners to coordinate locations of electric vehicle charging stations and associated infrastructure.
- e. Consider opportunities to utilize utility and rail corridors or other right-of-way agreements for the expansion of the recreational trail network.
- f. Consider Transportation Demand Management, reducing parking requirements where appropriate, and other strategies that encourage the development of a multi-modal transportation system and reduce long-term impact to air quality.
- g. Continue to educate the public, decision-makers and other stakeholders on the benefits of alternative forms of transportation.



Map 8. Regional Transportation Priorities

EXCEPT FOR PRIORITY 1 Priorities are not listed in order of importance letters and numbers have been used solely for the purposes of identifying priorities on the map. Priorities were established in collaboration with member municipalities.

Critical Priorities

1. Hwy 1 - Extension of HOV/transit lanes through FVRD
 - 1.1. Hwy 1 at Peardonville Rd - Overpass replacement
 - 1.2. Hwy 1 at Highway 11 - Interchange replacement and park and ride
 - 1.3. Hwy 1 at Whatcom Rd - interchange improvements and park and ride
 - 1.4. Hwy 1 at Vedder Canal - re-alignment and widening
 - 1.5. Hwy 1 at Lickman Rd - interchange improvements and park and ride

High Priorities

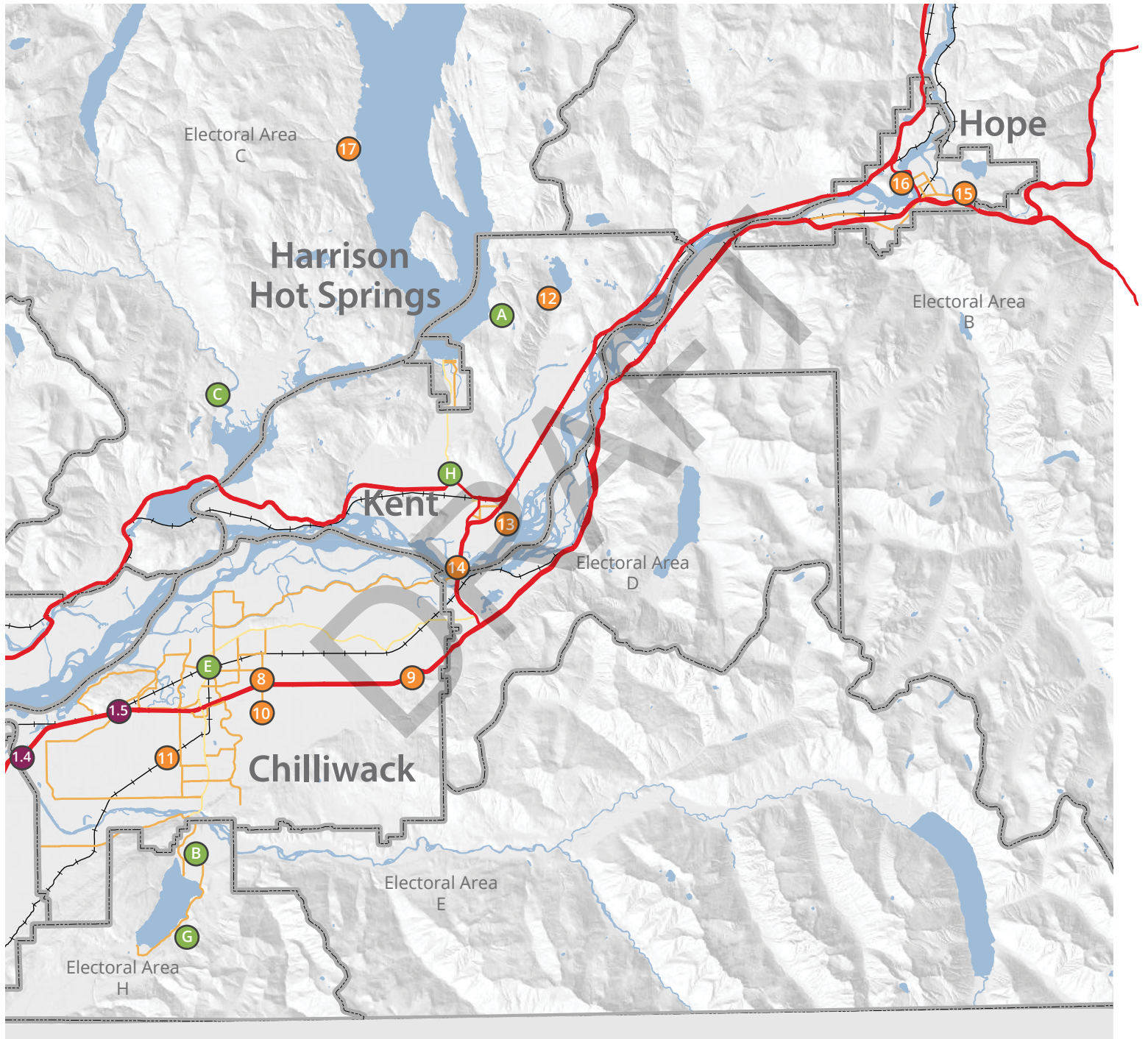
2. Marshall Rd extension - King Rd to Mt. Lehman
3. Fraser Hwy widening - Mt. Lehman to Aldergrove
4. McKee Rd upgrade - new overpass over Hwy 11 to George Ferguson
5. Hwy 7 widening - Silverdale to Maple Ridge boundary
6. North of Fraser transit connections - west to Maple Ridge & east to District of Kent
7. Bypass between Hwy 7 and 1st Ave (Mission)
8. Hwy 1 at Prest - Interchange upgrade
9. Hwy 1 at Annis Rd - Interchange upgrade
10. Prest Rd upgrade - Chilliwack Central to Bailey
11. Valley Rail Trail south to Yarrow (active transportation)
12. Emergency Access Route Rockwell to Lougheed Hwy
13. Bypass between Hwy 7 & Haig Hwy
14. Rosedale Bridge seismic and safety retrofits
15. Othello Road Improvements (Hope)
16. Fraser Bridge Pedestrian Crossing (ETF - Hope active transportation)
17. West-side Harrison Lake to Lillooet Lake - FSR Improvements

Medium/Long Term Priorities

- A. Rockwell Drive Upgrades
- B. Cultus Lake - 2nd Access Route/emergency access route
- C. Morris Valley Rd Bridge Replacement
- D. Vedder Way extension - Lonzo Rd to McClary Ave under Hwy 1
- E. CN Grade Separation at Young Road
- F. Maclure Rd - Connector between Hwy 11 to McCallum
- G. Columbia Valley Hwy - pedestrian and bike upgrades
- H. Highway 7 at Hotsprings Dr - intersection upgrade



■ DRAFT UPDATES



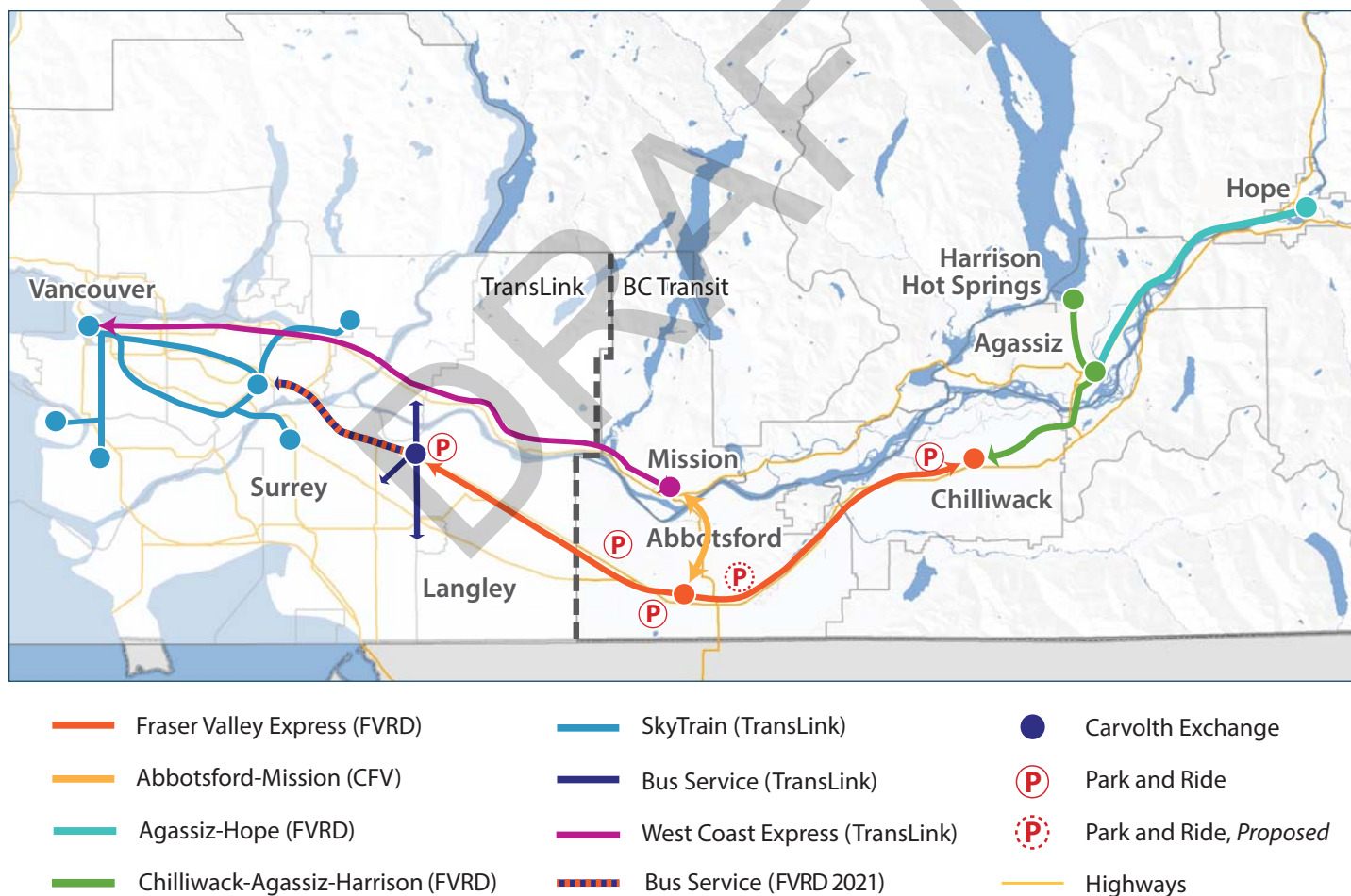
- Interprovincial Highways
- Arterial Roads
- Collector Road

Map 9. Regional Transit Network

The *Strategic Review of Transit in the Fraser Valley* (2010) was a partnership between the Ministry of Transportation and Infrastructure, FVRD, BC Transit and TransLink. It provided a 25 to 30 year vision and 20 year strategy to guide the significant expansion of transit services, facilities and policies needed to make transit an attractive transportation choice for Fraser Valley residents and visitors.

The FVRD's inter and intra-regional transit network is a product of the *Strategic Review* and subsequent *Transit Future Plans*. New services are being implemented, some well before the timelines set out in the *Strategic Review*, demonstrating the FVRD's commitment toward supporting more sustainable land use patterns, providing attractive transportation alternatives and reducing greenhouse gases.

Until now, the lack of integrated transportation services between Metro Vancouver and the FVRD and it's communities has forced residents and visitors to primarily travel by private vehicle. Improved transit service between Harrison Hot Springs and Chilliwack, the introduction of the Fraser Valley Express (FVX) between the City of Chilliwack, City of Abbotsford and Langley Township and a new connection between the Districts of Hope and Kent, represent a significant expansion of transit in the region. These routes will add to existing inter-municipal connections within the FVRD and the inter-regional rail connection provided by West Coast Express. In 2021 the FVX service will expand to connect directly with Sky Train at the Lougheed Town Centre Station in Burnaby.





7.0 Infrastructure & Services

Goal: *To provide efficient, sustainable, and cost effective services that contribute to compact and sustainable growth.*

Like most regions across Canada, communities in the Fraser Valley are feeling pressure to upgrade and expand their infrastructure to meet growing demand. A large share of financial resources goes into infrastructure, especially as the costs of maintaining aging infrastructure continues to grow. Given the significant costs associated with infrastructure development, municipalities and Electoral Areas are in the position of having to make difficult decisions that directly impact the lives of residents.

Building more compact communities is one of the most effective ways to reduce infrastructure costs. Compact development minimizes the need for new and expanded systems and reduces maintenance costs over the long term. To manage aging infrastructure, communities throughout the region have expressed interest in finding ways to collaborate that will be more cost effective and share the burden of liability.

In the FVRD's 2014 Solid Waste Management Plan, the region set an ambitious target to achieve 90% diversion rate by 2024. Achieving this goal will require commitments from both the public and private sectors to more effectively manage and reduce the overall amount of solid waste produced in the region. It will also require taking a more innovative approach to solid waste management practices, and a high level of public education. The Region is committed to finding solutions that effectively manage waste without impacting air quality.

In addition to the services that affect our daily lives, are those services we hope we never have to use. Emergency services help to encourage public preparedness, ensure that organizations are prepared in the event of an emergency, and that plans are in place to mitigate any disasters. The region will continue to develop and expand these services in ways that are adequate, safe, efficient, and ensure sustainable development over the long-term.

7.1 Provide safe and efficient access to basic utilities

- a. Ensure Rural Communities have access to effective and efficient water and sewer systems that protect public health and the environment; support establishing MOU's with Indigenous communities which will improve basic utilities.
- b. Support the installation and maintenance of water and sewer systems that have high-design standards, encourage compact development and are environmentally, economically, and socially sustainable.
- c. Explore the viability of green infrastructure and new and emerging technologies that can improve efficiencies and minimize future infrastructure investments.
- d. Clarify existing partnerships and explore new opportunities for joint ventures and cost sharing when building new infrastructure projects and maintaining aging infrastructure to achieve economies of scale.

7.2 Ensure responsible management of solid waste

- a. Implement the FVRD's Solid Waste Management Plan to effectively manage and reduce the region's solid waste.
- b. Commit to achieving Zero Waste over the long-term, applying strategies that will not negatively affect air quality.

- c. Educate the public on sustainable waste management practices (i.e. Zero Waste, recycling, composting, and Advanced Material Recovery).
- d. Consider a regional approach to waste management for materials recovery in order to achieve economies of scale and meet regional waste diversion goals.
- e. Consider the development of a liquid waste management plan.

7.3 Ensure public safety through emergency management planning

- a. Evaluate on a continual basis potential impacts of emergency events across the region and support measures to mitigate disasters.
- b. Continue working with the Fraser Basin Council, regional partners and senior governments on the Lower Mainland Flood Management Strategy initiative.
- c. Consider developing - in collaboration with Indigenous organizations - a regional system for hazard management.

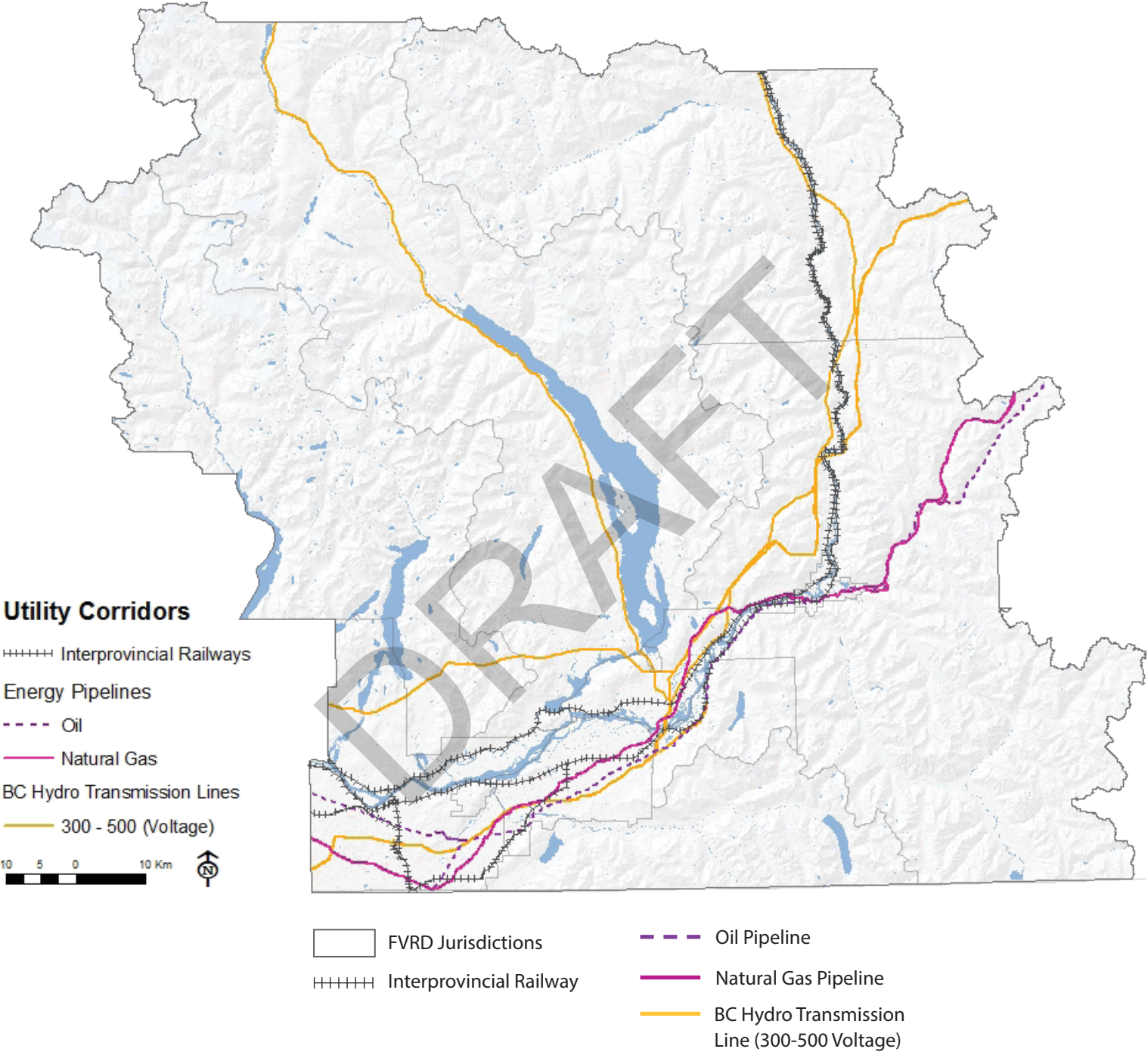
- d. Work with the Province to identify and address emergency services gaps in rural areas, particularly in regards to wildfire and landslide risks near highways and residential areas.
- e. Work with local governments, Indigenous governments, the Province, and outside agencies to develop strategies for community recovery and resiliency should an emergency occur.
- f. Consider developing a plan for alternative access and evacuation should an emergency event block a major transportation corridor within the Region.

7.4 Minimize the impact of large-scale utility corridors that traverse the region

- a. Minimize the impact of major utility corridors such as power lines, pipelines, and railways on communities, agricultural productivity, and the cultural and natural health of the environment.
- b. Work with railway companies and the Federal government to ensure high safety standards for transport of goods by rail, particularly within community boundaries.



Map 10. Utility Corridors





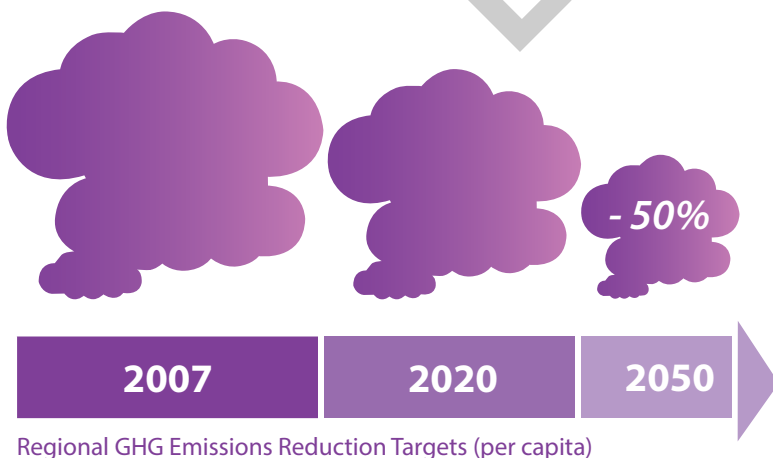
8.0 Energy and Climate Change

Goal: *To increase energy efficiency, lower energy costs, and reduce greenhouse gas emissions in order to minimize the region's impact on global climate change, and to mitigate impacts of climate change on our Region.*

Decisions and actions from outside our region contribute to the overall health of the ecosystem, particularly for air and water quality. The FVRD can and does collaborate with neighbouring jurisdictions in order to advocate for coordinated policies that will achieve the best possible outcome for the natural environment. In the same way, activities within the FVRD have an impact beyond our own boundaries, such as in the global effort to reduce greenhouse gas (GHG) emissions and minimize the adverse effects of climate change.

As signatories to the British Columbia Climate Action Charter, the FVRD, along with its member municipalities, has committed to creating compact, energy efficient communities. The Provincial government has also enacted legislation and policies intended to encourage GHG emission reductions. The *Local Government Act* requires that all Regional Growth Strategies include GHG emissions reduction targets and actions.

Through a combination of efforts to reduce the consumption of energy, increase energy efficiency, prioritize clean energy and reduce GHG emissions, the region will work toward achieving its GHG reduction targets. Taking action will help to reduce energy costs, and contribute to a healthier future for both FVRD residents and our neighbours.



8.1 Promote energy efficiency and the reduction of Greenhouse Gas Emissions

- Promote development and sustainable management of local, clean, non-combustive and renewable energy supplies that reduce GHG emissions and protect air quality.
- Promote energy efficient incentive programs on a region-wide basis.
- Support community design that facilitates active transportation to reduce GHG emissions.
- Encourage use of high energy efficiency building standards to reduce energy costs and GHG emissions in all new developments.
- Work with municipalities to achieve a region-wide per capita reduction in Greenhouse Gas emissions of 50% by 2050, relative to 2007 levels.
- Encourage individual, municipal, Indigenous communities, and region-wide efforts to improve energy conservation and efficiency through education and other initiatives.

8.2 Reduce the region's impact on climate change and develop capacity to adapt to and mitigate the impacts of climate change on the region.

- Ensure that land use, transportation, and other planning decisions at the regional level consider the impacts to climate change.
- Research and promote best practices for climate change mitigation and adaptation.



Ruskin Dam (left) and Powerhouse

Implementation

Regional Context Statements

Section 446 of the *Local Government Act* requires that within a region that has adopted a Regional Growth Strategy, all municipal Official Community Plans (OCPs) must include a Regional Context Statement. The regional context statement sets out the relationship between the RGS and the OCP and how they will be made consistent over time.

Once the RGS has been formally accepted by all affected local governments, each member municipality has two years to adopt a Regional Context Statement (RCS) in their OCP. The Regional District Board in turn must accept the Regional Context Statements. Electoral Area planning and zoning must be consistent with RGS policies.

In order to simplify the process and apply a level of consistency across the Region, Regional Context Statements shall, at a minimum, include:

- A written description of how the OCP relates to each of the goals and objectives of the RGS; and
- Where there are inconsistencies, a description of how the OCP will become consistent over time.

Once the RGS has been adopted, all bylaws adopted by the Regional District must be consistent with the RGS. However, as set out in Section 445 of the *Local Government Act*, the RGS does not commit or authorize a Regional District to proceed with any project or action specified within the plan.

Implementation Agreements

Implementation Agreements (IA) can be used to implement aspects of an RGS. An IA is a partnership agreement between a regional district and other levels of government, their agencies, Indigenous governments or other bodies which spells out the details of how certain aspects of a regional growth strategy will be carried out. The primary focus, however is on provincial ministries and agencies.

According to the province, such agreements are an important tool designed to promote coordinated local/provincial actions. These agreements are the primary means for the regional district and the provincial government to commit to actions on implementation of the RGS.

Monitoring and Evaluation

Under British Columbia's *Local Government Act*, every Regional District with a Regional Growth Strategy (RGS) is required to review and monitor the RGS periodically. The FVRD will work on a continuing basis with local municipalities and provincial agencies to achieve the objectives outlined in the RGS and to track progress.

Although the RGS takes a long-term perspective it is important that the RGS is periodically reviewed and updated to ensure that the policies remain relevant. The FVRD will take the following actions to monitor progress on a region-wide level:

- Work with municipalities to develop Regional Context Statements for Official Community Plans.
- Prepare an annual monitoring report to evaluate progress in achieving the goals outlined in the RGS.
- Maintain a GIS database with up-to-date spatial information.
- Consider a review of the RGS every five years.

Figure 2. Relationship between the Regional Growth Strategy and Official Community Plans



Amendment Process

Section 437 of the *Local Government Act* allows for both major and minor amendments to the Regional Growth Strategy. In both cases, the process to initiate amendments to the Regional Growth Strategy is by resolution of the Regional Board. Municipalities are encouraged to discuss the reasons for an amendment with the regional district prior to submitting a request for amendment.

Should a local government wish to request an amendment, it must be forwarded to the Regional Board as a resolution of Council. Submissions must be accompanied by a report explaining the planning justification and rationale for the amendment request. It is encouraged, but not mandatory, that referral requests be given after 1st reading by the Municipal Council.

All proposed amendments to the Regional Growth Strategy will be forwarded to the Board. Where the Board resolves to proceed with a request, the Board will:

- Agree whether the request should be treated as a minor or major amendment.
- Provide written notice to affected local governments of the proposed minor amendment along with any other relevant supporting documentation and the date, time, and place of the first reading.
- Provide a minimum of 30 days for affected local governments, and agencies to respond.
- Consider comments provided by affected local governments prior to giving first reading to the proposed amendment bylaw.
- Consider the need for a public hearing.

Criteria and Procedures for Major Amendments

An amendment to the RGS is considered major if the proposed change includes one or more of the following:

- The addition or deletion of Regional Growth Strategy goals or policies;
- Amendments to the minor amendment process as outlined below;
- Proposed changes to Regional Growth Boundaries pertaining to land that is not adjacent to the existing Regional Growth Boundary; and, or
- Other criteria as specified in Section 437 of the Local Government Act.

Major amendments to the RGS must be accepted by all Affected Local Governments in accordance with the provisions of Section 436 of the Local Government Act and must follow the same process that is required to adopt the RGS.

Criteria and Procedures for Minor Amendments

Minor Amendments may be made to the Regional Growth Strategy provided they fit one or more of the following criteria:

- Amendments to population or employment projections, tables, figures, grammar or numbering that do not alter the intent of the RGS;
- Text and map amendments required to correct errors or to update information;
- Amendments resulting from a full Official Community Plan process;
- Changes to evaluation and monitoring of RGS goals;
- Changes to lands adjacent to the existing Regional Growth Boundary.

Minor Amendment Process

The procedure for minor amendments is as follows:

Public Hearing Required

If at first reading, the amending bylaw receives an affirmative vote by the Board, and it is determined that a public hearing is necessary, a public hearing will take place after the 2nd reading. In consideration of public comment, the bylaw may then be adopted in accordance with the procedures that apply to the adoption of a regional growth strategy bylaw under Section 207 of the *Local Government Act* and the Board's procedure bylaw.

No Public Hearing Required

If at first reading, the amending bylaw receives, by simple majority, an affirmative vote of the Board and it is determined that no public hearing is necessary, the bylaw may be adopted in accordance with the procedures that apply to the adoption of a Regional Growth Strategy bylaw under Section 207 of the *Local Government Act* and the Board's procedure bylaw.

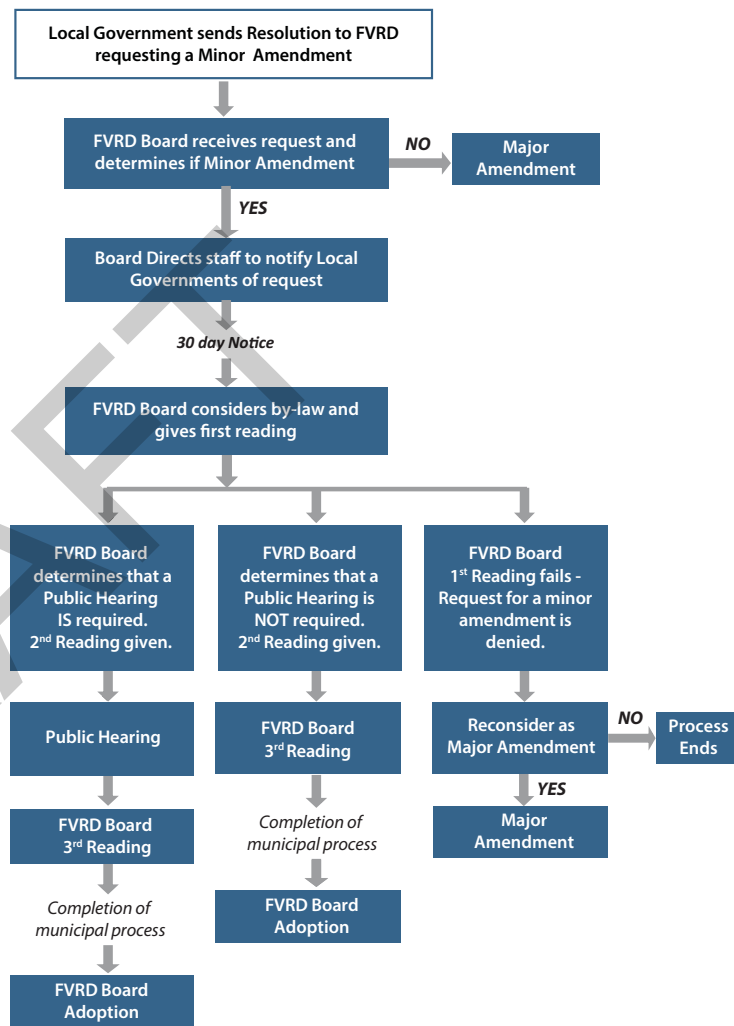
In either of the above two cases, final adoption of the minor amendment on the part of the Board will take place only after the municipal council has given final approval to the municipal application or initiative for which the amendment is requested. This is to ensure that the reason for the RGS amendment is first upheld at the municipal level.

If at first reading, the amending bylaw does not receive an affirmative vote of the Board, the bylaw may only be adopted in accordance with the Major amendment procedure established by Section 432 in which case acceptance by affected local governments is required. *(Please refer back to criteria and procedures for major amendments)*

Final Adoption

Where an RGS amendment is tied to a municipal process, the RGS amendment bylaw will not be adopted until the municipal process is complete.

Figure 3. RGS Minor Amendment Process





DRAFT

Fraser Valley Regional District

1-45950 Cheam Avenue, Chilliwack BC V2P1N6 | 604. 702. 5000 | info@fvrd.ca | www.fvrd.ca





CORPORATE REPORT

To: Regional and Corporate Services Committee

Date: 2020-03-10

From: Robin Beukens, Planner II

File No: 6430-51-2011-01

Subject: Regional Growth Strategy Update

INTENT

This report is intended to advise the Committee of information pertaining to an update of the Fraser Valley Regional District Regional Growth Strategy. Staff is not looking for a recommendation and has forwarded this information should members want more clarification to discuss the item further.

STRATEGIC AREA(S) OF FOCUS

Support Environmental Stewardship

Foster a Strong & Diverse Economy

Support Healthy & Sustainable Community

Provide Responsive & Effective Public Services

BACKGROUND

The Regional Growth Strategy (RGS) is a strategic, high-level policy document for coordinating planning in the Fraser Valley Regional District (FVRD) and for informing provincial priorities. An RGS is a framework for planning and coordinating the activities of local governments, the provincial government, and other agencies to ensure that the region as a whole is working toward a common future. The RGS considers issues that spill across the boundaries between neighbouring municipalities and regional districts. It also provides a framework for Official Community Plans in Fraser Valley municipalities and directs development in unincorporated areas. It considers issues that impact all of us, such as transit, housing, parks, the environment, air quality and economic development from a regional perspective. In recent years, building relationships with Indigenous communities have taken on a much more important role in the FVRD, and the updated RGS will reflect this change.

The first draft of the RGS update was presented to the Board for review in July 2014 and was sent out for referral to affected local governments, federal and provincial agencies; Indigenous communities and agencies; and other interested parties. Feedback from Indigenous communities and agencies took some time, and major Official Community Plan updates in Abbotsford, Mission and the District of Hope

and other priorities resulted in a decision to delay the second draft of the plan until municipal processes were completed. With other local government planning processes completed and strengthening relationships with Indigenous communities, the FVRD is restarting the RGS update process with a target of having a final version completed by the end of 2020, allowing the bylaw to move forward in early 2021.

DISCUSSION

The Regional Growth Strategy (RGS) is a strategic plan enabled by the Local Government Act (LGA) that provides an overarching planning framework for coordinating the activities of local governments and the provincial government. It considers transit, housing, parks, economic development and environmental issues from a regional perspective with the goal of creating healthy, sustainable communities. As a long-range vision with a 20 to 30-year scope, it aims to ensure the region as a whole is working toward a common future.

Regional growth strategies support the management of issues that affect more than one jurisdiction and can perform the following functions (among others):

- Promote coordination among municipalities and regional districts on issues that cross jurisdictional boundaries;
- Promote coordination among municipalities, regional districts and Indigenous communities as a means of establishing and maintaining meaningful and collaborative relationships;
- Strengthen links between regional districts and the provincial ministries and agencies whose resources are needed to carry out projects and programs; and,
- Communicate the region's strengths to potential investors while demonstrating that local governments, Indigenous communities and stakeholders are proactively addressing the key issues affecting the region's future.

Legislation

Part 13 of the LGA sets out the legal requirements for regional growth strategies in British Columbia. The purpose of regional growth strategies "is to promote human settlement that is socially, economically and environmentally healthy, and that makes an efficient use of public facilities and services, land and other resources."

The minimum requirements for a regional growth strategy include:

- A 20-year minimum time frame
- Regional vision statements
- Population and employment projections
- Regional actions for key areas such as housing, transportation, regional district services, parks and natural areas, and economic development
- Targets, policies and actions for the reduction of greenhouse gas emissions in the regional district

- Consideration of the most recent housing needs reports and the housing information on which such reports are based.

As housing needs reports are a new requirement and will not be mandatory until April 2022, the RGS update will not include housing needs report content but will refer to future requirements.

Regional growth strategies are required to work towards, but not be limited to, the following:

- avoiding urban sprawl and ensuring that development takes place where adequate facilities exist or can be provided in a timely, economical and efficient manner;
- settlement patterns that minimize the use of automobiles and encourage walking, bicycling and the efficient use of public transit;
- the efficient movement of goods and people while making effective use of transportation and utility corridors;
- protecting environmentally sensitive areas;
- maintaining the integrity of a secure and productive resource base, including the agricultural land reserve;
- economic development that supports the unique character of communities;
- reducing and preventing air, land and water pollution;
- adequate, affordable and appropriate housing;
- adequate inventories of suitable land and resources for future settlement;
- protecting the quality and quantity of groundwater and surface water;
- settlement patterns that minimize the risks associated with natural hazards;
- preserving, creating and linking urban and rural open space, including parks and recreation areas;
- planning for energy supply and promoting efficient use, conservation and alternative forms of energy; and
- good stewardship of land, sites and structures with cultural heritage value.

The RGS update was initiated by a resolution of the regional district Board of Directors. After the initiation, the Intergovernmental Advisory Committee (IAC) was formed consisting of senior staff from local governments, the Province, other agencies and, in the case of the FVRD, Indigenous community/agency representatives. The role of the IAC is to advise the regional district on the development of the RGS. The IAC was formed early in the process, but because of turn-over, over time, membership of the IAC will be updated. Consultation is required with regional district citizens; affected local governments; First Nations; boards of education, greater boards and improvement districts; and provincial and federal governments and their agencies and others as necessary.

Regional growth strategies do not require provincial approval, but formal "Acceptance" is required from "affected local governments," which consist of member municipalities and adjacent regional districts. Acceptance is by resolution of each local government. Once an RGS or major update is formally

adopted, member municipalities must update their official community plans (OCP) within two years with “regional context statements” (RCS). This is to ensure OCPs and the RGS are consistent.

The LGA also now allows minor amendment processes to be incorporated into an RGS. This facilitates changes without having to undergo the major amendment process as set out in the Act. The updated RGS will include a minor amendment process that will facilitate minor changes without triggering a more onerous major amendment process.

Regional districts are required to establish a monitoring program after an RGS has been adopted. The “Snap Shot” series of reports and, more recently, the RGS Monitoring Report (2019) are products of this program.

Local governments also have the option to enter into implementation agreements with other local governments, different levels of government (including the Province), and agencies to implement the actions and policies of a regional growth strategy. To date, few, if any, regional districts use this tool to implement their plans.

2004 Regional Growth Strategy

The FVRD’s current Regional Growth Strategy, “Choices for Our Future,” was adopted on October 26, 2004. The strategy was the result of an extensive collaborative and consultative process and was prepared in accordance with the Local Government Act.

Through the original RGS process, the region gained a better understanding of how valley communities were coping with the pressures of growth and change over the past twenty years. It was also a timely initiative given that the region had been newly amalgamated, and a regional vision and framework for managing growth was needed.

With its burgeoning population, expected to be approaching 500,000 by 2051, the region is experiencing new challenges in terms of increasingly complex growth management issues relating to air quality, transportation and transit, housing affordability, economic growth, healthy communities, greenhouse gas monitoring, Indigenous relations and others. Furthermore, new legislative requirements and funding arrangements from the provincial and federal governments are adding pressure on the region. It was timely to review and amend the FVRD’s RGS to address these evolving challenges.

Although the FVRD remains remarkably independent from the rest of the lower mainland, the region will increasingly face external pressures as a result of growth occurring within Metro Vancouver. By 2050, current trends indicate that the lower mainland’s population could be approaching a population of 4 million, up from about 2.9 million today. The RGS update will be taking such growth into consideration.

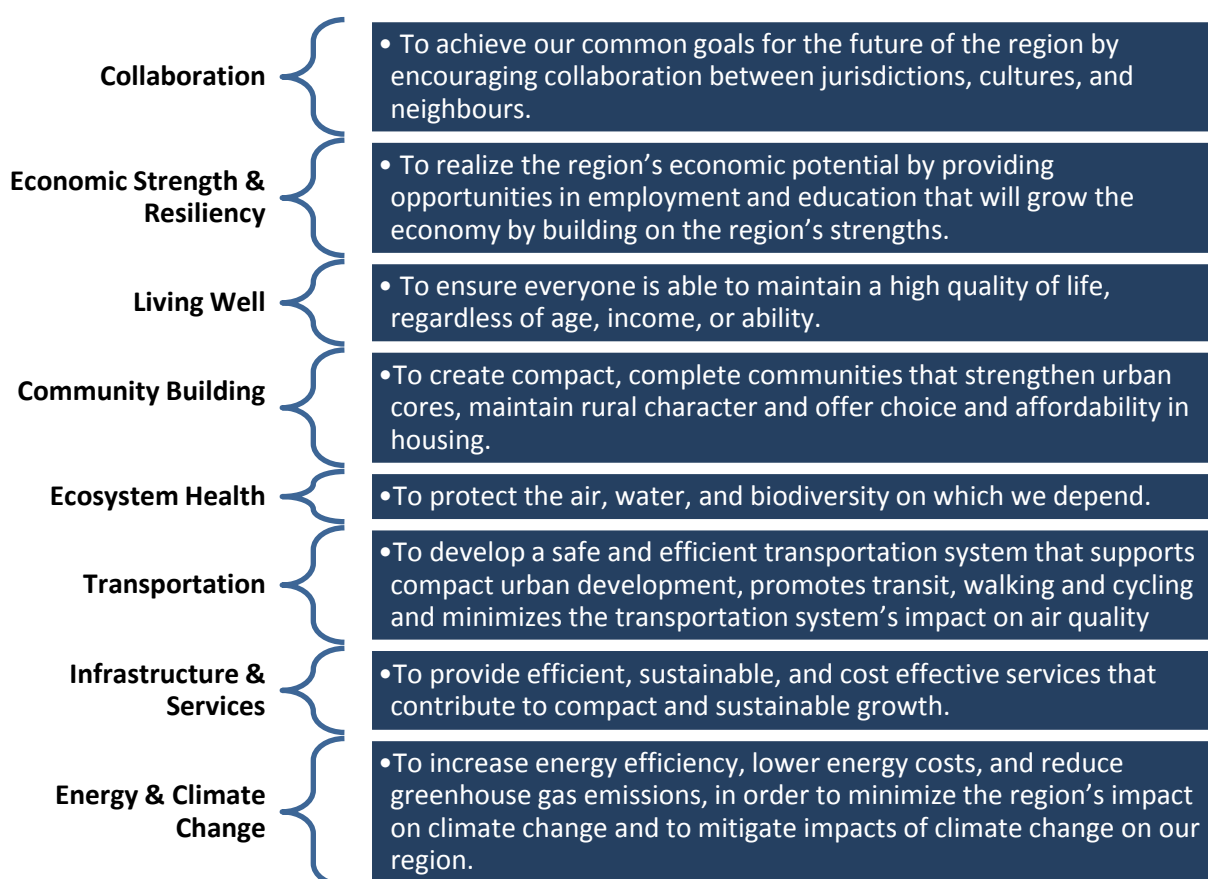
Regional Growth Strategy Update

The RGS update formally began in 2011. An IAC was formed, and meetings held between 2011 and 2014. These meetings covered a range of topics, including developing the IAC terms of reference, reviewing work plans, discussing engagement strategies, garnering input from local governments, Indigenous communities and IAC member agencies, and reviewing drafts.

Presentations were made to municipal councils, and a workshop was held with the FVRD Board in July 2014. There was also outreach to Indigenous communities and agencies to provide opportunities for meetings and/or presentations. Staff met with several Band councils and/or staff, the FVRD held a community-to-community forum with Soowahlie First Nation which included discussion of the RGS, and the team met with S'ólh Téméxw Stewardship Alliance (STSA) leadership to discuss the first draft.

Public engagement also took place to gather input from residents in rural and urban parts of the region. Eight open house events were held throughout the region and referrals were sent out to local governments, Indigenous communities, government agencies and stakeholders. The first draft was shared with member municipalities, neighbouring regional districts and other IAC participants, People of the River Referral Office (PRRO) and forty-four individual Indigenous communities who have an interest in the FVRD.

The draft RGS includes eight goals:



Since 2014, the RGS update process has been complicated by several major OCP updates undertaken by the City of Abbotsford, District of Mission, and District of Hope; the need for more Indigenous engagement; and shifting regional priorities. Over this time, Indigenous consultation and relationship building activities have been undertaken in support of the RGS, and other FVRD initiatives and the Strategic Planning team has been tasked with other initiatives that help implement and/or monitor the existing RGS and provide input to the RGS update. Work has included:

- Fraser Valley Express and Hope transit service implementations (2015 and 2017) and other transit-related planning initiatives;
- Fraser Valley Trip Diary report (2014);
- Collaboration with BC Agriculture & Food Climate Action Initiative (CAI) - Fraser Valley Agricultural Climate Adaption Strategy (2015);
- Freshet Flooding & Fraser Valley Agriculture: Evaluating Impacts & Options for Resilience (2016) – collaboration with CAI;
- Homeless surveys and social housing inventories (2017 and 2020);
- Outdoor Recreation workshop (2017) and supporting the outdoor recreation and tourism economic analysis and management plan (2019-20);
- Clean Economy study and GLOBE Fraser Valley Focus event (2019-20);
- Updated agricultural “Snap Shot” report (2018) and the RGS monitoring report (2019).

2020 Schedule

A schedule of RGS update activities is included in Appendix 1. Staff are currently working through a round of revisions to prepare a second draft of the RGS. This includes finalizing updated Transportation Priorities; updating the Indigenous peoples’ content; updating the population and employment projections to 2050 to better align with Metro Vancouver’s RGS update and TransLink’s 2050 Transportation Plan. Staff will also be meeting with provincial officials to discuss the RGS update and provincial expectations.

Provincial input

Staff will be meeting with Municipal Affairs and Housing (MAH) officials shortly to discuss the RGS update and determine provincial expectations in relation to provincial legislation, United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) commitments and initiatives recently announced in the provincial budget. MAH will assist in identifying appropriate provincial staff to represent relevant ministries or agencies on the IAC.

Intergovernmental Advisory Committee (IAC)

As part of the RGS update, an Intergovernmental Advisory Committee (IAC) was formed early in the process with a mandate to advise on developing the updated RGS. The IAC will be reinstated in the spring of 2020. The FVRD will be asking for staff from affected local governments, Indigenous communities/agencies and other organizations to be appointed to the IAC. A list of IAC member organizations is included as Appendix 2, although additional members may be added as needed.

The FVRD's IAC consists of a "Core" group with local government and Indigenous community membership and a broader advisory group (IAC terms of reference - Appendix 2).

Indigenous engagement

More extensive engagement with Indigenous communities is needed to ensure that the RGS builds a strong framework for collaboration and further strengthens relationships in the FVRD. Although valuable feedback was received in the first draft, and the second draft reflects that input, it is important to acknowledge that more engagement is required to reflect changing relationships, the shifting legal landscape and provincial UNDRIP commitments.

Over the past few years, efforts have been made by the FVRD to build stronger relationships with indigenous communities and to better understand the challenges these communities face. Broader FVRD engagement has included a staff visit to Stl'alt'imc First Nations north of Harrison Lake, developing transit and other servicing agreements, community to community forums, engagement on outdoor recreation and tourism analysis and plans and more. While reserves are outside the jurisdiction of the RGS, Indigenous communities will be affected by anticipated population growth in the FVRD and the lower mainland as a whole. FVRD staff will be reaching out to Indigenous communities in the FVRD to determine how they will prefer to be engaged. The intent is to build on existing relationships and to build relationships where none are currently in place.

Public engagement

More general public engagement will take place over the spring and summer. A public engagement strategy has not yet been finalized but will likely include a series of open houses and opportunity to comment on the draft plan online.

Discussions with the Province and Indigenous communities/agencies will assist in finalizing the work plan going forward. As the process moves forward, staff will keep the Board informed of the process, and a more detailed timeline will be provided.

Once a final draft is completed and undergone Board, IAC and legal review, the amendment bylaw will go forward to the FVRD Board. As required by the Act, before 3rd Reading, the bylaw will be formally referred to member municipalities and adjacent regional districts ("affected local governments") for formal acceptance by resolution. Once accepted, the bylaw can be adopted by the Board. Should an RGS update not be accepted and parties cannot come to an agreement, the LGA sets out an arbitration process to resolve any outstanding issues. The goal is to move the bylaw forward into the formal approval process in January 2021.

COST

N/A

CONCLUSION

A draft of the FVRD Regional Growth Strategy is being prepared and undergoing revisions. Staff will be re-instituting the Intergovernmental Advisory Committee, engaging with affected local governments, Indigenous communities and agencies, provincial and federal ministries and agencies, the public and stakeholders, as we move towards a final draft. A more detailed timeline will be provided to the Board to reflect upcoming discussions with the Province, Indigenous communities and agencies.

COMMENTS BY:

Alison Stewart, Manager of Strategic Planning: Reviewed and supported.

Stacey Barker, Director of Regional Services: Reviewed and supported.

Mike Veenbaas, Director of Financial Services: No further financial comment.

Jennifer Kinneman, Acting Chief Administrative Officer: Reviewed and supported.

FVRD Regional Growth Strategy 2020 Schedule

TASK NAME	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	2021
Finalize Draft Regional Growth Strategy												
Public Engagement Plan												
Indigenous Engagement Strategy												
Intergovernmental Advisory Committee (IAC) Meeting												
Public Engagement												
Indigenous Communities Engagement												
Incorporate and Respond to Feedback												
Final IAC Meeting												
Finalize Regional Growth Strategy												
First Reading of Bylaw and formal referral												

Fraser Valley Regional District ~ Regional Growth Strategy Review

INTERGOVERNMENTAL ADVISORY COMMITTEE (IAC) TERMS OF REFERENCE

COMMITTEE PURPOSE:

Per Section 867(2) of the Local Government Act, the role of an IAC is to:

1. advise applicable local governments on the development and implementation of the Regional Growth Strategy; and
2. to facilitate coordination of Provincial and local government actions, policies and programs as they relate to the Regional Growth Strategy.

BACKGROUND:

The FVRD established an IAC when the Regional Growth Strategy (RGS) was initiated in 1996 and relied upon its guidance through the development of the *Choices for our Future* RGS to its adoption in 2004. The current RGS is the product of that collaborative and consultative process. The IAC was allowed to lapse after the adoption of the RGS in 2004.

In October 2010 the FVRD formally initiated a major RGS review and update and as part of this process is reinstituting the IAC. The mandate will be to advise applicable local governments on developing the updated RGS.

Per Section 867(2) of the Local Government Act, a regional district must establish an Intergovernmental Advisory Committee (IAC) when a Regional Growth Strategy is initiated or a major amendment is undertaken. The Act specifies that the role of the IAC is to:

1. advise applicable local governments on the development and implementation of the Regional Growth Strategy; and
2. to facilitate coordination of Provincial and local government actions, policies and programs as they relate to the Regional Growth Strategy.

The Act also specifies that the membership of the IAC must include the following:

1. the planning director for the regional district, or another official appointed by the Board;
2. the planning director, or another official appointed by the applicable council, of each municipality, all or part of which is covered by the Regional Growth Strategy;
3. senior representatives of the Provincial government and Provincial government agencies and corporations, determined by the Minister in consultation with the Board; and
4. representatives of other authorities and organizations if invited to participate by the Board.

MEMBERSHIP COMPOSITION

1. The IAC shall be comprised of a 'core group' and a 'resource group'.
2. The **'core group'** of the IAC shall include the following:
 - a. FVRD: senior staff responsible for strategic planning, electoral area planning and public works and services;
 - b. FVRD affected local governments (member municipalities and adjacent regional districts): the planning director or equivalent, or another official appointed by the applicable council or regional board;
 - c. Ministry of Community, Sport and Cultural Development (MCSCD): senior staff with responsibilities related to monitoring regional growth strategy development and implementation.
 - d. FVRD First Nations: senior staff responsible for planning and land use management, or another official appointed by the applicable council
 - e. Members of the 'resource group' relevant to the specific items or issues to be discussed at an IAC meeting.
3. The **'resource group'** of the IAC may include the following:
 - a. Other FVRD Local Authorities: senior staff from Fraser Health Authority and School Districts No. 78, 75, 34 and 33;
 - b. Provincial Ministries, Agencies and Corporations: senior staff with responsibilities related to the attainment of Regional Growth Strategy objectives pursuant to the *Local Government Act*;
 - c. Federal Government Departments and Agencies: senior staff with responsibilities related to the attainment of Regional Growth Strategy objectives pursuant to the *Local Government Act*.
 - d. Senior representatives of other organizations as invited by the IAC Chair and/or Regional Board.

IAC PROCEDURES

1. The Chair of the IAC shall be elected by the committee.
2. The 'core group' of the IAC shall meet as necessary. The number and frequency of meetings may vary according to the work plan for each year.
3. A number of the meetings will be an issue-based workshop format, with IAC members expected to participate and, in some instances, take a leading role.
4. The IAC will meet at the call of the Chair.
5. The IAC is not a formal decision making body. It is a forum for the identification, discussion and resolution of growth management challenges facing the region. It is expected that the IAC will help the FVRD to better understand the full range of perspectives that could be taken into consideration in its decisions related to these issues.
6. The agendas and minutes for meetings of the 'core group' will be circulated to the 'resource group' for information purposes in accordance with the RGS Engagement Plan.
7. Members of the 'resource group' may attend any meeting of the 'core group' upon notifying the IAC Chair or an FVRD staff member responsible for the RGS of their anticipated attendance.
8. The minutes of IAC meetings will be provided to the FVRD Board for consideration of receipt.

9. In the context of IAC meetings, consensus means the committee will not engage in formal voting, but will agree among themselves on a position before moving on.
10. IAC core group members will be responsible for communicating with their respective Councils/Boards on a regular, consistent and timely basis.
11. IAC core group members will be responsible for communicating any concerns or issues raised by their respective Council/Boards to the IAC core committee as they arise.
12. FVRD staff will provide support to IAC core group members to ensure that reporting and communication strategies and processes work for each individual organization.

2020 IAC membership (proposed updated list)

CORE:

FVRD staff

- Regional Services
- Electoral Area Planning
- Engineering and Community Services

Affected Local Governments – member municipalities and adjacent regional districts.

Ministry of Municipal Affairs and Housing

Indigenous representation – determined in consultation with Indigenous communities or agencies

ADVISORY:

Provincial ministries & related agencies (relevant)

- Ministry of Aboriginal Relations and Reconciliation
- Ministry of Agriculture
- Agricultural Land Commission
- Ministry of Forests, Lands, Natural Resource Operations, and Rural Development
- Ministry of Environment and Climate Change Strategy
- Ministry of Energy, Mines, and Petroleum Resources
- Fraser Health Authority
- Ministry of Jobs, Economic Development and Competitiveness
- Ministry of Transportation and Infrastructure
- Ministry of Social Development and Poverty Reduction
- Ministry of Tourism, Arts and Culture
- BC Housing

Federal agencies

- Transport Canada
- Environment and Climate Change Canada
- Fisheries and Oceans Canada

Others

- School Boards (#33, #34, #75 and #78)
- University of the Fraser Valley
- BC Transit
- TransLink
- Port Metro Vancouver
- Abbotsford Airport Authority
- BC Ag Council
- Chambers of Commerce
- Urban Development Institute
- Others as identified by the IAC or Regional Board

FRASER VALLEY REGIONAL DISTRICT

BOARD OF DIRECTORS MEETING

OPEN MEETING MINUTES

Tuesday, July 28, 2020
(Immediately following the FVRHD Board Meeting)
FVRD Boardroom, 45950 Cheam Avenue, Chilliwack, BC

Members Present: Director Jason Lum, City of Chilliwack, Chair *(via Zoom conference call)*
Director Patricia Ross, City of Abbotsford, Vice Chair *(via Zoom conference call)*
Director Dennis Adamson, Electoral Area B *(via Zoom conference call)*
Director Pam Alexis, District of Mission *(via Zoom conference call)*
Director Wendy Bales, Electoral Area C *(via Zoom conference call)*
Director Sandy Blue, City of Abbotsford *(via Zoom conference call)*
Director Kelly Chahal, City of Abbotsford *(via Zoom conference call)*
Director Hugh Davidson, Electoral Area F *(via Zoom conference call)*
Director Bill Dickey, Electoral Area D *(via Zoom conference call)*
Director Taryn Dixon, Electoral Area H *(via Zoom conference call)*
Director Orion Engar, Electoral Area E *(via Zoom conference call)*
Director Leo Facio, Village of Harrison Hot Springs *(via Zoom conference call)*
Director Brenda Falk, City of Abbotsford *(via Zoom conference call)*
Director Carol Hamilton, District of Mission *(via Zoom conference call)*
Director Chris Kloot, City of Chilliwack *(via Zoom conference call)*
Director Dave Loewen, City of Abbotsford *(via Zoom conference call)*
Director Bud Mercer, City of Chilliwack *(via Zoom conference call)*
Director Ken Popove, City of Chilliwack *(via Zoom conference call)*
Director Sylvia Pranger, District of Kent *(via Zoom conference call)*
Director Peter Robb, District of Hope *(via Zoom conference call)*
Director Ross Siemens, City of Abbotsford *(via Zoom conference call)*
Director Al Stobbart, Electoral Area G *(via Zoom conference call)*

Regrets: Director Terry Raymond, Electoral Area A

Staff Present: Jennifer Kinneman, Chief Administrative Officer *(via Zoom conference call)*
Kelly Lownsborough, Director of Financial Services/Chief Financial Officer *(via Zoom conference call)*

Jaime Reilly, Manager of Corporate Administration/Corporate Officer *(via Zoom conference call)*
Graham Daneluz, Director of Planning & Development *(via Zoom conference call)*
Stacey Barker, Director of Regional Services *(via Zoom conference call)*
Suzanne Gresham, Director of Corporate Initiatives *(arrived at 7:37 pm via Zoom conference call)*
Alison Stewart, Manager of Strategic Planning *(via Zoom conference call)*
David Urban, Manager of Outdoor Recreation Planning *(via Zoom conference call)*
Lance Lilley, Manager of Environmental Services *(via Zoom conference call)*
Kristen Kohuch, Executive Assistant to CAO and Board *(Recording Secretary)*
Marina Richter, Environmental Services Coordinator *(left at 9:40 pm - via Zoom conference call)*
Tyler Davis, Network Analyst II

Also Present:

Bruce Blackwell, RPBio, RPF, B.A. Blackwell and Associates Ltd. *(with respect to item 4.1) (left at 7:35 pm - via Zoom conference call)*
Dan Buffett, CEO, The Habitat Conversation Trust Foundation and Executive Director Steve Kozuki, Forest Enhancement Society of BC *(with respect to item 4.2) (left at 7:51 pm - via Zoom conference call)*
Peter Larose, Principal, Larose Research & Strategy *(with respect to item 13.1) (via Zoom conference call)*
Two members of the public *(via Zoom conference call)*

1. CALL TO ORDER

Chair Lum called the meeting to order at 7:09 pm.

2. CONDUCT OF ONLINE MEETINGS

Moved By BLUE

Seconded By POPOVE

THAT the Fraser Valley Regional District continue to conduct meetings without the members of the public present in the Boardroom;

AND THAT the Fraser Valley Regional District continue to promote openness, transparency, accessibility and accountability by webcasting and archiving Board meetings online, allowing members of the public to write, email or call in with questions, and promoting public participation at meetings through social media channels.

CARRIED
All/Unweighted

3. APPROVAL OF AGENDA, ADDENDA AND LATE ITEMS

Discussion ensued with respect to the resolution with respect to Item 11.4. It was noted that any proposed amendments to the motion shall be considered at the time that Item 11.4 is considered.

Moved By FACIO
Seconded By KLOOT

THAT the Agenda, Addenda and Late Items for the Fraser Valley Regional District Board Open Meeting of July 28, 2020 be approved;

AND THAT all delegations, reports, correspondence committee and commission minutes, and other information set to the Agenda be received for information.

CARRIED
All/Unweighted

4. DELEGATIONS AND PRESENTATIONS

4.1 Community Wildfire Prevention Plan

Bruce Blackwell, RPBio, RPF, B.A. Blackwell and Associates Ltd. provided a presentation with respect to the Community Wildfire Prevention Plan, highlighting the following points:

- Review of Community Wildfire Protection Plans (CWPPs) developed in Zones A (Electoral Areas A and B), B (Electoral Areas C, F, and G), and C (Electoral Areas D, E, and H); and,
- Recommendations to reduce the risk of wildfires including:
 - Fuel reduction treatments, updates to plans/policies/bylaws, and FireSmart initiatives;
 - Provincial programs such as the Community Resiliency Investment (CRI) Program; and,

- Strategic planning initiatives to build fire awareness in communities;

Discussion ensued regarding evacuation concerns for Hemlock Valley; herbicide desiccation of trees in logging fires; fire prevention methods in the Community Wildfire Prevention Plan; and, creation of incentives for FireSmart initiatives such as putting sprinklers on roofs.

4.1.1 Electoral Area Emergency Services – Community Wildfire Protection Plan

The corporate report dated July 28, 2020 from Reg Dyck, Manager of Electoral Area Emergency Services was provided for information.

4.2 Habitat Conservation Trust Foundation & Forest Enhancement Society of BC

Dan Buffett, CEO, The Habitat Conversation Trust Foundation (HCTF) and Executive Director Steve Kozuki, Forest Enhancement Society of BC (FESB) provided a presentation with respect to Habitat Conservation Trust Foundation & Forest Enhancement Society of BC funded projects within the FVRD, highlighting the following points:

- 31 projects completed in the Fraser Valley totalling \$764, 000
- Feature initiatives including white sturgeon monitoring, Ryder Lake Amphibian Project, 3 Wild schools. 3 HCTF Education Facilitators, 67 Go Grants (since 2015)
- Funding and Priorities; and,
- The HCTF and FESB Partnership an co-funded projects.

Interest was expressed by members in working with The Habitat Conversation Trust Foundation and Forest Enhancement Society of BC on future projects within individual Electoral Areas.

5. BOARD MINUTES & MATTERS ARISING

5.1 Draft Fraser Valley Regional District Board Meeting Minutes - June 23, 2020

Moved By PRANGER

Seconded By ROBB

THAT the Minutes of the Fraser Valley Regional District Board Open Meeting of June 23, 2020 be adopted.

CARRIED
All/Unweighted

6. COMMITTEE AND COMMISSION MINUTES FOR INFORMATION AND MATTERS ARISING

The following minutes were provided for information:

- 6.1 Draft Regional and Corporate Services Committee Meeting Minutes - July 14, 2020**
- 6.2 Draft Electoral Area Services Committee Meeting Minutes - July 14, 2020**
- 6.3 Draft Recreation, Culture & Airpark Commission Meeting Minutes - July 21, 2020**

An error was noted in the draft Regional and Corporate Services Committee Meeting Minutes of July 14, 2020.

7. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN

- 7.1 Amendment to FVRD Board and Committee Procedures Bylaw brought forward by Director Davidson, Electoral Area F**

Moved By DAVIDSON
Seconded By ADAMSON

THAT the Fraser Valley Regional District Board direct staff to draft an amendment to the FVRD Board and Committee Procedures Bylaw No. 1305, 2015, and amendments thereto, allowing a board member moving a motion to speak against their motion, allowing for the same privileges as other board members.

Staff advised that where the FVRD Board and Committee Procedures Bylaw No. 1305, 2015 is silent as to meeting procedures, Robert's Rules of Orders applies. Comments were offered regarding the advice of Parliamentarian Eli Mina around speaking against one's motion. It was further noted that a review of the FVRD Board and Committee Procedures Bylaw No. 1305, 2015 could allow for an opportunity to update the bylaw to address minor housekeeping amendments, resulting in the following amendment:

Moved By LUM
Seconded By ALEXIS

THAT the main motion be amended to include the following paragraph: “**AND THAT** staff identify and draft changes to address any minor housekeeping amendments”.

CARRIED

All/Unweighted

Further discussion ensued on the main motion as amended:

Moved By DAVIDSON

Seconded By ADAMSON

THAT the Fraser Valley Regional District Board direct staff to draft an amendment to the FVRD Board and Committee Procedures Bylaw No. 1305, 2015, and amendments thereto, allowing a board member moving a motion to speak against their motion, allowing for the same privileges as other board members.

AND THAT staff identify and draft changes to address any minor housekeeping amendments.

CARRIED

DIRECTOR LOEWEN OPPOSED

All/Unweighted

8. CORPORATE ADMINISTRATION

8.1 2019 Annual Report

The 2019 Annual Report was provided for information.

The Board thanked Staff for their report and commented that it provided good information for members of the public about what a regional district is.

8.2 Appointment of Head of Freedom of Information and Protection of Privacy and Privacy Officer

Moved By FACIO

Seconded By DIXON

THAT the Fraser Valley Regional District Board appoint and designate Suzanne Gresham as Head of Freedom of Information and Protection of Privacy and Privacy Officer, in accordance with the *Freedom of Information and Protection of Privacy Act*,

AND THAT all other previous statutory designations with respect to the *Freedom of Information and Protection of Privacy Act* be rescinded.

CARRIED
All/Unweighted

9. FINANCE

9.1 2020 Grant-In-Aid Request – Cultus Lake Aquatic Stewardship Strategy, Electoral Area “H”

Moved By DIXON

Seconded By DICKEY

THAT the Fraser Valley Regional District Board authorize a grant-in-aid of \$2,000 to the Cultus Lake Aquatic Stewardship Strategy, funded from the Electoral Area “H” grant-in-aid budget, to help offset the costs of print materials supporting stewardship programs in the Cultus Lake area.

CARRIED
All/Unweighted

10. BYLAWS

10.1 Zoning Bylaw No. 1594, 2020 Proposed rezoning of 52655 Yale Road, Electoral Area D to facilitate a future subdivision between 52655 Yale Road and 10159 Caryks Road with the potential for two (2) new lots to be created.

Moved By DICKEY

Seconded By STOBART

THAT the Fraser Valley Regional District Board consider giving second and third reading to the bylaw cited *Fraser Valley Regional District Electoral Area D Zoning Amendment Bylaw No. 1594, 2020* for the rezoning of 52655 Yale Road, Electoral Area D to facilitate a future subdivision between 52655 Yale Road and 10159 Caryks Road with the potential for two (2) new lots to be created.

CARRIED
EAs/Unweighted

10.2 Zoning Bylaw 1597, 2020 Proposed rezoning of 10789 North Deroche Road, Electoral Area G to facilitate a single burial plot within an existing religious building.

Moved By STOBART

Seconded By DAVIDSON

THAT the Fraser Valley Regional District Board consider giving second and third reading to the bylaw cited *Fraser Valley Regional District Electoral Area G Zoning Amendment Bylaw No. 1597, 2020* for the rezoning of 10789 North Deroche Road, Electoral Area G to permit a single burial plot within an existing religious use building.

CARRIED
EAs/Unweighted

11. PERMITS

11.1 Development Variance Permit 2020-03 to vary the height regulation in the Waterfront Residential (R-3) zone at 29 Lakeshore Drive, Cultus Lake, Electoral Area H

It was noted that two letters of opposition were received. Staff commented that the proposed variance will not impact the overall height of the building or the views of adjacent lots; the Zoning Bylaw allows a height of 22 ft and the proposed variance meets this requirement and further, the rear lot line setback which faces the lake is not being varied.

Moved By DIXON

Seconded By ENGAR

THAT the Fraser Valley Regional District Board issue Development Variance Permit 2020-03 for 29 Lakeshore Drive, Cultus Lake Park, to vary the height regulation from maximum two (2) stories plus basement or crawlspace and roof to maximum three (3) stories plus basement and roof to facilitate the construction of a single-family dwelling, subject to consideration of comments or concerns raised by the public.

CARRIED
EAs/Unweighted

11.2 Development Variance Permit 2020-07 to reduce the front and side lot line setbacks at 58261 Fancher Road, Electoral Area B

Moved By ADAMSON
Seconded By DAVIDSON

THAT the Fraser Valley Regional District Board issue Development Variance Permit 2020-07 to reduce the front lot line setback from 25 feet (7.62 metres) to 9.84 feet (3.0 metres) clear-to-sky and side lot line setback from 25 feet (7.62 metres) to 8 feet (2.43 metres) clear-to-sky to facilitate construction of an agricultural machine shop and storage building at 58261 Fancher Road, Electoral Area B, subject to the consideration of any comments or concerns raised by the public.

CARRIED
EAs/Unweighted

11.3 Development Variance Permit 2020-08 to reduce the interior side lot line setbacks at 43830 & 43836 Loch Road, Electoral Area C

Moved By BALES
Seconded By STOBART

THAT Development Variance Permit 2020-08 be referred back to FVRD staff, and that staff work with the applicants to revise their Development Variance Permit.

CARRIED
EAs/Unweighted

11.4 Commercial Gravel Operation Permit 2020-01 for Statlu Resources, 12 km Chehalis Forest Service Rd, Area C

Moved By KLOOT
Seconded By ADAMSON

TO refer back to staff the motion 6.5 that is on the July 14, 2020 EASC Agenda: "**THAT** the FVRD Board issue Commercial Gravel Operations Permit 2020-01 to Statlu Resources INC for the gravel operation at 12 KM of the Chehalis Forest Service Road in Electoral Area C."

Concerns were raised regarding the wording of the motion on the agenda. Discussion ensued and the following amendment was proposed:

Moved By BALES

Seconded By ADAMSON

THAT the main motion be amended by adding the following words: "Until and after such a time that the permit applicant Statlu Resources Inc., complies with a communication plan that addresses how the permit holder will communicate with the surrounding community, as referred to on page 4 of the bylaw #1181 permit Application.

As indicated in the applicants Noise, and Water Control there are issues of residential concern, but the applicant has not communicated with area communities on this current application. Also of concern is, that terminology for mitigating impacts in the study use the term should, instead of shall. This give the applicant the option to not follow the recommendations."

DEFEATED

ALL DIRECTORS EXCEPT BALES AND ADAMSON OPPOSED

Further discussion ensued regarding this matter, and the importance regarding the applicant preparing a communication plan to address community concerns was noted.

The question was called on the original motion:

Moved By KLOOT

Seconded By ADAMSON

TO refer back to staff the motion 6.5 that is on the July 14, 2020 EASC Agenda: "**THAT** the FVRD Board issue Commercial Gravel Operations Permit 2020-01 to Statlu Resources INC for the gravel operation at 12 KM of the Chehalis Forest Service Road in Electoral Area C."

CARRIED

All/Unweighted

12. CONTRACTS, COVENANTS AND OTHER AGREEMENTS

12.1 Assignment and Assumption Agreements for Sale of Shaw Telecommunications Tower on Sumas Mountain

Moved By FACIO

Seconded By STOBART

THAT the Fraser Valley Regional District Board authorize its signatories to execute an agreement to assign the Shaw Cablesystems License of Occupation for its telecommunication site on Sumas Mountain to TRK Connect Inc. for the remainder of the existing term to April 30, 2023;

AND THAT the Fraser Valley Regional District Board authorize its signatories to execute an agreement providing for TRK Connect Inc. to assume the associated sub-licence, which allows for FVRD equipment to be housed on the same communications tower.

CARRIED
All/Weighted

12.2 NAV Canada Licence of Occupation Renewal at the Regional Airpark

Moved By ADAMSON

Seconded By ROBB

THAT the Recreation, Culture and Airpark Services Commission recommend that the Fraser Valley Regional District Board authorize its signatories to extend a Licence of Occupation with NAV Canada for the presence of three digital aviation weather cameras at its regional airpark effective August 1, 2020, to August 1, 2025.

CARRIED
All/Weighted

13. OTHER MATTERS

13.1 2019 FVRD Outdoor Recreation Economic Impact Analysis

David Urban, Manager of Outdoor Recreation Planning provided highlights from the presentation on at the Electoral Area Services Committee Meeting held July 14, 2020.

Moved By BLUE

Seconded By ALEXIS

THAT the Fraser Valley Regional District Board receive the 2019 Fraser Valley Regional District Outdoor Recreation Economic Impact Analysis;

AND THAT the study be shared widely with all project participants, member municipalities, local outdoor recreation organizations and Indigenous communities in order to ensure there is broad uptake of this first-ever analysis of the value of outdoor recreation in the region.

Discussion ensued regarding methodology of calculating monies spent on recreation activities and concerns were identified in the formatting of statistics for some activities. The Board expressed interest in utilizing this report for future strategic planning. The following motion was introduced:

Moved By DAVIDSON

Seconded By ADAMSON

THAT the Fraser Valley Regional District Board refer the 2019 FVRD Outdoor Recreation Economic Impact Analysis back to staff to review consistency of data in the report.

CARRIED
All/Unweighted

13.2 Climate Action Revenue Incentive Program 2019 Report Results

Moved By LOEWEN

Seconded By MERCER

THAT the Fraser Valley Regional District Board receive the Climate Action Revenue Incentive Public Report for 2019;

AND THAT the results of an upcoming Energy Management Assessment conducted in partnership with BC Hydro be presented to the Board for its consideration to fund special projects from carbon tax refunds to further reduce its greenhouse gas emissions.

CARRIED
All/Unweighted

13.3 Fraser Valley Clean Economy Spotlight at Globe 2020 – Summary Report

Moved By ALEXIS

Seconded By ROSS

THAT the Fraser Valley Regional District Board receive the attached summary "Clean Economy in the Fraser Valley - Spotlight on the Fraser Valley Session at GLOBE 2020" as prepared by Delphi Group;

AND THAT the Fraser Valley Regional District Board forward the Summary to municipal and Indigenous partners and regional clean economy stakeholders.

CARRIED
All/Unweighted

13.4 Agricultural Land Commission Application – Non-Farm Use on PID 023-261-510, Bridal Falls Road, Electoral Area "D"

Moved By DICKEY

Seconded By STOBART

THAT the application for non-farm use within the Agricultural Land Reserve on Crown Land property on Bridal Falls Road, Electoral Area "D", be forwarded to the Agricultural Land Commission for consideration;

AND THAT the Agricultural Land Commission consider the staff report dated July 14, 2020 under file number 3015-20 2020-02.

CARRIED
EAs/Unweighted

13.5 FVRD Electoral Area Biosolids Management Plan

Moved By DIXON

Seconded By DAVIDSON

THAT the Fraser Valley Regional District Board endorse the recommendations of the FVRD Biosolids Management Options Assessment.

Concerns were raised regarding the capacity for heavy industrial sludge at the James Treatment Plant, resulting in the following resolution:

Moved By SIEMENS

Seconded By ALEXIS

THAT the Fraser Valley Regional District Board refer the FVRD Electoral Area Biosolids Management Plan back to staff for further discussion.

CARRIED
All/Unweighted

13.6 Rogers Communications Tower Proposal for 52018 Yale Road, Electoral Area D

Moved By KLOOT

Seconded By HAMILTON

THAT the Fraser Valley Regional District Board respond to the referral from Rogers Communications for the installation of a new communications tower at 52018 Yale Road, Electoral Area D with the following comments:

1. The scope of the proposed public consultation is satisfactory to the Fraser Valley Regional District provided consultation with Cheam First Nation is undertaken.
2. Rogers Communications will provide documentation confirming that consultation is complete.
3. The proposed communications tower would be in the Agricultural Land Reserve and it requires the approval of the Agricultural Land Commission.
4. Rogers Communications will obtain a building permit prior to construction.
5. Rogers Communications will provide information to the FVRD on the potential for other telecommunication companies to co-locate on the proposed tower.

Discussion ensued regarding the benefits of providing support to the ALC for the proposed communications tower, resulting in the following amendment:

Moved By KLOOT

Seconded By PRANGER

THAT the main motion be amended by inserting the words "and the FVRD sends it to the ALC with support" to the end of paragraph 3.

CARRIED
All/Unweighted

Comments were offered noting the community is supportive of additional cellular connectivity in Electoral Area D. The question was called on the main motion as amended:

Moved By KLOOT
Seconded By HAMILTON

THAT the Fraser Valley Regional District Board respond to the referral from Rogers Communications for the installation of a new communications tower at 52018 Yale Road, Electoral Area D with the following comments:

1. The scope of the proposed public consultation is satisfactory to the Fraser Valley Regional District provided consultation with Cheam First Nation is undertaken.
 2. Rogers Communications will provide documentation confirming that consultation is complete.
 3. The proposed communications tower would be in the Agricultural Land Reserve and it requires the approval of the Agricultural Land Commission, and the FVRD sends it to the ALC with support.
 4. Rogers Communications will obtain a building permit prior to construction.
 5. Rogers Communications will provide information to the FVRD on the potential for other telecommunication companies to co-locate on the proposed tower.

CARRIED
All/Unweighted

13.7 Nicomen Island Shoreline Protection Project Tender Results

Comments were offered on the benefit of this project for agricultural lands.

Moved By STOBART
Seconded By DAVIDSON

THAT the Fraser Valley Regional District Board authorize its signatories to execute a contract with Jakes Construction Ltd. to construct the Nicomen Island Shoreline Protection Works for the sum of \$1,691,210 plus taxes.

CARRIED
All/Weighted

13.8 Recognition of SD 78 Trustee John Koopman

Moved By ADAMSON

Seconded By HAMILTON

THAT the Fraser Valley Regional District Board authorize a donation of \$250 in the memory of Mr. John Koopman to the Fraser Cascade School District 78 Trades Program, and a \$50 expenditure to add Mr. Koopman's name to the memorial wall at the Hope & Area Recreation Centre;

AND THAT the Fraser Valley Regional District Board direct staff to create a policy for administering future memorial wall considerations at the Hope and Area Recreation Centre.

CARRIED
All/Weighted

14. ADDENDA ITEMS/LATE ITEMS

None.

15. REPORTS FROM COMMITTEE MEETINGS - FOR INFORMATION

15.1 Bike Skills Park Wood Feature Upgrades at Island 22 Regional Park

The corporate report dated July 14, 2020 from Christian Lang, Parks Technician II was provided for information.

15.2 Recreation, Culture and Airpark Services Facilities Update

The corporate report dated July 21, 2020 from Christina Vugteveen, Manager of Parks and Recreation was provided for information.

16. REPORTS BY STAFF

None.

17. REPORTS BY BOARD DIRECTORS

Director Dixon reported parking and safety issues along Columbia Valley Highway and that Cultus Lake Park is very busy at this time.

Director Adamson thanked staff for their support.

Director Engar reported on Chilliwack River Valley being busy and remaining park closures in the region seems to be increasing traffic through Electoral Area E.

Director Bales reported on safety concerns with usage along Chehalis Forest Service Road.

Director Alexis reported on safety concerns with usage along forest services roads in her area as people have been seen camping along the roadways.

Director Stobbart reported that the Fraser River has receded below 4m gauge, blueberry crops have improved for farmers, and reported on the passing of Norm Harris, a founder of the North Fraser Fire Department and former Deputy Chief.

Director Popove thanked Director Dixon for working together with the City of Chilliwack on traffic issues at Cultus Lake.

18. PUBLIC QUESTION PERIOD FOR ITEMS RELEVANT TO AGENDA

There were no written questions submitted with respect to items on the agenda. Staff announced the time for members of the public to provide questions to the Board via Zoom and by telephone.

Pedro Pederson, Board member of West Soaring Club announced that he joined the meeting to observe its proceedings and had no questions regarding the agenda.

The Board recessed for a period of three minutes to allow the public to call in with questions.

No other public questions were provided.

19. RESOLUTION TO CLOSE MEETING

Moved By FACIO

Seconded By ROSS

THAT the Meeting be closed to the public, except for Senior Staff and the Executive Assistant, for the purpose of receiving and adopting Closed Meeting Minutes convened in accordance to Section 90 of the *Community Charter* and to consider matters pursuant to:

- Section 90(1)(g) of the *Community Charter* - litigation or potential litigation affecting the municipality; and,
- Section 90(1)(e) of the *Community Charter* - the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality.

CARRIED
All/Unweighted

The Board recessed at 9:13 pm.

20. RECONVENE OPEN MEETING

The meeting reconvened at 10:30 pm.

21. RISE AND REPORT OUT OF CLOSED MEETING

None.

22. ADJOURNMENT

Moved By FACIO

Seconded By POPOVE

THAT the Fraser Valley Regional District Board Open Meeting of July 28, 2020 be adjourned.

CARRIED
All/Unweighted

The Fraser Valley Regional District Board Open Meeting of July 28, 2020 adjourned at 10:30 pm.

MINUTES CERTIFIED CORRECT:

.....
Director Jason Lum, Chair

.....
Corporate Officer/Deputy

FRASER VALLEY REGIONAL DISTRICT
ELECTORAL AREA SERVICES COMMITTEE
OPEN MEETING MINUTES

Tuesday, July 14, 2020

1:30 pm

FVRD Boardroom, 45950 Cheam Avenue, Chilliwack, BC

- Members Present:
- Director Bill Dickey, Electoral Area D, Chair *(via Zoom conference call)*
 - Director Terry Raymond, Electoral Area A *(via Zoom conference call)*
 - Director Dennis Adamson, Electoral Area B *(via Zoom conference call)*
 - Director Wendy Bales, Electoral Area C *(via Zoom conference call)*
 - Director Orion Engar, Electoral Area E *(via Zoom conference call)*
 - Director Hugh Davidson, Electoral Area F *(via Zoom conference call)*
 - Director Al Stobbart, Electoral Area G *(via Zoom conference call)*
 - Director Taryn Dixon, Electoral Area H *(via Zoom conference call)*
- Staff Present:
- Jennifer Kinneman, Chief Administrative Officer *(via Zoom conference call)*
 - Kelly Lownsbrough, Director of Financial Services/Chief Financial Officer *(via Zoom conference call)*
 - Jaime Reilly, Manager of Corporate Administration/Corporate Officer *(via Zoom conference call)*
 - Tareq Islam, Director of Engineering & Community Services *(via Zoom conference call)*
 - Graham Daneluz, Director of Planning & Development *(via Zoom conference call)*
 - Suzanne Gresham, Director of Corporate Initiatives *(via Zoom conference call)*
 - Reg Dyck, Manager of Electoral Area Emergency Services *(via Zoom conference call)*
 - Sterling Chan, Manager of Engineering and Infrastructure *(via Zoom conference call)*
 - Dave Roblin, Manager of Operations *(via Zoom conference call)*
 - David Bennett, Planner II *(via Zoom conference call)*
 - Kristen Kohuch, Executive Assistant to CAO and Board *(recording secretary)*
 - Tyler Davis, Network Analyst II
 - Gavin Luymes, Planning Technician

Tracey Heron, Planning Assistant

Also Present: Lesa Lacey, Lacey Developments Ltd. (re item 4.1) *(via Zoom conference call)*
Laura Jeffries, Applied Research Scientist, Sylvis Environmental Services and,
John Lavery, Senior Environmental Scientist, Sylvis Environmental Services (re
item 4.2) *(via Zoom conference call)*
1 member of the public

1. CALL TO ORDER

Chair Dickey called the meeting to order at 1:31 pm.

Jennifer Kinneman, Chief Administrative Officer announced that Provincial Government passed Ministerial Order M192 on June 17, 2020. This new Ministerial Order replaces previous Ministerial Order M138 which allowed local governments to hold their meetings electronically online, and without the public present. Focusing on moving local governments toward normal operations, this Order still provides local governments the flexibility to hold their meetings electronically online; however, this updated Order is moving towards increased public presence at local government meetings.

Discussion ensued, resulting in the following motion:

Moved By ENGAR

Seconded By RAYMOND

THAT until such time the FVRD has a safety plan in place and the FVRD offices reopen to the public, the Fraser Valley Regional District continue to conduct meetings without the members of the public present in the Boardroom;

AND THAT the Fraser Valley Regional District continue to promote openness, transparency, accessibility and accountability by webcasting and archiving Committee meetings online, allowing members of the public to write, email or call in with questions, and promoting public participation at meetings through social media channels.

CARRIED

2. CHAIR'S REPORT ON REGIONAL AND CORPORATE SERVICES COMMITTEE MEETING

Chair Dickey provided a brief summary of the Regional and Corporate Services Committee Meeting of July 14, 2020.

3. APPROVAL OF AGENDA, ADDENDA AND LATE ITEMS

Moved By STOBART
Seconded By RAYMOND

THAT the Agenda, Addenda and Late Items for the Electoral Area Services Committee Open Meeting of July 14, 2020 be approved;

AND THAT all delegations, reports, correspondence and other information set to the Agenda be received for information.

CARRIED

4. DELEGATIONS AND PRESENTATIONS

4.1 Presentation by Lesa Lacey, Lacey Developments Ltd. regarding DVP 2020-o8

Lesia Lacey, Lacey Developments Ltd. provided a presentation on Development Variance Permit 2020-o8 to reduce the interior side lot line setbacks at 43830 & 43836 Lock Road, Electoral Area C. Plans for a proposed skywalk connecting the single family residences of the subject properties were outlined. Seven letters of support were received.

4.1.1 Development Variance Permit 2020-o8 to reduce the interior side lot line setbacks at 43830 & 43836 Loch Road, Electoral Area C

Moved By ENGAR
Seconded By RAYMOND

THAT the Fraser Valley Regional District Board refuse Development Variance Permit application 2020-o8 to reduce the interior side lot line setbacks from 1.5 metres to 0 metres to facilitate the construction of a second storey breezeway to connect two dwelling units on separate parcels at 43830 & 43836 Loch Road, Area C.

Staff commented that the DVP Application does not meet BC Building Code requirements because when two separate dwelling units are joined together, this requires a separation between dwelling units and a party wall between the dwellings, having a specific fire resistance rating of one hour which is not consistent with the plans proposed. The BC Building Code does not provide humanitarian exemptions however, some alternative options include building a covered walk at grade or adding stair lifts to existing stairways. Discussion ensued resulting in the following motion:

Moved By BALES
Seconded By ADAMSON

THAT Development Variance Permit 2020-08 be referred back to FVRD staff, and that staff work with the applicants to revise their Development Variance Permit.

CARRIED

4.2 Presentation by Laura Jeffries, Applied Research Scientist from Sylvis Environmental Services regarding FVRD Electoral Area Biosolids Management Plan

Laura Jeffries, Applied Research Scientist, Sylvis Environmental Services provided a presentation on the FVRD Electoral Area Biosolids Management Plan, highlighting the following points:

- Six facilities currently managed by the FVRD which manage either Liquid Sludge, Liquid Class B Biosolids, or Dewatered Class B Biosolids;
- Options assessment criteria: environmental, social, technical, and economic;
- Comparison of biosolid management categories; and,
- A recommendation for Cultus Lake North to be amalgamated with the Chilliwack Dewatered Biosolids Management Program.

4.2.1 FVRD Electoral Area Biosolids Management Plan

Discussion ensued about onsite programming options, beneficial use programs to treat residual waste, biosolid land application requirements, and biosolid testing requirements.

Moved By ENGAR

Seconded By DAVIDSON

THAT the Fraser Valley Regional District Board endorse the recommendations of the FVRD Biosolids Management Options Assessment.

CARRIED

5. MINUTES/MATTERS ARISING

5.1 Draft Electoral Area Services Committee Meeting Minutes - June 9, 2020

Moved By RAYMOND

Seconded By STOBART

THAT the Minutes of the Electoral Area Services Committee Open Meeting held June 9, 2020 be adopted.

CARRIED

6. PLANNING, BUILDING INSPECTION AND BYLAW ENFORCEMENT

6.1 Agricultural Land Commission Application – Non-Farm Use on PID 023-261-510, Bridal Falls Road, Electoral Area “D”

Moved By RAYMOND

Seconded By ENGAR

THAT the application for non-farm use within the Agricultural Land Reserve on Crown Land property on Bridal Falls Road, Electoral Area “D”, be forwarded to the Agricultural Land Commission for consideration;

AND THAT the Agricultural Land Commission consider the staff report dated July 14, 2020 under file number 3015-20 2020-02.

CARRIED

6.2 Development Variance Permit 2020-03 to vary the height regulation in the Waterfront Residential (R-3) zone at 29 Lakeshore Drive, Cultus Lake, Electoral Area H

The Committee commented that the Cultus Lake Park Board has reviewed and supported this item.

Moved By DIXON

Seconded By ENGAR

THAT the Fraser Valley Regional District Board issue Development Variance Permit 2020-03 for 29 Lakeshore Drive, Cultus Lake Park, to vary the height regulation from maximum two (2) stories plus basement or crawlspace and roof to maximum three (3) stories plus basement and roof to facilitate the construction of a single-family dwelling, subject to consideration of comments or concerns raised by the public.

CARRIED

6.3 Development Variance Permit 2020-07 to reduce the front and side lot line setbacks at 58261 Fancher Road, Electoral Area B

The Committee commented that some neighbours have given their support for this item.

Moved By ADAMSON
Seconded By RAYMOND

THAT the Fraser Valley Regional District Board issue Development Variance Permit 2020-07 to reduce the front lot line setback from 25 feet (7.62 metres) to 9.84 feet (3.0 metres) clear-to-sky and side lot line setback from 25 feet (7.62 metres) to 8 feet (2.43 metres) clear-to-sky to facilitate construction of an agricultural machine shop and storage building at 58261 Fancher Road, Electoral Area B, subject to the consideration of any comments or concerns raised by the public.

CARRIED

6.4 Rogers Communications Tower Proposal for 52018 Yale Road, Electoral Area D

Staff commented on options for members of the public to provide comments and that none have been received to date.

The Committee discussed public concerns regarding studies citing cancer risks from 5G networks. It was noted Industry Canada is the authority which regulates cell tower placements, making the Regional District's role limited to the consultation plan.

Moved By STOBART
Seconded By DIXON

THAT the Fraser Valley Regional District Board respond to the referral from Rogers Communications for the installation of a new communications tower at 52018 Yale Road, Electoral Area D with the following comments:

1. The scope of the proposed public consultation is satisfactory to the Fraser Valley Regional District provided consultation with Cheam First Nation is undertaken.
2. Rogers Communications will provide documentation confirming that consultation is complete.
3. The proposed communications tower would be in the Agricultural Land Reserve and it requires the approval of the Agricultural Land Commission.
4. Rogers Communications will obtain a building permit prior to construction.
5. Rogers Communications will provide information to the FVRD on the potential for other telecommunication companies to co-locate on the proposed tower.

CARRIED

6.5 Commercial Gravel Operation Permit 2020-01 for Statlu Resources, 12 km Chehalis Forest Service Rd, Area C

Moved By RAYMOND

Seconded By DIXON

THAT the FVRD Board issue Commercial Gravel Operations Permit 2020-01 to Statlu Resources INC for the gravel operation at 12 KM of the Chehalis Forest Service Road in Electoral Area C.

Comments were offered that the permit applicant Statlu Resources Inc., comply with a communication plan that addresses how the permit holder will communicate with the surrounding community, as referred to on page 4 of the FVRD bylaw 1181, 2014 permit application. Comments were further offered that as indicated in the applicant's noise, and water control plan there are issues of residential concern, but the applicant has not communicated with area communities on this current application. Also of concern is, that terminology for mitigating impacts in the study use the term should, instead of shall, potentially giving the applicant the option to not follow the recommendations.

Discussion ensued and the following motion was introduced:

Moved By BALES

Seconded By ADAMSON

TO refer back to staff the motion 6.5 that is on the July 14, 2020 EASC Agenda: "**THAT** the FVRD Board issue Commercial Gravel Operations Permit 2020-01 to Statlu Resources INC for the gravel operation at 12 KM of the Chehalis Forest Service Road in Electoral Area C."

CARRIED

DIRECTORS STOBART AND DIXON OPPOSED

7. ADDENDA ITEMS/LATE ITEMS

None.

8. REPORTS BY STAFF

None.

9. REPORTS BY ELECTORAL AREA DIRECTORS

Director Engar commented on the impacts of recent heavy rains to gardening.

Director Dixon reported on Goose Management in Cultus Lake and a trail that was added alongside the Lake.

Director Adamson reported the opening of the Yale Museum.

Director Stobbart thanked staff for their work during times of EOC activation this season, and reported on the passing of Norm Harris, a founder of the North Fraser Fire Department and former Deputy Chief.

Director Raymond reported the announcement to his community of the federal grant authorization for the CN Railway Station project in Boston Bar.

Director Bales provided an update on the Deroche Community Garden project.

10. PUBLIC QUESTION PERIOD FOR ITEMS RELEVANT TO AGENDA

There were no written questions submitted with respect to items on the agenda. Staff announced the time for members of the public to provide questions to the Board via Zoom and by telephone.

The Board recessed for a period of five minutes to allow the public to call in with questions.

Pedro Pederson, Board member of West Soaring Club provided the Committee an opportunity to ask questions with respect to Item 6.1. The Committee commented that the Item will be sent to the Agricultural Land Reserve and then the Agricultural Land Commission for a decision.

No other public questions were provided.

11. RESOLUTION TO CLOSE MEETING

Moved By DIXON

Seconded By RAYMOND

THAT the meeting be closed to the public, except for Senior Staff and the Executive Assistant, for the purpose of receiving and adopting Closed Meeting minutes convened in accordance with Section 90 of the *Community Charter* and to consider matters pursuant to:

- Section 90(1)(g) of the *Community Charter* - litigation or potential litigation affecting the municipality; and,
- Section 90(1)(i) of the *Community Charter* - the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

CARRIED

The meeting was recessed at 2:45 pm.

12. RECONVENE OPEN MEETING

The meeting was reconvened at 3:01 pm.

13. RISE AND REPORT OUT OF CLOSED MEETING

None.

14. ADJOURNMENT

Moved By ADAMSON

Seconded By RAYMOND

THAT the Electoral Area Services Committee Open Meeting of July 14, 2020 be adjourned.

CARRIED

The Electoral Area Services Committee Open Meeting of July 14, 2020 adjourned at 3:41 pm.

MINUTES CERTIFIED CORRECT:

.....

Director Bill Dickey, Chair

To: Fraser Valley Regional District Board
From: Jennifer Kinneman, Chief Administrative Officer

Date: 2020-09-17
File No: 0560-20

Subject: Appointment of Head of Freedom of Information and Protection of Privacy and Privacy Officer

RECOMMENDATION

THAT the Fraser Valley Regional District Board appoint and designate Jaime Reilly as Head of Freedom of Information and Protection of Privacy and Privacy Officer, in accordance with the *Freedom of Information and Protection of Privacy Act*,

AND THAT all other previous statutory designations with respect to the *Freedom of Information and Protection of Privacy Act* be rescinded.

STRATEGIC AREA(S) OF FOCUS

Provide Responsive & Effective Public Services

BACKGROUND

Section 77 of the *Freedom of Information and Protection of Privacy Act* (the "Act") requires that a Board designate a person to act as the "head" for the purposes of the Act:

- 77 A local public body, by bylaw or other legal instrument by which the local public body acts,
- (a) must designate a person or group of persons as the head of the local public body for the purposes of this Act, and
 - (b) [Repealed 2011-17-30.]
 - (c) may set any fees the local public body requires to be paid under section 75.

Section 66 of the Act notes that the Board may delegate the powers, duties and functions:

66 (1)The head of a public body may delegate to any person any duty, power or function of the head of the public body under this Act, except the power to delegate under this section.

(2)A delegation under subsection (1) must be in writing and may contain any conditions or restrictions the head of the public body considers appropriate.

At the November 22, 2016 and July 28, 2020 meetings, the Board appointed and designated a number of individuals in the capacity of Head of Freedom of Information and Protection of Privacy in accordance with the Act.

DISCUSSION

Since these previous Board meetings, staffing changes have taken place within the organization, requiring a Board resolution to update the appointments and designations to reflect current staffing. In order to remove previous appointments and designations, a resolution is also required from the Board to rescind the previous appointments and designations under the Act.

COST

There are no costs associated with this report.

CONCLUSION

Staffing changes have taken place which require the Board to update the appointments and designations of staff acting in the capacity of Head of Freedom of Information and Protection of Privacy and Privacy Officer.

COMMENTS BY:

Kelly Lownsborough, Chief Financial Officer/ Director of Financial Services:

Reviewed and supported.

To: Fraser Valley Regional District Board
From: Jaime Reilly, Manager of Corporate Administration

Date: 2020-09-17
File No: 1970-23

Subject: Establishment of a Parcel Tax Roll Review Panel

RECOMMENDATION

THAT the Fraser Valley Regional District Board establish a Parcel Tax Roll Review Panel pursuant to Section 204 of the *Community Charter* for the purpose of reviewing, correcting and authenticating the following parcel tax bylaws:

- Fraser Valley Regional District Cultus Lake Integrated Water Supply and Distribution System Service Area Parcel Tax Bylaw No. 1417, 2017;
- Fraser Valley Regional District Cultus Lake Integrated Water Supply and Distribution Capital Construction Service Area Parcel Tax Bylaw No. 1447, 2017;
- Fraser Valley Regional District South Cultus Lake Sewage Treatment Service Area Parcel Tax Establishment Bylaw No. 1497, 2018;
- Fraser Valley Regional District Lake Errock Water System Capital Construction Service Area Parcel Tax Establishment Bylaw No. 1496, 2018;
- Fraser Valley Regional District Popkum Sewer Service Area Parcel Tax Establishment Bylaw No. 1498, 2018; and
- Fraser Valley Regional District Popkum Sewer Parcel Tax Establishment Bylaw No. 1574, 2020.

AND THAT Director Wendy Bales, Director Bill Dickey and Director Taryn Dixon be appointed as members of the Parcel Tax Roll Review Panel;

AND FINALLY THAT the sitting of the Parcel Tax Roll Review Panel take place on Thursday, November 12 at 10am in the Fraser Valley Regional District Boardroom.

STRATEGIC AREA(S) OF FOCUS

Provide Responsive & Effective Public Services

BACKGROUND

Parcel taxes are one taxation method for funding the provision of a service to the community. The parcel taxes in the FVRD are set to impose a single equal amount on each property included in the service area (not based on property area or frontage). Parcel taxes are imposed by bylaw, along with the establishment of a parcel tax roll bylaw.

Section 388(2) of the *Local Government Act* requires that where a Regional District imposes a parcel tax in an electoral area, Sections 200 to 209 of the *Community Charter* (the "Charter") applies. Section 204 of the Charter requires that before a parcel tax bylaw is imposed for the first time, a parcel tax roll review panel must consider any complaints with respect to the parcel tax roll and must authenticate the roll. The Regional District must appoint at least three members to the parcel tax roll review panel, establish the time and place for sitting of that panel, and have advance notice of the time and place advertised in accordance with public notice requirements under the Charter.

DISCUSSION

The purpose of the parcel tax roll review panel is to consider any complaints, make any corrections and to authenticate the tax roll for these six bylaws. The complaints which the panel may consider are limited to the following four criteria:

- (a) There is an error or omission respecting a name or address on the parcel tax roll;
- (b) There is an error or omission respecting the inclusion of a parcel;
- (c) There is an error or omission respecting the taxable area or the taxable frontage of a parcel;
- (d) An exemption has been improperly allowed or disallowed.

In the case of these six bylaws, the FVRD has been given the ability to retroactively hold and validate a parcel tax roll review panel for the years 2017, 2018 and 2020 through legislation recently passed in the *Municipalities Enabling and Validating Act*.

As the bylaws are services within Electoral Areas C, D and H staff recommended that Director Wendy Bales (Electoral Area C), Director Bill Dickey (Electoral Area D) and Director Taryn Dixon (Electoral Area H) be appointed as the members of the panel.

The notice of sitting will be posted at the FVRD office, on the FVRD's corporate website, published in two consecutive issues of the Chilliwack Progress, Agassiz-Harrison Observer and Mission City Record newspapers, and a copy shall also be mailed to the owner of every parcel of land for the specified taxation year in the service areas as required under the Charter.

COST

Costs will be limited to staff time, newspaper advertising and postage for mailing notices to the property owners.

CONCLUSION

The *Local Government Act*, the *Community Charter* and the *Municipalities Enabling and Validating Act* require that the Regional District hold a parcel tax roll review panel in order to consider any complaints, make any corrections, and to authenticate the tax rolls for all six of the parcel tax bylaws.

Staff are recommending that Director Bales, Director Dickey and Director Dixon act as the three members for the parcel tax roll review panel. Notice and advertising of the sitting of the parcel tax roll review panel will be in accordance with requirements of the *Community Charter*, and will include advertising in the FVRD's offices and corporate website, as well as two consecutive editions of the Chilliwack Progress, Agassiz-Harrison Observer and Mission City Record newspapers. Individual property owners will also receive a copy of the notice through Canada Post.

COMMENTS BY:

Kelly Lownsbrough, Chief Financial Officer/ Director of Financial Services: Reviewed and supported

Jennifer Kinneman, Chief Administrative Officer: Reviewed and supported.

To: Electoral Area Services Committee
From: David Bennett, Planner II

Date: 2020-09-09
File No: 3060-20-2020-07 3090-
2020-12

Subject: Form and Character Development Permit 2020-07 for a proposed commercial development at 52964 Yale Road Electoral Area D and Development Variance Permit 2020-12 for a reduction of one (1) required parking space.

RECOMMENDATION

THAT the Fraser Valley Regional District Electoral Area Services Committee **issue** Form and Character Development Permit 2020-07 relating to the Form and Character of a Commercial Development at 52964 Yale Road Electoral Area D.

THAT the Fraser Valley Regional District Board **issue** Development Variance Permit 2020-12 to reduce the required number of parking space from 48 to 47 stalls for a Commercial Development at 52964 Yale Road Electoral Area D, subject to consideration of any comments or concerns raised by the public

STRATEGIC AREA(S) OF FOCUS

Foster a Strong & Diverse Economy
Support Healthy & Sustainable Community
Provide Responsive & Effective Public Services

BACKGROUND

52964 Yale Road is zoned Gateway Commercial (C-5). These applications are to facilitate a new commercial development. A development permit for the Form and Character of the development is required prior to issuance of a building permit.

Project details:

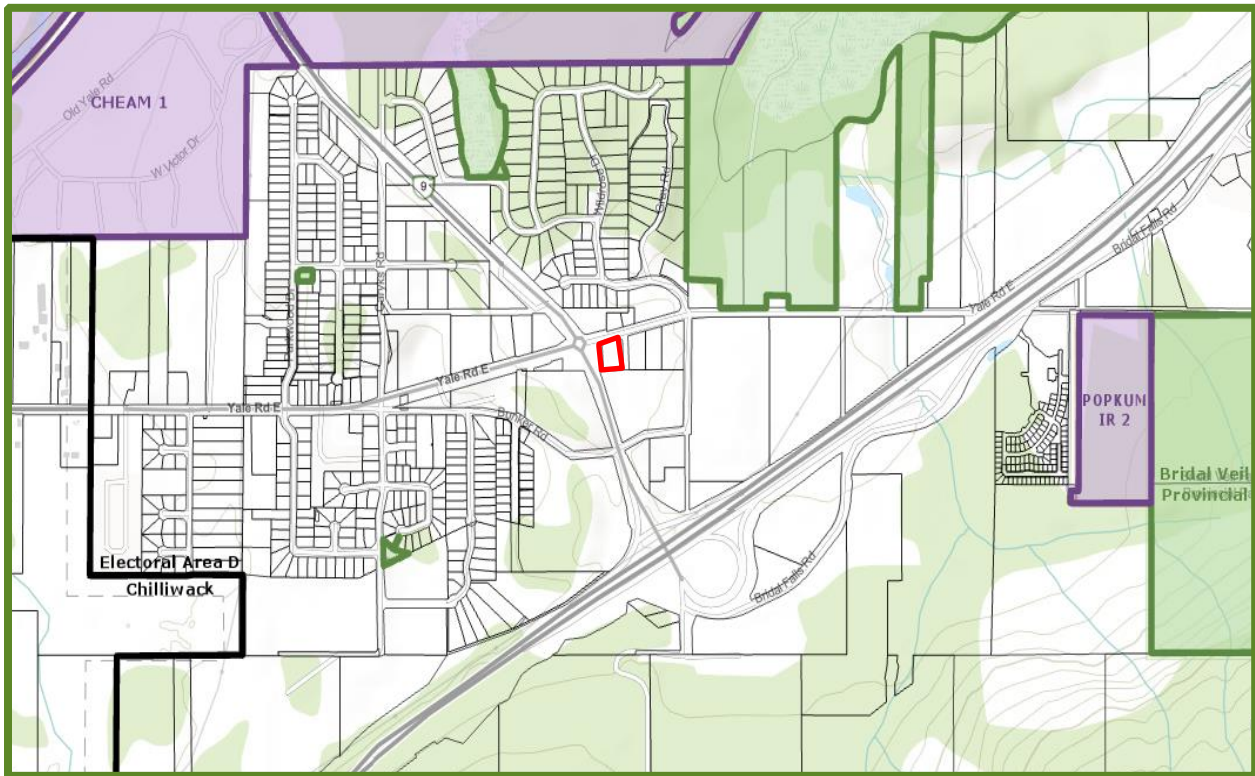
Two (2) new single storey Commercial Buildings
Proposed Commercial Uses:
 Two (2) Drive-thru restaurants
 Four (4) local commercial retail units

A development variance permit is also requested to reduce the required parking from 48 stalls to 47.

PROPERTY DETAILS			
Electoral Area	D		
Address	52964 Yale Rd		
PID	029-004-667		
Folio	733.06468.000		
Lot Size	0.956 acres		
Owner	Jay Lee	Agent	Steven Cross – X Architecture
Current Zoning	Gateway Commercial (C-5)	Proposed Zoning	No Change
Current OCP	Highway Tourist Recreational Commercial (HTRC)	Proposed OCP	No Change
Current Use	Bare Land	Proposed Use	Commercial
Development Permit Areas	5-C –West Popkum Commercial DPA, 6-C – Riparian DPA		
Agricultural Land Reserve	No		

ADJACENT ZONING & LAND USES		
North	^	Local Commercial (C-1) & Country Residential (CR); Retail & Single-family Residence
East	>	Country Residential (CR); Single-family Residence
West	<	Gateway Commercial (C-5); Highway easement, Highway 9
South	v	Gateway Commercial (C-5); Commercial

NEIGHBOURHOOD MAP



PROPERTY MAP



DISCUSSION

The proposed commercial uses comply with the C-5 zone. The proposed commercial development does not require a Zoning amendment or an Official Community Plan amendment.

The property is located in Development Permit Area (DPA) 5-D. The DPA is designated for the establishment of objectives and the provision of guidelines for the form and character of commercial development and for the protection of the natural environment, its ecosystems and biological diversity.

The DPA has established 8 objectives and 33 guidelines to direct development in the area. The DPA is very comprehensive and the applicants have worked diligently to meet the objectives and guidelines. The designs reflect the values of the permit area and avoid the use of typical franchise building designs. The applicants have submitted a complete application and the design concepts achieve the guidelines for the Development Permit Area.

The guidelines reflect a vision of the West Popkum commercial mode which includes high quality buildings accented with attractive landscaping, buffered from surrounding residential uses, and connected to the community by pathways and other linkages; commercial buildings that are finished with natural colours and materials such as wood and stone, and make minimal use of vinyl, plastic and pastel colours; and architecture takes cues from the surrounding rural landscape and reflects the agricultural and/or resource-based traditions and economy of Popkum.

The importance of the West Popkum commercial node to the community makes it particularly sensitive to incompatible development. Residents have expressed concern that commercial uses should not detract from the surrounding residential uses or the natural environment. The aesthetic quality and integrity of the environment is vital to the appeal and success of the community.

The Yale Road/Highway No. 9 intersection serves as both the focus of surrounding residential neighbourhoods and as the entryway to the community for most visitors. It is a high visibility commercial node which contributes significantly to the overall character and appearance of the community. It is critical, then, that development at this intersection provides a distinct sense of arrival and reflects the environmental and cultural context of Popkum.

DPA guidelines are discretionary in nature and in some cases, may require a balancing of objectives by way of trading off compliance with one guideline against compliance with another. These guidelines are discussed in detail in the attached letter from X Architecture dated July 20, 2020.

Development Permit Conditions

Conditions will be included in the Development Permit to ensure that the permit area guidelines will be met. These conditions must be met prior to a final inspection of any building permits. The draft development permit is attached. A security will be taken to ensure that the landscaping requirements are met.

Referrals

Ministry of Transportation and Infrastructure

The Ministry was forwarded a copy of the Development Permit for review and comment. The Ministry has notified the FVRD that the project's access and layout is acceptable, and there shall be no direct vehicle access from Yale Road.

Development Variance Permit Notification

A notice of the development variance will be forwarded to neighbours within 30m of the development site. It is recommended that the Development Variance Permit be issued subject to consideration of any concerns raised as a result of notification.

COST

Development Permit Fee \$500.00 Paid

Development Variance Permit Fee \$1,300.00 Paid

CONCLUSION

The Form and Character of the proposed commercial development at 52964 Yale Road is consistent with the Development Permit Area form and character guidelines. The Development Permit may be issued.

The Development Variance Permit is minor (reduction of one required parking space) issuance is recommended subject to consideration of any comments received from neighbours.

COMMENTS BY:

Graham Daneluz, Director of Planning & Development

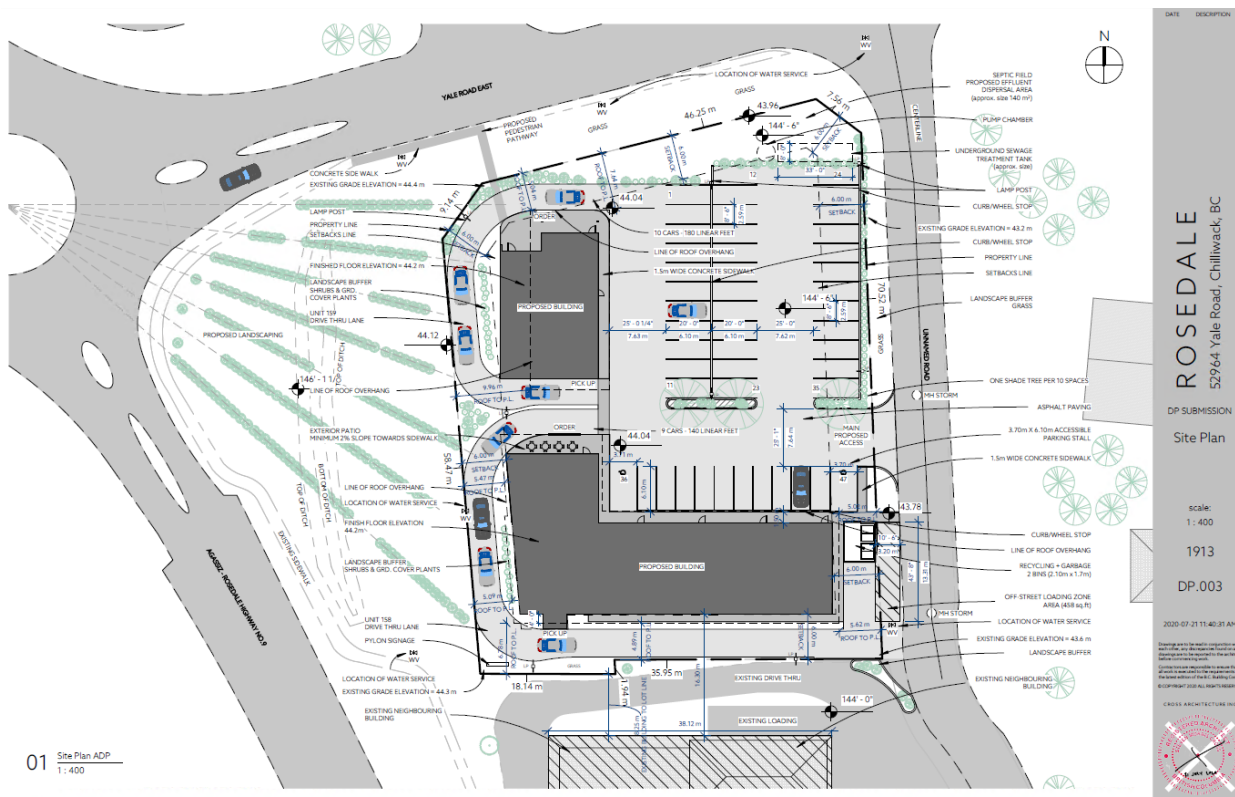
Reviewed and supported.

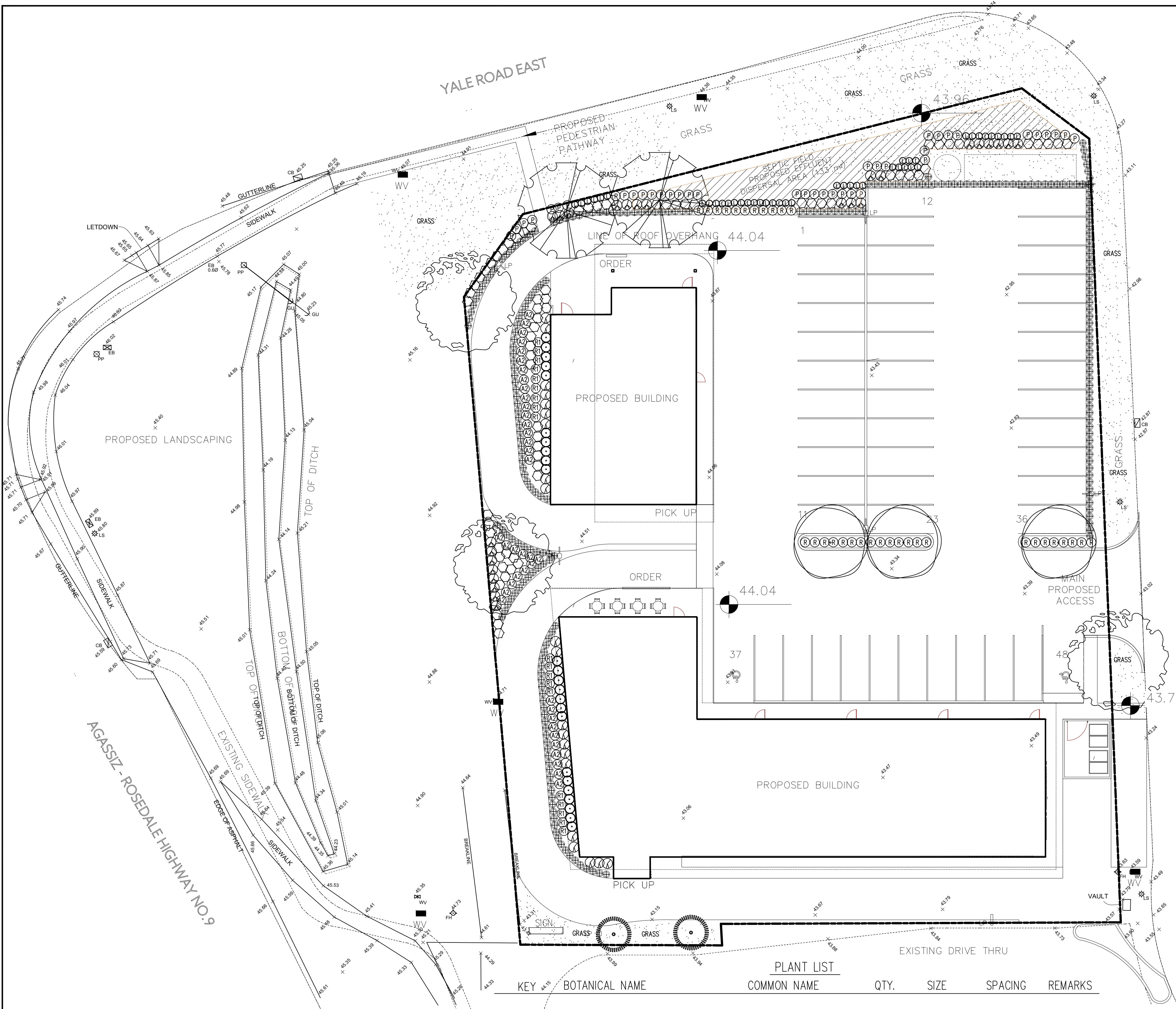
Kelly Lownsbrough, Chief Financial Officer/ Director of Financial Services

Reviewed and supported.

Jennifer Kinneman, Chief Administrative Officer

Reviewed and supported.





PLANT LIST						
KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	REMARKS
●	PRUNUS YEDOENSIS 'AKEBONO'	DAYBREAK CHERRY	2	6 CM. CAL.	AS SHOWN	B. & B.
●	ACER RUBRUM BOWHALL	BOWHALL MAPLE	3	6 CM. CAL.	AS SHOWN	B. & B.
●	PYRUS CALLERYANA CHANTICLEER	CHANTICLEER PEAR	3	6 CM. CAL.	AS SHOWN	B. & B.
●	PICEA OMORIKA	SERBIAN SPRUCE	2	3.00 METERS	AS SHOWN	B. & B.
●	AZALEA JAPONICA (VARIOUS)	JAPANESE AZALEA	39	#3 POT	90 CM. O.C.	
●	ABELIA 'EDWARD GOUCHER'	EDWARD GOUCHER ABELIA	60	#3 POT	90 CM. O.C.	
●	EUONYMUS ALATUS COMPACTUS	DWARF BURNING BUSH	24	#3 POT	90 CM. O.C.	
●	ROSA MEIDILAND 'PINK'	PINK MEIDILAND ROSE	32	#3 POT	90 CM. O.C.	
●	POTENTILLA FRUITICOSA GOLDFINGER	SHRUBBY CINQUEFOIL	40	#3 POT	90 CM. O.C.	
●	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	OTTO LUYKEN LAUREL	232	#3 POT	70 CM. O.C.	
●	LAVANDUAL ANGUSTIFOLIA 'MUNSTEAD'	LAVENDER	49	#3 POT	60 CM. O.C.	
●	HYDRANGEA MACROPHYLLA 'NIKKO BLUE'	HYDRANGEA	24	#3 POT	90 CM. O.C.	
●	MEDIUM RHODODENDRON (VARIOUS)	RHODODENDRON	19	#3 POT	90 CM. O.C.	
●	SYRINGA VULGARIS 'MICHEL BUCHNER'	LILAC	21	#3 POT	90 CM. O.C.	

NOTES / GENERAL

1) PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO BC LANDSCAPE STANDARD "LATEST EDITION". CONTAINER SIZES ARE SPECIFIED AS PER "ONTA STANDARDS". BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. SEARCH AND REVIEW, MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY "LANDSCAPE ARCHITECT" AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. "SUBSTITUTIONS" MUST OBTAIN WRITTEN APPROVAL FROM THE "LANDSCAPE ARCHITECT" PRIOR TO MAKING ANY SUBSTITUTIONS TO SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE WORKING DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO "B.C. LANDSCAPE STANDARD"

ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED "DISEASE FREE" NURSERY. ALL PLANT MATERIAL MUST CONFORM TO THE LATEST EDITION OF THE "BC LANDSCAPE STANDARD". PROVIDE CERTIFICATION UPON REQUEST. ALL LANDSCAPING AND LANDSCAPE MATERIALS TO CONFORM TO THE LATEST EDITION OF THE BCNA/BCSLA "LANDSCAPE STANDARDS"

2) MIN. GROWING MEDIUM DEPTHS OVER PREPARED SUBGRADE SHALL BE :

LAWN AREAS	450 mm
GROUND COVER AREAS	450 mm
SHRUB AREAS	450 mm
TREE PITS	300 mm AROUND ROOT BALL

3) GROWING MEDIUM SHALL HAVE PHYSICAL AND CHEMICAL PROPERTIES AS DESCRIBED IN THE STANDARDS FOR LEVEL 2 AND LEVEL 3 AREAS, EXCEPT FOR AREAS OVER STRUCTURES WHERE THE MEDIUM SHALL CONFORM TO THE REQUIREMENTS FOR LEVEL 1 APPLICATIONS. PROCESSING AND MIXING OF GROWING MEDIUM COMPONENTS SHALL BE DONE OFF-SITE USING A MECHANIZED SCREENING PROCESS. PROPOSED GROWING MEDIUM SHALL BE TESTED BY A RECOGNIZED LABORATORY. THE CONTRACTOR SHALL GUARANTEE THAT THE SOIL SUBMITTED FOR TESTING IS A REPRESENTATIVE SAMPLE TAKEN FROM THE SOIL THAT WILL BE USED AT THE SITE.

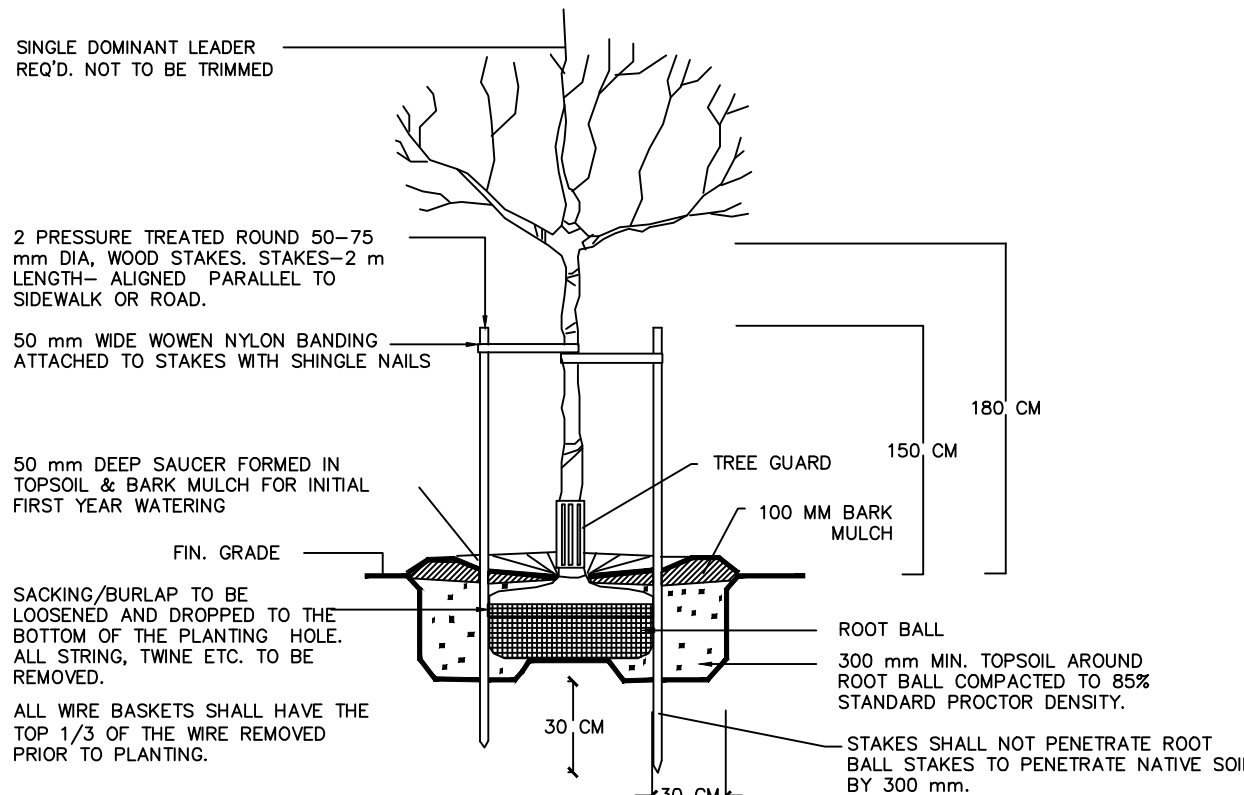
4) ON-SITE OR IMPORTED SOILS SHALL SATISFY THE REQUIREMENTS OF THE STANDARDS FOR GROWING MEDIUM. SOILS SHALL BE VIRTUALLY FREE FROM SUBSOIL, WOOD INCL. WOODY PLANT PARTS, WEED OR REPRODUCTIVE PARTS OF WEEDS, PLANT PATHOGENIC ORGANISMS, TOXIC MATERIALS, STONES OVER 30 MM AND FOREIGN OBJECTS.

5) ALL PLANTING BEDS SHALL RECEIVE MIN. 50 MM BARK MULCH.

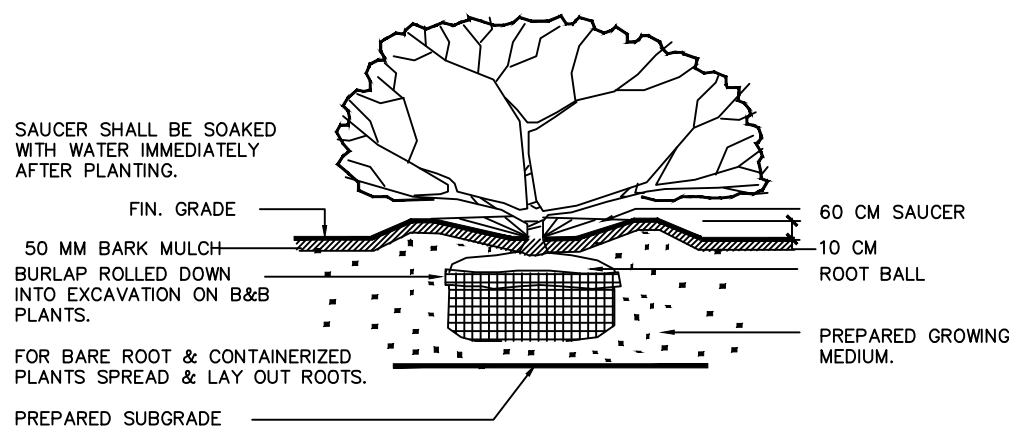
6) PLANT SPECIES AND VARIETIES MAY NOT BE SUBSTITUTED WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT.

7) THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) FULL YEAR FROM THE DATE OF FINAL ACCEPTANCE, UNLESS OTHERWISE SPECIFIED. ALL PLANT MATERIAL NOT SURVIVING, OR IN POOR CONDITION DURING THE GUARANTEE PERIOD SHALL BE REPLACED BY THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.

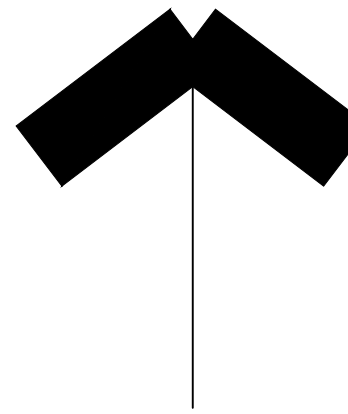
8) THE CONTRACTOR SHALL CLEAR AWAY FROM THE SITE ALL RUBBISH AS IT ACCUMULATES, AND SHALL, AT THE COMPLETION OF THE WORK, LEAVE THE WORK AND THE SITE THEREOF IN A CLEAN AND PRESENTABLE CONDITION, FREE FROM ALL OBSTRUCTIONS.



TREE PLANTING DETAIL
SECTION N.T.S.



PLANTING DETAIL - SHRUBS & GRD. COVER PLANTS
SECTION N.T.S.



JUN/20	REVISED SITE PLAN	4
MAR/20	REVISED SITE PLAN	3
JAN/20	REVISED SITE PLAN	2
JUL/19	REVISED SITE PLAN	1
DATE	REMARKS	NO.

C.KAVOLINAS & ASSOCIATES INC.
BCSLA CSLA
2462 JONQUIL COURT
ABBOTSFORD, B.C.
V3G 3E8
PHONE (604) 857-2376

CLIENT

JIN YUM ARCHITECT
c/o DOO-JUN LEE
RHEE GA HOLDINGS
53003 BUNKER ROAD
ROSEDALE, B.C.
VOX 1X0

TITLE

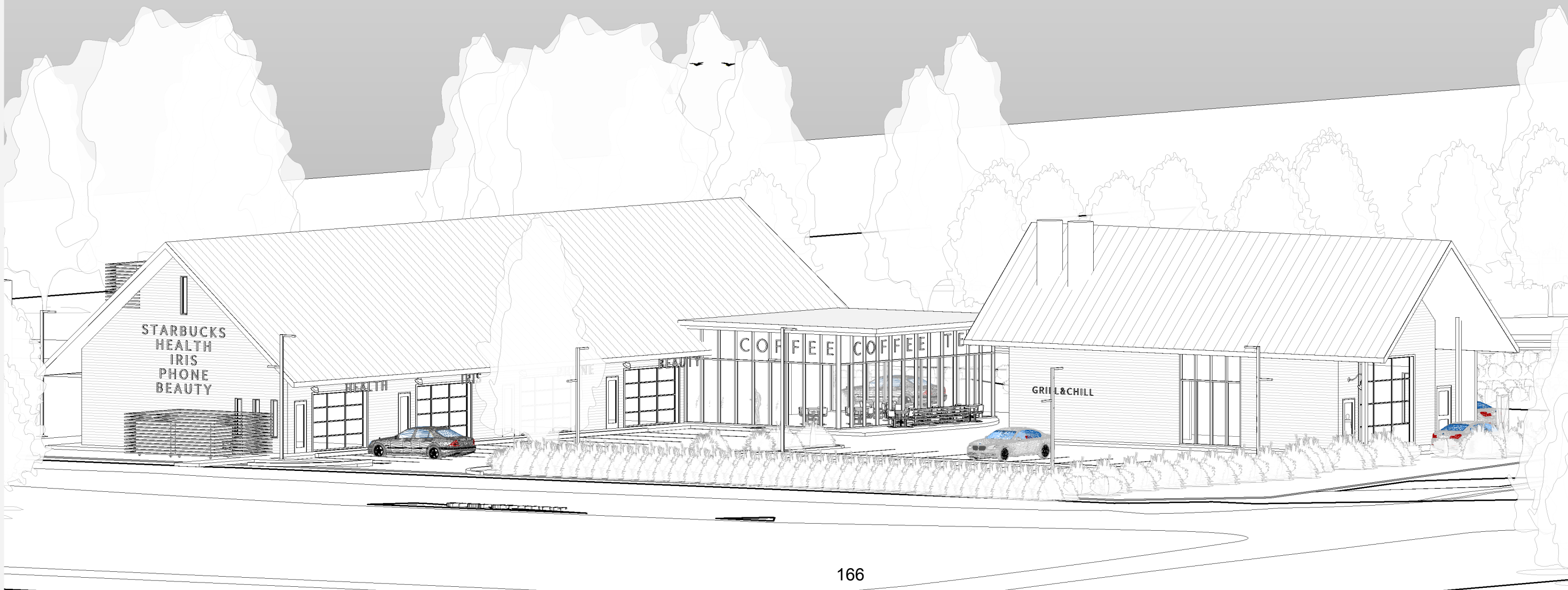
PLAN VIEW
LANDSCAPE PLAN
ROSEDALE
COMMERCIAL DEVELOPMENT
52964 YALE ROAD
ROSEDALE B.C.

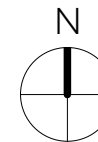
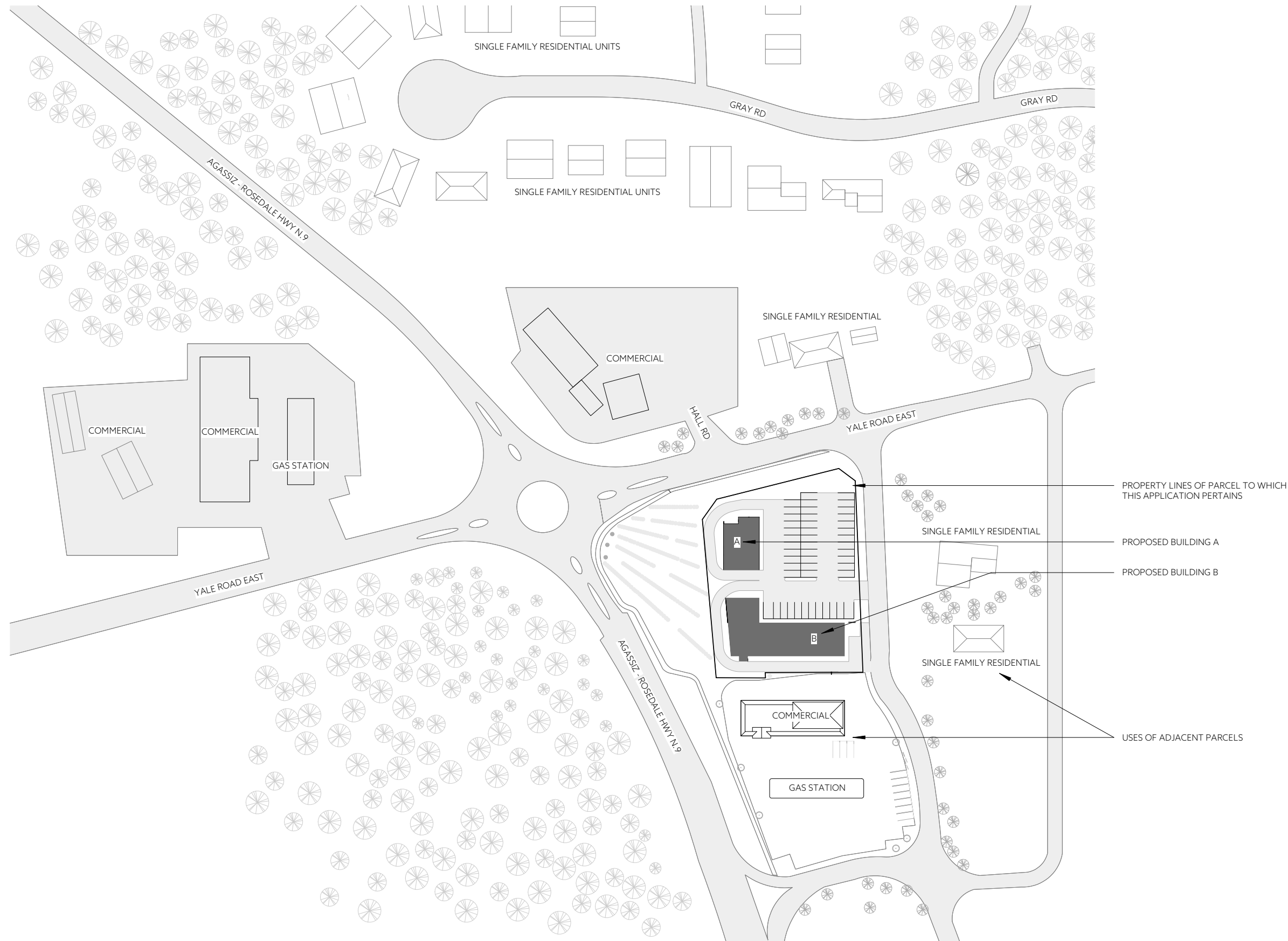
SCALE 1:200	DATE OCT/18
DRAFT	CHK'D
ENG.	CHK'D
APPR'D	AS BUILT

PRINTED	JOB No.
	DRAWING No.
	L-1

Development Permit Sheet List

Sheet Name	Sheet Number
Cover Page	DP.000
Location Map	DP.001
Context Views	DP.002
Site Plan	DP.003
Data	DP.004
Diagrams	DP.005
Floor Plan Building A	DP.100
Floor Plan Building B	DP.101
Roof Plan	DP.102
Elevations	DP.200
Elevations	DP.201
Sections	DP.300
Sections	DP.301
Signage Building A + Exterior Signage	DP.800
Signage Building B	DP.801
Aerial Perspectives	DP.900
Renderings	DP.901
Shadow Study	DP.902
Cover Page	DPV.000
Location Map and Data	DPV.001
Site Plan	DPV.002





DATE DESCRIPTION

ROSEDALE
52964 Yale Road, Chilliwack, BC

DP SUBMISSION

Location
Map

scale:
1 : 1500

1913

DP.001

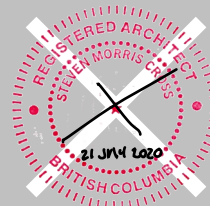
2020-07-21 11:39:25 AM

Drawings are to be read in conjunction with each other, any discrepancies found on any drawings are to be reported to the architect before commencing work.

Contractors are responsible to ensure that all work is executed to the requirements of the latest edition of the B.C. Building Code.

© COPYRIGHT 2020 ALL RIGHTS RESERVED

CROSS ARCHITECTURE INC





Single Family House



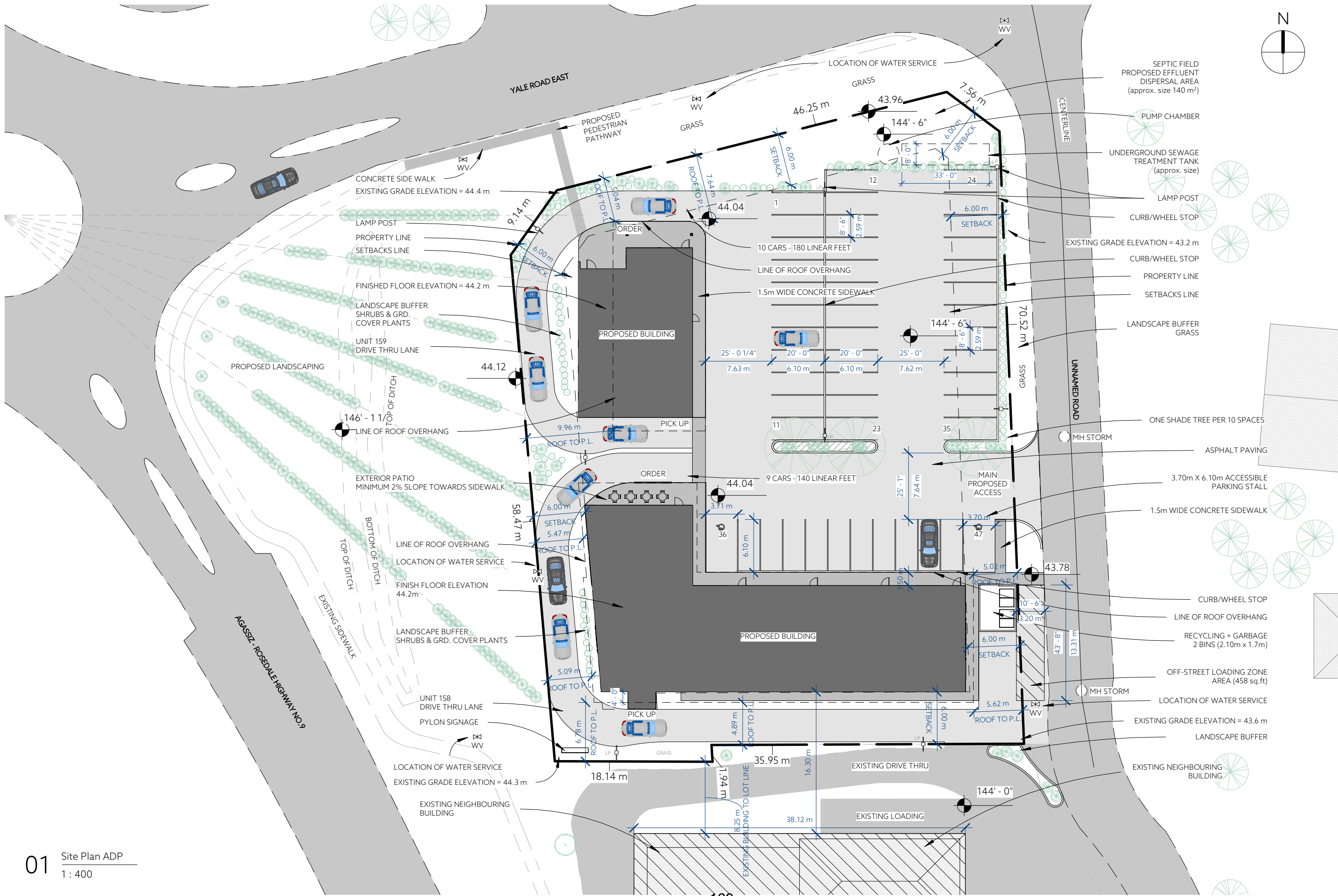
The Garden House - Garden Market



Subway + Petro Canada



DATE	DESCRIPTION
ROSEDALE 52964 Yale Road, Chilliwack, BC	
DP SUBMISSION	
Context Views	
scale: As indicated	
1913	
DP.002	
2020-07-21 11:39:25 AM	
<small>Drawings are to be read in conjunction with each other; any discrepancies found on any drawings are to be reported to the architect before commencing work. Contractors are responsible to ensure that all work is executed to the requirements of the latest edition of the B.C. Building Code. © COPYRIGHT 2020 ALL RIGHTS RESERVED</small>	
CROSS ARCHITECTURE INC	



01

Site Plan ADP
1 : 400

DATE DESCRIPTION

ROSEDALE
52964 Yale Road, Chilliwack, BC

DP SUBMISSION

Site Plan

scale:
1 : 400

1913

DP.003

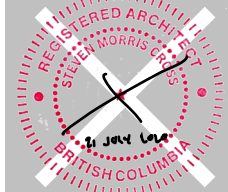
2020-07-21 11:40:31 AM

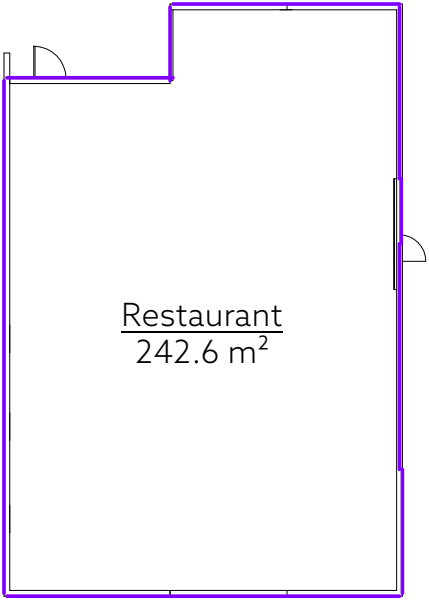
Drawings are to be read in conjunction with each other, any discrepancies found on any drawings are to be reported to the architect before commencing work.

Contractors are responsible to ensure that all work is executed to the requirements of the latest edition of the B.C. Building Code.

© COPYRIGHT 2020 ALL RIGHTS RESERVED

CROSS ARCHITECTURE INC





Area Schedule			
UH	Name	Imperial Area (SF)	Area Metric (m²)
Level 1	Coffee Shop	2710.6	251.8
Level 1	CRU 160	880.0	81.8
Level 1	CRU 161	1093.5	101.6
Level 1	CRU 162	1093.5	101.6
Level 1	CRU 163	1106.2	102.8
Level 1	Restaurant	2611.4	242.6
Gross Floor Area Total: 6		9495.2	882.1

DP SITE STATISTICS

Legal Description: LOT 1, SECTION 6, TOWNSHIP 3, RANGE 28, WEST OF THE SIXTH MERDIAN, NWD, PLAN EPP21164

Address: 52964 Yale Rd. E. Rosedale, Chilliwack BC

Current zoning: C5 - Gateway Commercial
Jurisdiction: Electoral Area D

PID: 029-004-667

Project Description:

Site Area = 3870 m²

Allowable Site Coverage = 30%

Proposed Site Coverage = 22.7%

Allowable FAR/FSR = 0.35

Proposed FAR/FSR = 0.23

Storeys = 1

Allowable Building Height = 10.00 m

Proposed Building Height = 10.00 m

Drive Aisle width = 7.62m - 25'- 0"

Tenant Spaces = 6 total (Building A: 158 - Building B: 159, 160, 161, 162, 163)

Tenant Floor Area = 882 m²

Retail: 160, 161, 162, 163 = 387.8 m² (4173 SQ.FT)

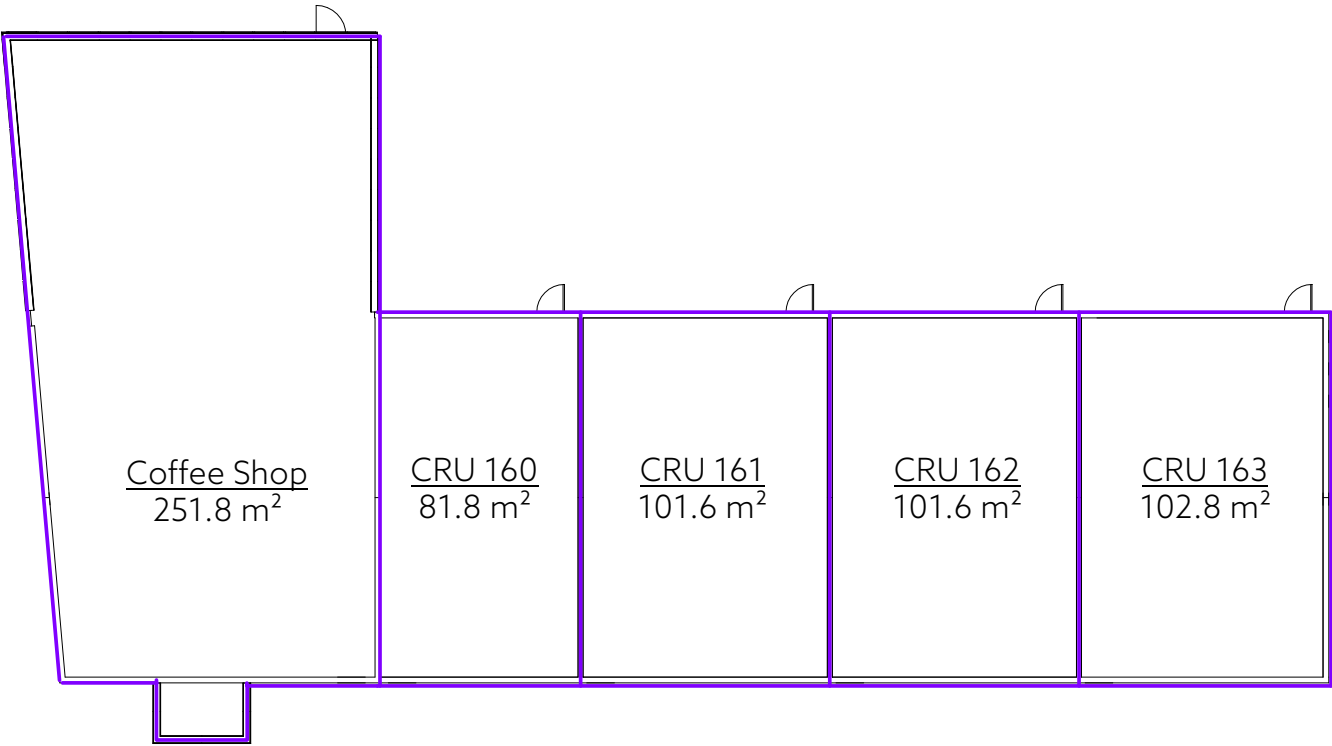
Cafe and Restaurant: Unit 158 and 159 = 494 m² (5322 SQ.FT)

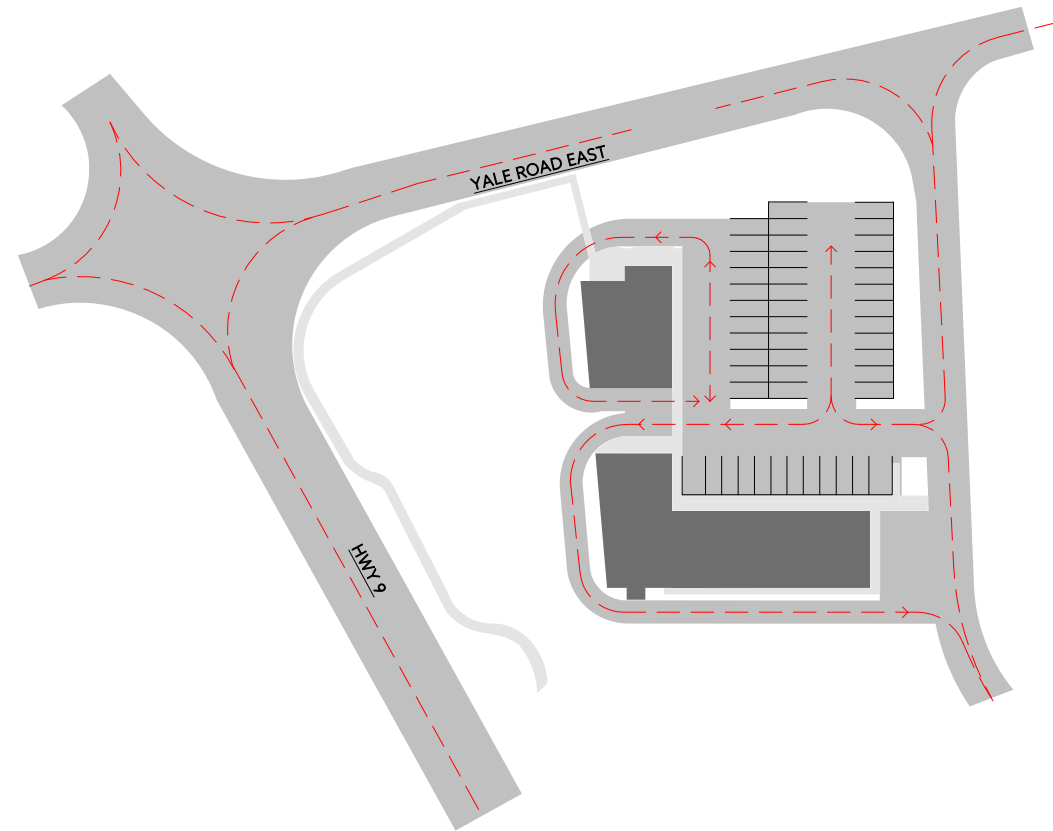
Allowable Setbacks = 6m from all property lines

Proposed Setbacks = 6m from all property lines

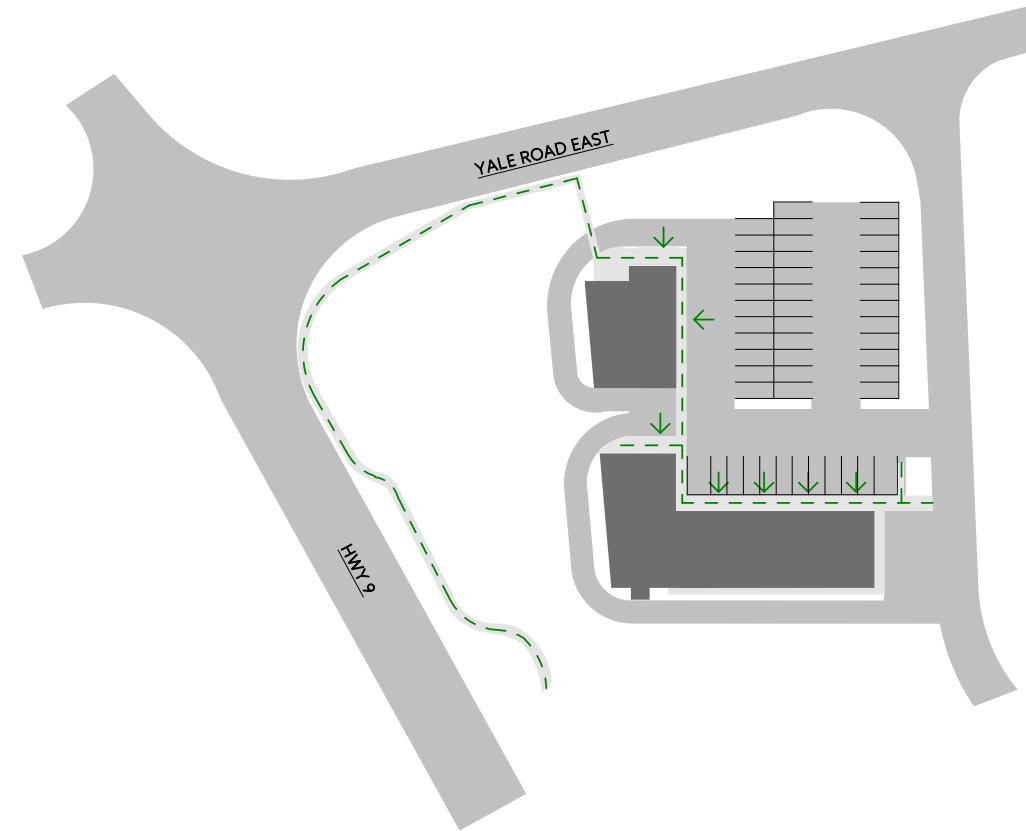
VEHICLE PARKING SUPPLY REQUIREMENTS & PROVISION - ZONING C-5

LAND USE	DENSITY	BYLAW RATE	BYLAW REQ.	PROVIDED
COFFEE SHOP/ RESTAURANT	45 SEATS	1 PER 3 SEATS	15	15
RETAIL	4173 SQ.FT	4 PER 500 SQ.FT OF RETAIL FLOOR AREA	33	32
	METERS	FEET		
DRIVE AISLE	7.62 m	25'-0"		
STALL	6.10 x 2.59 m	20'-0" x 8'-6"		
ACCESSIBLE STALL	6.10 x 3.70 m	20'-0" x 12'-1"		

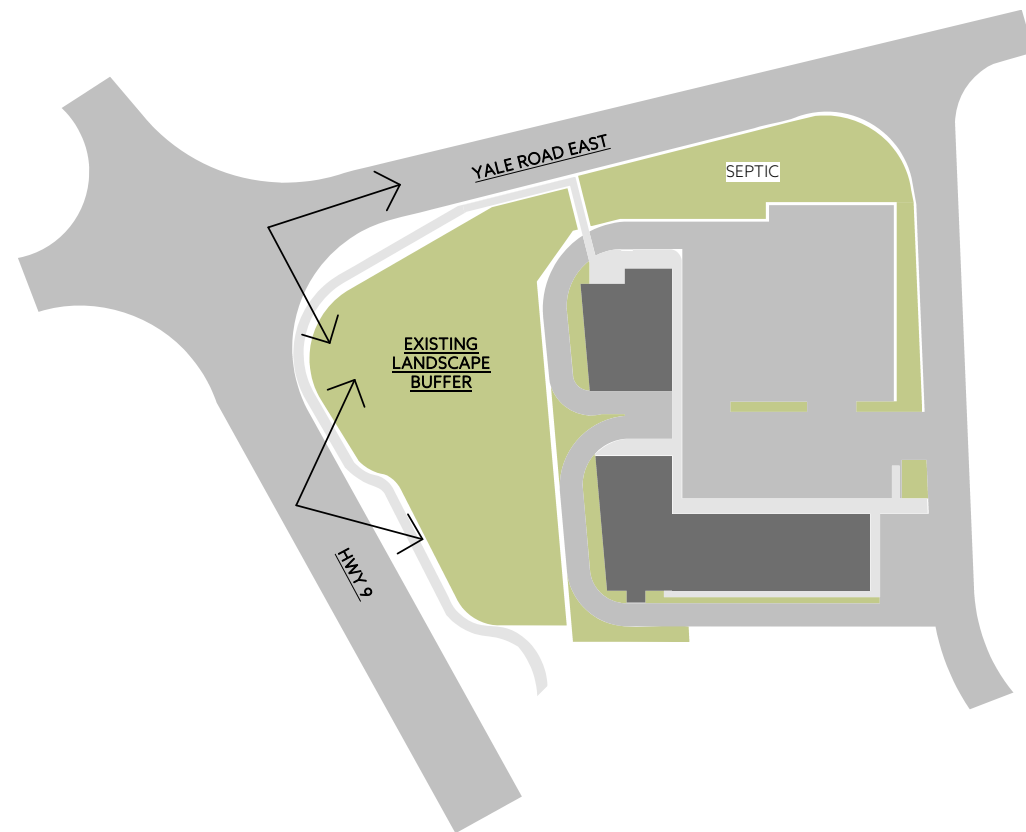




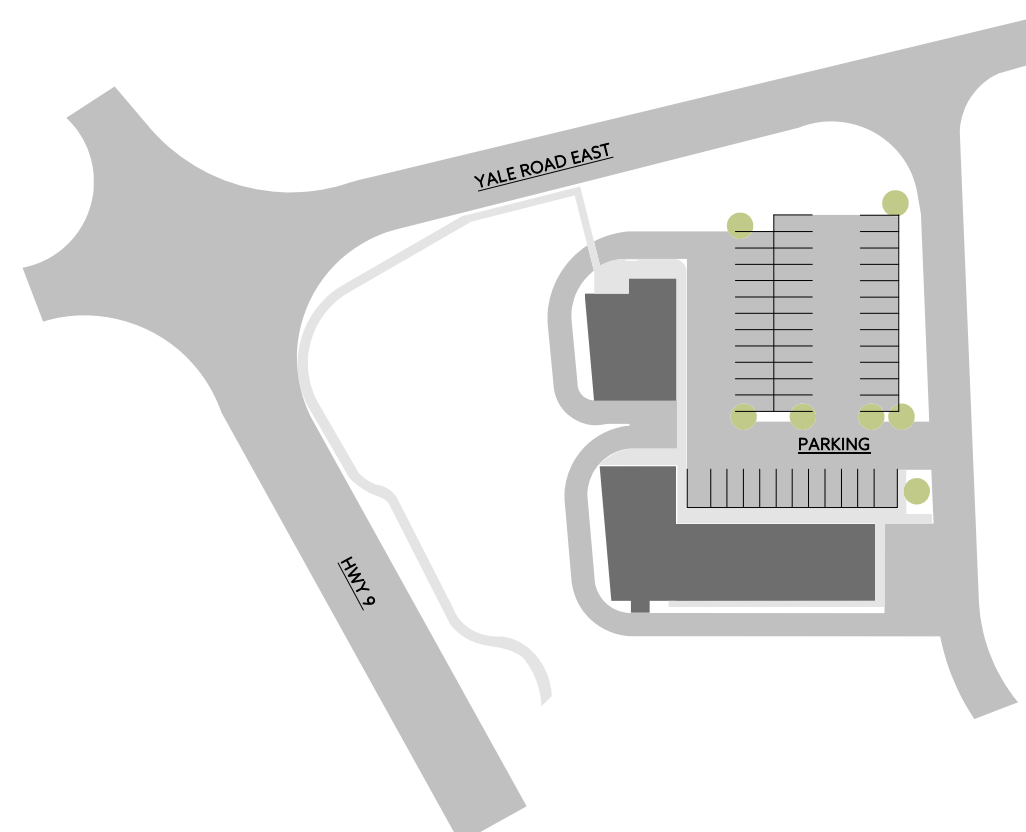
01. VEHICULAR ACCESS AND CIRCULATION



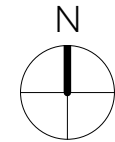
02. PEDESTRIAN CIRCULATION



03. PATHWAYS/LINKAGES/GREEN AREAS/VIEWS



04. PARKING AREAS



DATE DESCRIPTION

ROSEDALE
52964 Yale Road, Chilliwack, BC

DP SUBMISSION

Diagrams

scale:
1" = 100'-0"

1913

DP.005

2020-07-21 11:40:37 AM

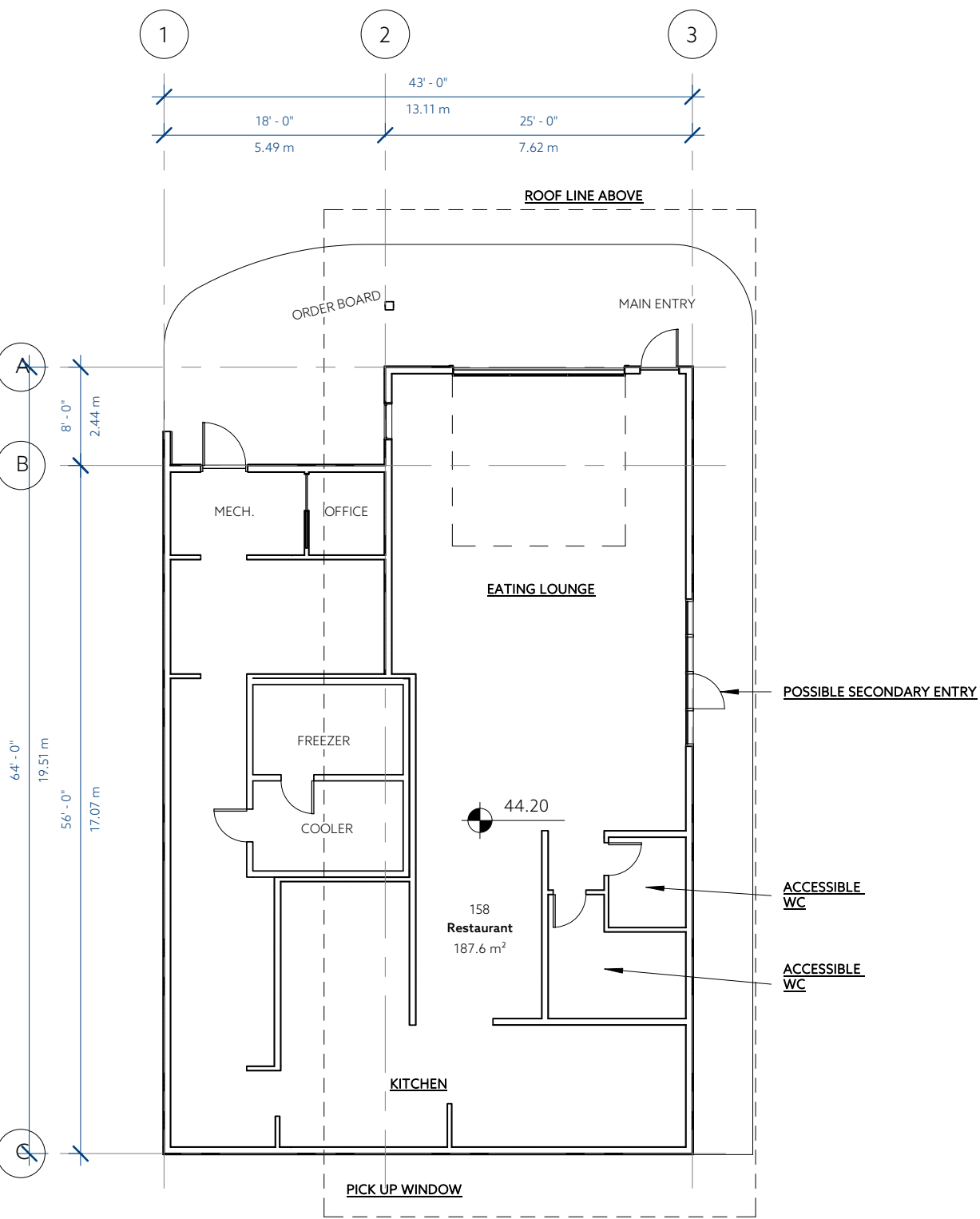
Drawings are to be read in conjunction with each other, any discrepancies found on any drawings are to be reported to the architect before commencing work.

Contractors are responsible to ensure that all work is executed to the requirements of the latest edition of the B.C. Building Code.

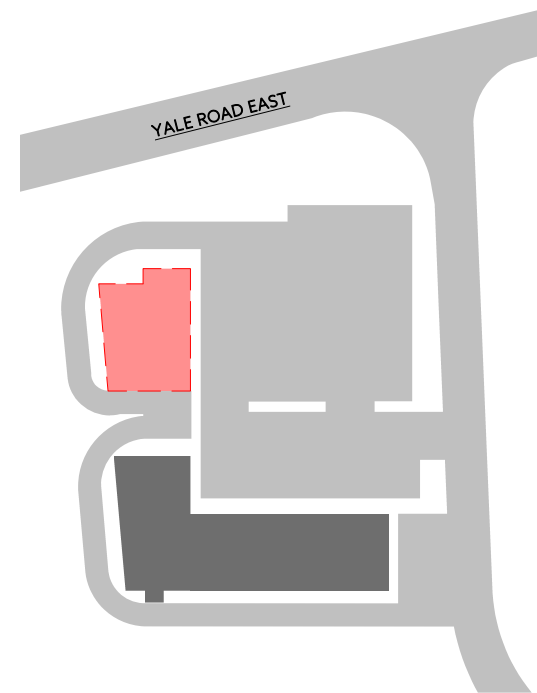
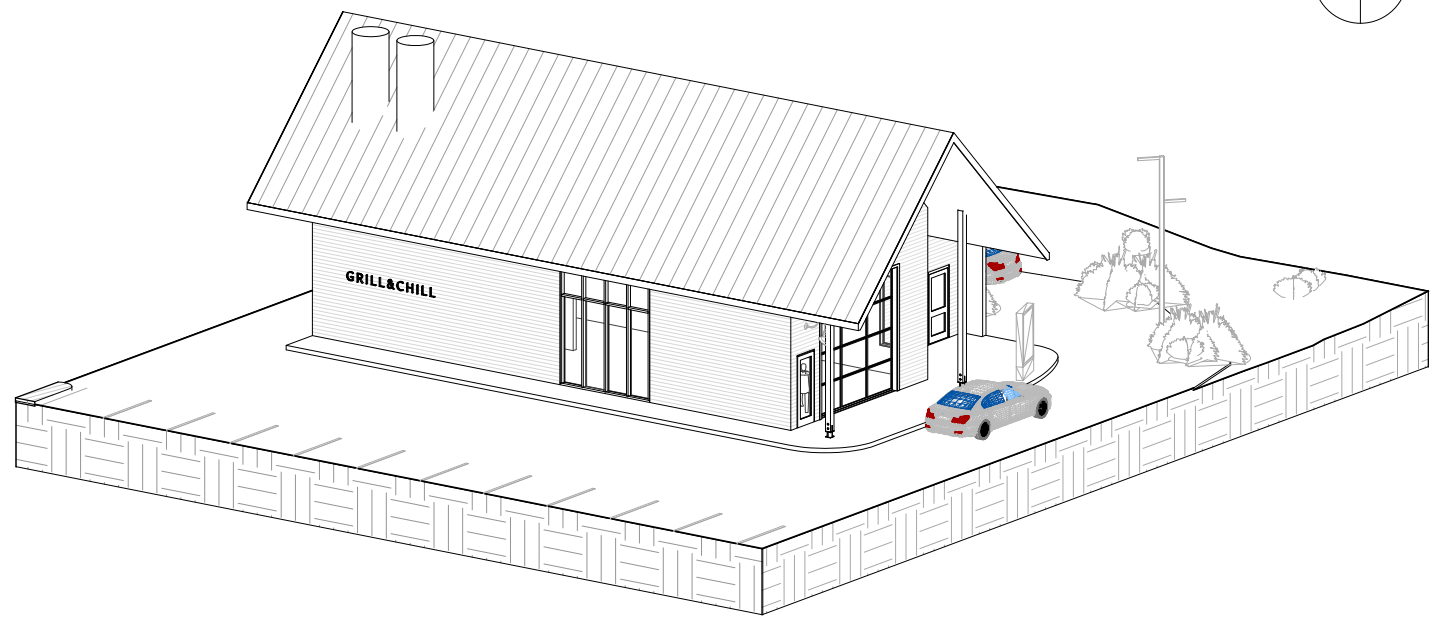
© COPYRIGHT 2020 ALL RIGHTS RESERVED

CROSS ARCHITECTURE INC





01 Level 1 Building A
1 : 150



DATE DESCRIPTION

ROSEDALE
52964 Yale Road, Chilliwack, BC

DP SUBMISSION

Floor Plan
Building A

scale:
As indicated

1913

DP.100

2020-07-21 11:40:40 AM

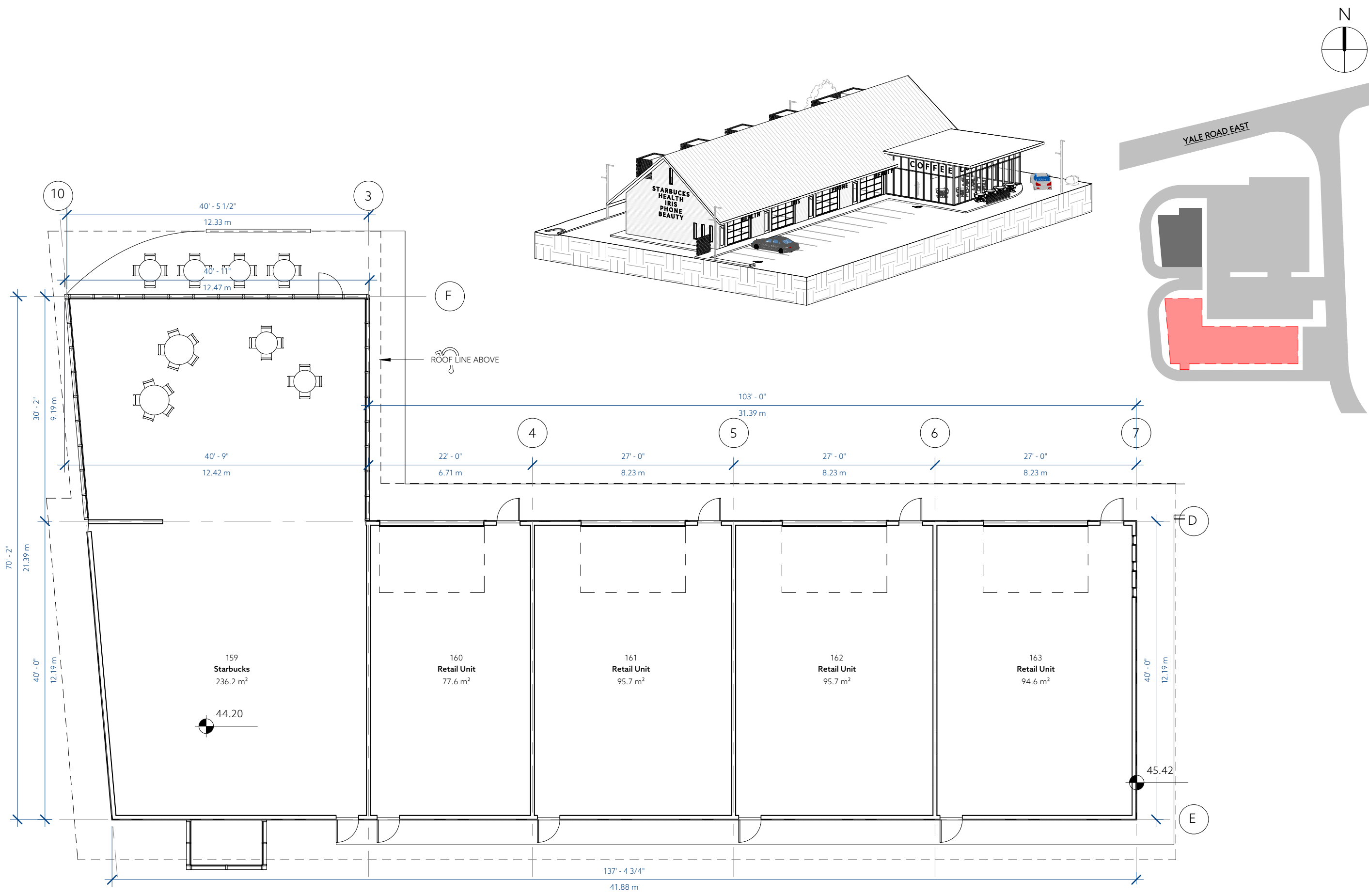
Drawings are to be read in conjunction with each other, any discrepancies found on any drawings are to be reported to the architect before commencing work.

Contractors are responsible to ensure that all work is executed to the requirements of the latest edition of the B.C. Building Code.

© COPYRIGHT 2020 ALL RIGHTS RESERVED

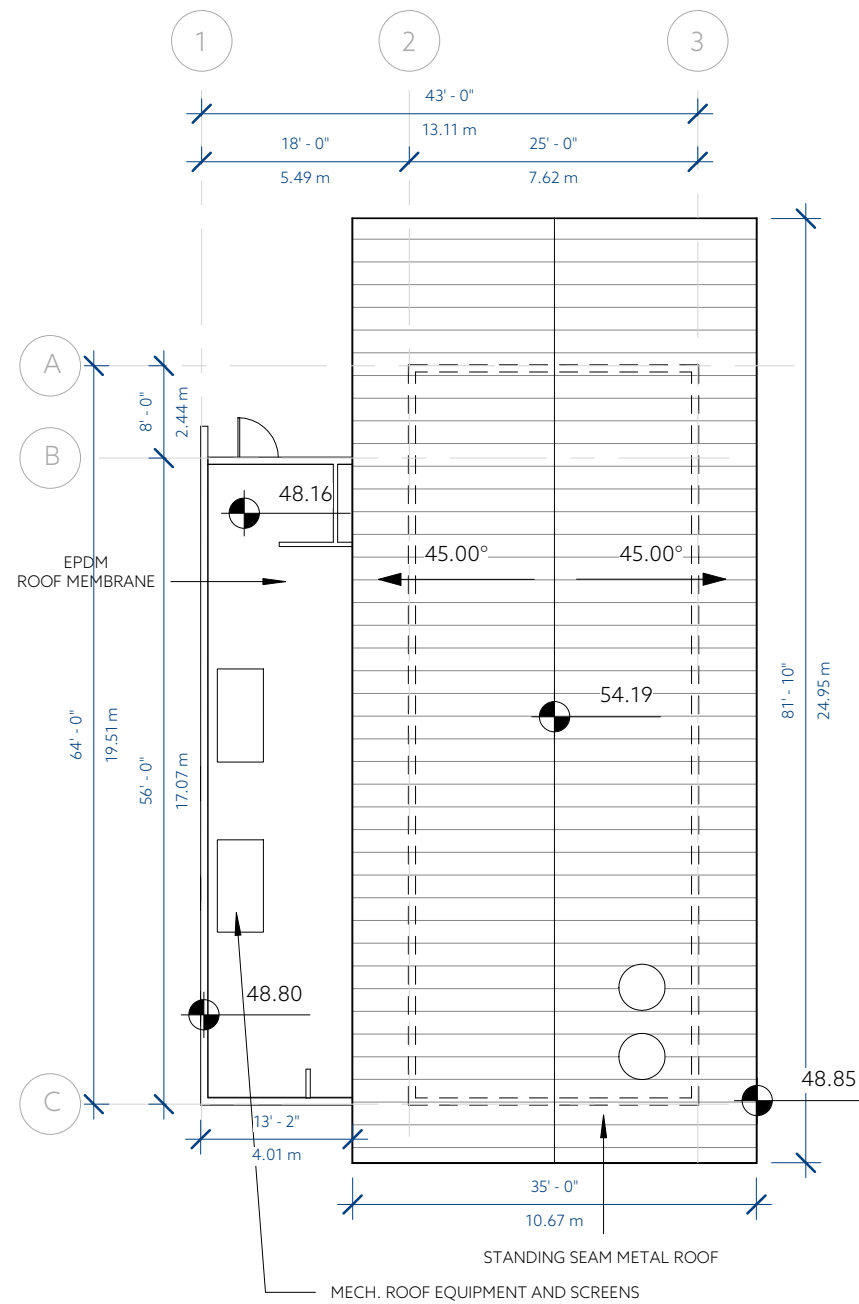
CROSS ARCHITECTURE INC



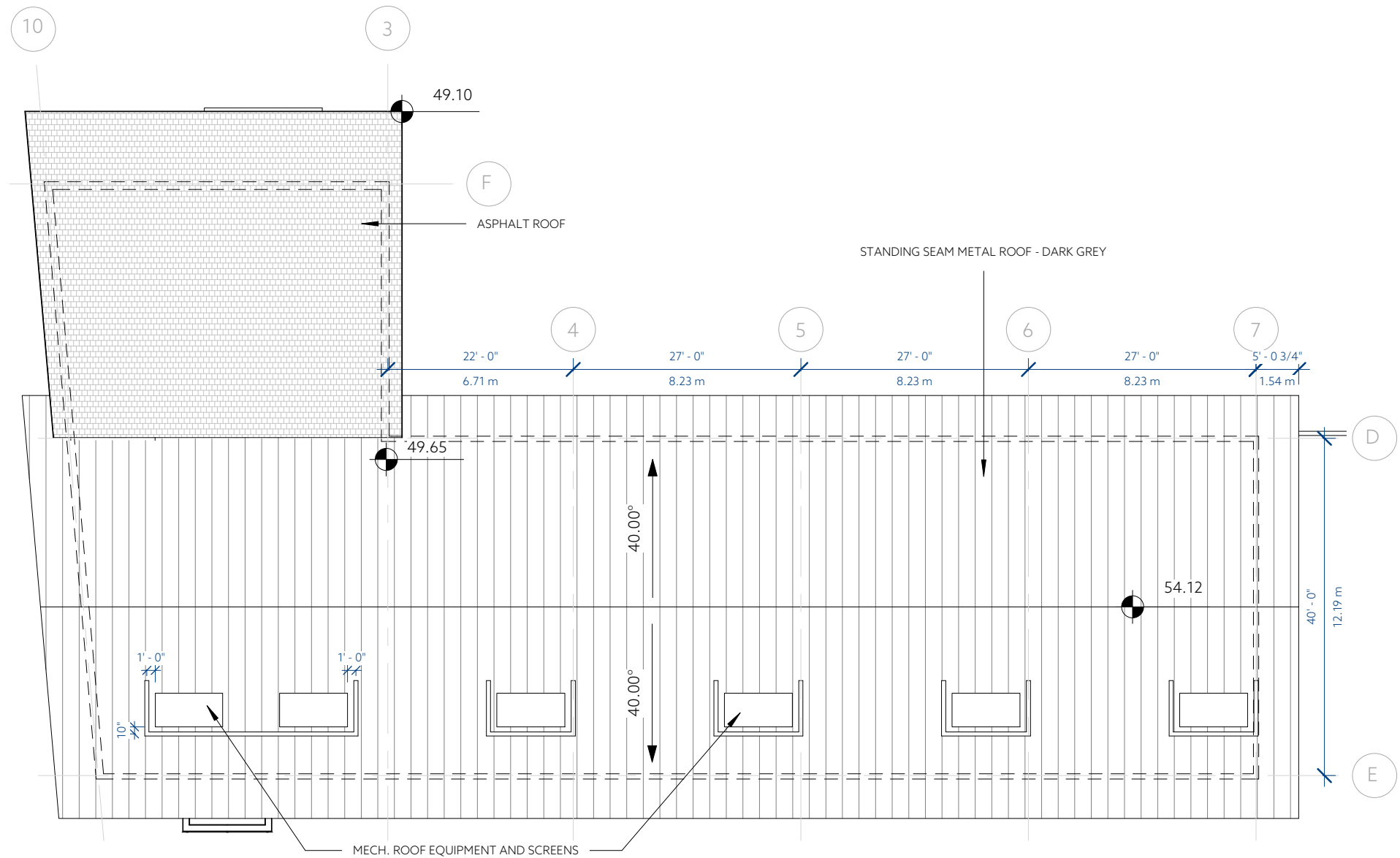


01 Level 1 Building B
1 : 150

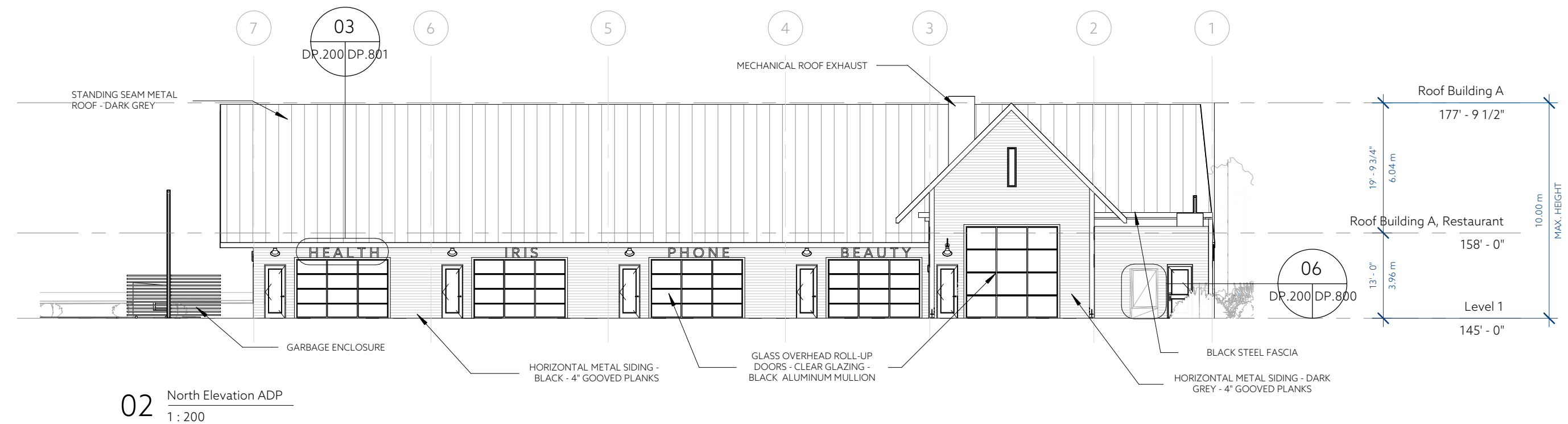
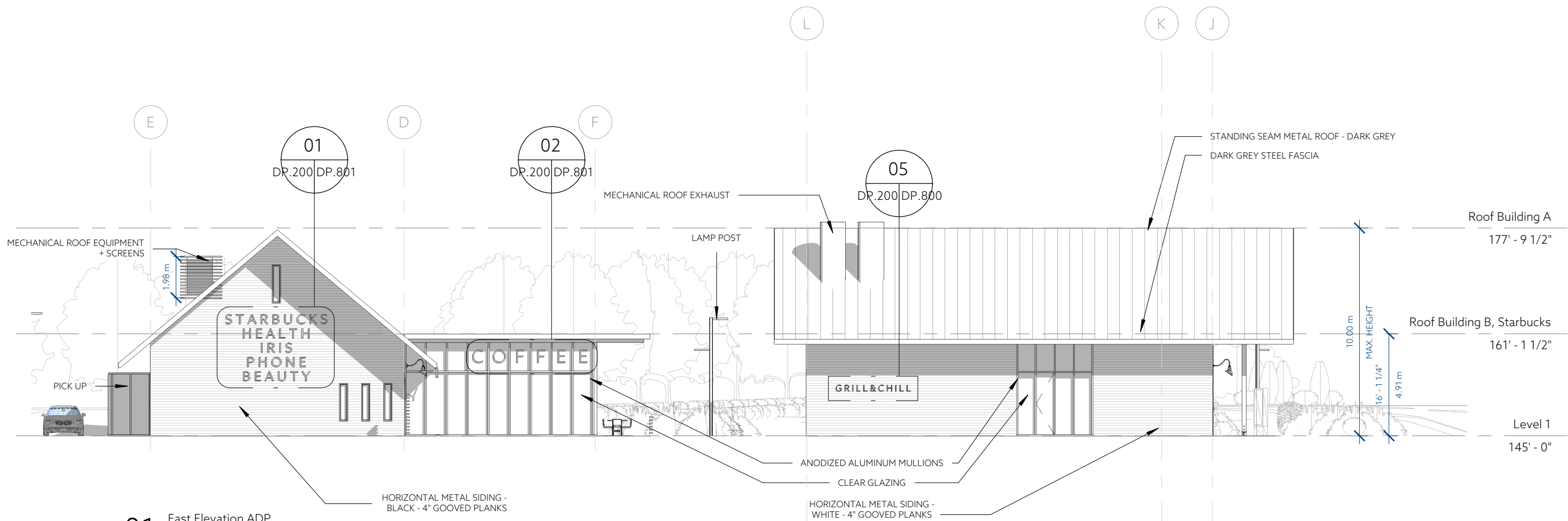
DATE	DESCRIPTION
ROSEDALE 52964 Yale Road, Chilliwack, BC	
DP SUBMISSION	
Floor Plan Building B	
scale: As indicated	
1913	
DP.101	
2020-07-21 11:40:55 AM	
<small>Drawings are to be read in conjunction with each other, any discrepancies found on any drawings are to be reported to the architect before commencing work.</small>	
<small>Contractors are responsible to ensure that all work is executed to the requirements of the latest edition of the B.C. Building Code.</small>	
<small>© COPYRIGHT 2020 ALL RIGHTS RESERVED</small>	
CROSS ARCHITECTURE INC	

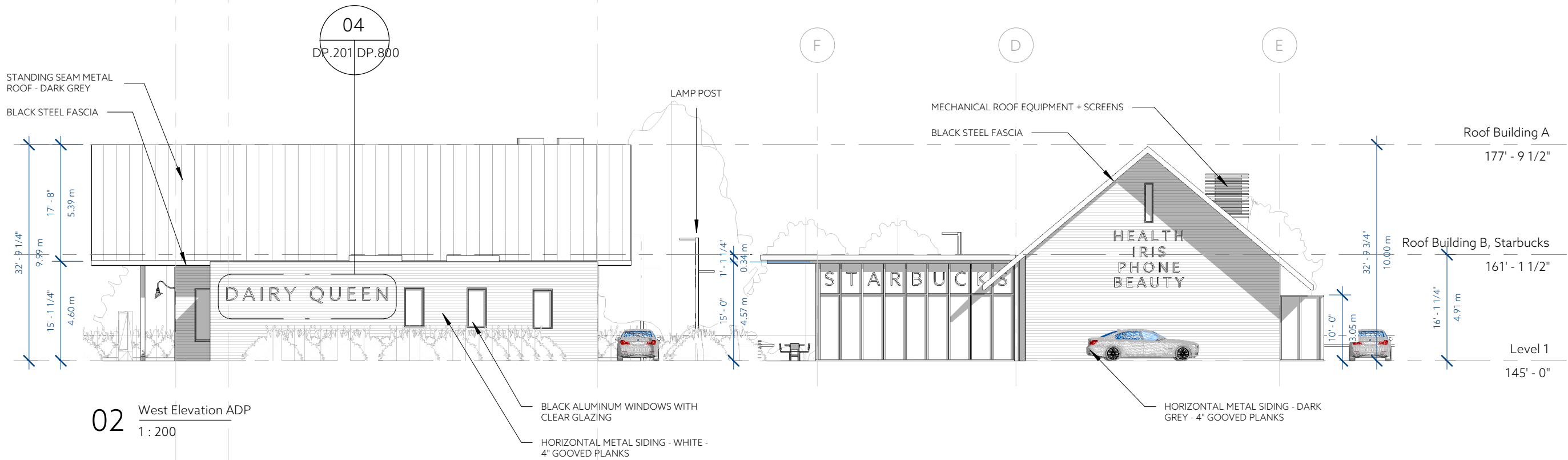
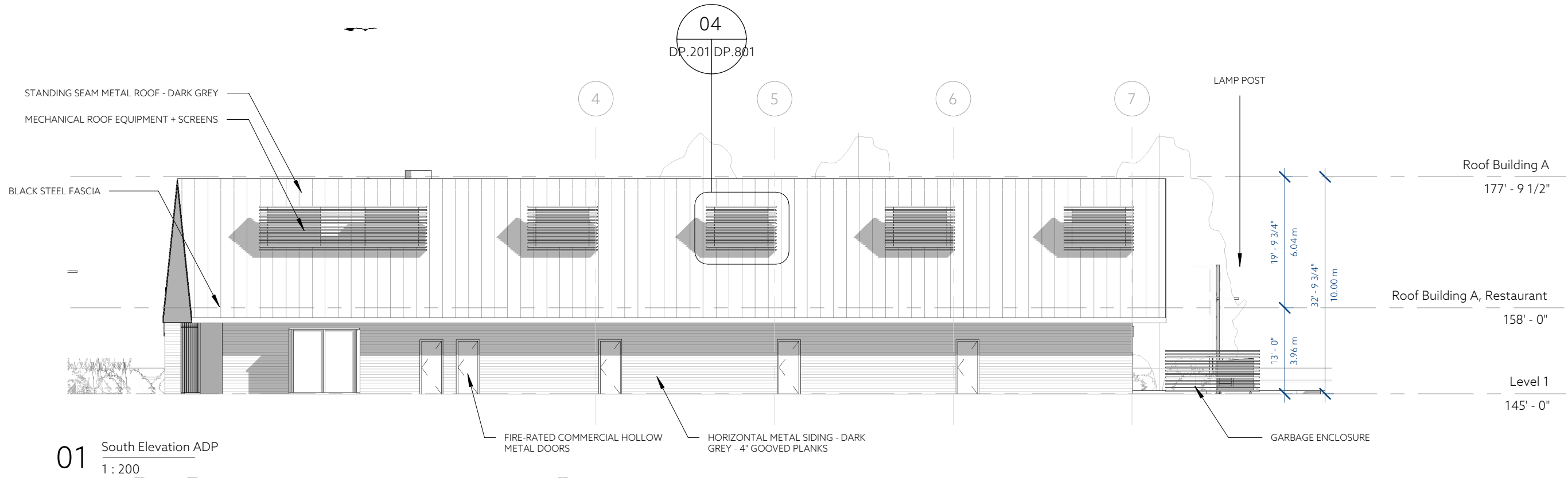


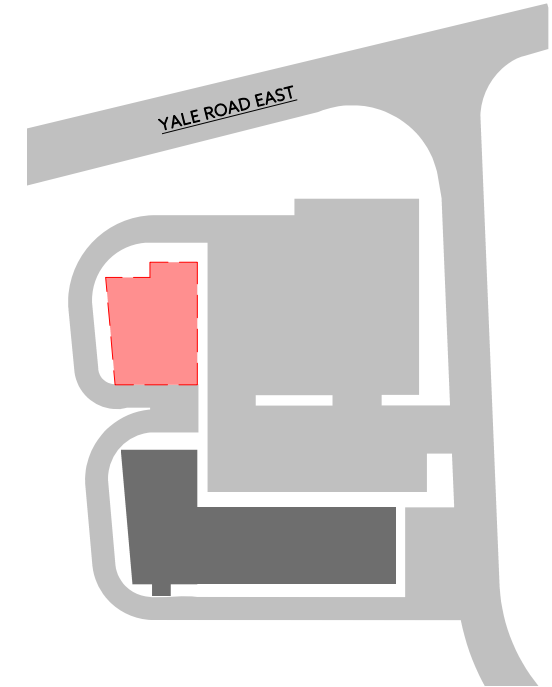
01 Roof Building A
1 : 200



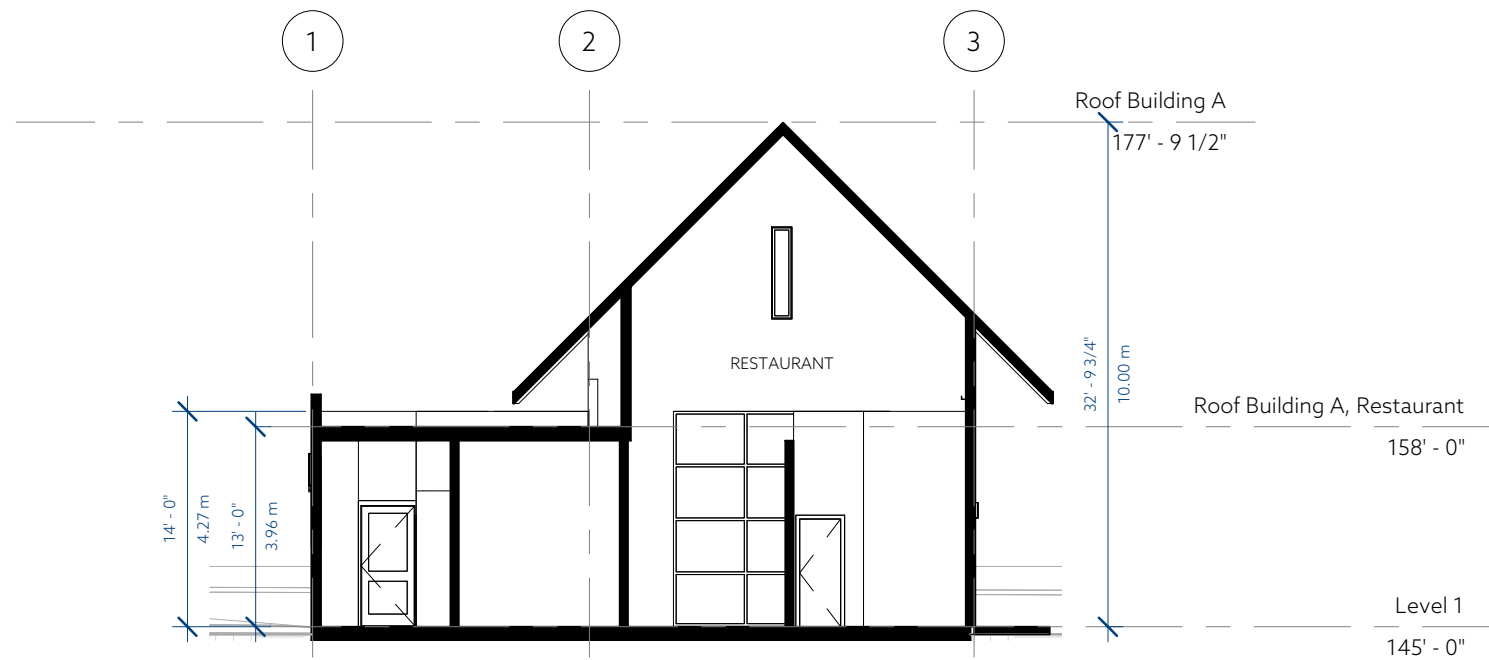
02 Roof Building B
1 : 200



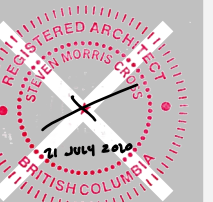


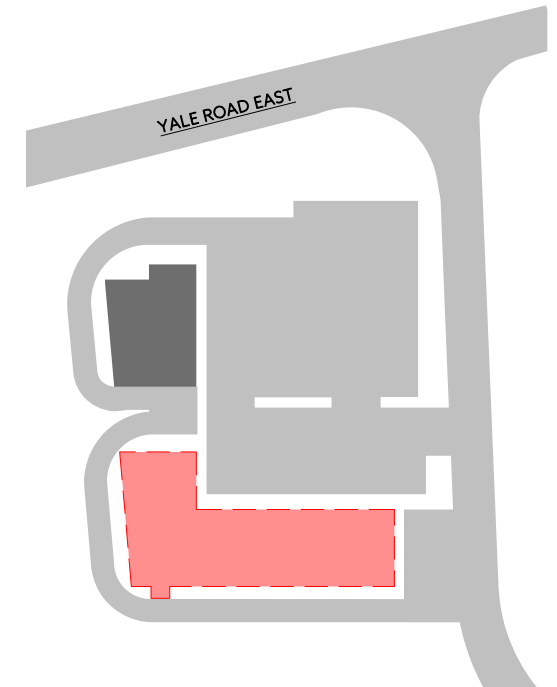
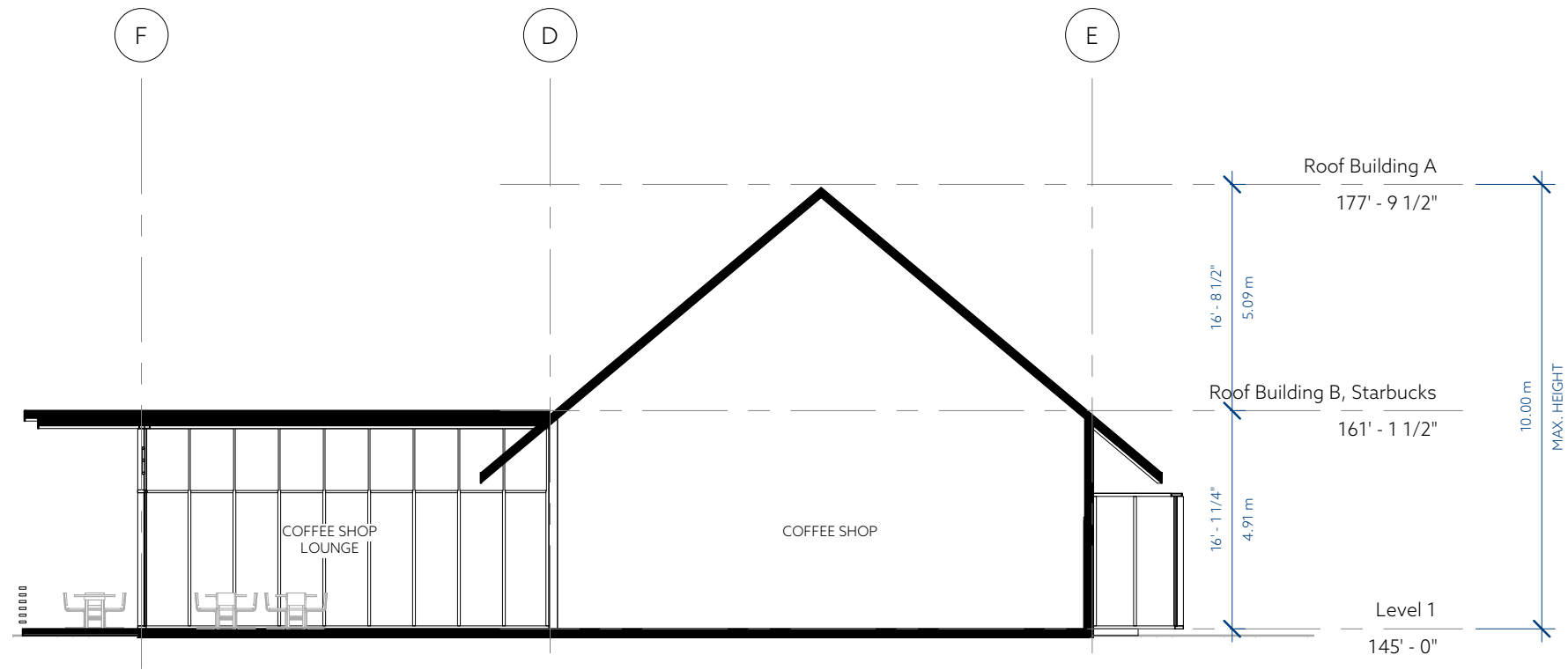


01 Building A - Longitudinal Section
1 : 150

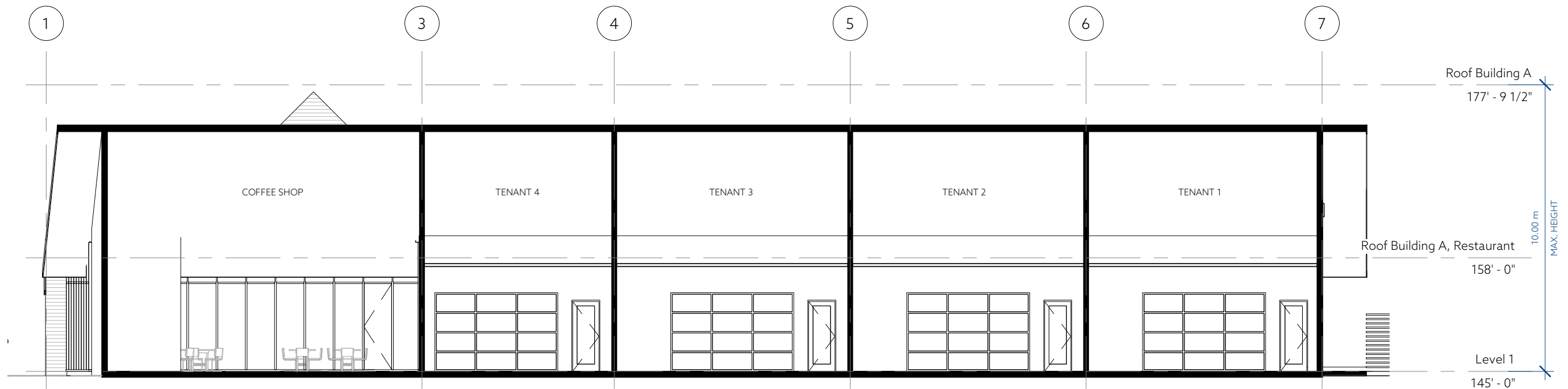


02 Building A - Cross Section
1 : 150

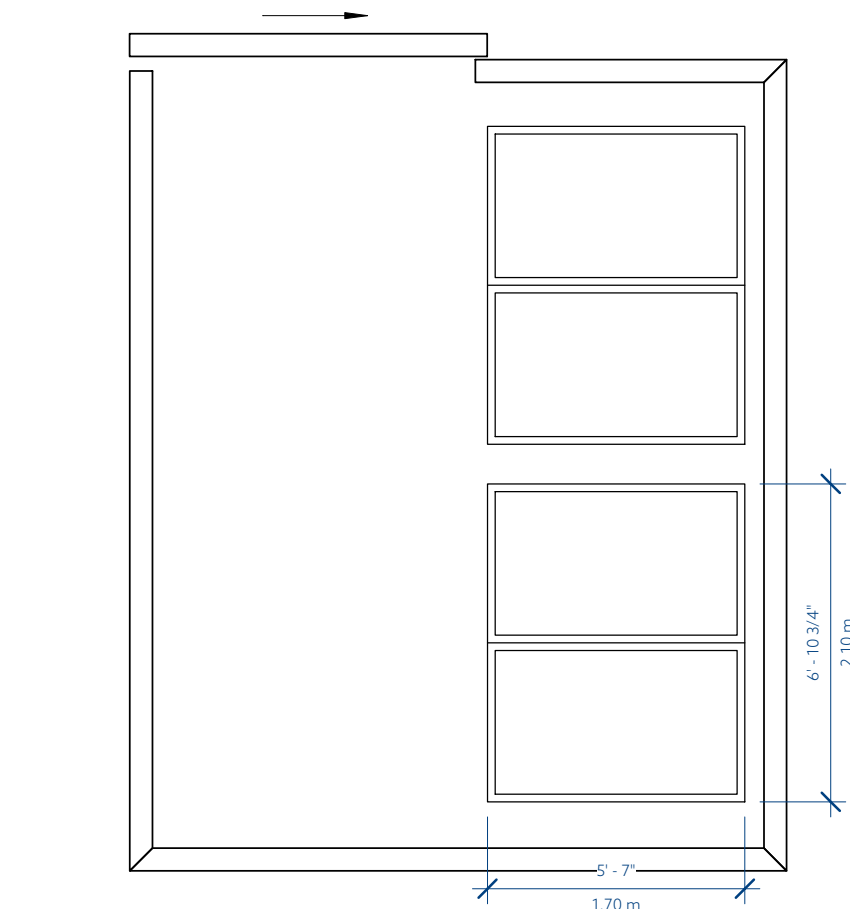




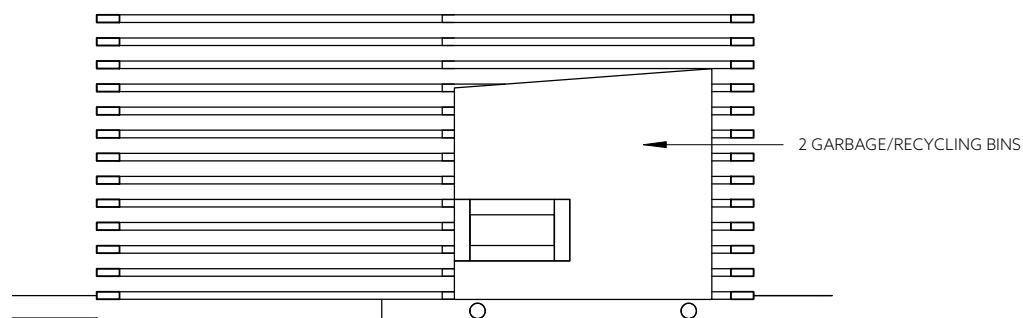
02 Building B - Cross Section
1 : 150



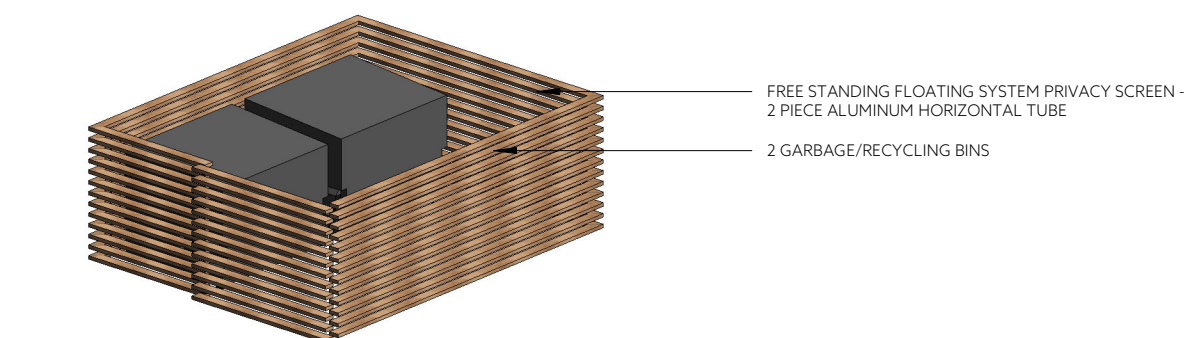
01 Building B - Longitudinal Section
1 : 150



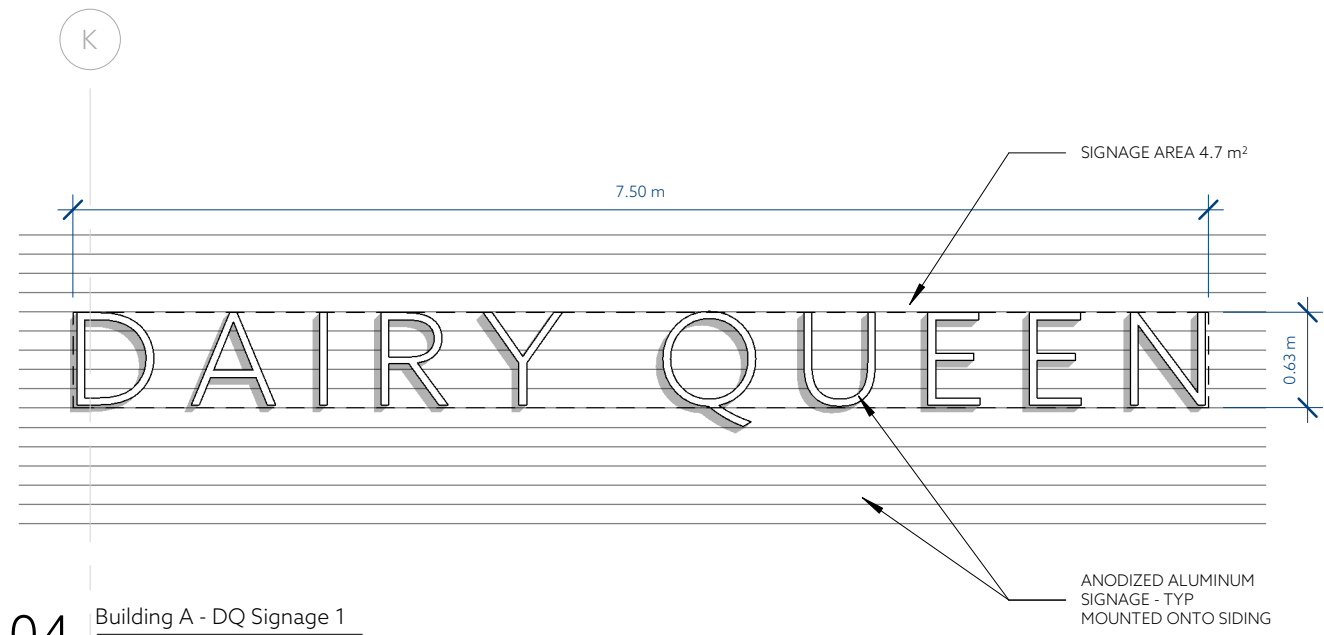
01 Exterior Details
1 : 50



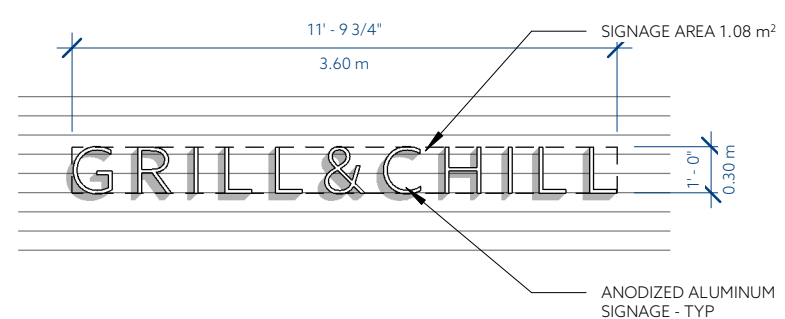
02 Waste Enclosure Section
1 : 50



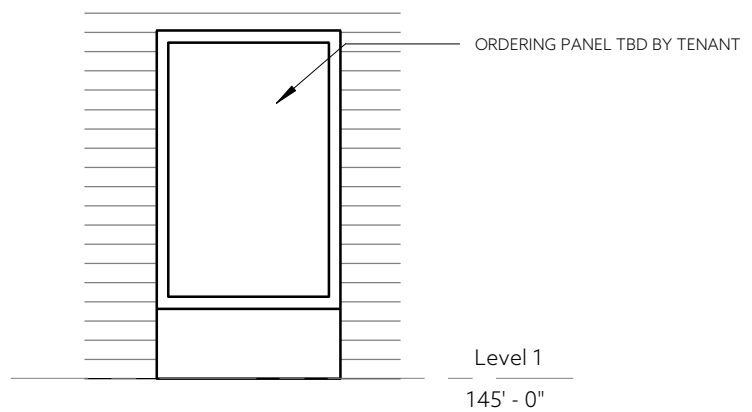
03 Waste Enclosure



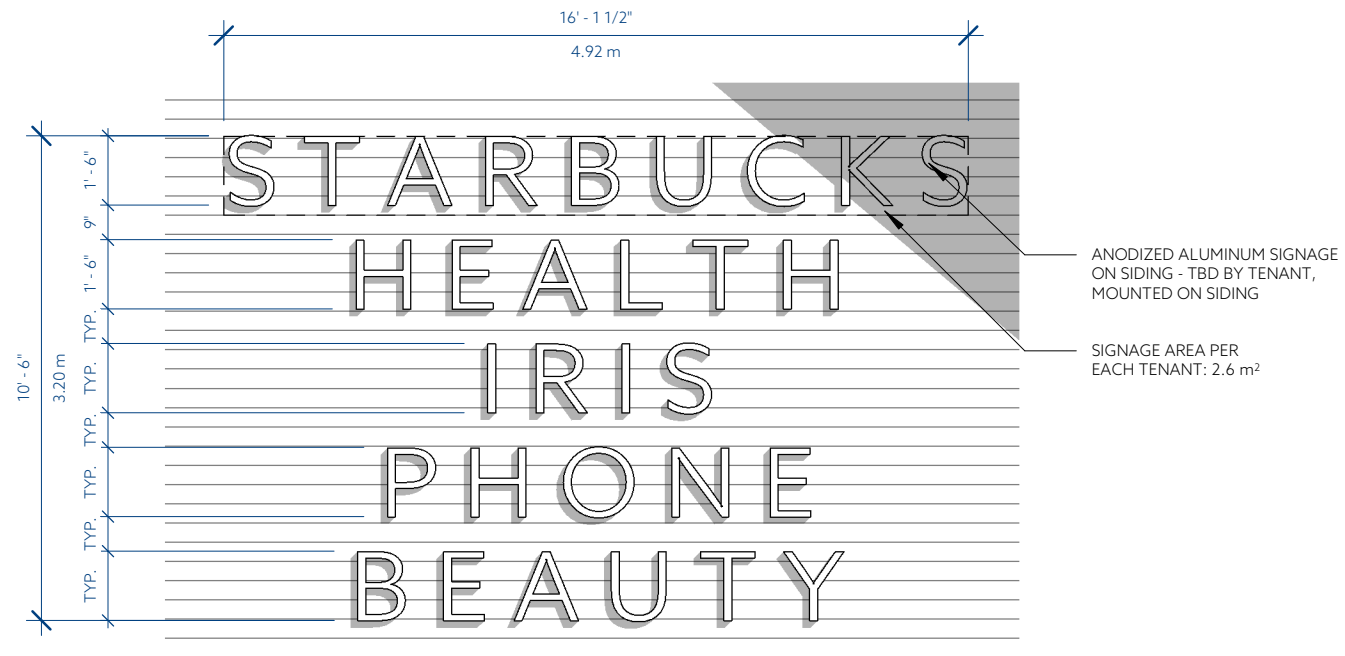
04 Building A - DQ Signage 1
1 : 50



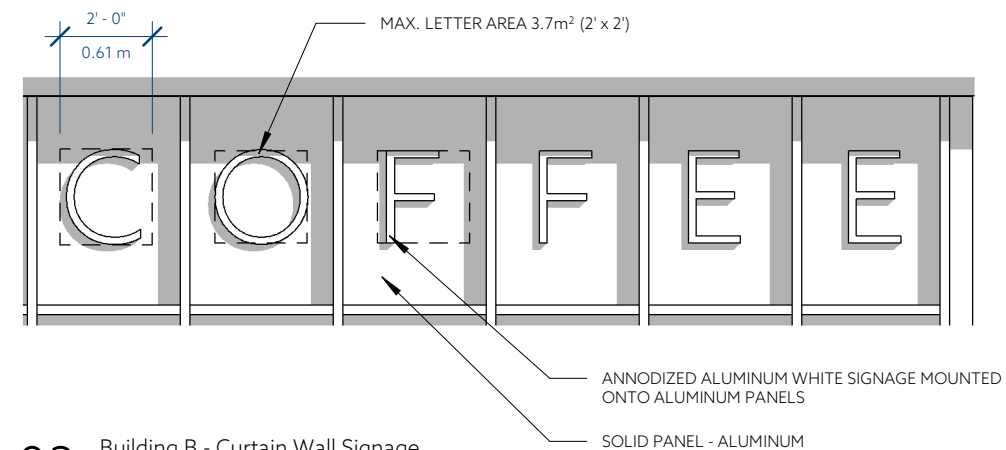
05 Building A - DQ Signage 2
1 : 50



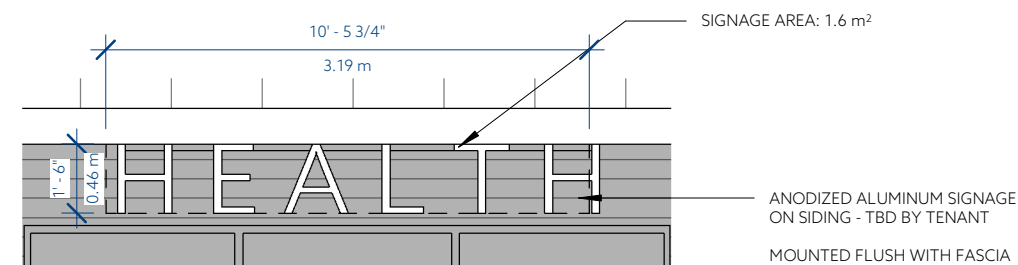
06 Building A - Drive Thru Signage
1 : 50



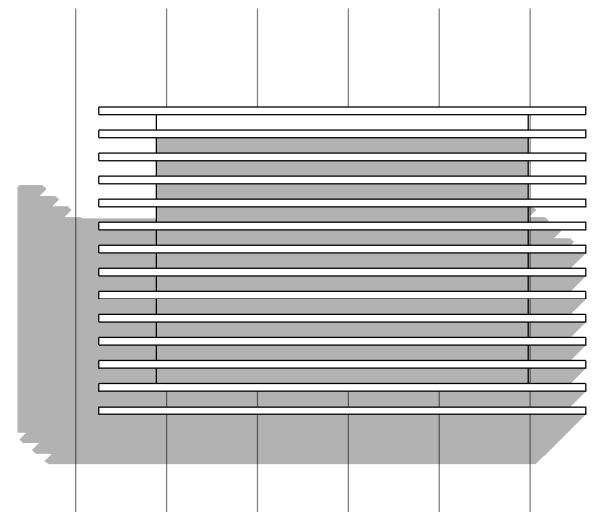
01 Building B - Street View Signage
1 : 50



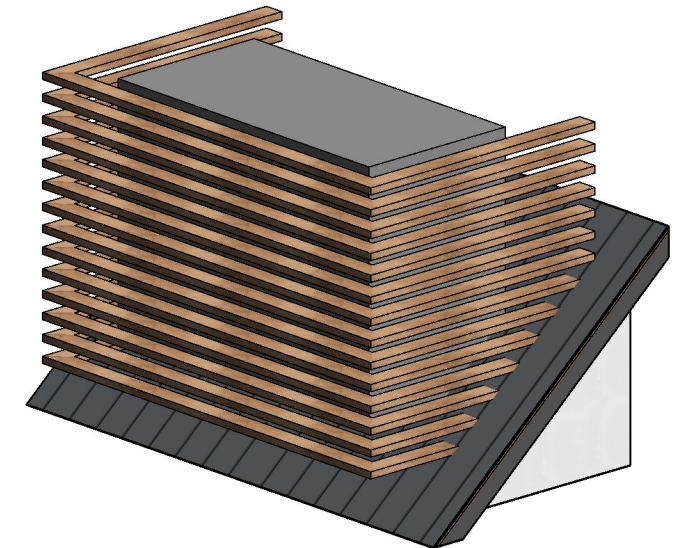
02 Building B - Curtain Wall Signage
1 : 50



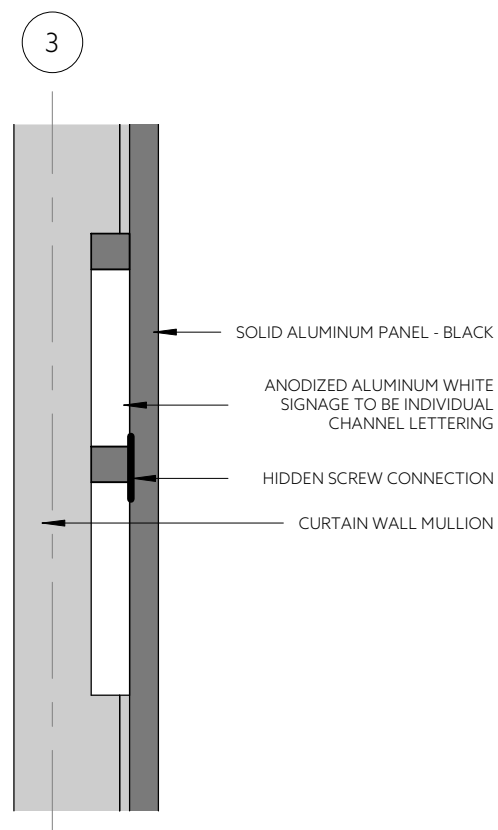
03 Building B - CRU Signage
1 : 50



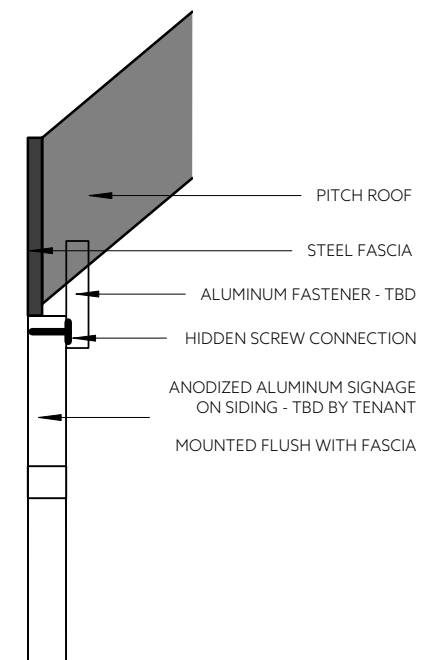
04 Rooftop Mechanical Equipment Screens
1 : 50



05 Rooftop Mechanical Equipment Screens



06 Building B - Curtain Wall Signage Section
1 : 10



07 Building B - CRU Signage Detail
1 : 10

DATE DESCRIPTION

ROSEDALE
52964 Yale Road, Chilliwack, BC

DP SUBMISSION

Signage
Building B

scale:
As indicated

1913

DP.801

2020-07-21 11:41:10 AM

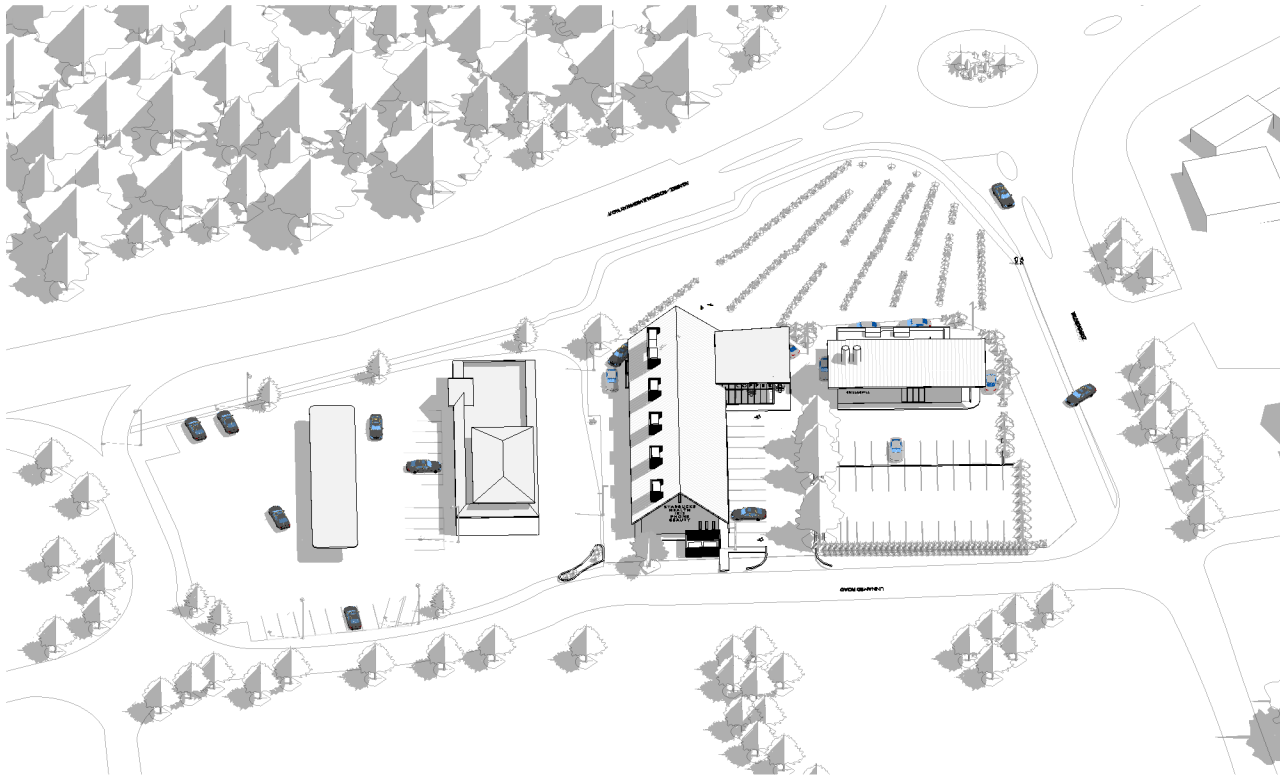
Drawings are to be read in conjunction with each other, any discrepancies found on any drawings are to be reported to the architect before commencing work.

Contractors are responsible to ensure that all work is executed to the requirements of the latest edition of the B.C. Building Code.

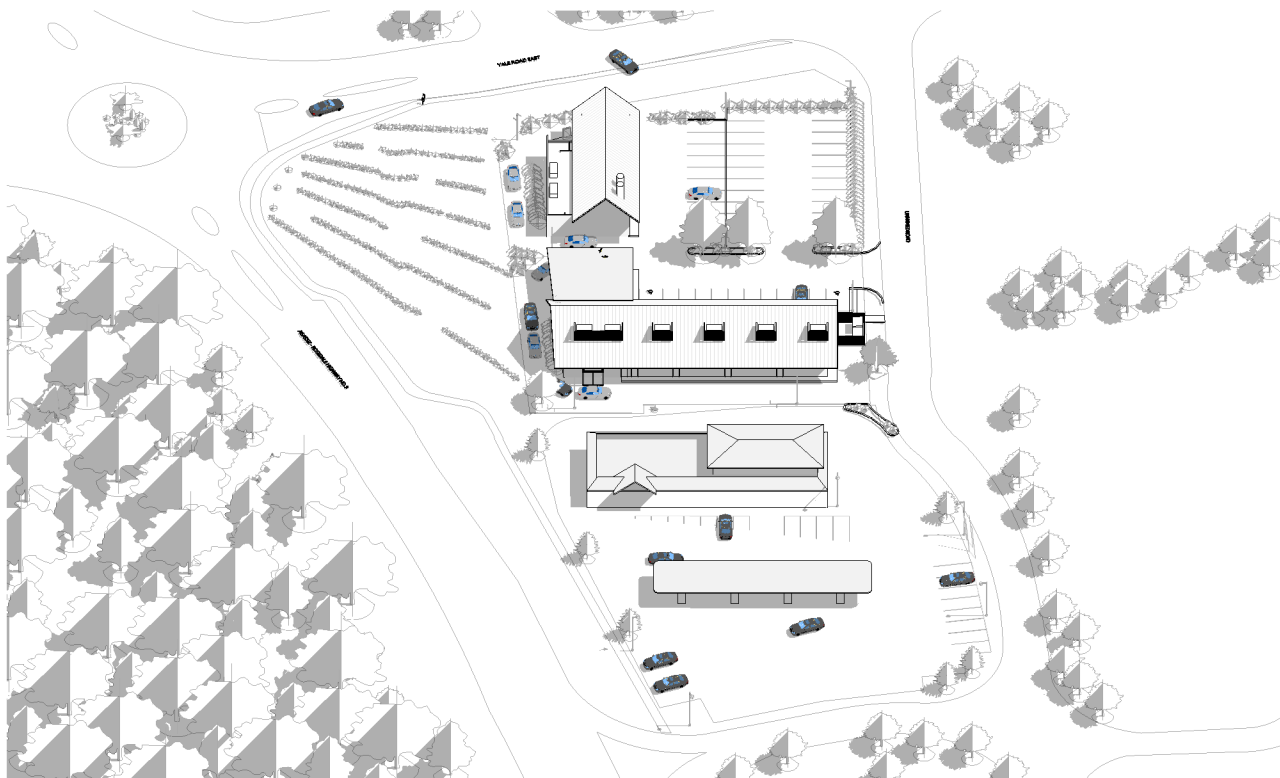
© COPYRIGHT 2020 ALL RIGHTS RESERVED

CROSS ARCHITECTURE INC

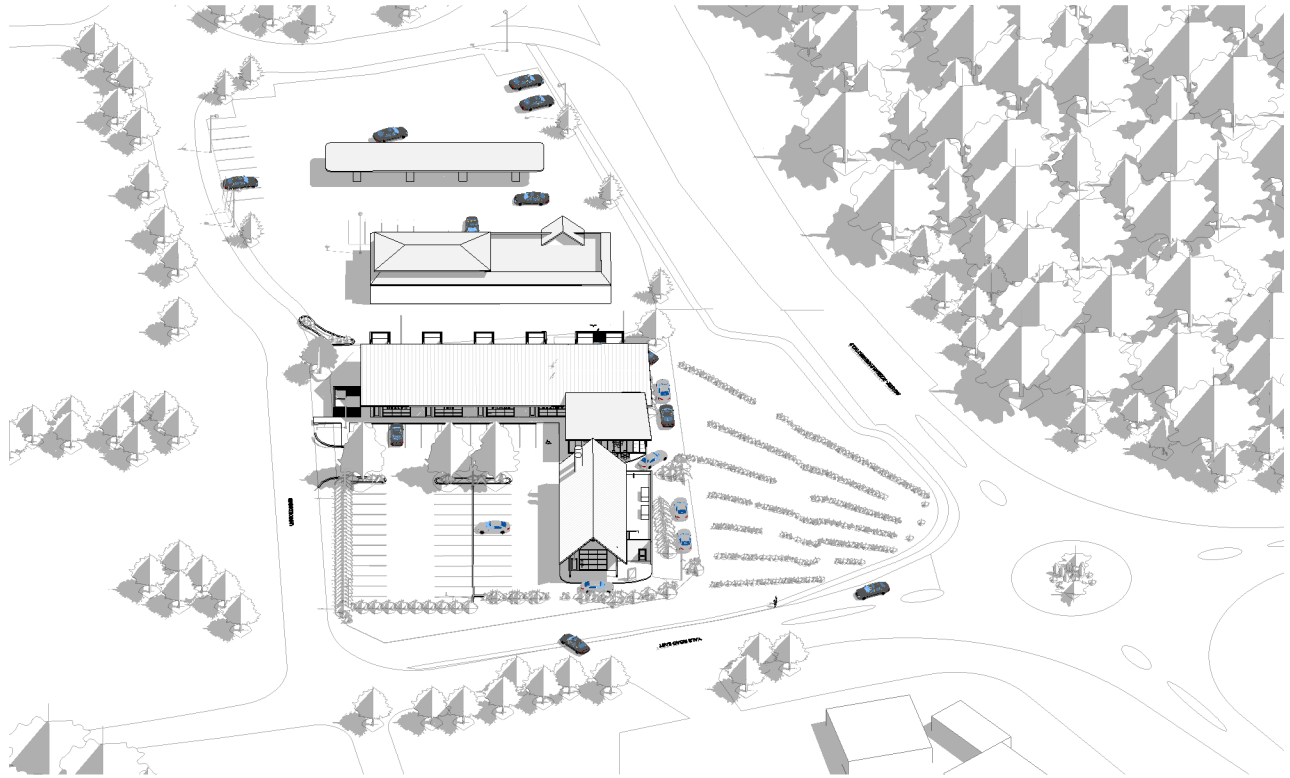




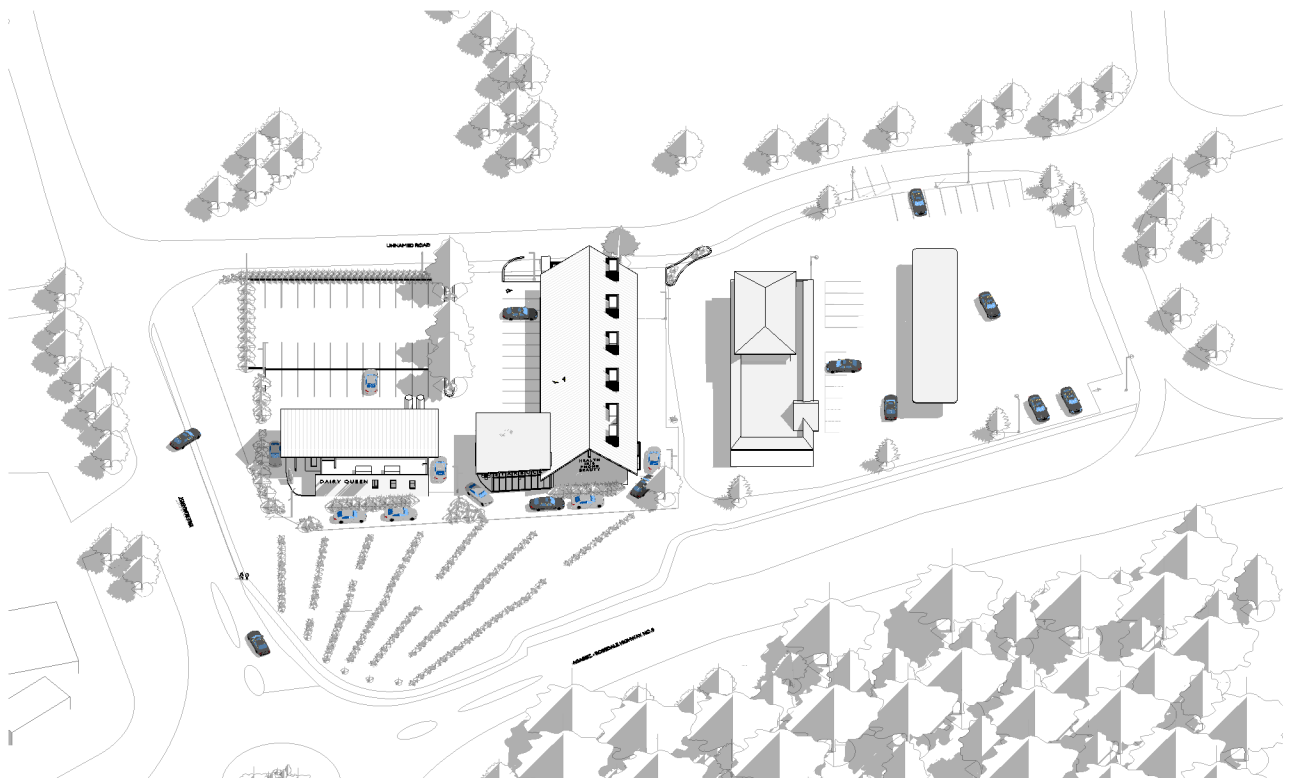
01 East Perspective



03 South Perspective



02 North Perspective



04 West Perspective



DATE DESCRIPTION

ROSEDALE
52964 Yale Road, Chilliwack, BC

DP SUBMISSION

Renderings

scale:
12" = 1'-0"

1913

DP.901

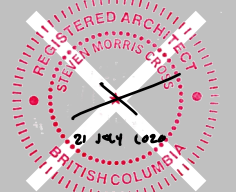
2020-07-21 11:41:21 AM

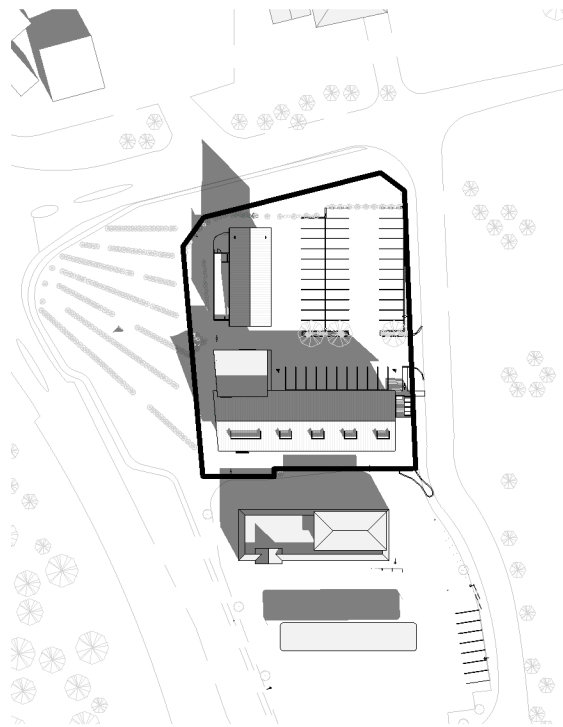
Drawings are to be read in conjunction with each other, any discrepancies found on any drawings are to be reported to the architect before commencing work.

Contractors are responsible to ensure that all work is executed to the requirements of the latest edition of the B.C. Building Code.

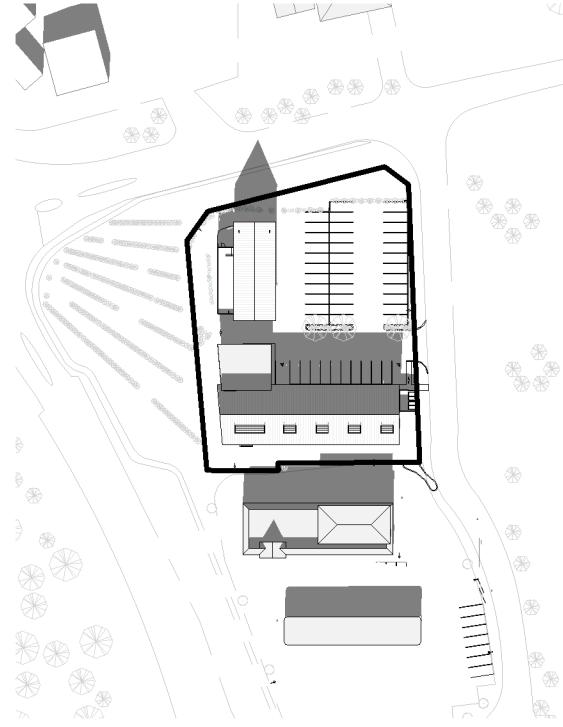
© COPYRIGHT 2020 ALL RIGHTS RESERVED

CROSS ARCHITECTURE INC

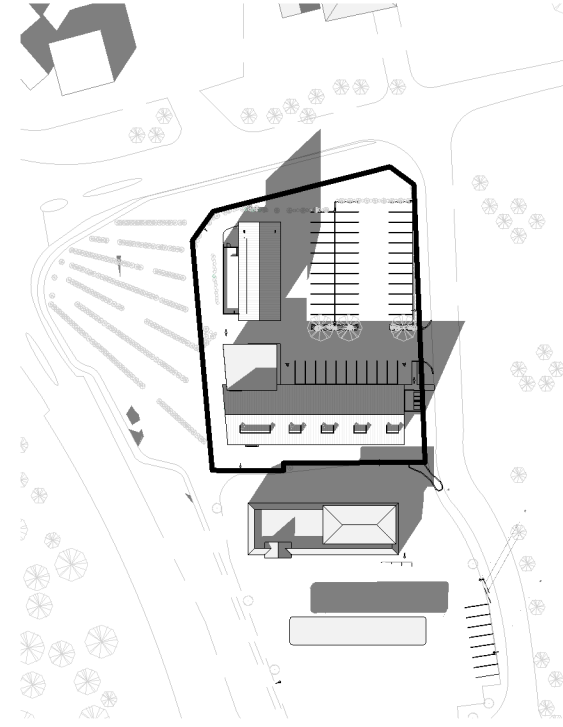




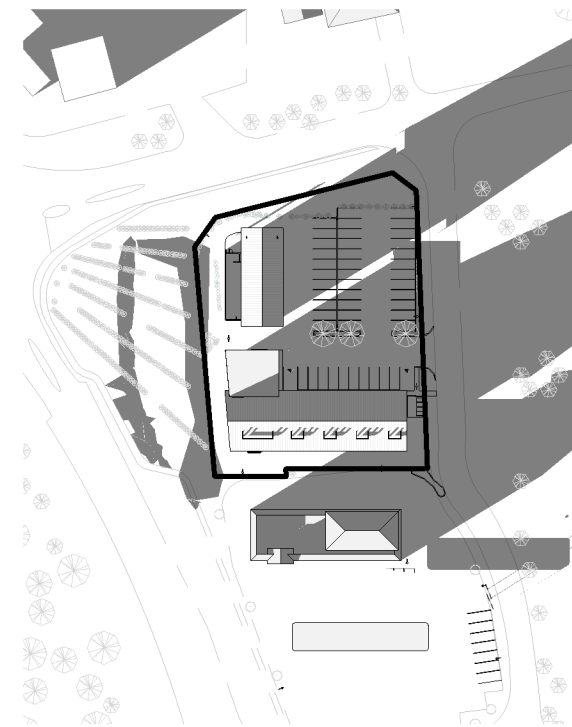
01 Winter Solstice - 10 AM
1" = 160'-0"



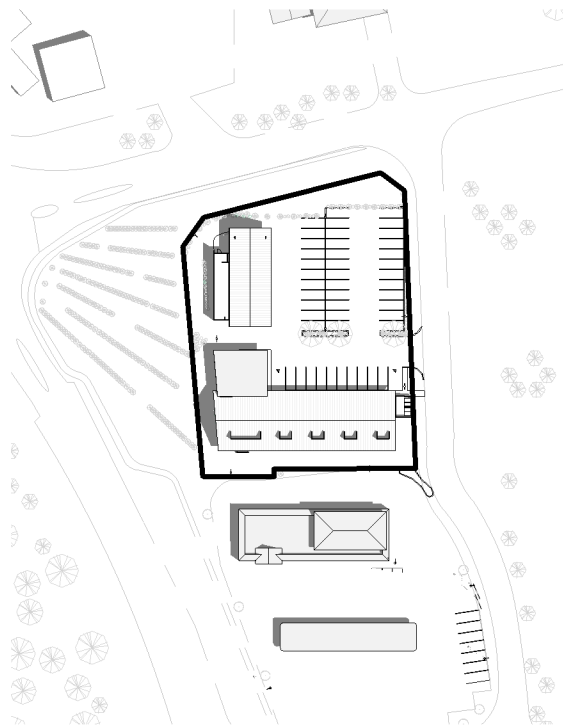
02 Winter Solstice - 12 PM
1" = 160'-0"



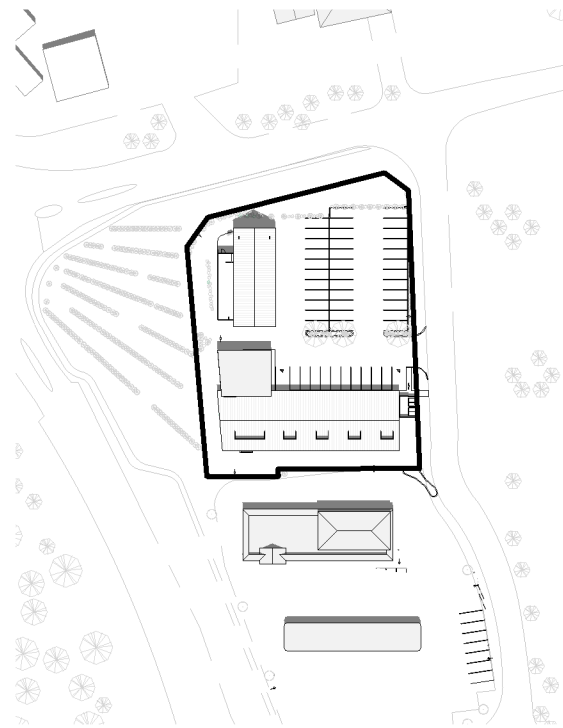
03 Winter Solstice - 2 PM
1" = 160'-0"



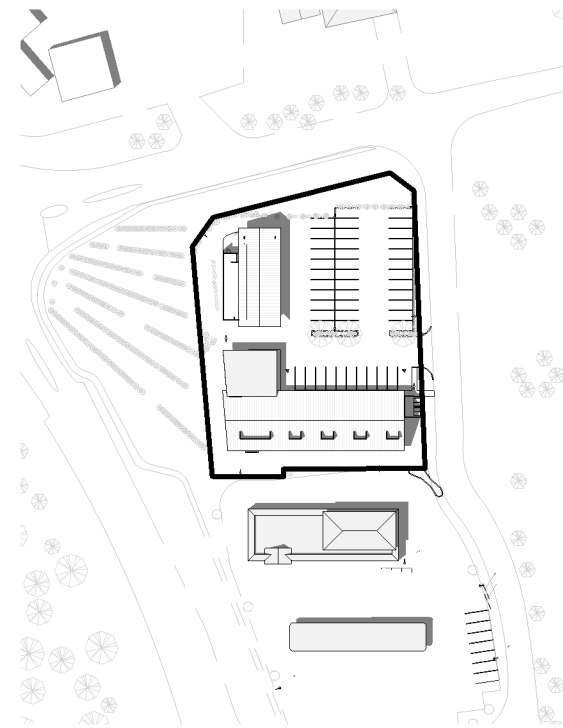
04 Winter Solstice - 4 PM
1" = 160'-0"



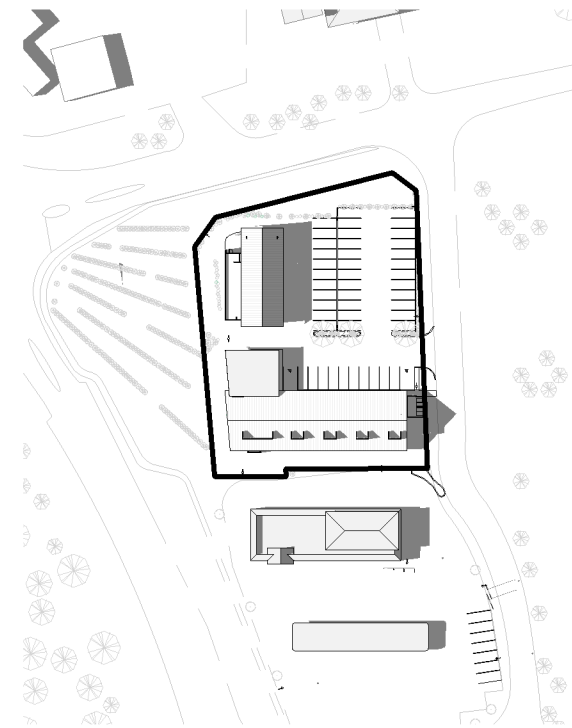
05 Summer Solstice 10 AM
1" = 160'-0"



06 Summer Solstice 12 PM
1" = 160'-0"



07 Summer Solstice 2 PM
1" = 160'-0"



08 Summer Solstice 4 PM
1" = 160'-0"

May 5, 2020

File Ref: C19-5621/A

Fraser Valley Regional District
45950 Cheam Avenue
Chilliwack, BC V2P 1N6

Attention: David Bennett, Planner

Reference: 52964 Yale Rd., Rosedale, B.C
Drainage Design Brief

Summary

The following outlines the proposed storm water management plan for the commercial development proposed at 52964 Yale Road. The existing development south of the proposed development constructed a storm sewer system that provided service to the subject lot. This included storm sewer, storm water treatment systems, and infiltration facilities.

1. Existing Development

The existing development south of the proposed development was designed by MJL Engineering Ltd., Project No. 212012, dated October 12, 2012. The design was for a proposed gas station, roadway design, and future development for five different buildings. The design included water, sanitary, and storm services provided for each location, and labeled future if it was to be built at a later time. The proposed storm system at the time of development included storm sewers, catch basins, storm water treatment, and infiltration facilities.

2. Water treatment

An oil/silt treatment facility is located on the development south of the project site and just before the infiltration facility. This treatment facility appears to have been designed to treat all of the run-off entering the infiltration facility.

3. Detention/Infiltration Design

The existing design from MJL Engineering's design proposed an infiltration rock pit. The rock pit was designed to include the proposed development, as well as other areas, at a runoff coefficient of 0.90. This information can be seen on the attached sheet SK01. Calculating the pervious and impervious area of the new commercial development, the weighted average run-off coefficient is as follows:

Pervious area (R=0.30): 369 sq. m
Impervious area (R=0.90): 3501 sq. m
Total area: 3870 sq. m
Weighted Run-off Coefficient: $(369 \times 0.30) + (3501 \times 0.90) / 3870 = 0.84$

The required infiltration system storage volume that is required for the proposed development, including the catchment areas originally planned for the existing infiltration system, is 219 m³. Refer to the attached spreadsheets for calculations.

The infiltration storage volume provided by the existing infiltration system is 221 m³. Therefore, there is adequate capacity in the existing infiltration system to handle the storm water run-off for the proposed development.

4. Signature

We trust that this information meets your expectations. Should you have any questions or concerns, please contact the undersigned at your convenience.

Yours truly,
Wedler Engineering LLP

Per:

Reviewed by:



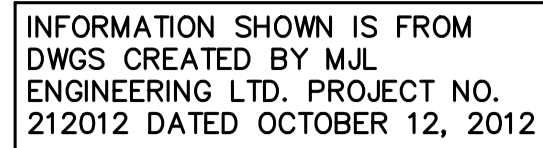
Patrick Mango
Civil Design Engineer

André Gagné, P. Eng.
Project Engineer
agagne@wedler.com

cc: Steven Cross, X Architecture
Jay Lee, Rhee Ga Holdings

Enclosures:

- Wedler Drawing No. C19-5621/A-SK01: Storm Water Management Plan – Overall Design
- Wedler Engineering Soak-Away Sizing Calculation Sheet

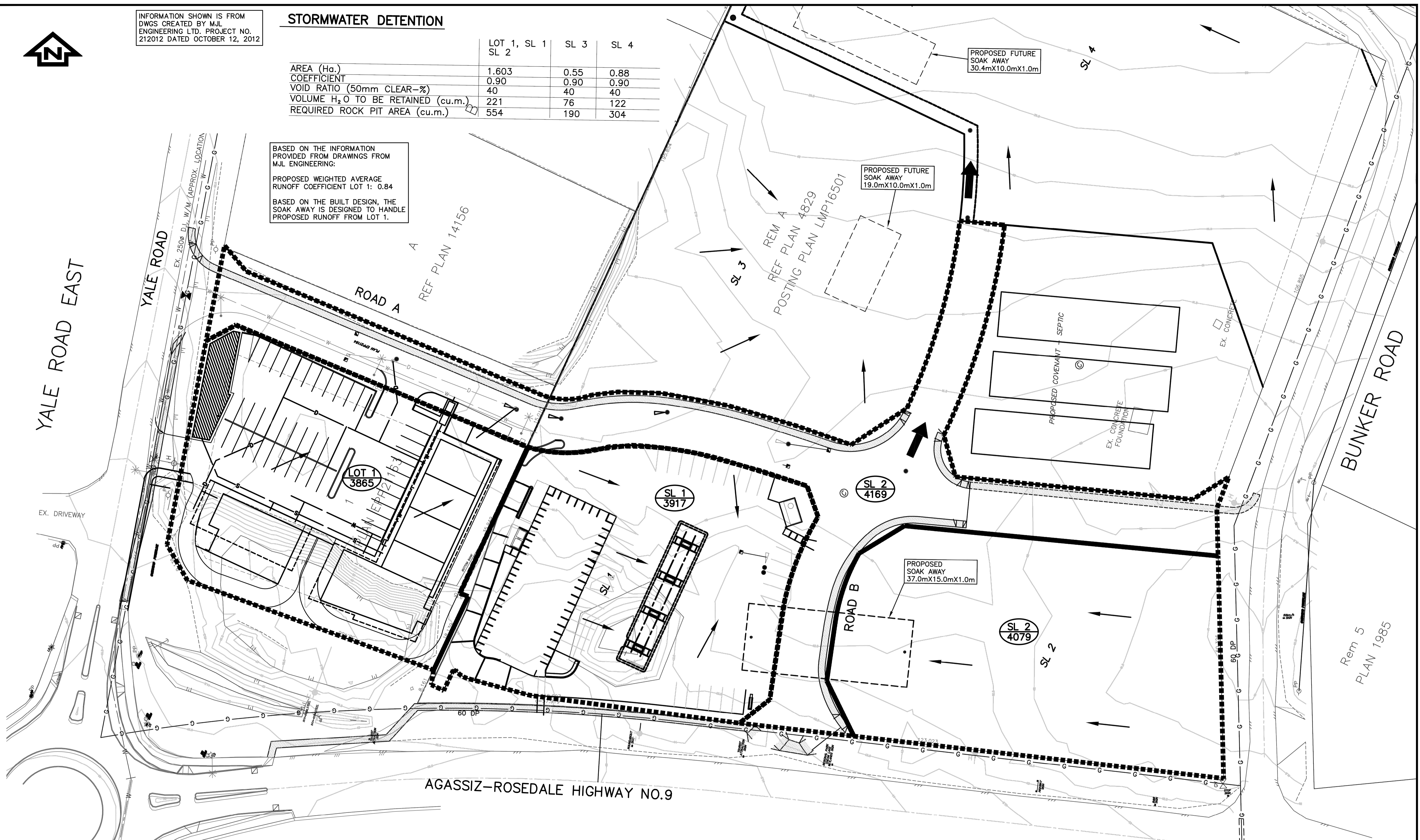


	LOT 1, SL 1 SL 2	SL 3	SL 4
AREA (Ha.)	1.603	0.55	0.88
COEFFICIENT	0.90	0.90	0.90
VOID RATIO (50mm CLEAR-%)	40	40	40
VOLUME H ₂ O TO BE RETAINED (cu.m.)	221	76	122
REQUIRED ROCK PIT AREA (cu.m.)	554	190	304

BASED ON THE INFORMATION
PROVIDED FROM DRAWINGS FROM
M/JL ENGINEERING:

PROPOSED WEIGHTED AVERAGE
RUNOFF COEFFICIENT LOT 1: 0.84

BASED ON THE BUILT DESIGN, THE
SOAK AWAY IS DESIGNED TO HANDLE
PROPOSED RUNOFF FROM LOT 1.



LEGAL:	A	ISSUED FOR DEVELOPMENT PERMIT	2020-05-01	PJM					
BM/ TBM:									
	REV	DESCRIPTION	YYYY-MM-DD	BY	REV	DESCRIPTION	YYYY-MM-DD	BY	

PROJ. MGR.	ALG
DESIGN/DRAWN	PJM
PEER REVIEWED	--
HORIZ. SCALE	1: 400
VERT. SCALE	



THE WEDLER GROUP

- **Abbotsford**
1.604.746.0300
- **Chilliwack**
1.604.792.0651
- **Courtenay**
1.250.334.3263
- **Surrey**
1.604.588.1919

RHEE GA 0808 HOLDINGSS LTD.
COMMERCIAL DEVELOPMENT
52964 YALE ROAD, ROSEDALE, BC

STORM WATER MANAGEMENT PLAN OVERALL DESIGN

DRAWING NO.		OF	1
C19-5621/A-SK01			
LOCAL GOVERNMENT FILE			
PHASE		REVISION	
		A	



SOAK-AWAY SIZING CALCULATION SHEET

Client: **Rhee Ga Holdings**
Project: **52964 Yale Rd. Commercial Development**
Project #: **C19-5621/A**
Soak-Away Desc: **Existing Soak Away - Updated Design**

Date Printed: **May 5, 2020**
By: **PJM**

	Area (m ²)	Runoff Coefficient
Lot 1 (Proposed)	3870	0.84
Ex. SL1	3917	0.9
Fut. SL2	8248	0.9
Combined	16035	0.89

Infiltration Rate Used	144	mm/hr
Length	37.00	m
Width	15.00	m
Depth	1.00	m
Footprint	555	m ²
Perf. Pipe Size	150	mm
Perf Pipe Storage	0.7	m ³
Storage Provided (40% void ratio)	222.4	m ³
Max. Storage Req'd	219.6	m ³

Discharge Data

Allowable Offsite Release 0.0000 m³/s **None**
Release rate from infiltration 0.0222 m³/s

Time min	Intensity mm/hr	Q _{in} m ³ /s	Q _{out} m ³ /s	Vol. _{in} m ³	Vol. _{out} m ³	Vin-Vout m ³
0	0.00	0.0000	0.0000	0.00	0.00	0.00
5	64.16	0.2533	0.0222	75.98	6.66	69.32
10	45.56	0.1798	0.0222	107.90	13.32	94.58
15	37.29	0.1472	0.0222	132.47	19.98	112.49
30	26.48	0.1045	0.0222	188.13	39.96	148.17
60	18.80	0.0742	0.0222	267.16	79.92	187.24
120	13.35	0.0527	0.0222	379.40	159.84	219.56
360	7.76	0.0306	0.0222	661.48	479.52	181.96
720	5.51	0.0217	0.0222	939.37	959.04	-19.67
1440	3.91	0.0154	0.0222	1334.01	1918.08	-584.07



July 14, 2020

File Ref: C19-5621/A

Fraser Valley Regional District
45950 Cheam Avenue
Chilliwack, BC V2P 1N6

Attention: David Bennett, Planner
Reference: 52964 Yale Road, Chilliwack, BC
Updates to Drainage Design Brief

A Drainage Design Brief, dated May 5, 2020, was submitted to the Fraser Valley Regional District (FVRD) based on preliminary design drawings, dated April 9, 2020. An update to the Drainage Design Brief was previously provided on June 15, 2020, based on updated drawings dated June 5, 2020. Further updated preliminary design drawings have been prepared, based on changes to the proposed site plan, dated July 14, 2020.

The most current updated site plan adjusts the amount of landscaped area versus pavement area in order to accommodate additional area for wastewater treatment facilities. These changes resulted in a net change to the amount of impervious area of approximately 34 square metres. Below are the new calculations for the weighted run-off coefficient calculations.

Pervious area (R=0.30):	400 sq. m
Impervious area (R=0.90):	3470 sq. m
Total area:	3870 sq. m
Weighted Run-off Coefficient:	$(400 \times 0.30 + 3470 \times 0.90) / 3870 = 0.84$

This change results in a negligible fraction of the total site area, the weighted run-off coefficient remained unchanged. As such, the information contained in the Drainage Design Brief, dated May 5, 2020, is unaffected by the changes to the updated site plan.

We trust that this information meets your expectations. Should you have any questions or concerns, please do not hesitate to contact the undersigned.

Yours truly,

Wedler Engineering LLP

Per:

André Gagné, P.Eng.
Project Engineer
agagne@wedler.com



cc: Steven cross, X Architecture
Virginia Melandri, X Architecture
Jay Lee, Rhee Ga Holdings

2020.07.20

Steven Cross
X Architecture
23230 Billy Brown Road
Langley, BC, V1M 4G1
sc@xarchitecture.com

David Bennett
Fraser Valley Regional District
45950 Cheam Avenue
Chilliwack, BC, V2P 1N6
dbennett@fvrd.ca

Exterior Light Impact Letter

Below is the required Exterior Light Impact letter that shows the outdoor lighting strategy of the design, according to Fraser Valley Regional District Subdivision and Development Servicing Bylaw No. 1319, 2015 and Land Development Bylaw 2014, No. 3055.

The lighting design proposed for this development intends to:

- Improve public safety on the proposed parking lot with full-cutoff davit-type luminaire, designed to minimize light trespass and glare.

Poles shall have an anti-theft device on or inside the pole hand hole to limit access to the main wiring. Poles will be supplied with a galvanized finish and a powder coat finish.

- Provide accessible and inviting outdoor spaces using full-cutoff wall mounted fixtures

These fixtures will be installed lower than 4 meters above grade and will be oriented towards the wall in order to avoid impacting vehicle traffic, and glare. All wall mounted fixtures will have warm colour temperature (2200-2700 Kelvin), and will have dimmers and timers to regulate based on peak/off-peak hours.

- Reduce light pollution.

All light sources are intended to minimize light spill onto adjacent properties, glare that can reduce visibility for vehicle and pedestrian traffic as well as sky glow, resulting from light scattering in the atmosphere at night.

- Reduce energy usage and maintenance costs by using LED lighting sources.
- Minimize the ecological impacts by using LED lighting sources. These do not contain hazardous materials and are highly recyclable.



July 30, 2020

File 19-01

Rhee Ga Holdings Ltd.
53003 Bunker Road
Rosedale, BC
V0X 1X0

Attention: Mr. Doo-Jun Lee

RE: Feasibility Assessment for Proposed On-Site Wastewater Treatment System 52964 Yale Road East, Popkum BC

The site plan attached to our April 9, 2019 report has been updated to reflect a new layout. No other changes have been made to our April 9, 2019 report.

Further to your request, Arden Consulting Engineers Ltd. (ACE) has completed a limited review and assessment of the subsurface conditions at 52964 Yale Road East Popkum, BC for the purpose of assessing the parcel's ability to support an onsite wastewater treatment system for the proposed new commercial development. .

BACKGROUND

The site is currently undeveloped has been cleared and is level. It is approximately 0.39 ha in size and bounded by a commercial property to the south, Highway 9 to the west, Yale Road East to the north and a laneway to the east. There are no surface water courses on the subject parcel nor neighboring parcels within 30m or other physical features that would preclude the development of an onsite wastewater treatment system. The parcel is serviced by the Fraser Valley Regional District's water supply system and as such there is no requirement to drill a water well. It is desired to develop the property to include 4 commercial retail units along with 3 food premises.

The corresponding design flow rate for the future development is calculated to be 9,160 Lpd based and accordingly, the discharge would be governed by the *Sewerage System Regulation* (SSR) administered by the Fraser Health Authority (FHA). The design flow rate is summarized in Table 1 below.

ARDEN CONSULTING ENGINEERS LTD.

28049 Myrtle Ave, Abbotsford, BC V4X 2P5 Phone: (604) 807-1712 Fax: (604) 626-4980
www.arden-engineering.com



<i>Item</i>	<i>units</i>	<i># of units</i>	<i>Flow per unit (L)</i>	<i>Flow (L/day)</i>	
<i>Drive Through Restaurant</i>	seat	30	60	1,800	
	employees	8	50	400	
Subtotal					2,200
<i>Bakery/coffee shop</i>	seat	20	200	4,000	
	employees	4	50	200	
Subtotal					4,200
<i>Pizza</i>	seat	5	60	300	
	employees	2	50	100	
Subtotal					400
<i>Commercial retail</i>	m ²	472	5	2,360	
Subtotal					2,360
Total				9,160	

It is assumed that the both the pizza and drive through restaurants will serve fast food with paper service as opposed to washable dishware (plates and cutlery etc) and will be open less than 16 hours per day.

SUBSURFACE INVESTIGATION FOR SEWAGE DISPOSAL

A subsurface investigation was conducted by ACE on January 23, 2019 for the purpose of evaluating the subsurface conditions. Seven testpits were advanced around the perimeter of the property. The test pits were advanced using a medium sized tracked excavator to depths ranging from 1700- 2500mm Below Ground Surface (BGS) and the subsurface conditions were logged by a member of our engineering staff. The locations of the testpits were chosen to reflect the future development plans and not to encumber the development of the site.

Six percolation tests and one double ring infiltrometer test were additionally performed to assess the soil permeability. The percolation holes were presoaked for 4 hours prior to timing. The locations of the test pits, double ring infiltrometer and percolation tests are shown on the attached site plan. Only test pits 2 through 5 were judged to be suitable for effluent dispersal under the SSR. Test pit 1 contained significant amounts of clay and silt and Test pits 6 & 7 contained nonnative fill. No seepage or water table was encountered to the depths investigated.

Detailed logs of the test pits are attached. The percolation test results are presented in Table 1 below.

Table 1- Percolation test Results

Perc Hole #	Rate (min/inch)	Depth Below Ground Surface (cm)
1	19	90
2	2	90
3	30	90
4	15	40
5	2.5	86
6	10	81

The average percolation rate was 13 minutes per inch. Percolation testhole 1 was located near testhole 1 and outside of the area considered for location of the effluent dispersal field. Percolation test 6 is located outside of the effluent dispersal area shown



on the attached site plan, however, the subsurface conditions in this area are favourable and as such the effluent dispersal field could be shifted to include this area if desired. One double ring infiltrometer test was also performed using a trucked water supply yielding an infiltration rate of 10.8m/day which is considered to be very favourable an indicative that a more aggressive hydraulic loading rate (HLR) may be possible. The double ring infiltrometer test was only run for approximately 3 hours due to the limited water supply (3,000 L). A longer duration test will need to be run at the design stage.

Options for Effluent Dispersal

Given the relatively high design flow and the high percentage of proposed hard surfacing, Type 3 effluent will be required to reduce the effluent dispersal area. Type 3 effluent is treated by a sewage treatment system to achieve the following standards:

- Biochemical Oxygen Demand (BOD₅) < 10 mg/L
- Total Suspended Solids (TSS) <10 mg/L.
- Fecal coliform bacteria < 400 CFU per 100mL

A Sewer Treatment Plant (STP) is typically required to produce type 3 effluent. A grease trap should proceed the STP and should be installed on the kitchen discharges of each food premise. The influent organic strength (BOD₅) should be assumed to be on the order of 800 mg/L for design purposes. National Sanitation Foundation (NSF) approved package STPs designed for typical residential strength wastewater are likely not suitable for this application given the presence of the food premises.

ACE has calculated the area required for the effluent dispersal field based on the projected design flow rate and Type 3 effluent.

Table 3 – Summary of Area Required for Effluent Dispersal

Area required
Type 3 (m2)
115 (3m x 39m)

The required area for a Type 3 system is shown on the attached site plan. If desired the dispersal area could be shifted as far east to the vicinity of testhole 5 and/or split into two equally sized hydraulically separated dispersal areas in order to accommodate road access. It is noted that the effluent dispersal area cannot be located beneath hard surfacing including driveways and parking areas.

NEIGHBORING WELLS

A cursory field review was conducted to locate the nearest neighboring wells. The area is serviced by the Fraser Valley regional district water supply system and it was confirmed that the closest residences to the proposed effluent dispersal area on the north side of Yale road east (52975, 52945 and 52905) have a connection to the water supply system. The parcel to the east 52984 Yale Road East has not connected to the FVTD system and is still serviced by a private well. The well location is shown on the attached site plan and is outside of the required 30m setback from the proposed effluent dispersal area.



This letter has been prepared by ACE exclusively for Rhee Ga Holdings Ltd. and is intended to provide an assessment of the parcel's ability to accommodate a future septic system. The conclusions made in this report reflect ACE's best judgement in light of the information available at the time of testing. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. ACE accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this letter.

The findings and conclusions documented in this report have been prepared for specific application to this site and have been developed in a manner consistent with that level of care normally exercised by septic design professionals currently practicing under similar conditions in the area.

We trust that this provides the information you currently require. If you have any questions or require comment, please feel free to contact the undersigned.

Yours truly,

ARDEN CONSULTING ENGINEERS LTD.

PER:

Rob Arden, P.Eng

Encl Site Plan
 Test pit Logs



Test Pit 1

0-96" Clayey Silt and gravel, frequent cobbles and shale, occasional boulders, angular, light brown to grey, medium dense, some mottling
No seepage

Test Pit 2

0-16" Silty sand and gravel, dark brown, dense, dry
16-40" Silty sand and gravel (granular), medium dense, dark brown
40-103" Color change to grey, broken shale, frequent cobbles, occasional boulders, angular some mottling. Localized seepage @40" due to clay pocket
No seepage at depth

Test Pit 3

0-36" Silty sand and gravel, dark brown, loose to medium dense
36-96" Silty sand and gravel, some clay, grey, frequent cobbles, angular, broken shale, occasional boulders
No seepage, no mottling

Test Pit 4

0-32" Silty sand and gravel, dark brown, medium dense
32-60" Sand and Gravel, some silt, brown, (granular), medium dense
60-100" Silty sand and gravel, greyish brown, frequent cobbles and broken shale, angular, medium dense
No seepage

Test Pit 5

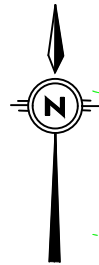
0-24" Sand and gravel, some silt, brown, medium dense
24-90" Sand and Gravel, some silt, trace clay, medium dense, frequent cobbles and shale, occasional boulders, angular.
No Seepage

Test Pit 6

0-36" Silty sand and gravel, tree debris (fill)
36-66" Clayey silt and gravel, grey, firm.
No Seepage

Test Pit 7

0-12" Sand and gravel, some silt, grey (fill)
12-72" Silty sand and gravel, some clay, medium dense, greyish brown, frequent cobbles and shale,
72-96" sand and gravel, some silt, brown, angular.
No Seepage



LEGEND

- LOCATION OF TEST PIT
- LOCATION OF PERCOLATION TEST
- LOCATION OF DOUBLE RING INFILTRMETER TEST
- LOCATION OF WELL
- LOCATION OF WATER SERVICE

0 5 10 15 20 METRES

SCALE 1:400

NOTE: ORIGINAL SEAL IN RED

SEAL

ACE ARDEN
CONSULTING
ENGINEERS LTD.

CLIENT:

RHEE GAA HOLDINGS

PROJECT 52964 YALE ROAD EAST

TITLE JULY 2020 SITE LAYOUT

DATE OF ISSUE
JUL 30/20
DWN BY: JD

PROJECT No.
19-01

DWG. No.
1 OF 1

REV.
01

CANCEL PRINTS BEARING EARLIER NUMBER

December 5th, 2018
Project No.: WG1-1406

Doo-Jun Lee
Rhee Ga Holdings
53003 Bunker Road
Rosedale BC V0X 1X0

Submitted To: Doo-Jun Lee
Email: djl4904@gmail.com

GEOTECHNICAL ASSESSMENT

**Proposed Retail & Commercial Development at
52964 Yale Road, Rosedale, B.C.**

Submitted By: Rajinder Bains, M.Eng. P.Eng.
Western Geotechnical Consultants Ltd.
#20-3275 McCallum Road
Abbotsford B.C. V2S 7W8
T. 604.385.4244 | F. 604.385.4245 | E. rbains@westerngeo.ca

1.0 INTRODUCTION

Western Geotechnical Consultants Ltd. (WesternGeo) has completed this *Geotechnical Assessment* for a proposed Retail & Commercial Development at Rosedale, B.C. The purpose of this assessment is to provide a professional opinion pertaining to the feasibility of the proposed development and to provide comments and geotechnical recommendations for the following:

- Depth to competent subgrade for the proposed building;
- Allowable soil bearing pressures for proposed building;
- Subgrade preparation for proposed building;
- Excavation and backfilling;
- Compaction requirements for structural backfill;
- Comments regarding groundwater conditions;
- Recommendations for pavement structure design; and
- Geotechnical hazard assessment of the proposed development.

The scope of work performed for this assessment included the following tasks:

1. A reconnaissance level site investigation to observe the current conditions at the site, including observations of site topography, surficial soil, vegetation, surface water, and drainage conditions;
2. A desktop review of relevant available background information including published geologic maps and related subsurface information, hazard Analysis in the adjoining areas and available survey information
3. Evaluation and geotechnical engineering analysis of the collected data;
4. Preparation of this summary geotechnical report to present the findings, recommendations, design parameters, and conclusions for the geotechnical aspects of the project;
5. Depth to competent subgrade for the proposed building foundations;
6. Allowable soil bearing capacity for building foundations; and
7. Hazard assessment of the subject site in accordance with the Fraser Valley Regional District (FVRD)- Popkum Bridal Falls Landslide Hazard Part of Electoral Area D.

Attachments to this report include a soil logs and test pit location plan. Environmental considerations are outside the scope of this report. This report may be used by the Fraser Valley Regional District for development and building planning purposes.

2.0 PROJECT AND SITE DESCRIPTION

The subject property is located at the civic address of 52964 Yale Road, Rosedale, B.C. The property is roughly rectangular in shape, runs approximately 70 m (N-S) by approximately 50 m (E-W). It is bounded by gas station/commercial lot to the south, Lane way to the east, Yale Road to the north and HWY 9 to the west. The site was empty and cover with bush and grass. Based on site Topographical plan, the site general flat at west portion with approximate elevation 42m, and the grades drops from 48 to 42m at east portion from eastside towards to west.

The site conceptual layout plan and Topographical plan was provided by JY Architecture Inc. WesternGeo understand that the proposed development will be one (1) story multi-unit commercial buildings with pavement parking and driveway. Any change may require additional investigation and/or revision of the geotechnical report/recommendations.

3.0 FIELD WORK & METHODOLOGY

A member of WesternGeo's technical staff visited the site on October 25, 2018 and conducted a reconnaissance level site investigation. The site reconnaissance included a visual investigation where features such as topography, vegetation, and surface water features were observed and recorded.

Following the reconnaissance review, a subsurface soil investigation consisting of seven (7) test pits using a track-mounted excavator was completed. WesternGeo's staff visually logged and classified the soil excavated from each test pit. Representative soil samples were obtained for further classification and testing in the laboratory. The subject site was traversed by foot in accessible areas and any features of engineering geological significance were recorded.

A desktop study of relevant available information was conducted following the site investigation. This study included the review of resources such as geologic maps and landslide Hazards studies. This information was used to assist in determining site specific geotechnical parameters needed for geohazard risk analysis and to determine construction recommendations including requirements for site preparation, foundation design, and drainage.

This report was prepared to summarize the results of the site investigation, desktop study, and subsequent engineering analysis. The intent of this report is to provide the key stakeholders with information regarding the condition of the subject site from a geotechnical perspective.

4.0 SOIL AND GROUNDWATER CONDITIONS

Published geological mapping by J. E. Armstrong (1977) of the Geological Survey of Canada shown on Map 1487A, Surficial Geology Chilliwack West of Sixth Meridian British Columbia includes the site area. The map indicates that most of the site and vicinity is underlain by slope deposits (SAo) consisting of fan and landslide gravel and sand and rubble up to 10 meters thick overlying Fraser River sediments. The

mapped landslide deposits extend about 3.5 kilometers north out on to the valley floor from the mountains. This is consistent to the soil conditions observed during WesternGeo's site investigation.

The surficial deposits at the subject site include alluvial fan with colluvium sand, gravel, and rubble, which overly the Fraser river sediment. The alluvium fan is deposited by debris flow of unconsolidated sediments over 6000 years ago after a major landslide at the end of the last glaciation period of the Fraser river valley area. The landslide or rock slide that deposited the colluvium material may be associated with the Cheam slide that occurred over 6000 years as previously discussed.

Weathering, erosion and other depositional processes over the years may account for the surficial fine silt at the subject area. The bedrock at the subject area consists of Chilliwack group limestone. However, the higher steep mountain areas consist of meta-sedimentary rocks with few visible outcrops at the lower mountain slopes.

The following describes the specific soil conditions interpreted from the test pits and our local knowledge and experience in the area. Interpretation of soil conditions between test pits is based on an assumed continuity of the subsurface conditions. The soil conditions described are generalized and are based on the available information in the test pits. Variation in soil stratigraphy can occur between test pits and in the areas not investigated. The soil logs should only be referenced for soil and groundwater conditions at the specific location of each test pits.

Based on the test pit results and the general information presented in the geological maps, the stratigraphy in order of increasing depth of occurrence is summarized as follows:

Table 1: General Soil Conditions (TP18 - 01 to TP18 - 07)

Approximate Depth	Soil Unit
0.0 m to 0.1m	TOP SOIL: silt, rootlets, organic, soft, dark brown, moist.
0.3m to depths explored (TP18-01,02,03,04&07)	SAND: and gravel(land slide), some silt, rock rubble(angular, sharp edge), dense, brown, moist
0.3 to 1.0m	SAND: and gravel(land slide), some silt, rock rubble(angular, sharp edge), dense, brown, moist
1.0 to 2.0m	SAND: and silt, compact, dark brown, moist
2.0 to 3.0m (TP18-05)	GRAVEL: some sand, dense, brown, dry to moist
0.3 to 1.0m	SAND: and gravel(land slide), some silt, rock rubble(angular, sharp edge), dense, brown, moist
1.0 to 1.6m	SAND: and silt, compact, mottled colour, moist
1.6 to 3.0m (TP18-06)	GRAVEL: some sand, dense, brown, dry to moist

Groundwater seepage was not encountered during investigation. Seasonal fluctuations in the groundwater table are expected. It is anticipated that a localized and perched groundwater level may develop near the existing ground surface after/during periods of intense rainfall and/or rapid snowmelt.

5.0 DISCUSSION AND RECOMMENDATIONS

The results of the subsurface explorations indicate that the proposed Retail & Commercial development is feasible. The sand and gravel (Land Slide, rock rubble) will provide a competent subgrade for the construction of the proposed future building structure.

Based on the Schedule D5 (Development Permit Map) related to Fraser Valley Regional District(FVRD), Official Community Plan (OCP) for Popkum Bridal Fall Bylaw No.0200, the proposed site is in the zone of DPA 5-D (West Popkum Commercial Development Permit Area).

Also based on the Schedule D2 (Boundary and Area Designation Plan Map) related to FVRD, OCP Bylaw #0200, the site is in the area of Highway Tourist Recreation Commercial Area (HTRC). As per schedule D4 map, proposed development site is away from the Floodplain and Environmentally sensitive areas.

5.1 Seismicity

According to the B.C. Building Code (BCBC 2018), the Site Classification for this property is 'C' – Very dense soil and soft rock. The National Building Code (NBCC 2015) Seismic Hazard Calculation for the coordinates 49.1849 North and 121.7637 West gives a Peak Ground Acceleration (PGA) of 0.220 g for a return period equivalent to 2 percent in 50 years. The design Spectral Accelerations for this seismic event are given in Table 2 below.

Table 2: Seismic spectral coefficients from NBCC (2015)

Sa(0.2)	Sa(0.5)	Sa(1.0)	Sa(2.0)	Sa(5.0)	Sa(10.0)	PGA	PGV
0.488	0.404	0.254	0.161	0.059	0.020	0.220	0.317

Based on B.C. Building Code (BCBC 2018) Table 4.1.8.4. –H & I, the value of F(PGA) and F(PGV) were interpolated as 1.0 and 1.0, respectively. The site has no liquefaction potential due to the observed soil consistency.

5.2 Geohazard Assessment

5.2.1 Methodology

WesternGeo conducted a review of available and pertinent documents on the subject site in addition to site reconnaissance and assessment of pertinent data from the desktop study. Documents reviewed include past geotechnical, previous hazard assessment report and the geologic hazard map. Geotechnical Hazard Study Popkum-Bridal Falls, Fraser valley Regional District (FVRD) and official Community Plan related to electoral area "D", Bylaw No.0200 were reviewed.

The site reconnaissance consists of systematic identification of any potential hazard through observation and inspection of geological features at the site. The hazards are characterized in descriptive terms as suggested by Cave (1993).

5.2.2 Previous Studies

- **Slope Stability**

The study identified an old landslide termed “Cheam Slide” that occurred over 6000 years back. The Cheam Slide originated southeast of the study area, which is outside the subject site, and its debris covered the Fraser River lowland. Referenced work by Nauman (1990) that a future major slide could occur in that region was counteracted by the work of Thurber Consultants (1991) in which no critical failure surface or discontinuity was found.

Further assessment by Hardy BBT Limited (1991) found no evidence of major future slope instability at the area, and concluded that rock falls or small slides from the Cheam Mountain Cliffs and the Cheam Slide pose no hazard at the subject site, thus, of low risk.

5.2.3 Landslide Assessment

The existing natural slope of the Cheam Mountain is well vegetated and there is evidence of instability from site inspection. The nearest steep section of the Cheam Mountain with a slope of 100% is approximately 3km from the proposed development. Besides, there is adequate building setback from the base of the mountain in the unlikely event of slope instability.

Thus, WesternGeo concurs with previous assessments that the probability of massive failure of the Cheam Mountain slope is very low (i.e., less than 1:10000), thus, it does not pose any hazard to the proposed development.

5.2.4 Flood and Erosion Assessment

The subject site is not within a flood and environmental hazard zone as delineated in the Schedule D4 (attached) by the FVRD, OCP for Popkum Bridal Falls Part of Electoral Area “D”, Bylaw No 200.

The site is periodically subjected to flooding during the rainy season, but the flooding may be due to ground water rather than surface water. Surface water runoff seeps into the rock rubble at the base of the mountains to the south and then apparently flows north as ground water through the inclined layer of buried rock rubble that extends under the site. During severe storms, the water may rise above the ground surface and pond at the site’s low areas, because the water is confined laterally by Gray road which is elevated at the site’s east boundary.

To minimize the risk of flood water damage, the engineered fill to be constructed at the site should be extended well above the existing natural grade, and storm drain measures should be devised to intercept and divert ponding water to locations east of Gray Road.

5.2.5 Snow Avalanche and Debris flow

The subject site is more than 3 km from the top of the Cheam Mountain crest, and the distance between the crest and site is well vegetated with mature trees and shrubs. Besides, there is no historical evidence of any major freshet at the subject area.

Therefore, the release of any accumulated snow or ice from the mountain top would have no impact on the subject site because of the resistance offered by the vegetation, and the large buffer zone between the mountain top and the subject site.

Flow of saturated unconsolidated sediment or debris flow from the mountain side will have low impact on the proposed development, which is approximately 2 km from the base of the mountain. Thus, avalanche and debris flow from the mountain top are of no concern at the subject site.

5.2.6 Liquefaction Assessment

The subject area is located within an area of moderate seismicity with a peak ground acceleration of 0.22g for a 2% probability of exceedance in 50 years. The major risks posed by seismic activities are landslide and soil liquefaction. As discussed earlier, previous studies have shown that the last major slide occurred over 6000 years ago and the likelihood of any major slide in the future is low.

Based on the observation from the testpit exploration program, no water seepage was observed in any of the testpit TP18-01 to TP18-07, the water table is considered deep enough to impact the soil aggregates at subject site. Since unsaturated soil aggregates cannot liquefy, and the non-liquefiable crust is enough buffers to mitigate the effect of any deep seated liquefaction. Thus, liquefaction hazard is of very low concern at the subject site.

In assessing hazards associated with the subject site, this geotechnical report has used the 1993 paper *Hazard Acceptability Thresholds for Development Approvals by Local Government* by Dr. Peter W. Cave (Cave Report), acknowledged throughout British Columbia as a defining document in hazard assessment. The Cave Report details eight distinct geotechnical hazards that may pose a risk to a site. The eight hazards have been summarized in Table 3. A site is rarely subject to all eight hazards; however, depending on location and the site-specific profile characterization, a property may be at risk from any combination of the hazards listed below.

Table 3: Relevant Geotechnical Hazards

Hazard	Definition
Inundation by Flood Waters	Characterized by an unusually large volume of water flowing in a channel, a portion of which may flow overbank. Floods are associated with other hazards such as channel erosion and avulsion.
Mountain Stream Erosion and Avulsion	Characterized by the lateral migration of a stream channel (erosion) and/or the abandonment of the channel course to occupy a different position on the alluvial fan (avulsion). This type of hazard may be associated with large flow events.
Debris Flows and Debris Torrents	A rapid, channelized, fluid transport of water saturated debris. A debris flow path can be divided into an initiation zone, a transport and erosion zone, and a deposition zone. Transport often initiates within steep gullies and is conveyed downslope at high velocity which can damage forests and human development.
Debris Floods	A large flood event associated with an unusually high amount of sediment movement consisting of coarse bed load material and organic material such as trees and logs.
Landslides, Small-Scale, Localized	The sudden and rapid or gradual and incremental downslope movement of soil, rock, and other weathered materials.
Snow Avalanche	The sudden and rapid downslope movement of snow and ice. Avalanches develop large amounts of kinetic energy, damaging anything in its path.
Rock Fall	The detachment of individual rock fragments from a steep slope and their gravitational downslope transport.
Landslides, Massive, Catastrophic	The sudden and rapid movement of unusually large amounts of soil, rock and other weathered materials.

During the site walkover, WesternGeo did not see signs of surface erosional features that pertain to susceptibility to hazard as a result of *Erosion and Avulsion, Debris Flow and Torrents, Debris Floods, Snow Avalanche, or Rock Fall*.

5.2.7 Risk Analysis

The Cave Report describes the appropriate regulatory responses and approval conditions to development applications for sites that may be susceptible to geohazards. The regulatory response for a specific site is based on the applicable geohazards, the expected return period of these hazards and the scope of the proposed development. The Approval Rating is quantified in a response range from 1 to 5, with corresponding conditions of approval provided below in Table 4.

Table 4: Hazard-related Responses to Development Approval Applications

Approval Rating	Approval Response
1	Approval without conditions relating to hazards.
2	Approval, without siting conditions or protective works conditions, but with a covenant including “save harmless” conditions.
3	Approval, but with siting requirements to avoid the hazard, or with requirements for protective works to mitigate the hazard.
4	Approval as (3) above, but with a covenant including “save harmless” conditions as well as siting conditions, protective works or both.
5	Not approvable.

The subject site was analyzed according to the criteria for *New Building*. Estimates of the annual return frequencies of potential geohazards and the appropriate approval responses to these probabilistic estimations are listed in Table 5.

Table 5: Estimated Annual Return Frequency for Geotechnical Hazards

Hazard	Return Frequency	Approval Rating
Inundation by Flood Waters	n/a	1
Mountain Stream Erosion/Avulsion	n/a	1
Debris Flows and Debris Torrents	n/a	1
Debris Floods	n/a	1
Landslides, Small-Scale, Localized	n/a	1
Snow Avalanche	n/a	1
Rock Fall	n/a	1
Landslides, Massive, Catastrophic	n/a	1

It is important to note that accurately defining annual return frequencies and probabilities of occurrence in terms of qualitative values is extremely complex. In accordance with standard geotechnical principles and practices, the estimation of these values is based on the observed site conditions, engineering judgment and all the information available to WesternGeo at the time the report was written. The estimated probabilities of occurrences are based on the estimated annual return frequencies described in the Cave Report.

Based on this assessment, no hazards associated with landslides, flooding and erosion, avalanche and debris flow, and soil liquefaction were identified. WesternGeo considered that the geotechnical hazard associated with the subject site is very low. Therefore, the development described in this report to be safe for the use intended.

5.3 Subgrade Preparation

Proposed development be stripped and cleared of topsoil, organics, loose soils and other deleterious material, in order to expose an inorganic subgrade consisting of stiff silt or dense to very dense sand and gravel or rock rubble.

Stripping of unsuitable materials should be undertaken with a tracked excavator equipped with a clean-out bucket. The excavator should progressively retreat from the stripped area to avoid disturbance to the exposed subgrade.

- Site preparation should be undertaken during extended periods of dry weather.
- All loose or deleterious material should be stripped to expose the load bearing surfaces, to a distance beyond the building footprint equal to at least the depth of the excavation. Recommended maximum cut slopes should be 1.5 H to 1 V (Horizontal: Vertical).
- If any excavated area will remain open during extended period of time, rainfall protection measures are recommended. Polyethylene Sheeting should be used to cover all cut faces and slopes. Temporary berms and channels shall be constructed to divert water away from excavations.
- A bedding layer of 100 mm (minimum thickness) of 19 mm clear crush gravel, or approved equivalent, should be placed directly on the excavated surface.
- All water-softened or disturbed soils should be removed and replaced with compacted clean cohesionless well-graded structural fill, or as directed by the Geotechnical Engineer.

5.4 Foundations

The proposed building(s) should be supported on shallow or spread footings founded on the dense stiff silt or dense to very dense sand and gravel or rock rubble layer, or on well-compacted structural fill (within any over-excavated areas). Geotechnical recommendations for footings are provided below:

It is recommended that design bearing pressures up to 100 kPa (approximately 2,000 psf) be used for sizing the footings under Serviceability Limit States (SLS) design, where they are directly supported on the sand and gravel or rock rubble layer. This design value can be increased by a factor of 1.5 under Ultimate Limit States (ULS) conditions.

Minimum spread footing dimensions of 0.6 metres (2.0 feet) and minimum strip footing widths of 0.9 metres (3 feet) are recommended. It is recommended that foundations be placed at least 0.45 metres (18 inches) below final exterior grades for frost protection and confinement. Foundations should step at no more than 1.0 vertical to 2.0 horizontal.

The total settlement of footings, under serviceability loading conditions, designed in accordance with the above recommendation should be less than one inch. Differential settlement would be expected to be less than 25 millimetres over a span of 10 metres (an inch over a span of 30 feet) or 0.002 radians angular distortion. This corresponds to a deflection ratio of 1 in 500.

It is suggested that the footing areas be protected with an approximately 2 inch thick layer of clear crushed gravel.

Foundation subgrades should be protected from freezing. In addition, groundwater and rainwater runoff should be directed to temporary sumps, and footing subgrades should be kept free of standing water. Footing concrete should not be poured on frozen ground.

The engineered fill materials placed in support of footings should be compacted in thin lifts to at least 100% of the maximum dry density as determined in accordance with ASTM D698 (*Standard Proctor*), within 2% of its "optimum" moisture content for compaction.

The Geotechnical Engineer of Record should be provided with an opportunity to review the exposed subgrade prior to footing construction or concrete pouring.

5.5 Pavement Sections

The subgrade preparation for the road works may be done as mentioned in Section 5.3 above. After stripping the topsoil, the sand/sand & gravel should be compacted and approved by the geotechnical engineer before placing subgrade fill above. The finished subgrade should be and proof rolled to the satisfaction of the geotechnical engineer before placing the subbase layer. The onsite soils are considered competent for the road widening and new section. Based on the Fraser Valley Regional District (Rose Dale) Subdivision and Control Bylaw and soil conditions encountered, the following minimum pavement section is recommended for internal subdivision roads to meet the minimum requirements.

- 75mm Asphalt Pavement
- 150 mm Crushed Granular Base
- 350 mm Select Granular Subbase
- Undisturbed approved subgrade

The base and sub-base should meet the requirements given in Master Municipal Specifications Sections 02233 and 02234. In accordance with the Master Municipal Specifications, the compaction of granular base and sub-base materials should be to a minimum of 95% Modified Proctor maximum dry density (ASTM D-1557). Silt subgrade soils should be excavated neat and should not be compacted. Any disturbed or water softened subgrade soils should be cleaned out just prior to placing structural fill or the subbase layer.

5.6 Excavation

Where excavation is required and exceeds a depth of 1.2m, WorkSafe B.C. guidelines for stable excavations should be followed to ensure a safe working area. For planning purposes, temporary cut

slopes deeper than 1.2 m, may be cut with side slopes of 1H:1V according to WorkSafe BC regulations unless specific on site recommendations are provided by the geotechnical engineer. Should seepage be encountered during excavation, the slopes should be flattened.

The Geotechnical Engineer should also be notified in advance in order to review the excavation to verify its stability and safety of workers entering the excavation and/or provide shoring details.

5.7 Slab-on-grade

Floors formed as concrete slab-on-grade construction should be underlain with a minimum 100 mm-thick layer of 19 mm clear crushed gravel, or alternatively clean cohesionless well-graded granular fill (with less than 5 percent passing the 0.075 mm sieve), compacted to a minimum of 95% of Standard Proctor maximum dry density (ASTM D-698). A moisture barrier, such as 7.5 mil polyethylene sheeting should be installed underneath the slab to minimize potential for slab dampness. A thin layer of sand can be placed underneath the poly to avoid puncture due to gravels.

5.8 Structural Fill

Structural fill is defined as fill placed beneath any load bearing area. Imported structural fill should consist of inorganic, clean cohesionless (less than 8 percent passing the 0.075 mm sieve), well-graded granular material.

Structural fill should extend beyond the edge of the footing and paved areas by a distance equal to, or greater than the depth of structural fill below these structural elements. Structural fill should be placed in maximum 0.3 m lifts. Table 6 summarizes the compaction recommendations for structural fill for various structural components.

Table 6: Compaction Requirements for Structural Fill

Structural Component	Minimum Compaction
Beneath building envelope, slab-on-grade, and basement wall backfill (non-structural loading)	95% SPMDD*
Beneath pavements and footings (structural loading)	100% SPMDD*

*Standard Proctor maximum dry density

Laboratory Proctor and field density testing should be conducted to confirm that the standards are met. Prior to importing to the site, sources of structural fill should be reviewed by the geotechnical engineer for approval.

5.9 Perimeter Drainage

Footing drains are recommended, should be consisted of 150mm (6 inch) perforated drain pipe surrounded on the top and sides by at least 150mm (6 inches) of nominal 19mm (3/4 inch) drain rock or clear crushed gravel wrapped in filter fabric. A minimum 300mm (1foot) wide zone of free-draining backfill should be placed against foundation walls above the drain rock.

5.10 Utility Trench

Bedding material for utility trenches should have Type 1 gradation, in accordance with Master Municipal Construction Document (MMCD) specifications and should be placed and compacted in lifts to provide a minimum of 95% Modified Proctor maximum dry density (ASTM D-1557) around the pipe, including underneath its haunches. Hand-tamping equipment should not directly contact the pipe and should not be allowed to compact above the pipe until the full 300 mm bedding zone has been placed above it.

Imported trench backfill should consist of pit-run gravel or approved equivalent fill material that follows MMCD guidelines and should be placed only within the zone of trench backfill, above the pipe bedding zone. Trench backfill should be compacted to a minimum of 95% Modified Proctor maximum dry density.

6.0 CONSTRUCTION REVIEW

WesternGeo should be notified during the construction stage in order to facilitate and complete necessary field reviews. As a minimum, the following field reviews are necessary at the following stages:

- Field subgrade review for the proposed house during site stripping,
- Confirmation of subsoil bearing capacity for the proposed development, and
- Compaction testing of structural fill.

Upon request, WesternGeo can issue Schedule B for geotechnical aspects of the Building Permit Application for the individual buildings constructed for this project. To ensure commitment to field reviews, WesternGeo must be notified when the work commences, to conduct the necessary field reviews during construction. WesternGeo cannot assume responsibility or liability for the adequacy of its recommendations when they are used in the field without WesternGeo being retained to review and approve the actual soil conditions during construction.

7.0 LIMITATIONS

The recommendations in this report are provided on the assumption that the contractor will be suitably qualified and experienced. In the event of report revisions, additional funds may be required. The subsurface conditions may vary between testpits and with time. The interpretation of subsurface conditions provided is an opinion and not a certification. Stratigraphic variations in ground conditions

are expected due to its historic nature. As such, all explorations involve an inherent risk that some conditions will not be detected.

Environmental considerations are outside the scope of this geotechnical report. Our recommendations do not constitute a design of any proposed structural element. Incorporation of our recommendations into the design does not constitute us as designers. The designers of such elements must consider the appropriateness of our recommendations.

Samples obtained from site will be retained in our laboratory for 60 days. Should no instructions be received to the contrary, these samples will then be discarded. This report has been made in accordance with the generally accepted soil and foundation engineering practices.

No other warranty, expressed or implied, is made. If the project does not start within 2 years of the report date, the report may become invalid and further review may be required. This report has been prepared for the exclusive use of the client, Rose Dale the Fraser Valley Regional District, and their "Approved Users" for specific application to the development mentioned in the report. WesternGeo and its employees accept no responsibility to another party for loss or liability incurred as a result of use of this report. Any use of this report for purposes other than the intended, should be approved in writing by WesternGeo. Contractors should rely upon their own explorations for costing purposes.

The above referenced report "the Report" may be relied upon by the as if the Report was directly issued to the Fraser Valley Regional District, subject to the following conditions:

- The Fraser Valley Regional District will only use the Report for the specific project that is the recipient and subject of the Report.
- To the extent required by law and subject to the Freedom of Information and Protection of Privacy Act, R.S.B.C., 1996, c. 165, as amended, the Fraser Valley Regional District agrees not to disclose or distribute the Report furnished hereunder to any third party unless the Fraser Valley Regional District on the first page of the Report places a prominent statement that "THIS REPORT MAY NOT BE RELIED UPON WITHOUT THE EXPRESS WRITTEN CONSENT OF THE AUTHOR OF THE REPORT".



8.0 CLOSURE

We appreciate the opportunity to be of service to you. If you have any questions regarding the contents of this report, or if we can be of further assistance to you on this project, please call any of the undersigned.

Best Regards,

Western Geotechnical Consultants Ltd.

Prepared By:

Yaodong Yu, B.A.Sc., E.I.T.
Geotechnical Engineer in Training

Reviewed By:

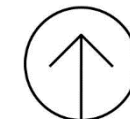
Rajinder Bains, P.Eng., M.Eng.
Geotechnical Engineer



Attachments: **Test Pit Location Plan**
 Soil Logs
 Maps Schedule D2, D4 and D5



Source: GeoBC Ministry of Forests, Lands and Natural Resource Operations



#20-3275 McCallum Rd
Abbotsford BC V2S 7W8

t. 604.385.4244
f. 604.385.4245
t. 1.877.853.5GEO
e. email@westerngeo.ca
www.westerngeo.ca

Client:

Rhee Ga Holdings

Proposed 1 Storey Retail & Commercial Development

Test Pit Location Plan

52964 Yale Road, Rosedale, B.C.

Project Number: WG1-1406

Number: Figure 1

Drawing Date: 11/06/2018

Drawn By: Yaodong Yu

Reviewed By: Rajinder Bains

Scale: NTS

Legend:

TP18-01 Test Pit Location (approximate)

SOIL LOG

TP18-01

CLIENT Rhee Ga Holdings

PROJECT No WG1-1406

PROJECT Retail & Commercial Development

DATUM

NORTHING ---

LOCATION 52964 Yale Road, Rosedale, B.C.

ELEVATION

EASTING ---

DATE TESTED October 25, 2018

METHOD Test Pit

SOIL LOG WG1-1406 2018.10.25 SOIL LOG REVISION 00 YY RB.GPJ TESTING PURPOSE - MI.GDT 11/6/18

DEPTH (m)	CLASSIFICATION	SOIL SYMBOL	MATERIAL DESCRIPTION	SAMPLE TYPE	ELEVATION	DCPT (N)	MOISTURE CONTENT & ATTERBERG LIMITS	POCKET ▲ PENTROMETER (kPa) 100 175 250 325	□ DCPT N VALUE	DEPTH (ft)
0.0			TOP SOIL: silt, organic, rootlets, soft, dark brown, moist SAND: and gravel (land slide), some silt, rock rubble (angular, sharp edge), dense, brown, moist				<div> <div>WP</div> <div>W</div> <div>WL</div> </div> <div>20 40 60 80</div>	<div>20 40 60 80</div>	0	
0.5										
1.0										
1.5										
2.0		GP	@1.8m, change to mottled colour, sandy gravel							
2.5			@2.4m, change to brown colour							
3.0										
3.5			NO water seepage observed End of hole at 3.3 m.							
4.0										

Sample Type: GS- Grab Sample SPT- Standard Penetration Test
ST- Shelby Tube PT- Piston Tube VT- Shear Vane Test

LOGGED BY:
Raj B.



Western Geotechnical Consultants Ltd.
20 - 3275 McCallum Road
Abbotsford, B.C. V2S 7W8
T: 604.385.4244

SOIL LOG

TP18-02

CLIENT Rhee Ga Holdings PROJECT No WG1-1406
 PROJECT Retail & Commercial Development DATUM NORTHING ---
 LOCATION 52964 Yale Road, Rosedale, B.C. ELEVATION EASTING ---
 DATE TESTED October 25, 2018 METHOD Test Pit

DEPTH (m)	CLASSIFICATION	SOIL SYMBOL	MATERIAL DESCRIPTION	SAMPLE TYPE	ELEVATION	DCPT (N)	MOISTURE CONTENT & ATTERBERG LIMITS				POCKET ▲ PENTROMETER (kPa)				DEPTH (ft)	
							WP	W	WL		100	175	250	325		
0.0			TOP SOIL: silt, organic, rootlets, soft, dark brown, moist SAND: and gravel (land slide), some silt, rock rubble (angular, sharp edge), dense, brown, moist				20	40	60	80		20	40	60	80	0
0.5																
1.0																
1.5																
2.0																
2.5																
3.0			Excavation refusal @2.7m due to big size rock, NO water seepage observed End of hole at 2.7 m.													
3.5																
4.0																

SOIL LOG WG1-1406 2018.10.25 SOIL LOG REVISION 00 YY RB.GPJ TESTING PURPOSE - MI.GDT 11/6/18

Sample Type: GS- Grab Sample SPT- Standard Penetration Test
 ST- Shelby Tube PT- Piston Tube VT- Shear Vane Test

LOGGED BY:
 Raj B.



Western Geotechnical Consultants Ltd.
 20 - 3275 McCallum Road
 Abbotsford, B.C. V2S 7W8
 T: 604.385.4244

SOIL LOG

TP18-03

CLIENT Rhee Ga Holdings

PROJECT No WG1-1406

PROJECT Retail & Commercial Development

DATUM

NORTHING ---

LOCATION 52964 Yale Road, Rosedale, B.C.

ELEVATION

EASTING ---

DATE TESTED October 25, 2018

METHOD Test Pit

SOIL LOG WG1-1406 2018.10.25 SOIL LOG REVISION 00 YY RB.GPJ TESTING PURPOSE - MI.GDT 11/6/18

DEPTH (m)	CLASSIFICATION	SOIL SYMBOL	MATERIAL DESCRIPTION	SAMPLE TYPE	ELEVATION	DCPT (N)	MOISTURE CONTENT & ATTERBERG LIMITS	POCKET ▲ PENTROMETER (kPa)	□ DCPT N VALUE	DEPTH (ft)
							WP W WL	100 175 250 325	20 40 60 80	
0.0			TOP SOIL: silt, organic, rootlets, soft, dark brown, moist							0
			SAND: and gravel (land slide), some silt, rock rubble (angular, sharp edge), dense, brown, moist							
0.5										
1.0										
1.5										5
2.0		GP	@1.8m, change to mottled colour, sandy gravel							
2.5			@2.4m, change to brown colour							
3.0										10
3.5			NO water seepage observed End of hole at 3.3 m.							
4.0										

Sample Type: GS- Grab Sample SPT- Standard Penetration Test
ST- Shelby Tube PT- Piston Tube VT- Shear Vane Test

LOGGED BY:
Raj B.



Western Geotechnical Consultants Ltd.
20 - 3275 McCallum Road
Abbotsford, B.C. V2S 7W8
T: 604.385.4244

SOIL LOG

TP18-04

CLIENT Rhee Ga Holdings

PROJECT No WG1-1406

PROJECT Retail & Commercial Development

DATUM

NORTHING ---

LOCATION 52964 Yale Road, Rosedale, B.C.

ELEVATION

EASTING ---

DATE TESTED October 25, 2018

METHOD Test Pit

SOIL LOG WG1-1406 2018.10.25 SOIL LOG REVISION 00 YY RB.GPJ TESTING PURPOSE - MI.GDT 11/6/18

DEPTH (m)	CLASSIFICATION	SOIL SYMBOL	MATERIAL DESCRIPTION	SAMPLE TYPE	ELEVATION	DCPT (N)	MOISTURE CONTENT & ATTERBERG LIMITS	POCKET ▲ PENTROMETER (kPa)	□ DCPT N VALUE	DEPTH (ft)
							WP W WL	100 175 250 325	20 40 60 80	
0.0			TOP SOIL: silt, organic, rootlets, soft, dark brown, moist							0
			SAND: and gravel (land slide), some silt, rock rubble (angular, sharp edge), dense, brown, moist							
0.5										
1.0										
1.5										5
2.0		GP	@1.8m, change to mottled colour, sandy gravel							
2.5			@2.4m, change to brown colour							
3.0										10
3.5			NO water seepage observed End of hole at 3.3 m.							
4.0										

Sample Type: GS- Grab Sample SPT- Standard Penetration Test
ST- Shelby Tube PT- Piston Tube VT- Shear Vane Test

LOGGED BY:
Raj B.



Western Geotechnical Consultants Ltd.
20 - 3275 McCallum Road
Abbotsford, B.C. V2S 7W8
T: 604.385.4244

SOIL LOG

TP18-05

CLIENT Rhee Ga Holdings

PROJECT No WG1-1406

PROJECT Retail & Commercial Development

DATUM

NORTHING ---

LOCATION 52964 Yale Road, Rosedale, B.C.

ELEVATION

EASTING ---

DATE TESTED October 25, 2018

METHOD Test Pit

SOIL LOG WG1-1406 2018.10.25 SOIL LOG REVISION 00 YY RB.GPJ TESTING PURPOSE - MI.GDT 11/6/18

DEPTH (m)	CLASSIFICATION	SOIL SYMBOL	MATERIAL DESCRIPTION	SAMPLE TYPE	ELEVATION	DCPT (N)	MOISTURE CONTENT & ATTERBERG LIMITS	POCKET ▲ PENTROMETER (kPa) 100 175 250 325	□ DCPT N VALUE	DEPTH (ft)
0.0			TOP SOIL: silt, organic, rootlets, soft, dark brown, moist				WP 20 40 60 80 W WL	20 40 60 80	20 40 60 80	0
0.5	GP		SAND: and gravel (land slide), some silt, rock rubble (angular, sharp edge), dense, brown, moist							
1.0			SAND: and silt, compact, dark brown, moist							
1.5	SM									5
2.0			GRAVEL: some sand, dense, brown, dry to moist							
2.5	GP									
3.0			No water seepage observed. End of hole at 3.0 m.							10
3.5										
4.0										

Sample Type: GS- Grab Sample SPT- Standard Penetration Test
ST- Shelby Tube PT- Piston Tube VT- Shear Vane Test

LOGGED BY:
Raj B.



Western Geotechnical Consultants Ltd.
20 - 3275 McCallum Road
Abbotsford, B.C. V2S 7W8
T: 604.385.4244

SOIL LOG

TP18-06

CLIENT Rhee Ga Holdings

PROJECT No WG1-1406

PROJECT Retail & Commercial Development

DATUM _____

NORTHING ---

LOCATION 52964 Yale Road, Rosedale, B.C.

ELEVATION _____

EASTING ---

DATE TESTED October 25, 2018

METHOD Test Pit

SOIL LOG WG1-1406 2018.10.25 SOIL LOG REVISION 00 YY RB.GPJ TESTING PURPOSE - MI.GDT 11/6/18

DEPTH (m)	CLASSIFICATION	SOIL SYMBOL	MATERIAL DESCRIPTION	SAMPLE TYPE	ELEVATION	DCPT (N)	MOISTURE CONTENT & ATTERBERG LIMITS	POCKET ▲ PENTROMETER (kPa) 100 175 250 325 □ DCPT N VALUE	DEPTH (ft)
0.0			TOP SOIL: silt, organic, rootlets, soft, dark brown, moist				WP 20 40 60 80 W WL	20 40 60 80	0
0.5	GP		SAND: and gravel (land slide), some silt, rock rubble (angular, sharp edge), dense, brown, moist						
1.0			SAND: and silt, compact, mottled colour, moist						
1.5	SM								
2.0			GRAVEL: some sand, dense, brown, dry to moist						
2.5	GP								
3.0			No water seepage observed. End of hole at 3.0 m.						
3.5									
4.0									

Sample Type: GS- Grab Sample SPT- Standard Penetration Test
ST- Shelby Tube PT- Piston Tube VT- Shear Vane Test

LOGGED BY:
Raj B.



Western Geotechnical Consultants Ltd.
20 - 3275 McCallum Road
Abbotsford, B.C. V2S 7W8
T: 604.385.4244

SOIL LOG

TP18-07

CLIENT Rhee Ga Holdings PROJECT No WG1-1406
 PROJECT Retail & Commercial Development DATUM NORTHING ---
 LOCATION 52964 Yale Road, Rosedale, B.C. ELEVATION EASTING ---
 DATE TESTED October 25, 2018 METHOD Test Pit

DEPTH (m)	CLASSIFICATION	SOIL SYMBOL	MATERIAL DESCRIPTION	SAMPLE TYPE	ELEVATION	DCPT (N)	MOISTURE CONTENT & ATTERBERG LIMITS	POCKET ▲ PENTROMETER (kPa) 100 175 250 325	□ DCPT N VALUE	DEPTH (ft)
0.0			SAND: and gravel (land slide), some silt, rock rubble (angular, sharp edge), dense, brown, moist				WP 20 40 60 80 W WL	20 40 60 80	20 40 60 80	0
0.5										
1.0										
1.5										
2.0			No water seepage observed. End of hole at 1.8 m.							
2.5										
3.0										
3.5										
4.0										

Sample Type: GS- Grab Sample SPT- Standard Penetration Test
 ST- Shelby Tube PT- Piston Tube VT- Shear Vane Test

LOGGED BY:
 Raj B.

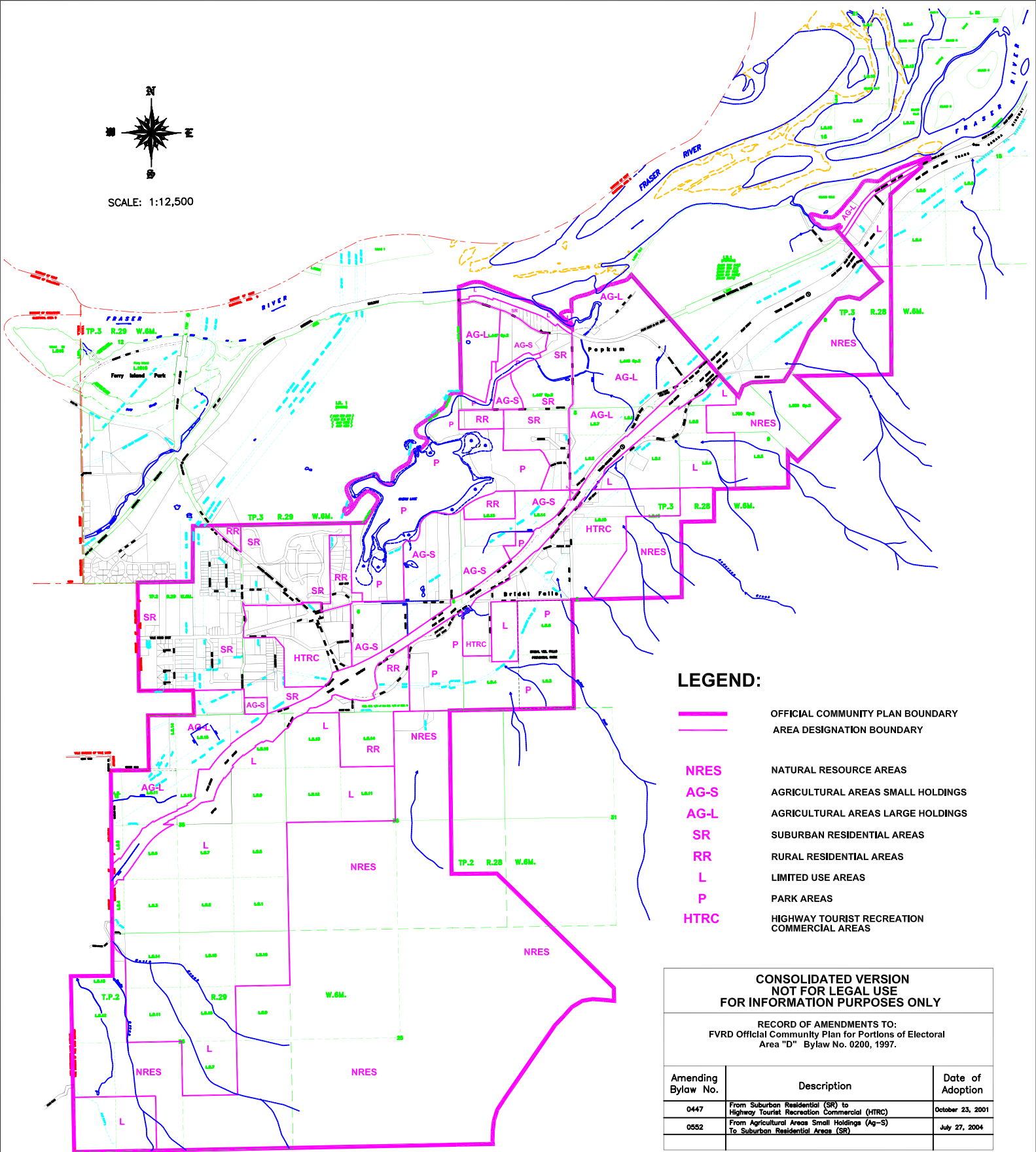


Western Geotechnical Consultants Ltd.
 20 - 3275 McCallum Road
 Abbotsford, B.C. V2S 7W8
 T: 604.385.4244

SOIL LOG WG1-1406 2018.10.25 SOIL LOG REVISION 00 YY RB.GPJ TESTING PURPOSE - MI.GDT 11/6/18



SCALE: 1:12,500



LEGEND:

- OFFICIAL COMMUNITY PLAN BOUNDARY
- AREA DESIGNATION BOUNDARY
- NRES NATURAL RESOURCE AREAS
- AG-S AGRICULTURAL AREAS SMALL HOLDINGS
- AG-L AGRICULTURAL AREAS LARGE HOLDINGS
- SR SUBURBAN RESIDENTIAL AREAS
- RR RURAL RESIDENTIAL AREAS
- L LIMITED USE AREAS
- P PARK AREAS
- HTRC HIGHWAY TOURIST RECREATION COMMERCIAL AREAS

**CONSOLIDATED VERSION
NOT FOR LEGAL USE
FOR INFORMATION PURPOSES ONLY**

RECORD OF AMENDMENTS TO:
FVRD Official Community Plan for Portions of Electoral
Area "D" Bylaw No. 0200, 1997.

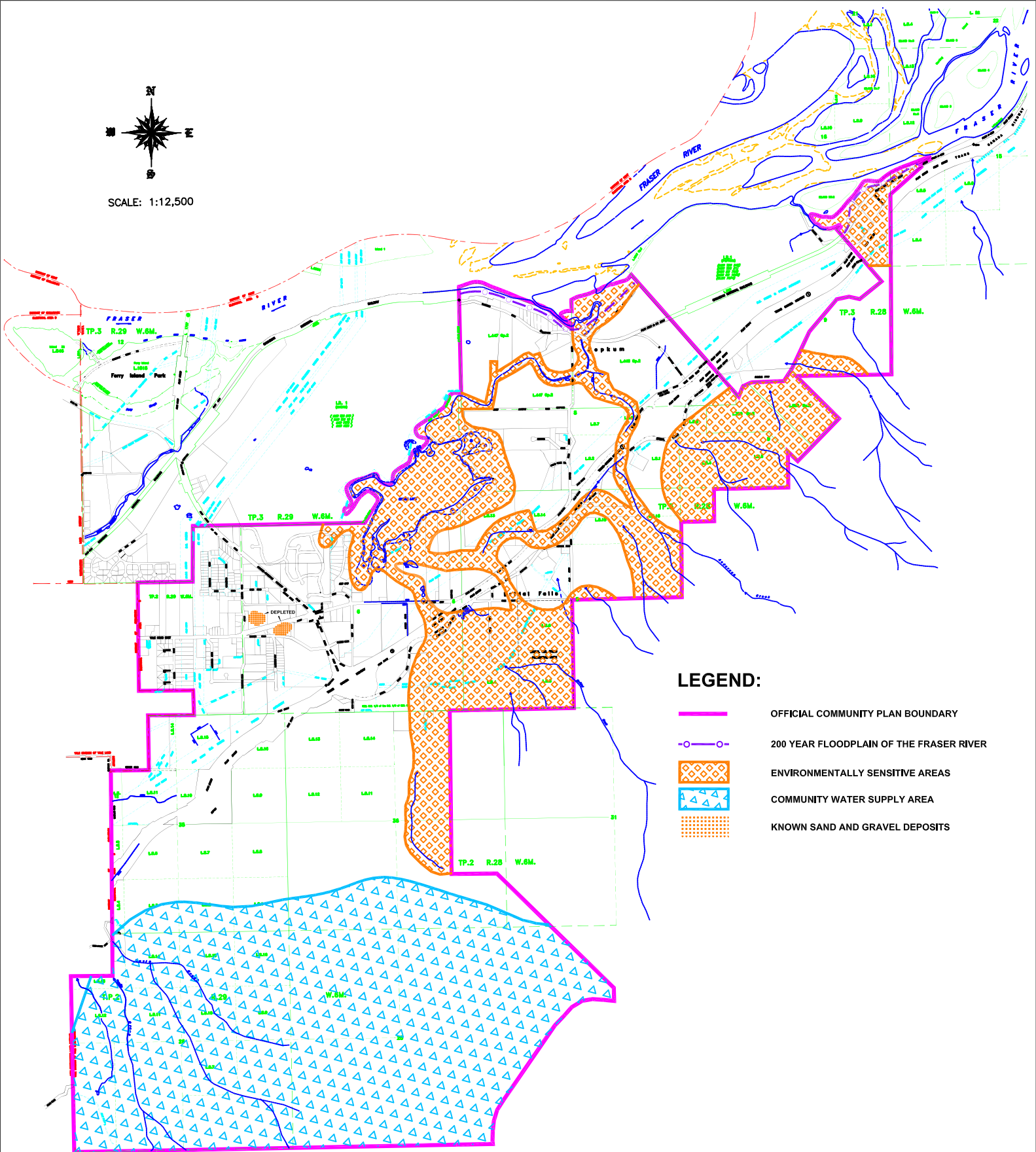
Amending Bylaw No.	Description	Date of Adoption
0447	From Suburban Residential (SR) to Highway Tourist Recreation Commercial (HTRC)	October 23, 2001
0552	From Agricultural Areas Small Holdings (Ag-S) To Suburban Residential Areas (SR)	July 27, 2004

FRASER VALLEY REGIONAL DISTRICT OFFICIAL COMMUNITY PLAN FOR POPKUM BRIDAL FALLS PART OF ELECTORAL AREA "D", BYLAW No.0200

SCHEDULE D2: BOUNDARY AND AREA DESIGNATION PLAN MAP



SCALE: 1:12,500



FRASER VALLEY REGIONAL DISTRICT **OFFICIAL COMMUNITY PLAN FOR POPKUM BRIDAL FALLS** **PART OF ELECTORAL AREA "D", BYLAW No.0200**

THIS MAP COMPRISES PART OF SCHEDULE D4 TO THE OFFICIAL COMMUNITY PLAN FOR POPKUM BRIDAL FALLS AREA, PART OF ELECTORAL AREA "D" REFERRED TO IN THE FRASER VALLEY REGIONAL DISTRICT BYLAW No.0200, 1997.

RECONSIDERED AND ADOPTED THIS 28th DAY OF APRIL, 1998.

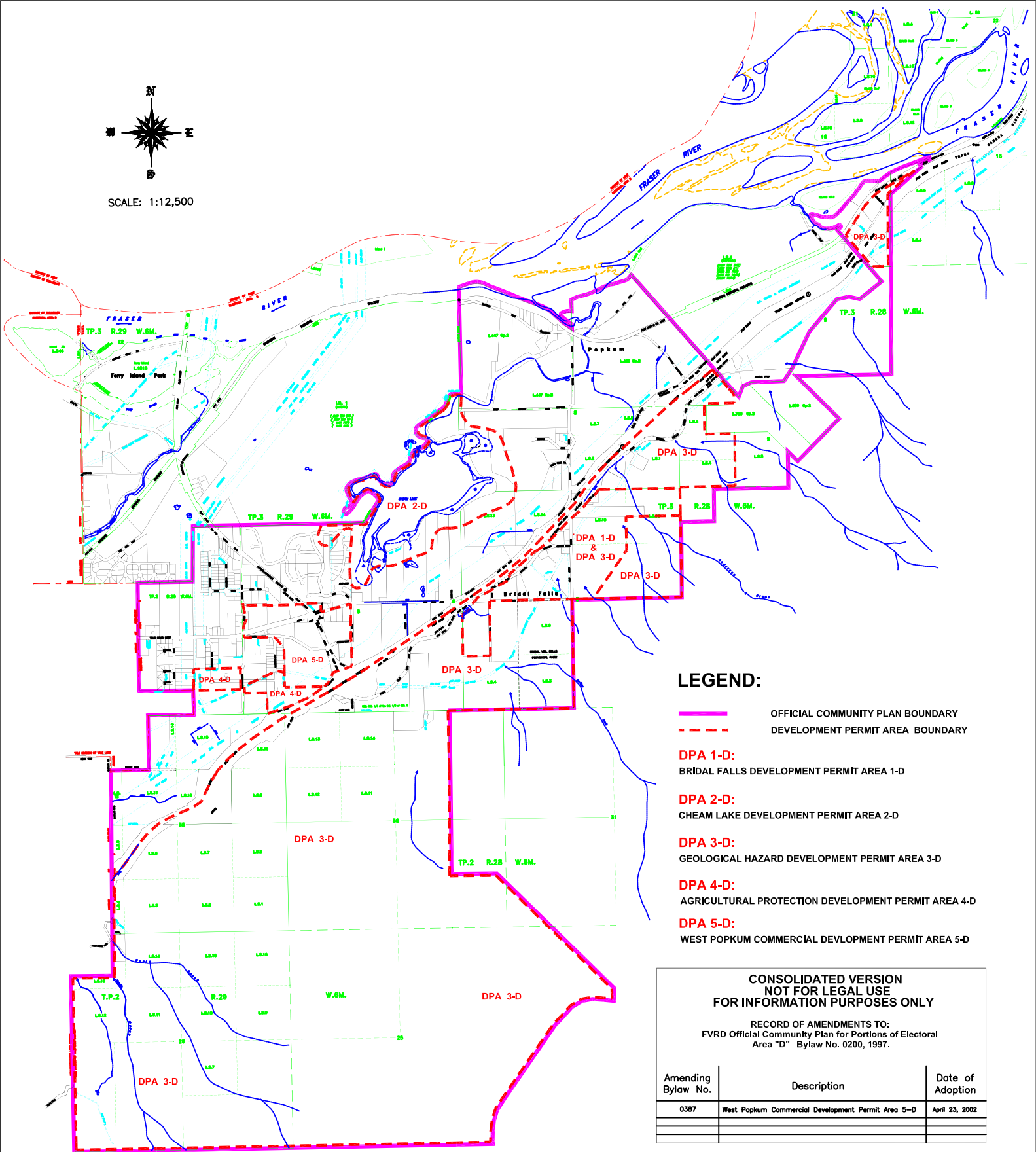
CHAIRMAN _____

SECRETARY _____

SCHEDULE D4: FLOODPLAIN AND ENVIRONMENTAL FEATURES MAP



SCALE: 1:12,500



LEGEND:

- OFFICIAL COMMUNITY PLAN BOUNDARY
- - - - DEVELOPMENT PERMIT AREA BOUNDARY
- DPA 1-D:**
BRIDAL FALLS DEVELOPMENT PERMIT AREA 1-D
- DPA 2-D:**
CHEAM LAKE DEVELOPMENT PERMIT AREA 2-D
- DPA 3-D:**
GEOLOGICAL HAZARD DEVELOPMENT PERMIT AREA 3-D
- DPA 4-D:**
AGRICULTURAL PROTECTION DEVELOPMENT PERMIT AREA 4-D
- DPA 5-D:**
WEST POPKUM COMMERCIAL DEVELOPMENT PERMIT AREA 5-D

CONSOLIDATED VERSION
NOT FOR LEGAL USE
FOR INFORMATION PURPOSES ONLY

RECORD OF AMENDMENTS TO:
FVRD Official Community Plan for Portions of Electoral
Area "D" Bylaw No. 0200, 1997.

Amending Bylaw No.	Description	Date of Adoption
0387	West Popkum Commercial Development Permit Area 5-D	April 23, 2002

FRASER VALLEY REGIONAL DISTRICT OFFICIAL COMMUNITY PLAN FOR POPKUM BRIDAL FALLS PART OF ELECTORAL AREA "D", BYLAW No.0200

SCHEDULE D5: DEVELOPMENT PERMIT AREA MAP

THIS MAP COMPRISES PART OF SCHEDULE D5 TO THE OFFICIAL COMMUNITY PLAN
FOR POPKUM BRIDAL FALLS AREA, PART OF ELECTORAL AREA "D" REFERRED TO IN
THE FRASER VALLEY REGIONAL DISTRICT BYLAW No.0200, 1997.

RECONSIDERED AND ADOPTED THIS 28th DAY OF APRIL, 1998.

CHAIRMAN _____ SECRETARY _____

2020.07.20

Steven Cross
X Architecture
23230 Billy Brown Road
Langley, BC, V1M 4G1
sc@xarchitecture.com

David Bennett
Fraser Valley Regional District
45950 Cheam Avenue
Chilliwack, BC, V2P 1N6
dbennett@fvrld.ca

Zoning Compliance Letter

Below is the required compliance letter that shows our design is compatible with the Regulations provided by the Zoning Bylaw No. 75, Area "D" - Division Twenty-Six: Gateway Commercial (C-5).

2600 PERMITTED USES OF LAND, BUILDINGS, AND STRUCTURES

- (a) Local Commercial Use
- (b) Highway Commercial Use

2601 DENSITY REGULATIONS

There is no residential use proposed on this development.

2602 SETBACKS

- (a) The proposed buildings, of 1 storey, are set back a minimum of 6.0m from any lot lines.
- (b-c) There are no buildings of 2 or more storeys proposed for this development.

2603 HEIGHT

The maximum height of all buildings does not exceed 10.0m, as shown on elevations, on Sheet DP200.

2604 REGULATIONS RESPECTING AREA, SHAPE, AND DIMENSIONS OF NEW PARCELS TO BE CREATED BY SUBDIVISION



No new parcel has been created by subdivision.

2605 CONDITIONS OF USE

All uses are connected to the approved community water system, as shown on Sheet C19-5621 / A-C03

2606 ONE (1) ACCESSORY ONE-FAMILY RESIDENTIAL USE

There will be no residential use on this property.

2607 FLOOR AREA RATIO

The proposed floor area ratio factor is 0.23, therefore it does not exceed the allowable of 0.35.

2608 FLOOR AREA

There are no motel or motor hotel proposed on this property

2609 MAXIMUM LOT COVERAGE

The proposed maximum lot coverage is 22.7%, therefore it does not exceed the allowable of 30%.

2610 SIGNS

Subject to the conditions of Division Three, Section 302 (8), all individual signs do not exceed 5 square metres in area on any one lot.

2611 OFF STREET PARKING

Off street parking is provided according to the provision of Division Sixteen and Schedule A of the Zoning Bylaw No. 75, Area "D". The parking stalls required by this Bylaw are 48. The Development proposed has provided 47 parking stalls. A Development Variance Permit is submitted along with this application to ask for the reduction of 1 parking space.

2612 SCREENING

The lot of this Development Application does not abut a lot which is not zoned C-1, C-2, C-3, C-4 or C-5, therefore no fence is required.

2020.07.20

Steven Cross
X Architecture
23230 Billy Brown Road
Langley, BC, V1M 4G1
sc@xarchitecture.com

David Bennett
Fraser Valley Regional District
45950 Cheam Avenue
Chilliwack, BC, V2P 1N6
dbennett@fvrld.ca

Development Guidelines

Below are the individual items as set out in the Development Guidelines by the FVRD. We appreciate robust guidelines like these, as it can inform the design in unique ways. As desired, you'll find our response to all of these items in chronological order. Justification for the ones that aren't directly adhered to is also noted.

See: DP.005 - Diagrams - 02. Pedestrian Circulation

5.5.1 Pedestrian linkages shall be provided between adjacent and opposite compatible commercial developments. In this instance, compatible developments are those a person might wish to visit on the same trip, ie. a motel, restaurant or major tourist attraction.

Pedestrian access from our site has been provided at East entrance and exit from our site. Pedestrian connection is also provided from the north existing walkway to the proposed site. This will allow for future linkages between future compatible developments, as there aren't any at present.

5.5.2 Where commercial services can be expected to be used by local residents, and where such services are adjacent to pedestrian routes or bikeways, services shall be accessible from these pathways.

Continuation of the sidewalk from the roundabout to the existing road completes pedestrian connections around our small site.



5.5.3 For developments in which there is more than one building, pedestrian walkways between buildings shall be provided. Covered walks, arcades, landscaping and special paving are encouraged to connect buildings with pedestrian pathways, parking areas and roadways.

A continuous pedestrian path has connected all buildings, restaurants patios and parking lot on site.

5.5.4 Pedestrian routes shall be constructed of a uniform and complementary material used throughout the development to link all pedestrian routes and bikeways, and shall be buffered where feasible from roadways, vehicular traffic, and parking areas.

Pedestrian paths through the site are constructed of concrete and are buffered from drive aisles on the south from parking spaces and along the north from a raised curb.

See: DP.005 - Diagrams - 03. Pedestrian Circulation

5.5.5 The character of development, including landscaping and the form and character of buildings, shall provide for an attractive, safe, and distinct edge along the property frontages on Bunker, Cray, Caryks, Thompson and Yale Roads and Highway No. 9. Landscaping along these roadways shall provide visual continuity.

Our Highway 9 frontage is buffered by extensive existing landscaping currently on the Ministry of Transportation's land. We are working on an agreement with them to maintain the landscaping to continually keep this space attractive. The form and character of the architecture are aligned at our 6m setback, to create the desired distinct edge. Landscaping in front of each building has also provided a buffer and to maintain a safe and attractive streetscape.

5.5.6 Landscape screening shall define and buffer surface parking, storage and service areas from adjacent residential uses, pedestrian corridors and roadside views. Landscaping and/or screening shall be used to provide visual privacy to any adjacent residential properties.

Our lot is not adjacent to a residential use. Landscape screening is not provided.

5.5.7 Landscaping should give preference to native species found locally and shall, where feasible, retain existing vegetation. In any case, all landscaping and screening shall meet or exceed the British Columbia Society of Landscape Architects and British Columbia Nursery Trades Association standards.



All vegetation proposed is native to the area. There currently isn't any existing vegetation to retain on site. The plan exceeds the BC Society of Landscape Architects and BC Nursery Trades Association standards.

Parking Areas - Borders, Landscaping and Screening - DP.005 - Diagrams - 03. Pedestrian Circulation

5.5.8 Parking areas shall be setback three (3) metres from any lot line adjoining a residential use. Screening and/or landscaping shall be provided to buffer parking areas from adjacent residential uses.

Our lot is not adjacent to a residential use. Landscape screening and/or the 3m setback is not provided.

5.5.9 Parking areas shall be screened from public roadways with landscaping or a combination of landscaping and earth berms.

Our buildings provide most of the screening desired from Highway 9 and Yale Rd East with landscape between the buildings doing the rest. The private road on the east property line does not have screening or a berm.

5.5.10 Where parking areas about a commercial building, a one (1) metre landscaped buffer strip shall be provided between the parking spaces and the building. Where appropriate, the use of walkways to separate parking spaces from buildings and to provide orderly and attractive pedestrian circulation, is encouraged.

The use of walkways separates both commercial buildings on our site to provide orderly and attractive pedestrian circulation from the parking areas.

5.5.11 Parking areas shall be designed to avoid large, unbroken expanses. Landscaping elements such as parking islands or medians shall be used to break up large parking areas into smaller cells. One shade tree shall be provided for every 10 parking spaces.

One shade tree per 10 spaces has been provided. Landscaping islands are provided at the end of each row, as well as bioswales have been introduced along some parking edges to break up the large asphalt areas.

5.5.12 Parking areas shall be paved. All parking spaces shall be clearly delineated and provided with curbs or wheel stops.



All parking spaces and drive aisles are paved in asphalt. Parking spaces will have painted lines and wheel stops.

5.5.13 Porous paving, paving stones, French drains and similar techniques are encouraged to facilitate exfiltration of storm water. Landscaped areas can further be used for retention and exfiltration of storm water.

Bioswales throughout the parking area and in the landscape islands will help maintain water retention. Curbs have been used for protection of pedestrians only, allowing water to flow to designated areas on site to be naturally retained. French drains have also been designed.

Signs and Lighting

5.5.14 The size, location and design of free-standing commercial signs and other advertising structures not attached to buildings shall be compatible with uses and structures on adjacent properties. Fascia signage recessed into the facade of the building is strongly encouraged. The use, form and character of signage shall be consistent throughout the development.

Signage has been integrated into the architecture. Fascia signage has been recessed into the facade of the buildings.

5.5.15 The form and character of structures supporting free-standing signs, including architecture, materials, and colours, shall be consistent with and of comparable quality to that of the principal buildings. The use of natural materials, including exposed aggregate, is encouraged for structures supporting signs. Architectural sign supports are encouraged. Single pole sign supports are strongly discouraged.

Signage has been integrated into the architecture, thus there will be no signage poles.

See:

DP.800 - Signage Building A + Exterior Signage

DP.801 - Signage Building B

DP.901 - Renderings

5.5.16 Site lighting shall be designed to minimize “light spill” onto adjacent residential or agricultural lands.

Site lighting has been designed to not pollute other properties. See “Exterior Light Impact Letter” submitted along with this application for further details.

Siting, Design and Finishing of Buildings

5.5.17 New commercial developments shall be compatible with access, servicing, and signage conditions and constraints on adjacent lands.

Our new commercial development provides access via the “unnamed east road” as per traffic consultants recommendation, connects to the necessary services in an unobtrusive way and has integrated all signage into the physical building, which does not affect adjacent properties.

5.5.18 Buildings shall be designed to complement a pedestrian scale and focus.

The use of clear glazing on the buildings allows the passerby and tenant to see inside the buildings, focusing one’s attention on the pedestrian activity inside the buildings.

5.5.19 New commercial uses shall not be of a height and scale which negatively impact surrounding residential amenities, including views and sunlight penetration. New commercial developments shall not exceed one storey in height. However, the Regional District Board may consider a multi-story motel or hotel if the development will be a landmark or focal point of the commercial node and of high quality design, materials and architecture. The Regional District Board may also consider a small two story development on an individual lot with a single unit commercial space on the main floor and one dwelling unit for the owner/proprietor on the second floor provided that no other dwelling exists on the property, adequate residential amenities for the dwelling unit, including a rear yard with screening for privacy, are provided, and all other guidelines of the permit area are met.

Our commercial buildings are 1 storey in height and do not obstruct views, sunlight or other amenities of neighbouring lots.

5.5.20 New commercial buildings shall be designed to address all adjacent public roads or highways. Where a building face, other than the front of a building, is visible from a road or highway, a visually attractive appearance shall be provided by a combination of landscaping, finishing and fenestration of the structure to a similar standard as the front of the building.

Buildings have been brought as close to Highway 9 as possible to allow for a visible connection to the passerby. Large expanses of glass provide the building with an

attractive and visually connected facade. Small blank spaces on the facade are complimented with landscaping.

5.5.21 Blank and monotonous facades shall be avoided. Building surfaces two stories high, where permitted, or exceeding fifteen (15) metres in length shall be relieved with changes of wall plane or differentiation that provides strong shadow or visual Interest.

Blank and monotonous facades have been avoided. The spaces that do not have fenestrations are intentionally left solid to positively contrast the openness of the design. The roof overhang will provide visual depth, strong shadows and will create covered outdoor spaces. As mentioned in 5.5.20, landscaping has been provided in these spaces as well.

5.5.22 For developments in which there is more than one building, a cohesive visual relationship between buildings and structures, including structures supporting signs, shall be evident. Architectural consistency among all buildings and structures in a development shall be maintained through the use of similar roof pitches, proportion, height, materials, fenestration and design theme.

The two buildings are designed to compliment each other in height, proportion, materials and overall design theme. The architectural consistency is preserved by using the same design language but made more interesting with variations in height, orientation and color palette.

5.5.23 The primary building entrance shall be clearly defined and provide a sense of entry.

All buildings and CRUs have a very open and attractive entry making it clear for everyone to understand where to enter.

5.5.24 The architecture, including materials and colour schemes, of new developments should acknowledge the traditional agricultural and resource based economy and culture of the area, and should incorporate a clear and well articulated design concept. Buildings shall not be stylized in an attempt to use the building itself as advertising, particularly where the proposed architecture is the result of a corporate or franchise style.

Corporate / franchise style of architecture has been minimized. The buildings use vertical metal siding, similar to most agriculture barns in the area, as well as galvanized roofs. The massing and overall designs are also simple, which has continued to be a common vernacular in the fraser valley for farming and resource based communities.



5.5.25 Colour schemes used in new commercial developments should be based substantially on colours already found in the surrounding natural and cultural landscape and should not utilize pastel colours except possibly as accents. The use of natural finishing materials, such as wood and stone, is strongly encouraged.

Our colour scheme has adhered to local architecture themes, heavily influenced in past colour schemes of agricultural buildings. The buildings will have tones of white and grey, this will provide a calm and simple background for the signage that will be incorporated.

Stone has not been used on these older buildings, thus was not brought on to this one, as it is seen as a trend of the past 15 years.

Stones have been used in the landscaping, as it is consistent with the natural landscape.

5.5.26 New commercial buildings and structures shall have pitched roofs to reflect the surrounding mountains, to preserve a feeling of openness along the highway and roads and to provide broad sightlines to mountains and the sky. Roofs shall have not less than a 4 in 12 pitch. All buildings and structures in a proposed development should have similarly pitched roofs.

All roofs in this development are of a similar design, with pitched roof to integrate with the surroundings.

See Dp.102 - Roof - ADP

5.5.27 New buildings shall be designed to maximize sunlight penetration to open areas and pedestrian areas.

As seen from our sun diagrams, buildings have been designed to naturally bring in as much sunlight as possible. Large areas of glass bring that ambient light into the buildings even further.

5.5.28 New development and on-site services should be located so as not to preclude future uses of adjacent properties.

Our on site services have been coordinated with future expansion of neighbouring lots in mind.

Protection of the Environment

5.5.29 All new commercial uses should be adequately served by the community water system and, where required by Plan policies, community storm drainage services.



Our commercial development will be served by the community water system but is not required to be connected to the drainage services.

5.5.30 Where on-site disposal of storm and/or sanitary sewage is proposed, an engineering study, certified by a Professional Engineer registered in the Province of British Columbia, shall be provided which demonstrates that the proposed methods of on-site disposal are adequate and will not lead to degradation of the groundwater regime or other environmental problems in the long term.

A professional engineer has prepared a report for our onsite septic area, confirming that it will not lead to the degradation of the groundwater regime or other environmental problems long term.

5.5.31 On-site sewage disposal and drainage systems should be prohibited in areas where water is subject to degradation, except as otherwise recommended in engineering studies.

As per our engineer's report, our septic field will not lead to degradation of the groundwater.

Information for Review and Approval

5.5.3.2 In order to assist with the review and approval of development permit applications, the Regional District Board may require:

(a) a site schematic showing vehicular and pedestrian circulation, and the design and layout of pathways and linkages;

DP.005 - Diagrams 01. Vehicular Access And Circulation, 02. Pedestrian Circulation, 03. Pathways and Linkages

(b) a landscaping plan;

See Landscaping Plan - L-1

(c) a scaled plan showing the layout and design of parking areas, stormwater infrastructure, and lighting;

See:

Storm Water Management Plan - Drawing No. C19-5621/A-C02

Site Plan - Drawing No. DP.003

(d) scaled drawings showing the design, materials and colour scheme of proposed free-standing signs and sign supports;

Free-standing signs and integrated signs can be seen at pages:

See:

DP.800 - Signage Building A + Exterior Signage

DP.801 - Signage Building B

DP.901 - Renderings

(e) scaled architectural elevations of proposed buildings and structures showing finishing materials and colour schemes, and colour architectural renderings of the proposed development;

See :

DP.200 Elevations

DP. 201 - Elevations

(f) a scaled site plan showing the siting of all proposed buildings and structures;

See DP.003 - Site Plan

(g) other information required to demonstrate that the proposed development meets the development permit area guidelines. See:

DP.001 - Site Plan Context ADP

DP.002 - Context Views

DP.004 - Data

DP.100 - Floor Plan Building A

DP.101 - Floor Plan Building B

DP.300 - Sections

DP.301 - Sections

DP.900 - Perspectives

DP.901 - Renderings

DP.902 - Shadow Study



FRASER VALLEY REGIONAL DISTRICT DEVELOPMENT PERMIT

Permit No.	2020-07	Folio No. 733.06468.000
Issued to:	RHEE GA HOLDINGS LTD., INC.NO. BC1219042	
Address:	103-53003 BUNKER ROAD ROSEDALE, BC V0X 1X0	
Applicant:	same	
Site Address:	52964 Yale Road, Electoral Area D	

The lands affected by this permit are shown on Schedule "A", Location Map, attached hereto which forms an integral part of this Permit and are legally described as the whole of:

LOT 1 SECTION 6 TOWNSHIP 3 RANGE 28 WEST OF THE 6TH MERIDIAN
NEW WESTMINSTER DISTRICT PLAN EPP21164
029-004-667

LIST OF ATTACHMENTS:

Schedule "A": Location Map
Schedule "B": Site Plan
Schedule "C": Landscape Plan
Schedule "D": Design Drawings
Schedule "E": Drainage Design Brief
Schedule "F": Exterior Lighting Impact
Schedule "G": On-Site Wastewater Treatment
Schedule "H": Soils Geotech Report

AUTHORITY TO ISSUE

This Development Permit is issued pursuant to Part 14 - Division 7 of the Local Government Act. The above-noted property lies within DEVELOPMENT PERMIT AREA 5-D in Electoral D of the Fraser Valley Regional District. Pursuant to Section 488 of the *Local Government Act*, R.S.B.C., this area has been designated under the Official Community Plan for Electoral D, Bylaw No. 200 for the:

- ☒ (a) protection of the natural environment, its ecosystems and biological diversity
- ☐ (b) protection of development from hazardous conditions
- ☐ (c) protection of farming
- ☐ (d) revitalization of an area in which a commercial use is permitted
- ☐ (e) establishment of objectives for form and character of intensive residential development
- ☒ (f) establishment of objectives for form and character of commercial, industrial or multi-family residential development

BYLAWS SUPPLEMENTED OR VARIED BY THIS PERMIT:

None

TERMS AND CONDITIONS OF THIS PERMIT

1. If the holder of the permit does not commence the construction with respect to which the permit was issued within two (2) years of the date of the permit, this permit shall lapse.

PEDESTRIAN LINKAGES

1. Pedestrian pathways shall be constructed adjacent to Yale Road, as shown on the Site Plan attached hereto as Schedule "B".

BORDERS, LANDSCAPING AND SCREENING

1. The landscaping shall be completed in accordance with the landscaping plan attached hereto as Schedule "C".

PARKING AREAS

1. Parking areas, walkways, and curbs, shall be constructed in accordance with the Site Plan attached hereto as Schedule "B".

SIGNS AND LIGHTING

1. The size, and location of all fascia signage shall be in accordance with Schedules "D" attached hereto.
2. The applicant shall provide a letter from a qualified professional that certifies that site's lighting has been designed and installed to minimize light spill onto adjacent lands.

SITING, DESIGN AND FINISHING OF BUILDINGS

1. Siting and Layout of the development shall be in accordance with the Site Plan attached hereto as Schedule "B".
2. The Design of buildings on the site shall be undertaken in accordance with Schedules "D" attached hereto.
3. Finishing materials and finishing material colours shall be in accordance with Schedule "D".

PROTECTION OF THE ENVIRONMENT

1. The development shall be connected to the Popkum community water system.
2. The applicant shall provide letters from qualified professionals certifying that the storm water and septic disposal systems have been designed and installed in accordance with Schedules "E" and "G" attached hereto and will not degrade the ground water regime or lead to long-term environmental problems.

3. No alteration to the natural drainage, construction or excavation shall be undertaken which might cause or contribute to hazardous conditions on the site or on adjacent lands.
-

GENERAL TERMS AND CONDITIONS

1. This Development Permit is issued Pursuant to Part 14 - Division 7 of the *Local Government Act*.
 2. A development permit shall not vary the permitted uses or densities of land use in the applicable zoning bylaw, except that permitted uses or densities may be varied where the land has been designated under the Official Community Plan for the protection of development from hazardous conditions pursuant to Section 488 of the *Local Government Act*.
 3. Nothing in this permit shall waive the owner's obligation to ensure that the development proposal complies in every way with the statutes, regulations, requirements, covenants and licences applicable to the undertaking.
 4. Nothing in this permit shall in any way relieve the owner's obligation to comply with all setback regulations for construction of structures or provision of on-site services pursuant to the *Public Health Act*, the *Fire Services Act*, the *Safety Standards Act*, and any other provincial statutes.
 5. The owner of the subject property shall provide the general contractor and all professionals associated with this project with copies of this permit as issued by the Regional Board.
 6. The owner of the subject property shall notify the Fraser Valley Regional District in writing of any intention to excavate, construct or alter the subject property or building site thereon.
 7. The Archaeology Branch of the Province of British Columbia must be contacted (phone 250-953-3334) if archaeological material is encountered on the subject property. Archaeological material may be indicated by dark-stained soils containing conspicuous amounts of fire-stained or fire-broken rock, artefacts such as arrowheads and other stone tools, or human remains. If such material is encountered during demolition or construction, a Heritage Conservation Act Permit may be needed before further development is undertaken. This may involve the need to hire a qualified Archaeologist to monitor the work.
-

SECURITY DEPOSIT

1. As a condition of the issuance of this Permit, and pursuant to Section 502 of the *Local Government Act*, the Regional Board is holding the security set out below to ensure that development is carried out in accordance with the terms and conditions of this Permit.
2. Should the holder of this permit:
 - a) Fail to complete the works required to satisfy the landscaping conditions contained herein;
 - b) Contravene a condition of the permit in such a way as to create an unsafe condition;

3. The Regional Board may undertake and complete the works required to satisfy the landscaping conditions, or carry out any construction required to correct an unsafe condition at the cost of any excess to be returned to the holder of the permit.
4. Security Posted:
 - (a) an irrevocable letter of credit in the amount of: \$ 32,828.40.
 - (b) the deposit of the following specified security: \$ N/A .
5. Release of the Security will occur one year after the installation of the required landscaping. The permit holder must provide a letter from a qualified professional that certifies the date of installation and that the completed landscaping meets or exceeds the British Columbia Society of Landscape Architects and British Columbia Nursery Trades Association standards.

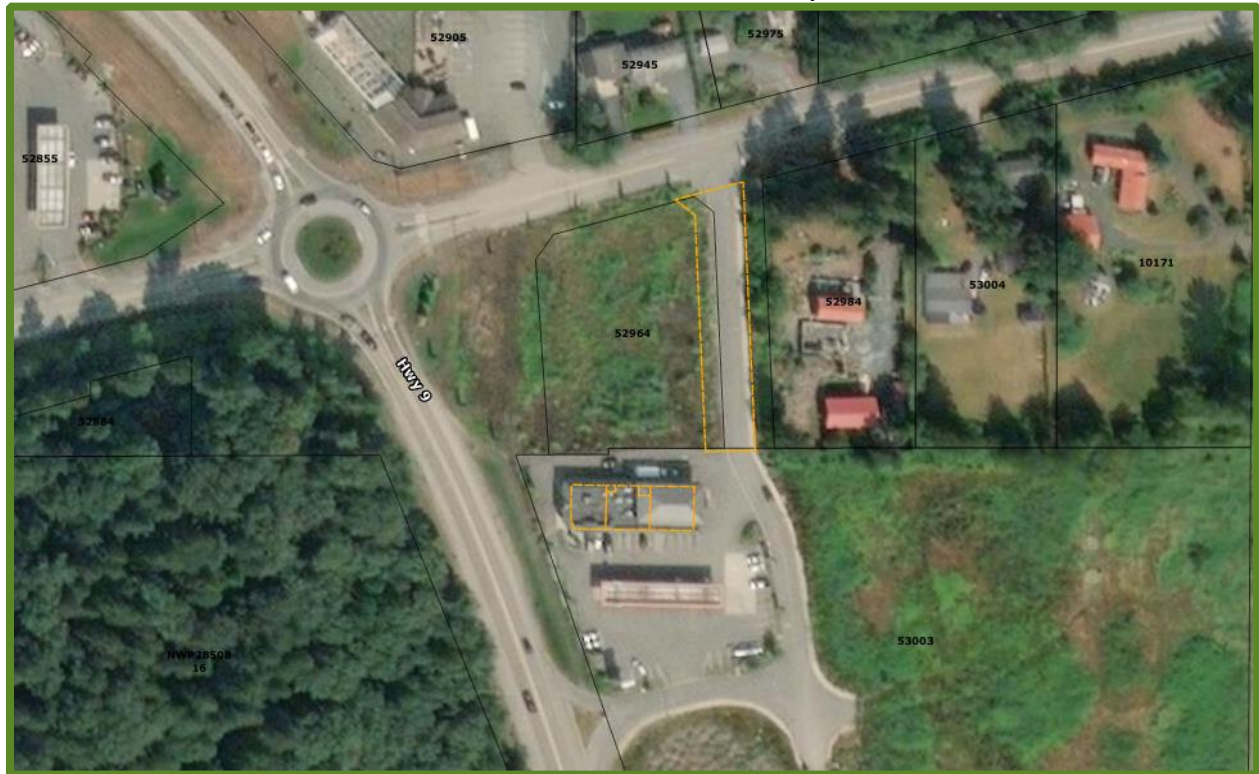
Note: The Regional District shall file a notice of this permit in the Land Title Office stating that the land described in the notice is subject to Development Permit Number 2020-07. The notice shall take the form of Appendix I attached hereto.

AUTHORIZING RESOLUTION PASSED BY THE ELECTORAL AREA SERVICES COMMITTEE OF THE FRASER VALLEY REGIONAL DISTRICT ON THE <DATE> DAY OF <MONTH>, <YEAR>

Director of Planning and Development

THIS IS NOT A BUILDING PERMIT

DEVELOPMENT PERMIT 2020-07
SCHEDULE "A" - Location Map





FRASER VALLEY REGIONAL DISTRICT DEVELOPMENT VARIANCE PERMIT

Permit No. Development Variance Permit 2020-12 **Folio No.** 733.06468.000

Issued to: RHEE GA HOLDINGS LTD., INC.NO. BC1219042

Address: 103-53003 BUNKER ROAD ROSEDALE, BC V0X 1X0

Applicant: Same

Site Address: 52964 Yale Road, Electoral Area D

The lands affected by and subject to this permit are shown on Schedule "A", Location Map, attached hereto, which forms an integral part of this permit, and are legally described as:

LOT 1 SECTION 6 TOWNSHIP 3 RANGE 28 WEST OF THE 6TH MERIDIAN
NEW WESTMINSTER DISTRICT PLAN EPP21164
029-004-667

LIST OF ATTACHMENTS

Schedule "A": Location Map

Schedule "B": Site Plan

AUTHORITY TO ISSUE

1. This Development Variance Permit is issued under Part 14 - Division 9 of the *Local Government Act*.
-

BYLAWS SUPPLEMENTED OR VARIED

'Zoning Bylaw for Electoral Area "D", 1976 of the Regional District of Fraser-Cheam is varied as follows:

Division Twenty Six 2611 OFF STREET PARKING by decreasing the required number of parking spaces from 48 to 47.

SPECIAL TERMS AND CONDITIONS

1. No variances other than those specifically set out in this permit are implied or to be construed.
2. If the holder of this permit does not commence the construction with respect to which the Permit was issued within two (2) years after the date of the permit, this permit shall lapse.
3. Development of the site shall be undertaken in accordance with the Site Plan attached hereto as Schedule "B".

GENERAL TERMS AND CONDITIONS

1. This Development Variance Permit is issued Pursuant to Part 14 - Division 9 of the *Local Government Act*.
2. This Development Variance Permit shall not vary the permitted uses or densities of land use in the applicable zoning bylaw nor a flood plain specification designated under Section 524 of the *Local Government Act*.
3. Nothing in this permit shall in any way relieve the developer's obligation to ensure that the development proposal complies in every way with the statutes, regulations, requirements, covenants and licences applicable to the undertaking.
4. Nothing in this permit shall in any way relieve the developer's obligation to comply with all setback regulations for construction of structures or provision of on-site services pursuant to the *Public Health Act*, the *Fire Services Act*, the *Safety Standards Act*, and any other provincial statutes.
5. The Archaeology Branch of the Province of British Columbia must be contacted (phone 250-953-3334) if archaeological material is encountered on the subject property. Archaeological material may be indicated by dark-stained soils containing conspicuous amounts of fire-stained or fire-broken rock, artefacts such as arrowheads and other stone tools, or human remains. If such material is encountered during demolition or construction, a Heritage Conservation Act Permit may be needed before further development is undertaken. This may involve the need to hire a qualified Archaeologist to monitor the work.

SECURITY DEPOSIT

As a condition of the issuance of this Permit, and pursuant to Section 502 of the *Local Government Act*, the Regional Board is holding the security set out below to ensure that development is carried out in accordance with the terms and conditions of this Permit

Should the holder of this permit:

- a. fail to complete the works required to satisfy the landscaping conditions contained herein,
- b. contravene a condition of the permit in such a way as to create an unsafe condition,

The Regional Board may undertake and complete the works required to satisfy the landscaping conditions, or carry out any construction required to correct an unsafe condition at the cost of the holder of the permit and may apply the security in payment of the costs of the works, with any excess to be returned to the holder of the permit.

Security Posted: (a) an irrevocable letter of credit in the amount of: \$ <N/A> .
 (b) the deposit of the following specified security: \$ <N/A> .

Note: The Regional District shall file a notice of this permit in the Land Title Office stating that the land described in the notice is subject to Development Variance Permit Number 2020-12. The notice shall take the form of Appendix I attached hereto.

AUTHORIZING RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF THE FRASER VALLEY REGIONAL DISTRICT ON THE <DAY> DAY OF <MONTH>, <YEAR>

Chief Administrative Officer / Deputy

THIS IS NOT A BUILDING PERMIT

DRAFT

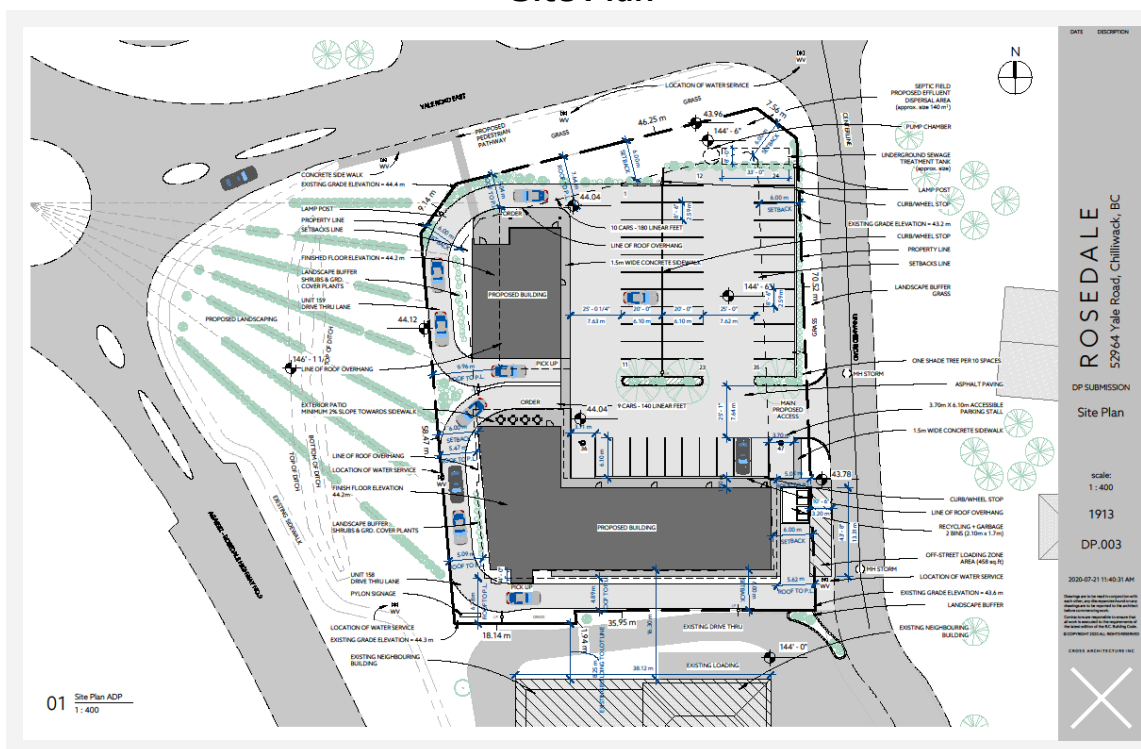
DEVELOPMENT VARIANCE PERMIT 2020-12
SCHEDULE "A"
Location Map



DEVELOPMENT VARIANCE PERMIT 2020-12

SCHEDULE "B"

Site Plan



To: Electoral Area Services Committee

Date: 2020-09-09

From: David Bennett, Planner II

File No: 3090-20-2020-11

Subject: The developer of "The Gardens," a single-family residential subdivision located on the site of the former Minter Gardens in Electoral Area D, applied to increase the maximum height of new homes within the development.

RECOMMENDATION

THAT the Fraser Valley Regional District Board refuse the requested Development Variance Permit for all lots backing on to Llanberis Way and issue the Development Variance Permit for the remainder of the lots within the development.

STRATEGIC AREA(S) OF FOCUS

Provide Responsive & Effective Public Services

Foster a Strong & Diverse Economy

Support Healthy & Sustainable Community

BACKGROUND

The developer of "The Gardens," a single-family residential subdivision located on the site of the former Minter Gardens in Electoral Area D, applied to increase the maximum height of new homes within the development.

The Variance request is to increase the maximum permitted height from 10m to 11m for certain lots that back onto existing homes on Llanberis Way and to increase the maximum height from 10m to 12m on the other lots in the development. No variance is requested for lots 1 through 4 in Phase 1.

The reason that the developer has made this request is to accommodate walk-out basements on sloping lots.

PROPERTY DETAILS			
Electoral Area	D		
Address	52892 Bunker Road		
PID	005-649-668		
Folio	733.06434.009		
Lot Size	2.304 Hectares		
Owner	Bunker Road Developments, Platin Homes, 0677306 B.C LTD	Agent	Precision Building Design (Ryan Hoxie)
Current Zoning	Suburban Residential (SBR-3)	Proposed Zoning	No change
Current OCP	Suburban Residential (SR)	Proposed OCP	No change
Current Use	Residential	Proposed Use	No change
Development Permit Areas	5-D, 6-D		
Agricultural Land Reserve	No		

ADJACENT ZONING & LAND USES		
North	^	Country Residential (CR); Yale Road E
East	>	Gateway Commercial (C-5); Gas Station, Country Residential (CR); SFD, Hwy 9
West	<	Suburban Residential (SBR-2); Single Family Dwellings
South	v	Suburban Residential (SBR-3); Empty Lot, Trans-Canada Hwy

[illegible]

DISCUSSION

"The Gardens," a single-family home residential development, is being built on the site of the former Minter Gardens, a site with a relatively hilly terrain compared to the surrounding neighbourhood. The developer has chosen to cut and fill parts of the development to accommodate new home sites. Many of the lots in the development slope down and away from the centre line of the new roads. Sloping lots provide builders with opportunities to expose portions of basements and accommodate walk-out basements.

In the Electoral Area D zoning bylaw, height is measured from the lowest point on a lot within 6m of a structure to the highest point on that structure. The maximum height of a house is 10m.

In the neighbouring subdivision of Rosegarden Estates, a blanket height variance was issued to measure grade within 2m of the base of a structure to address the sloping lots in that subdivision. However, some lots in Rosegarden Estates requested additional variances to measure from the grade adjacent to the home and to increase the overall height to 11.59m in one instance.

On a level lot, a below-grade basement would not impact the height of a home. However, when a basement is exposed on a sloping lot, the measurement of height is taken from that exposed portion of the basement and is measured to the peak of the roof. The 10m height maximum in the SBR-3 zone makes a three-storey home possible, but the roofs must have a lower pitch.

The developer is requesting this height variance in order to avoid lower-pitched roof designs.

The first phase of the development is on a road now named Magnolia Place. This road crosses the Trans-Mountain pipeline. The pipeline's elevation dictated the grade of Magnolia Place as well as the depths of the infrastructure in the road, including water lines, sewer lines and storm drainage. The pipeline is the reason for the road's elevation. The elevation of the road means that the lots on Magnolia Place slope down and away from the centre of the road. These sloping lots provide opportunities to have walk-out basements.

Neighbourhood Engagement

FVRD staff encouraged the developer to provide advanced notice of the requested variance to the 18 neighbouring properties that back onto the project. The developer originally proposed a full 12m height maximum on all lots in "The Gardens" subdivision. The developer provided neighbours with a description of the variance and an example drawing.

Initial feedback: The neighbours did not provide support for the 12m variance adjacent to the lots that back onto Llanberis Way.

The developer then revised their variance request. The revised request did not seek any height variance on lots 1 through 4 that back onto Llanberis Way and reduced the height request from 12m to 11m for

the rest of the lots that back onto Llanberis way. A maximum height of 12m is requested (a 2m variance) for all of the other lots in the development (no other lots back onto any other existing lots in the surrounding neighbourhood).

Feedback on the revised request: Neighbours are still opposed to the variance request for the lots that back onto Llanberis way.

Developer Options:

The alternative to the requested variance is to construct homes with lower roof pitches or to construct homes without walk-out basements.

Raising the grade of the rear yards is also an option. The developer provided an alternative grading plan (attached) to show how raising the rear grade would look. In this option, the developer has chosen not to lower the roof pitch, and the basements do not have walk-outs. Raising the rear yard grade and only having 'daylight' basements without entries does not change the final elevation of proposed homes. The impact on the neighbours on Llanberis Way would be same. However, raising the rear yard grades is more challenging for the builders as it requires retaining walls and attention to drainage. If every rear yard is not filled to the same elevation, it will lead to varying rear yard elevations. Lot owners may also choose alternative home designs and may choose single- or two- storey homes instead of the three-storey designs. For example, building permit plans for Lot 6 are for a rancher with a walk-out basement; this design is well below the maximum height of 10m.

The following images illustrate the proposed Variances and grading options.

12m Variance Request

This elevation shows the full 12m variance request. This variance allows for pitched roofs, and full walk-out basements on sloping lots.

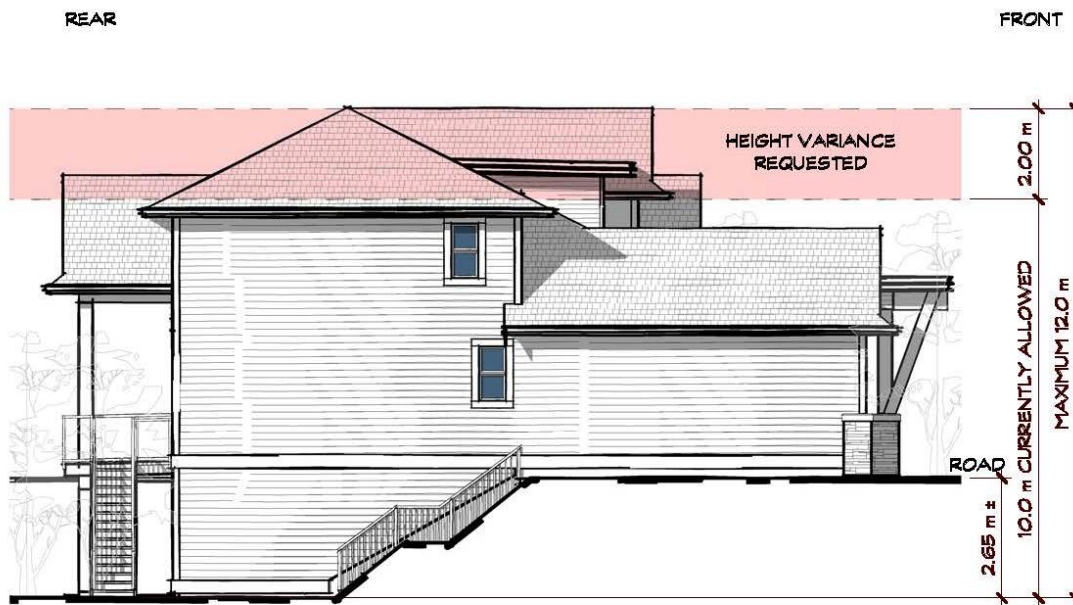
11m Variance Request

This elevation shows the 11m variance request for just the lots adjacent to Llanberis Way. This variance allows for pitched roofs, and full walk-out basements on sloping lots.

Raising the Rear Grade

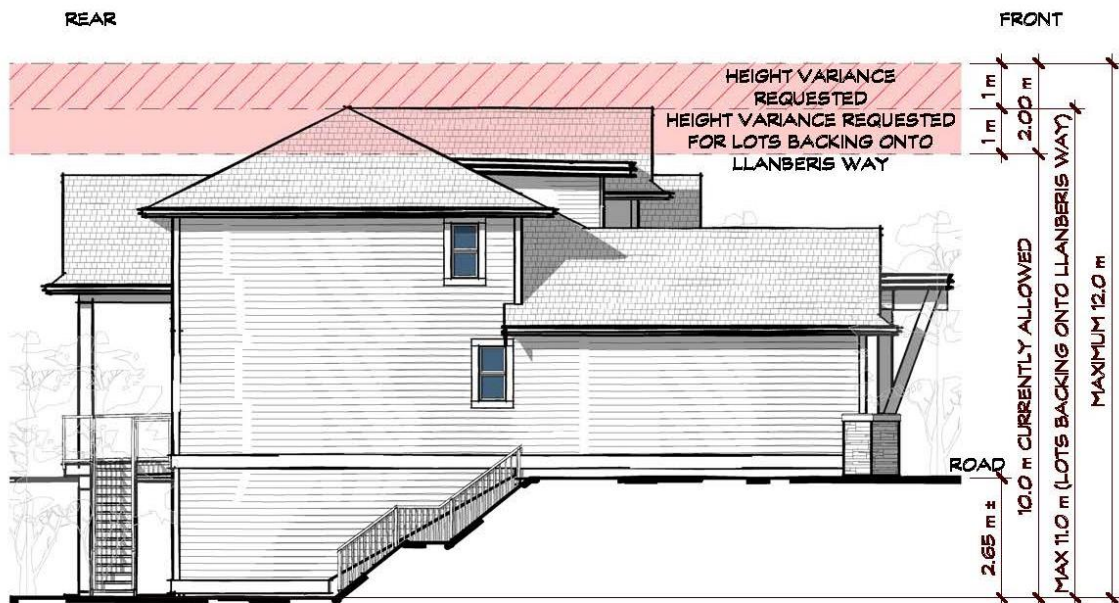
This elevation shows a 'daylight' basement and compliance with the current 10m height maximum.

EXAMPLE OF HEIGHT VARIANCE



SIDE ELEVATION

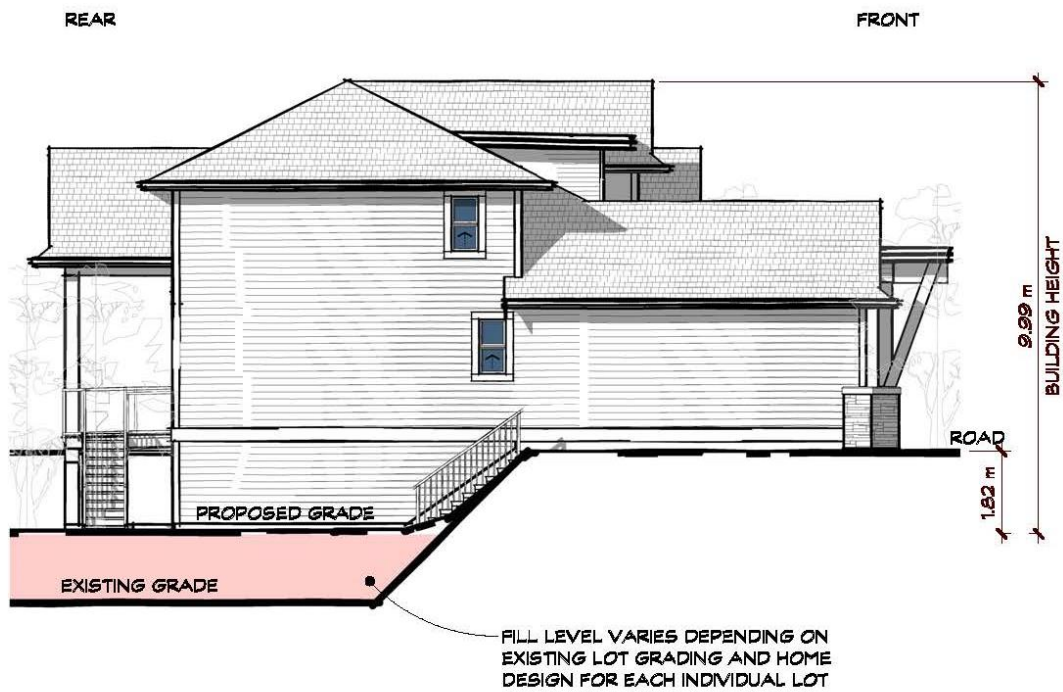
EXAMPLE OF HEIGHT VARIANCE



SIDE ELEVATION

Raising the Rear Grade (no variance required)

EXAMPLE OF HOME WITH BUILT UP REAR GRADE



SIDE ELEVATION

FVRD Board Options:

The FVRD Board may consider the following options:

- 1) **THAT** the Fraser Valley Regional District Board **issue** the requested Development Variance Permit.

This option increases the maximum height from 10m to 11m on the lots that back onto Llanberis Way, and increases the maximum height to 12m in the rest of the development. No variances would apply to lots 1-4 on Magnolia Place.

- 2) **THAT** the Fraser Valley Regional District Board **refuse** the requested Development Variance Permit for all lots adjacent to Llanberis Way and **issue** the Development Variance Permit for the remainder of the development.

This option maintains the current maximum height for the lots backing onto neighbours and the developer will have to redesign homes with lower roof pitches to accommodate walk-out basements on those lots. The rest of the lots in the development would have a different maximum height.

- 3) **THAT** the Fraser Valley Regional District Board **refuse** the requested Development Variance Permit.

This option maintains the current maximum height and the developer will have to redesign homes with lower roof pitches to accommodate walk-out basements.

COST

Development Variance Request for 24 lots with three separate owners- \$3,900.00

CONCLUSION

The current zoning bylaw's height definition makes construction of walk-out basements on sloping lots possible, but the roof pitches must be low, and ceiling heights may not be able to exceed a standard eight feet. The developer is requesting this height variance in order to avoid lower-pitched roof designs. Neighbouring developments in Popkum, such as Rosegarden Estates, also requested and received variances for increased height to address the challenges of building on sloping lots.

For this application, the developer solicited feedback from the immediate neighbours and revised their proposal based on that feedback. The neighbours have not provided support for any maximum height increases for any lots that back onto Llanberis Way. Concerns about height in the rest of the development have not been raised.

Consideration should be given to the interface between the existing community and this new development project. The scale of new homes adjacent to existing homes should be in keeping with the existing scale. The remainder of the lots within the development site have no existing neighbours, and a height increase on those lots would not impact the adjacent neighbourhood.

It is recommended **THAT** the Fraser Valley Regional District Board **refuse** the requested Development Variance Permit for all lots adjacent to Llanberis Way and **issue** the Development Variance Permit for the remainder of the lots within the development.

This option maintains the current maximum 10m height for the lots backing onto neighbouring lots on Llanberis Way. The developer will have to redesign homes with lower roof pitches to accommodate walk-out basements on those lots. The rest of the lots in the development would have a different maximum height, 12m increased from 10m and measured at the lowest grade adjacent to a structure. This option may lead to the developer filling in the rear yards on some of the lots, but this will not allow for walk-out basements, only daylight basements. Raising the rear yard grades also means that the impact on the neighbours on Llanberis Way would be the same as if the variance were to be issued, but not every lot may be filled, and future lot owners may choose alternative home designs (single storey or two-storey for example).

COMMENTS BY:

Graham Daneluz, Director of Planning & Development

Reviewed & supported.

Kelly Lownsbrough, Chief Financial Officer/ Director of Financial Services

Reviewed & supported.

Jennifer Kinneman, Chief Administrative Officer:

Reviewed and supported.



FRASER VALLEY REGIONAL DISTRICT DEVELOPMENT VARIANCE PERMIT

Permit No. Development Variance Permit 2020-11

Issued to: BUNKER ROAD DEVELOPMENTS LTD

Address: 9674 GILLANDERS RD CHILLIWACK BC V2P 6H4

Applicant: Same

Site Address: Bunker Road, Electoral Area D

The lands affected by and subject to this permit are shown on Schedule "A", Location Map, attached hereto, which forms an integral part of this permit, and are legally described as:

TBD
TBD

LIST OF ATTACHMENTS

Schedule "A": Location Map

AUTHORITY TO ISSUE

1. This Development Variance Permit is issued under Part 14 - Division 9 of the *Local Government Act*.

BYLAWS SUPPLEMENTED OR VARIED

'Zoning Bylaw for Electoral Area "D", 1976 of the Regional District of Fraser-Cheam'. is **varied** as follows:

1) Division 1 shall be **varied** by replacing the existing definition of height for all the future construction on the lands subject to the permit with the following:

HEIGHT means the greatest vertical distance measured from the elevation of the natural or finished level of the ground, whichever is the lower, at any point on the lot adjacent to a structure, to the highest point on such structure, exclusive of chimneys and similar fixtures but including elevator and stairway housings.

2) Division Twenty-Six Suburban Residential -3 (SBR-3) 2602.2 (a) (i) shall be **varied** by increasing the maximum height from ten (10) metres to twelve (12) metres.

SPECIAL TERMS AND CONDITIONS

1. No variances other than those specifically set out in this permit are implied or to be construed.
2. The height definition established by this permit shall apply to all future construction on the lands subject to this permit.

GENERAL TERMS AND CONDITIONS

1. This Development Variance Permit is issued Pursuant to Part 14 - Division 9 of the *Local Government Act*.
2. This Development Variance Permit shall not vary the permitted uses or densities of land use in the applicable zoning bylaw nor a flood plain specification designated under Section 524 of the *Local Government Act*.
3. Nothing in this permit shall in any way relieve the developer's obligation to ensure that the development proposal complies in every way with the statutes, regulations, requirements, covenants and licences applicable to the undertaking.
4. Nothing in this permit shall in any way relieve the developer's obligation to comply with all setback regulations for construction of structures or provision of on-site services pursuant to the *Public Health Act*, the *Fire Services Act*, the *Safety Standards Act*, and any other provincial statutes.
5. The Archaeology Branch of the Province of British Columbia must be contacted (phone 250-953-3334) if archaeological material is encountered on the subject property. Archaeological material may be indicated by dark-stained soils containing conspicuous amounts of fire-stained or fire-broken rock, artefacts such as arrowheads and other stone tools, or human remains. If such material is encountered during demolition or construction, a Heritage Conservation Act Permit may be needed before further development is undertaken. This may involve the need to hire a qualified Archaeologist to monitor the work.

SECURITY DEPOSIT

As a condition of the issuance of this Permit, and pursuant to Section 502 of the *Local Government Act*, the Regional Board is holding the security set out below to ensure that development is carried out in accordance with the terms and conditions of this Permit

Should the holder of this permit:

- a. fail to complete the works required to satisfy the landscaping conditions contained herein,
- b. contravene a condition of the permit in such a way as to create an unsafe condition,

The Regional Board may undertake and complete the works required to satisfy the landscaping conditions, or carry out any construction required to correct an unsafe condition at the cost of the holder of the permit and may apply the security in payment of the costs of the works, with any excess to be returned to the holder of the permit.

Security Posted: (a) an irrevocable letter of credit in the amount of: \$ <N/A> .
(b) the deposit of the following specified security: \$ <N/A> .

Note: The Regional District shall file a notice of this permit in the Land Title Office stating that the land described in the notice is subject to Development Variance Permit Number 2020-11. The notice shall take the form of Appendix I attached hereto.

AUTHORIZING RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF THE FRASER VALLEY REGIONAL DISTRICT ON THE <DAY> DAY OF <MONTH>, <YEAR>

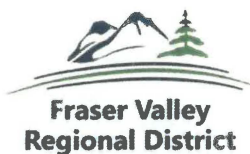
Chief Administrative Officer / Deputy

THIS IS NOT A BUILDING PERMIT

DEVELOPMENT VARIANCE PERMIT 2020-11
SCHEDULE "A"
Location Map

To be included

DRAFT



Fraser Valley Regional District

45950 Cheam Avenue, Chilliwack, BC V2P 1N6

Tel: (604)702-5000 or 1-800-528-0061

Fax: (604) 792-9684

SCHEDULE A

Application to Board of Variance

I / We hereby apply to the Fraser Valley Regional District Board of Variance for:

- ☐ A minor variance from bylaw requirements due to hardship [LGA s. 901(1)(a)]*
- ☐ Structural alteration or addition to non-conforming structure [LGA s. 901(1)(c) and 911(5)]*
- ☐ Other (describe) _____ LGA* s. _____

* LGA means Local Government Act

An Application Fee in the amount of \$ _____ as stipulated in FVRD Board of Variance Establishment Bylaw No. 0903, 2008 must be paid upon submission of this application.

Address of Subject
Property _____

Legal
Description

Lot _____ Block _____ Section 6 Township 3 Range 28 Plan _____
PID _____

The property described above is the subject of this application and is referred to herein as the 'subject property'

This application is made with my full knowledge and consent. I declare that the information submitted in support of the application is true and correct in all respects.

Owner's
Declaration

Name of Owner (print) BUNKER ROAD DEVELOPMENTS (HARVEY HAAN)	Signature of Owner	Date
Name of Owner (print)	Signature of Owner	Date

Owner
Contact
Information

Please print clearly.

Address 9674 GILLARDERS ROAD		City CHILLIWACK
Email [REDACTED]		Postal Code V2P 6H4
Phone [REDACTED]		Fax

Office Use
Only

Date	File No.
Received	Folio No.
Complete Application	Receipt No.
Required Documents	Fees \$

Agent

I hereby give permission to PRECISION BUILDING DESIGN (RYAN HOXIE) to act as my/our agent in all matters relating to this application.

Only complete this section if the applicant is NOT the owner.

Signature of Owner	Date
Signature of Owner	Date

Agent's contact information and declaration

Name of Agent <u>RYAN HOXIE</u>	Company <u>PRECISION BUILDING DESIGN</u>		
Address <u>3-41253 AIRPORT ROAD</u>	City <u>CHILLIWACK, BC</u>		
Email [REDACTED]	Postal Code [REDACTED]		
[REDACTED]	Fax [REDACTED]		

I declare that the information submitted in support of this application is true and correct in all respects.

Signature of Agent 	Date
---	------

Variance Details

Property Size
(m² or ha)

2.304 ha
23,038.92 m²

Present Zoning

AREA D SBR-3

Existing Use

RESIDENTIAL

Proposed Development

Proposed Variance

TO CHANGE THE BUILDING HEIGHT FOR THE ENTIRE DEVELOPMENT TO 11m FROM AVERAGE GRADE TO HIGHEST POINT OF ROOF

(use separate sheet if necessary)

Reasons in
Support of
Application

THE MARKET IS DRIVING THE NEED FOR 2-STORY
HOMES WITH A WALK-OUT BASEMENT.

(use separate sheet if necessary)

Supporting Information
(check applicable boxes)

- ☒ Location map
- ☒ Site plan showing dimensions of property, easements and location of existing buildings
- ☐ Location of proposed buildings, alterations or additions, including any proposed variances
- ☐ Location of any watercourses, streams, or ponds
- ☐ Location of existing or proposed water supplies, septic systems or other services
- ☐ Letters of support if applicable
- ☐ Other supporting information or reports (describe) _____

In accordance with the *Freedom of Information and Protection of Privacy Act*, the personal information on this form is being collected under the authority of Part 26 of the *Local Government Act* and will be collected, used or disclosed only in a manner consistent with the administration of the Management of Development of the Fraser Valley Regional District. If you have any questions about the collection, use or disclosure of this information, please contact the Information Officer of the Fraser Valley Regional District at 45950 Cheam Avenue, Chilliwack, BC V2P 1N6, Tel 604.702.5000 or 1.800.528.0061.

September 17, 2020 FVRD Board Meeting
CORRESPONDENCE – Item 6.2
DVP 2020-11, “The Gardens”
Electoral Area D

From: Stan R Zink
Sent: September 2, 2020 3:38 PM
To: Planning Info
Cc: Bill Dickey
Subject: height variance for The Gardens

Mr. Bennett

Regarding your request for comments on the variance permit 2020-11:

Your office has at this time received many letters and e-mails from home owners on Llanberis Way opposing any height variance to properties backing on Llanberis Way. We assume that these communications will be read at the meeting of September 17. I see by your corporate report to the Electoral Area Services Committee that you yourself are recommending the FVRD Board refuse the requested variance for properties backing onto ours. Thank you for that. Since we will not be able to attend that (public) meeting due to COVID-19, please make the minutes available to us.

Thank You

Stan Zink

10036 Llanberis Way
Rosedale, BC
VOX 1X1

[REDACTED]

[REDACTED]

September 17, 2020 FVRD Board Meeting
CORRESPONDENCE – Item 6.2
DVP 2020-11, "The Gardens"
Electoral Area D

September 17, 2020

To: Fraser Valley Regional District
Planning and Development Department

Re: Variance Application for Bunker and Magnolia Place

This letter is to ask that you reconsider your recommendation of no height variance for the applicable lots on Magnolia Place.

Our reasoning for this is that without the variance the houses will still be the same height, but it will cause the backyards to all be at different heights. There will have to be retaining walls between all of the involved lots to deal with the different grades and to avoid water issues.

If we were to receive the variance it would allow each yard to nicely flow into the adjoining yards. Allowing the variance will not change the area of view for the residents on Llanberis and we think it will make the Magnolia back yards more aesthetically pleasing.

We think going down to a 1m variance was a fair compromise due to the fact that because of the large size and distance away of the backyards of Llanberis and the yards on Magnolia, this height difference is negligible to the eye.

We are concerned that by not giving us the variance that the end result for the neighbourhood will be the same but will result in inconsistent grading between lots that could be avoided.

A few negative responses out of 18 residences should not dictate a rejection of the variance.

Thank you for your consideration of our proposal.

Sincerely,



Harvey Haan
Owner

To: Electoral Area Services Committee

Date: 2020-09-09

From: Julie Mundy, Planner 1

File No: 3090-20 2020-13

Subject: Development Variance Permit application to vary the definition of height to allow for a three storey single family home at 47040 Snowmist Drive, Electoral Area C

RECOMMENDATION

THAT the Fraser Valley Regional District issue Development Variance Permit 2020-13 to vary the number of permitted storeys from two, to three, for a single family residence at 47040 Snowmist Drive, subject to consideration of any comments or concerns raised by the public.

STRATEGIC AREA(S) OF FOCUS

Provide Responsive & Effective Public Services

BACKGROUND

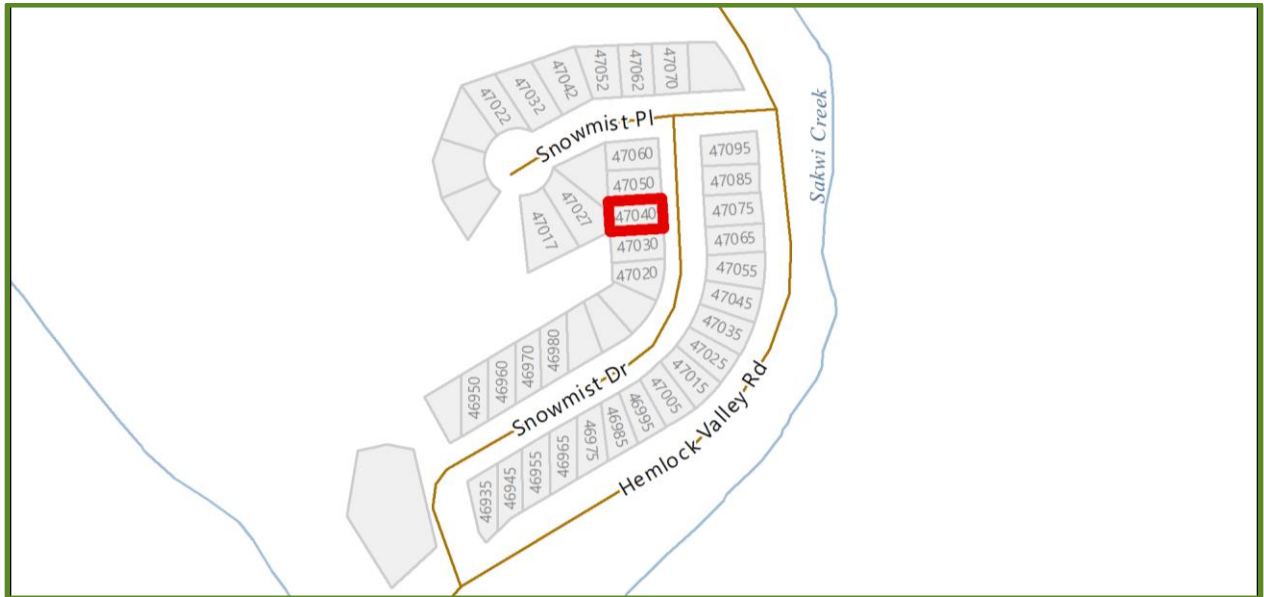
The property owners have applied for a Development Variance Permit (DVP) to vary the number of permitted storeys for a single family residence. The proposed building has three storeys, instead of the two permitted under *Fraser Valley Regional District Zoning Bylaw 100, Morris Valley-Harrison Mills, portion Area "C"*. The maximum allowable building height will not be increased.

PROPERTY DETAILS			
Electoral Area	E		
Address	47040 Snowmist Dr		
PID	005-654-751		
Folio	776.01444.034		
Lot Size	0.14 Acres		
Owner	Aaron and Sarah Minicola	Agent	---
Current Zoning	Resort Residential 3 (RST-3)	Proposed Zoning	No change
Current OCP	Cottage Residential (CR)	Proposed OCP	No change
Current Use	Residential	Proposed Use	No change
Development Permit Areas	5-HV (Riparian Areas)		
Hazards	Flood proofing requirements		
Agricultural Land Reserve	---		

ADJACENT ZONING & LAND USES

North	^	Resort Residential 3 (RST-3); Single-family Residential
East	>	Resort Residential 2 (RST-2); Snowmist Drive, Single-family Residential
West	<	Limited Use (L-1); Forest (Crown land)
South	v	Resort Residential 3 (RST-3); Single-family Residential

NEIGHBOURHOOD MAP



PROPERTY MAP



DISCUSSION

The subject property is relatively flat, is located at the base of Sasquatch Mountain Resort, and is surrounded by residential lots. A building permit has been issued, and construction of a new single family dwelling has started on the property.

Variance Request – DVP 2019-09

Height Variance

Zoning Bylaw 100 states “the maximum height of buildings and structures shall not exceed 12.0 metres (39.37 feet), or two storeys, whichever is lesser”. The building under construction will be 9.75 metres, with two stories and a loft, for a total of three stories. The proposal adheres to the maximum building height, but varies the internal configuration of space.

Height Requirement	
Permitted (zoning)	12.0 metres (39.37 feet), or two storeys
Proposed	9.75 metres (32 feet), three storeys
Requested Variance	0 metres, <u>1 storey</u>

Explanation of a Storey and a Basement

The applicant has submitted building plans where the lot elevation would be raised with fill so that the entry level floor is ultimately sunk into the ground. This would allow the entry floor to qualify as a basement, rather than a storey, and would not require a variance. Refer to Appendix A diagrams.

The applicant now wishes to forego raising the grade of the lot. This means the entry level floor will be classified as a storey, which results in a total of three stories, and the need for a Development Variance Permit.

Zoning Bylaw 100 defines a storey as the space between the ceiling and the floor where the floor level is not more than 0.6 metres (2 feet) below the ground elevation. Basements are not counted as a 'storey' if the basement floor level is between 0.6 metres (2 feet) and 1.2 metres (4 feet) below the finished ground level. This distinction enables property owners to construct a full size house on lots that may have an uneven grade.

Application rationale

The applicant provides the following rational to support the application:

- 1) The building will have the same external height whether it is two or three storeys;
- 2) The third storey is a small loft space of approximately 370 square feet;
- 3) Filling the lot to raise the grade will hinder snow removal in the winter;

- 4) Filling the lot to raise the grade will add an additional cost of approximately \$20,000, without providing any structural or drainage benefits.

If the variance is not approved the property owner would have to alter the house design to remove one storey. This could be achieved by:

- 1) Removing the already constructed loft space, or
- 2) Raising the grade of the lot so that the entry level floor is buried 0.6 metres (2 feet) into the ground and qualifies as a basement.

History of Related Variances in Hemlock

In the last twenty years, there have been five variance requests (all approved) for building height in the Hemlock Area.

DVP for Residential Building Height – Sasquatch Mountain			
Address	Permit	Conditions of Permit	Status
20942 Snowflake Cres	DVP 2020-02	Increase height from 12m to 13.8m and, Increase number of stories from 2 to 3	Approved
47020 Snowmist Drive	DVP 2019-23	Increase number of stories from 2 to 3	Approved
20934 Snowflake Cres	DVP 2018-17	Increase height from 12m to 13.5, and Increase number of storeys from 2 to 3	Approved
20917 Snowflake Cres	DVP 2018-14	Increase the height from 12m to 14m (Additional height variance from issued DVP)	Approved
20917 Snowflake Cres	DVP 2017-14	Increase number of storeys from 2 to 3	Approved

Snow Shedding Impacts

Buildings in Hemlock are prone to accumulating large amounts of snow which results in snow shedding from roofs. The height variance is not anticipated to increase snow shedding impacts.

Building Permits

A building permit for the construction was issued on March 11, 2020. The building complies with all other siting and zoning bylaw requirements.

Neighbourhood Notification and Input

All property owners within 30 metres of the property will be notified by FVRD of the Development Variance Permit application and will be given the opportunity to provide written comments, or to state their comments at the Board meeting. FVRD staff have encouraged the applicant to advise

neighbouring property owners and residents of the requested variance in advance of the mail-out notification. To date, no letters of support or opposition have been received.

COST

The application fee of \$1,300 has been paid by the applicant.

CONCLUSION

Staff recommend the FVRD Board issue Development Variance Permit 2020-13 to vary height requirements for the construction of a residence at 47040 Snowmist Drive. The maximum allowable height of a structure will not change with the variance, and no adverse health and safety impacts are anticipated.

Option 1 – Issue (Staff Recommendation)

MOTION: THAT the FVRD Board issue Development Variance Permit 2020-13 to vary the number of permitted storeys from two, to three, for a single family residence at 47040 Snowmist Drive, subject to consideration of any comments or concerns raised by the public.

Option 2 – Refuse

MOTION: THAT the Fraser Valley Regional District Board refuse Development Variance Permit 2020-13 for 47040 Snowmist Drive Road, Electoral Area C.

COMMENTS BY:

Graham Daneluz, Director of Planning & Development:

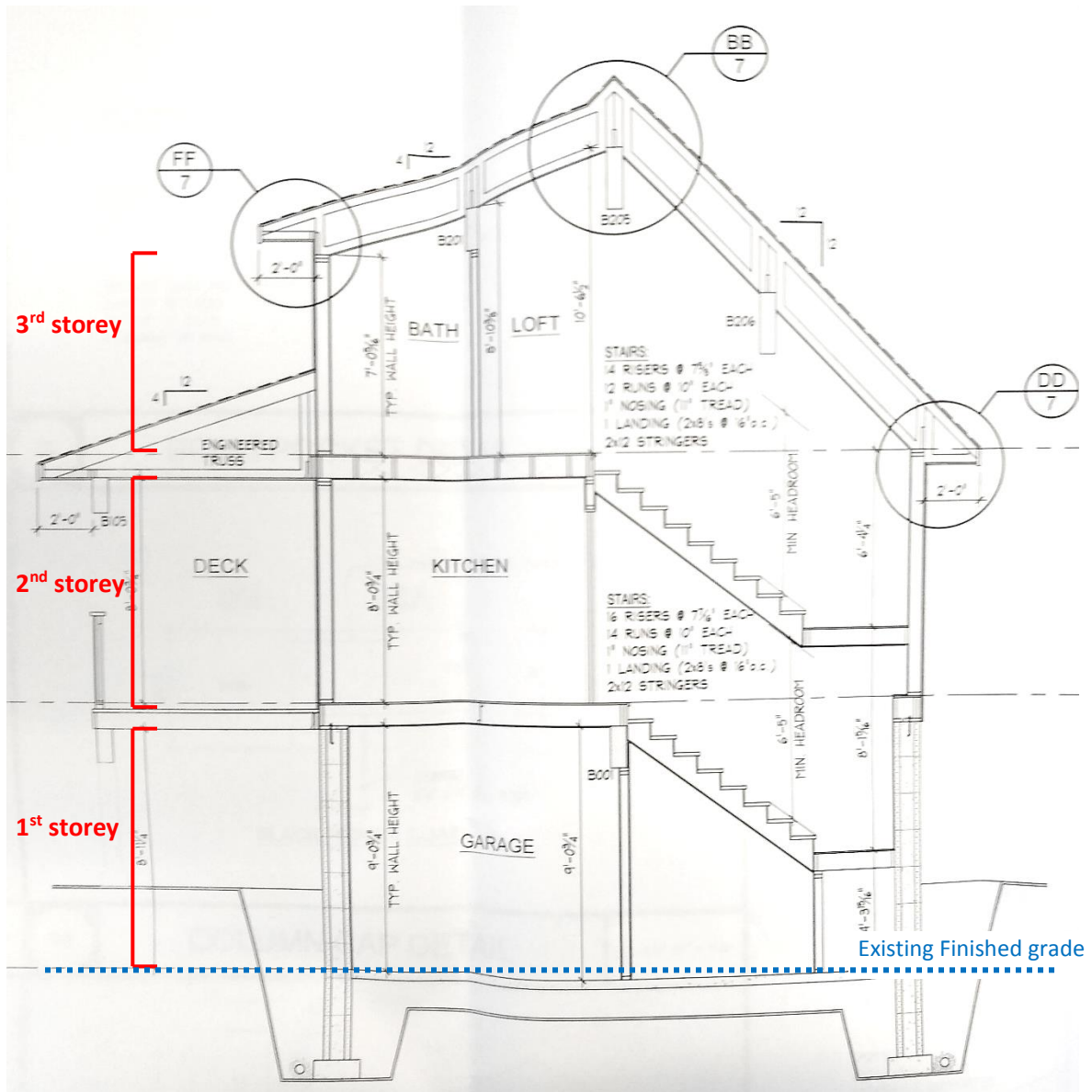
Reviewed and supported

Kelly Lownsbrough, Chief Financial Officer/ Director of Financial Services:

Reviewed and supported

Jennifer Kinneman, Chief Administrative Officer:
Reviewed and supported.

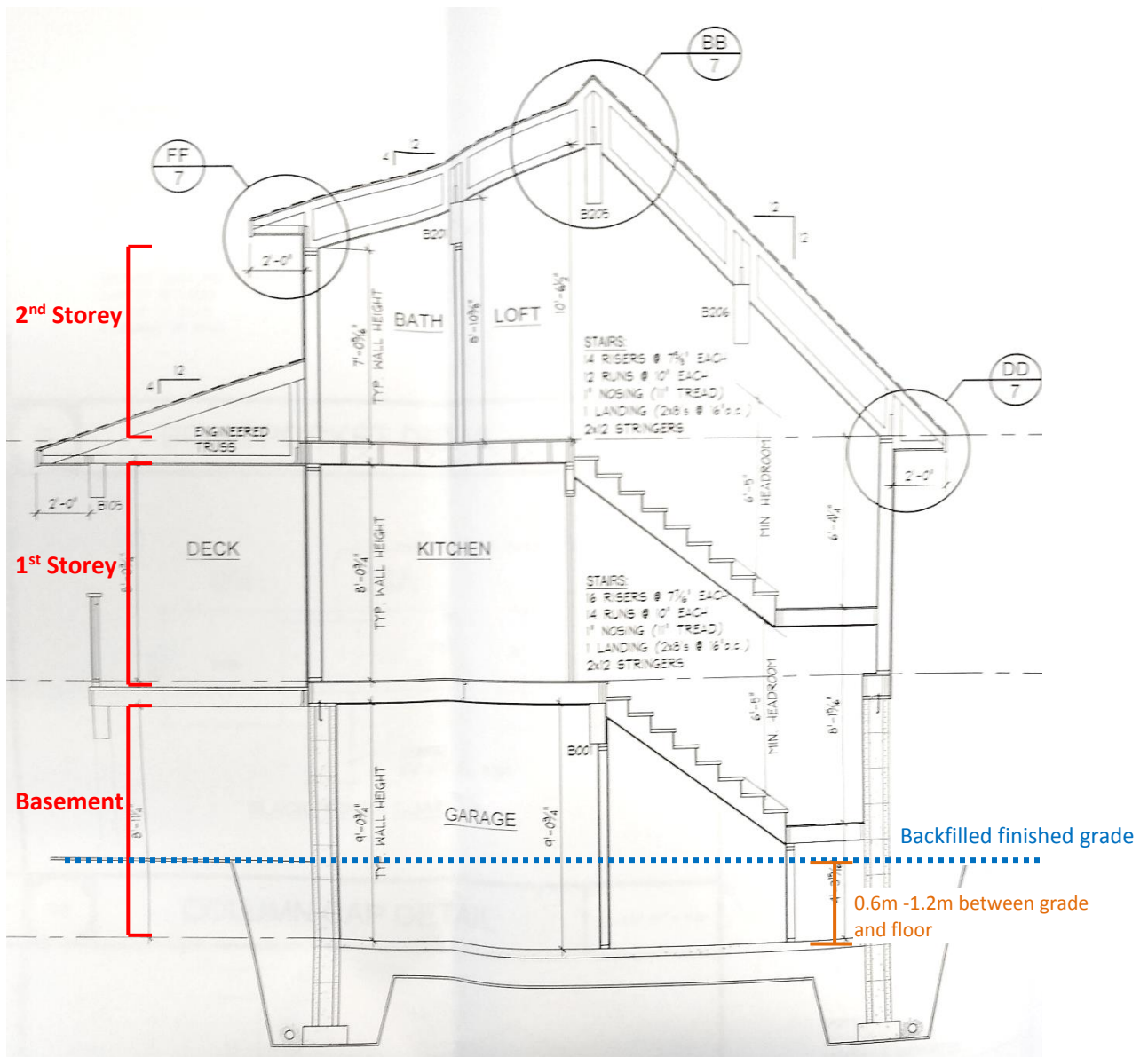
Appendix A Building Cross Section



The submitted plans show the garage and habitable space to be at grade. The entry level is classified as the 1st storey with the 2nd and 3rd storeys above. A Development Variance Permit is needed to allow the third storey.

This is the option requested by the property owners.

Labelling of floor levels, if the entry floor is sunk 0.6m – 1.2m below the finished grade



If the floor of the level with the garage were sunk into the ground 0.6m – 1.2m (2 - 4 feet), the entry level would be classified as a basement, with the 1st and 2nd storeys above. In this case, the house would meet the zoning regulations and a Development Variance Permit would not be required.



FRASER VALLEY REGIONAL DISTRICT DEVELOPMENT VARIANCE PERMIT

Permit No. Development Variance Permit 2020-13 **Folio No.** 776.01444.034

Issued to: Aaron and Sarah Minicola

Address:

Applicant: Aaron and Sarah Minicola

Site Address: 47040 Snowmist Drive, Area C

The lands affected by and subject to this permit are shown on Schedule "A", Location Map, attached hereto, which forms an integral part of this permit, and are legally described as:

LOT 34, DISTRICT LOT 4132, NEW WESTMINSTER DISTRICT, PLAN NWP58157, GROUP 1
PID: 005-654-751

LIST OF ATTACHMENTS

Schedule "A": Location Map

Schedule "B": Site Plan

AUTHORITY TO ISSUE

1. This Development Variance Permit is issued under Part 14 - Division 9 of the *Local Government Act*.

BYLAWS SUPPLEMENTED OR VARIED

Regional District of Fraser Cheam By-law No. 100, 1979 is **varied** as follows:

Division 19, Section 1905 the maximum height of building shall not exceed 12.00 metres (39.37 feet). The maximum number of storeys is increased from two to three storeys.

SPECIAL TERMS AND CONDITIONS

1. No variances other than those specifically set out in this permit are implied or to be construed.
2. If the holder of this permit does not commence the construction with respect to which the Permit was issued within two (2) years after the date of the permit, this permit shall lapse.
3. Development of the site shall be undertaken in accordance with the Site Plan attached hereto as Schedule "B".
4. All new construction shall be generally in compliance with Building Permit No. BP014800

GENERAL TERMS AND CONDITIONS

1. This Development Variance Permit is issued Pursuant to Part 14 - Division 9 of the *Local Government Act*.
 2. This Development Variance Permit shall not vary the permitted uses or densities of land use in the applicable zoning bylaw nor a flood plain specification designated under Section 524 of the *Local Government Act*.
 3. Nothing in this permit shall in any way relieve the developer's obligation to ensure that the development proposal complies in every way with the statutes, regulations, requirements, covenants and licences applicable to the undertaking.
 4. Nothing in this permit shall in any way relieve the developer's obligation to comply with all setback regulations for construction of structures or provision of on-site services pursuant to the *Public Health Act*, the *Fire Services Act*, the *Safety Standards Act*, and any other provincial statutes.
 5. The Archaeology Branch of the Province of British Columbia must be contacted (phone 250-953-3334) if archaeological material is encountered on the subject property. Archaeological material may be indicated by dark-stained soils containing conspicuous amounts of fire-stained or fire-broken rock, artefacts such as arrowheads and other stone tools, or human remains. If such material is encountered during demolition or construction, a Heritage Conservation Act Permit may be needed before further development is undertaken. This may involve the need to hire a qualified Archaeologist to monitor the work.
-

SECURITY DEPOSIT

As a condition of the issuance of this Permit, and pursuant to Section 502 of the *Local Government Act*, the Regional Board is holding the security set out below to ensure that development is carried out in accordance with the terms and conditions of this Permit

Should the holder of this permit:

- a. fail to complete the works required to satisfy the landscaping conditions contained herein,
- b. contravene a condition of the permit in such a way as to create an unsafe condition,

The Regional Board may undertake and complete the works required to satisfy the landscaping conditions, or carry out any construction required to correct an unsafe condition at the cost of the holder of the permit and may apply the security in payment of the costs of the works, with any excess to be returned to the holder of the permit.

Security Posted: (a) an irrevocable letter of credit in the amount of: \$ <N/A> .
 (b) the deposit of the following specified security: \$ <N/A> .

Note: The Regional District shall file a notice of this permit in the Land Title Office stating that the land described in the notice is subject to Development Variance Permit Number 2020-13. The notice shall take the form of Appendix I attached hereto.

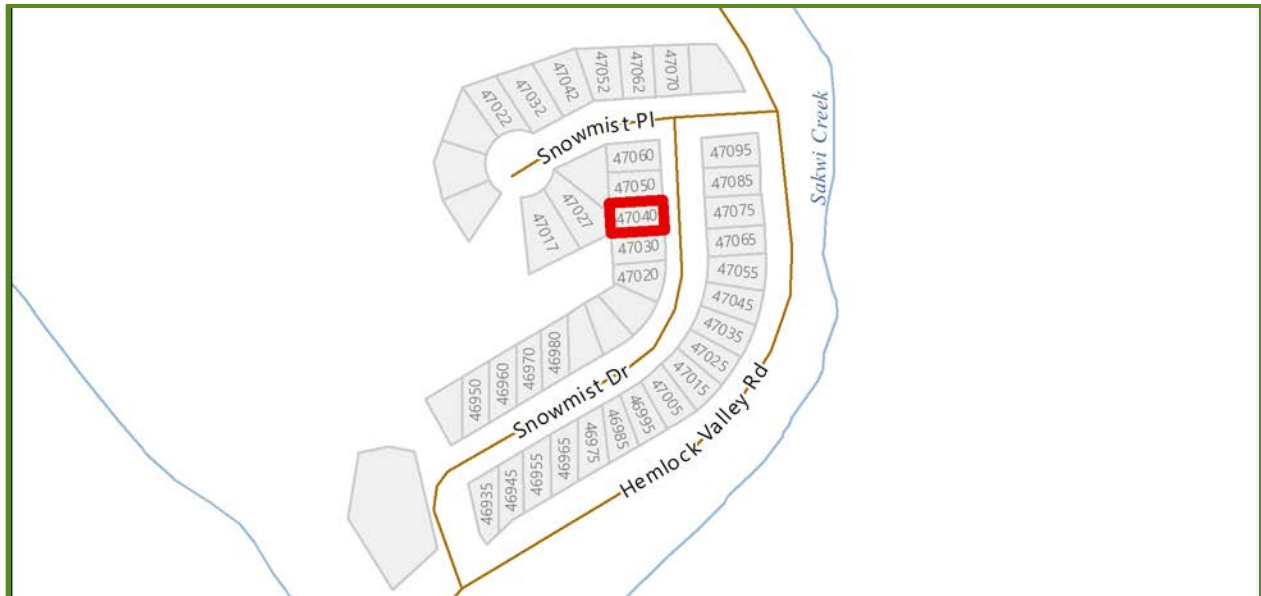
AUTHORIZING RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF THE FRASER VALLEY REGIONAL DISTRICT ON THE <DAY> DAY OF <MONTH>, <YEAR>

Chief Administrative Officer / Deputy

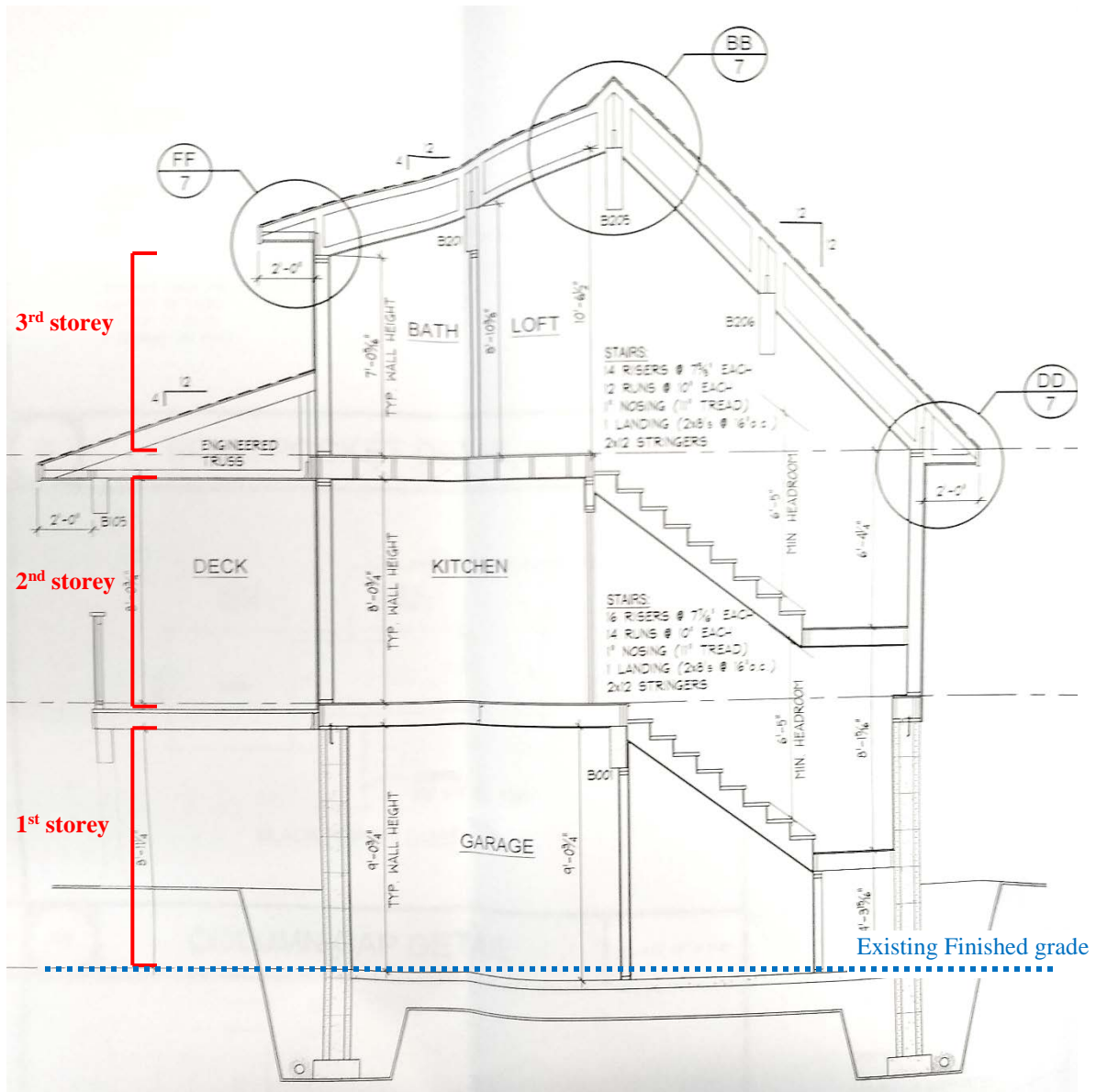
THIS IS NOT A BUILDING PERMIT

DRAFT

DEVELOPMENT VARIANCE PERMIT 2020-13
SCHEDULE "A"
Location Map



DEVELOPMENT VARIANCE PERMIT 2020-13 **SCHEDULE "B"** **Site Plan**



SCHEDULE A-4
Permit Application

I / We hereby apply under Part 14 of the *Local Government Act* for a;

☒ **Development Variance Permit**
☐ **Temporary Use Permit**
☐ **Development Permit**

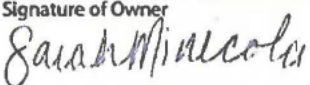
An Application Fee in the amount of \$ 1300 as stipulated in FVRD Application Fees Bylaw No. 1231, 2013 must be paid upon submission of this application.

Civic Address 47040 Snowmist Dr PID 005-654-769

Legal Description Lot X Block _____ Section _____ Township _____ Range _____ Plan _____

The property described above is the subject of this application and is referred to herein as the 'subject property.' This application is made with my full knowledge and consent. I declare that the information submitted in support of the application is true and correct in all respects.

Owner's Declaration

Name of Owner (print) Aaron Minicola	Signature of Owner 	Date Aug 4/2020
Name of Owner (print) Sarah Minicola	Signature of Owner 	Date Aug 4/2020

Owner's Contact Information

Address [REDACTED]		City Port Coquitlam
[REDACTED]		Postal Code V [REDACTED]
Phone [REDACTED]	Cell [REDACTED]	Fax [REDACTED]

Office Use Only	Date	File No.
	Received By	Folio No.
	Receipt No.	Fees Paid: \$

Agent

I hereby give permission to _____ to act as my/our agent in all matters relating to this application.

Only complete this section if the applicant is NOT the owner.

Signature of Owner	Date
Signature of Owner	Date

Agent's contact information and declaration

Name of Agent		Company	
Address		City	
Email		Postal Code	
Phone	Cell	Fax	

I declare that the information submitted in support of this application is true and correct in all respects.

Signature of Agent	Date
--------------------	------

Development Details

Property Size 0.14 acres Present Zoning RST-3

Existing Use residential, partially built house

Proposed Development residential, single dwelling house

Proposed Variation / Supplement use natural elevation for backfilling, rather than building 3ft of elevation around the perimeter of the house

(use separate sheet if necessary)

Reasons in Support of Application After getting the foundation in and having the drainage signed off on, we don't believe it's beneficial to build the grade up another 3ft against the foundation walls, as it provides no benefit to the drainage or structure. Having the grade built up around the perimeter would also affect snow removal in the winter, as operators wouldn't be able to scrape easily because of the uneven grade. Not backfilling would NOT exceed the permitted building height either.

Page 2 of 3

Provincial Requirements

(This is not an exhaustive list; other provincial regulations will apply)

Riparian Areas Regulation

Please indicate whether the development proposal involves residential, commercial, or including vegetation removal or alteration; soil disturbance; construction of buildings and structures; creation of impervious or semi-pervious surfaces; trails, roads, docks, wharves, bridges and, infrastructure and works of any kind – within:

yes
☐

no
☒

30 metres of the high water mark of any water body

yes
☐

no
☒

a ravine or within 30 metres of the top of a ravine bank

"Water body" includes; 1) a watercourse, whether it usually contains water or not; 2) a pond, lake, river, creek, or brook; 3) a ditch, spring, or wetland that is connected by surface flow to 1 or 2 above.

Under the *Riparian Areas Regulation* and the *Fish Protection Act*, a riparian area assessment report may be required before this application can be approved.

Contaminated Sites Profile

Pursuant to the *Environmental Management Act*, an applicant is required to submit a completed "Site Profile" for properties that are or were used for purposes indicated in Schedule 2 of the *Contaminated Sites Regulations*. Please indicate if:

yes
☐

no
☒

the property has been used for commercial or industrial purposes.

If you responded 'yes,' you may be required to submit a Site Profile. Please contact FVRD Planning or the Ministry of Environment for further information.

Archaeological Resources

Are there archaeological sites or resources on the subject property?

yes
☐

no
☒

I don't know
☐

If you responded 'yes' or 'I don't know' you may be advised to contact the Archaeology Branch of the Ministry of Tourism, Sport and the Arts for further information.

Required information

When providing Application Forms to the applicant, Regional District staff shall indicate which of the following attachments are required for this application. **Additional information may also be required at a later date.**

	Required	Received	Details
Location Map			Showing the parcel (s) to which this application pertains and uses on adjacent parcels
Site Plan			Reduced sets of metric plans
			North arrow and scale
At a scale of:			Dimensions of property lines, rights-of-ways, easements
1: _____			Location and dimensions of existing buildings & setbacks to lot lines, rights-of-ways, easements
			Location and dimensions of proposed buildings & setbacks to lot lines, rights-of-ways, easements
			Location of all water features, including streams, wetlands, ponds, ditches, lakes on or adjacent to the property
			Location of all existing & proposed water lines, wells, septic fields, sanitary sewer & storm drain, including sizes
			Location, numbering & dimensions of all vehicle and bicycle parking, disabled persons' parking, vehicle stops & loading
			Natural & finished grades of site, at buildings & retaining walls
			Location of existing & proposed access, pathways
			Above ground services, equipment and exterior lighting details
			Location & dimensions of free-standing signs
			Storm water management infrastructure and impermeable surfaces
			Other:
Floor Plans			Uses of spaces & building dimensions
			Other:
Landscape Plan			Location, quantity, size & species of existing & proposed plants, trees & turf
			Contour information (_____ metre contour intervals)
Same scale as site plan			Major topographical features (water course, rocks, etc.)
			All screening, paving, retaining walls & other details
			Traffic circulation (pedestrian, automobile, etc.)
			Other:
Reports			Geotechnical Report
			Environmental Assessment
			Archaeological Assessment
			Other:

The personal information on this form is being collected in accordance with Section 26 of the *Freedom of Information and Protection of Privacy Act, RSBC 1996 Ch. 165* and the *Local Government Act, RSBC 2015 Ch. 1*. It will only be collected, used and disclosed for the purpose of administering matters with respect to planning, land use management and related services delivered, or proposed to be delivered, by the FVRD. Questions about the use of personal information and the protection of privacy may be directed to the FVRD Privacy Officer at 45950 Cheam Avenue, Chilliwack, BC V2P 1N6, Tel: 1-800-528-0061 EOI@fvr.ca.

Page 4 of 5

Julie Mundy

From: Aaron M .

Sent: August 5, 2020 9:54 PM

To: Julie Mundy <JMundy@fvrd.ca>

Subject: Re: 47040 Snowmist Dr Variance

Hi Julie,

Just to briefly additionally summarize what our intention is for this variance. We would like to increase the living space without changing the overall height or square footage of our current build. To do this we hope you will allow us not to have to build up the additional 3ft of backfilling . This will affect our snow plowing plan and cost us upwards of \$20,000 in additional material brought in to meet those needs.

Thanks Aaron

Sent from my iPhone

To: Electoral Area Services Committee
From: Gavin Luymes, Planning Technician

Date: 2020-09-09
File No: 3090-20 2020-14

Subject: Application for Development Variance Permit 2020-14 to vary the requirements of Accessory Family Residential Use for the property located at 35990 Hyde Buker Road, Electoral Area G

RECOMMENDATION

THAT the Fraser Valley Regional District Board issue Development Variance Permit 2020-14 to vary the requirements regarding the relationship between the property owner and occupant of an Accessory Family Residential Use to allow the daughter of a property owner to occupy the proposed accessory family residence at 35990 Hyde Buker Road, Electoral Area G, subject to consideration of any comments or concerns raised by the public;

AND THAT the Fraser Valley Regional District Board authorize its signatories to execute all legal instruments associated with this application.

STRATEGIC AREA(S) OF FOCUS

Support Healthy & Sustainable Community
Provide Responsive & Effective Public Services

BACKGROUND

The owners of 35990 Hyde Buker Road have applied for a Development Variance Permit to vary the definition of Accessory Family Residential Use as outlined in the *Dewdney-Alouette Regional District Land Use and Subdivision Regulation Bylaw No. 559-1992*. The owners wish to vary the definition so that their daughter can occupy the Accessory Family Residential Use. The owners have applied for a Building Permit (BP014897) and Development Permit for the proposal.

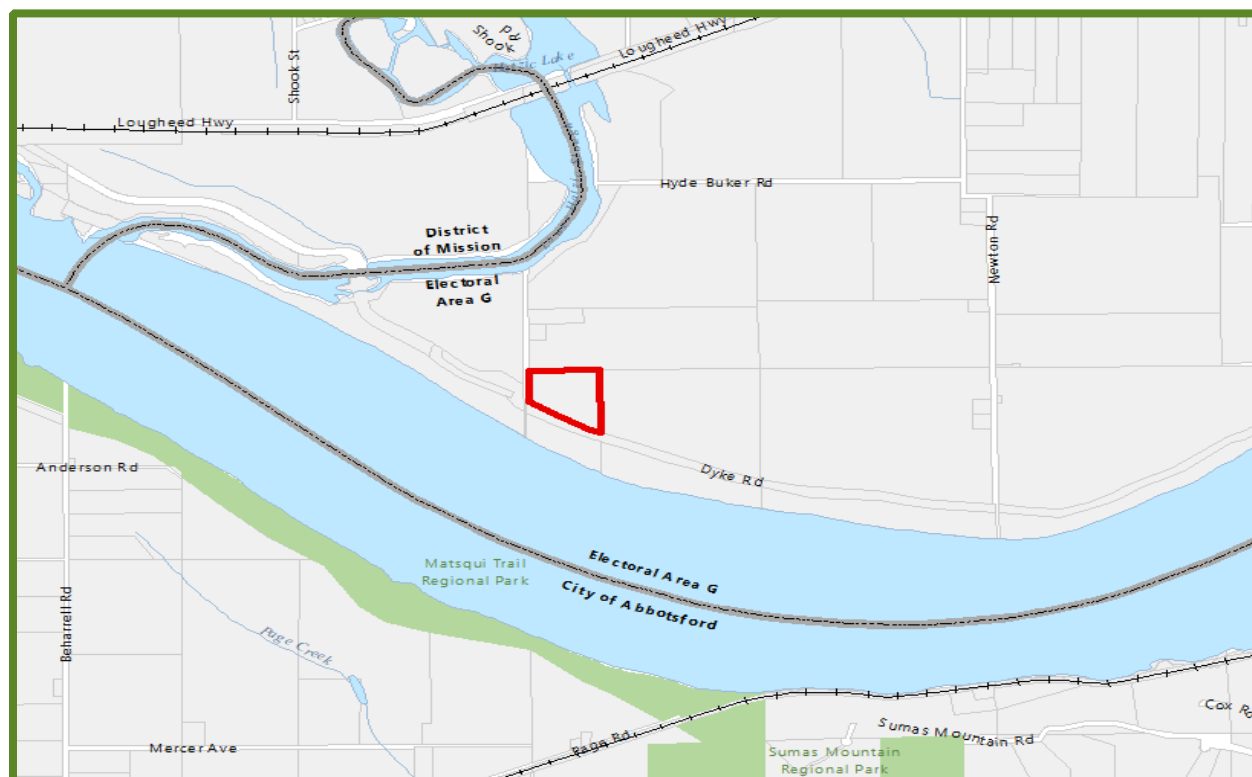
PROPERTY DETAILS

Electoral Area	G		
Address	35990 Hyde Buker Road		
PID	013-398-814		
Folio	775.02448.000		
Lot Size	12.33 Acres		
Owner	Donald & Nancy Scarrow	Agent	N/A
Current Zoning	Floodplain Agriculture (A-2)	Proposed Zoning	No change
Current OCP	Agricultural (AG)	Proposed OCP	No change
Current Use	Farm/Grain & Forage	Proposed Use	No change
Development Permit Areas	Riparian 2-G		
Agricultural Land Reserve	Yes		

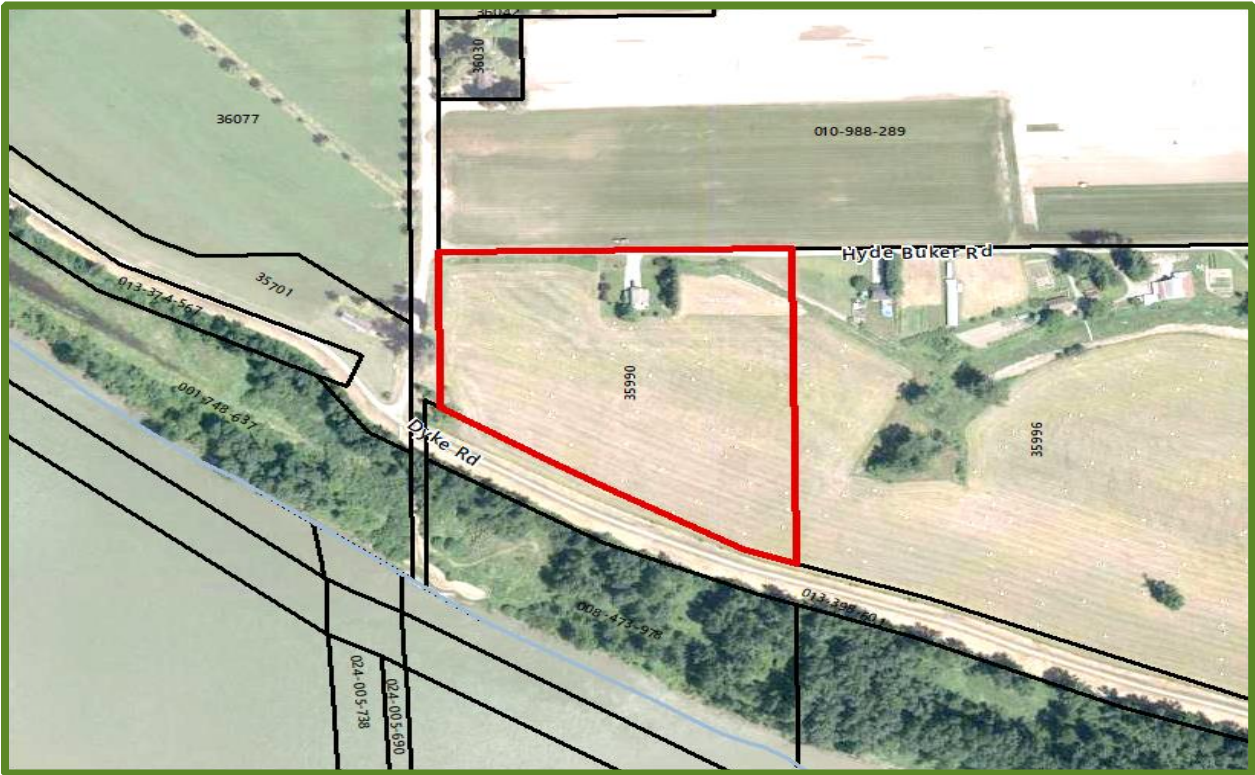
ADJACENT ZONING & LAND USES

North	^	Floodplain Agriculture (A-2); Other/Farm Use
East	>	Floodplain Agriculture (A-2); Farm/Grain & Forage
West	<	Floodplain Agriculture (A-2); Farm/Dairy
South	v	Floodplain Agriculture (A-2); Dyke Road/Vacant Lot

NEIGHBOURHOOD MAP



PROPERTY MAP



DISCUSSION

The applicants wish to vary the requirements of Accessory Family Residential Use so that their daughter can occupy a proposed accessory family residence (Appendix A: Site Plan) at 35990 Hyde Buker Road for reasons of personal care. The proposal will not vary siting requirements or increase density beyond what zoning currently allows. The proposed use is permitted in the Agricultural Land Reserve (ALR) and the applicants are working with staff to ensure all provincial and FVRD requirements are met. For these reasons staff recommend the requested variance be granted. If the variance were denied the daughter of the applicants could not occupy the accessory family residence.

Variance Request

The applicants have applied to vary the definition of Accessory Family Residential Use to allow their daughter to occupy the accessory family residence:

Current Definition

ACCESSORY FAMILY RESIDENTIAL USE means the use of a single-width manufactured home as a dwelling unit for the accommodation of the father, mother, father-in-law, mother-in-law or

Proposed Definition

ACCESSORY FAMILY RESIDENTIAL USE means the use of a single-width manufactured home as a dwelling unit for the accommodation of the father, mother, father-in-law, mother-in-law,

grandparent of an owner of the parcel.

grandparent **or child** of an owner of the parcel.

The applicants have explained the rationale for their request in their development variance permit application. The applicants have also provided documentation to staff regarding the need for personal care. Staff are confident that the need for care is legitimate. To protect privacy, staff are not providing further detail or documentation on the circumstances but the Area G Director is aware of them.

The applicants further state that the neighbours in their general vicinity are aware of their plans to place an accessory family residence on the property. According to the applicants, the neighbours are aware and supportive of their plan.



Figure 1: View of the subject property from Hyde Buker Road (Google Streetview).

Zoning

The subject property is zoned Floodplain Agriculture (A-2). Accessory Family Residential Use is permitted on the property under A-2 zoning. The need for a variance arises because the definition of Accessory Family Residential Use requires that the accessory family residence be occupied by the father, mother, father-in-law, mother-in-law, or grandparent of a property owner. The applicants wish to have their daughter occupy the accessory family residence. Since Accessory Family Residential Use is already permitted on the property, varying this definition to include children of the property owner would not increase density beyond what zoning currently allows.

The Accessory Family Residential Use contains further requirements that ensure the use is for family members and can be discontinued when required. These include that:

- The property owners execute a covenant in favour of the Regional District restricting the Accessory Family Residential Use to all provisions under zoning and agree to remove the dwelling within 90 days should it no longer meet these provisions;
- The applicants provide the Regional District a security bond in the amount of \$1,000.00 to be held until such time as the accessory family residence is removed and the covenant discharged; and
- The Accessory Family Residential Use be located in a single-wide mobile home that is not placed on a permanent foundation but supported by blocking on a concrete slab.

The applicants are willing and able to meet these requirements. This will ensure the additional dwelling is temporary and for the accommodation of their family member.

Zoning Bylaw Review

Staff are currently reviewing and consolidating the zoning bylaws of all Electoral Areas. This review includes analysis of the Accessory Family Residential Use. Under the *Local Government Act*, zoning is a tool to regulate the use of land and not the type of user. Staff are therefore analyzing the terms and conditions of Accessory Family Residential Use to determine if revised zoning provisions are required that do not discriminate based on relationship to the property owner.

Agricultural Land Reserve

The subject property is within the ALR. The proposed Accessory Family Residential Use is permitted in the ALR under Section 32(3) of the *Agricultural Land Reserve Use Regulation* subject to the following conditions:

- The residence is located in a manufactured home of 9 metres or less in width;
- The residence is used by the property owner or their family members including children;
- All authorizations to place the manufactured home are granted by December 31, 2020.

The applicants can meet these requirements. The proposed Accessory Family Residential Use is permitted in the ALR. Since children of the property owner are permitted to occupy the additional residence, the requested variance would align zoning with ALR legislation for the property.

Development Permit Areas

The subject property is within Riparian Areas Development Permit Area 2-G under the *Fraser Valley Regional District Official Community Plan for Electoral Area "G" Bylaw No. 0866, 2008*. Since the proposed accessory family residence is within 30 metres of a stream defined by the provincial *Riparian Areas Protection Regulation*, a site-specific riparian assessment and development permit are required. The applicants have submitted a development permit application and contracted a Qualified Environmental Professional (QEP) to complete the assessment. Staff will work with the applicants to ensure provincial and FVRD regulations are met.

Flood Hazard

The subject property is within the Fraser River Floodplain and must achieve Flood Construction Level (FCL) of 9.3 metres GSC under the *Fraser Valley Regional District Floodplain Management Bylaw 0681, 2005*. The applicants cannot meet this requirement but are willing to raise the habitable area of their accessory family residence 2.5 metres above grade under covenant with the FVRD. This will satisfy minimum FCL requirements of the Fraser River Floodplain. The applicants will also maintain the required 15-metre setback from any watercourse as defined by the *Fraser Valley Regional District Floodplain Management Bylaw 0681, 2005*.

Neighbourhood Notification and Input

All property owners within 30 metres of the property will be notified by the FVRD of the variance application and be given the opportunity to provide written comments or attend the Board meeting to state their comments. Staff encourage the applicants to advise neighbouring property owners and residents of the requested variance in advance of the mail-out notification.

To date no letters of support or opposition have been received.

COST

The \$1,300.00 application fee has been paid by the applicants.

CONCLUSION

The requested variance will expand the definition of Accessory Family Residential Use to include children of a property owner but is not expected to negatively impact the surrounding neighbourhood. The proposal will not vary siting requirements or increase the density permitted under zoning. The proposed use is permitted in the ALR and the applicants are working with staff to meet development permit and floodplain management requirements. Staff recommend that the FVRD Board issue Development Variance Permit 2020-14 to include children of a property owner in the definition of Accessory Family Residential Use.

Option 1: Issue (Staff Recommendation)

Staff recommend that the Fraser Valley Regional District Board issue Development Variance Permit 2020-14 to vary the requirements regarding the relationship between the property owner and occupant of an Accessory Family Residential Use to allow the daughter of a property owner to occupy the proposed accessory family residence at 35990 Hyde Buker Road, Electoral Area G, subject to the consideration of any comments or concerns raised by the public.

Staff further recommend that the Fraser Valley Regional District Board authorize its signatories to execute all legal instruments associated with this application.

Option 2: Refuse

If the Board wishes to refuse the application, the following motion would be appropriate:

MOTION: THAT the Fraser Valley Regional District Board refuse Development Variance Permit 2020-14 for the property at 35990 Hyde Buker Road, Electoral Area G.

Option 3: Refer to Staff

If the Board wishes to refer the application back to staff to address outstanding issues identified by the Board, the following motion would be appropriate:

MOTION: THAT the Fraser Valley Regional District Board refer Development Variance Permit 2020-14 for the property at 35990 Hyde Buker Road, Electoral Area G to FVRD staff.

COMMENTS BY:

Graham Daneluz, Director of Planning & Development:

Reviewed and supported

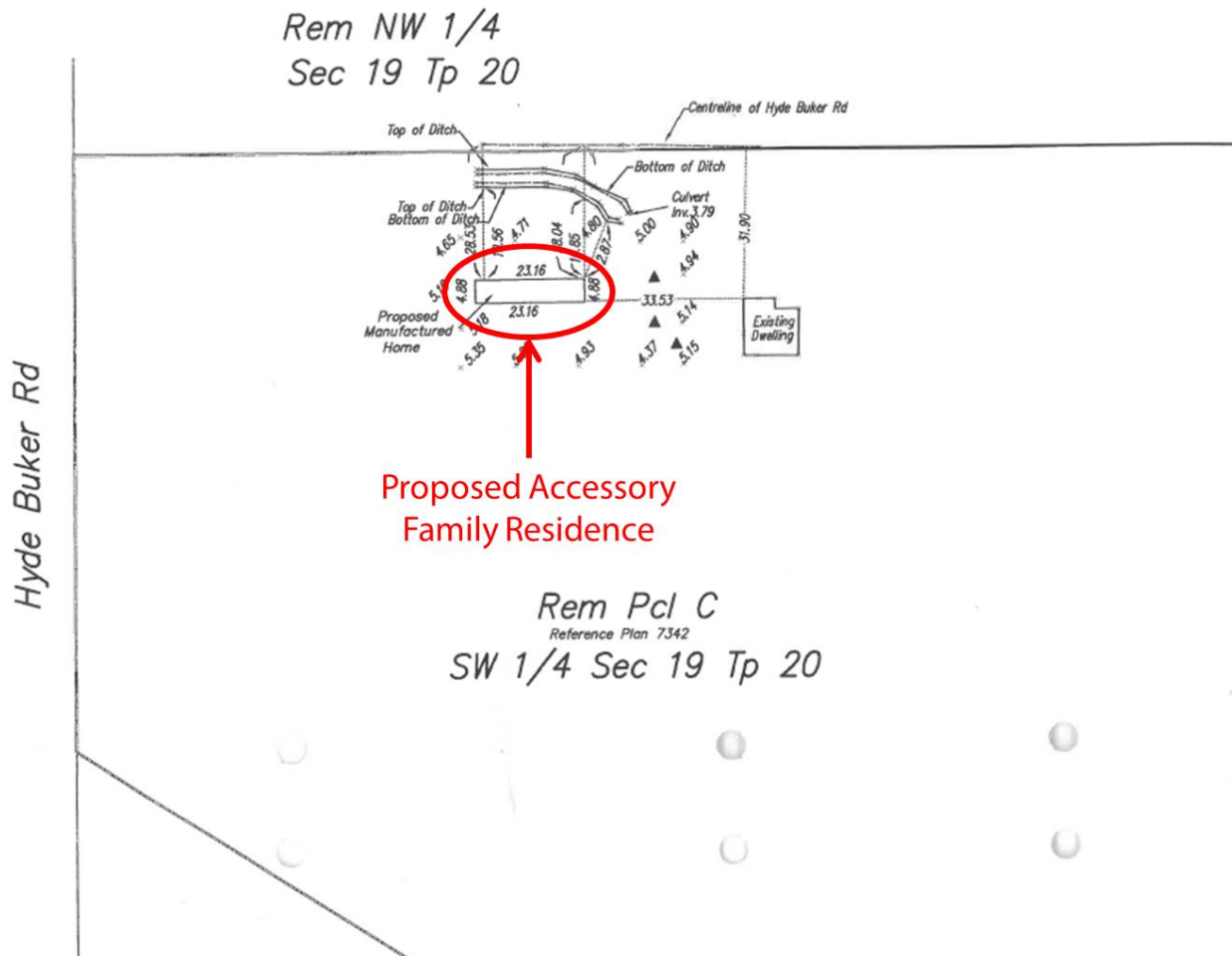
Kelly Lownsbrough, Chief Financial Officer/ Director of Finance:

Reviewed and supported

Jennifer Kinneman, Chief Administrative Officer:

Reviewed and supported.

APPENDIX A: SITE PLAN





FRASER VALLEY REGIONAL DISTRICT DEVELOPMENT VARIANCE PERMIT

Permit No. Development Variance Permit 2020-14 **Folio No.** 775.02448.000

Issued to: Donald & Nancy Scarrow

Address: 35990 Hyde Buker Road

Applicant: Donald & Nancy Scarrow

Site Address: 35990 Hyde Buker Road, Electoral Area G

The lands affected by and subject to this permit are shown on Schedule "A", Location Map, attached hereto, which forms an integral part of this permit, and are legally described as:

PARCEL "C" (REFERENCE PLAN 7342) SOUTH WEST QUARTER SECTION 19 TOWNSHIP 20 EXCEPT:

FIRSTLY: PART 2.72 ACRES MORE OR LESS (STATUTORY RIGHT-OF-WAY PLAN 12605)

SECONDLY: PART LYING BETWEEN THE NORTH BOUNDARY OF THE FRASER RIVER AND THE
SOUTH BOUNDARY OF THE DYKE SHOWN ON PLAN 12605

PID: 013-398-814

LIST OF ATTACHMENTS

Schedule "A": Location Map

Schedule "B": Site Plan

AUTHORITY TO ISSUE

1. This Development Variance Permit is issued under Part 14 - Division 9 of the *Local Government Act*.

BYLAWS SUPPLEMENTED OR VARIED

Dewdney-Alouette Regional District Land Use and Subdivision Regulation Bylaw No. 559-1992 is **varied** as follows:

Part 200 – Definitions

ACCESSORY FAMILY RESIDENTIAL USE means the use of a single-width manufactured home as a dwelling unit for the accommodation of the father, mother, father-in-law, mother-in-law, grandparent, or child of an owner of the parcel.

SPECIAL TERMS AND CONDITIONS

1. No variances other than those specifically set out in this permit are implied or to be construed.

2. If the holder of this permit does not commence the construction with respect to which the Permit was issued within two (2) years after the date of the permit, this permit shall lapse.
3. Development of the site shall be undertaken in accordance with the Site Plan attached hereto as Schedule "B".

GENERAL TERMS AND CONDITIONS

1. This Development Variance Permit is issued Pursuant to Part 14 - Division 9 of the *Local Government Act*.
2. This Development Variance Permit shall not vary the permitted uses or densities of land use in the applicable zoning bylaw nor a flood plain specification designated under Section 524 of the *Local Government Act*.
3. Nothing in this permit shall in any way relieve the developer's obligation to ensure that the development proposal complies in every way with the statutes, regulations, requirements, covenants and licences applicable to the undertaking.
4. Nothing in this permit shall in any way relieve the developer's obligation to comply with all setback regulations for construction of structures or provision of on-site services pursuant to the *Public Health Act*, the *Fire Services Act*, the *Safety Standards Act*, and any other provincial statutes.
5. The Archaeology Branch of the Province of British Columbia must be contacted (phone 250-953-3334) if archaeological material is encountered on the subject property. Archaeological material may be indicated by dark-stained soils containing conspicuous amounts of fire-stained or fire-broken rock, artefacts such as arrowheads and other stone tools, or human remains. If such material is encountered during demolition or construction, a Heritage Conservation Act Permit may be needed before further development is undertaken. This may involve the need to hire a qualified Archaeologist to monitor the work.

SECURITY DEPOSIT

As a condition of the issuance of this Permit, and pursuant to Section 502 of the *Local Government Act*, the Regional Board is holding the security set out below to ensure that development is carried out in accordance with the terms and conditions of this Permit.

Should the holder of this permit:

- a. fail to complete the works required to satisfy the landscaping conditions contained herein,
- b. contravene a condition of the permit in such a way as to create an unsafe condition,

The Regional Board may undertake and complete the works required to satisfy the landscaping conditions, or carry out any construction required to correct an unsafe condition at the cost of the holder of the permit and may apply the security in payment of the costs of the works, with any excess to be returned to the holder of the permit.

Security Posted: (a) an irrevocable letter of credit in the amount of: \$ <N/A>.
(b) the deposit of the following specified security: \$1,000.00.

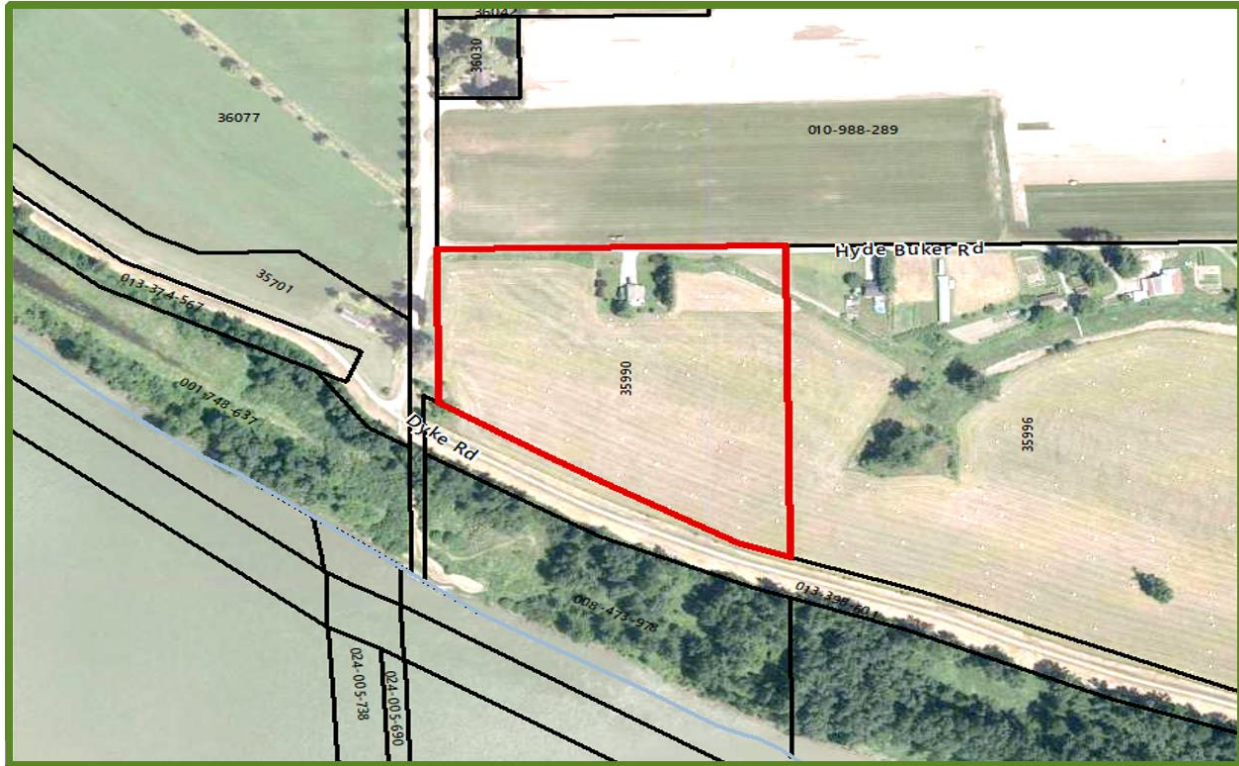
Note: The Regional District shall file a notice of this permit in the Land Title Office stating that the land described in the notice is subject to Development Variance Permit Number 2020-14. The notice shall take the form of Appendix I attached hereto.

AUTHORIZING RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF THE FRASER VALLEY REGIONAL DISTRICT ON THE 17th DAY OF SEPTEMBER, 2020.

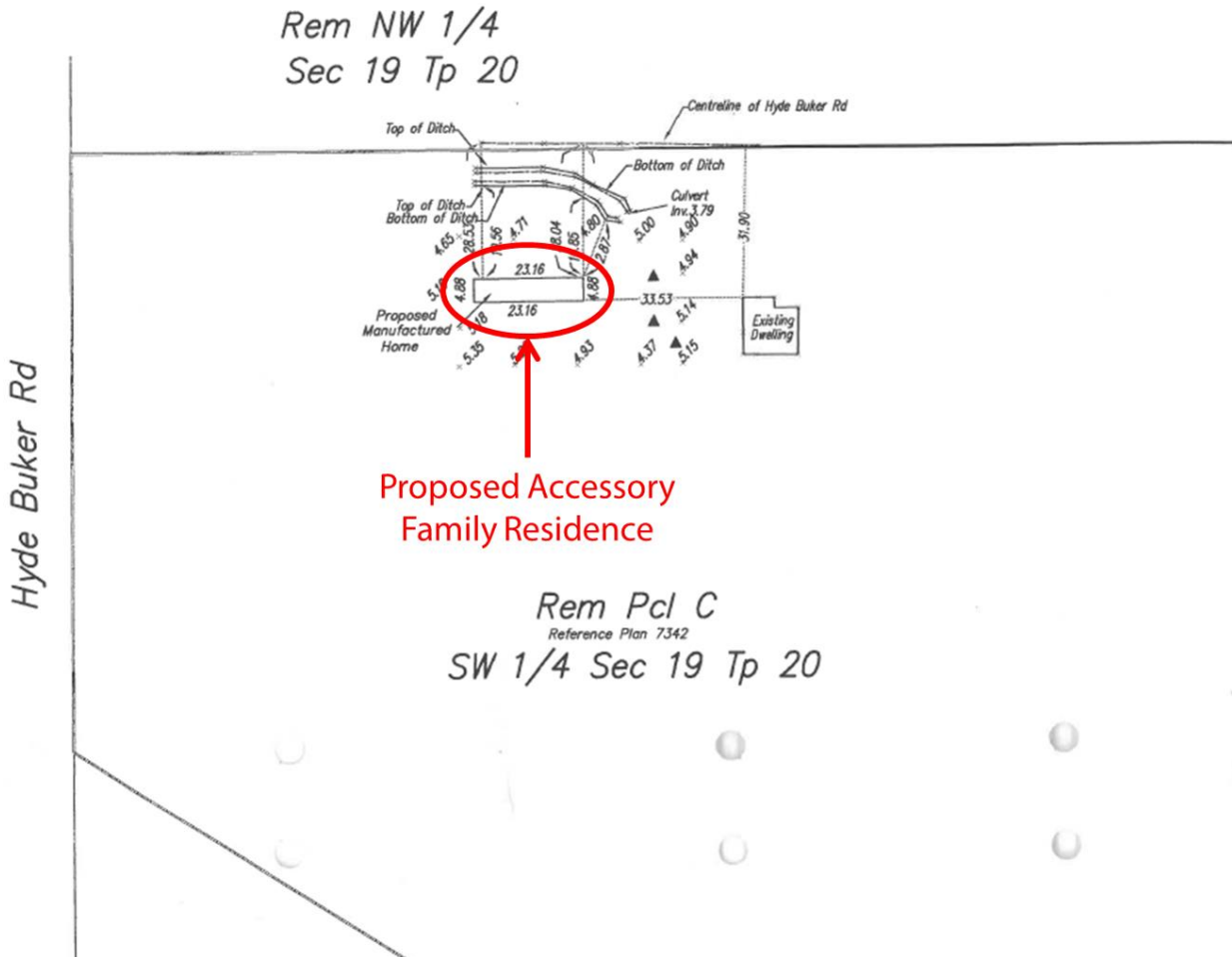
Chief Administrative Officer / Deputy

THIS IS NOT A BUILDING PERMIT

DEVELOPMENT VARIANCE PERMIT 2020-14
SCHEDULE "A"
Location Map



DEVELOPMENT VARIANCE PERMIT 2020-14 SCHEDULE "B" Site Plan



SCHEDULE A-4

Permit Application

I / We hereby apply under Part 14 of the Local Government Act for a;

☒ Development Variance Permit

☐ Temporary Use Permit

☒ Development Permit

1300.00 (DVP)
300.00 (DP)

An Application Fee in the amount of \$ 300.00 as stipulated in FVRD Application Fees Bylaw No. 1231, 2013 must be paid upon submission of this application.

Civic

Address

35990 Hyde-Baker Rd. Dewdney, BC PID 013-398-814
VOM1H0

Legal

Lot _____ Block _____ Section X Township _____ Range _____ Plan _____

Description

The property described above is the subject of this application and is referred to herein as the 'subject property.' This application is made with my full knowledge and consent. I declare that the information submitted in support of the application is true and correct in all respects.

Owner's
Declaration

<u>Janet Robinson</u>	<u>[Signature]</u>	<u>Aug 17/2020</u>
<u>Mary Lynn Scarrow</u>	<u>[Signature]</u>	
Name of Owner (print)	Signature of Owner	Date
<u>Donald Scarrow</u>	<u>[Signature]</u>	<u>Aug 16/2020</u>
<u>Nancy Scarrow</u>	<u>[Signature]</u>	<u>Aug 16/2020</u>
Name of Owner (print)	Signature of Owner	Date
<u>Jim Scarrow</u>	<u>[Signature]</u>	<u>Aug 19/2020</u>
<u>Lorraine Scarrow</u>	<u>[Signature]</u>	<u>Aug 19/2020</u>
<u>Robert Scarrow</u>	<u>[Signature]</u>	

Owner's
Contact
Information

Address <u>35990 Hyde-Baker Rd.</u>	City <u>Dewdney, BC</u>
	Postal Code <u>VOM1H0</u>
	Fax

Office Use Only	Date	File No.
	Received By	Folio No.
	Receipt No.	Fees Paid: \$

Agent

I hereby give permission to _____ to act as my/our agent in all matters relating to this application.

Only complete this section if the applicant is NOT the owner.

Signature of Owner	Date
Signature of Owner	Date

Agent's contact information and declaration

Name of Agent		Company
Address		City
Email		Postal Code
Phone	Cell	Fax

I declare that the information submitted in support of this application is true and correct in all respects.

Signature of Agent	Date
--------------------	------

Development Details

Property Size Approx. 11 acres Present Zoning Agricultural A-2

Existing Use Residential / Pasture

Proposed Development Addition of accessory family dwelling

Proposed Variation / Supplement Need definition of accessory family residential use altered to include a child.

(use separate sheet if necessary)

**Riparian
Areas
Regulation**

Please indicate whether the development proposal involves residential, commercial, or including vegetation removal or alteration; soil disturbance; construction of buildings and structures; creation of impervious or semi-pervious surfaces; trails, roads, docks, wharves, bridges and, infrastructure and works of any kind – within:

yes ☒ no ☐

30 metres of the high water mark of any water body

yes ☐ no ☒

a ravine or within 30 metres of the top of a ravine bank

"Water body" includes; 1) a watercourse, whether it usually contains water or not; 2) a pond, lake, river, creek, or brook; 3) a ditch, spring, or wetland that is connected by surface flow to 1 or 2 above.

Under the *Riparian Areas Regulation* and the *Fish Protection Act*, a riparian area assessment report may be required before this application can be approved.

in progress

**Contaminated
Sites Profile**

Pursuant to the *Environmental Management Act*, an applicant is required to submit a completed "Site Profile" for properties that are or were used for purposes indicated in Schedule 2 of the *Contaminated Sites Regulations*. Please indicate if:

yes ☐ no ☒

the property has been used for commercial or industrial purposes.

If you responded 'yes,' you may be required to submit a Site Profile. Please contact FVRD Planning or the Ministry of Environment for further information.

**Archaeological
Resources**

Are there archaeological sites or resources on the subject property?

yes ☐ no ☒ I don't know ☐

If you responded 'yes' or 'I don't know' you may be advised to contact the Archaeology Branch of the Ministry of Tourism, Sport and the Arts for further information.

Required Information

When providing Application Forms to the applicant, Regional District staff shall indicate which of the following attachments are required for this application. **Additional information may also be required at a later date.**

	Required	Received	Details
Location Map			Showing the parcel (s) to which this application pertains and uses on adjacent parcels
Site Plan			Reduced sets of metric plans
At a scale of:			North arrow and scale
1: _____			Dimensions of property lines, rights-of-ways, easements
			Location and dimensions of existing buildings & setbacks to lot lines, rights-of-ways, easements
			Location and dimensions of proposed buildings & setbacks to lot lines, rights-of-ways, easements
			Location of all water features, including streams, wetlands, ponds, ditches, lakes on or adjacent to the property
			Location of all existing & proposed water lines, wells, septic fields, sanitary sewer & storm drain, including sizes
			Location, numbering & dimensions of all vehicle and bicycle parking, disabled persons' parking, vehicle stops & loading
			Natural & finished grades of site, at buildings & retaining walls
			Location of existing & proposed access, pathways
			Above ground services, equipment and exterior lighting details
			Location & dimensions of free-standing signs
			Storm water management infrastructure and impermeable surfaces
			Other:
Floor Plans			Uses of spaces & building dimensions
			Other:
Landscape Plan			Location, quantity, size & species of existing & proposed plants, trees & turf
Same scale as site plan			Contour information (_____ metre contour intervals)
			Major topographical features (water course, rocks, etc.)
			All screening, paving, retaining walls & other details
			Traffic circulation (pedestrian, automobile, etc.)
			Other:
Reports			Geotechnical Report
			Environmental Assessment
			Archaeological Assessment
			Other:

The personal information on this form is being collected in accordance with Section 26 of the *Freedom of Information and Protection of Privacy Act, RSBC 1996 Ch. 165* and the *Local Government Act, RSBC 2015 Ch. 1*. It will only be collected, used and disclosed for the purpose of administering matters with respect to **planning, land use management** and related **services delivered**, or proposed to be delivered, by the FVRD. Questions about the use of personal information and the protection of privacy may be directed to the FVRD Privacy Officer at 45950 Cheam Avenue, Chilliwack, BC V2P 1N6, Tel: 1-800-528-0061 FOI@fvrld.ca.

September 17, 2020 FVRD Board Meeting
CORRESPONDENCE – Item 6.4
DVP 2020-14, 35990 Hyde Buker Road
Electoral Area G

From: Elske von Hardenberg <evonhardenberg@bell.net>
Sent: September 13, 2020 2:42 PM
To: Planning Info <planning@fvr.ca>
Subject: RE: Development Variance Permit 2020-14

To: The Regional Board of the FVRD

RE: Development Variance Permit 2020-14

We, Fred and Elske von Hardenberg, of 36077 Hyde Buker Road, Dewdney BC, are in receipt of a notification letter regarding the proposed Development Variance Permit 2020-14. We have reviewed the letter and the location map, and, as neighbours, we have no objection to the proposed development.

Regards;

*Elske and Fred von Hardenberg
Box 138
36077 Hyde Buker Road
Dewdney, BC V0M1H0
T: 604 820 8453
C: 604 302 9197*

To: Electoral Area Services Committee
 From: Gavin Luymes, Planning Technician

Date: 2020-09-09
 File No: 3090-20 2020-15

Subject: Application for Development Variance Permit 2020-15 to vary the front lot line setback for an animal shelter or part thereof at 53294 Yale Road, Electoral Area D

RECOMMENDATION

THAT the Fraser Valley Regional District Board issue Development Variance Permit 2020-15 to vary the front lot line setback for an animal shelter or part thereof from 200 feet to 120 feet clear-to-sky to facilitate construction of a dairy barn at 53294 Yale Road, Electoral Area D, subject to the consideration of any comments or concerns raised by the public.

STRATEGIC AREA(S) OF FOCUS

Foster a Strong & Diverse Economy
 Provide Responsive & Effective Public Services

BACKGROUND

The property owners have applied for a Development Variance Permit to vary the front lot line setback for an animal shelter or part thereof (dairy barn) as prescribed in *Zoning Bylaw for Electoral Area "D", 1976 of the Regional District of Fraser-Cheam*. The property owners have applied for a Building Permit (BP014904) to facilitate construction of the dairy barn.

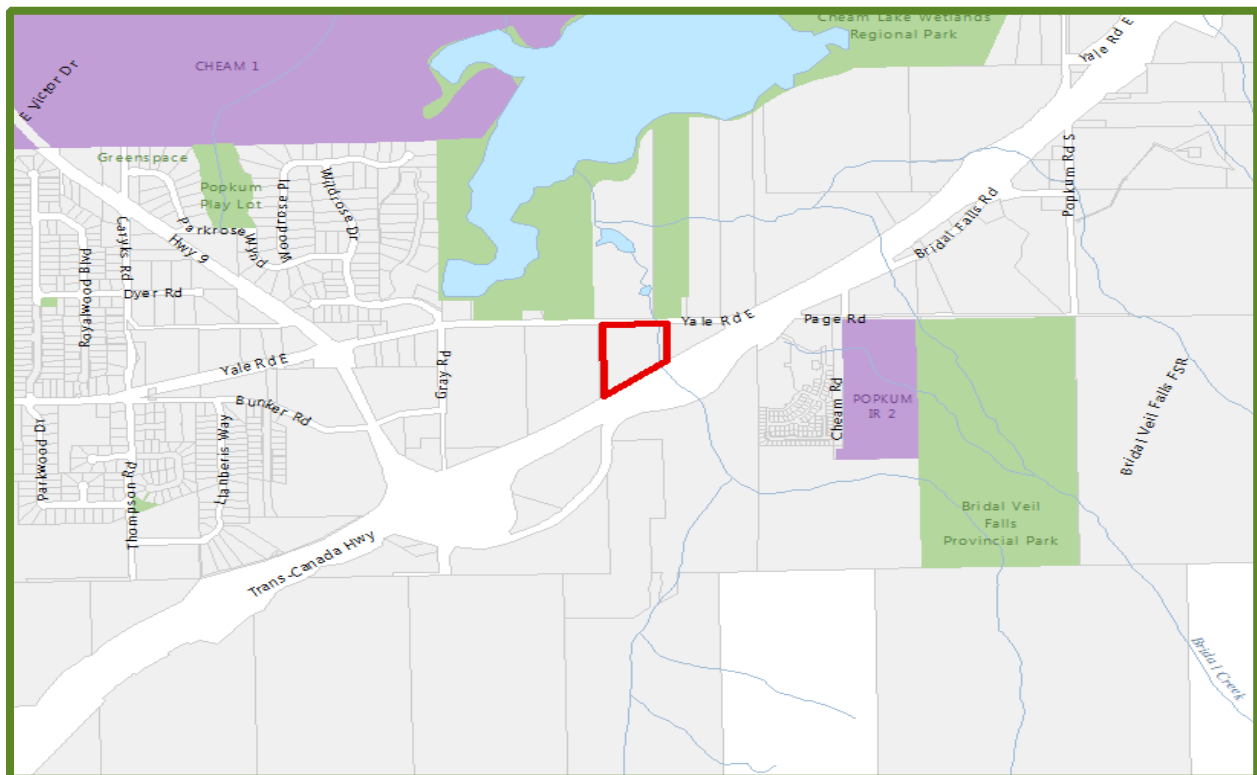
PROPERTY DETAILS			
Electoral Area	D		
Address	53294 Yale Road		
PID	008-965-820		
Folio	733.06430.100		
Lot Size	7.21 Acres		
Owner	William & Lynn Romeyn	Agent	David Goosen
Current Zoning	Rural (R)	Proposed Zoning	No change
Current OCP	Agricultural (AG-S)	Proposed OCP	No change

Current Use	Mixed	Proposed Use	No change
Development Permit Areas	Riparian 6-D		
Agricultural Land Reserve	Yes		

ADJACENT ZONING & LAND USES

North	^	Yale Road East & Rural (R); 2 acres or more (Outbuilding)
East	>	Rural (R); 2 acres or more (Vacant)
West	<	Rural (R); Mixed
South	v	Trans-Canada Highway, & Bridal Falls Road

NEIGHBOURHOOD MAP



PROPERTY MAP



DISCUSSION

The property owners have applied to reduce the front lot line setback from 200 to 120 feet for their proposed dairy barn at 53294 Yale Road (Appendix A: Site Plan). The barn cannot be simply located elsewhere on the property due to a BC Hydro right-of-way, required setbacks from watercourses, dwelling units, and other lot lines, site topography, and concerns regarding soil stability and marshy ground at the sole alternative location where a variance would not be required. Other structures on the property meet required setbacks and the applicants advise that treed vegetation and the 120-foot setback will buffer the barn from Yale Road and the front lot line. For these reasons staff recommend the requested variance be granted.

Variance Request

The applicants have requested relaxation of the required front lot line setback from 200 to 120 feet:

Required Setback	Proposed Setback	Difference
200 feet	120 feet	80 feet

This required front lot line setback only applies to animal shelters for the housing of livestock. The required front lot line setback for other structures on the property is 25 feet under Rural (R) zoning. This would apply to other agricultural structures including the “proposed manure storage lagoon” shown on

the submitted site plan. The proposed dairy barn meets all other required setbacks for an animal shelter including 100 feet from any side or rear lot line, 200 feet from a flanking street, 100 feet from a residential use, and 100 feet from the natural boundary of a stream, lake or watercourse.

Rationale for Variance

The applicants provide the following rationale in support of their variance request:

- The property contains a BC Hydro right-of-way that limits their buildable area;
- The building envelope is constrained by required setbacks from the side and rear lot lines, residential use, and watercourses;
- The alternative location for the barn that meets all required setbacks is composed of low, swampy ground where building would be prohibitively expensive; and
- The barn will be screened from Yale Road by a 30-foot vegetated buffer in addition to the requested 120-foot setback.

Staff have considered this rationale in relation to FVRD requirements and neighbourhood impact.

The BC Hydro right-of-way limits buildable area on the property by approximately 0.75 acres but the right-of-way is entirely within the required setbacks for the proposed dairy barn. Though the right-of-way is therefore not a significant restriction for the dairy barn, this area does limit buildable area on the property for other development.

Required setbacks for the dairy barn are 100 feet from side and rear lot lines, 100 feet from a residential use, and 100 feet from the natural boundary of a stream, lake, or watercourse. Since the property is relatively small (7.2 acres) with a house in the centre and creek on the eastern portion, these setbacks significantly restrict the buildable area and present a limitation to development. Staff note that the dairy barn meets each of these other setbacks.

The sole location where the dairy barn could be built without a setback variance is on low, swampy ground that the applicants consider unsuitable and prohibitively expensive for building. Development in this location could also fail to meet the 100-foot watercourse setback under zoning and requirements of the *Fraser Valley Regional District Floodplain Management Bylaw 0681, 2005*.

The dairy barn will be screened from Yale Road and neighbouring properties by a 30-foot vegetated buffer in addition to the requested 120-foot setback. Staff consider these measures sufficient to mitigate any negative impact of the dairy barn on surrounding properties.

Agricultural Land Reserve

The subject property is within the Agricultural Land Reserve (ALR). Dairy farming is a permitted use that cannot be prohibited by local government in the ALR.

Flood Hazard

The proposed dairy barn is subject to the *Fraser Valley Regional District Floodplain Management Bylaw 0681, 2005*. The barn must be located 1.5 metres above and 15 metres from any nearby watercourse. Staff will ensure these flood protection requirements are met during the building permit process.

Neighbourhood Notification and Input

All property owners within 30 metres of the property will be notified by the FVRD of the variance application and be given the opportunity to provide written comments or attend the Board meeting to state their comments. Staff encourage the applicants to advise neighbouring property owners and residents of the requested variance in advance of the mail-out notification.

To date one letter of support and no letters of opposition have been received.

COST

The \$1,300.00 application fee has been paid by the applicants.

CONCLUSION

The requested variance is appropriate for constructing the proposed dairy barn. The building envelope for a dairy barn is limited by property size and required setbacks from lot lines, residential use, and watercourses. The only location on the subject property where the proposed dairy barn could be built without a development variance is considered unsuitable and prohibitively expensive for building. The dairy barn will maintain a 120-foot setback from Yale Road and be screened with a 30-foot vegetated buffer, mitigating the impact on surrounding properties. For these reasons staff recommend that the FVRD Board issue Development Variance Permit 2020-15 to vary the required front lot line setback for an animal shelter from 200 to 120 feet at 53294 Yale Road.

Option 1: Issue (Staff Recommendation)

Staff recommend that the Fraser Valley Regional District Board issue Development Variance Permit 2020-15 to vary the front lot line setback for an animal shelter or part thereof from 200 feet to 120 feet clear-to-sky to facilitate construction of a dairy barn at 53294 Yale Road, Electoral Area D, subject to the consideration of any comments or concerns raised by the public.

Option 2: Refuse

If the Board wishes to refuse the application, the following motion would be appropriate:

MOTION: THAT the Fraser Valley Regional District Board refuse Development Variance Permit 2020-15 for the property at 53294 Yale Road, Electoral Area D.

Option 3: Refer to Staff

If the Board wishes to refer the application back to staff to address outstanding issues identified by the Board, the following motion would be appropriate:

MOTION: THAT the Fraser Valley Regional District Board refer Development Variance Permit 2020-15 for the property at 53294 Yale Road, Electoral Area D to FVRD staff.

COMMENTS BY:

Graham Daneluz, Director of Planning & Development: Reviewed and supported.

Kelly Lownsbrough, Chief Financial Officer/ Director of Finance: Reviewed and supported.

Jennifer Kinneman, Chief Administrative Officer: Reviewed and supported.

[illegible]



FRASER VALLEY REGIONAL DISTRICT DEVELOPMENT VARIANCE PERMIT

Permit No. Development Variance Permit 2020-15 **Folio No.** 733.06430.100

Issued to: William & Lynn Romeyn

Address: 53294 Yale Road

Applicant: David Goosen

Site Address: 53294 Yale Road, Electoral Area D

The lands affected by and subject to this permit are shown on Schedule "A", Location Map, attached hereto, which forms an integral part of this permit, and are legally described as:

LOT 3, EXCEPT: PART ON PLAN 51771 SECTION 6 TOWNSHIP 3 RANGE 28 WEST OF THE SIXTH
MERIDIAN YALE DIVISION YALE DISTRICT PLAN 20646
PID: 008-965-820

LIST OF ATTACHMENTS

Schedule "A": Location Map

Schedule "B": Site Plan

AUTHORITY TO ISSUE

1. This Development Variance Permit is issued under Part 14 - Division 9 of the *Local Government Act*.

BYLAWS SUPPLEMENTED OR VARIED

Zoning Bylaw for Electoral Area "D", 1976 of the Regional District of Fraser-Cheam is **varied** as follows:

Division Three: General Regulations

302 REGULATIONS FOR THE SIZE, SHAPE, AND SITING OF BUILDINGS

1. GENERAL REGULATIONS

(b) An animal shelter or part thereof used for the stabling of horses, or for the housing of livestock or other farm animals shall not be located closer than:

ii) 120 feet from a front or flanking street

SPECIAL TERMS AND CONDITIONS

1. No variances other than those specifically set out in this permit are implied or to be construed.

2. If the holder of this permit does not commence the construction with respect to which the Permit was issued within two (2) years after the date of the permit, this permit shall lapse.
3. Development of the site shall be undertaken in accordance with the Site Plan attached hereto as Schedule "B".

GENERAL TERMS AND CONDITIONS

1. This Development Variance Permit is issued Pursuant to Part 14 - Division 9 of the *Local Government Act*.
2. This Development Variance Permit shall not vary the permitted uses or densities of land use in the applicable zoning bylaw nor a flood plain specification designated under Section 524 of the *Local Government Act*.
3. Nothing in this permit shall in any way relieve the developer's obligation to ensure that the development proposal complies in every way with the statutes, regulations, requirements, covenants and licences applicable to the undertaking.
4. Nothing in this permit shall in any way relieve the developer's obligation to comply with all setback regulations for construction of structures or provision of on-site services pursuant to the *Public Health Act*, the *Fire Services Act*, the *Safety Standards Act*, and any other provincial statutes.
5. The Archaeology Branch of the Province of British Columbia must be contacted (phone 250-953-3334) if archaeological material is encountered on the subject property. Archaeological material may be indicated by dark-stained soils containing conspicuous amounts of fire-stained or fire-broken rock, artefacts such as arrowheads and other stone tools, or human remains. If such material is encountered during demolition or construction, a Heritage Conservation Act Permit may be needed before further development is undertaken. This may involve the need to hire a qualified Archaeologist to monitor the work.

SECURITY DEPOSIT

As a condition of the issuance of this Permit, and pursuant to Section 502 of the *Local Government Act*, the Regional Board is holding the security set out below to ensure that development is carried out in accordance with the terms and conditions of this Permit.

Should the holder of this permit:

- a. fail to complete the works required to satisfy the landscaping conditions contained herein,
- b. contravene a condition of the permit in such a way as to create an unsafe condition,

The Regional Board may undertake and complete the works required to satisfy the landscaping conditions, or carry out any construction required to correct an unsafe condition at the cost of the holder of the permit and may apply the security in payment of the costs of the works, with any excess to be returned to the holder of the permit.

Security Posted: (a) an irrevocable letter of credit in the amount of: \$ <N/A>.
 (b) the deposit of the following specified security: \$ <N/A>.

Note: The Regional District shall file a notice of this permit in the Land Title Office stating that the land described in the notice is subject to Development Variance Permit Number 2020-15. The notice shall take the form of Appendix I attached hereto.

AUTHORIZING RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF THE FRASER VALLEY REGIONAL DISTRICT ON THE 17th DAY OF SEPTEMBER, 2020.

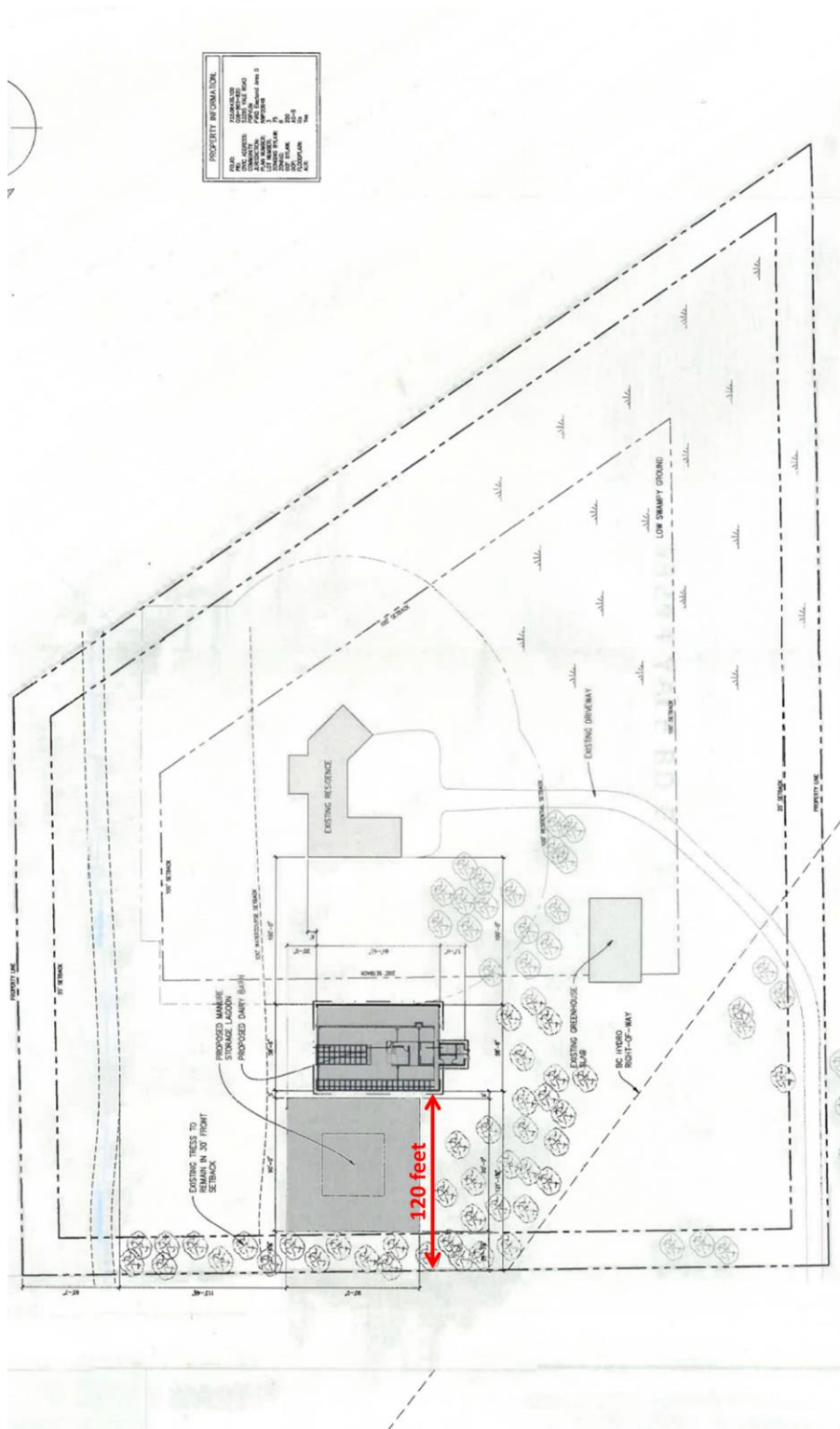
Chief Administrative Officer / Deputy

THIS IS NOT A BUILDING PERMIT

DEVELOPMENT VARIANCE PERMIT 2020-15
SCHEDULE "A"
Location Map



DEVELOPMENT VARIANCE PERMIT 2020-15
SCHEDULE "B"
Site Plan





**PLANNING &
DEVELOPMENT**

www.fvrd.ca | planning@fvrd.ca

SCHEDULE A-4

Permit Application

I / We hereby apply under Part 14 of the Local Government Act for a:

- ☒ Development Variance Permit
- ☐ Temporary Use Permit
- ☐ Development Permit

An Application Fee in the amount of \$ _____ as stipulated in FVRD Application Fees Bylaw No. 1231, 2013 must be paid upon submission of this application.

Civic **53294 Yale Road, Popkum, BC** PID **008-965-820**
Address _____

Legal **3**
Description Lot _____ Block _____ Section _____ Township _____ Range _____ Plan _____

The property described above is the subject of this application and is referred to herein as the 'subject property.' This application is made with my full knowledge and consent. I declare that the information submitted in support of the application is true and correct in all respects.

Owner's Declaration	Name of Owner (print) William Romeyn	Signature of Owner 	Date July 30/2020
	Name of Owner (print) Lynn Romeyn	Signature of Owner 	Date July 30/2020

Owner's Contact Information	Address 53294 Yale Road	City Popkum	Postal Code
	Cell	Fax	


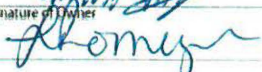
Office Use Only	Date	File No.
	Received By	Folio No.
	Receipt No.	Fees Paid: *

45950 Cheam Avenue | Chilliwack, BC | V2P 1N6

Phone: 604-702-5000 | Toll Free: 1-800-528-0061 | Fax: 604-702-9824

Agent David Goosen
 I hereby give permission to _____ to act as my/our agent in all matters relating to this application.

Only complete this section if the applicant is NOT the owner.

Signature of Owner 	Date July 30/2020
Signature of Owner 	Date July 30/2020

Agent's contact information and declaration

Name of Agent David Goosen		Company Goosen Construction
Address 46165A 4th Avenue		City Chilliwack
		Postal Code V2P1N3
Phone 	Cell	Fax

I declare that the information submitted in support of this application is true and correct in all respects.

Signature of Agent 	Date July 9, 2020
---	----------------------

Development Details

Property Size 7.2 ACRE Present Zoning Rural
 Existing Use AGRICULTURE
 Proposed Development New 84.5'x 58.5' Dairy Barn

Proposed Variation / Supplement Vary the front setback from road to new barn from 200' down to 120'.

(use separate sheet if necessary)
 Current setbacks, such as Hydro, watercourse, Farm Building Code, & FVRD bylaws
 Reasons in Support of Application
limit the buildable area. Another factor limiting buildable area is the low swampy ground in the south west corner of the property. In order to build in this location, it would require extensive geotechnical remediation for both the proposed barn and manure pit. Please note that the manure pit meets all FVRD bylaw whereas the proposed barn does not. The existing trees within the 30' setback along Yale Road will remain.

Provincial Requirements (This is not an exhaustive list; other provincial regulations will apply)

Riparian Areas Regulation

Please indicate whether the development proposal involves residential, commercial, or including vegetation removal or alteration; soil disturbance; construction of buildings and structures; creation of impervious or semi-pervious surfaces; trails, roads, docks, wharves, bridges and, infrastructure and works of any kind – within:

☐ yes

☒ no

30 metres of the high water mark of any water body

☐ yes

☒ no

a ravine or within 30 metres of the top of a ravine bank

"Water body" includes: 1) a watercourse, whether it usually contains water or not; 2) a pond, lake, river, creek, or brook; 3) a ditch, spring, or wetland that is connected by surface flow to 1 or 2 above.

Under the *Riparian Areas Regulation* and the *Fish Protection Act*, a riparian area assessment report may be required before this application can be approved.

Contaminated Sites Profile

Pursuant to the *Environmental Management Act*, an applicant is required to submit a completed "Site Profile" for properties that are or were used for purposes indicated in Schedule 2 of the *Contaminated Sites Regulations*. Please indicate if:

☐ yes

☒ no

the property has been used for commercial or industrial purposes.

If you responded 'yes,' you may be required to submit a Site Profile. Please contact FVRD Planning or the Ministry of Environment for further information.

Archaeological Resources

Are there archaeological sites or resources on the subject property?

☐ yes

☒ no

I don't know

☐

If you responded 'yes' or 'I don't know' you may be advised to contact the Archaeology Branch of the Ministry of Tourism, Sport and the Arts for further information.

Required Information

When providing Application Forms to the applicant, Regional District staff shall indicate which of the following attachments are required for this application. **Additional information may also be required at a later date.**

	Required	Received	Details
Location Map			Showing the parcel (s) to which this application pertains and uses on adjacent parcel;
Site Plan			Reduced set; of metric plan;
At a scale of: 1: _____	2		North arrow and scale;
	2		Dimensions of property lines, rights-of- ways, easement;
			Location and dimensions of existing buildings & setbacks to lot lines, rights-of-ways, easement;
			Location and dimensions of proposed buildings & setbacks to lot lines, rights-of- ways, easement;
			Location of all water features, including streams, wetlands, ponds, ditches, lakes on or adjacent to the property;
			Location of all existing & proposed water lines, wells, septic fields, sanitary sewer & storm drain, including size;
			Location, numbering & dimensions of all vehicle and bicycle parking, disabled persons' parking, vehicle steps & loading;
			Natural & finished grades of site, at buildings & retaining walls;
	2		Location of existing & proposed access, pathway;
	2		Above ground services, equipment and exterior lighting detail;
	2		Location & dimensions of free standing sign;
	2		Storm water management infrastructure and impermeable surface;
	2		Other;
Floor Plans			Uses of spaces & building dimensions
			Other;
Landscape Plan			Location, quantity, size & species of existing & proposed plants, trees & turf
Same scale as site plan	1		Contour information (_____ metre contour intervals)
	1		Major topographical features (watercourse, rocks, etc.)
	2		All screening, paving, retaining walls & other detail;
	2		Traffic circulation (pedestrian, automobile, etc.)
			Other;
Reports			Geotechnical Report
			Environmental Assessment
			Archaeological Assessment
	1		Other;

The personal information on this form is being collected in accordance with Section 26 of the *Freedom of Information and Protection of Privacy Act, RSBC 1996 Ch. 165* and the *Local Government Act, RSBC 2015 Ch. 1*. It will only be collected, used and disclosed for the purpose of administering matters with respect to planning, land use management and related services delivered, or proposed to be delivered, by the FVRD. Questions about the use of personal information and the protection of privacy may be directed to the FVRD Privacy Officer at 45950 Cheam Avenue, Chilliwack, BC V2P 1N6, Tel: 1-800-528-0061 FOI@fvrld.ca

F.V.R.D. BLDG. DEPT

AUG 28 2020

William & Lynn Roney
53294 Yale Road
Rosedale, BC V0X 1X1
Canada

Date: Aug 26 /20

Fraser Valley Regional District
45950 Cheam Avenue
Chilliwack, BC V2P 1N6

RE: Letter of Support for Variance Permit at 53294 Yale Road

To Whom it May Concern,

I/We, Chris, Lynette Klaassen as owner(s) of 53210 Yale Rd
have been notified about the proposed variance permit at 53294 Yale Road and support the
approval of the variance by our signature(s) at the bottom of this page.

As described to me/us, the proposed variance in question requests that the Fraser Valley
Regional District vary the front setback requirement from 200' down to 120' to facilitate the
construction of a new dairy barn. The current property owners have also mentioned to us that
the existing trees along the front of the property will remain as a visual buffer between the
road and proposed dairy barn.

Sincerely,

Name: Chris Klaassen

Name: _____

Signature: 

Signature: _____

To: Regional and Corporate Services Committee
From: Marina Richter, Environmental Policy Analyst

Date: 2020-09-09
File No: 9050-20-099

Subject: FVRD Air Quality Management Plan Discussion Paper

INTENT

This report is intended to obtain feedback from the Board on the document titled "Air Quality Planning for the Fraser Valley: A Discussion Paper" and to advise the Board that staff will begin seeking input on this document from multiple levels of government and from interested organizations and stakeholders that play a role in airshed management within the Lower Fraser Valley.

STRATEGIC AREA(S) OF FOCUS

Support Environmental Stewardship
Support Healthy & Sustainable Community

PRIORITIES

Priority #2 Air & Water Quality

BACKGROUND

Air quality is one of the top priorities for the Fraser Valley Regional District (FVRD). Most of the FVRD lies in the Lower Fraser Valley airshed, known for its sensitivity to air pollution and frequent episodes of poor air quality. While air quality in the Lower Fraser Valley is generally good, and a number of pollutant levels have been showing a downward trend, this is not always the case. Multiple health advisories are often issued each year, and our scenic mountains and beautiful landscapes are often hidden from view due to poor air quality. There is more that is needed to be done, particularly given ongoing population and economic growth, at local, regional, and even international levels to better understand pollution levels and reduce exposure.

The FVRD's 1998 Air Quality Management Plan (AQMP) is outdated and needs revising to better reflect the newest data, modelling, and research findings. Over the past several years, as information has been collected, staff have been bringing forward to the Board reports and

presentations on the main sources of emissions within the region, including on-road transportation, off-road equipment, and outdoor and indoor burning. These issues, as well as identifying strategies and tools for addressing emission, became a framework for updating the AQMP.

DISCUSSION

A draft of this new Air Quality Management Plan, presented here in the form of a discussion paper to elicit further feedback, defines a vision for our region's airshed and serves as a guiding document to inform, prioritize, and target air quality actions undertaken by the FVRD throughout the next decade. The FVRD remains committed to protecting air quality within its airshed by monitoring and modelling air quality data, by conducting research and policy development, by collaborating with airshed partners, and by supporting outreach and education efforts. By following the roadmap of a new AQMP, the FVRD will continue to advance its collective understanding of air quality and exposure concerns and to see continued improvements in the health and quality of the Lower Fraser Valley airshed.

Staff will share the AQMP Discussion Paper with multiple levels of government and with interested organizations and stakeholders that play a role in airshed management within the Lower Fraser Valley airshed to seek feedback on the proposed directions needed to address concerns and enhance our knowledge of air quality in this region. This collaborative approach is of particular importance with air quality due to the multitude of emission sources and the number of jurisdictions involved.

The Discussion Paper will be available for comments until November 15, 2020.

After feedback is obtained, the final steps in the AQMP preparation include making any necessary amendments, prioritizing actions, identifying implementation timelines, determining suitable performance indicators, and defining a progress reporting schedule. Once complete, the final AQMP will be brought back to the Board as early as December 2020.

COST

n/a

CONCLUSION

The FVRD is seeking feedback on a draft Discussion Paper as part of a new AQMP that includes the proposed framework, goals, and actions that will help the region continue to improve air quality conditions within the region.

COMMENTS BY:

Stacey Barker, Director of Regional Services: Reviewed and supported.

Kelly Lownsborough, Chief Financial Officer/ Director of Financial Services:

Reviewed and supported.

Jennifer Kinneman, Chief Administrative Officer: Reviewed and supported.



Air Quality Planning for the Fraser Valley: a Discussion Paper

**Fraser Valley Regional District
Air Quality Management Plan 2021-2030 (draft)**

Sept 9, 2020

TABLE OF CONTENTS

Introduction.....	3
<i>What is the Fraser Valley Regional District?</i>	4
<i>What is the Lower Fraser Valley Airshed?</i>	5
Why is Air Quality Important?	6
Air Quality in the FVRD	10
<i>Monitoring Air Quality</i>	10
<i>Trends and Pollutants of Concern</i>	11
<i>Sources of Emissions</i>	11
Air Quality Planning and Management	13
<i>Airshed Authority</i>	13
<i>Tools</i>	13
Vision and Goals.....	17
Actions.....	19
Next Steps	27
Appendices	28
Appendix A: Asthma and COPD prevalence rates in the FVRD municipalities.....	29
Appendix B: Air quality trends and emission data for the FVRD.....	30
Appendix C: List of Air Quality Committees and Working Groups in the LFV.....	38
Appendix D: Ambient Air Quality Objectives in Canada, BC, and the LFV	40
Appendix E: Criteria Air Contaminants and their sources and effects.....	42
Appendix F: Linkages to the existing local plans and policies	45
Appendix G: List of Acronyms	49

INTRODUCTION

"Air pollution causes 1 in 9 deaths. It is the most important environmental health risk of our time"

UN Environment Program

Clean air is something we often take for granted. Poor air quality affects our health, our economy, and our recreational and aesthetic enjoyment of the outdoors. In the Lower Fraser Valley, episodes of poor air quality are still frequent. Multiple health advisories are issued each year and our scenic mountains and beautiful landscapes are often hidden from view due to pollution and haze. While there has been improvements in some air pollutant levels observed over the last few decades, more is needed to be done to ensure this progress continues, especially given the population and economic growth anticipated within the region, and to better address other pollutant levels that appear to be on the rise.

The Fraser Valley Regional District (FVRD) produced its first Air Quality Management Plan (AQMP) in 1998. Since then, new comprehensive air quality data have become available, as has new research on air pollution effects, suggesting time for a revised plan. A draft of this new plan is presented here, in the form of a discussion paper, to seek feedback on air quality issues within the Lower Fraser Valley Airshed and on the proposed directions needed by the FVRD or its multitude of partners to address concerns and enhance our collective understanding of air quality in this region.

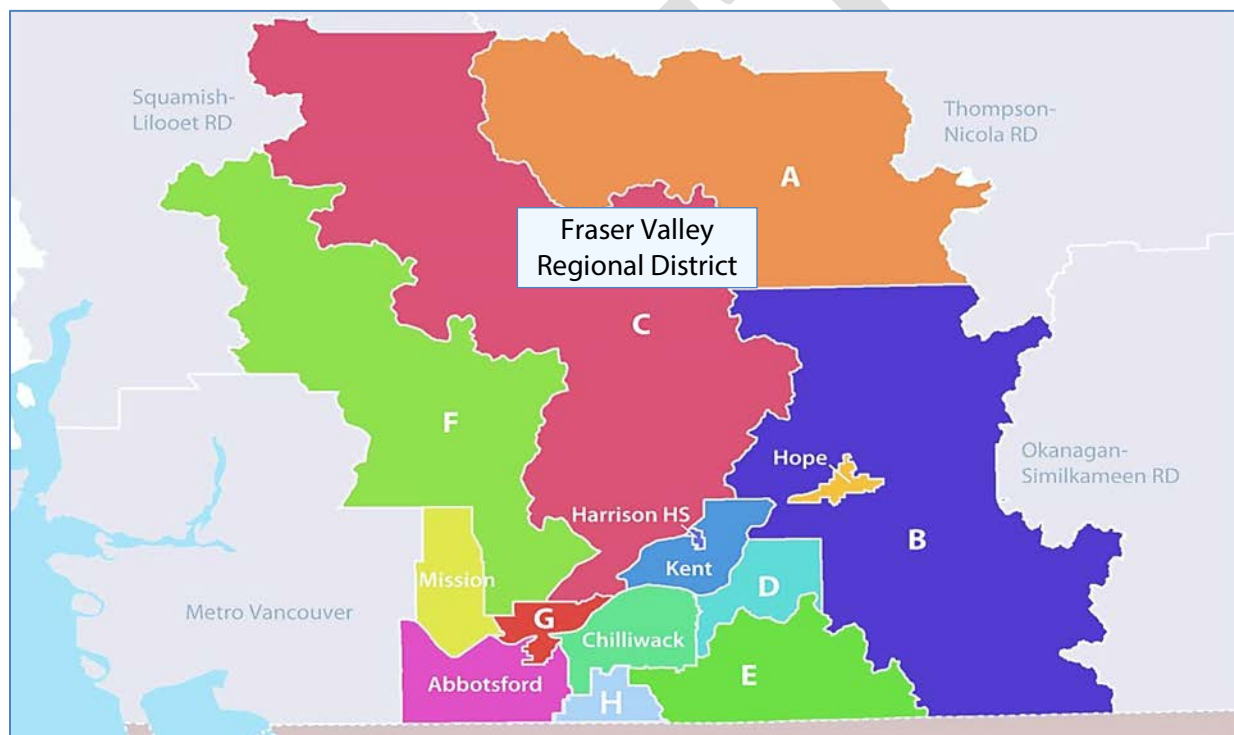
This revised draft AQMP defines key goals and serves as a guiding document to inform, prioritize, and target air quality actions undertaken by the FVRD throughout the next decade. The Fraser Valley Regional District remains committed to protecting air quality within our airshed through monitoring and analysis of air quality data, through research and policy development, and through outreach and public education. By following the roadmap described within this AQMP, the FVRD will do our part to ensure this essential resource remains healthy and clean so that our vibrant vistas will continue to be enjoyed by current and future generations of those who live, work, or play in this beautiful region.

Successful stewardship of our airshed can only be achieved by working collaboratively, for air quality concerns affect us all. Your opinion, knowledge, and experiences matter and we want to hear from you. Please submit feedback to environment@fvr.ca by November 15th, 2020.

What is the Fraser Valley Regional District?

The Fraser Valley Regional District (FVRD) is a federation of six municipalities (Abbotsford, Chilliwack, Harrison, Hope, Kent, and Mission) and eight Electoral Areas (A through H). It is located in southwest British Columbia between Thompson-Nicola and Okanagan-Similkameen Regional Districts to the east, Squamish-Lillooet Regional District and Metro Vancouver to the west, and the US border to the south.

The region has a population of approximately 280,000 residents, making it the third most populous regional district in BC. The FVRD is governed by a 23 member board made up of appointed local municipal mayors, councillors, and electoral area directors and they provide over 100 separate services to residents within the region, including sewer and water, fire protection, street lighting, solid waste management, regional parks, emergency services, animal control, community planning, and air quality.

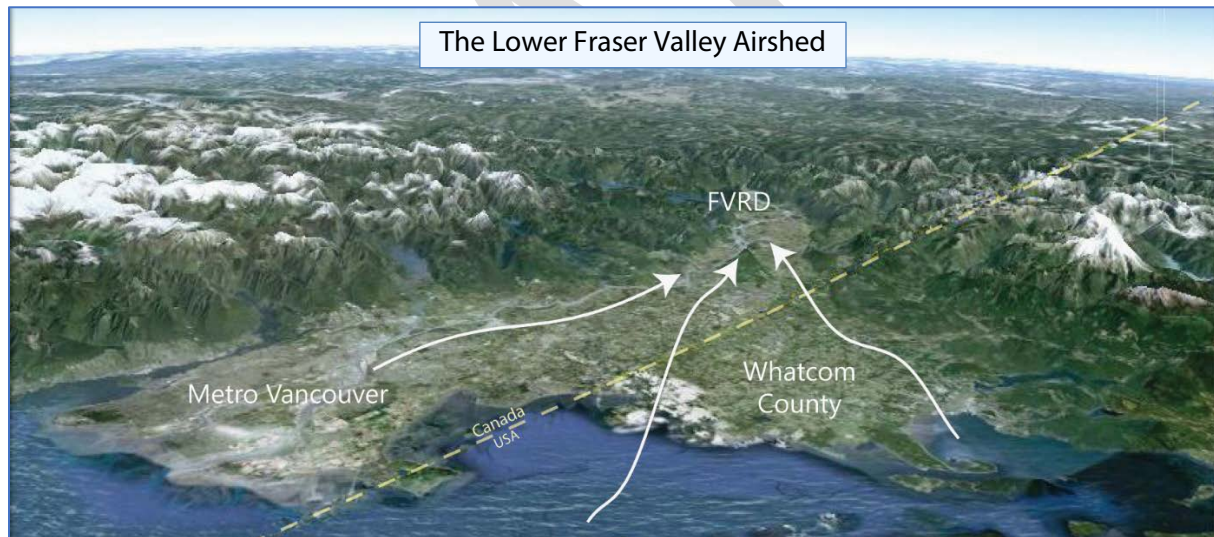


What is the Lower Fraser Valley Airshed?

The FVRD comprises the eastern portion of the Lower Fraser Valley (LFV) airshed. This airshed is situated between the Cascades and the Coast Mountains, in western North America where it overlaps both the southwestern portion of British Columbia and the northwestern portion of Washington State. It is shared by three regions: the Fraser Valley Regional District, Metro Vancouver, and Whatcom County.

The LFV is shaped like a funnel, with the wide end opening up from the Pacific Ocean and narrowing as it continues eastward, bound by mountains that confine and channel the air. Prevailing winds push air pollutants towards the eastern, narrower portion of the airshed. The result is often an accumulation of pollutants from densely populated and industrialized areas of Metro Vancouver and Whatcom County in Washington State, combining with pollutants emitted locally, creating air quality health and visibility concerns concentrated within the FVRD. The airshed is considered 'sensitive' due to its abilities to contain and concentrate air pollutants, resulting in increased health risks for its residents.

The FVRD boundaries extend beyond the Lower Fraser Valley airshed, including up into the Fraser Canyon. While focus is most often placed on the LFV airshed, the breadth and application of efforts to improve air quality described within the AQMP must extend throughout the entire regional district.



WHY IS AIR QUALITY IMPORTANT?

"You know it as Mt. Cheam but our name for it is Lhilheqey... she was supposed to be watching over the river and watching over the people and watching over the salmon and yet she's way up there and all the smog that's impairing her vision to watch over people"

Sonny McHalsie, Stó:lō Nationⁱ

Poor air quality affects public health, economic development, agricultural production, local ecosystems, and our overall quality of life. As such, air quality is recognized as one of the most important environmental issues in the FVRD.

Health

Poor air quality can cause adverse health effects on all ages, from pre-birth development deficiencies to premature mortality. Air pollution represents a measurable health risk commonly characterized by the large scale population exposure and strong impacts on vulnerable groups, including children, seniors, and people with pre-existing conditionsⁱⁱ. Air quality is ubiquitously recognized by the public health professionals as one of the major modifiable risk factors in disease prevention and management. In the Fraser Valley, long-term exposure to traffic-related air contaminants has been linked to the adverse cardiovascular outcomes in nearby residentsⁱⁱⁱ. Regional episodes of poor air quality often see increases in hospital admissions and dispensation of asthma medications, with asthma and COPD rates in the FVRD municipalities reported above BC average (Appendix A). Studies also reveal close association between toxic air pollutants and a greater risk of cancer, with the recent focus on diesel soot from engine exhaust as a primary driver for lung cancer in the region. Air toxins may also contribute to leukemia and other types of cancers.

Ground-level ozone (O₃) and fine particulate mater (PM_{2.5}) are the most harmful air contaminants in the LFV, contributing to a broad range of illnesses. Regulatory standards and objectives for these contaminants do not imply that 'safe levels' are found below these thresholds, but in fact these contaminants are considered harmful at any level of exposure. Ozone is a powerful oxidant that can cause inflammation to lung tissue and permanent damage or loss of lung function after repeated long-term exposure. PM_{2.5} penetrates deep into the respiratory tract causing irritation and inflammation to the tissues. Due to their small sizes, fine particulates are falsely recognized and attacked by the immune

ⁱ Personal interview from 'Mountains that see, and that need to be seen: aboriginal perspectives on degraded visibility associated with air pollution in the BC Lower Mainland and Fraser Valley.' A traditional knowledge study, Government of Canada, 2009

ⁱⁱ Costs of Pollution in Canada. Report of International Institute for Sustainable Development, 2017

ⁱⁱⁱ The Georgia Basin – Puget Sound Airshed Characterization Report, 2014

system as biological invaders, e.g., viruses and bacteria. However, the particulates cannot be killed by the immune system, and the inflammation is sustained.

Other air contaminants are also associated with significant risks, especially for respiratory and cardiovascular health. Their direct effect might be less pronounced in the LFV due to decreasing trends and improved regional air quality. However, those air pollutants even at the low levels may act as precursors and contribute to the formation of either secondary PM_{2.5} or O₃.

Air quality in the Fraser Valley might be perceived as generally 'good' when compared with many other places in the world, but substantial health benefits can still be achieved by reducing and preventing air emissions and by making continual improvements in air quality.

Visual Air Quality

In the Lower Fraser Valley, air pollution often appears as white or brown haze that obscures views of mountains and scenic vistas within the region. 'Visual Air Quality' (VAQ) or 'visibility' is the term that describes the effect of air pollution and weather conditions on the views of distant landscapes. Recent research has shown that PM_{2.5} of mixed chemical composition (nitrates, sulfates, and organic matterⁱ) is the greatest contributor to local haze. The direct effect of PM_{2.5} on visibility is however hard to quantify. Currently VAQ monitoring in the LFV is performed using camera-based instrumentation with automated cameras taking a photograph of the same site a few times a day. Airshed partners use an observation-based scale from 'Poor' to 'Excellent' to report VAQ on a daily basis.

Visual Air Quality is important for many residents and users within the Fraser Valley. It affects the ability of local First Nations to see the mountains, to see from the mountains, and to be seen by the mountain mother - essential for maintaining cultural traditions and meeting spiritual needs. Businesses, like real estate, recreation and tourism, also stand to benefit from a better VAQ. To improve VAQ, the emissions of PM and other pollutants forming secondary PM have to be reduced, so that residents and visitors can enjoy unobstructed views of natural landscapes.

Economy

Economic effects of air pollution are felt by a broad range of institutions, industries, and businesses. Those directly impacted by air quality include public health, agriculture, forestry, real estate, tourism and recreation, to name just a few.

Substantial costs to our health care system are attributed to health impacts from poor air quality. Health Canada estimates the number of annual mortalities in Canada attributed to air pollution to be 14,600 deaths per year. This estimate represents an increase of 1.4% as compared with the 2017 estimateⁱⁱ. The total economic cost of all health impacts attributable to air pollution is \$114B per year (in 2015 currency).

ⁱ Working to clear the air in BC. 2015–2017 Report of the British Columbia Visibility Coordinating Committee, August 2017

ⁱⁱ Health Impacts of Air Pollution in Canada. Estimates of morbidity and premature mortality outcomes, 2019

Regionally, a 2014 report produced by Environmental Canada and the United States Environmental Protection Agencyⁱ estimates that a 10% decrease in ground level ozone and fine particulate matter from a 5-year average baseline (1999-2003) could generate annual health benefits of an estimated C\$28 million and \$300 million, respectively. The report also identifies losses in revenue from tourism, recreation, and real estate associated with reduced visibility. They estimate that a single poor visibility event in the Fraser Valley during the peak tourist season could result losses be as high as C\$1.3 million in regional tourism revenue.

For agricultural and forestry operations, air pollution can result in reduced crop and timber yields and related economic activities. Elevated concentration of ground level ozone is the most significant air quality issue affecting growing crops. Ozone exposure may generate visible foliar damage, reduce plant and tree growth and productivity, and increase their vulnerability to drought, pests, and diseases.

Ecosystems

Ecosystem health is susceptible to air pollution. Atmospheric nitrogen and sulfur oxides (NO_x and SO_x) are strong acidifying compounds. When deposited on vegetation, they are known to damage plant tissue. This 'acid rain' effect can seriously damage plants and crops and eventually cause loss of sensitive species. Acid deposition on soils and water could cause significant changes in soil and surface water chemistry and reduce nutrient uptake by the roots.

Atmospheric deposition of those nutrients also leads to eutrophication of aquatic ecosystems and overgrowth of algae in water bodies damaging aquatic wildlife. Nitrogen-containing air pollutants contribute to nitrogen eutrophication and this has been identified as an important issue in British Columbia. For instance, up to 8.7 tonnes/yr. or 19% of total nitrogen loading to Cultus Lake in the FVRD was from direct wet and dry atmospheric depositionⁱⁱ.

High concentrations of O₃ can cause visible injury to native vegetation, while the long-term exposure may result in decreased plant health. It also contributes to forest decline, such as reduced yields, growth of tree seedlings, and an increased susceptibility to disease and pests. Particulate matter deposited on plant surfaces can inhibit the normal respiration and block photosynthesis within the leaf. Air pollution can lead to the overall decline in habitat and food supply availability for ecosystem wildlife.

ⁱ Environment Canada and U.S. Environmental Protection Agency. 2014. Georgia Basin - Puget Sound Airshed Characterization Report, 2014. Vingarzan R., So R., Kotchenruther R., editors. Environment Canada, Pacific and Yukon Region, Vancouver (BC). U.S. Environmental Protection Agency, Region 10, Seattle (WA). ISBN 978-1-100-22695-8. Cat. No.: En84-3/2013E-PDF. EPA 910-R-14-002.

ⁱⁱ Putt, A. E. 2014. Spatiotemporal nutrient loading to Cultus Lake: Context for eutrophication and implications for integrated watershed-lake management. Master's Thesis, School of Resource and Environmental Management, Simon Fraser University.

Odours

Odours are caused by one or more volatilized chemical compounds that are generally found in low concentrations. They can be unavoidable consequences of certain commercial and business operations, such as wastewater treatment, livestock and manure management, mushroom composting, and various industrial operations. Odours can be offensive to some people even at air concentrations below instrumental detection limits. Understanding the sources of odours, monitoring options, and responsible authorities are critical components that help to reduce the nuisance of odours negatively affecting the health and quality of life for residents.

Climate Change

Air pollution and climate change are directly linked. Greenhouse gases (GHG) and major air contaminants often come from the same sources and activities. On-road transportation, off-road machinery, residential and commercial heating, and livestock farming are amongst the largest emitters of both GHGs and air pollutants in the FVRD. Certain pollutants themselves, such as ground-level ozone (O₃) or particle-formed aerosols, act as short-lived GHGs adding to the greenhouse effect and climate change.

The consequences of climate change, which at times can be quite severe, are already being felt within the Fraser Valley. The recent trends are towards more extreme weather patterns with drier and hotter summers and warmer and wetter winters. With that comes a greater risk of natural disasters. The region is increasingly experiencing intense precipitation, storms and flooding, as well as droughts and forest wildfires, causing major disruptions to communities, and impacts on the economy and the environment.

Recent emission data projected a steady increase for GHG emissions in the FVRD up until 2030. To reverse this trend, consistent mitigation actions are needed. Targeting emissions from common sources therefore provides practical co-benefits addressing both GHGs and air pollution.

While this is not a climate plan per se, by addressing causes of air pollution that also contribute to climate change, the actions identified in this plan have the co-benefits of addressing both air pollution and GHG emissions. It is recognized however that additional GHG planning and management remains an important component of regional sustainability that still needs to be undertaken.

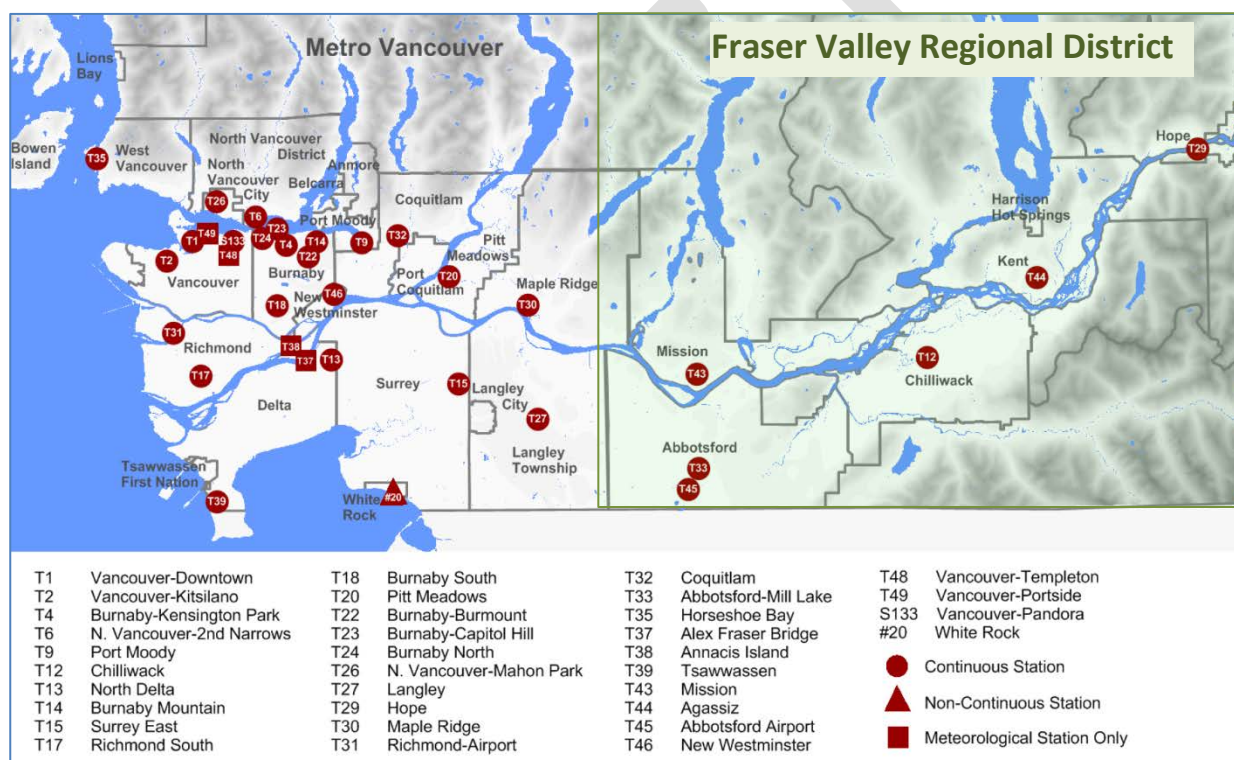
AIR QUALITY IN THE FVRD

"Understanding the source, location and types of emissions in an area is valuable and allows communities to develop targeted actions that can improve air quality in a region"

BC Ministry of Environment and Climate Change Strategy

Monitoring Air Quality

The Lower Fraser Valley Air Quality Monitoring Network is an integrated system of monitoring stations that measure air contaminant concentrations in ambient air throughout the region. These stations cover the entire Lower Fraser Valley airshed from Horseshoe Bay to Hope. The FVRD hosts the six eastern-most stations: Abbotsford (2 stations), Mission, Chilliwack, Agassiz, and Hope. All stations also collect meteorological and weather data.



Source: 2016 Lower Fraser Valley Air Quality Monitoring Report (Metro Vancouver)

Automated air quality sensors take a reading of each parameter every minute of the hour generating high-frequency real-time continuous data. Non-continuous air testing is also conducted periodically for certain contaminants when continuous monitoring is not available. All data points undergo thorough data quality checks. After averaging over certain time periods (hourly, 8-hour, 24-hour, or annual), the data is reported to the public through online web resources (e.g., <https://www2.gov.bc.ca/gov/content/environment/air-land-water/air/air-quality/current-air-quality-data>). Real-time continuous data from the Network also serve as a basis for air quality advisories, Air Quality Health Index (AQHI) calculations, and various reports and assessments.

Due to high complexity and diversity of emission sources, it is not always possible to measure emissions from all the different source types. Therefore, an emission inventory can assist policy makers in estimating emissions from within a geographic region or jurisdiction.

Metro Vancouver, in partnership with the FVRD, updates the LFV Emission Inventory every 5 years.

Air Quality Health Index (AQHI) is a scale (1 to 10+) designed to help understand what the quality of the air around us means to our health. It is a tool developed by health and environmental professionals to communicate the health risk posed by air pollution.

Trends and Pollutants of Concern

Consistent measures on reducing air emissions since the late 1990s have resulted in significant air quality improvements in the Lower Fraser Valley airshed and the FVRD. As the region faces growing populations and industrial usages, maintaining this progress becomes more difficult and collaborative efforts on air quality protection should continue.

While the downward trends in some pollutants is encouraging, several concerns remain for regional air quality. Unfortunately, these emission trends are projected to level off or slowly increase after 2020. The release of ammonia (NH_3), another important air contaminant, has been increasing since 2010. Steady increases are also projected for the principal greenhouse gases: carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O).

The most concerning air contaminants for local air quality are fine particulate matter ($\text{PM}_{2.5}$) and ground-level ozone (O_3). Smoke from wood and biomass burning is the main source of $\text{PM}_{2.5}$ in the FVRD. Episodes of elevated $\text{PM}_{2.5}$ occur during all seasons. Burning for residential heating, yard waste disposal and land clearing generate much smoke in colder months. An emerging source for high levels $\text{PM}_{2.5}$ is wildfire activity typically occurring under hot and dry summer conditions.

Ground-level ozone (O_3) is not emitted directly but forms in the atmosphere from other air pollutants in the presence of sunlight. Summertime O_3 episodes were frequent in the LFV in the past. The alarming tendency for O_3 is that even though the occurrences of summertime peak episodes are decreasing, its non-peak averages are on the rise, affected by transboundary imports and new local sources.

Air quality trends, emissions, and forecasts in the FVRD are provided in Appendix B.

Sources of Emissions

Air emissions within the Lower Fraser Valley originate from a multitude of sources, most of which can be considered non-point sources. Degraded air quality is a result of the cumulative affect of all these emissions occurring within our confined, sensitive, airshed. The sources of emissions can be broadly characterized as originating from one of the following five categories:

- 1) On-Road Transportation
- 2) Non-Road Equipment
- 3) Indoor and Outdoor Wood Burning
- 4) Commercial, Industrial, and Agricultural Operations
- 5) Natural Sources

These categories, and the emissions they are responsible for, are summarized in the following table.

Category	Key Sources	Pollutants of Concern ¹	Significance in FVRD
1. On-Road Transportation	Light-, medium- and heavy-duty gasoline & diesel vehicles	CO, NO _x , SO _x , VOCs, PM _{2.5} , TAPs, GHGs	Accounts for: ➤ <u>24%</u> of total air emissions ➤ <u>37%</u> of NO _x emissions ➤ <u>43%</u> of total GHG emissions
2. Non-Road Equipment	Construction equipment Agriculture machinery Lawn and garden equip. Rec. vehicles & watercraft Aircraft Rail yard and locomotives Marine vessels	CO, NO _x , SO _x , VOCs, PM _{2.5} , TAPs, GHGs	Accounts for: ➤ <u>27%</u> of total air emissions ➤ <u>58%</u> of NO _x emissions ➤ <u>21%</u> of total GHG emissions
3. Indoor or Outdoor Wood Burning	Land clearing burning Prescribed forest burning Residential yard waste burning Agricultural debris burning Woodstoves and fireplaces Commercial boilers & heaters	PM ₁₀ , PM _{2.5} , CO, VOCs, TAPs	Accounts for: ➤ <u>4%</u> of total air emissions ➤ <u>25%</u> of PM _{2.5} emissions
4. Commercial, Industrial, and Agric. Operations	Composting Facilities Soil tillage Fuel distribution stations Forest harvesting Aggregate extraction Construction and excavation Waste landfills and incinerators Livestock and poultry farms Pulp mills & wood processing Miscellaneous facilities	PM _{2.5} , PM ₁₀ , NH ₃ , VOCs, NO _x , TAPs, GHGs, odours	Accounts for: ➤ <u>20%</u> of total air emissions ➤ <u>49%</u> of PM _{2.5} emissions ➤ <u>35%</u> of GHG emissions
5. Natural Sources	Wildfires Radon Sources Vegetation	CO, Ground-level ozone, BVOC, PM ₁₀ , PM _{2.5} , TAPs, Radon	Accounts for: ➤ <u>25%</u> of total air emissions ➤ <u>73%</u> total VOC emissions

¹ Acronyms used within the table include the following:

- CO = Carbon Monoxide
- NO_x = Nitrogen Oxides
- SO_x = Sulfur Oxides
- PM_{2.5} = Fine Particulate Matter
- PM₁₀ = Inhalable Particulate Matter
- VOCs = Volatile Organic Compounds
- BVOC = Biogenic Volatile Organic Compounds
- TAPs = Toxic Air Pollutants
- GHGs = Greenhouse Gases
- NH₃ = Ammonia

These categories of emission sources are utilized later in the report to present the various actions suggested as part of the Air Quality Management Plan.

AIR QUALITY PLANNING AND MANAGEMENT

"Air pollution does not recognize borders. Improving air quality demands sustained and coordinated government action at all levels"

World Health Organization

Airshed Authority

The primary authority for air quality regulation in British Columbia outside of the Metro Vancouver lies with the BC Ministry of the Environment and Climate Change Strategy. It does so through the *Environmental Management Act* by establishing air quality standards and guidelines and regulating point sources of emissions. BC builds its air quality policies and actions upon programs already in place at the national level. The federal government plays a pivotal role in addressing air quality issues, and is involved in monitoring, providing public health information, and regulating many industries or sectors that have an impact on air quality such as motor vehicles and fuels, railways, and marine vessels.

The FVRD received air quality planning authority by a Provincial Order in Council in 1992. Although air emissions regulatory authority remains with the Province, the FVRD, as a local government, has numerous ways to influence air quality in the region. Tools, such as air quality monitoring and research, education and outreach, regional planning and development, advocacy, and incentives, can play an important role in reducing regional air pollution and its associated risks for public health.

Tools

In order to be effective and efficient, the FVRD uses numerous tools available within their air quality toolbox. These tools include reliance on partnerships, air quality monitoring and comparing data with standards, supporting educational initiatives, conducting scientific research, generating policies and programs, advocating for the region to senior governments, leading by example, and pursuing co-benefits. These tools are explained below.

1) Partnerships and Collaboration

Air pollution cannot be stopped by geographic boundaries. It can travel long distances and affect large population groups. Management of airshed air quality is a complex, non-trivial undertaking that can only be successful with coordinated, long-term effort from all levels of government, health authorities, science experts, and environmental advocates.

Many regional agencies and organizations share a common mission for continuous improvements in air quality in the Lower Fraser Valley that can only be realized by working together. To coordinate that effort, air quality experts and regulators from relevant agencies in the LFV work in cooperation on a network of regional committees and working groups (Appendix C). Such cooperation includes but is not limited to ambient air quality monitoring, compilation of periodic emission inventories, provision of air quality data to the public, initiatives and incentives on emission reduction, and public outreach and education. As an active member of the LFV air quality management network,

the FVRD regularly contributes to continuous improvement of local air quality, both individually and in collaboration with airshed partners.

2) Measuring and Monitoring Air Quality

Information on ambient levels of air contaminants is gathered to assess health exposure, evaluate the performance of programs and actions aimed at reducing emissions, and provide support for the development of new initiatives. To obtain this information, the FVRD participates in several undertakings including monitoring ambient air quality and estimating using emissions inventories.

The emissions of atmospheric pollutants could be natural or anthropogenic. Natural sources of air pollution may include forest fires, volcanoes and VOC emissions from vegetation. Anthropogenic emissions are caused by human activities and come from point, area, and mobile sources.

Point sources are stationary, fixed sources from which air pollutants can be released into the atmosphere continuously or instantaneously, for example, factory or power plant smokestacks.

Area sources release pollutants to the atmosphere from larger areas, for example, agricultural fields or forest wildfires.

Mobile sources generally refer to the emissions from sources that can move around, for example, road transportation, non-road machinery, railways, marine vessels, or aviation.

3) Air Quality Standards and Objectives

Air quality standards and objectives are thresholds on the acceptable presence of contaminants in the atmosphere established by the regulatory authorities at the federal, provincial and regional level. They are useful tools to help protect human health and the environment, assess current or historical air quality status, and guide decision-making for all levels of government.

For many air pollutants, however, there are no “safe” levels and exposure can affect peoples’ health even at low concentrations. Air quality objectives should not be viewed as limits to “pollute up to” but as targets for guiding decision-making and policies.

Air quality standards and objectives for contaminant concentrations in ambient air have been established at the national, provincial, and regional levels (Appendix D).

The Canadian Ambient Air Quality Standards (CAAQS) have been developed as federal standards for certain Criteria Air Contaminants. CAAQS are an important part of the national Air Quality Management System (AQMS) in Canada. The purpose of the AQMS is to protect human health and the environment from detrimental effects of air pollution. It does so through maintaining the ambient air quality standards, such as CAAQS, limiting industrial and transportation emissions, supporting actions to improve air quality and encouraging collaboration between jurisdictions

Criteria Air Contaminants (CACs) are the most common air pollutants for which threshold levels are set to protect public health and to guide airshed-planning activities. In Canada, they include fine particulate matter (PM_{2.5}), nitrogen oxide (NO₂), sulfur oxide (SO₂), and ground-level ozone (O₃).

on air quality initiatives. Appendix E provides a summary of key air contaminants, their sources, and their impact on human health or the environment.

4) Education and Awareness

Understanding air quality and making informed and responsible decisions relies on environmental education. Knowledge and awareness of air quality sources, exposure risks, and personal choices that can be taken are critical for ongoing air stewardship and relies on a collaborative approach to reach as many as possible.

In 2017, the FVRD launched a well-received school program called "Love Our Air". This program consists of custom workshops designed for Grades 5 and 10 classrooms and a teacher resource package. The program focuses on developing students' respect for our sensitive airshed and understanding of how to reduce pollution through their everyday actions.

5) Research and Studies

Scientific knowledge is essential for creating guidance or policies on complicated environmental topics such as air quality and climate change. Effective dialogue between science and policy helps policymakers, industry, and the public to make decisions that protect our health, our ecosystems, and our air.

The FVRD engages in high-quality problem-oriented air quality research to identify emerging topics, to prioritise, and to communicate and measure impact. Conducted either independently or in collaboration with other partners, these studies help to address the broad range of factors contributing to air quality. Examples of recent studies administered by the FVRD include reviews of air emissions from on-road and off-road engines, smoke from open burning, and emissions of ammonia. Those studies provided important insight essential for decision making on those issues.

6) Policies and Programs

Environmental policies and programs are practical measures for preventing or reducing the harmful effects of air quality on environmental and public health. Developed either as single or linked policies, they also can be useful to facilitate positive relations with regional counterparts, stakeholders, businesses, and communities. At the corporate level, they demonstrate commitment to environmental sustainability and continuous improvement.

7) Advocating for the Region

Advocating to higher levels of government for stronger regulations and enforcement is a valuable tool for protecting regional air quality. It might include raising concerns and awareness about the adequacy of existing rules, lobbying for legislation that is more robust, or supporting best industry standards.

8) Integration in Other Planning Processes

To be successful, air quality policies need to be fully integrated into federal, provincial, regional, municipal and electoral area plans and strategies. An AQMP cannot be effective in isolation. Many local governments within the FVRD already have air quality policies within their Official Community Plans. Incorporating these linkages will assist with prioritization and implementation (Appendix F).

9) Leading by Example

Through leading by example, the FVRD is fully committed to demonstrate and promote responsible behaviour aimed at reducing air emissions, using sustainable energy sources, and minimizing environmental footprints from day-to-day operations.

The FVRD has been actively promoting low or zero emission initiatives by adding a number of electric vehicles to its fleet, installing new chargers on the FVRD parking lots, organizing Bike-to-Work and Walk-to-Work campaigns, and reducing corporate energy consumption.

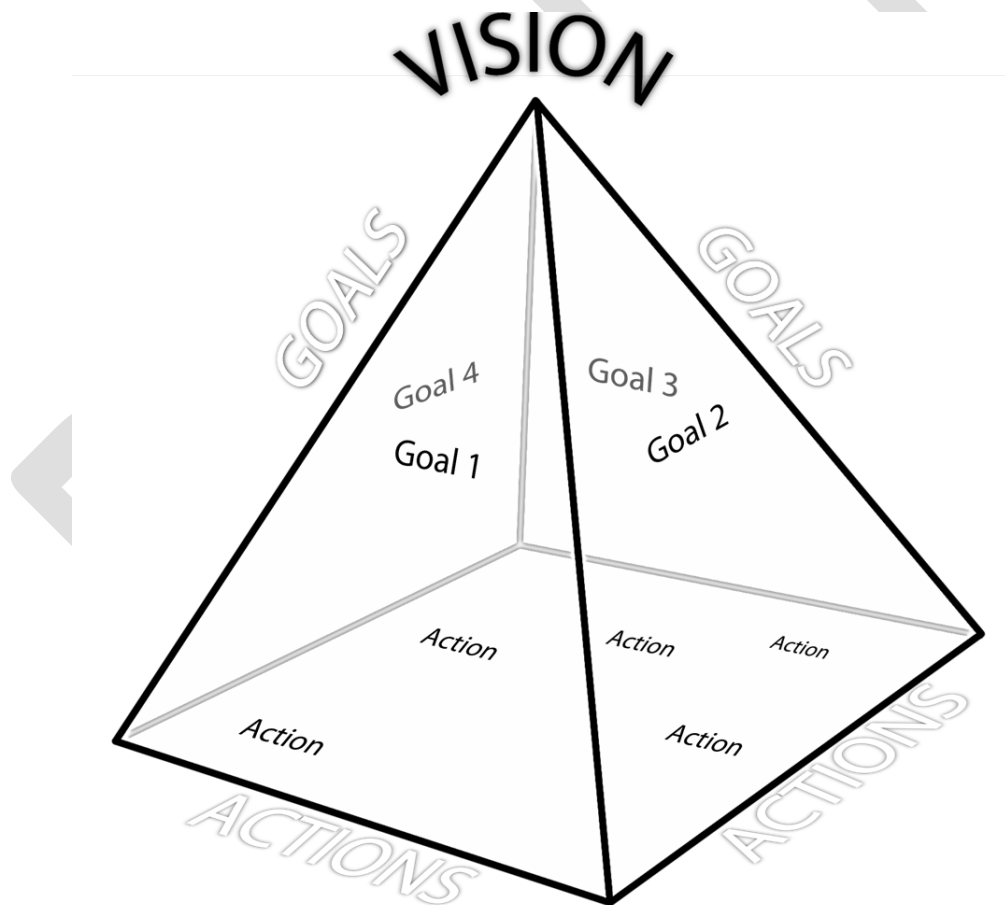
10) Pursuit of Co-Benefits

The focus of the FVRD's air quality management is on improving air quality, but helping to address sources of pollution can have multiple co-benefits beyond the health of the air. Reducing greenhouse gases emissions from fossil fuels and the accompanying climate impacts is the most obvious co-benefit. Other areas where positive impacts could be expected might include resource and energy efficiency, economic development, ecosystem sustainability and biodiversity.

VISION AND GOALS

Many plans use a simple linear framework where each goal is followed by a series of actions designed to help achieve that particular goal. Such a linear model does not fully reflect the intricacy of air quality, a cross-jurisdictional issue affected by diverse emission sources, convoluted nature of pollutants, and complex atmospheric chemistry.

This AQMP is designed to make the Actions be dynamic and interactive, as each Action may contribute to various Goals. The strong focus is therefore on pursuit of co-benefits and alignment with collective airshed responsibility without duplication of efforts. The Actions are formally attributed to the six Focus Areas of emission sources broadly defined based on the emission inventory data. However, since sources often overlap across categories, this categorization is flexible and unrestrictive. The conceptual diagram below demonstrates the AQMP structure with Actions as the basis of the plan contributing to all four Goals, which support the overarching Vision for regional air quality.



The FVRD AQMP Vision statement is formulated as our overarching objective and long-term aspiration for the region, a destination where we would like to be. To set the path for it and to make the Vision turn into a reality, four Goals have been identified. Goals are specific desired outcomes in line with the Vision. Goals define steps towards the Vision and continuously helps to test our abilities, skills and perseverance in reaching it.

VISION

“Healthy air and clear vistas that support a vibrant region”

The Goals of this AQMP address four primary concerns in the airshed related to air quality: health, visibility, odour, and climate change.

Goal 1: To improve community and environmental health impacted by exposure to air contaminants

This Goal will be reached through emission reduction of criteria and toxic air contaminants harmful for humans and the environment. The focus is on key sources of fine particulate matter (PM_{2.5}) and ground-level ozone and its precursors from the LFV.

Goal 2: To attain a consistently excellent visibility rating that allows visitors and residents to fully enjoy the region’s scenic beauty

This Goal will be reached through emission reduction of air pollutants contributing to poor visual air quality (visibility), which has negative effects on various economic and cultural aspects and quality of life in the LFV.

Goal 3: To effectively prevent or mitigate nuisance odour conditions

This Goal will be reached through emission reduction of air pollutants contributing to noxious odours, which can have negative impacts on residents and visitors of the FVRD.

Goal 4: To achieve continual reductions in emissions which contribute to climate change

This Goal will be reached through improvements in energy management in the FVRD, maximizing use of renewable energy sources and minimizing energy consumption overall. It also entails reducing greenhouse gas emissions from all major sources in the FVRD.

ACTIONS

Actions outlined in the document are meant to serve as a roadmap only. New initiatives that require resources beyond normal operating budgets will be brought forward to the FVRD Board for their consideration to determine if they align within with organization's capacity and policy directions. The following actions are not intended to be exhaustive but should provide a foundation for the FVRD's Air Quality Program to follow to continue addressing air quality matters within the LFV for the next decade.

Actions are categorized based on the sources of emissions presented previously. The following actions are tentative only and are included here for the purposes of discussion, refinement, and the identification of gaps or action items still needed for inclusion.

I. On-Road Transportation

Light-duty automobile emissions

1. The FVRD will continue to improve public awareness and knowledge of zero-emission vehicles (ZEV) including plug-in hybrid, battery electric and hydrogen fuel cell vehicles by:
 - a. Providing information and education materials on purchasing, driving, and charging of ZEVs to organizations, businesses, and residents;
 - b. Collaborating with regional campaigns and organizers (e.g., Emotive BC) to showcase and promote ZEVs at community events.
2. The FVRD will advocate for maintaining and expanding government programs and financial incentives for replacing old polluting vehicles with ZEVs (e.g., BC SCRAP-IT program, Clean Energy Vehicles for BC, etc.).
3. The FVRD will help develop public, residential, and commercial ZEV charging infrastructure by:
 - a. Maintaining existing and installing new public charging stations in the FVRD, using available grants and financial support;
 - b. Evaluating need and identifying locations for new public charging stations within the region for travelers (e.g., rest areas, campgrounds, tourist destinations), daily commuters (e.g., park n ride/carpool lots, transit hubs), and residents (e.g., schools, hospitals, parks);
 - c. Supporting local municipalities, neighbouring jurisdictions, BC Hydro, and the Province in their efforts to build and operate new charging stations (e.g., providing host locations);
 - d. Supporting development of government guidelines and/or sample bylaws that would assist with the installation of ZEV charging infrastructure in new developments (multifamily, mixed use, employment center developments, and new homes) where appropriate and as permitted under the BC Building Code;
 - e. Assisting homeowners with identifying potential funding sources and incentives for home EV charger installation.

4. The FVRD will consider adopting a ZEV policy for the FVRD corporate fleet by:
 - a. Continuing to replace old corporate fleet vehicles with ZEVs, or cleaner alternatives with lower emission and carbon outputs;
 - b. Developing a corporate driving policy for FVRD staff prioritizing use of ZEVs, when appropriate;
 - c. Continuing to provide education for staff on the use of ZEVs and on fuel-efficient driving behaviours.
5. The FVRD will promote optimizations of local fleets and improve driving behaviour by:
 - a. Supporting regional fleet management programs that reduce emissions from private and public vehicle fleets by maintaining appropriate fleet size and composition;
 - b. Promoting driver education programs (including for FVRD staff) that increase fuel efficiency and reduce emissions;
 - c. Supporting the installation of low-emission re-fueling infrastructure within the region;
 - d. Supporting efforts to reduce idling;
 - e. Advocating to the Province of BC to prevent tampering of emission control devices from vehicles, particularly when the tampering results in higher emissions of harmful diesel engine exhaust (“coal rolling”).
6. The FVRD will encourage transit ridership within the region.
7. The FVRD will consider the promotion of car-pooling and ride-sharing within the region by:
 - a. Supporting infrastructure upgrades and expansions for safe and affordable park-and-ride and park-and-carpool parking options;
 - b. Facilitating information exchange for drivers and riders to schedule rides and routes;
 - c. Promoting car-sharing co-ops to reduce residents’ need for owning a car.
8. The FVRD will promote active transportation, such as biking and walking by:
 - a. Actively participating in community events such as Bike to Work Week, Walk to Work Day, etc.;
 - b. Supporting the development of pedestrian-friendly and bike-friendly communities and infrastructure (sidewalks, crosswalks, overpasses, road signage, trails, etc.).
9. The FVRD will collaborate with the Provincial Government, municipalities, and health and transportation authorities on land use planning and urban development practices that considers health implications associated with siting residential developments near heavy traffic areas.

Heavy-duty on-road transportation

10. The FVRD will encourage and support electrification infrastructure for truck stops within the Fraser Valley to reduce idling of commercial trucks.
11. The FVRD will encourage and support the Province of BC and regional partners to develop a heavy-duty diesel vehicle retirement program that replaces or retrofits old polluting vehicles with cleaner models.
12. The FVRD will advocate for a new, thorough, vehicle emission inspection program for heavy-duty vehicles.
13. The FVRD will promote and advocate for the use of cleaner alternative fuels (e.g., natural gas, propane, renewable fuels) for heavy-duty vehicles by:
 - a. Providing in-kind assistance and technical expertise for municipal, public, and private fleet managers in their efforts to replace heavy-duty diesel vehicles with cleaner alternative fuel vehicles;
 - b. Supporting the establishment of programs or infrastructure that increases the availability of increased access to sources of clean re-fueling technology or stations.

II. Non-Road Equipment

Non-road diesel equipment and machinery

14. The FVRD will advocate to the Province to address spill-over emissions from old diesel engines being relocated to the Fraser Valley as a result of Metro Vancouver's Non-Road Diesel Engine Emission Regulation and their non-road diesel engine registration system.
15. The FVRD will encourage and promote opportunities for residents and businesses to replace or retrofit older diesel equipment with newer low-emission models by:
 - a. Investigating the feasibility of providing an incentive program to encourage residents to replace older lawn and garden equipment;
 - b. Advocating to the Province of BC and agricultural agencies to pilot a 'SCRAP-IT' type of financial incentive program for replacing old diesel-fueled agricultural equipment.
16. The FVRD will support and promote the development and use of Best Management Practices (BMPs) for construction and agricultural non-road diesel equipment that would reduce emissions of harmful emissions (e.g., avoiding unnecessary idling, preventative engine maintenance, prevention of fuel spills, using electric grid power when available, using alternative fuels where feasible, etc.).
17. The FVRD will ensure that adequate air quality provisions are considered in the new industrial proposals associated with non-road equipment use within the region.

Rail, Airplanes, and Boat Emissions

18. The FVRD will advocate for emission monitoring and enforcement of new railway emission regulations to reduce emissions from diesel locomotives and rail yard support machinery.
19. The FVRD will consider a study of river traffic (both industrial and pleasure craft) used on the regional waterways and, if warranted, investigate potential options to reduce exposure from nearby users or residents.
20. The FVRD will provide in-kind assistance, where feasible, to municipal and local airport staff to help in their efforts to reduce emissions associated with airport ground support machinery.

III. Indoor and Outdoor Wood Burning

Residential woodstoves and fireplaces

21. The FVRD will continue to administer the BC Wood Stove Exchange Program that provides financial incentives that support the upgrade of older wood burning appliances with newer, emission-certified woodstoves or fireplaces.
22. The FVRD will continue to promote education and awareness for reducing emissions from the operation of residential wood burning appliances.
23. The FVRD will encourage and promote new energy-efficient developments built less reliant on woodstoves.

Commercial boilers and heaters

24. The FVRD will continue to advocate for more stringent emission standards for commercial boilers and heaters and for improved compliance with provincial and regional regulations and policies.
25. The FVRD will promote and encourage use of cleaner or retrofitted greenhouse boilers that optimize efficiencies and reduce emissions.

Residential and agricultural debris burning

26. The FVRD will explore potential alternatives to residential and agricultural open burning.
27. The FVRD will provide education and awareness on best management practices for open burning.

Land clearing burning for development purposes

28. The FVRD will investigate the potential effect of smoke from current, planned, and potential land clearing burning for development purposes on nearby communities through modeling and monitoring studies.
29. The FVRD will work with municipal and electoral area planning and firefighting staff on developing more effective and consistent use of “burning windows” across the region.

IV. Commercial, Industrial, and Agricultural Emissions

Sources of dust and wind erosion of soils

30. The FVRD will support and advocate for the development and implementation of industry-specific soil stabilization and dust control BMPs, such as wind barriers, cover crops, reduced tillage, sprinkler/irrigation systems.
31. The FVRD will support and advocate for the implementation of provincial, regional, and municipal regulations and other tools (e.g., Mines Permits by the BC Ministry of Energy and Mines) related to dust emissions or dust suppression requirements.

Sources of gaseous ammonia

32. The FVRD will promote applicable research and information exchange within regional air quality and agriculture networks, government agencies, and research institutions, in order to gain further knowledge of ammonia emissions.
33. The FVRD will optimize and advance the ambient ammonia monitoring network and air pollution data collection, through:
 - a. Continuously expanding and improving the stationary ammonia monitoring network in the region in collaboration with Metro Vancouver, BC Ministry of Environment and Climate Change Strategy, and Environment and Climate Change Canada.
 - b. Exploring short-term mobile air pollution monitoring of ambient ammonia for near-farm communities to better understand localized ammonia emissions and exposure risks.
34. The FVRD will encourage and promote the use of new technologies and practices that clean ammonia from ventilation air, such as gas-phase bio-filtration at livestock or poultry facilities.

Municipal Solid Waste

35. The FVRD will continue to advocate against the incineration of municipal solid waste from within the Lower Fraser Valley airshed and for strong emission control requirements and transparency.
36. The FVRD will support emission reduction from landfills.
37. The FVRD will increase awareness and enforcement of the FVRD's Source Separation Bylaw, which, through diversion of organic waste, will reduce methane emissions from regional landfills.

New industrial developments

38. The FVRD will protect the airshed from new industrial developments potentially contributing to air pollution by working with regulatory agencies (BC Ministry of Environment and Climate Change Strategy, USA Northwest Clean Air Agency, USA Puget Sound Clean Air Agency, local municipalities) to collect information on air discharges, permits, modeling and monitoring data.
39. The FVRD will encourage and provide in-kind assistance for local businesses to develop, adopt, and implement pollution prevention plans to reduce air pollution from their operations.

Sources of odour emissions

40. The FVRD will encourage local producers to increase the use of new technologies and employ BMPs to manage nuisance impacts of odour, such as bio-filtration systems, anaerobic digesters, forced or fan-driven ventilation, sealed or covered storage of odorous materials, and maintaining good housekeeping and spill cleanup procedures.
41. The FVRD will support and mediate when appropriate, the development of constructive relationships and mutual understanding for both producers and neighbouring residential communities to deal effectively with odours.
42. The FVRD will support the Province of BC to develop odour complaint logging processes, response protocols, and guidelines for odour impact assessment.
43. The FVRD will advocate for and participate in the development of a regional policy framework to address noxious odours from cannabis growing through monitoring and reporting the odour-causing emissions, as well as identifying and supporting best practices for emission reductions.

V. Natural Sources

Smoke from forest wildfires

44. The FVRD will continue to provide updated air quality information to communities and businesses when wildfire smoke air quality advisories are in effect for the region, including updates and associated messaging on the Air Quality Health Index (AQHI).

Radon Sources

45. The FVRD will promote residential indoor radon awareness, testing and mitigation, in collaboration with health authorities and regional partners.

Biogenic VOC Sources

46. The FVRD will coordinate with regional partners to develop an updated emission inventory of local biogenic sources of Volatile Organic Compounds.
47. The FVRD will support and promote planting of low BVOC emitting tree species in the region that would include:
 - a. Coordinating with the FVRD municipalities to develop and support a low-BVOC species guidance document in the municipal tree planting programs.
 - b. Advocating to the Province of BC to include BVOC emission rates as a selection criterion in a Tree Species Selection Tool.
48. The FVRD will participate and contribute to regional studies of potential impacts of BVOC emissions from commercial cannabis cultivation and processing.

VI. General/Other

All Sources

49. The FVRD will continue to study and monitor air quality throughout the region in collaboration with provincial and regional partners through both the regular regional air quality monitoring network and short-time mobile monitoring campaigns.
50. The FVRD will investigate the need for additional air quality monitoring within the region and expand the monitoring network as required, including within small, remote and rural communities underserved by the existing network.
51. The FVRD will investigate and employ new evolving technologies for air quality testing, such as small and portable sensors, to amend and complement its existing air quality monitoring network.
52. The FVRD will continue working in partnership with other agencies and health authorities as part of an air quality advisory network that creates and delivers consistent and timely health messaging to the public about poor air quality conditions.
53. The FVRD will continue conducting emission assessments and forecast studies for all sources of emissions to enhance understanding of emission areas that might require further controls.
54. The FVRD will continue to support or deliver air quality education programs developed by the FVRD for schools in the Fraser Valley.
55. The FVRD will communicate information on air quality issues in the FVRD through community centers, public forums, regional events, internet and mass media resources, education and extension centers, and signage at parks, playgrounds, and scenic viewpoints, as appropriate.
56. The FVRD will design a public engagement program to empower the community and identify action items they can do at the individual or community level to protect air quality and help the FVRD achieve the vision and goals of this plan.
57. The FVRD will continue to assist regional stakeholders with air quality expertise and air monitoring data and outreach.
58. The FVRD will continue to participate in the BC Visibility Coordinating Committee (BCVCC) on managing visual air quality through activities such as:
 - a. Developing visual air quality goals, metrics, indices, and rating tools;
 - b. Helping to maintain a visual air quality monitoring network at the FVRD air quality monitoring stations to collect and analyze visibility data;
 - c. Raising public awareness of air quality impacts on visibility through communications, outreach, published materials, interpretive signage, and community workshops.
59. The FVRD will continue to work with regional stakeholders directly affected by poor visual quality, such as health, tourism, and real estate sectors, to receive feedback, collect information, and implement measures on reducing haze and the number of poor visibility days.
60. The FVRD will identify further opportunities for information exchange and collaboration with local First Nation communities on air quality.

61. The FVRD will continue supporting stewardship group such as the Fraser Valley Watersheds Coalition to replant degraded habitat sites with native trees and shrubs.

It is anticipated this list of actions will expand as new air quality or technology emerges and as we continue to discuss projects and ideas with airshed stakeholders. Our hope is that through this AQMP process, we will be able to discover initiatives proposed or being undertaken by others that also align with the vision and goals of this plan. Supporting those projects and helping to coordinate and develop synergies between actions underway within the airshed will allow the greatest chance for success in collective stewardship of our shared airshed.

DRAFT

NEXT STEPS

The FVRD Air Quality Management Plan 2021-2030 represents our consistent commitment to the improvement of regional Air Quality. Through its Vision, Goals, and Actions, the Plan identifies strategic directions and practical mechanisms required for reducing emissions, changing behaviours, and promoting sustainability, so residents and visitors will enjoy clean air, beautiful vistas, and healthy living.

Following the inclusion of feedback or suggestions, subsequent steps include the prioritization of actions, identifying associated timelines, determining suitable performance indicators and benchmarks, and defining a schedule for progress reporting that evaluates implementation.

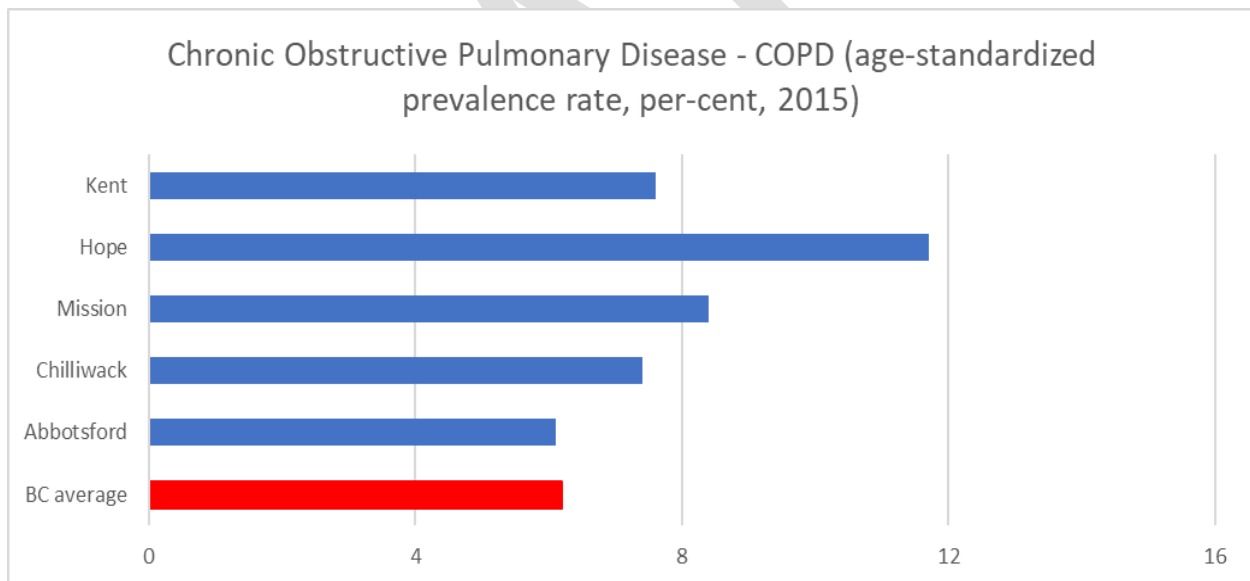
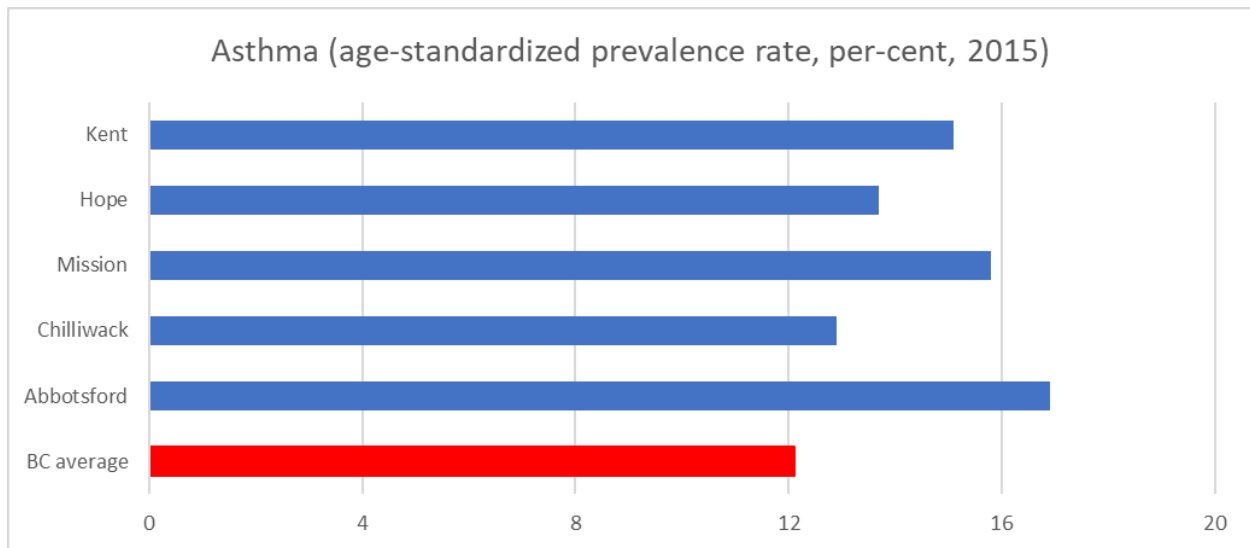
The AQMP is intended to be a living dynamic and will likely require updates and amendments as new data, technologies, ideas, funding opportunities, or policy directions emerge over time. Much can change within a ten-year period, and remaining adaptable and flexible will allow the plan to remain relevant over the next decade.

Continual improvements in air quality remains a top priority for the Fraser Valley Regional District, and this draft AQMP provides a roadmap for moving forward towards a vision of *healthy air and clear vistas that support a vibrant region*.

APPENDICES

- Appendix A: Lung disease prevalence in the FVRD
- Appendix B: Air quality trends and emission data for the FVRD
- Appendix C: List of Air Quality Committees and Working Groups in the LFV
- Appendix D: Ambient Air Quality Objectives in Canada, BC, and the Lower Fraser Valley
- Appendix E: Criteria Air Contaminants and their sources and effects
- Appendix F: Linkages to the existing local plans and policies
- Appendix G: List of Acronyms

Appendix A: Asthma and COPD prevalence rates in the FVRD municipalities

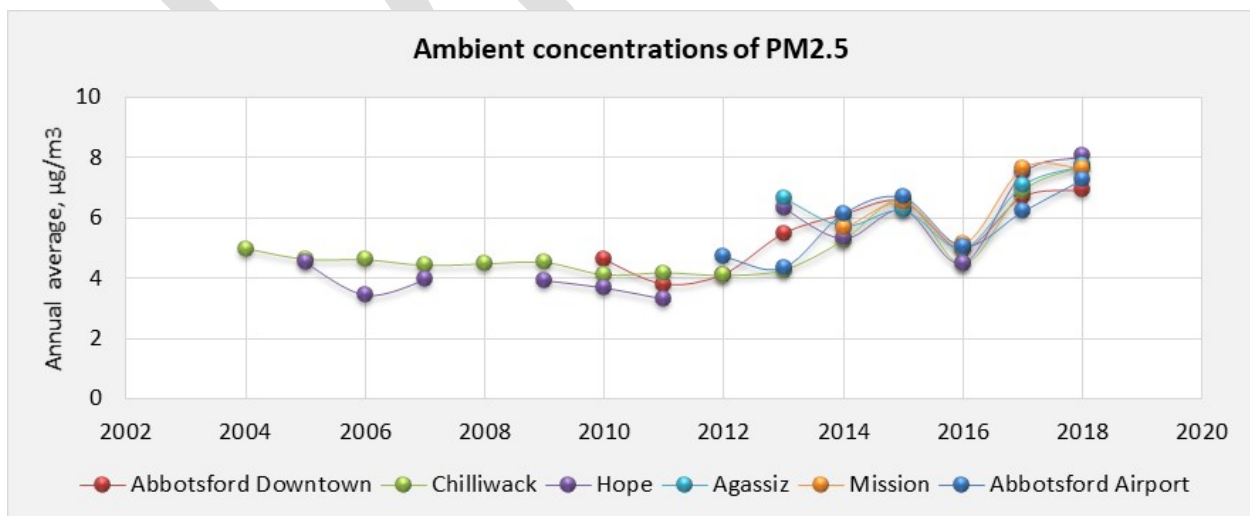
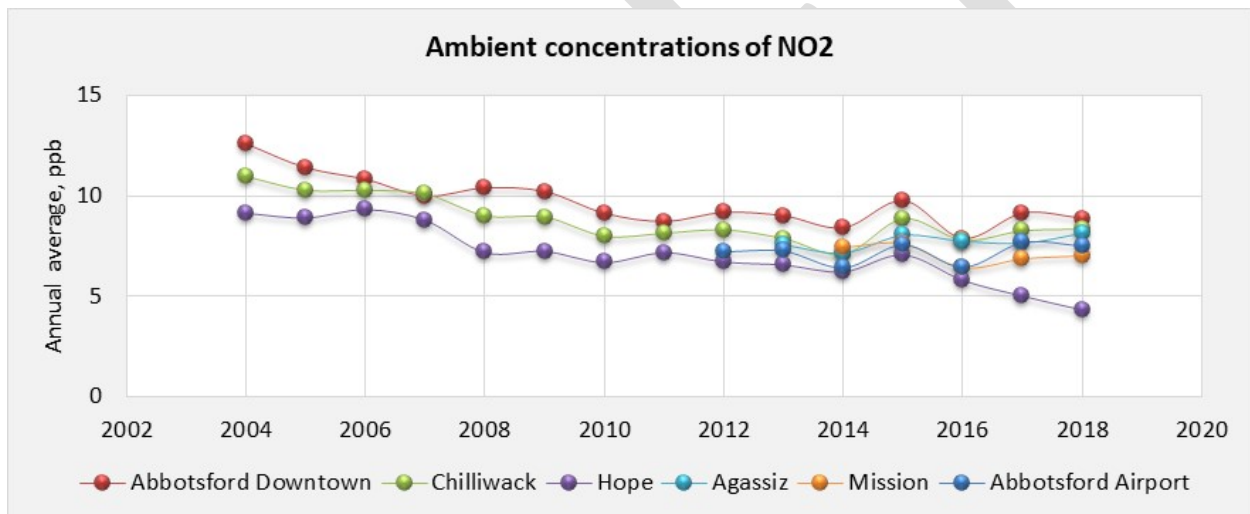
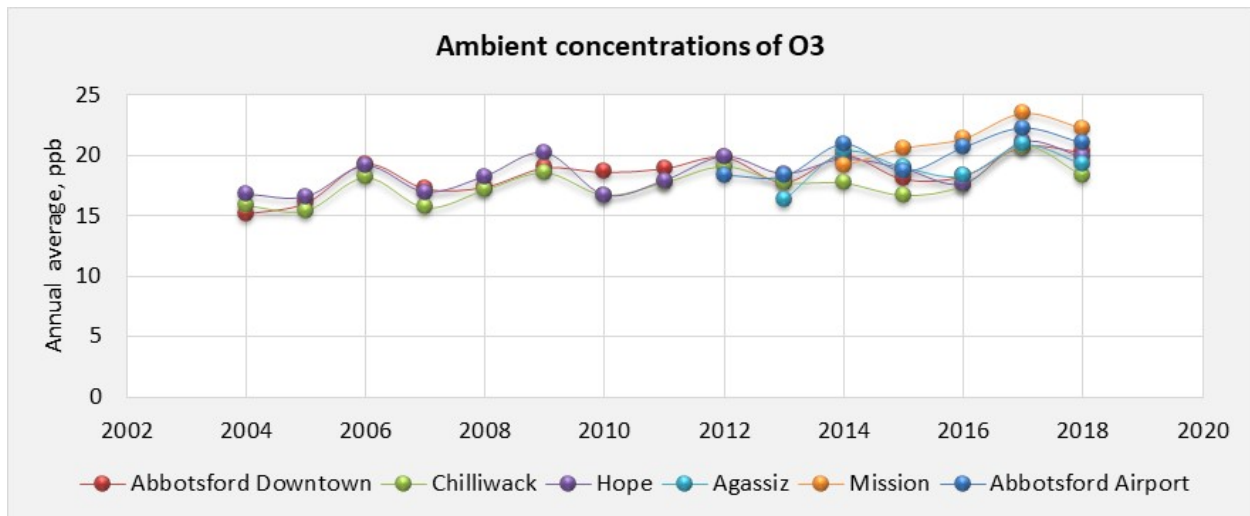


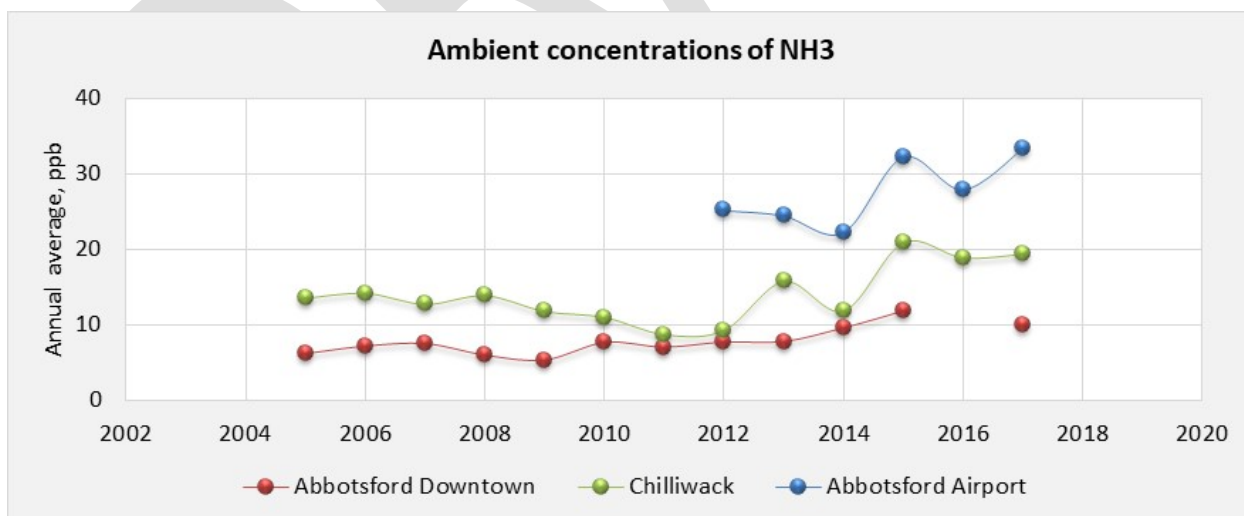
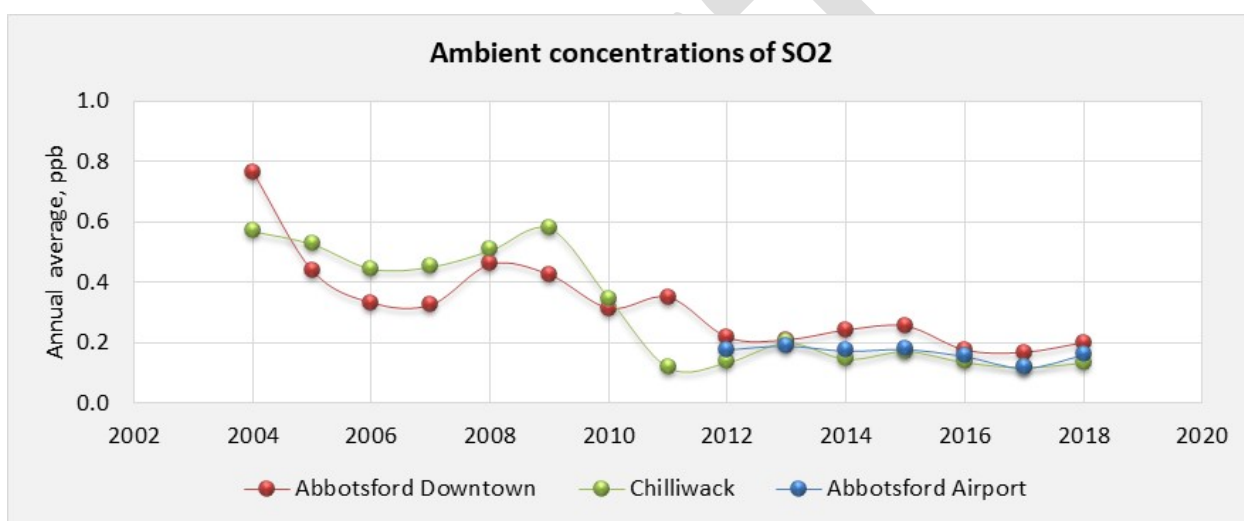
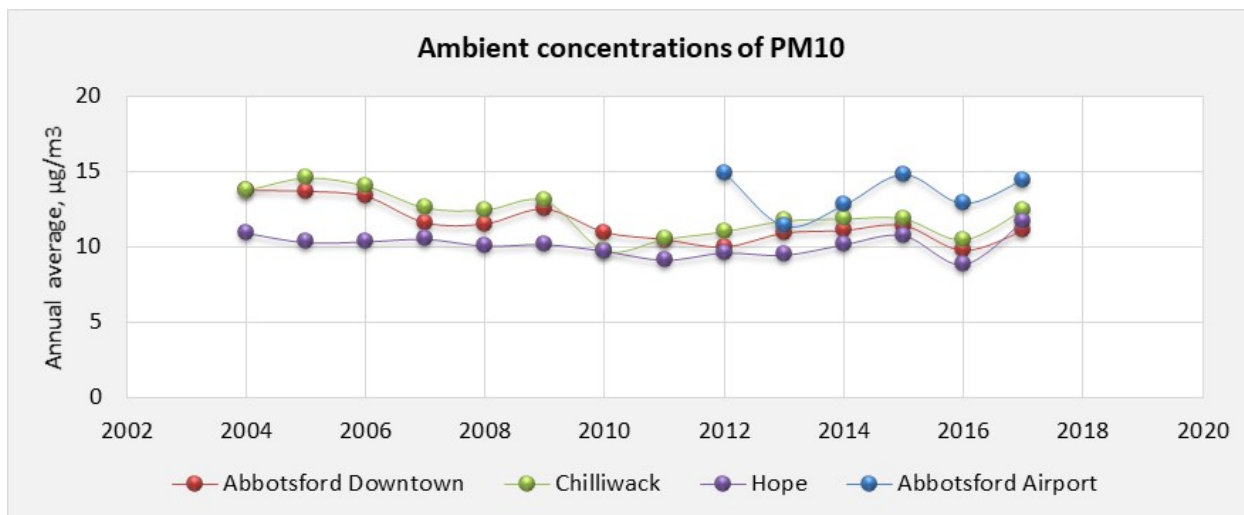
(from BC Community Health Profiles. Municipality Health Profiles, 2019.

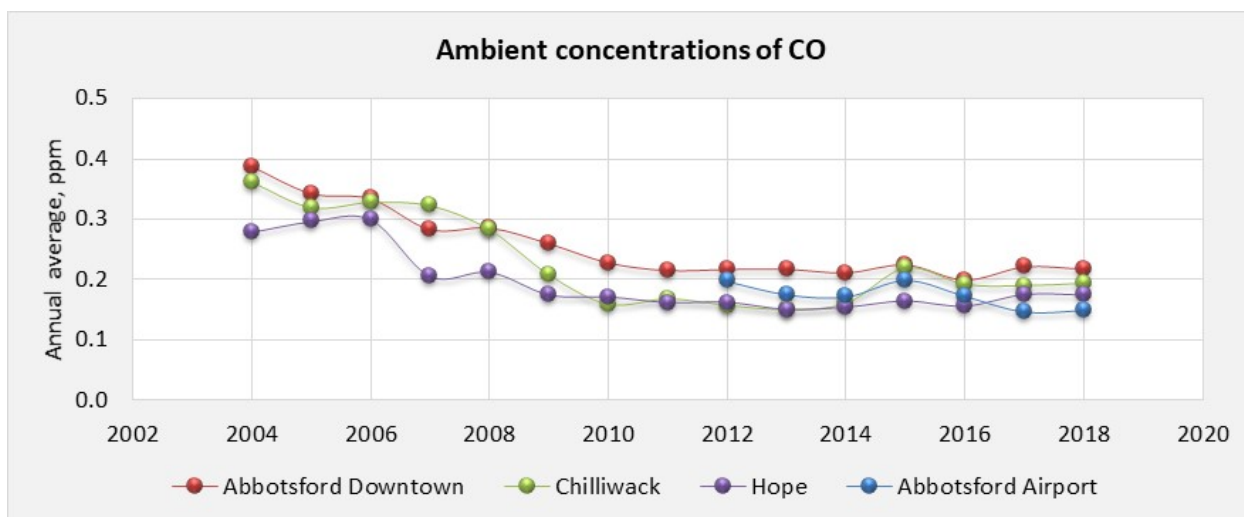
<http://communityhealth.phsa.ca/HealthProfiles>)

Appendix B: Air quality trends and emission data for the FVRD

Air Quality Trends:

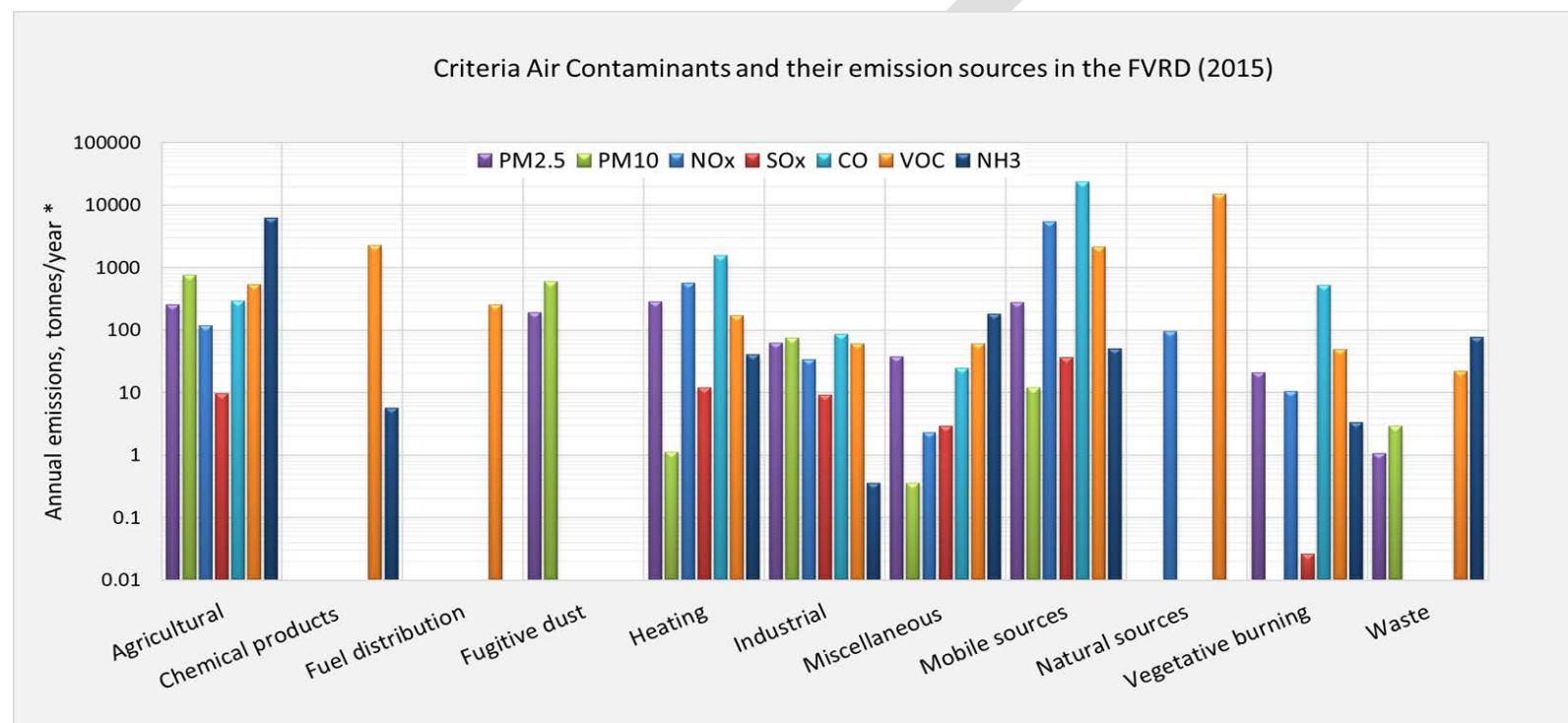




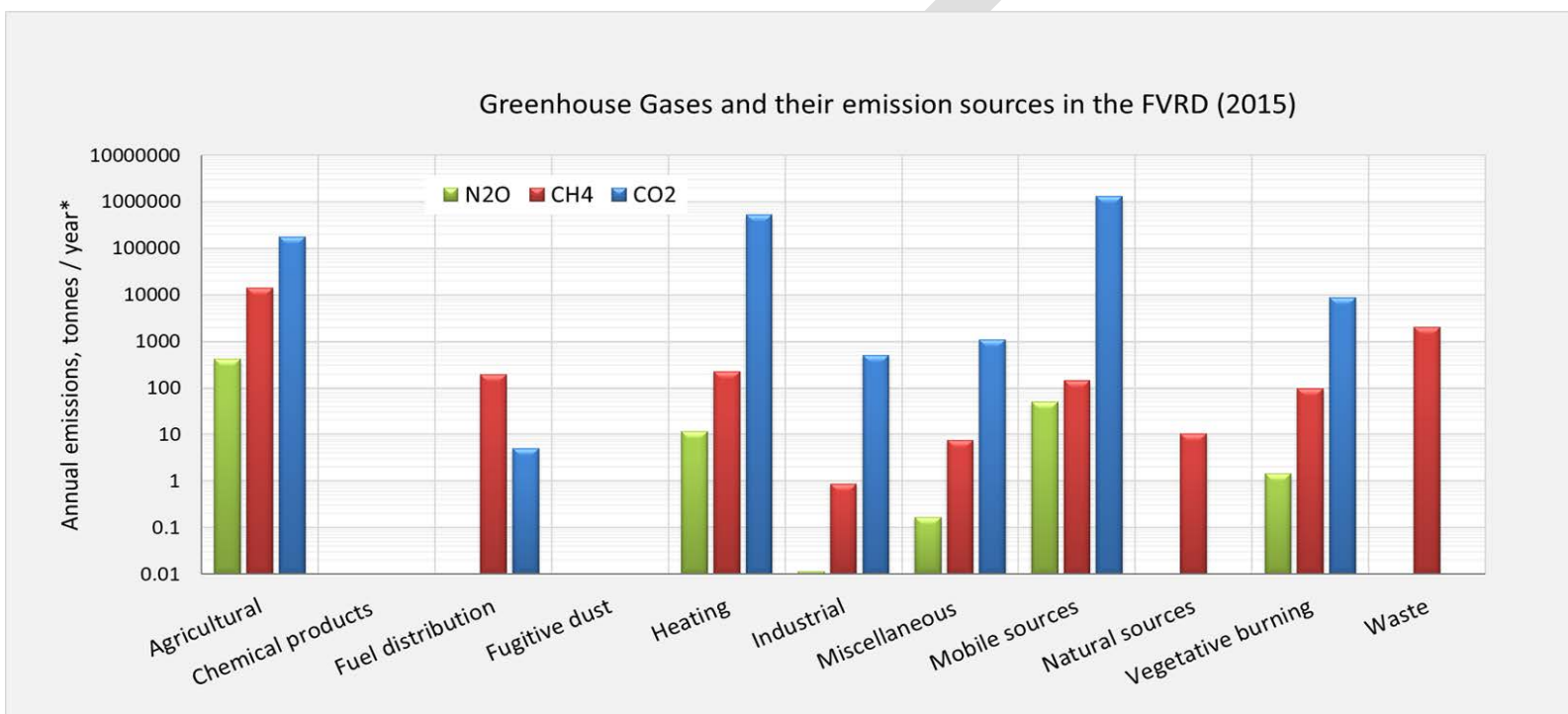


DRAFT

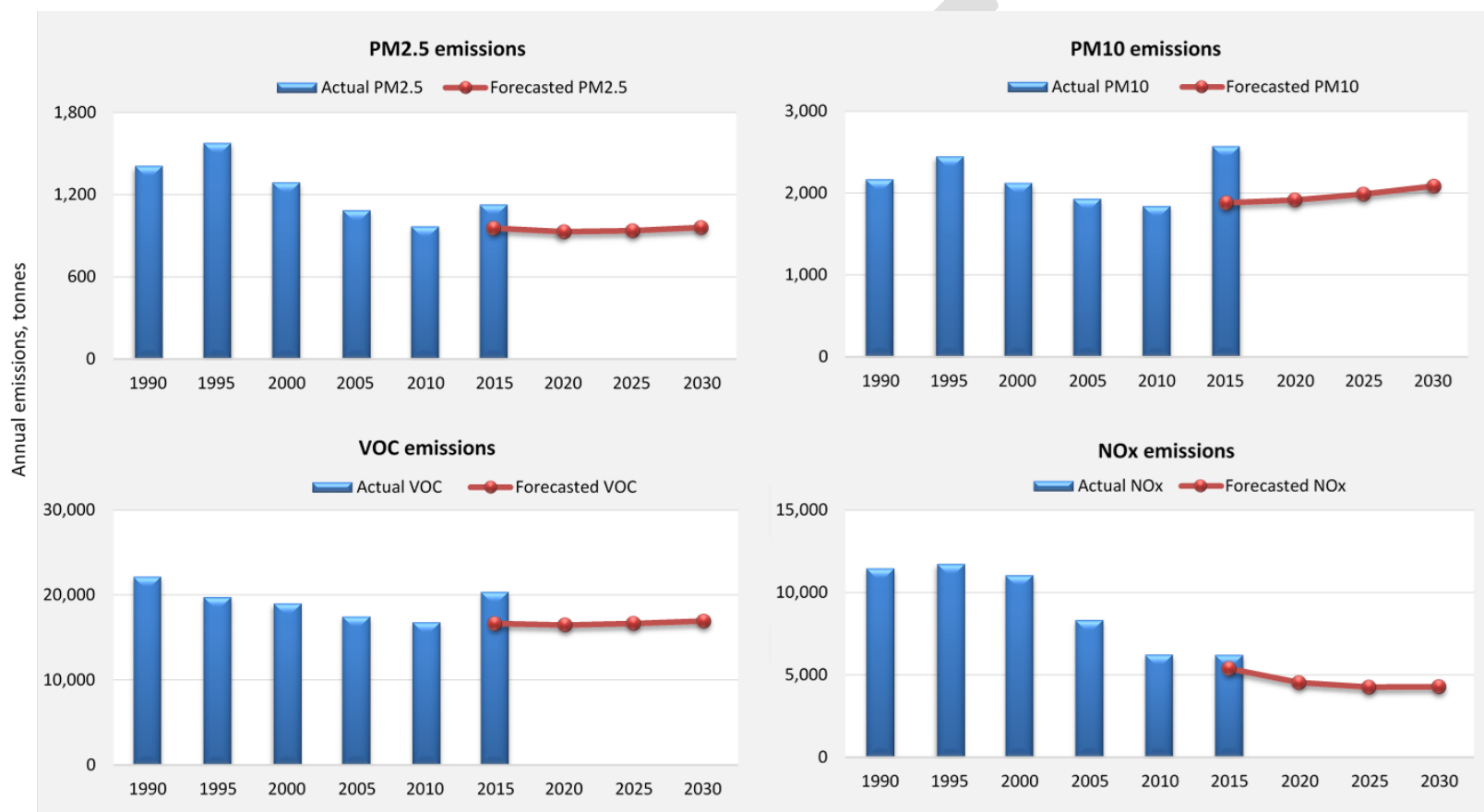
Air Emissions in the FVRD:

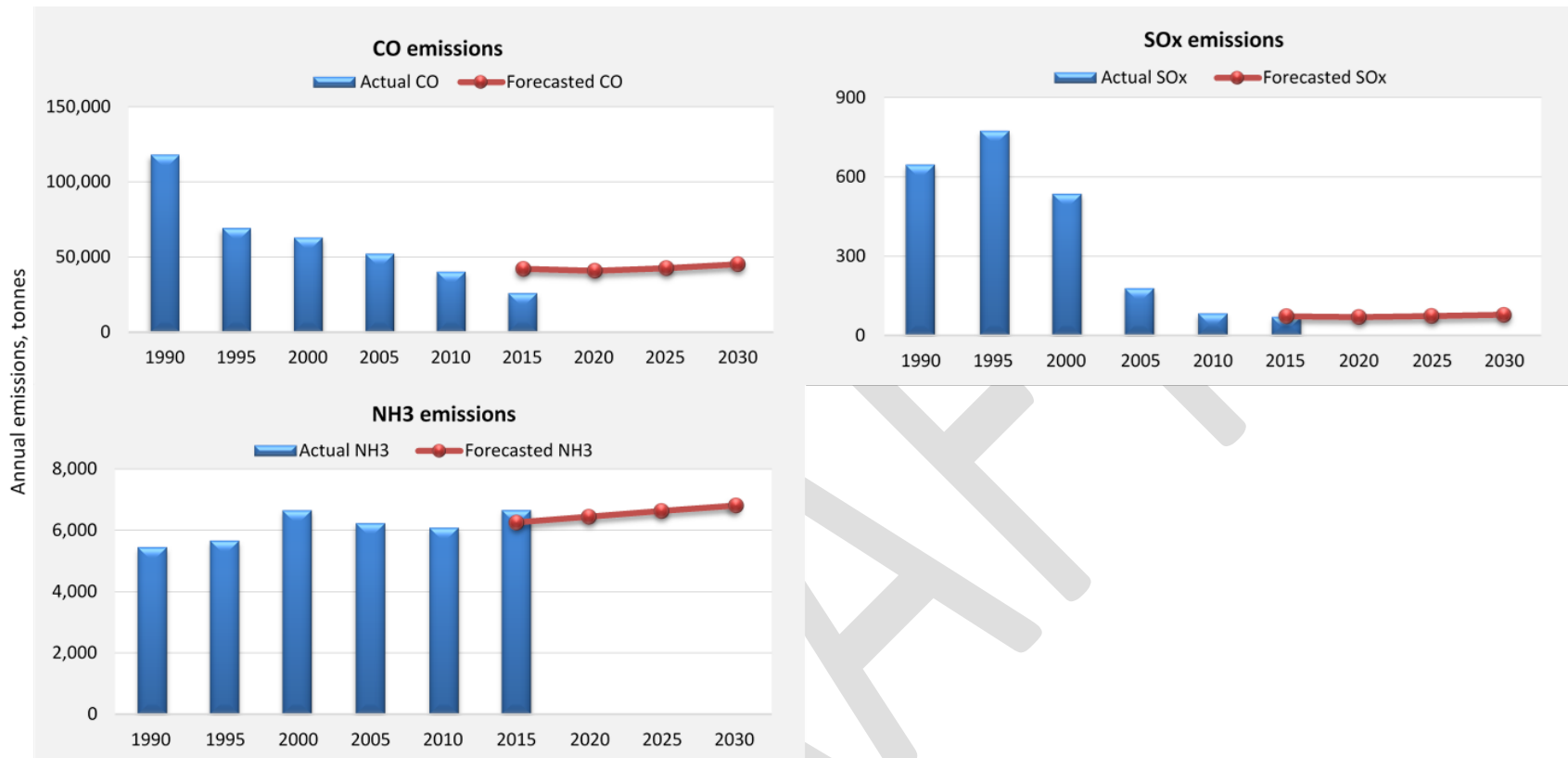


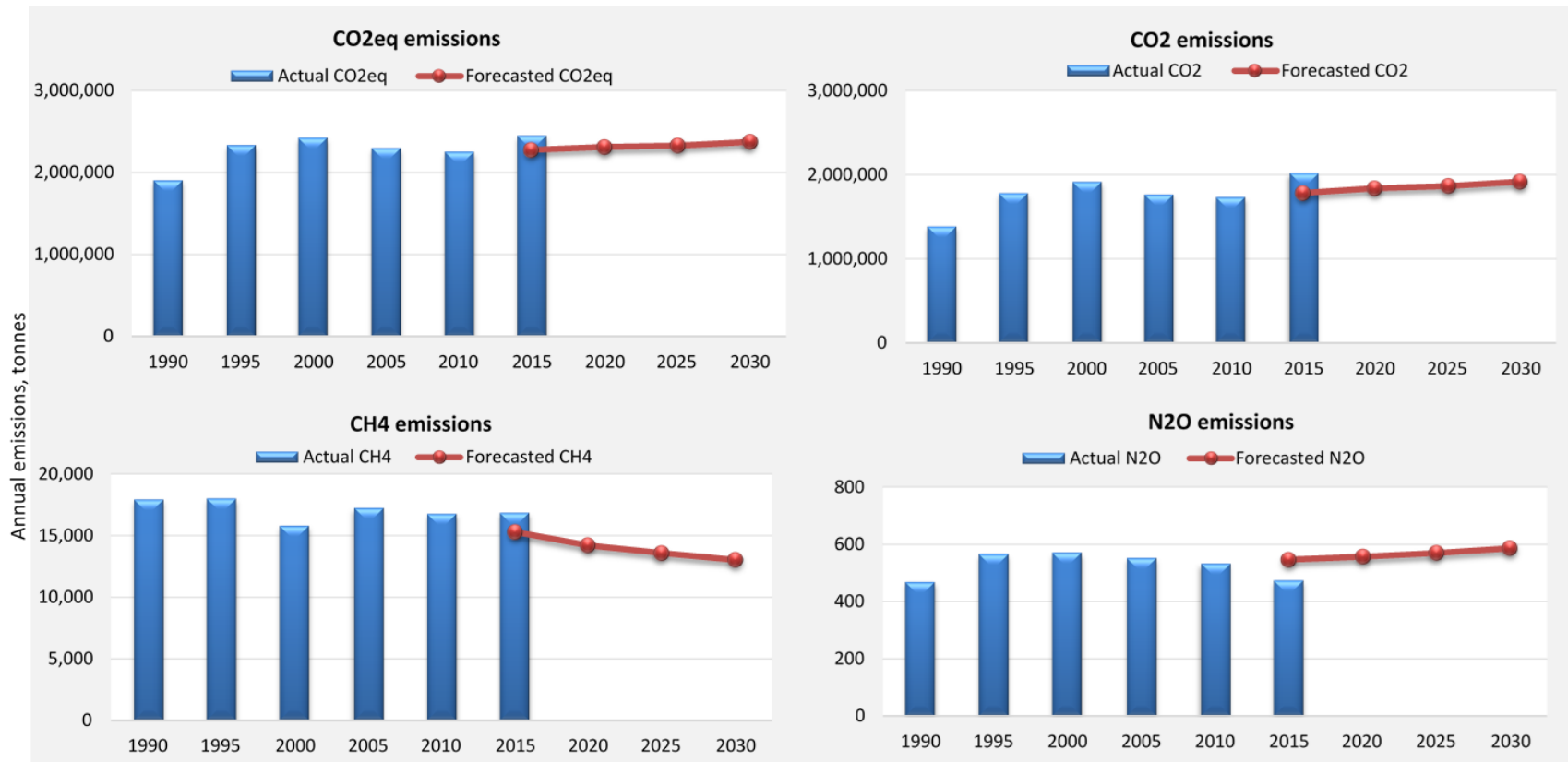
GHG emissions in the FVRD:



Emission trends and forecast in the FVRD:







Appendix C: List of Air Quality Committees and Working Groups in the LFV

Committee	Region/ country	Goals and objectives	Activity status	FVRD involvement
Agricultural Nutrient and Air Working Group (ANAWG) - a joint industry-government working group	LFV	Provides a forum for exchange of information on agricultural nutrient management and air quality, as well as to review projects and research being done.	Dormant since 2018	Member
Air Quality & Health Steering Committee (AQ&HC) - a multi-agency regional committee	LFV	Promotes understanding of the effects of air pollution on health, environment, and economy through research, education, and public awareness campaigns. Aims to develop tools and inform policies that will reduce the impact of air pollution on human health, ecosystems, and visibility.	Active, meets semi-annually	Member
BC Air Quality Meteorologists (AQ Met) – a provincial air quality experts group	BC	Discusses provincial air quality issues and organizes training sessions and workshops.	Active, meets monthly by tele-conference	Member
BC Visibility Coordinating Committee (BCVCC)	LFV	Studies and communicates the impact of air pollutants on visual air quality in the LFV	Dormant since 2019	Member
eMotive (Electric Vehicle Experience) Campaign	LFV	Develops and implements electric vehicle communications strategy. Raises awareness and promotes electric vehicles in the LFV.	Active, meets monthly by tele-conference	Member
Georgia Basin/Puget Sound International Airshed Strategy Group (IAS)	LFV and WA (USA)	Works collaboratively to address present and future cross-border air quality issues and to resolve pressing international air quality issues in the region in a timely manner.	Active, meets semi-annually	Member
IAS Subcommittee - Residential Wood Smoke Workgroup	LFV and WA (USA)	Exchanges information on wood burning appliances regulations and studies across the USA and Canada.	Active, meets semi-annually	Member

Committee	Region/ country	Goals and objectives	Activity status	FVRD involvement
Lower Fraser Valley Air Quality Coordinating Committee (LFV AQCC)	LFV	Works toward coordinated policies and programs for air quality management in the LFV. Guides intergovernmental actions to address the issues, encourage efforts to understand and manage air quality and foster the stewardship. Facilitates cooperation and information exchange between agencies responsible for air quality management in the LFV airshed.	Active, meets quarterly	Member, Co-chair
Regional Ground Level Ozone Strategy Steering Committee (RGLOSSC)	LFV	Develops and implements the regional Ground Level ozone Strategy in the LFV	Active	Chair
Mobile Source Emissions Forum (MSEF, formerly Air Care Steering Committee)	LFV	Oversees the inspection and maintenance program for light-duty vehicles in the LFV	Dormant since 2015	Member
Regional Clean Air Communications Team (RCACT)	LFV	Focuses on air quality communications	Dormant since 2018	Member
Regional Engineers Advisory Committee (REAC, Metro Vancouver Committee)	MV	Discusses climate change and greenhouse emissions reductions	Active, meets monthly	Adjunct member

Appendix D: Ambient Air Quality Objectives in Canada, BC, and the LFV

Canadian Ambient Air Quality Standardsⁱ

Pollutant	Averaging Time	Numerical Value		
		2015	2020	2025
Fine Particulate Matter (PM _{2.5})	24-hour	28 µg/m ³	27 µg/m ³	
	Annual	10 µg/m ³	8.8 µg/m ³	
Ozone (O ₃)	8-hour	63 ppb	62 ppb	
Sulphur Dioxide (SO ₂)	1-hour	-	70 ppb	65 ppb
	Annual	-	5 ppb	4 ppb
Nitrogen Dioxide (NO ₂)	1-hour	-	60 ppb	42 ppb
	Annual	-	17 ppb	12 ppb

Ambient Air Quality Objectives in British Columbiaⁱⁱ

Contaminant	Avg. Period	Air Quality Objective		Source	Date Adopted
		µg/m ³	ppb		
Formaldehyde (HCHO)	1 hour	60	50	Provincial AQO	1995
Nitrogen Dioxide (NO ₂)	1-hour	188	100	Interim Provincial AQO	2014
	Annual	60	32		
Ozone (O ₃)	1-hour	160	82	NAAQO8	1989
	8 hour	123	63	CAAQS	2013
Particulate Matter <2.5 µm (PM _{2.5})	24 hour	25	-	Provincial AQO	2009
		28	-	CAAQS	2013
	Annual	8	-	Provincial AQO	2009
		10	-	CAAQS	2013
Particulate Matter <10 µm (PM ₁₀)	24 hour	50	-	Provincial AQO	1995
Sulphur Dioxide (SO ₂)	1-hour	196	75	Interim Provincial AQO	2016
	1-hour	183	70	CAAQS	2016
	Annual	13	5	CAAQS	2016
Total Suspended Particulate (TSP)	24- hour	120	-	NAAQO	1974
	Annual	60	-	NAAQO	1974

ⁱ Adopted from the Canadian Council of Ministers of the Environment website. More details available at <http://airquality-qualitedelair.ccme.ca/en/>

ⁱⁱ Adopted from the BC Air Quality website. More details available at <https://www2.gov.bc.ca/assets/gov/environment/air-land-water/air/reports-pub/aqotable.pdf>

Metro Vancouver's Current Ambient Air Quality Objectivesⁱ

Air Contaminant	Averaging Time	Ambient Air Quality Objective Levels	
		µg/m ³	ppb
Carbon monoxide (CO)	1-hour	30,000	26,200
	8-hour	10,000	8,700
Nitrogen dioxide (NO ₂)	1-hour	200	106
	Annual	40	21
Sulphur dioxide (SO ₂)	1-hour	196*	75*
	24-hour	125	48
	Annual	30	11
Ozone (O ₃)	1-hour	161	82
	8-hour	128	65
Inhalable particulate matter (PM ₁₀)	24-hour	50	-
	Annual	20	-
Fine particulate matter (PM _{2.5})	24-hour	25	-
	Annual	8 (6)	-
Total reduced sulphur (TRS)	1-hour (acceptable)	14	10
	1-hour (desirable)	7	5

Air Zone management framework for ground-level ozone and PM_{2.5}ⁱⁱ

Management Level	O ₃ (ppb)		PM _{2.5} – Annual (µg/m³)		PM _{2.5} - 24h (µg/m³)	
	2015	2020	2015	2020	2015	2020
Red	Actions for Achieving Air Zone CAAQS					
Threshold (CAAQS)	63	62	10	8.8	28	27
Orange	Actions for Preventing CAAQS Exceedance					
Threshold	56		6.4		19	
Yellow	Actions for Preventing Air Quality Deterioration					
Threshold	50		4		10	
Green	Actions for Keeping Clean Areas Clean					

- “Red” - Communities are expected to work towards a goal of achieving the CAAQS through advanced air zone management actions. The CAAQS define the upper threshold separating the “red” and “orange” management levels.
- “Orange” - Communities are expected to improve air quality through active management.
- “Yellow” – Communities are expected to utilize early intervention and ongoing actions to continuously improve air quality.
- “Green” zones are expected to keep clean areas clean and to proactively manage air quality.

ⁱ Adopted from the Metro Vancouver website. More details available at <http://www.metrovancouver.org/services/air-quality/AirQualityPublications/CurrentAmbientAirQualityObjectives.pdf>

ⁱⁱ Adopted from the Report on Air Zone Management Response for British Columbia, September 2017

Appendix E: Criteria Air Contaminants and their sources and effects

Air Contaminant	What is it?	Where does it come from?	What does it do for health and the environment?
Particulate Matter (PM)			
Coarse or inhalable Particulate Matter (PM ₁₀)	Solid or liquid airborne particles smaller than 10 micrometers (µm) in diameter (1/10 of a human hair thickness)	Motor vehicles Wood burning stoves and fireplaces Wildfires Open burning and incineration of waste Dust from construction, roads, and agriculture Industrial sources Windblown dust from open lands Atmospheric chemical reaction between other pollutants	<i>Health:</i> Penetrates the deeper part of human lungs, such as bronchi (PM ₁₀) and alveoli (PM _{2.5}) causing irritation and inflammation to airways. Causes negative health effects, such as lung cancer, respiratory and cardiopulmonary diseases, adverse pregnancy outcomes, birth defects, and dementia. Increases mortality and a number of hospital visits. Has no safe levels for human exposure <i>Environment:</i> Contributes to haze and smog; reduces visibility Clogs stomatal openings of plants, leading to slower growth or mortality in some plant species
Fine Particulate Matter (PM _{2.5})	Solid or liquid airborne particles smaller than 2.5 micrometers (µm) in diameter (1/40 of a human hair thickness)		
Ozone (O₃)			
Ground-level ozone (O ₃)	Light-blue gas with a pungent smell Highly reactive and hazardous substance Powerful oxidizing agent Major component of toxic photochemical smog	Photochemical (sun-driven) atmospheric reaction between nitrogen oxides (NO _x) and volatile organic compound (VOC)	<i>Health:</i> Aggravates chronic lung diseases and causes permanent lung damage, particularly for children and the elderly. Increases risk of premature death Has no safe levels for human exposure <i>Environment:</i> Damages sensitive vegetation and decreases productivity of some crops Damages synthetic materials and rubber

Air Contaminant	What is it?	Where does it come from?	What does it do for health and the environment?
Nitrogen Oxides (NOx)			
Nitrogen dioxide (NO ₂)	Reddish-brown gas with pungent and irritating smell Highly reactive and hazardous substance	Motor vehicles Industrial sources	Causes airway irritation and inflammation in healthy people Increases respiratory symptoms in people with asthma Main component of ground-level ozone formation cycle Major component of acid rain
Nitric oxide (NO)	Colorless gas, a free radical Highly reactive and hazardous substance	Motor vehicles Industrial sources	Rapidly oxidizes to hazardous NO ₂ in presence of air
Volatile Organic Compounds (VOC)			
Volatile organic compounds (VOC)	Organic substances which easily evaporate or sublime from their liquid or solid form	Motor vehicles Various hydrocarbons in fossil fuels Chemical products, such as solvents, paints and coatings	Participate in ground-level ozone formation cycle Vary from highly toxic to those with no known health effects Might cause eye and respiratory irritation, headaches, dizziness, visual disorders, and memory impairment
Biogenic volatile organic compounds (BVOC)	VOCs produced by plants	Certain plant/tree species	
Greenhouse gases (GHG)			
Carbon dioxide (CO ₂)	Atmospheric gases that absorb and re-emit thermal energy and cause the greenhouse effect on Earth	Motor vehicles (CO ₂ , N ₂ O) Deforestation and land use changes (CO ₂) Livestock and manure management (CH ₄ , N ₂ O)	Contribute to global warming and climate change
Methane (CH ₄)			
Nitrous oxide (N ₂ O)			
Other Criteria Air Contaminants			
Ammonia (NH ₃)	Colourless gas with a pungent and irritating smell Extremely hazardous and toxic in high concentrations	Livestock and manure management Sewage treatment	Causes airway irritation and inflammation in healthy people Contributes to formation of secondary PM _{2.5}
Sulfur oxides (SOx)	Colorless gas with a pungent and irritating smell Extremely hazardous and toxic in high concentrations	Motor vehicles Marine vessels Coal burning Industrial sources	Causes airway irritation and inflammation in healthy people Increases respiratory symptoms in people with asthma

Air Contaminant	What is it?	Where does it come from?	What does it do for health and the environment?
			Increases risk of premature death Contributes to formation of secondary PM _{2.5} Major component of acid rain
Carbon monoxide (CO)	Colorless, odorless, and tasteless gas Extremely hazardous and toxic in high concentrations	Motor vehicles Gas burning stoves and fireplaces (if improperly vented) Coal burning Industrial sources	Causes significant damage to the heart and central nervous system May result in seizure, coma, and fatality May have severe adverse effects on the fetus of a pregnant woman

DRAFT

Appendix F: Linkages to the existing local plans and policies

Initiative	Air Quality Content
FVRD Regional Growth Strategy (2020, working draft)	<p>Strategy 5.1: Monitor, study, protect and improve air quality.</p> <p>Strategy 6.1: Create a region-wide network of affordable and convenient transportation options that safely and efficiently facilitates the movement of people and goods.</p> <p>Strategy 6.2: Promote active and alternative forms of transportation that prioritize pedestrians and cyclists.</p> <p>Strategy 8.1: Promote energy efficiency and the reduction of greenhouse gas emissions.</p> <p>Strategy 8.2: Reduce the region's impact on climate change and develop capacity to adapt to and mitigate climate change.</p>
FVRD Solid Waste Management Plan Update (2016-2026) ⁱ	<p>The FVRD is not supportive of incineration as a method of 'recovery' for reasons that include its emissions of harmful air emissions and its production of greenhouse gases.</p> <p>The FVRD supports organic diversion from landfills to reduce production of methane and other volatile organic compounds.</p> <p>Strategy 7.3.4: Reduce operations-related GHG emissions.</p>
Strategic Review of Transit in the Fraser Valley (2010) ⁱⁱ	Includes a 20-year vision for transit in the Fraser Valley involving significant increases in local services, new regional services between communities, and new inter-regional services, and outlines numerous transit-related strategies to achieve this Vision.
FVRD Climate Change Adaptation Strategy (2015) ⁱⁱⁱ	As part of the BC Agriculture & Food Climate Action Initiative, this strategy identified priority actions for the agricultural sector to adapt to impacts from climate change. It also included a detailed analysis of climate projections for the Fraser Valley through the 2050s. The report discusses the anticipated impacts of climate change on the region some of which (e.g., increased opportunities for production of ground level ozone in the atmosphere, increased dust, etc.) affect air quality.
FVRD Greenhouse Gas Reduction Strategy (2009)	<p>Stantec prepared a baseline inventory of corporate greenhouse gas emissions that result from FVRD operations and identified a number of corporate actions that could be taken to reduce energy consumption.</p> <p>The total energy consumption for the FVRD operations in 2008 was estimated at 563 tonnes of CO₂e, primarily emanating from recreational facilities and the fleet.</p> <p>Although not part of the strategy, the report estimates community emissions for the FVRD as 67,685 tonnes of CO₂e.</p>

ⁱ Available: <http://www.fvrd.ca/assets/Services/Documents/Garbage/SWMP.pdf>

ⁱⁱ Available: <http://www.fvrd.ca/assets/Government/Documents/Transit%20Strategic%20Review.pdf>

ⁱⁱⁱ Available: <http://www.fvrd.ca/assets/Government/Documents/RegionalStrategies-FraserValley.pdf>

City of Abbotsford Official Community Plan (2016)	<p>Sets city-wide GHG Reduction Targets for 2025 (20%) and 2040 (40%; per capita, below 2007 levels) and establishes policies pertaining to alternative forms of transportation and improved air quality, including:</p> <p>Policy 3.2: "Develop ambitious but realistic city wide and neighbourhood specific mode targets that emphasize walking, biking, and transit use year-round, reflecting a multi-modal city. A suggested starting target is 25% of all trips being made without a vehicle in the life of this Plan, an increase from 7% today."</p> <p>Policy 5.6: "Protect viewscales to natural features such as Mt. Baker, north shore, and Fraser Valley mountains, and minimize the visual impact of development on the hillside from the lowlands."</p> <p>Policy 5.12: "Promote strategies that reduce local air pollution, including measures to protect the Fraser Valley airshed from additional point pollution sources such as energy plants."</p>
City of Abbotsford Green Energy Plan (2013)	<p>This plan outlines strategies that can be taken to support and promote green house gas and energy use reduction in the City of Abbotsford. Carbon emissions related to the energy used in buildings (29% of community emissions), transportation (69% of community emissions) and solid waste decomposition (2% of community emissions). Activities in Abbotsford generate 6%-9% of the emissions of carbon monoxide (CO), nitrogen oxide (NOx) and particulate matter (PM 2.5) in the Lower Fraser Valley.</p>
Chilliwack's Integrated Air Quality, Energy and Greenhouse Gas Community Action Plan (2011)	<p>Stantec prepared an action plan for to help address community and corporate air quality and greenhouse gas emissions for the City of Chilliwack. Based on 2007 levels, 45% of GHG emissions within the City were from on-road transportation. Buildings (29%), agriculture (17%), and solid waste (9%) were responsible for the remainder.</p> <p>Around 3-6% of all emissions in the Lower Fraser Valley originate from within Chilliwack, with key parameters of concern including ammonia, particulate matter, and nitrogen oxides and volatile organic compounds (which react with sunlight to produce ozone). This plan will be updated in 2020</p>
District of Mission OCP (2017)	<p>The District is striving to achieve the greenhouse gas emissions reduction targets adopted in the 2008 OCP - 20% below 2007 levels by December 31, 2020 and by 80% below 2007 levels by December 31, 2050.</p> <p>The District's Policies to achieve these goals include:</p> <p>4.2.3-4.2.8. Promote sustainable and active transportation, establishing an idling reduction policy, and developing infrastructure for electric vehicles.</p> <p>4.2.9-4.2.27 Programs and incentives for home energy retrofits, sustainable development practices, building alternative energy systems, promote energy efficiency for commercial and residential buildings, reduce commercial fleet vehicle emissions</p> <p>4.2.30 Reduce methane gas generation from the landfill</p> <p>6.5.1-6.5.12 Improve transit service and amenities</p>
District of Kent OCP (2014)	<p>According to the Community Energy and Emissions Inventory for Kent (2010), on-road transportation accounts for approximately 54% of emissions in Kent. Buildings account for 36% of emissions and solid waste for 10%. The district already has air quality initiatives such as no-idling policy for municipal fleet vehicles and the operation of a new air quality monitoring station.</p> <p>Further GHG and Energy Reduction Policies include the following:</p> <p>Reduce District GHG's by 10% of 2006 levels by 2025; this target is in line with the District's unique small town and rural characteristics.</p>

	<p>Raise awareness respecting climate change and GHG emission reduction initiatives through leadership and community sustainability programs incorporate climate change, its potential impact, and mitigation measures when reviewing new development applications and undertaking long-term planning projects and initiatives.</p> <p>Continue to pursue opportunities to reduce GHG emissions in District operations including the use of fuel-efficient municipal vehicles.</p> <p>Continue to support improvements to alternative and active transportation amenities.</p> <p>Explore options for encouraging and developing infrastructure for “electric plug-in-vehicles”.</p> <p>Support provincial efforts and work with other agencies, stakeholders, and the community to achieve emission reduction targets and energy conservation goals.</p>
District of Hope OCP (2018)	<p>Objective 6.6 To improve air quality.</p> <p>Policy 6.6.1 Discourage vehicle idling within the District.</p> <p>Policy 6.6.2 Collaborate with the FVRD, other Fraser Valley municipalities, and major employers to address issues that affect air quality.</p> <p>Policy 6.6.3 Encourage large employers and government agencies with air quality monitoring data to share this information publicly.</p> <p>Policy 6.6.4 Continue to support the wood stove exchange program.</p> <p>In 2014, Hope set its community target of reducing GHG emissions to 23% per capita below 2009 levels by the year 2030.</p> <p>Develop a sustainability checklist for buildings to improve energy efficiency in new and existing developments.</p> <p>Policy 15.1.2 Encourage active transportation through infrastructure development and education.</p> <p>Policy 15.1.3 Work with BC Transit to provide local public transit options that are affordable and convenient.</p> <p>Policy 15.1.4 Promote energy demand-side management programs</p> <p>Policy 15.1.5 Incorporate energy efficient standards into purchase agreements, enforced through a Section 219 covenant, when selling District lands for development.</p> <p>Policy 15.1.6 Investigate the implementation of LED street lighting, solar pathway lighting and lighting retrofits in municipal buildings, where appropriate.</p>
Harrison Hot Springs OCP (2018)	<p>Goal 5: Protect and maintain air and water quality and biodiversity. The strategy to achieve this goal involves upgrading wastewater management systems, managing stormwater drainage and runoff, limiting campfires and protecting important natural habitats and ecosystem functions.</p>
Area A Official Community Plan (1994)	<p>It is the Regional Board's policy that:</p> <p>10.3.1 The Regional board will encourage the ongoing monitoring and analysis of ambient air quality and air contaminant discharges in the Plan area.</p>
Area D Official Community Plan (Draft)	<p>7.6.4 Residents are encouraged to avoid the burning of wood wastes and debris, which results in reduced air quality and emissions of fine particulates that may pose a health hazard, and instead employ alternatives such as composting or mulching.</p> <p>7.6.5 The Regional District will work with Provincial ministries and other appropriate organizations to combat the illegal burning of household garbage and other prohibited materials.</p>

Area E and H Official Community Plans (2011)	<p>6.1.4 The farming community is strongly encouraged to follow best management practices associated with the spreading of manure on fields and the burning of wastes to minimize air quality impacts, particularly fine particulates in the air. Farms are encouraged to review the Ministry of Agriculture's Beneficial Management Practices for crop types grown in Columbia Valley.</p> <p>8.4.5 Residents are encouraged to avoid the burning of garbage and wastes which results in reduced air quality and emissions of fine particulates which may pose a health hazard.</p>
Area F Official Community Plan (2010)	The Plan states that support from the FVRD board for any new transportation/utility corridor proposals will be contingent on the proposals meeting the air quality policies outlined in the AQMP
Area G Official Community Plan (2009)	The Plan states that support from the FVRD board for any new transportation/utility corridor proposals will be contingent on the proposals meeting the air quality policies outlined in the AQMP
Hemlock Valley OCP (Draft)	<p>Sets a community-wide plan to reduce GHG and other air pollutants originating from the Hemlock Valley Community. This Plan strives to protect sensitive ecosystems with high biodiversity values through legal and policy tools including the following;</p> <p>4.7.7 Encourage residents to avoid the burning of garbage and waste which results in reduced air quality and hazardous fine particulate matter emissions.</p> <p>6.3.3 Take actions to reduce particulates and other emissions from transportation, industry, building heating and other sources.</p> <p>6.3.4 Continue to study and monitor air quality throughout the Hemlock Valley and expand the monitoring network as needed.</p> <p>6.3.5 Support land use development, initiatives, and programs across all sectors that reduce Greenhouse Gas Emissions, protect air quality, and promote energy efficiency and conservation.</p> <p>6.3.6 Update and implement the regional Air Quality Management Plan.</p> <p>6.3.7 Educate Hemlock Valley residents on the causes and impacts of degraded air quality, and what they can do to improve air quality.</p>

Appendix G: List of Acronyms

AQ	Air Quality
AQHI	Air Quality Health Index
BC MOECCS	BC Ministry of Environment and Climate Change Strategy
BVOC	Biogenic Volatile Organic Compounds
CAAQS	Canada-wide Ambient Air Quality Standards
CAC	Criteria Air Contaminants
CH ₄	Methane
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COPD	Chronic Obstructive Pulmonary Disease
ECCC	Environment and Climate Change Canada
EV	Electric Vehicles
GHG	Greenhouse Gases
H ₂ S	Hydrogen Sulfide
FVRD	Fraser Valley Regional District
LFV	Lower Fraser Valley
LNG	Liquefied Natural Gas
MV	Metro Vancouver
NAAQS	National Ambient Air Quality Standards (USA)
NH ₃	Ammonia
N ₂ O	Dinitrogen Monoxide or Nitrous Oxide
NO ₂	Nitrogen Dioxide
NO	Nitrogen Monoxide or Nitric Oxide
NO _x	Nitrogen Oxides
O ₃	Ozone
PM	Particulate Matter
PM _{2.5}	Fine Particulate Matter (with particle diameter ≤ 2.5µm)
PM ₁₀	Coarse or Inhalable Particulate Matter (with particle diameter ≤ 10µm)
ppb	Particles Per Billion
ppm	Particles Per Million
SO ₂	Sulfur Dioxide
SO _x	Sulfur Oxides
TAP	Toxic Air Pollutants
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulates
US EPA	US Environmental Protection Agency
VAQR	Visual Air Quality Rating
VI	Ventilation Index
VOC	Volatile Organic Compounds
ZEV	Zero-Emission Vehicles

To: Regional and Corporate Services Committee
From: Meghan Jackson, Park Technician II
Building

Date: 2020-09-09
File No: 6140-20-

Subject: Mount Cheam Toilet Installation and Kiosk Replacement

INTENT

This report is intended to advise the Regional and Corporate Services Committee of information pertaining to the installation of a urine-diversion toilet (UDT) and the replacement of an information kiosk at the Mount Cheam trailhead. Staff is not looking for a recommendation and has forwarded this information should members want more clarification to discuss the item further.

STRATEGIC AREA(S) OF FOCUS

Support Environmental Stewardship
Support Healthy & Sustainable Community

PRIORITIES

Priority #4 Tourism
Priority #5 Outdoor Recreation

BACKGROUND

In 2014, the Fraser Valley Regional District (FVRD) entered into a partnership agreement with Recreation Sites and Trails BC (RSTBC) for Mount Cheam and Elk-Thurston trails, under which the FVRD provides management and maintenance services for these trails. Over the last few years, FVRD staff had observed that the outhouse at Mount Cheam trailhead, a traditional pit toilet, was reaching the end of its useful service and getting close to capacity. Staff also identified that the information kiosk for this site was due for an update and should be moved closer to the trailhead.

In 2018, the FVRD installed a unique urine-diversion toilet (UDT) near the top of Elk Mountain in partnership with RSTBC, and the unit has performed well in this remote and popular area. Given the success of that project and the similarities of the Mount Cheam site, FVRD and RSTBC staff began planning for the installation of a new UDT at the Mount Cheam trailhead. This type of

toilet was chosen because these units manage waste more effectively than a traditional pit toilet, making them better suited to backcountry locations.

This technology separates liquids and solids resulting in less waste volume to manage (typically 70% of what goes into an outhouse is liquid waste) and also improved decomposition because liquids and solids are not mixing. Sterile liquids are automatically diverted into a separate pipe under the unit, filtered and dispersed through an on-site drain field. Solids are transferred through a user-operated foot pump conveyor system to a contained area with a dirt floor at the back of the unit, allowing microbes from the soil to help with decomposition. Solids are turned and rotated as needed, and periodically moved to the side and covered to increase decomposition. Once fully decomposed, the waste piles are expected to be inert enough to spread on-site, or can be bagged and removed if preferred. However, given the seasonal use at the Mount Cheam site and the expected rate of accumulation, the removal of waste would likely not be required for several years.

DISCUSSION

This July, a UDT and new information kiosk were installed at the Mount Cheam trailhead. Before the installation, FVRD and RSTBC staff had spent the previous winter planning, sourcing materials, and hiring and preparing a contractor for this unique job.

The installation of this project was completed over four days, involving both FVRD and RSTBC staff and vehicles (see Appendix A for pictures). Project materials were transported by truck up 19 km of remote and rough logging roads, and then carried by hand and wheelbarrow from the trailhead to the installation sites. The UDT construction had multiple steps, including the construction of the base and drain field, assembly of the enclosure, and setup of the urine-diversion unit. Once the UDT and new kiosk installation were complete, the old structures were decommissioned and removed from the site.

COST

The cost of the urine diversion toilet (not including staff time) was \$14,397 and the cost of the kiosk was \$3,120. These project costs were approved in the Regional Parks budget (700) for 2020.

CONCLUSION

The Mount Cheam UDT installation and kiosk replacement is another successful partnership project between the FVRD and RSTBC intended to enrich the user experience and minimize impact in a popular hiking area. The new kiosk will provide the public with important

information closer to the trailhead, while the UDT will improve waste management at the site, helping to preserve our beautiful backcountry.

COMMENTS BY:

Stacey Barker, Director of Regional Services: Reviewed and supported.

Kelly Lownsborough, Chief Financial Officer/ Director of Financial Services: Reviewed and supported.

Jennifer Kinneman, Chief Administrative Officer: Reviewed and supported.

Appendix A: Mount Cheam Urine-Diversion Toilet Installation and Kiosk Replacement Project



Transporting materials to Mount Cheam





Old and new Mount Cheam kiosk



Mount Cheam Urine Diversion Toilet

To: Electoral Area Services Committee

Date: 2020-09-09

From: David Bennett, Planner II

Subject: Public Hearings during the COVID-19 Provincial State of Emergency

RECOMMENDATION

THAT the Fraser Valley Regional District Board resolve to resume public hearings for rezoning and Official Community Plan amendment bylaws;

THAT Fraser Valley Regional District Board authorise the holding of public hearings by means of electronic communication;

AND THAT the Fraser Valley Regional District Board direct staff to develop electronic public hearing procedural rules to maximize clarity, transparency and access for the public, and to ensure that due process is maintained.

STRATEGIC AREA(S) OF FOCUS

Foster a Strong & Diverse Economy

Provide Responsive & Effective Public Services

Support Healthy & Sustainable Community

BACKGROUND

In response to the provincial state of emergency, FVRD staff made the operational decision to defer the holding of public hearings. This operational decision was then formalized by FVRD Board resolution (May 2020):

THAT the Fraser Valley Regional District Board direct staff to delay the holding of public hearings until such time that the Order of the Provincial Health Officer, Class Order (mass gatherings) re: COVID-19 is cancelled unless directed otherwise by the Board on a case-by-case basis.

Public Hearings have not been held in the FVRD since the Province declared a public health emergency in March 2020.

COVID-19 impacts on FVRD Public Hearings:

Zoning Bylaw Amendment applications ready for Public Hearing	3	2(Area D) 1(Area F)
OCP ready for Public Hearing	1	Area D
Public Hearings waived	2	Area D

There are currently three (3) rezoning applications that have received first reading and are ready to proceed to a public hearing. Applicants were informed of the FVRD Board resolution to delay the holding of public hearings.

The Electoral Area D Official Community Plan is ready to proceed to a public hearing.

Public Hearings were waived for two rezoning applications (in accordance with section 464 of the Local Government Act).

Provincial Orders

Restrictions on gathering sizes and recommendations on physical distancing will likely remain while the state of emergency is in place. The province recognized the challenges faced by local governments to hold public hearings under these conditions and issued a provincial order to allow for electronic public hearings during the state of emergency.

On June 17, 2020 Ministerial Order M139 under the *Emergency Program Act* was repealed and replaced by Ministerial Order M192. Previous provisions under M139 that enabled local governments to address the challenges of holding public hearings while complying with prohibitions on mass gatherings and recommendations on physical distancing continue to apply.

To enable local governments to proceed safely with public hearings, this order authorizes the FVRD to conduct public hearings using electronic or other communication facilities, such as Zoom.

FVRD Experience with Electronic Meetings

The FVRD is now conducting Electoral Area Services Committee meetings and FVRD Board meetings electronically.

The FVRD is now experienced with operating electronic meetings and incorporating public participation in these meetings.

FVRD Member municipalities have implemented the use of electronic public hearings.

The software that the FVRD is using for electronic public meetings (Zoom) can also be used for Public Hearings.

DISCUSSION

Provincial Guidance for Electronic Public Hearings

Public hearings are separate from council and board meetings and are addressed accordingly under Division 5 of the Order. Under the Order, a council, board or local trust committee of the Islands Trust may conduct a public hearing by electronic or other communication facilities. These provisions provide local governments another tool to hold public hearings while complying with the public health orders on mass gatherings and recommendations on physical distancing.

The Province has stated that it is up to each local government to decide which format of public hearing is best suited to its circumstances, whether it be electronic, in-person or a combination of both.

It is important to note that under the order, a public hearing may be conducted using electronic or other communication facilities despite any applicable requirements in a procedure bylaw. This means that FVRD procedure bylaws do not need amendments to implement electronic public hearings.

Access and Transparency of Electronic Public Hearings:

Electronic hearings are one way by which local governments can ensure that they are complying with the public health orders and necessary physical distancing while continuing to make important planning and land use decisions for their communities, including amendments to bylaws.

Local governments are accountable to their citizens and have a responsibility to ensure that opportunities for public input are accessible and transparent.

Maintaining procedural fairness, transparency and accountability should be of paramount concern in designing a process for electronic or phone participation in a public hearing.

Some community members do not have a computer or are not comfortable using technology. What other options are there to receive their opinions at a public hearing?

Local governments will need to carefully consider issues of access and transparency when holding public hearings that rely on electronic rather than in-person attendance.

In addition to online meetings, the order enables local governments to hold public hearings by phone or teleconference.

Local governments can also encourage the public to provide written submissions, as has always been allowed, as an alternative to attending an electronic public hearing.

How would hearings be conducted?

An Electronic Public Hearing would be conducted in a similar manner to the existing FVRD in-person public hearing processes. The FVRD Board may delegate the hearing to the Electoral Area Director for the area where the application is located. The meeting will be broadcast as a livestream so people can watch the meeting. The meeting would be opened by the meeting Chair and FVRD staff would then provide an overview of the procedures for the hearing and then provide an overview of the application. The meeting Chair would then read out the public hearing statement and state the meeting procedures. The Chair will then call for statements from the public. At that time members of the public will be able call-in by phone or using a Zoom (or other) app. After calling three times for statements, the Chair will then close the meeting. A recording of the meeting will be uploaded at a later date.

Unlike a traditional public hearing, for electronic public hearings, members of the public will not have to travel to a venue to attend a hearing or participate. Members of the public may choose to simply watch the hearing, or they may choose to submit comments by phone or the Zoom application.

Like a traditional public hearing, members of the public may submit comments in writing in advance of the hearing and have those comments entered into the public hearing record. Submitting written comments is encouraged.

To assist those who choose to speak at the electronic meeting, FVRD staff will be available to provide support and assistance.

In compliance with provincial orders, in advance of the meeting, written notices will be provided that include instructions on how to participate electronically. Newspaper ads will also include electronic participation instructions. The FVRD website will also include these instructions.

ALTERNATIVES

1. Continue to defer public hearings:

Continuing to defer public hearings will mean that applications will not proceed.

2. Conduct in-person only public hearings:

Conducting in-person public hearings requires compliance with public health regulations. Challenges include: venue availability, capacity limits, sanitizing of surfaces, maintaining physical distancing and complying with health and safety requirements. If an opportunity for an in-person hearing arises, staff will bring it to the attention of the EA Director.

3. Conduct in-person / electronic hybrid public hearings

Conducting in-person / electronic hybrid public hearings includes all of the challenges of an in-person hearing and adds the complexities of a duplicated electronic process.

4. Waive public hearings

Waiving public hearings may be supportable in some circumstances, but waiving a hearing is not recommended when there is community concern about an application. If a zoning amendment application arises that is likely to generate little community interest, staff will consult the EA Director about the potential for the Board to consider waiving the public hearing.

CONCLUSION

To enable local governments to proceed safely with public hearings, provincial orders now authorize the FVRD to conduct public hearings using electronic or other communication facilities.

The FVRD is currently conducting Board and Committee meetings electronically. FVRD staff are now experienced with the operation of the electronic meeting software and incorporating live public participation.

Holding an electronic public hearing will be a learning experience for the FVRD and members of the public. Compliance with provincial orders includes developing new notices and providing new ways to participate. The Province has enabled local governments to develop their own procedural rules to suit their community's needs. The FVRD is learning from member municipalities on how to hold these types of meetings. Hearings will be tailored to suit the needs of the residents of the FVRD.

The software used by the FVRD will allow for members of the public to call-in using a telephone, or over the internet. This will ensure that areas with limited access to the internet will be able to participate.

Members of the public may also continue to submit comments in writing and will be encouraged to do so.

It is therefore recommended that the Fraser Valley Regional District Board resolve to resume public hearings for rezoning and Official Community Plan amendment bylaws, and that Fraser Valley Regional District Board authorise the holding of public hearings by means of electronic communication. It is further recommended that the Fraser Valley Regional District Board direct staff to develop electronic public hearing procedural rules to maximize clarity, transparency and access for the public, and to ensure that due process is maintained.

COST

The table below highlights some of the costs associated with an Electronic Public hearing compared to an in-person Public Hearing (pre-state of emergency).

	In Person Public Hearing	Electronic Public Hearing
Number of Staff	2 (planning)	5 (1 IT, 2 admin, 2 planning)
Hearing notice	Provides details on attending and submitting comments	Must include new details on access to an electronic meeting, additional costs.
Venue	Costs for booking hearing venue	No venue costs
Staff travel	Travel to and from hearing venue + set-up and take down	Conducted from FVRD office

The existing FVRD Zoom licence will accommodate electronic public hearings without additional licencing costs.

COMMENTS BY:

Graham Daneluz, Director of Planning & Development

reviewed & supported

Kelly Lownsborough, Chief Financial Officer/ Director of Financial Services

reviewed & supported

Jennifer Kinneman, Chief Administrative Officer

Reviewed and supported.

To: Electoral Area Services Committee

Date: 2020-09-09

From: Andrea Antifaeff, Planner I

File No: 3015-20-2020-03

Subject: Agricultural Land Commission Application – Non-Farm Use (Fire Hose Repair Facility) at Ford Mountain Correctional Centre, 57657 Chilliwack Lake Road, Electoral Area E

RECOMMENDATION

THAT the application for non-farm use within the Agricultural Land Reserve at 57657 Chilliwack Lake Road (Ford Mountain Correctional Centre), Electoral Area E, be forwarded to the Agricultural Land Commission for consideration;

AND THAT the Agricultural Land Commission consider the staff report dated September 9, 2020 under file number 3015-20-2020-03.

STRATEGIC AREA(S) OF FOCUS

Provide Responsive & Effective Public Services

BACKGROUND

The Fraser Valley Regional District has received an application for a non-farm use (Fire Hose Repair Facility) in the Agricultural Land Reserve for the property located at 57657 Chilliwack Lake Road (Ford Mountain Correctional Centre), Electoral Area E.

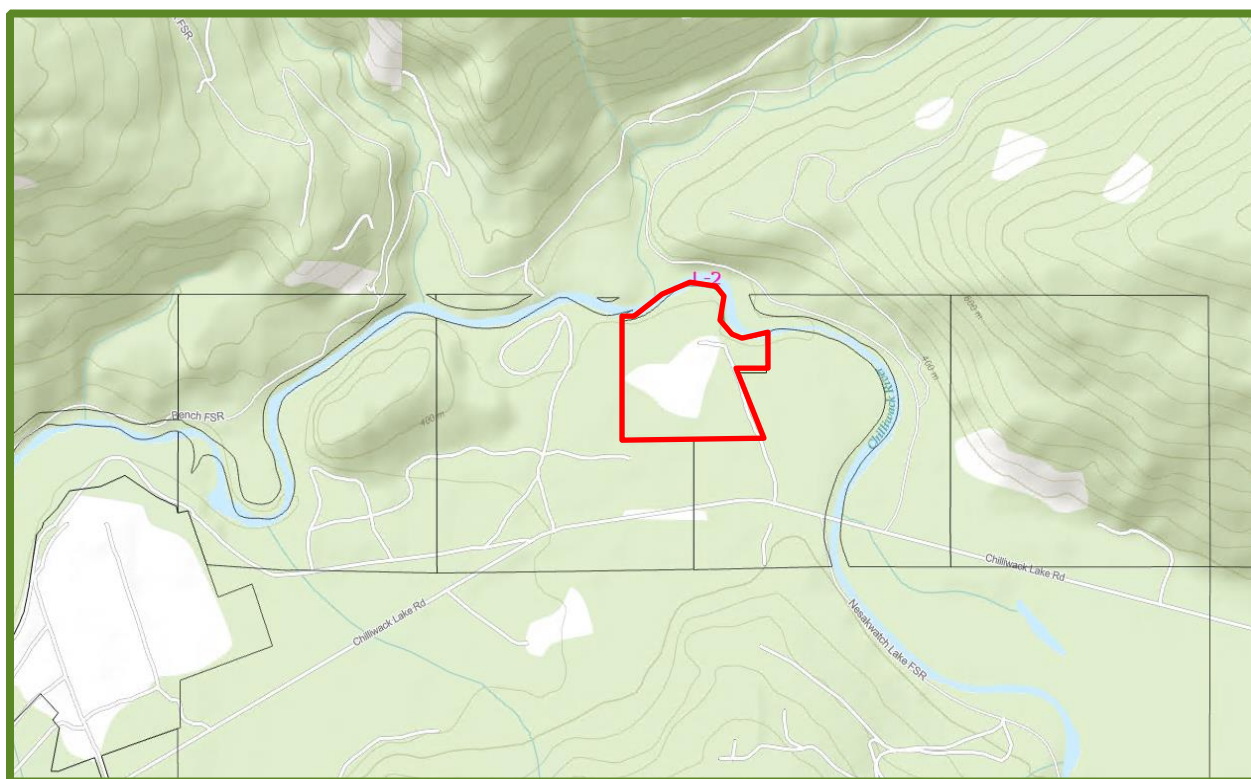
PROPERTY DETAILS			
Electoral Area	E		
Address	57657 Chilliwack Lake Road		
PID	023-064-803		
Folio	733.01278.000		
Lot Size	41.191 acres		
Owner	Province of BC – Ministry of Citizens' Services	Agent	Josh Nelson, Project Coordinator
Current Zoning	Institutional (L-2)	Proposed Zoning	No change
Current OCP	Institutional (I)	Proposed OCP	No change

Current Use	Correctional Facility	Proposed Use	No change
Development Permit Areas	5-E Riparian Areas		
Agricultural Land Reserve	Yes		

ADJACENT ZONING & LAND USES

North	^	Institutional (L-2); Chilliwack River (Crown Land)
East	>	Institutional (L-2); Crown Land
West	<	Institutional (L-2); Crown Land
South	v	Institutional (L-2); Crown Land

NEIGHBOURHOOD MAP



PROPERTY MAP



DISCUSSION

The purpose of the non-farm use application is to obtain approval for the construction of a fire hose repair facility to be placed on the property located at 57657 Chilliwack Lake Road which is currently used as Ford Mountain Correctional Centre.

Ford Mountain Correctional Centre (FMCC) opened in 1966 as an open custody facility. Today, FMCC is a men's multi-level security centre which houses approximately 125 adult male offenders. FMCC offers work programs where inmates are supervised providing community work services and developing practical job skills.

The fire hose repair facility building is proposed as a pre-engineered building approximately 10,513 square feet in size with an exterior covered area and a receiving area which is approximately 4,594 square feet in size. Once constructed, the new fire hose repair facility will complement existing inmate work programs. These experiences provide meaningful work opportunities for inmates and contribute vital capacity to BC Wildfire maintenance needs.

The fire hose refurbishment inmate work program has been located at Nanaimo Correctional Centre since 2008 and the proposed relocation of this work program to FMCC is a coordinated effort between the BC Wildfire Service, the Ministry of Public Safety and Solicitor General, Ministry of Forests, Lands, Natural Resource Operations & Rural Development and the Ministry of Citizen Services. The fire hose

refurbishment inmate work program is for the maintenance, repair and packaging of fire hoses to support provincial forest firefighting efforts. The facility will service the Ministry of Forests, Lands, Natural Resource Operations and Rural Development in their forest firefighting efforts by cleaning and preparing their fire hoses for use. The facility will also help the inmates learn new skills which will prepare them to integrate into the workforce.

Property Description

The property is currently used as Ford Mountain Correctional Centre and is surrounded by vacant Crown land and the Chilliwack River. There are numerous structures that make up the correctional centre which includes:

- Huts
 - There are four huts which provide inmate residency.
- Administration building
 - Main staffing facilities, including offices, boardroom, kitchen and control room.
- Holloway House
 - Additional inmate living accommodations and program rooms for inmate training and educational opportunities.
- Program Trailer
 - A fixed Atco trailer utilized for expanded program opportunities.
- Pump House
 - Supplies domestic water for the site and contains the main electrical components of the operation.
- Inmate Works Yard
 - The works yard consists of several buildings utilized for work programs. Programming includes the refurbishment of BC Wildfire hand tools and the repair of water bladders utilized during the fire season.

FVRD Policies and Regulations

Zoning

The subject property is zoned Institutional (L-2) as per *Zoning Bylaw for Electoral Area E, 1976 of the Regional District of Fraser-Cheam*. The proposed fire hose repair facility is consistent with the zoning regulations provided for in the bylaw.

Official Community Plan

The subject property is designated Institutional (I) as per *Fraser Valley Regional District Official Community Plan for Electoral Area E and H Bylaw No. 1115, 2011*. This designation is for lands identified and reserved for community uses and private lands currently zoned for civic, educational, religious, fraternal, hospital or cultural facilities. The proposed fire hose repair facility is consistent with the land use designation provided for in the bylaw.

Development Permit

The subject property is located within Riparian Areas Development Permit Area 5-E. This development permit is required for the protection of the natural environment, its ecosystems and biological diversity and applies to any construction, land alteration or subdivision within 30 metres of any watercourse. The site plan provided shows that the proposed fire hose repair facility will be located more than 30 metres from any watercourse; therefore, a development permit would not be required.

Floodplain

The subject property is located in close proximity to the Chilliwack River and is required to follow regulations set forth in *Fraser Valley Regional District Floodplain Management Bylaw 0681, 2005*. The floodplain bylaw requires the following for the structure:

- Flood Construction Level of 3.0 metres above the Natural Boundary of Chilliwack River; and,
- Floodplain Setback of 30 metres from the Natural Boundary of Chilliwack River.

The site plan provided demonstrates that the proposed building will be greater than 30 metres away from the Chilliwack River. Once the applicant has applied for a building permit, staff will be able to confirm whether the structure is meeting the required Flood Construction Level.

Agricultural Capability Classification

Lands within the Agricultural Land Reserve are classified according to their ability to produce a range of crops when considering climate and topography. Soils are classified on a scale of 1 through 7; Class 1 is applied to land where the climate and soil allow growth of the widest range of crops and Class 7 is applied to land considered non-arable, with no potential for soil bound agriculture. Capability classes are designated as unimproved and improved. Unimproved ratings are based on soil characteristics without physical improvements, whereas improved ratings are based on assumptions that improvements can be made.

The subject property has an improved soil capability classification of Class 4. The Agricultural Land Commission is the most appropriate agency to decide and comment on matters such as soil capability for agriculture. However for the Committee's benefit we provide the following summary of the agricultural capability:

- Class 4: Land in this class has limitations that require special management practices or severely restrict the range of crops, or both.

COST

The \$300.00 local government fee has been paid by the applicant. The applicant will pay the Agricultural Land Commission portion of the fee (\$1,200.00) if the application is forwarded to the Agricultural Land Commission.

CONCLUSION

Staff recommend that the FVRD Board resolve to forward the application the ALC as the fire hose repair facility:

- is consistent with zoning and land use regulations;
- will not have any impact on the current (non-agricultural) use of the land or surrounding area; and,
- is a beneficial addition to the current work programs already being offered at Ford Mountain Correctional Centre and efforts for fighting wildfires.

OPTIONS

Option 1 Forward to the ALC (Staff Recommendation)

THAT the application for non-farm use within the Agricultural Land Reserve at 57657 Chilliwack Lake Road (Ford Mountain Correctional Centre), Electoral Area E, be forwarded to the Agricultural Land Commission for consideration;

AND THAT the Agricultural Land Commission consider the staff report dated September 9, 2020 under file number 3015-20-2020-03.

Option 2 Refuse

If the Board wishes to refuse the application, the following motion would be appropriate:

MOTION: THAT the Fraser Valley Regional District Board refuse the application for the ALR Non-Farm Use and not forward the application to the Agricultural Land Commission.

COMMENTS BY:

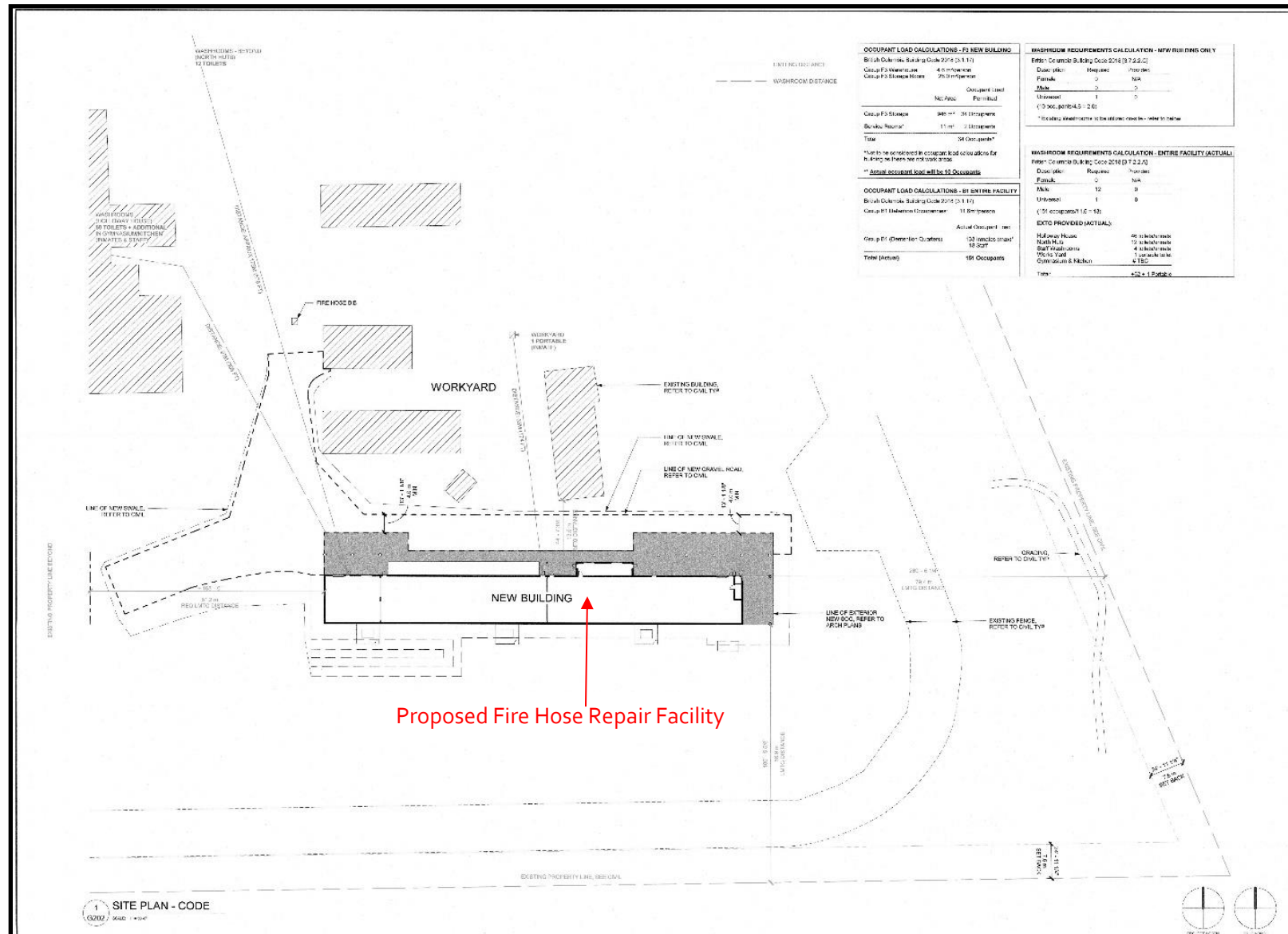
Graham Daneluz, Director of Planning & Development: Reviewed and supported.

Kelly Lownsbrough, Chief Financial Officer/ Director of Financial Services: Reviewed and supported.

Jennifer Kinneman, Chief Administrative Officer: Reviewed and supported.

Appendix A

Site Plan



Provincial Agricultural Land Commission - Applicant Submission

Application ID: 60610

Application Status: N/A

Applicant: Ministry of Citizens Services

Agent: Ministry of Citizens Services

Local Government: Fraser Valley Regional District

Local Government Date of Receipt: 05/26/2020

ALC Date of Receipt: This application has not been submitted to ALC yet.

Proposal Type: Non-Farm Use

Proposal: The purpose of the non-farm use proposal is to obtain approval for a fire hose repair facility being built on a portion of the Ford Mountain Correctional Centre site. The proposed building will not have any significant negative impact on agriculture on surrounding properties given that the property already has numerous buildings constructed on it that are used for the Ford Mountain Correctional Centre. The pre-engineered building structure's footprint is 10,513 SF with an exterior covered and receiving area of 4,594 SF.

Agent Information

Agent: Ministry of Citizens Services

Parcel Information

Parcel(s) Under Application

1. **Ownership Type:** Crown Lands

Parcel Identifier:

Legal Description: District Lot 527, New Westminster Land District, FORD MOUNTAIN CORRECTION FACILITY

Parcel Area: 14 ha

Civic Address: 57657 CHILLIWACK LAKE RD CHILLIWACK BC V4Z 1A7

Date of Purchase:

Farm Classification: Yes

Owners

1. **Name:** Ministry of Citizens Services

Address:

4000 Seymour Pl

Victoria, BC

V8X 4S8

Canada

Phone:

Email:

Current Use of Parcels Under Application

1. Quantify and describe in detail all agriculture that currently takes place on the parcel(s).

There are minor agricultural activities onsite such as goats grazing between the secure perimeter fences, and basic gardens onsite.

2. Quantify and describe in detail all agricultural improvements made to the parcel(s).

No agricultural improvements made to the parcel.

3. Quantify and describe all non-agricultural uses that currently take place on the parcel(s).

Inventory of primary buildings onsite and their basic purpose:

- 1. Huts The huts function as inmate residency / dorm room living accommodations. There are four huts onsite, located at the north end of the facility.*
- 2. Administration building The admin building contains the main staffing facilities, including offices, boardroom, kitchen, and control room.*
- 3. Holloway house Holloway house contains additional inmate living accommodations, and program rooms for inmate training and educational opportunities.*
- 4. Program trailer A fixed Atco trailer utilized for expanded program opportunities.*
- 5. Pump house Located outside the secure perimeter fence, the pump house functions to supply domestic water for the site, and contains the main electrical components for the operation.*
- 6. Inmate works yard Located to the south of the facility, the works yard consists of several buildings utilized for work programs. Programming includes the refurbishment of BC Wildfire hand tools and the repair of water bladders utilized during the fire season. Once constructed, the new fire hose refurbishment building will complement these existing programs, providing meaningful work opportunities for inmates and contribute vital capacity to BC Wildfires maintenance needs.*

Adjacent Land Uses

North

Land Use Type: Recreational

Specify Activity: Chilliwack River, recreational use

East

Land Use Type: Unused

Specify Activity: Vacant Crown Land

South

Land Use Type: Unused

Specify Activity: Vacant Crown Land

West

Land Use Type: Recreational

Specify Activity: License of occupation for guided nature viewing, Weather station - Ministry of Environment

Proposal

1. How many hectares are proposed for non-farm use?

0.1 ha

2. What is the purpose of the proposal?

The purpose of the non-farm use proposal is to obtain approval for a fire hose repair facility being built on a portion of the Ford Mountain Correctional Centre site. The proposed building will not have any significant negative impact on agriculture on surrounding properties given that the property already has numerous buildings constructed on it that are used for the Ford Mountain Correctional Centre. The pre-engineered building structure's footprint is 10,513 SF with an exterior covered and receiving area of 4,594 SF.

3. Could this proposal be accommodated on lands outside of the ALR? Please justify why the proposal cannot be carried out on lands outside the ALR.

No. The BC Wildfire Service, the Public Safety and Solicitor General (PSSG), Forests, Lands, Natural Resource Operations and Rural Development (FLNRO) and Citizens Services (CITZ) are coordinating the relocation of the Nanaimo Correctional Centre (NCC) to Ford Mountain Correctional Centre. The NCC has operated the fire hose refurbishment inmate work program since 2008 for the maintenance, repair, and packaging of fire hoses to support provincial forest fire-fighting efforts.

This facility will serve the ministry of FLNRO in their forest firefighting effort by cleaning and preparing their fire hoses for use. The Center will also help the inmates learn new skills preparing them to integrate into the workforce.

4. Does the proposal support agriculture in the short or long term? Please explain.

No. The on-site soil has only marginal improved capability rating.

5. Do you need to import any fill to construct or conduct the proposed Non-farm use?

Yes

Proposal dimensions

Total fill placement area (to one decimal place) *0.5 ha*

Maximum depth of material to be placed as fill *1.4 m*

Volume of material to be placed as fill *1600 m³*

Estimated duration of the project. *6 Months*

Describe the type and amount of fill proposed to be placed.

Structural fill . Max fill depth is 1.36m (most of the site will be filled less than 0.9m)

Briefly describe the origin and quality of fill.

Excavated material on-site will be used and the cobbles and boulders are removed. The fill will be compacted to 98% standard proctor maximum dry density in discrete lifts.

Applicant Attachments

- Agent Agreement - Ministry of Citizens Services
- Proposal Sketch - 60610

ALC Attachments

None.

Decisions

None.

To: Electoral Area Services Committee

Date: 2020-09-09

From: Julie Mundy, Planner 1

File No: 3015-20 2020-04

Subject: Agricultural Land Commission Application – Proposed Two (2) Lot Subdivision at 550 Blatchford Road, Area H

RECOMMENDATION

THAT the application for a two (2) lot subdivision within the Agricultural Land Reserve at 550 Blatchford Road, Electoral Area H be forwarded to the Agricultural Land Commission for consideration;

AND THAT the FVRD corporate report dated September 9, 2020 under file number 3015-20 2020-04, be forwarded to the Agricultural Land Commission

STRATEGIC AREA(S) OF FOCUS

Provide Responsive & Effective Public Services

Foster a Strong & Diverse Economy

BACKGROUND

The Fraser Valley Regional District has received an application for a two (2) lot subdivision in the Agricultural Land Reserve at 550 Blatchford Road, Area H. The applicant is proposing to subdivide an existing 20 acre (8 hectare) parcel into two lots of 10 acres (4 hectares).

PROPERTY DETAILS

Electoral Area	H		
Address	550 Blatchford Road		
PID	013-422-758		
Folio	733.02906.000		
Lot Size	20 Acres		
Owner	David and Patricia Huesken	Agent	OTG Developments
Current Zoning	Rural (R)	Proposed Zoning	No change
Current OCP	Agricultural (AG)	Proposed OCP	No change
Current Use	Agricultural / Residential	Proposed Use	No change
Development Permit Areas	5-E Riparian Areas		
Agricultural Land Reserve	Yes		

An aerial photograph of a rural landscape with property boundaries overlaid. The map shows several roads: Kosikar Rd on the left, Blatchford Rd running vertically in the center, and Frost Rd running horizontally across the middle. A stream, labeled 'Crest Creek', flows from the top center towards the bottom right. Various parcel numbers are visible, including 651, 790, 700, 781, 701, 501, 514, 515, 640, 670, 600, 621, 420, 550, 42871, 42921, 42961, 42952, 42882, 42892, 43051, 43111, and 43100. A red rectangle is drawn on the map, enclosing a portion of the 550 and 42892 parcels. A yellow arrow points from the text 'MOTI right-of-way' to this red rectangle.

ADJACENT ZONING & LAND USES		
North	^	Rural-Agriculture (R-Ag); Agricultural/Farm
East	>	Rural-Agriculture (R-Ag); Agricultural/Farm
West	<	Rural-Agriculture (R-Ag); Agricultural/Farm
South	v	Limited Use (L-1); Agricultural/Farm

DISCUSSION

Property Description

The subject property is located at the end of Blatchford Road in Columbia Valley. The west side of the property is gently sloped and is currently used for farming. The east side of the property is steeply sloped and heavily treed. Frosst Creek, which is a permanent fish bearing watercourse, runs across the property in a generally north-south direction.

There is an old MOTI road right of way that loops through the northern portion of the property. This right of way is currently locked at both ends, is overgrown with vegetation, and is not accessible to vehicular traffic. Slope stability concerns may have been a factor when Ministry of Transportation and Infrastructure closed the road.

Current Farm Activity

The property, classified as Grain & Forage Farm Use by BC Assessment, is part of a larger farm unit which produces hay and raises cattle. The property is used for growing hay and storing farm equipment. A steel Quonset which is used for agricultural purposes is the only building on the property.

Property Owner Rational

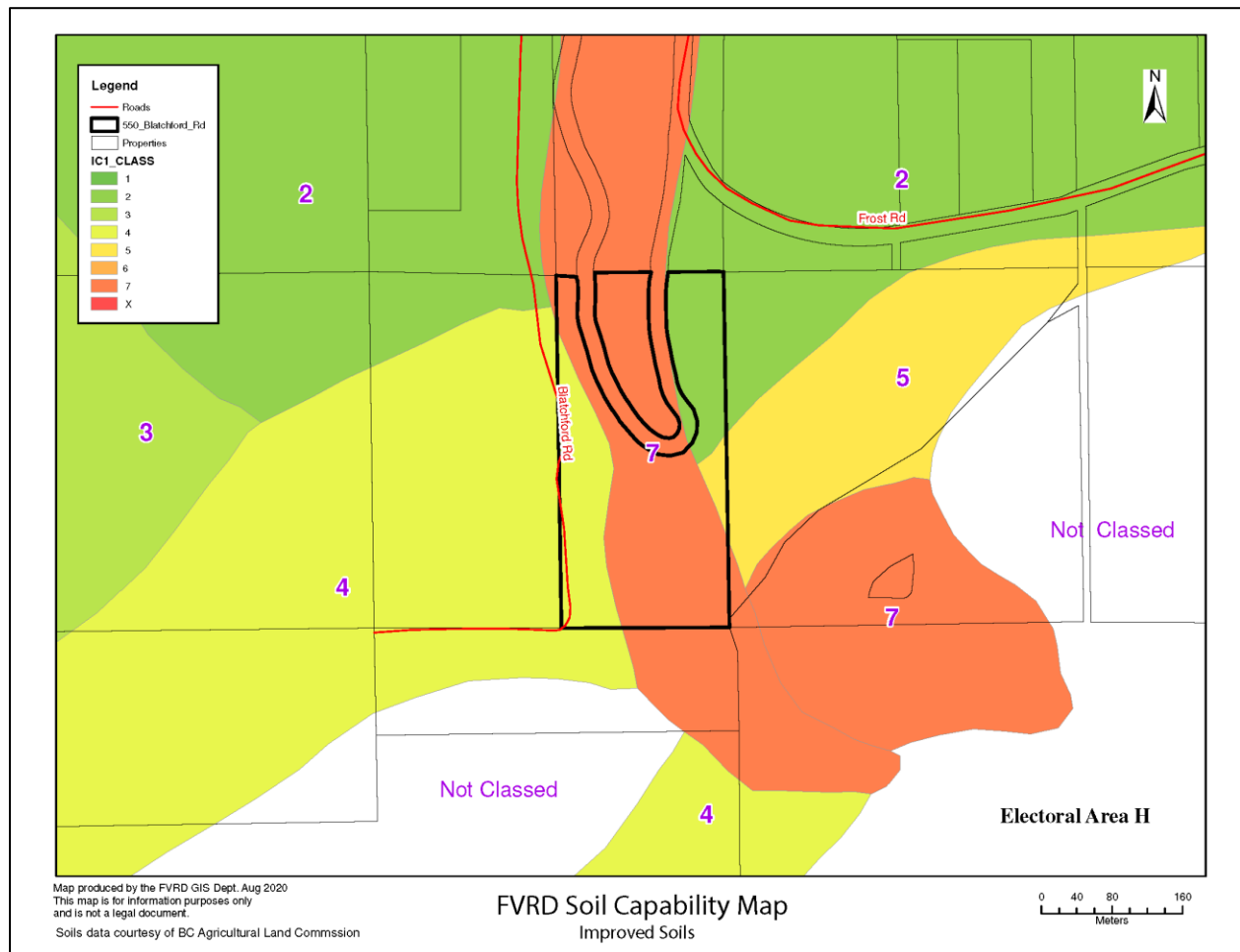
The property owner advises:

- The new parcel would provide a lot for a family member without impacting the farmable land;
- The steep slopes and Frosst Creek make farming virtually impossible on the eastern side of the property; additionally, there is no place large enough to construct a barn on the eastern side of the lot;
- The family has owned and farmed in the area since 1960, and have never farmed the eastern portion of the property;
- The western portion of the land will continue to be farmed.

Agricultural Capability Classification

Lands within the Agricultural Land Reserve are classified according to their ability to produce a range of crops when considering climate and topography. Soils are classified on a scale of 1 through 7. Class 1 is applied to land where the climate and soil allow growth of the widest range of crops, and Class 7 is applied to land considered non-arable, with no potential for soil-bound agriculture. Capability classes

are designated as unimproved and improved. Unimproved ratings are based on soil characteristics without physical improvements whereas improved ratings are based on assumptions that improvements can be made.



The western portion of the subject property has an improved agricultural capability classification of 4. The eastern portion of the property is comprised of land with an improved class of 2, and land in class 7 with topography limitations.

- Class 4: Land in this class has limitations that require special management practices or severely restrict the range of crops, or both;
- Class 2: Land in this class has minor limitations that require food ongoing management practices or slightly restrict the range of crops or both;
- Class 7: Land in this class has no capability for arable or sustained natural grazing.

Agricultural capability mapping does not always align with ground conditions. The Agricultural Land Commission is the most appropriate agency to decide and comment on this matter.

FVRD Policies and Regulations

Official Community Plan

The subject property is designated Agricultural (AG) per *Fraser Valley Regional District Official Community Plan for Electoral Areas E and H Bylaw No. 1115, 2011*. The proposed subdivision appears to meet the minimum parcel size of 4 hectares (10 acres) for lands outside of a floodplain.

The proposal shows consistency with the goals of the Official Community Plan subdivision policies, specifically:

Policy 5.1.20 New parcels created by subdivision with the AGRICULTURAL areas shall be configured to maximize agricultural sustainability and minimize potential conflicts between farm and non-farm uses.

Policy 5.1.22 Land in the AGRICULTURAL areas shall be subdivided only in accordance with the standards of the Responsible Authorities, except that the parcel size shall be:
b. Not less than four (4) hectares for lands outside of a floodplain.

Zoning

The subject property is zoned Rural Agriculture (R-Ag) under *Zoning Bylaw for Electoral Area "E", 1976 of the Regional District of Fraser Cheam*. The minimum parcel size for new lots to be created by subdivision is 4 hectares (10 acres). The proposed subdivision appears to meet the minimum lot size requirements, and the proposed farm and residential uses are permitted in the zone.

Subdivision Requirements

Should the applicant receive approval for the proposed subdivision from the Agricultural Land Commission, a subsequent subdivision application is required to the Ministry of Transportation and Infrastructure (MOTI). This application will be reviewed by FVRD to ensure it meets FVRD policies and regulations, including demonstrating safe building envelopes, appropriate access, environmental protections for Frosst Creek, and the necessary servicing requirements.

It is anticipated the applicant will have to work with MOTI on the feasibility of using the closed road right of way to access the eastern portion of the property.

Additionally, there are several easements on the property that would have to be addressed:

- CA4143156 & CA4143155: Mutual easement for building encroachment purposes between 550 and 621 Blatchford Road;
- CA2999006: Mutual easement for driveway and utility purposes between 550 and 420 Blatchford Road;
- BL128314: Mutual easements for driveway purposes.

COST

The \$300 FVRD portion of the application fee has been paid. The applicant will pay the Agricultural Land Commission portion of the fee (\$1200) if this application is forwarded to the Agricultural Land Commission.

CONCLUSION

Subject to the FVRD subdivision review and approval process, the proposed subdivision may be approvable. Staff recommend that the application be forwarded to the Agricultural Land Commission for consideration for the following reasons:

- The proposal meets minimum parcel size requirements in the Zoning Bylaw, and
- The Agricultural Land Commission is the agency best suited to decide on the agricultural impacts and agricultural merit of the proposal.

Option 1 – Forward to the ALC – (Staff Recommendation)

MOTION: THAT the Fraser Valley Regional District Board forward the application for ALR subdivision to the Agricultural Land Commission.

AND THAT the FVRD corporate report dated September 9, 2020 be forwarded to the Agricultural Land Commission.

Option 2 – Refuse

MOTION: THAT the Fraser Valley Regional District Board decline to forward the application for ALR subdivision to the Agricultural Land Commission

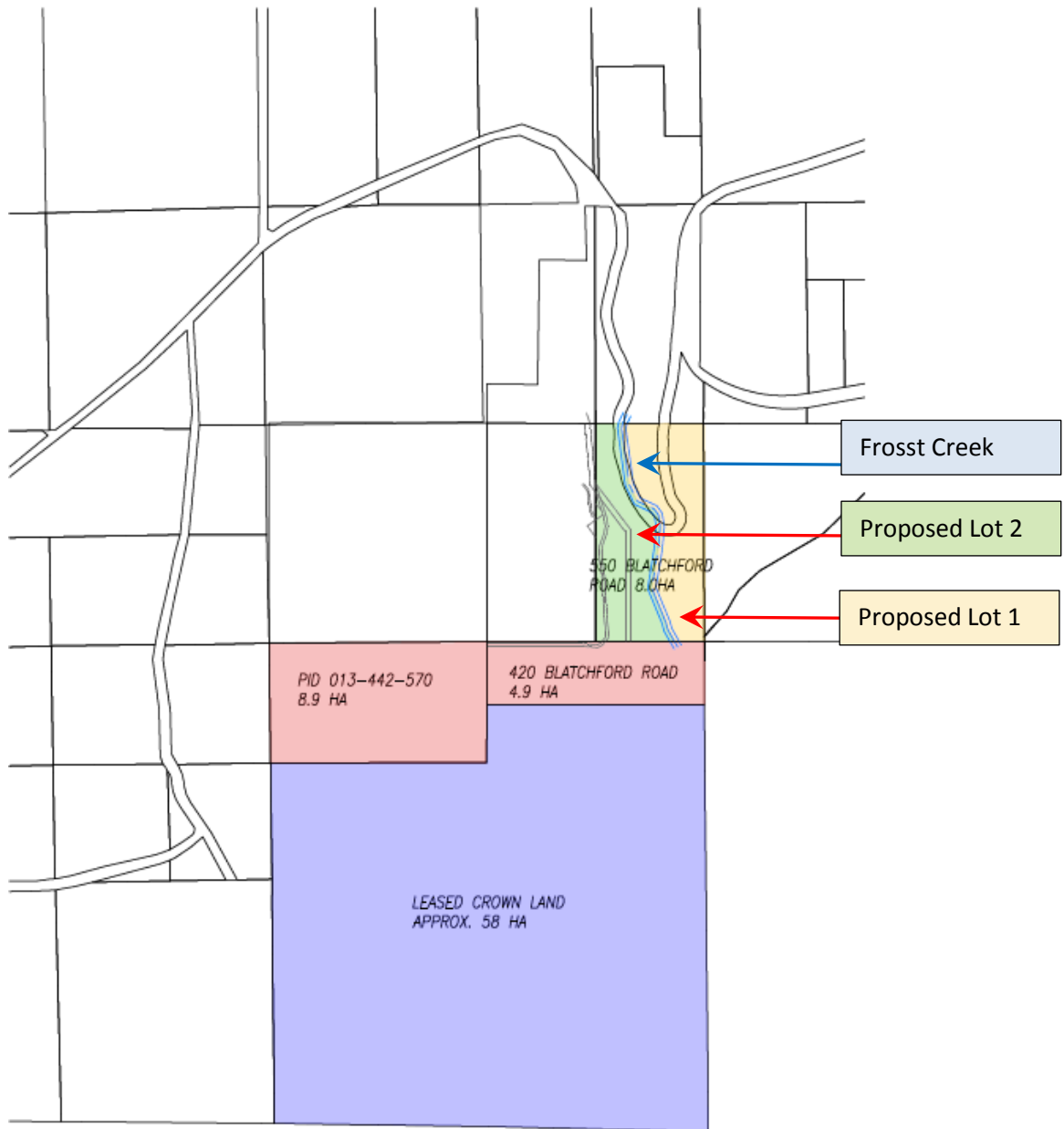
COMMENTS BY:

Graham Daneluz, Director of Planning & Development: Reviewed and supported

Kelly Lownsbrough, Chief Financial Officer/ Director of Financial Services: Reviewed and supported

Jennifer Kinneman, Chief Administrative Officer: Reviewed and supported.

Appendix A
Proposed Subdivision Layout – 550 Blatchford Road



Appendix B Supplemental Report



604.997.2772
604.393.7815
cassidy.silbernagel@otgdevelopments.com
Unit 520 - 45715 Hocking Ave
Chilliwack, BC, V2P 6Z6
www.otgdevelopments.com

Via Hand-Delivery

File No.: 20-023

June 3, 2020

Fraser Valley Regional District
45950 Cheam Avenue
Chilliwack, BC
V2P 1N6

Re: 550 Blatchford Road, Columbia Valley, BC – Subdivision in the ALR

Mr. Daneluz,

Please accept this letter as a supplement to the above noted Subdivision Application in the Agricultural Land Reserve (ALR). The property is located at 550 Blatchford Road (the Subject Property) in the Fraser Valley Regional District. This application proposes a subdivision in the ALR to create two (2) approximately 10 acre (4 ha) properties.

Proposal

The purpose of the subdivision in the ALR is to allow for the creation of two (2) 10 acre (4 ha) properties. The subject property is approximately 8.1 ha in size and is split in two by Frosst Creek that runs in a north south direction and has steep slopes.

There is a "road" that may have once allowed access from side to side, but it has not been maintained, the width is very small, and is now more of a walking trail. There is no way to have vehicular access to the east side from the west side without driving 9.2 km all the way around Frosst Creek. There is a locked gate at both ends of the "road" preventing vehicular and farm equipment access. There is no area suitable for any kind of farming on the east side of Frosst Creek.

The proposed subdivision would allow for the family to build a house on a property that has no agricultural use. The newly created parcel will allow the owner to provide a lot for his extended family to live, and not impact the useable farmable land on the west side.

Description of the Subject Property

The Subject Property is located in the rural area of Columbia Valley. The subject property is separated by Frosst Creek as it runs in a general north south direction. Frosst Creek is classified as permanent fish bearing. The property has slopes that are significant. Based on the Fraser Valley Regional District (FVRD) mapping, the average slopes on the east

+++
"A plan without action is a dream,
an action without a plan is a nightmare."





side are approximately 36%, and the west side is mainly around 20% with steeper slopes towards the north end.

The Subject Property has about 2.1 hectares of usable land on the west side of Frosst Creek. The rest of the land is heavily slopped, treed, and encumbered by Frosst Creek.

From reviewing the Agricultural Capability Classification in BC report the area we are proposing to subdivide off is Class 7, Subclass T & E.

- Class 7 - land in this class has no capability for arable or sustained natural grazing;
- Subclass E – Erosion
- Subclass T – Topography

The proposed 4 ha subdivision is entirely class 7, Subclass T & E it does not include any of the land that is being actively farmed. The proposal does not affect agriculture.

Farm Operation

The subject property is part of a larger farming operation carried out on the surrounding land. The family raises cattle and harvest hay for feed and sales. This operation is carried out on 420 Blatchford Road, PID 013-422-570 and leased Crown Land to the South (see attached plan). The cattle are located on the leased crown land for grazing. 420 Blatchford Road and a portion of 550 Blatchford Road are used for hay and equipment storage. The owners have a grazing lease over the crownland to the south.

Mr. Huesken owns 21.8 hectares and has a grazing lease on 58 hectares of Crown Land. There are about 8-10 head of cattle that graze on the 58 hectares of leased land from May to September, and graze on 7.5 hectares of Mr. Hueskens property from March to December. The area used for hay field is about 3 hectares. In a typical year they get 600 bails and from 2 cuts depending on the summer rain. They sell a portion of the feed in the fall they don't use.

History

The Huesken Family have owned and farmed this area since the late 1960's. The neighbor to the north-west (Mr. Huesken's brother) is a tree farmer. They have kept and continued to farm the land that his father originally bought back in the late 1960's.

There used to be a "road" that connected Blatchford Road to Frost Road however it has been decommissioned due to the instability of the slope.



Rationale for Subdivision in the ALR

The Subject Property has never been farmed on the east side due to the slope issues and a major water course splitting the property in half. Mr. Huesken has completed improvements over the years on the west side to create more field area by removing trees and leveling out the land. It is not possible to create farmland on the east side of Frosst Creek.

Application Package

Please find the following documents submitted with this letter:

- Title of subject parcel
- Letter of authorization
- Site Photos
- Site Concept Plan

Thank you for your time and consideration. If you have any questions, please do not hesitate to contact the undersigned.

Closing

Thank you for your time and consideration. If there are any questions or concerns, please do not hesitate to contact the undersigned.

Regards,

Cassidy Silbernagel

Cassidy Silbernagel, Project Manager
OTG Developments Ltd.

To: Electoral Area Services Committee

Date: 2020-09-09

From: Andrea Antifaeff, Planner 1

File No: 6785-30-004M

Subject: Chilliwack River Erosion Setback Line Update – Slesse Park Area

RECOMMENDATION

THAT the Fraser Valley Regional District Board direct staff to implement the findings of the *Chilliwack River Slesse Park Erosion Setback Line Update* report prepared by Kerr Wood Leidal Associates Ltd. by amending Chilliwack River Development Permit Area 2-E in *Fraser Valley Regional District Official Community Plan for Electoral Area E Bylaw No. 1115, 2011*;

AND THAT the Fraser Valley Regional District Board authorize the immediate use of the report for permitting purposes, to the extent possible, pending the update of the OCP and development permit area requirements;

AND FINALLY THAT the Fraser Valley Regional District Board direct staff to send a mail-out to all property owners within the study area to share the results of the report

STRATEGIC AREA(S) OF FOCUS

Support Healthy & Sustainable Community
Provide Responsive & Effective Public Services
Support Environmental Stewardship

PRIORITIES

Priority #3 Flood Protection & Management

BACKGROUND

The Erosion Setback Line (ESL) is an important part of the hazard framework the FVRD uses to guide development approvals in the Chilliwack River Valley. It identifies the area that could be eroded during a single major flood event with a return frequency of 1:50 to 1:100. The ESL is implemented in Chilliwack River Development Permit Area 2-E which is set out in the Official Community Plan.

Lands within the ESL face significant restrictions on construction because: 1) the consequences of erosion overtaking a development are severe; and 2) it is very difficult to protect a single property from erosion.

The Erosion Setback Line was originally set out in 1993 by Hay & Co Consultants based on professional judgement, the location of unprotected low river banks, the presence of bank protection (in 1993), and

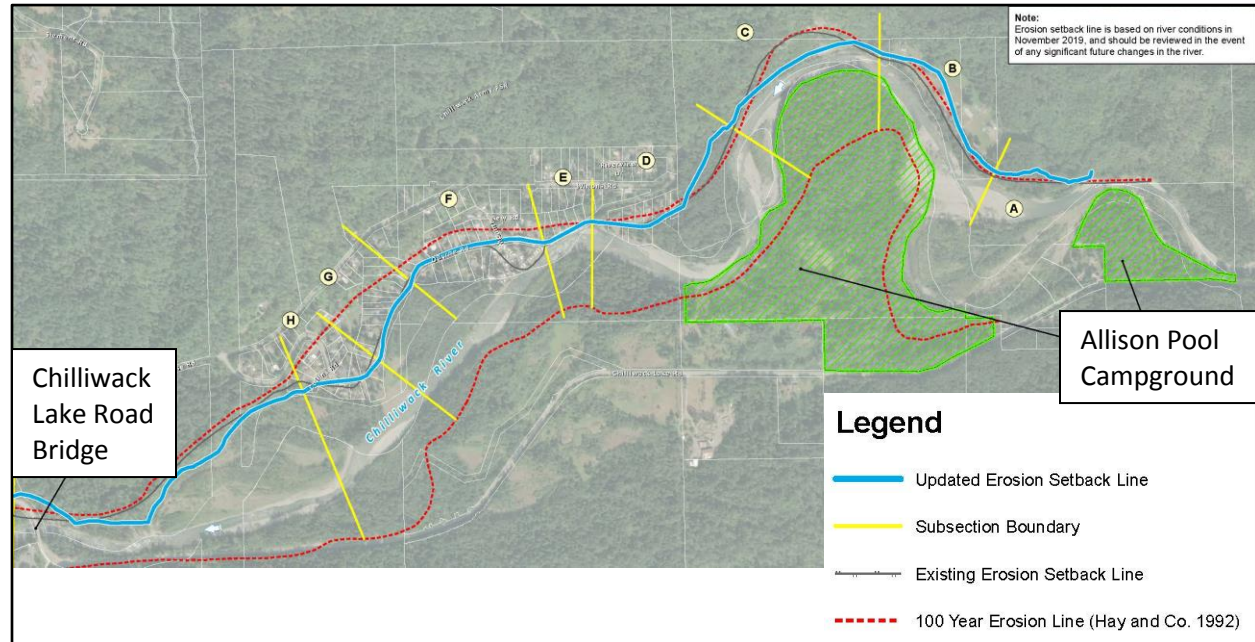
the possibility of outflanking of existing protection.¹ The ESL between Wilson Road and Baker Trails was reviewed in 2003 by Northwest Hydraulic Consultants but the ESL did not change.² In late 2015, the FVRD commissioned Northwest Hydraulic Consultants³ to again review the ESL between Wilson Road and Baker Trails and their report recommended a significant change to the ESL that moved it closer to the river mainly due to the construction of the Wilson Road Dike. This update benefitted a number of private properties.

In early 2020, at the request of the Electoral Area E Director, the FVRD retained Kerr Wood Leidal Associates LTD (KWL) to review the 1993 ESL for the Slesse Park area. The study area, as shown below, extends approximately 4 km along the north side of the Chilliwack River with an upstream limit near the large river bend adjacent to the Allison Pool Campground, and a downstream limit at the Chilliwack Lake Road bridge. The purpose of the KWL report was to determine whether the location of the ESL would be changed due to:

- improved understanding of the topography afforded by LiDAR mapping; and,
- changes in river hydrology since 1993.

DISCUSSION

The report by Kerr Wood Leidal Associates Ltd. *Chilliwack River Slesse Park Erosion Setback Line Update* and dated March 2, 2020 is attached as Appendix A.



¹ Hay & Company Consultants Ltd. Erosion Setback Line – Chilliwack River Valley. January 29, 1993.

² Northwest Hydraulic Consultants Ltd. Chilliwack River Sub-Area Nine Review, Erosion and Flooding Hazards. February 20, 2003.

³ Northwest Hydraulic Consultants Ltd. Chilliwack River Erosion Setback Line Update – Wilson Road to Baker Trails. January 22, 2016.

As shown on the map above, KWL has recommended some minor changes to the Erosion Setback Line. In general, the location of the updated ESL does not differ greatly from the previous one established by Hay & Co Consultants. The changes to the ESL includes the following:

- ESL is moved closer to the Chilliwack River (creating slightly larger buildable areas outside of the ESL) on 5 privately-owned properties;
- ESL moved further into 5 privately-owned properties (creating slightly smaller buildable areas outside of the ESL);
- On 1 privately-owned property the entirety of the property located south of Chilliwack Lake Road is now within the ESL; and,
- There are 3 Crown land areas: 2 of these areas now have more land located within the ESL and 1 of these areas now has less land within the ESL.
- In a few locations, the updated ESL is now on the landside of the 100-year erosion limit line.

KWL's recommendations are based on:

- Desktop Analysis
 - Orthophotos and LiDAR were reviewed using ArcGIS;
 - A draft ESL was produced considering the mapped active river floodway (to the estimated natural boundary line) in conjunction with topographical features that would have the potential to reduce erosion (e.g., high banks and bank protection works).
- Field Visit
 - Erosion-resistant features such as escarpments and bank protection identified in the orthophotos and LiDAR were confirmed in the field and reflected in the position of the ESL. Consideration was also given to recent changes in the morphology of the river, updated bank protection works and residential development.

Given the observed ability of the Chilliwack River to dramatically change its alignment within a single large flood event, the ESL must necessarily consider the potential for avulsion into older channels (including the reactivation of vegetated floodplain).

Please note that the lands are still subject to longer term erosion hazards. They remain within the 100-Year Erosion Limit which identifies lands that could be eroded in the course of multiple events over 100 years. Typically, this long-term erosion hazard will limit potential for subdivision and rezoning to increase density, but it does not significantly impede construction on existing lots.⁴

Implementation

⁴ Construction within the 100 Year Erosion Limit is addressed with a restrictive covenant in accordance with FVRD's *Hazard Acceptability Thresholds for Development Approvals* policy.

The revised ESL will be implemented through an amendment to the *Official Community Plan for Electoral Area E Bylaw No. 1115, 2011*. The amendments will be made to Section 10.2 – Floodplains and Section 14.2 – Chilliwack River Development Permit Area 2-E. Staff anticipate bringing a bylaw to amend the OCP to the EASC and Board this fall.

In the interim, it is recommended that the FVRD Board authorize the immediate use of the report for permitting purposes, to the extent possible, pending the update of the OCP.

Supplementary Recommendations

The floodplain maps for the Chilliwack River are based on river surveys from 1976 and a hydrology model based on data from 1980. Given the observed ability of the Chilliwack River to dramatically change its alignment within a single large flood event, the ESL must necessarily consider the potential for avulsion into older channels (including reactivation of vegetated floodplain). Based on the results of their study, KWL recommends that:

- FVRD consider updating the 100-year erosion limit line to be consistent with the updated ESL;
- FVRD consider integrating the updated ESL to the existing downstream ESL (or some other appropriate end point); and,
- The ESL be assessed (and updated as required) after major events. A major event could be classified as an event with a peak flow greater than a 50-year return period or an event that causes a significant change in the river alignment in the study area.

Copies of the report will also be distributed to owners of the properties within the study area.

COST

The total direct cost for the report was \$34,000. The consultant was administered by the FVRD Engineering Department. The funds came from the Area E Community Works Fund through UBCM.

CONCLUSION

Staff recommend that the FVRD Board direct staff to:

1. implement the findings of the Chilliwack River Slesse Park Erosion Setback Line Update report prepared by Kerr Wood Leidal Associates Ltd. by amending sections in *Fraser Valley Regional District Official Community Plan for Electoral Area E Bylaw No. 1115, 2011*;
2. authorize the immediate use of the report for permitting purposes, pending the updates of the OCP and development permit area requirements; and,
3. send a mailout to all property owners within the area to share the study results.

COMMENTS BY:

Graham Daneluz, Director of Planning & Development:

Reviewed and supported

Kelly Lownsborough, CFO/Director of Financial Services:

Reviewed and supported

Jennifer Kinneman, Chief Administrative Officer:

Reviewed and supported.

Appendix A

Chilliwack River Slesse Park Erosion Setback Line Update by Kerr Wood Leidal Associates Ltd. dated March 2, 2020



KERR WOOD LEIDAL
consulting engineers

Greater Vancouver
200 - 4185A Still Creek Drive
Burnaby, BC V5C 6G9
T 604 294 2088
F 604 294 2090

Technical Memorandum

DATE: March 2, 2020

TO: Tareq Islam
Fraser Valley Regional District

FROM: Erica Ellis, M.Sc., P.Geo.

RE: **CHILLIWACK RIVER SLESSE PARK**
Erosion Setback Line Update
Our File 2080.040-300

1. Introduction

1.1 Purpose of Project

Chilliwack River is an active gravel-bed river that has historically seen dramatic changes in channel position during large flood events. In the 1990s, the Fraser Valley Regional District (FVRD) commissioned the Chilliwack River Hazard Management Study. From this study, and related work, two erosion-related setback lines were developed:

1. The 100-year erosion limit line.
2. The erosion setback line.

The FVRD's Official Community Plan for Electoral Area E defines the 100-year erosion limit line as "the estimated limit of erosion over 100 years", and the erosion setback line as "the possible extent of erosion during a single major erosion event". Both lines are used by the FVRD to manage development adjacent to the Chilliwack River as presented in the FVRD's Hazard Acceptability Thresholds for Development Approvals guide (FVRD, 2017)¹.

FVRD has retained Kerr Wood Leidal Associates Ltd. (KWL) to update the 1990s erosion setback line for the Slesse Park area.

1.2 Project Team

The KWL project team and roles for this study are as follows:

- Erica Ellis, M.Sc., P.Geo. – Project Manager and Professional of Record;
- Mike Currie, M.Eng., P.Eng., FEC – Technical Reviewer and Professional of Record;
- Dylan Chemick, GradTech – Water Resources Technologist;
- Deanna Shrimpton – Junior Geomorphologist; and
- Jack Lau – GIS.

¹ Fraser Valley Regional District. (2017, June). *Hazard Acceptability Thresholds for Development Approvals*.



1.3 Study Area

The project is located on the Chilliwack River in the region of Slesse Park, approximately 20 km south-east of the City of Chilliwack. The study area, shown in Figure 1, extends approximately 4 km along the north side of the Chilliwack River, with an upstream limit near the large river bend adjacent to the Allison Pool Campground and a downstream limit at the Chilliwack Lake Road bridge.

2. Background

2.1 Previous Reports

FVRD provided the two previous studies that yielded the 100-year erosion limit line and the erosion setback line.

In July 1992, Hay & Company Consultants Inc. completed the "Chilliwack River Hazard Management Study" report. The study focused on the area between Slesse Park and Baker Trails (near Vedder Crossing). The purpose of the report was to provide guidance to protect development within the study reach from flooding, erosion, and landslides (Hay & Co et. al, 1992)². The report contains a detailed analysis of flood history, geomorphology, geotechnical hazards, flood frequency, and flood mapping. The report provides an estimate of the 200-year return period flood limits as well as an estimate of cumulative erosion over 100 years.

In January 1993, Hay & Company produced a letter report titled "Erosion setback line – Chilliwack River Valley" (Hay & Co., 1993)³. The erosion setback line described in the report is the estimate of erosion potential during a single major event (greater than 50-year return period). Minimum setbacks included in the development of the line are 15 m for sections with bank protection works and 20 m for unprotected sections.

2.2 Hydrology

The nearest Water Survey of Canada (WSC) hydrometric station (08MH001 – Chilliwack River at Vedder Crossing) is located approximately 10 km downstream of the study area at the Vedder Road crossing. For the purpose of this study, hydrometric data was used from this station as no other significant confluences enter the Chilliwack River between the study area and the station.

The catchment area at station 08MH001 is 1230 km². Regionally, historic flooding tends to occur on the Chilliwack River during two periods: during freshet in the months of April to July, and during fall/winter storms during the months of October to February. Highest peak flows have historically occurred during fall and winter storm events (1-3 days), while longer duration (1-2 weeks) lower peak flow events occur during the snowmelt freshet.

Data for hydrometric station 08MH001 was obtained from Water Survey of Canada. Peak flow data between 1911 and 2017 is available; however, some years were missing data and there is a large gap in monitoring between 1930 and 1950. Some of the data gaps occur in years when large floods are known to have occurred (e.g., 1989, 1990).

² Hay & Company, Golder Associates, D.B. Lister and Associates, Urban Systems, R. Laird, K. Moore (1992). *Chilliwack River Hazard Management Study Interim Report*. Report produced for Fraser Cheam Regional District. 116 pp + tables, figures & appendices.

³ Hay & Company (1993). *Erosion setback line - Chilliwack River Valley*. Letter report prepared for the Regional District of Fraser-Cheam. 7 pp. + maps.



Daily and Instantaneous peak flows between 1911 and 2017 are shown in Figure 2. Based on the available WSC data, three large (greater than 50-year return period) peak instantaneous flow events occurred during 1917, 2003 and 2006. Although WSC does not publish peak flows for 1989 and 1990, Hay & Co. et al. (1992) estimates each of these events to have had a daily average flow of about 700 m³/s, and at the time these events were estimated to have a return period of about 40 years.

2.3 Geomorphology

Slesse Park is located about 9 km downstream of the Slesse Creek tributary, which contributes flow and sediment load to the Chilliwack River. The Slesse Park reach is currently characterized by large meander bends, with a generally single-thread channel and gravel bars on the inside of bends. Historically, the channel in this reach has displayed low-order braiding with mid-channel bars and islands. The bed material ranges from boulders to cobbles, while banks are composed of glaciolacustrine silt and clay. This reach has historically displayed channel instability, including a notable change in alignment during the 1990s (discussed later).

2.4 Historical Channel Changes

Historical air photographs were loaned from the Geographic Information Centre at the University of British Columbia. Historical air photos were reviewed using a stereoscope to assess changes in the channel morphology within the study reach. More recent (2016) orthophotos and LiDAR (2015) were also reviewed. To demonstrate channel changes, selected air photographs were scanned and georeferenced using ArcGIS and 2016 orthophotos.

Table 1 summarizes the most significant changes in the study reach of the Chilliwack River by decade since historical images were available in the 1940's.



Table 1: Summary of Historical Changes of the Slesse Park Reach by Decade

1940's	<ul style="list-style-type: none"> Slesse Road is present but very little development on the floodplain. Downstream end of study reach: more meandering than current alignment. Single-thread channel with point-bars, and the occasional mid-channel bar. Upstream end of reach, just downstream of Slesse Slide, the right-bank meander bend has a prominent side channel. Side channel appears to have been active historically but is beginning to vegetate.
1950's	<ul style="list-style-type: none"> Development on floodplain. Chilliwack Lake Road (and bridge crossing) constructed. General morphology similar to 1940's although meanders are more pronounced. In the meander upstream of Slesse Slide (near Allison Pools), a sharp bend has formed. Formerly bare gravel bars now generally heavily vegetated (very little exposed bar). The abandoned right-bank side channel is mostly vegetated.
1960's	<ul style="list-style-type: none"> More development on floodplain observed, including some houses. Some indication that Obyrne Road may have been eroded by the river at one location and then later widened and repaired. More gravel bars observed to be exposed along entire length of river.
1970's	<ul style="list-style-type: none"> Additional residential development on the floodplain. Obyrne Road appears to have been eroded again. Additional bank protection placed along Obyrne Road. Minor changes in morphology. Meander bend upstream of Slesse Slide (near Allison Pool) is cut-off.
1980's	<ul style="list-style-type: none"> Slesse Park community well-established. Side channel in meander bend downstream of Slesse Slide has been partially re-activated. Unvegetated gravel bars more prominent, some shifting of bars.
1990's	<ul style="list-style-type: none"> Most significant shift in gross morphology during the period of observed record: downstream portion of study reach has straightened through erosion of two meanders. Large areas of bare gravel bar in straightened reach.
2000's	<ul style="list-style-type: none"> Gravel bars have largely revegetated. Channel is generally single-thread channel with few meanders. Upstream of Slesse Slide meander (near Allison Pool), the channel is still braided and continues to exhibit instability.

As indicated in Table 1, the largest morphologic change captured in the historical air photo record occurred in the 1990s: Hay & Co. et al. (1992) indicate that this change occurred during the November 1990 flood. Figure 3 shows a comparison of the Slesse Park reach from before (1986) and after (1993) the November 1990 event. As shown, there was a notable change in alignment (rather than progressive erosion at the outside of existing bends), as part of which two meander bends were cut off, resulting in a much straighter channel alignment.

Figure 3 illustrates the dynamic nature of the Chilliwack River and the potential for change within the study reach in a single, large flood event. In addition, the air photo review indicates that there are old



channels in now-vegetated areas that could become activated in a flood (these are also visible in the LiDAR topography).

3. Methodology

3.1 Development of Updated Erosion Setback Line

The general approach taken in updating the erosion setback line is summarized below.

- A desktop review of 2016 orthophotos and 2015 LiDAR was conducted to identify high banks, terraces, and historic channels. Locations of bedrock outcrops and log jams were also noted.
- The 'estimated natural boundary' was digitized based on 2016 orthophotos, and a corresponding elevation profile was extracted from 2015 LiDAR.
- The 'estimated natural boundary' profile was extrapolated in GIS to create a surface representing an area where floodwaters could regularly reach (i.e., an estimate of the active floodway).
- A draft erosion setback line was produced by considering the active river corridor in conjunction with topographical features that would have the potential to reduce erosion (e.g., high banks and bank protection works).
- A field inspection was conducted along the draft erosion setback line to identify any features not immediately obvious in orthophotos imagery or LiDAR, and to verify the locations of the features identified. Adequacy and erosion potential of the various features along the reach was also considered (e.g. existing banks and bank protection works).

The FVRD approach for building and subdivision applications was also considered in the development of the erosion setback line. A significant point arising from this consideration is that building permit applications that are on the riverside of the erosion setback line require a supportive engineering report, while those on the land side of the erosion line do not. Therefore, establishment of the new erosion setback line endeavoured to provide an appropriate delineation between these two situations in view of the erosion hazard.

3.2 Additional Detail on the Erosion Setback Line Update Work.

Desktop Analysis

Desktop analysis of orthophotos and LiDAR was conducted using ArcGIS 10.6.1. LiDAR was interpreted both in terms of derived 1 m contours, as well as a hillshade digital elevation model (DEM). As noted previously, orthophotos are from 2016 and LiDAR is from 2015: as such, more recent changes to the morphology of the river may not be captured.

Using GIS, KWL visually mapped the 'estimated natural boundary' for the river-right (north) bank of the study reach. The estimated natural boundary was defined as the transition from bare sediment to vegetation. The purpose of estimating the natural boundary line was to establish the active river floodway where the ground is low and subject to relatively frequent flood inundation, regardless of distance from the current active river channel.

The following assumptions were used in the development of the estimated natural boundary line:



- In locations with dense canopy, the estimated natural boundary line was drawn at the assumed centre of the obscuring tree trunk.
- The estimated natural boundary line was drawn at the top of the bank in areas with obvious (reasonable quality) riprap bank protection.
- Log jams were assumed to be transient features and were not identified as bank protection.
- Sporadic vegetation growing on the bank and on gravel bars were ignored due to minimal erosion protection.

The completed estimated natural boundary line was assigned elevations using the 2015 LiDAR. The resulting elevation profile is shown in Figure 4. The profile displays an overall consistent trend through the study reach. Local variations were examined and appear to result from mapping inaccuracies, which captured areas of locally-high riverbanks (for example), or areas that are generally lower (for example, a vegetating gravel bar). An envelope curve was established which captures the general trend of highest points along the banks (while ignoring the smaller areas of high outliers).

The envelope curve was then spatially extrapolated into the adjacent floodplain areas to delineate areas that might be expected to become regularly wetted during a flood (i.e., an estimate of the active floodway). The rationale for this assumption is that the reason there is a transition from bare sediment to vegetation along river channels is that inundation occurs regularly enough to prevent vegetation from establishing. When compared with mapped historical channels, the active floodway encompassed these channels, which supports the notion that the active floodway is an area that could be inundated during a flood.

A draft erosion setback line was produced by considering the mapped active river floodway (to the estimated natural boundary line) in conjunction with topographical features that would have the potential to reduce erosion (e.g., high banks and bank protection works). The position of the draft erosion setback line was established using professional judgement and by considering local topographic features and channel characteristics. In some locations, particularly those with existing bank protection, the position of the erosion setback line was determined by projecting a 3H:1V slope from the observable bank toe to the top of bank and adding a 5 m setback from this point.

Field Visit

A site visit was completed on November 12, 2019 to visually assess the draft erosion setback line from the desktop analysis. Erosion-resistant features such as escarpments and bank protection identified in the orthophotos and LiDAR were confirmed in the field and reflected in the position of the erosion setback line. Consideration was also given to recent changes to the morphology of the river, updated bank protection works and residential development.

Table 2 describes features identified within the study reach that were considered in establishing the updated erosion setback line. Within this table, the study reach has been broken into sub-sections (identified by letters); these breaks and sub-section identifiers are also shown on Figure 5.



Table 2: Features Considered in Erosion Setback Line Update

Sub-Section	Summary
A	<ul style="list-style-type: none">Undeveloped area with alluvial fan present on right (north) bank, which provides higher ground to reduce erosion. Upstream end of updated line ties into existing higher ground. <i>The updated erosion setback line is on the land side of the 100-year erosion limit line, in places.</i>
B	<ul style="list-style-type: none">Area of lower-lying floodplain with multiple dwellings situated within 150 m of the current riverbank. River morphology indicates this is an area of historical channel instability, with much higher ground on the left (south) bank. During the site visit, signs of recent erosion were observed along the right bank including the undermining of large trees. The erosion setback line was established based on topographic features with allowance for potential channel change during a flood. <i>The updated erosion setback line is on the land side of the 100-year erosion limit line, in places.</i>
C	<ul style="list-style-type: none">Slesse Slide located on right (north) bank. Bank currently built up at an estimated 1.5H:1V slope and protected with riprap. Erosion setback line was determined by projecting a 3H:1V slope from the observable bank toe to the top of bank and adding a 5 m setback from this point.
D	<ul style="list-style-type: none">Area includes some residential development. Low-lying area with historic non-standard dikes (berms), old river channels and a creek fan. Updated erosion setback line follows the toe of valley wall and then transitions to an escarpment in the low-lying region behind the old berms. The setback line follows an escarpment in front of developed properties. <i>The updated erosion setback line is on the land side of the 100-year erosion limit line, in places.</i>
E	<ul style="list-style-type: none">Area of residential development. Sub-section of study reach with riprap on right (north) bank. Erosion setback line was determined by projecting a 3H:1V slope from the observable bank toe to the top of bank and adding a 5 m setback from this point.
F	<ul style="list-style-type: none">Area of residential development with variable river-side topography. Updated erosion setback line follows the north side of Obyrne Road. The position of the updated line was established considering topography, and potential risk to existing development.
G	<ul style="list-style-type: none">Area of residential development fronted by a steep embankment leading to an old river channel and vegetated floodplain. The position of the updated line was established considering topography, and potential risk to existing development. Erosion setback line was determined by projecting a 3H:1V slope from the observable bank toe to the top of bank and adding a 5 m setback from this point.
H	<ul style="list-style-type: none">Area of residential development with variable river-side topography. The position of the updated line was established considering topography, and potential risk to existing development.
I	<ul style="list-style-type: none">Area of undeveloped land where floodplain meets steep valley wall. The updated erosion setback line in this reach follows the natural valley wall until it meets Chilliwack Lake Road at the end of the study reach. <i>The updated erosion setback line is on the land side of the 100-year erosion limit line, in places.</i>



4. Conclusions and Recommendations

The updated erosion setback line for Slesse Park is presented in Figure 5.

In general, the location of the updated line does not differ greatly from the previous erosion setback line established by Hay & Co et al. (1992). Given the observed ability of Chilliwack River to dramatically change its alignment within a single large flood event, the erosion setback line must necessarily consider the potential for avulsion into older channels (including the reactivation of vegetated floodplain). As noted in Table 2, in a few locations the updated erosion setback line is now on the landside of the 100-year erosion limit line.

Based on the results of this study, it is recommended that:

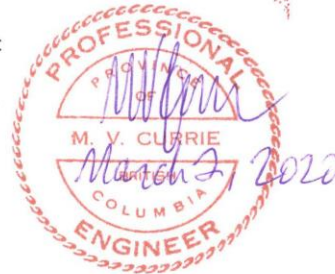
1. FVRD consider updating the 100-year erosion limit line to be consistent with the updated erosion setback line.
2. FVRD consider integrating the updated erosion setback line to the existing downstream erosion setback line (or some other appropriate end point).
3. The erosion setback line be assessed (and updated if required) after future major events. A major event could be classified as an event with a peak flow greater than a 50-year return period or an event that causes a significant change in the river alignment in the study area.



KERR WOOD LEIDAL ASSOCIATES LTD.

Prepared by:

Reviewed by:



Erica Ellis, P.Geo.
Project Geomorphologist

Mike V. Currie, M.Eng., P.Eng., FEC
Technical Reviewer

DAC/EE

Statement of Limitations

This document has been prepared by Kerr Wood Leidal Associates Ltd. (KWL) for the exclusive use and benefit of the intended recipient. No other party is entitled to rely on any of the conclusions, data, opinions, or any other information contained in this document.

This document represents KWL's best professional judgement based on the information available at the time of its completion and as appropriate for the project scope of work. Services performed in developing the content of this document have been conducted in a manner consistent with that level and skill ordinarily exercised by members of the engineering profession currently practising under similar conditions. No warranty, express or implied, is made.

Copyright Notice

These materials (text, tables, figures, and drawings included herein) are copyright of Kerr Wood Leidal Associates Ltd. (KWL). Fraser Valley Regional District is permitted to reproduce the materials for archiving and for distribution to third parties only as required to conduct business specifically relating to the Erosion Setback Line Update. Any other use of these materials without the written permission of KWL is prohibited.

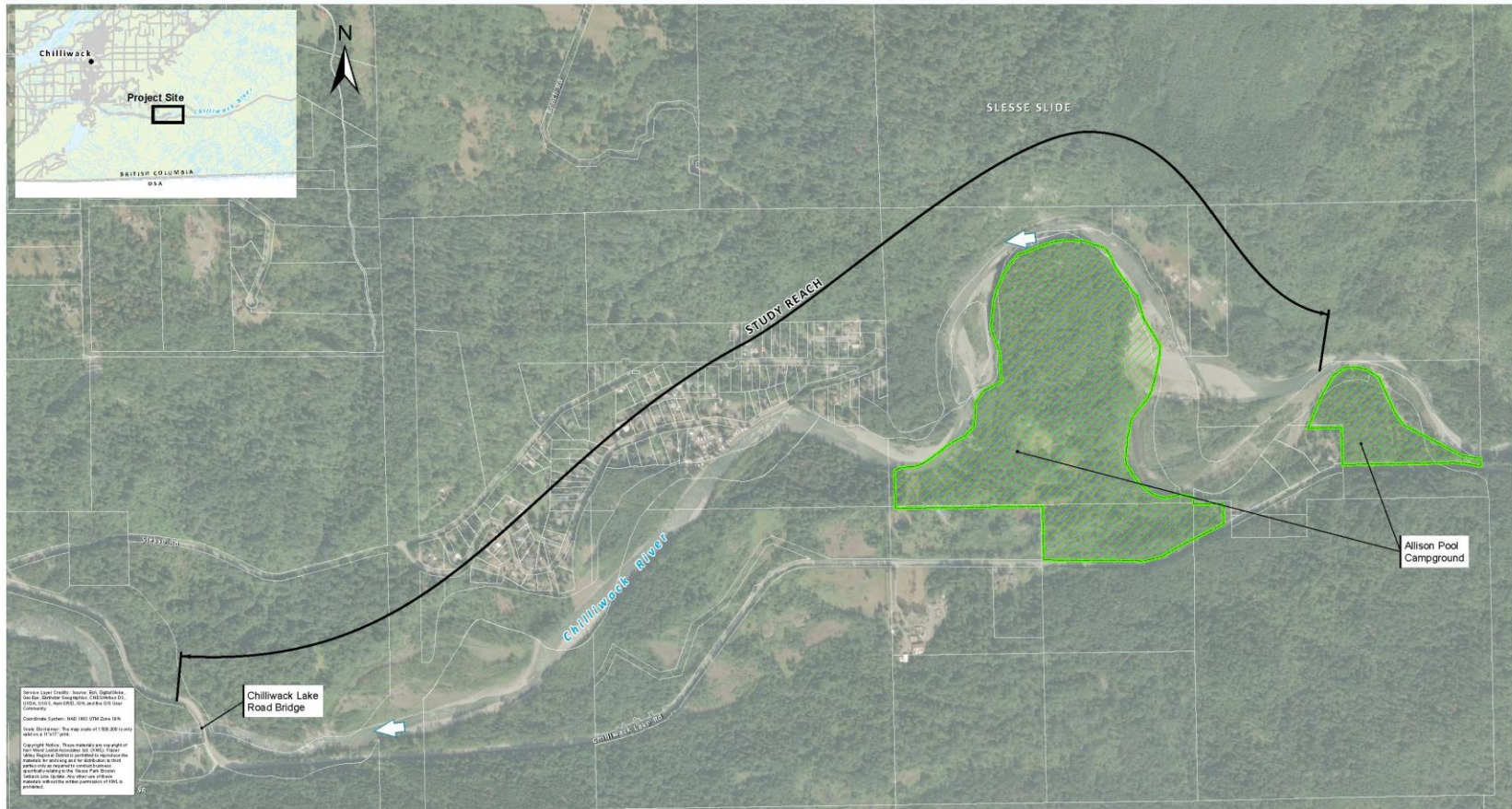
Revision History

Revision #	Date	Status	Revision Description	Author
0	March 2, 2020	Final		DAC / EE
A	November 22, 2019	Draft	For client review.	DAC / EE



KERR WOOD LEIDAL ASSOCIATES LTD.
consulting engineers

Fraser Valley Regional District
Slesse Park Erosion Setback Line Update



Project No. 2080.040
Date March 2020
Scale 0 50 100 200 (m)
1:10,000

Study Location

Figure 1

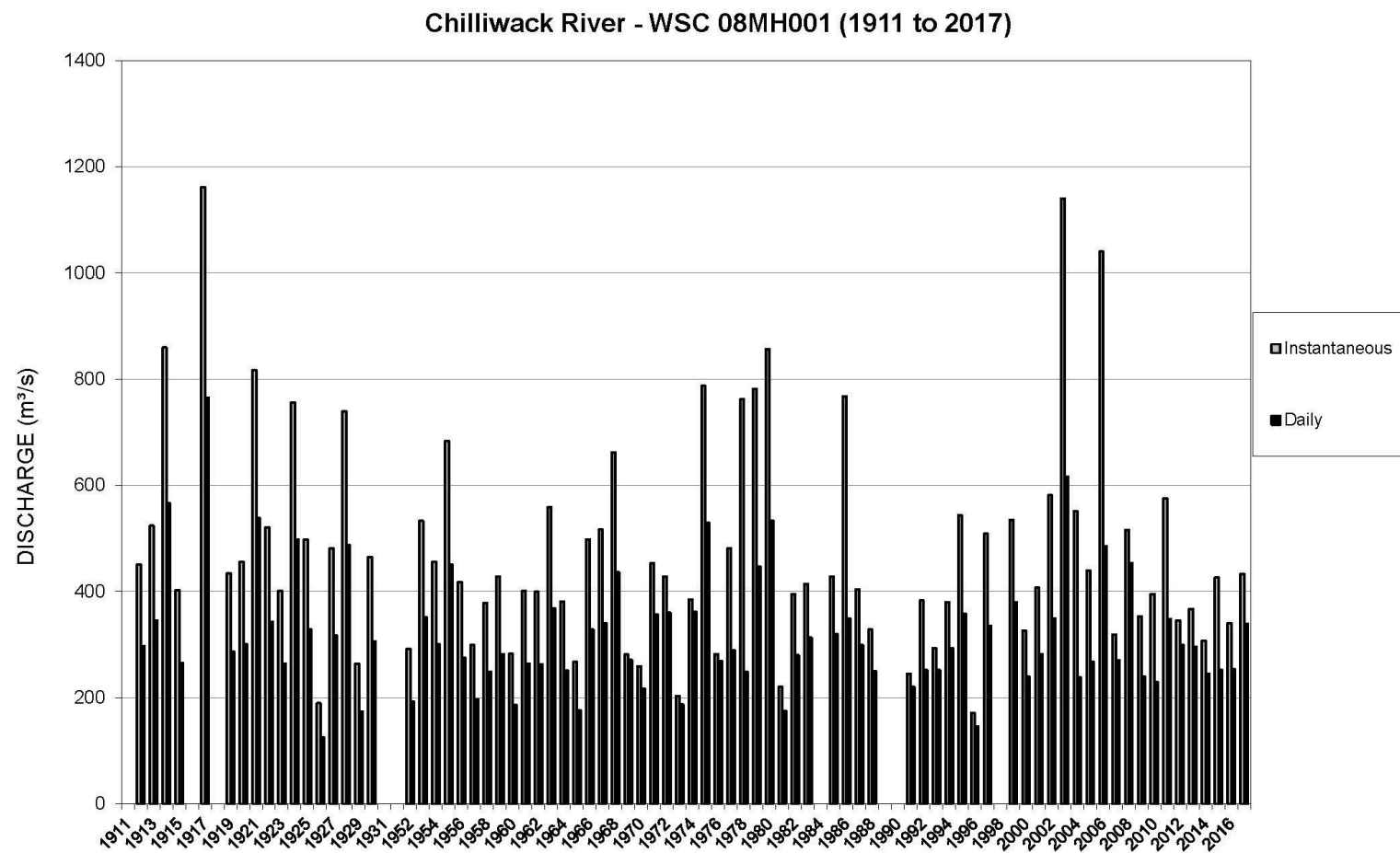


Figure 2

Fraser Valley Regional District
Slesse Park Erosion Setback Line Update



Project No. 2080.040
Date March 2020
Scale 0 50 100 200 (m)
1:12,500

**Slesse Park: 1986 vs 1993
Georeferenced Air Photos**

Figure 3

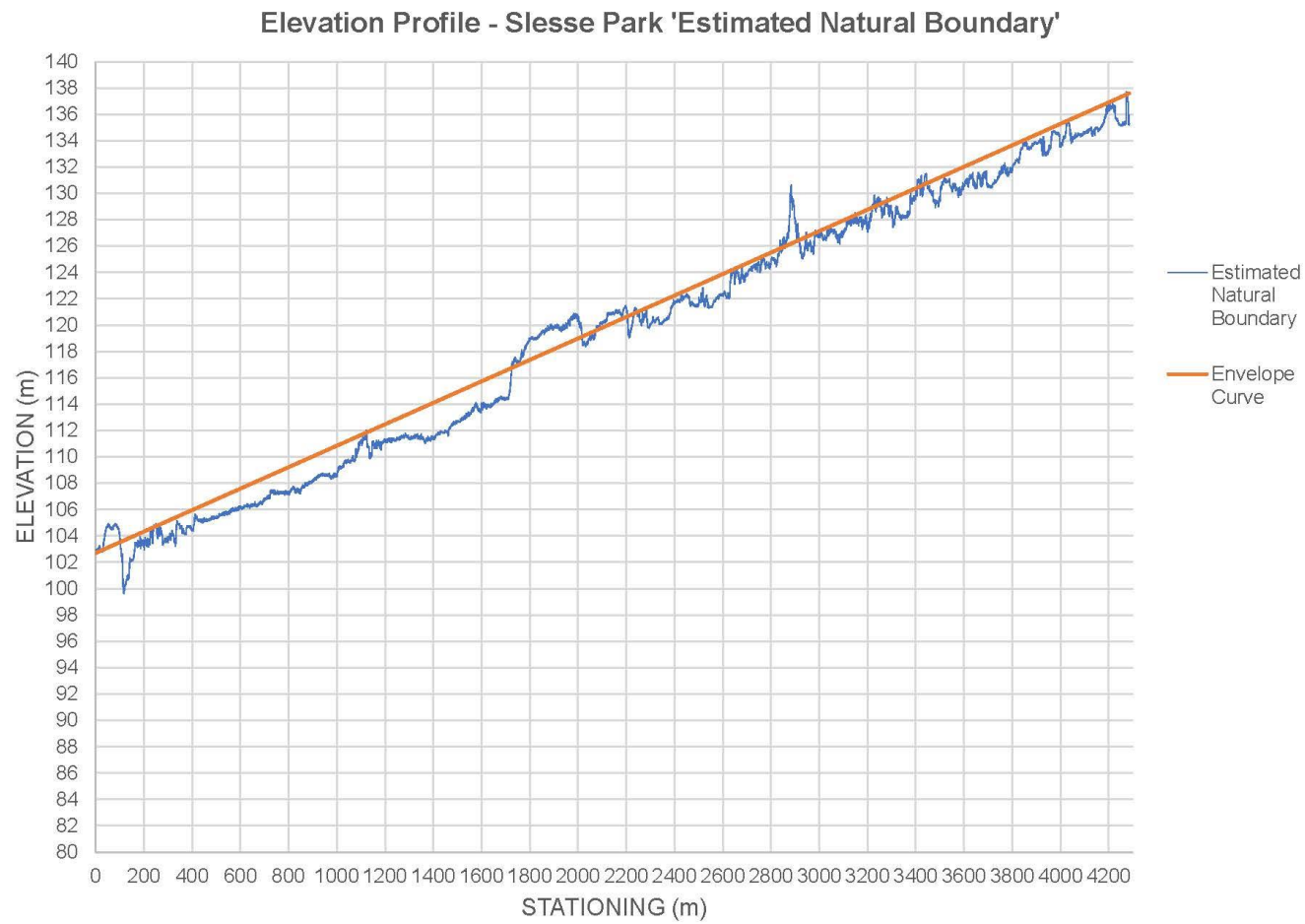
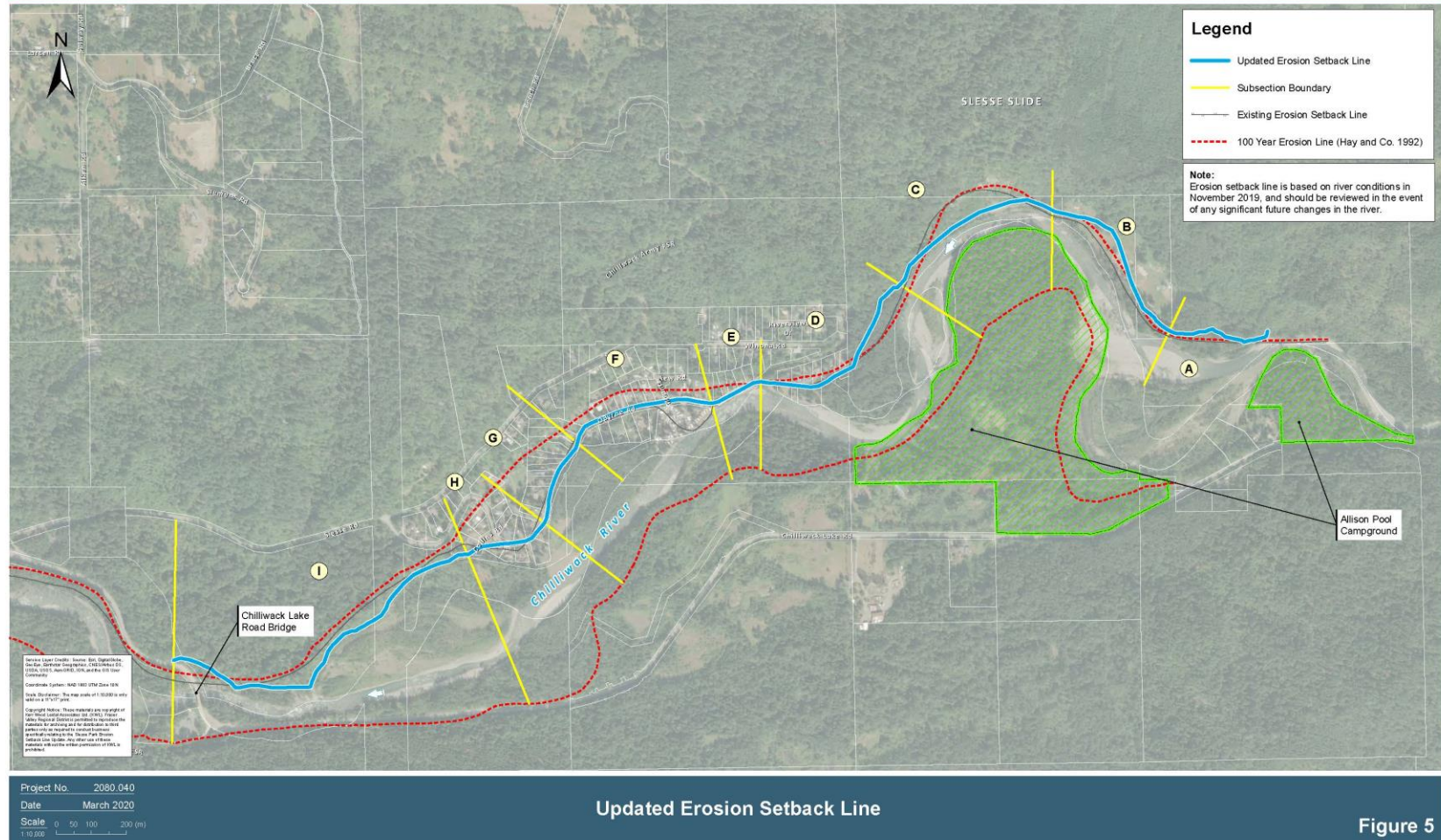


Figure 4

Fraser Valley Regional District
Slesse Park Erosion Setback Line Update





Technical Memorandum

DATE: March 2, 2020

TO: Tareq Islam
Fraser Valley Regional District

FROM: Erica Ellis, M.Sc., P.Geo.

RE: **CHILLIWACK RIVER SLESSE PARK**
Erosion Setback Line Update
Our File 2080.040-300

1. Introduction

1.1 Purpose of Project

Chilliwack River is an active gravel-bed river that has historically seen dramatic changes in channel position during large flood events. In the 1990s, the Fraser Valley Regional District (FVRD) commissioned the Chilliwack River Hazard Management Study. From this study, and related work, two erosion-related setback lines were developed:

1. The 100-year erosion limit line.
2. The erosion setback line.

The FVRD's Official Community Plan for Electoral Area E defines the 100-year erosion limit line as "the estimated limit of erosion over 100 years", and the erosion setback line as "the possible extent of erosion during a single major erosion event". Both lines are used by the FVRD to manage development adjacent to the Chilliwack River as presented in the FVRD's Hazard Acceptability Thresholds for Development Approvals guide (FVRD, 2017)¹.

FVRD has retained Kerr Wood Leidal Associates Ltd. (KWL) to update the 1990s erosion setback line for the Slesse Park area.

1.2 Project Team

The KWL project team and roles for this study are as follows:

- Erica Ellis, M.Sc., P.Geo. – Project Manager and Professional of Record;
- Mike Currie, M.Eng., P.Eng., FEC – Technical Reviewer and Professional of Record;
- Dylan Chernick, GradTech – Water Resources Technologist;
- Deanna Shrimpton – Junior Geomorphologist; and
- Jack Lau – GIS.

¹ Fraser Valley Regional District. (2017, June). *Hazard Acceptability Thresholds for Development Approvals*.



1.3 Study Area

The project is located on the Chilliwack River in the region of Slesse Park, approximately 20 km south-east of the City of Chilliwack. The study area, shown in Figure 1, extends approximately 4 km along the north side of the Chilliwack River, with an upstream limit near the large river bend adjacent to the Allison Pool Campground and a downstream limit at the Chilliwack Lake Road bridge.

2. Background

2.1 Previous Reports

FVRD provided the two previous studies that yielded the 100-year erosion limit line and the erosion setback line.

In July 1992, Hay & Company Consultants Inc. completed the “Chilliwack River Hazard Management Study” report. The study focused on the area between Slesse Park and Baker Trails (near Vedder Crossing). The purpose of the report was to provide guidance to protect development within the study reach from flooding, erosion, and landslides (Hay & Co et. al, 1992)². The report contains a detailed analysis of flood history, geomorphology, geotechnical hazards, flood frequency, and flood mapping. The report provides an estimate of the 200-year return period flood limits as well as an estimate of cumulative erosion over 100 years.

In January 1993, Hay & Company produced a letter report titled “Erosion setback line – Chilliwack River Valley” (Hay & Co., 1993)³. The erosion setback line described in the report is the estimate of erosion potential during a single major event (greater than 50-year return period). Minimum setbacks included in the development of the line are 15 m for sections with bank protection works and 20 m for unprotected sections.

2.2 Hydrology

The nearest Water Survey of Canada (WSC) hydrometric station (08MH001 – Chilliwack River at Vedder Crossing) is located approximately 10 km downstream of the study area at the Vedder Road crossing. For the purpose of this study, hydrometric data was used from this station as no other significant confluences enter the Chilliwack River between the study area and the station.

The catchment area at station 08MH001 is 1230 km². Regionally, historic flooding tends to occur on the Chilliwack River during two periods: during freshet in the months of April to July, and during fall/winter storms during the months of October to February. Highest peak flows have historically occurred during fall and winter storm events (1-3 days), while longer duration (1-2 weeks) lower peak flow events occur during the snowmelt freshet.

Data for hydrometric station 08MH001 was obtained from Water Survey of Canada. Peak flow data between 1911 and 2017 is available; however, some years were missing data and there is a large gap in monitoring between 1930 and 1950. Some of the data gaps occur in years when large floods are known to have occurred (e.g., 1989, 1990).

² Hay & Company, Golder Associates, D.B. Lister and Associates, Urban Systems, R. Laird, K. Moore (1992). *Chilliwack River Hazard Management Study Interim Report*. Report produced for Fraser Cheam Regional District. 116 pp + tables, figures & appendices.

³ Hay & Company (1993). *Erosion setback line - Chilliwack River Valley*. Letter report prepared for the Regional District of Fraser-Cheam. 7 pp. + maps.



Daily and Instantaneous peak flows between 1911 and 2017 are shown in Figure 2. Based on the available WSC data, three large (greater than 50-year return period) peak instantaneous flow events occurred during 1917, 2003 and 2006. Although WSC does not publish peak flows for 1989 and 1990, Hay & Co. et al. (1992) estimates each of these events to have had a daily average flow of about 700 m³/s, and at the time these events were estimated to have a return period of about 40 years.

2.3 Geomorphology

Slesse Park is located about 9 km downstream of the Slesse Creek tributary, which contributes flow and sediment load to the Chilliwack River. The Slesse Park reach is currently characterized by large meander bends, with a generally single-thread channel and gravel bars on the inside of bends. Historically, the channel in this reach has displayed low-order braiding with mid-channel bars and islands. The bed material ranges from boulders to cobbles, while banks are composed of glaciolacustrine silt and clay. This reach has historically displayed channel instability, including a notable change in alignment during the 1990s (discussed later).

2.4 Historical Channel Changes

Historical air photographs were loaned from the Geographic Information Centre at the University of British Columbia. Historical air photos were reviewed using a stereoscope to assess changes in the channel morphology within the study reach. More recent (2016) orthophotos and LiDAR (2015) were also reviewed. To demonstrate channel changes, selected air photographs were scanned and georeferenced using ArcGIS and 2016 orthophotos.

Table 1 summarizes the most significant changes in the study reach of the Chilliwack River by decade since historical images were available in the 1940's.

Table 1: Summary of Historical Changes of the Slesse Park Reach by Decade

1940's	<ul style="list-style-type: none"> Slesse Road is present but very little development on the floodplain. Downstream end of study reach: more meandering than current alignment. Single-thread channel with point-bars, and the occasional mid-channel bar. Upstream end of reach, just downstream of Slesse Slide, the right-bank meander bend has a prominent side channel. Side channel appears to have been active historically but is beginning to vegetate.
1950's	<ul style="list-style-type: none"> Development on floodplain. Chilliwack Lake Road (and bridge crossing) constructed. General morphology similar to 1940's although meanders are more pronounced. In the meander upstream of Slesse Slide (near Allison Pools), a sharp bend has formed. Formerly bare gravel bars now generally heavily vegetated (very little exposed bar). The abandoned right-bank side channel is mostly vegetated.
1960's	<ul style="list-style-type: none"> More development on floodplain observed, including some houses. Some indication that Obyrne Road may have been eroded by the river at one location and then later widened and repaired. More gravel bars observed to be exposed along entire length of river.
1970's	<ul style="list-style-type: none"> Additional residential development on the floodplain. Obyrne Road appears to have been eroded again. Additional bank protection placed along Obyrne Road. Minor changes in morphology. Meander bend upstream of Slesse Slide (near Allison Pool) is cut-off.
1980's	<ul style="list-style-type: none"> Slesse Park community well-established. Side channel in meander bend downstream of Slesse Slide has been partially re-activated. Unvegetated gravel bars more prominent, some shifting of bars.
1990's	<ul style="list-style-type: none"> Most significant shift in gross morphology during the period of observed record: downstream portion of study reach has straightened through erosion of two meanders. Large areas of bare gravel bar in straightened reach.
2000's	<ul style="list-style-type: none"> Gravel bars have largely revegetated. Channel is generally single-thread channel with few meanders. Upstream of Slesse Slide meander (near Allison Pool), the channel is still braided and continues to exhibit instability.

As indicated in Table 1, the largest morphologic change captured in the historical air photo record occurred in the 1990s: Hay & Co. et al. (1992) indicate that this change occurred during the November 1990 flood. Figure 3 shows a comparison of the Slesse Park reach from before (1986) and after (1993) the November 1990 event. As shown, there was a notable change in alignment (rather than progressive erosion at the outside of existing bends), as part of which two meander bends were cut off, resulting in a much straighter channel alignment.

Figure 3 illustrates the dynamic nature of the Chilliwack River and the potential for change within the study reach in a single, large flood event. In addition, the air photo review indicates that there are old



channels in now-vegetated areas that could become activated in a flood (these are also visible in the LiDAR topography).

3. Methodology

3.1 Development of Updated Erosion Setback Line

The general approach taken in updating the erosion setback line is summarized below.

- A desktop review of 2016 orthophotos and 2015 LiDAR was conducted to identify high banks, terraces, and historic channels. Locations of bedrock outcrops and log jams were also noted.
- The 'estimated natural boundary' was digitized based on 2016 orthophotos, and a corresponding elevation profile was extracted from 2015 LiDAR.
- The 'estimated natural boundary' profile was extrapolated in GIS to create a surface representing an area where floodwaters could regularly reach (i.e., an estimate of the active floodway).
- A draft erosion setback line was produced by considering the active river corridor in conjunction with topographical features that would have the potential to reduce erosion (e.g., high banks and bank protection works).
- A field inspection was conducted along the draft erosion setback line to identify any features not immediately obvious in orthophotos imagery or LiDAR, and to verify the locations of the features identified. Adequacy and erosion potential of the various features along the reach was also considered (e.g. existing banks and bank protection works).

The FVRD approach for building and subdivision applications was also considered in the development of the erosion setback line. A significant point arising from this consideration is that building permit applications that are on the riverside of the erosion setback line require a supportive engineering report, while those on the land side of the erosion line do not. Therefore, establishment of the new erosion setback line endeavoured to provide an appropriate delineation between these two situations in view of the erosion hazard.

3.2 Additional Detail on the Erosion Setback Line Update Work.

Desktop Analysis

Desktop analysis of orthophotos and LiDAR was conducted using ArcGIS 10.6.1. LiDAR was interpreted both in terms of derived 1 m contours, as well as a hillshade digital elevation model (DEM). As noted previously, orthophotos are from 2016 and LiDAR is from 2015: as such, more recent changes to the morphology of the river may not be captured.

Using GIS, KWL visually mapped the 'estimated natural boundary' for the river-right (north) bank of the study reach. The estimated natural boundary was defined as the transition from bare sediment to vegetation. The purpose of estimating the natural boundary line was to establish the active river floodway where the ground is low and subject to relatively frequent flood inundation, regardless of distance from the current active river channel.

The following assumptions were used in the development of the estimated natural boundary line:



- In locations with dense canopy, the estimated natural boundary line was drawn at the assumed centre of the obscuring tree trunk.
- The estimated natural boundary line was drawn at the top of the bank in areas with obvious (reasonable quality) riprap bank protection.
- Log jams were assumed to be transient features and were not identified as bank protection.
- Sporadic vegetation growing on the bank and on gravel bars were ignored due to minimal erosion protection.

The completed estimated natural boundary line was assigned elevations using the 2015 LiDAR. The resulting elevation profile is shown in Figure 4. The profile displays an overall consistent trend through the study reach. Local variations were examined and appear to result from mapping inaccuracies, which captured areas of locally-high riverbanks (for example), or areas that are generally lower (for example, a vegetating gravel bar). An envelope curve was established which captures the general trend of highest points along the banks (while ignoring the smaller areas of high outliers).

The envelope curve was then spatially extrapolated into the adjacent floodplain areas to delineate areas that might be expected to become regularly wetted during a flood (i.e., an estimate of the active floodway). The rationale for this assumption is that the reason there is a transition from bare sediment to vegetation along river channels is that inundation occurs regularly enough to prevent vegetation from establishing. When compared with mapped historical channels, the active floodway encompassed these channels, which supports the notion that the active floodway is an area that could be inundated during a flood.

A draft erosion setback line was produced by considering the mapped active river floodway (to the estimated natural boundary line) in conjunction with topographical features that would have the potential to reduce erosion (e.g., high banks and bank protection works). The position of the draft erosion setback line was established using professional judgement and by considering local topographic features and channel characteristics. In some locations, particularly those with existing bank protection, the position of the erosion setback line was determined by projecting a 3H:1V slope from the observable bank toe to the top of bank and adding a 5 m setback from this point.

Field Visit

A site visit was completed on November 12, 2019 to visually assess the draft erosion setback line from the desktop analysis. Erosion-resistant features such as escarpments and bank protection identified in the orthophotos and LiDAR were confirmed in the field and reflected in the position of the erosion setback line. Consideration was also given to recent changes to the morphology of the river, updated bank protection works and residential development.

Table 2 describes features identified within the study reach that were considered in establishing the updated erosion setback line. Within this table, the study reach has been broken into sub-sections (identified by letters): these breaks and sub-section identifiers are also shown on Figure 5.

Table 2: Features Considered in Erosion Setback Line Update

Sub-Section	Summary
A	<ul style="list-style-type: none"> Undeveloped area with alluvial fan present on right (north) bank, which provides higher ground to reduce erosion. Upstream end of updated line ties into existing higher ground. <i>The updated erosion setback line is on the land side of the 100-year erosion limit line, in places.</i>
B	<ul style="list-style-type: none"> Area of lower-lying floodplain with multiple dwellings situated within 150 m of the current riverbank. River morphology indicates this is an area of historical channel instability, with much higher ground on the left (south) bank. During the site visit, signs of recent erosion were observed along the right bank including the undermining of large trees. The erosion setback line was established based on topographic features with allowance for potential channel change during a flood. <i>The updated erosion setback line is on the land side of the 100-year erosion limit line, in places.</i>
C	<ul style="list-style-type: none"> Slesse Slide located on right (north) bank. Bank currently built up at an estimated 1.5H:1V slope and protected with riprap. Erosion setback line was determined by projecting a 3H:1V slope from the observable bank toe to the top of bank and adding a 5 m setback from this point.
D	<ul style="list-style-type: none"> Area includes some residential development. Low-lying area with historic non-standard dikes (berms), old river channels and a creek fan. Updated erosion setback line follows the toe of valley wall and then transitions to an escarpment in the low-lying region behind the old berms. The setback line follows an escarpment in front of developed properties. <i>The updated erosion setback line is on the land side of the 100-year erosion limit line, in places.</i>
E	<ul style="list-style-type: none"> Area of residential development. Sub-section of study reach with riprap on right (north) bank. Erosion setback line was determined by projecting a 3H:1V slope from the observable bank toe to the top of bank and adding a 5 m setback from this point.
F	<ul style="list-style-type: none"> Area of residential development with variable river-side topography. Updated erosion setback line follows the north side of Obyrne Road. The position of the updated line was established considering topography, and potential risk to existing development.
G	<ul style="list-style-type: none"> Area of residential development fronted by a steep embankment leading to an old river channel and vegetated floodplain. The position of the updated line was established considering topography, and potential risk to existing development. Erosion setback line was determined by projecting a 3H:1V slope from the observable bank toe to the top of bank and adding a 5 m setback from this point.
H	<ul style="list-style-type: none"> Area of residential development with variable river-side topography. The position of the updated line was established considering topography, and potential risk to existing development.
I	<ul style="list-style-type: none"> Area of undeveloped land where floodplain meets steep valley wall. The updated erosion setback line in this reach follows the natural valley wall until it meets Chilliwack Lake Road at the end of the study reach. <i>The updated erosion setback line is on the land side of the 100-year erosion limit line, in places.</i>



4. Conclusions and Recommendations

The updated erosion setback line for Slesse Park is presented in Figure 5.

In general, the location of the updated line does not differ greatly from the previous erosion setback line established by Hay & Co et al. (1992). Given the observed ability of Chilliwack River to dramatically change its alignment within a single large flood event, the erosion setback line must necessarily consider the potential for avulsion into older channels (including the reactivation of vegetated floodplain). As noted in Table 2, in a few locations the updated erosion setback line is now on the landside of the 100-year erosion limit line.

Based on the results of this study, it is recommended that:

1. FVRD consider updating the 100-year erosion limit line to be consistent with the updated erosion setback line.
2. FVRD consider integrating the updated erosion setback line to the existing downstream erosion setback line (or some other appropriate end point).
3. The erosion setback line be assessed (and updated if required) after future major events. A major event could be classified as an event with a peak flow greater than a 50-year return period or an event that causes a significant change in the river alignment in the study area.



KERR WOOD LEIDAL ASSOCIATES LTD.

Prepared by:

Reviewed by:



Erica Ellis, P. Geo.
Project Geomorphologist

Mike V. Currie, M. Eng., P. Eng., FEC
Technical Reviewer

DAC/EE

Statement of Limitations

This document has been prepared by Kerr Wood Leidal Associates Ltd. (KWL) for the exclusive use and benefit of the intended recipient. No other party is entitled to rely on any of the conclusions, data, opinions, or any other information contained in this document.

This document represents KWL's best professional judgement based on the information available at the time of its completion and as appropriate for the project scope of work. Services performed in developing the content of this document have been conducted in a manner consistent with that level and skill ordinarily exercised by members of the engineering profession currently practising under similar conditions. No warranty, express or implied, is made.

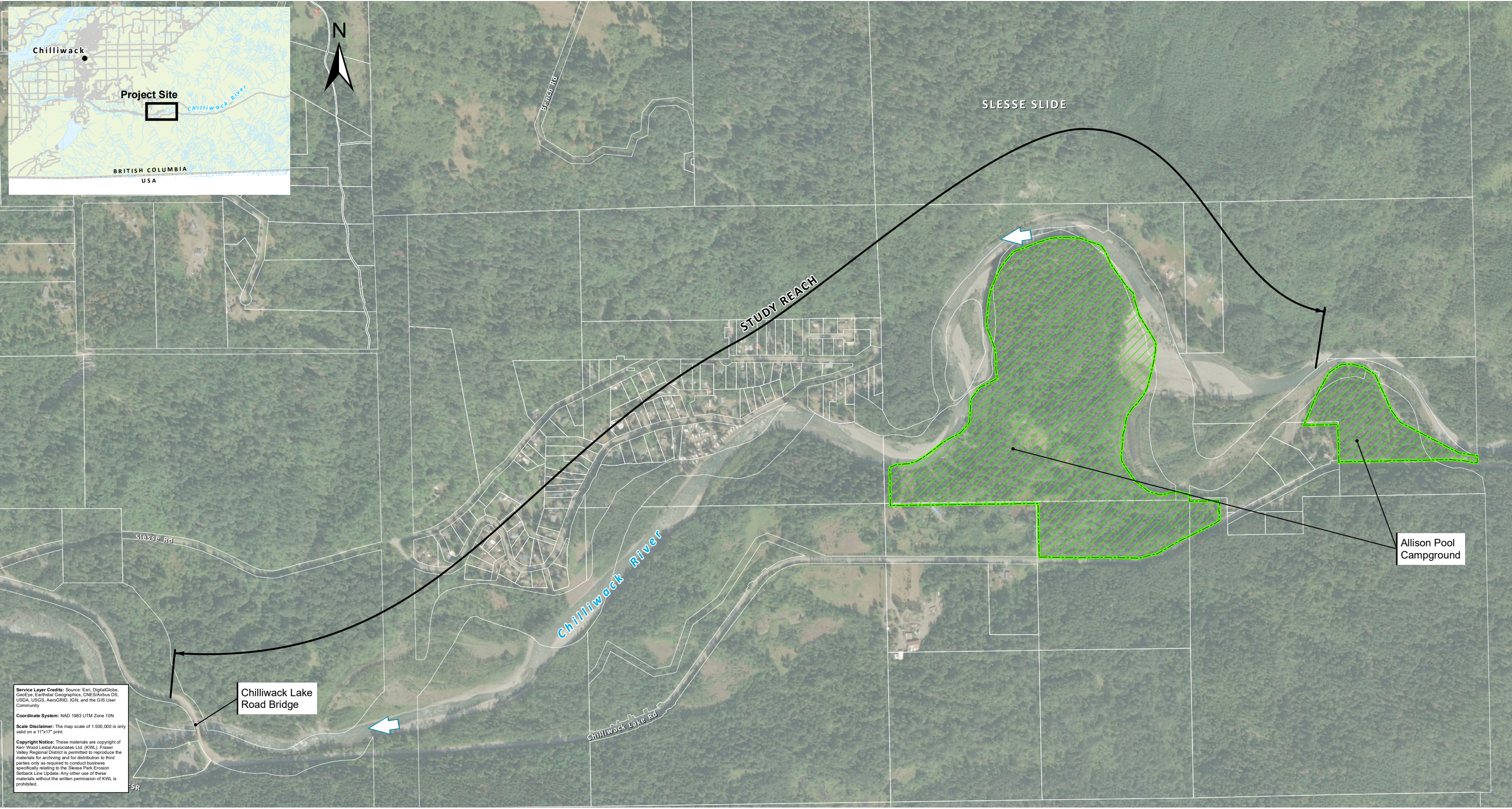
Copyright Notice

These materials (text, tables, figures, and drawings included herein) are copyright of Kerr Wood Leidal Associates Ltd. (KWL). Fraser Valley Regional District is permitted to reproduce the materials for archiving and for distribution to third parties only as required to conduct business specifically relating to the Erosion Setback Line Update. Any other use of these materials without the written permission of KWL is prohibited.

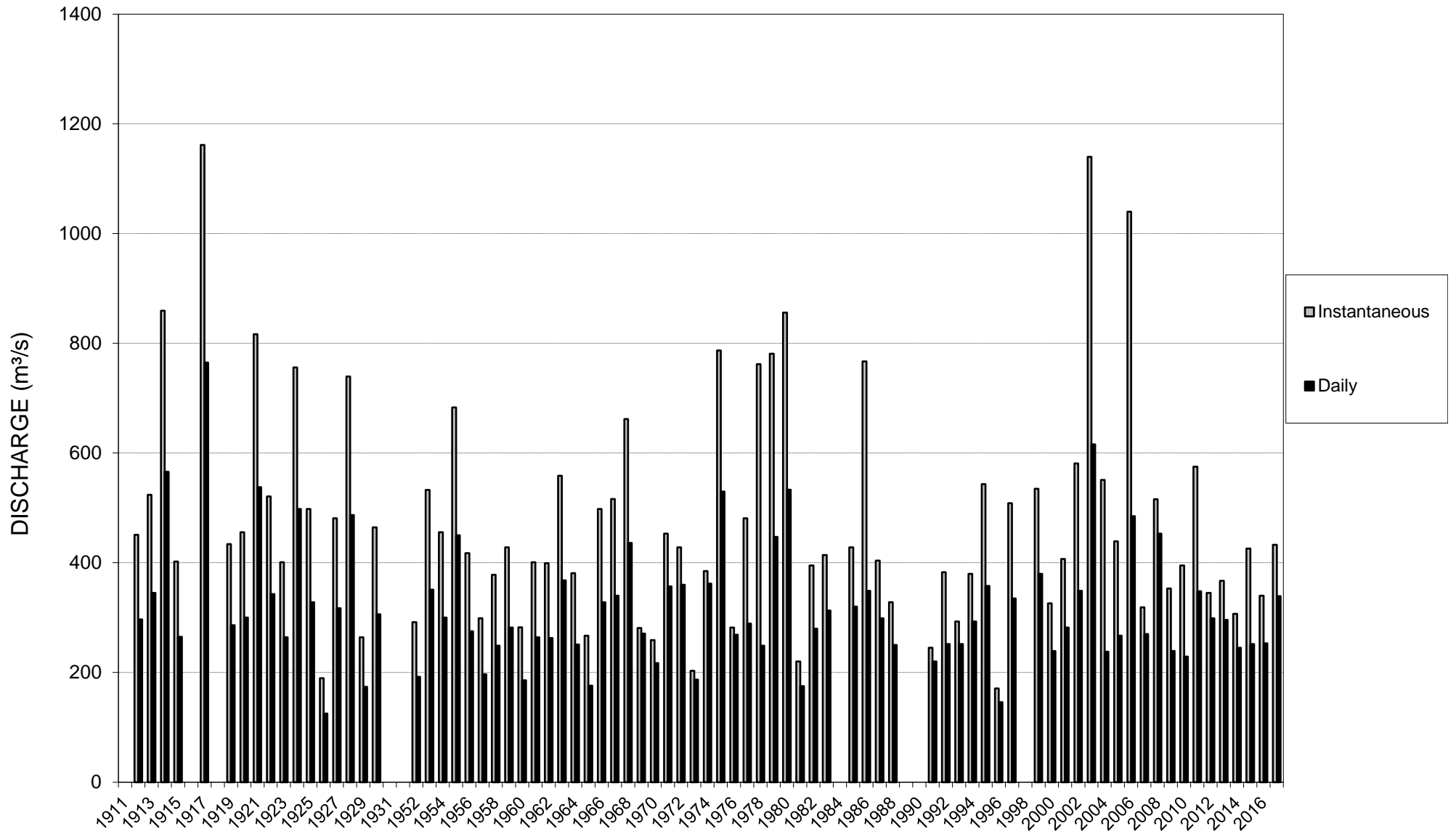
Revision History

Revision #	Date	Status	Revision Description	Author
0	March 2, 2020	Final		DAC / EE
A	November 22, 2019	Draft	For client review.	DAC / EE





Chilliwack River - WSC 08MH001 (1911 to 2017)



KERR WOOD LEIDAL
consulting engineers

Z:\2000-2999\2000-2099\2080-040\400-Work\Hydrology\08MH001_20191106_HYFRAN_Results_DAC.xls / peaks

Figure 2

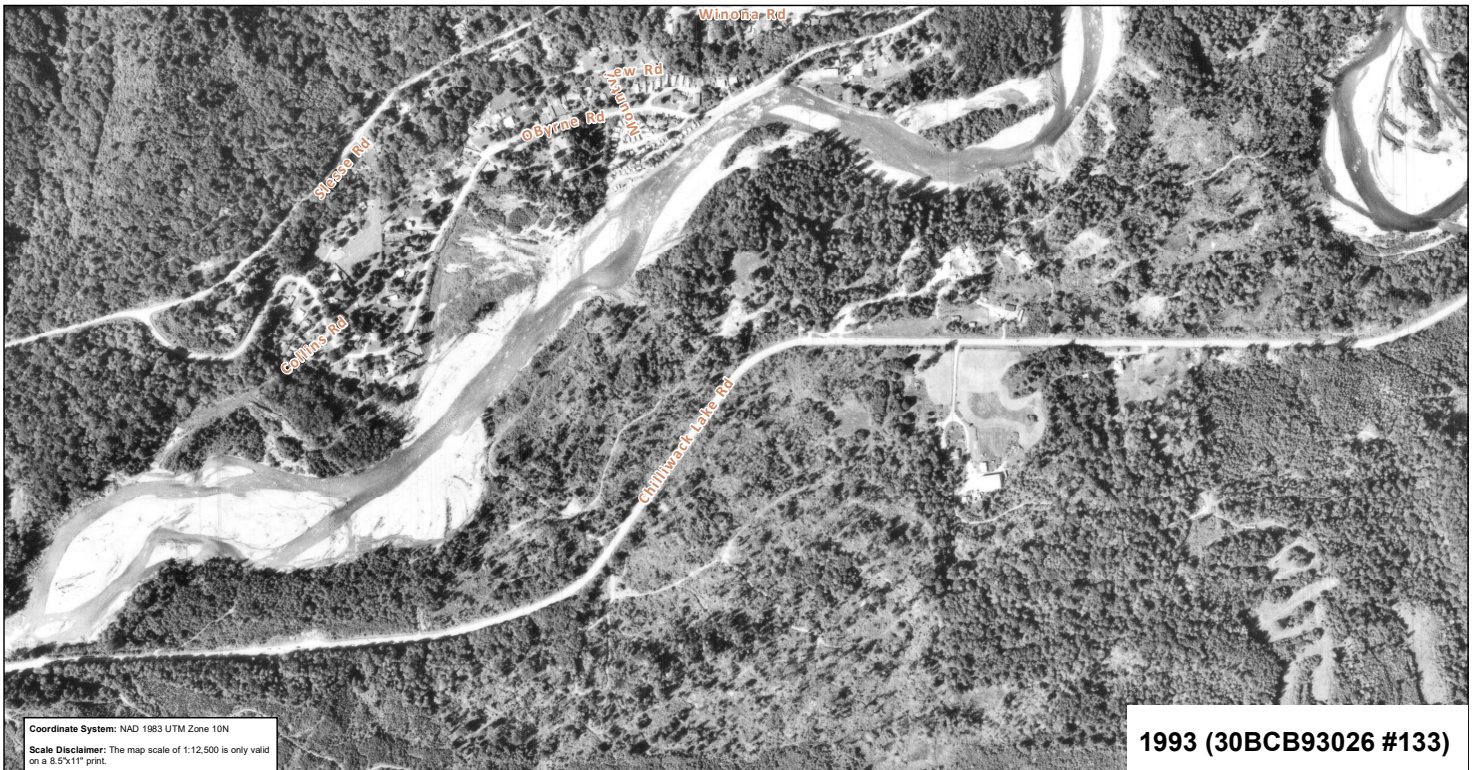
Fraser Valley Regional District Slesse Park Erosion Setback Line Update



KERR WOOD LEIDAL
consulting engineers



1986 (30BCC 453 #43)



1993 (30BCB93026 #133)

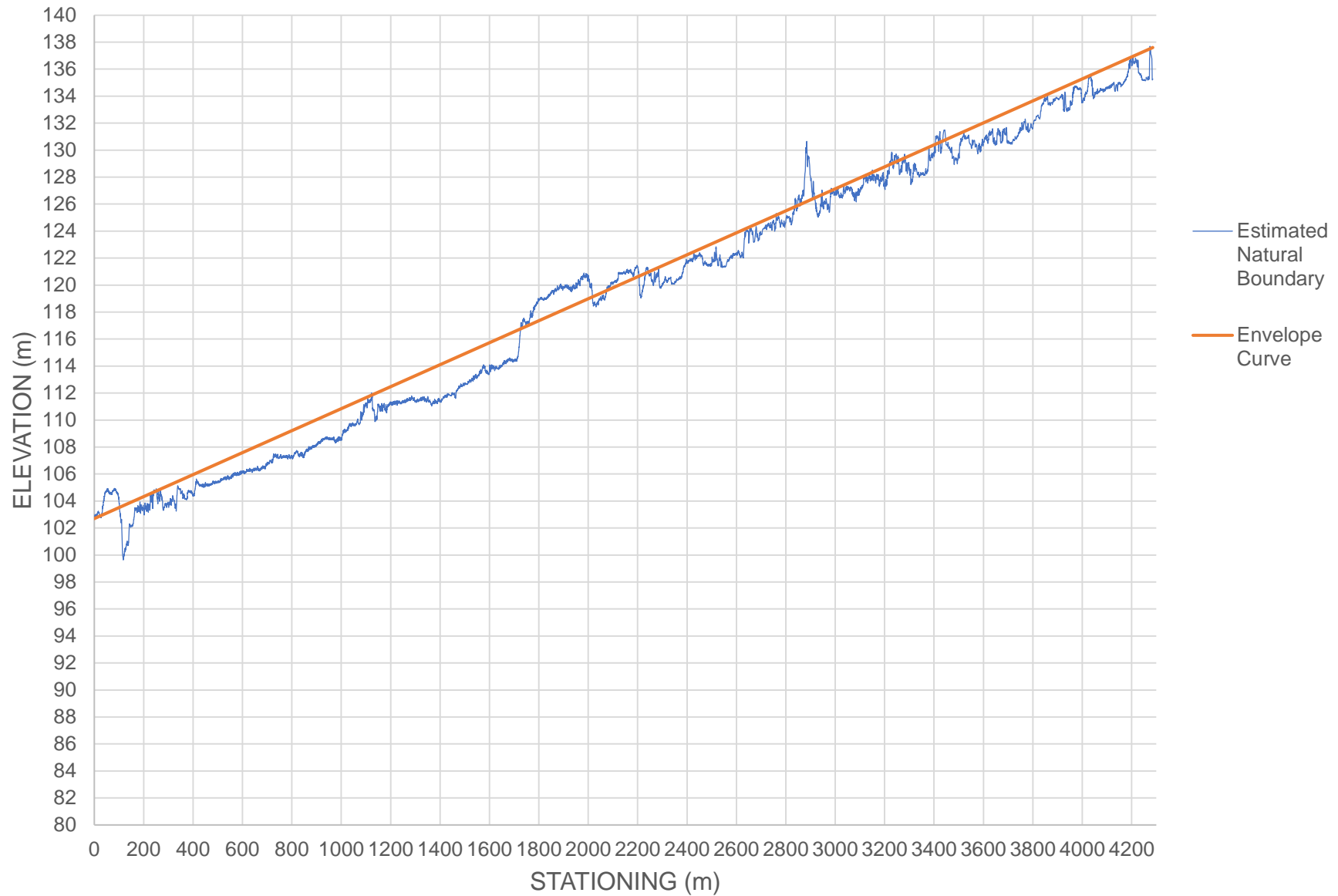
Coordinate System: NAD 1983 UTM Zone 10N
Scale Disclaimer: The map scale of 1:12,500 is only valid on a 8.5"x11" print.
Copyright Notice: These materials are copyright of Kerr Wood Leidal Associates Ltd. (KWL). Fraser Valley Regional District is permitted to reproduce the materials for archiving and for distribution to third parties only as required to conduct business specifically relating to the Slesse Park Erosion Setback Line Update. Any other use of these materials without the written permission of KWL is prohibited.

Project No. 2080.040
Date March 2020
Scale 0 50 100 200 (m)
1:12,500

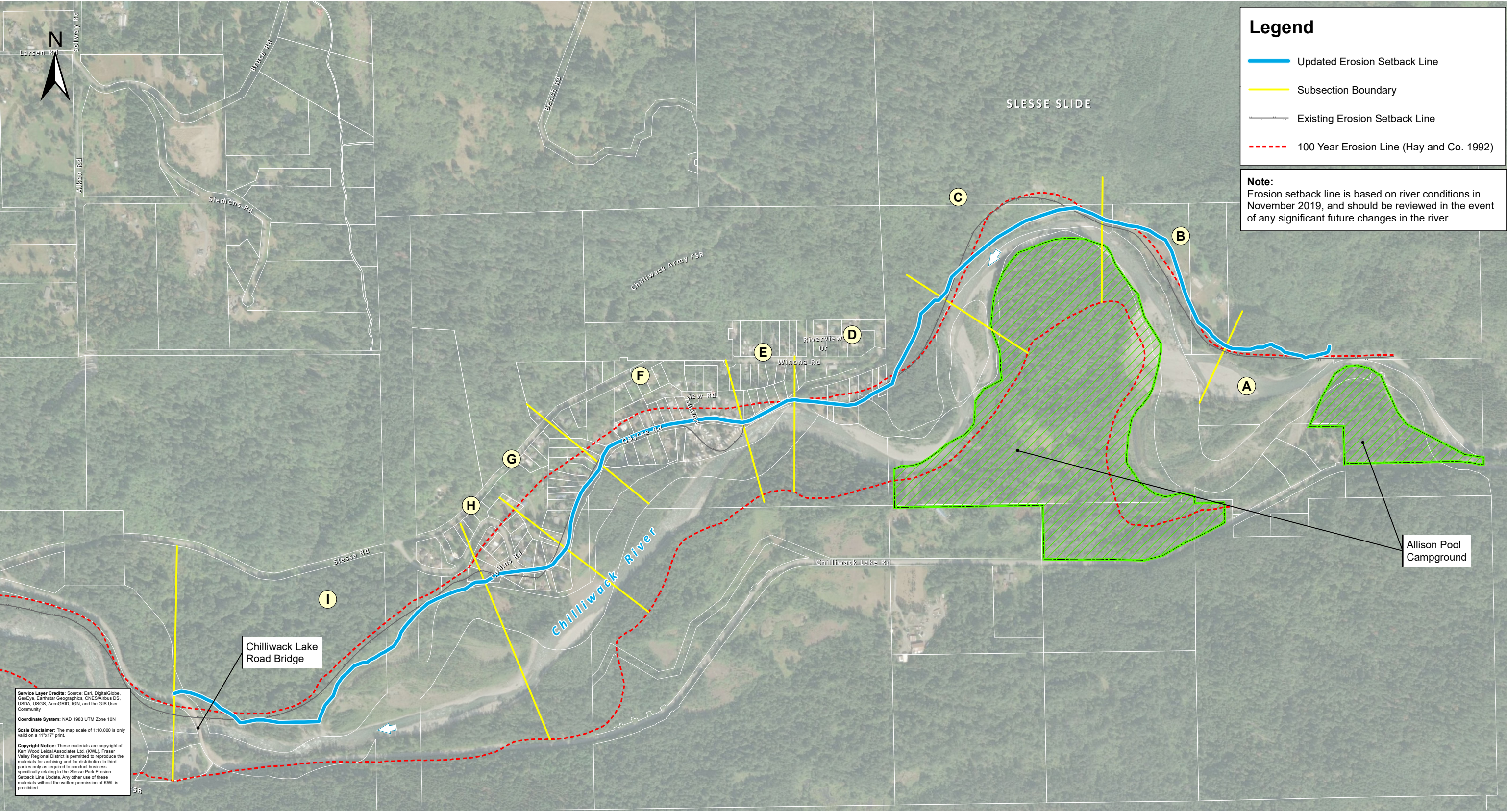
Slesse Park: 1986 vs 1993 Georeferenced Air Photos

Figure 3

Elevation Profile - Slesse Park 'Estimated Natural Boundary'



Fraser Valley Regional District
Slesse Park Erosion Setback Line Update



Project No. 2080.040

Date March 2020

Scale 0 50 100 200 (m)
1:10,000

Updated Erosion Setback Line

Figure 5

To: Fraser Valley Regional District Board

Date: 2020-09-02

From: Reg Dyck, Manager of Electoral Area Emergency Services

File No: 7340-01-

Subject: Grant Application: Community Resiliency Investment Program

RECOMMENDATION

THAT the Fraser Valley Regional District Board endorse a grant application of up to \$550,000 under UBCM's Community Resiliency Investment program (CRI) to reduce the risk of wildfires and mitigate their impacts on the FVRD.

STRATEGIC AREA(S) OF FOCUS

Provide Responsive & Effective Public Services

BACKGROUND

The Community Resiliency Investment (CRI) program was announced by the provincial government in 2018 and is intended to reduce the risk of wildfires and mitigate their impacts on BC communities. CRI includes two streams: FireSmart Community Funding & Supports, administered by UBCM, and Crown Land Wildfire Risk Reduction, administered by the Ministry of Forests, Lands, Natural Resource Operations & Rural Development. Under this program the 2019 Community Wildfire Protection Plan (CWPP) was recently completed and presented to the Board on July 28th 2020. Due to the size of the FVRD three separate zones were created with a separate plan for each zone. Completion of these plans enables the FVRD to apply for further grants within this funding stream.

DISCUSSION

As a grant application for up to \$50,000 per Electoral Area for FireSmart activities and an additional \$150,000 base funding is available, staff, working with the consultant B.A. Blackwell who created the FVRD CWPP plans, has created a list of proposed activities to apply for under this funding program.

Within the CWPP a total of 143 general and specific recommendations have been outlined for the three FVRD zones to reduce the overall wildfire risk profile. If successful, this grant project will begin to address those recommendations.

Proposed projects include:

1. Promote/distribute FireSmart education activities and tools
2. FireSmart day, events and workshops, and wildfire season open houses
3. Conduct site visits/FireSmart assessments
4. Amend OCPs, Comprehensive Community Plans and/or bylaws
5. Multi-agency fire and/or fuel management tables
6. Attend 2021 FireSmart BC Conference
7. Local FireSmart Representative Training
8. Cross-train fire department members
9. Neighbourhood Wildfire Risk Assessments
10. Provide off-site debris disposal

A draft worksheet for proposed activities has been attached for additional details and for discussion purposes which shows an application of \$49,100 per EA and base funding application of \$98,750. A discussion with a Wildfire Prevention Officer (WPO) is required 30 days before the deadline to discuss and approve proposed activities. As this report deadline occurred before the discussion with the WPO, the final application totals may be adjusted but will not exceed the recommendation.

The deadline for the grant application is October 9th 2020.

COST

As this funding stream can contribute a maximum of 100% of the cost of eligible activities, it is anticipated to have little budgetary impact for 2021 should the FVRD be successful. Additional future costs, depending on implementable actions, could be incurred such as the potential for the creation of steering committees, sub-committees, administration costs for a continuation of the FireSmart program including additional staff time and contracted work. If future costs are required a report will be brought forward to the board for discussion and recommendations.

CONCLUSION

Staff is recommending that FVRD apply for funding of up to \$550,000 from UBCM's Community Resiliency Investment program to reduce the risk of wildfires and mitigate their impacts on the FVRD.

COMMENTS BY:

Tareq Islam, Director of Engineering & Community Services: Reviewed and supported.

Kelly Lownsborough, Director of Financial Service/ CFO/: Reviewed and supported.

Jennifer Kinneman, Chief Administrative Officer: Reviewed and supported.

Activity #	Proposed Activities
1	<p>Promote/distribute FireSmart education activities and tools:</p> <p>Agriculture Firesmart Campaign: Distribute wildfire action planning resources prepared specifically for the agriculture sector by the BC Agriculture & Food Climate Action Initiative (CAI) (i.e. Wildfire Preparedness and Mitigation Plan - Guide and Workbook) . Host an on-line workshop to help producers with actions they can take on their property, as well as guide them in the completion of the CAI Plan and Workbook.</p>
2	<p>FireSmart day, events and workshops, and wildfire season open houses: A FireSmart workshop is proposed to be held in each Electoral Area in collaboration with the local Fire Department. Consultant to be engaged to develop workshop presentation materials and facilitate an evening workshop. Alternatively, the workshop can be held online. FVRD staff will coordinate the venue and advertisement of the workshop and outreach to residents (in-kind staff time). FVRD costs include 4 newspaper front-page advertisements.</p>
	Proposed Activities
3	<p>Conduct site visits/FireSmart assessments for FN owned buildings, publicly owned buildings, or publicly, provincially and FN owned critical infrastructure</p>
4	<p>Amend OCPs, Comprehensive Community Plans and/or bylaws: A consultant will be engaged to amend the OCP for one EA to a) include a growth management policy which considers wildfire risk and other natural hazard during development b) includes wildfire as a natural hazard and c) include an interface wildfire hazard objective which sets specific policies relating to development in the WUI</p>

5	<p>Multi-agency fire and/or fuel management tables:</p> <p>Develop and work with all key stakeholders (MFLNRORD, BCWS, BC Parks, BC Hydro, licensees, recreational groups/representatives, agricultural groups/ representatives, neighborhood associations) and First Nations to formalize an Interface Steering Committee to discuss fuel management projects, public education and awareness needs, fire prevention, and funding opportunities.</p> <p>OR</p>
6	<p>Attend 2021 FireSmart BC Conference</p>
7	<p>Local FireSmart Representative Training</p> <p>Train and employ Fire Department or other community members as Local FireSmart Representatives (LFR) to assist the various communities in complying with FireSmart principles at the community, neighbourhood and/or individual home-level. Employ one LFR per Electoral Area under a part-time contract during the fire season to deliver FireSmart program</p>
8	<p>Cross-train fire department members:</p> <p>Train FVRD staff or fire department personnel to deliver S-185 (Fire Entrapment Avoidance) and host training for local fire departments</p>
	<p>Proposed Activities</p>

9	Neighbourhood Wildfire Risk Assessments: One neighbourhood FireSmart assessments for areas identified in the CWPPs as having extreme and high wildfire risk rating (different for each Electoral Area)
10	Provide off-site debris disposal: Develop and implement a driveway chipping program with the help of neighbourhood representatives or community groups. This program can take place in the spring in identified interface neighbourhoods. Advertise to residents the days and times chippers will be in their neighbourhood.
	Total Grant Request per EA (FireSmart) excludes activities 4&5, including in FVRD Base Funding below
	*FVRD Base Funding (OCPs and Interface Committee)

Grant Application: Community Resiliency Investment Proj

1. Education	
	Cost Estimate/Calculation
4,500	Total cost is \$4,500: \$3,000 consultant costs (40 hrs @ \$85/hr); \$1,500 advertising and administrative costs (FVRD)

3,200 Total cost is \$3,200: \$1,700 consultant costs (20 hrs @ 85/hr); \$1,500 advertising costs (FVRD)

2. Planning	
	Cost Estimate/Calculation
3,400	Total cost \$3,400: 5 sites @ \$800/site-consultant costs (8 hrs @ \$85/hr)
3. Development Considerations	

10,000 Total cost is \$10,000: \$1,500 for administration (FVRD) and \$8,500 for consultant costs (100 hrs @ \$85/hr).

4. Interagency Co-operation

6,750

Total cost ~\$6,750 (FVRD costs): 40 hours to initiate group; an additional ~50 hours/year to plan, advertise/ communicate, attend, and debrief meetings; additional hours required depending on implementable actions and potential sub-committees developed

2,000

\$2,000 for travel, accomodation, and per diems for two Fire Department members

6. FireSmart Training & Cross Train

13,000

Total cost \$13,000: \$1,200 eternal consultant costs; \$1,800 administration and travel expenses (FVRD costs); \$10,000 for LFR contract (\$500/week compensation for 20 weeks)

2,000

Total cost: \$2,000 administration and expenses (FVRD costs)

8. FireSmart Activities for Residential Area

	Cost Estimate/Calculation
--	---------------------------

\$10,000	Total cost is \$10,000: \$10,000 per neighbourhood assessment- consultant costs (~118 hrs @ \$85/hr)
13,000	Total cost is \$13,000: chipping contractor costs (3 days @ \$4,000 per day); \$1,000 for advertising(This may be increased to include further chipping opportunities under the base funding)
\$49,100.00	**
\$98,750.00	***150,000 for higher risk- \$50,

gram - Appendix 1

Proposed Outcomes	Performance Measures
Promote improved planning and preparedness of agriculture producers in the FVRD and encourage FireSmart practices on private farm land	Number of workshop attendees; level of awareness of agricultural producers in the FVRD about wildfire risk and evacuation procedures. Implementation of FireSmart practices on private farmland.

Improve education/awareness of FireSmart principles and the CWPPs, promote increased FireSmart compliance through engagement and education of residents.

One workshop attended by 20-50 residents

Proposed Outcomes	Performance Measures
FireSmart assessment and prioritization of critical infrastructure throughout the District for future FireSmart treatments. Goal to improve resilience of District CI in the future.	Complete FireSmart Structure and Site Hazard Assessment Form for all 26 critical infrastructure sites

Amending the OCP for Electoral Area A to address wildfire hazard provides the FVRD with policies to regulate development in the WUI and a rationale for implementing additional measures and programs to mitigate wildfire risk.

Recognition of wildfire risk by FVRD staff members, elected officials and residents.

<p>Identify wildfire related issues in the area and to develop collaborative solutions to minimize wildfire risks.</p>	<p>Annual meetings</p>
<p>Professional development for Fire Department members and/or those interested in training as a Local FireSmart Representatives</p>	<p>One member from each Fire Department in the Electoral Area attends the conference</p>
<p>ning</p>	
<p>A LFR available in each community to assist with the delivery of future activities in the FVRD FireSmart program: Home Ignition Zone Assessments, local rebate program, Fire Smart Canada Community Recognition</p>	<p>One LFR or FireSmart Community Champion available during the fire season in each Electoral Area; uptake of FireSmart program among local residents</p>
<p>Capacity in each local fire department to deliver in-house S-185 training annually</p>	<p>Every fire services member is trained in S-185</p>
<p>s</p>	
<p>Proposed Outcomes</p>	<p>Performance Measures</p>

Assess one high risk neighbourhoods to determine current FireSmart compliance. Assessments will also help to direct future FireSmart education focus and communicate the practices and principles of FireSmart most needed within the particular neighbourhood.	Reduction in score on FireSmart Canada Wildfire Hazard Assessment Form to a low rating (< 21 points).
Reduction of accumulation of vegetative debris on private property. Residents are encouraged to thin and prune with an easy disposal option	Participation of residents in the program: aim for 20% of each neighbourhood.
50,000 additional per EA for FireSmart activities only	
000 for lower risk *This may be increased to include further chipping opportunities	

8 hours per site + travel (4 hrs site visit and 4 hrs write-up; can do ~3.5/day)

2 meetings, field assessment, reporting, FireSmart
community event

To: Fraser Valley Regional District Board

Date: 2020-09-17

From: Sterling Chan, Manager of Engineering and Infrastructure

File No: 1855-30

Subject: Investing in Canada Infrastructure Program – British Columbia - Rural and Northern Communities Infrastructure October 2020 Grant Intake

RECOMMENDATION

THAT the Fraser Valley Regional District Board direct staff to submit grant applications under the Investing in Canada Infrastructure Program – British Columbia - Rural and Northern Communities Infrastructure intake for projects involving upgrades to the Canyon Alpine and Deroche Water Systems.

STRATEGIC AREA(S) OF FOCUS

Support Environmental Stewardship
Support Healthy & Sustainable Community
Provide Responsive & Effective Public Services

PRIORITIES

Priority #2 Air & Water Quality

BACKGROUND

The Canadian Federal Government and British Columbia Provincial Government has launched the Investing in Canada Infrastructure Program (ICIP) - Rural and Northern Communities (RNC) Infrastructure Sub-Stream.

The Rural and Northern Communities (RNC) Program was established to ensure the unique needs of British Columbia's small, rural and remote communities are met – supporting their wide range of infrastructure priorities.

Under ICIP, the RNC Program is focused on improving the quality of life in rural communities by responding to the specific needs of these communities. Investments in rural infrastructure will help build stronger, more inclusive communities, help safeguard the environment and the health of residents, and help support local, low-carbon green economies, as well as work towards reconciliation with Indigenous communities, both on and off-reserve.

The intake for applications recently opened and will be closing on October 22, 2020, and is designed to target projects starting in 2021 or 2022, and that can be completed in five years following approval.

DISCUSSION

The RNC Program will fund infrastructure projects that support the unique challenges faced by rural communities. Eligible projects include improvements for drinking water, wastewater and stormwater, as well as reductions to soil and air pollutants through solid waste diversion and remediation. For communities with a population of less than 5,000, 100% of project costs will be funded under this program.

Regional Districts may submit one application per community in their area. Staff suggest submitting applications for projects in Electoral Areas A and G. Staff have consulted with the Area Directors for Electoral Areas A and G, as well as local First Nations.

The Fraser Valley Regional District is committed to ensuring all of its residents have access to safe and secure drinking water and where possible fire protection. As such, the project scopes for the proposed grant funding applications are described below.

Electoral Area A—Canyon Alpine Water System Upgrade:

The Canyon Alpine water system is supported by a small improvement district. Its infrastructure is aging, resulting in several water quality challenges, as well as numerous leaks, low pressure and, in addition, does not have the ability to deliver fire protection.

Past assessments of the existing Canyon Alpine water system determined that the following upgrades would be necessary:

- Replace distribution system piping to the appropriate sizing
- Repair/replace existing reservoir to prevent contamination from untreated surface water sources and provide fire protection
- Confirm all components are within the appropriate right-of-ways

If the grant application were to be successful, prior to commencing work, a service area would need to be established whereby the FVRD would assume ownership and operation of this system.

Electoral Area G—Deroche Water System Upgrade:

At present the existing Deroche water system is unable to provide fire protection. The existing reservoir includes domestic/balancing storage but has no emergency storage volume and has insufficient capacity/elevation to supply fire flows in accordance with FVRD Bylaws as well as the Fire Underwriters Survey.

The scope of the project would include a new reservoir as well as other minor upgrades to the system in order to provide fire protection. Additionally, these upgrades would provide the system with capacity in the future to service the nearby Lakahamen IR 11.

COST

There is no cost to the FVRD – all local government projects for communities with populations under 5,000 are funded at 100% from Provincial and Federal sources.

COMMENTS BY:

Tareq Islam, Director of Engineering & Community Services

Reviewed and supported.

Kelly Lownsbrough, Chief Financial Officer/ Director of Financial Services

Reviewed and supported.

Jennifer Kinneman, Chief Administrative Officer

Reviewed and supported.

To: Electoral Area Services Committee

Date: 2020-09-08

From: Katelyn Hipwell, Planner II

File No: 6840-20-21246

Subject: Housing Needs Report Project Update

INTENT

This report is intended to advise the Electoral Area Services Committee of information pertaining to the ongoing Housing Needs Report Project. Staff is not looking for a recommendation and has forwarded this information should members want more clarification to discuss the item further.

STRATEGIC AREA(S) OF FOCUS

Support Healthy & Sustainable Community

Provide Responsive & Effective Public Services

BACKGROUND

In 2018 the provincial government introduced legislation, *Bill 18 – Local Government Statutes (Housing Needs reports) Amendment Act*, requiring local governments provide housing needs reports for their communities. The purpose of the legislation is to help local governments understand current and future housing needs. As a regional district, the FVRD is required to complete a housing needs report for each of the FVRD Electoral Areas.

DISCUSSION

UBCM Funding Program

In November 2019, the FVRD applied for provincial funding to assist with completing the housing needs reports. As part of the application, local governments could choose to include up to five letters of support from partner organizations to demonstrate a commitment to and evidence of community partnerships. The FVRD included two letters of support with the application. Letters were received

from the Hope & Area Transition Society as well as the S.A.Y. Lands Office (representing the Skowkale, Aitchelitz and Yakweakwioose First Nations).

The grant application was successful, and the FVRD received the full eligible amount, totalling \$120,000 (\$15,000 per Electoral Area). A report outlining the funding program, and application requirements were provided to the Committee in October 2019.

Request for Proposals

The FVRD issued a Request for Proposals (RFP-20006) from qualified candidates for the provision of professional planning services involving the completion of a Housing Needs Report and the associated public engagement, data analysis, and capacity building.

The FVRD received five competitive proposals and ultimately awarded the contract to [CitySpaces Consulting](#).

Next Steps and Anticipated Timelines

Engagement

Staff are working closely with CitySpaces as they develop an engagement strategy that outlines the activities planned to engage residents across all eight Electoral Areas with the objective of hearing from a wide range of voices. Engagement activities will likely include:

- Project Webpage
 - Accessible from the FVRD website, the project page will include information about the process, the consultant, upcoming engagement events, data summaries, and, eventually, the final Housing Needs Report.
- Online Survey
 - The survey will be available online as well as in hard copy to reach individuals with limited connectivity.
 - FVRD staff will ensure community groups and prominent stakeholders are invited to participate in the survey.
- Virtual Focus Groups
 - In lieu of in-person meetings in an effort to adhere to COVID-19 protocols, virtual focus groups, geared towards specific stakeholder groups, will be hosted to garner insight into housing challenges and priorities in the FVRD.

Additional engagement activities may also be considered and will be advertised through FVRD social media platforms, including the Project Page on the FVRD website. These engagement activities will begin in September and be carried out throughout the Fall into November. Summaries of the information gathered throughout these activities will be prepared by CitySpaces and presented to the FVRD Board as well as made available on the FVRD website.

Demographic and Housing Data Analysis

To complete the Housing Needs Reports, the Province requires local governments to collect statistical information on:

- Current and projected population;
- Household income;
- Significant economic sectors; and
- Currently available and anticipated available housing units, including types of units.

Bill 18 requires that Housing Needs Reports contain the following:

- The number of housing units required to meet current housing and anticipated housing needs for at least the next five years, by housing type;
- Statements about key areas of local need;
- The number and percentage of households in core housing need and extreme core housing need; and
- A standardized summary form.

Much of the data required to complete the Report is available to through provincial and federal data sets from the following organizations:

- BC Assessment;
- BC Housing;
- Canada Mortgage and Housing Corporation;
- BC Stats; and
- Statistics Canada.

This demographic and housing data will be supplemented by our own development data and additional qualitative data collected through targeted local engagement and analyzed to identify housing needs, gaps, and trends in the Electoral Areas.

Staff Training and Capacity Building

CitySpaces will prepare and deliver additional training for FVRD staff with the goal of building staff capacity to update future Housing Need Reports, as required by *Bill 18* every five years. This will ensure FVRD staff have an understanding of the data collection and analysis approach and methodology, as well as best practices research and other value-add elements of Housing Needs Report preparation. Building capacity within FVRD staff will reduce costs associated with the preparation of future Housing Needs Report updates.

Final Report

The final Housing Needs Report will be presented to the FVRD Board at the December 2020 meeting. The Report will then be made publicly accessible through the FVRD's website.

Accompanying the final report will be an Implementation and Action plan. These plans will be based on the findings of the report, and will provide high-level recommendations about required Official Community Plan amendments and other actions that the FVRD Board may wish to take to address housing gaps and needs in the Electoral Areas. The Action Plan will specifically address anticipated timelines and costs associated with implementation to assist the Board in future priority setting.

COST

Costs incurred by staff and consultants over the course of the project will be borne from the grant funding received through UBCM.

CONCLUSION

In response to provincial legislation changes, the FVRD is completing a Housing Needs Report to better understand current and future housing needs. The Housing Needs Assessment Project, funded through the UBCM Funding Program, is underway. Engagement opportunities tailored to each Electoral Area are anticipated to begin in September and continue throughout the Fall. Staff will continue to provide updates to the Committee and Board throughout the project.

COMMENTS BY:

Graham Daneluz, Director of Planning & Development Reviewed and supported.

Kelly Lownsbrough, Chief Financial Officer/ Director of Financial Services: Reviewed and supported.

Jennifer Kinneman, Chief Administrative Officer: Reviewed and supported.