City of Richmond

REVISED
Agenda

General Purposes Committee

Council Chambers, City Hall
6911 No. 3 Road

Monday, July 20, 2020
3:00 p.m.

Pg. # ITEM

MINUTES

GP-6 ***Motion to adopt the minutes of the meeting of the General Purposes Committee held on July 6, 2020.***

COUNCILLOR MICHAEL WOLFE

ADDED 1A. **BANNING THE USE OF ANTICOAGULANT RODENTICIDES**
(File Ref. No.)

GP-235 See Page **GP-235** for materials

RECOMMENDATIONS

1. ***That Council provide direction to staff to implement a ban of anticoagulant rodenticides in the City of Richmond on city-owned land and update our existing bylaws***
2. ***That Council request that the Mayor write, on behalf of council, to the Premier of British Columbia, appropriate ministers, copying MLAs in Richmond, requesting that the Province of British Columbia ban anticoagulant rodenticides***
3. ***That the City of Richmond considers cancelling or modifying the rodent control contract with the Vancouver Coastal Health Authority, to follow the local scientific evidence of the toxic reach of our existing program.***

4. That Council direct staff to communicate to residents and businesses in the City of Richmond, council's direction on this matter, the harmful impacts of anticoagulant rodenticides, and better alternatives that are available, such as the A24 trap.

COMMUNITY SAFETY DIVISION

1. **SOIL USE FOR THE PLACEMENT OF FILL APPLICATION FOR THE PROPERTY LOCATED AT 19740 RIVER ROAD (SIDHU)**
(File Ref. No. 12-8080-12-01) (REDMS No. 6487928 v.8)

GP-10 See Page **GP-10** for full report

Designated Speaker: Carli Williams

STAFF RECOMMENDATION

That the 'Soil Use for the Placement of Fill' application submitted by Sukminder (Minder) Sidhu (the "Applicant") for the Property located at 19740 River Road proposing to deposit peat to develop and expand the current cranberry farming operation be authorized for referral to the Agricultural Land Commission (ALC) for the ALC to review and determine the merits of the proposal from an agricultural perspective as the Applicant has satisfied all of the City's current reporting requirements.

DEPUTY CAO'S OFFICE

2. **2020 UBCM COMMUNITY EXCELLENCE AWARDS**
(File Ref. No. 01-0103-01/2019) (REDMS No. 6482378 v.3)

GP-123 See Page **GP-123** for full report

Designated Speaker: Jason Kita

STAFF RECOMMENDATION

That the City's entries for the Union of BC Municipalities (UBCM) Community Excellence Awards be endorsed, including:

(1) Excellence in Governance: The City of Richmond's Organizational Development Program;

(2) Excellence in Service Delivery: Community Wellness Strategy 2018-2023;

(3) Excellence in Asset Management: Richmond Flood Protection Program; and

(4) Excellence in Sustainability: Mitchell Island Environmental Stewardship Initiatives.

PLANNING AND DEVELOPMENT DIVISION

3. **TRANSLINK 2020 CAPITAL COST-SHARE PROGRAM – SUPPLEMENTAL APPLICATIONS**
(File Ref. No. 01-0154-04) (REDMS No. 6457711 v.10)

GP-128

See Page **GP-128** for full report

Designated Speaker: Fred Lin

STAFF RECOMMENDATION

That as described in the report titled "TransLink 2020 Capital Cost-Share Program – Supplemental Applications" dated June 19, 2020 from the Director, Transportation:

(a) the transit-related projects recommended for cost-sharing as part of the TransLink 2020 Bus Speed and Reliability Program be endorsed;

(b) should the above project receive final approval from TransLink, the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the funding agreements and the Revised Consolidated 5 Year Financial Plan (2020-2024) be updated accordingly; and

(c) staff be directed to implement the projects approved by TransLink and report back in one year as part of the City's proposed applications to TransLink's 2021 Capital Cost-Share Programs.

Pg. # ITEM

4. **APPLICATION BY 1058085 BC LTD. FOR REZONING AT 10431 NO. 5 ROAD FROM THE "SINGLE DETACHED (RS1/E}" ZONE TO THE "ARTERIAL ROAD COMPACT TWO-UNIT DWELLINGS (RCD)" ZONE**
(File Ref. No. RZ 18-829789) (REDMS No. 6480434)

GP-146 See Page **GP-146** for full report

Designated Speakers: Wayne Craig & Nathan Andrews

STAFF RECOMMENDATION

(1) That Richmond Zoning Bylaw 8500, Amendment Bylaw 10197 to create the "Arterial Road Compact Two-Unit Dwellings (RCD)" zone, be introduced and given First Reading; and

(2) That Richmond Zoning Bylaw 8500, Amendment Bylaw 10195, for the rezoning of 10431 No. 5 Road from "Single Detached (RSl/E)" to "Arterial Road Compact Two-Unit Dwellings (RCD)", be introduced and given First Reading.

5. **APPLICATION BY KANARIS DEMETRE LAZOS FOR A HERITAGE ALTERATION PERMIT (HA 19-881148) AND A STEVESTON VILLAGE HERITAGE CONSERVATION GRANT AT 12111 3RD AVENUE (STEVESTON HOTEL)**
(File Ref. No. HA 19-881148) (REDMS No. 6486957)

GP-187 See Page **GP-187** for full report

Designated Speakers: Wayne Craig & Cynthia Lussier

STAFF RECOMMENDATION

(1) That a Heritage Alteration Permit (HA 19-881148) be issued which would permit the replacement of the existing roof on the building located at 12111 3rdAvenue; and

(2) That a grant request in the amount of $72,800 be approved under the Steveston Village Heritage Conservation Grant Program to assist with the roof replacement work for the building located at 12111 3rd Avenue, and disbursed in accordance with Council Policy 5900.

LEGAL AND LEGISLATIVE SERVICES DEPARTMENT

6. **LIVE-STREAMING OF COUNCIL AND COMMITTEE MEETINGS AND OF COUNCIL-SCHOOL BOARD LIAISON COMMITTEE MEETINGS AND DEVELOPMENT PERMIT PANEL MEETINGS**
(File Ref. No. 01-0105-01) (REDMS No. 6491857 v. 3)

GP-218 See Page **GP-218** for full report

Designated Speaker: Claudia Jesson

STAFF RECOMMENDATION

That staff receive direction regarding the live-streaming of Council and Standing Committee meetings and the live-streaming of Council-School Board Liaison Committee meetings and Development Permit Panel meetings, as outlined in the staff report titled "Live-streaming of Council and Committee Meetings and of Council-School Board Liaison Committee Meetings and Development Permit Panel Meetings" dated June 26, 2020 from the Director, City Clerk's Office.

ENGINEERING AND PUBLIC WORKS DIVISION

7. **AWARD OF CONTRACT 6676P – SUPPLY OF HYDRO-VAC SERVICES**
(File Ref. No. 10-6000-00) (REDMS No. 6483396 v.3)

GP-224 See Page **GP-224** for full report

Designated Speaker: Ben Dias

STAFF RECOMMENDATION

(1) That contract 6766P – Supply of Hydro-Vac Services for an initial three-year term be awarded on an "as and when requested" basis to McRae's Environmental Service Ltd as the most responsive and responsible bidder. The initial three-year term is estimated at $7,277,841 exclusive of taxes and 10% contingency; and

(2) That approval from Council will be requested prior to staff executing an option to renew the contract for a further two-year term, for a maximum total term of five years; and

(3) That the Chief Administrative Officer and the General Manager, Engineering and Public Works be authorized to execute the contract with McRae's Environmental Service Ltd.

8. **LIBRARY CULTURAL CENTRE MECHANICAL UPGRADE PROJECT**
(File Ref. No. 10-6125-05-01) (REDMS No. 6368260)

GP-229 See Page **GP-229** for full report

Designated Speakers: Norm Connolly and Martin Younis

STAFF RECOMMENDATION

That the Conventional Equipment Replacement described as Option 1 on page 4 in the staff report titled "Library Cultural Centre Mechanical Upgrade Project", dated July 20, 2020, from the Director, Sustainability and District Energy, be approved.

PLANNING AND DEVELOPMENT DIVISION

ADDED 9. **ESTIMATED COSTS FOR TEMPORARY ROAD CHANGES IN STEVESTON VILLAGE FOR AUGUST 2020**
(File Ref. No.)

GP-237 See Page **GP-237** for staff memorandum

Designated Speaker: Lloyd Bie

ADJOURNMENT

City of Richmond

Minutes

General Purposes Committee

Date: Monday, July 6, 2020

Place: Anderson Room
Richmond City Hall

Present: Mayor Malcolm D. Brodie, Chair
Councillor Chak Au
Councillor Carol Day (attending via teleconference)
Councillor Kelly Greene (attending via teleconference)
Councillor Alexa Loo (attending via teleconference)
Councillor Bill McNulty (attending via teleconference)
Councillor Linda McPhail (attending via teleconference)
Councillor Harold Steves (entered the meeting at 4:10 p.m. – attending via teleconference)
Councillor Michael Wolfe (attending via teleconference)

Call to Order: The Chair called the meeting to order at 4:02 p.m.

MINUTES

It was moved and seconded
That the minutes of the meeting of the General Purposes Committee held on June 15, 2020, be adopted as circulated.

CARRIED

COUNCILLOR KELLY GREENE

1. **TRANSLINK EMERGENCY OPERATING FUNDING**
(File Ref. No.)

Discussion took place on the need for funding for TransLink to ensure adequate travel options for frontline and essential workers.

As a result of the discussion, the following **motion** was introduced:

It was moved and seconded
That the City of Richmond calls upon the federal and provincial governments to provide emergency operating funds and to protect vital public transportation services. Letters to be written to the Parliamentary Secretary for TransLink; provincial Ministers of Transportation, Environment, and Finance; and federal Ministers of Transportation and Finance; with copies to Richmond MLAs and MPs.

Councillor Harold Steves entered the meeting (4:10 p.m.).

The question on the motion was not called as discussion further took place on (i) TransLink proactively working to obtain funding from the Provincial and Federal Governments, (ii) ridership during the pandemic, and (iii) physical distancing on the skytrain and buses.

The question on the motion was then called and it was **CARRIED**.

FINANCE AND CORPORATE SERVICES DIVISION

2. **UPDATE ON CITY OF RICHMOND COVID-19 ECONOMIC RESPONSE AND RECOVERY MEASURES**
(File Ref. No. 08-4150-01) (REDMS No. 6477062)

In reply to queries from Committee, staff noted that (i) there has been a significant increase in engagement in the Economic Development Program, (ii) the City has issued 6 temporary patio licences, (iii) information and photos about the temporary patio program is recirculated often through the City's social media channels, (iv) any programs that fits criteria announced through the Infrastructure Ministry or any other ministries are being closely monitored, (v) small businesses are adopting a larger e-commerce presence, (vi) with the CERB program businesses are having difficulties finding employees; however, the most important thing is to implement approved COVID-19 safety plans, (vi) the City and public health agencies are making health and safety of the consumers a priority, (vii) every effort is being made to ensure timely issuance of permits and licences, (ix) the Richmond Business Resilience Program was launched in mid-June and is a one-year program, and (x) the City has an active business licence directory that lists all operational business licences.

Staff were directed to provide a categorized list of the businesses in Richmond.

It was moved and seconded
That the staff report titled "Update on City of Richmond COVID-19 Economic Response and Recovery Measures", dated June 26, 2020, be received for information.

CARRIED

ENGINEERING AND PUBLIC WORKS DIVISION

3. TILBURY PHASE 2 LNG EXPANSION PROJECT

(File Ref. No. 10-6125-30-010) (REDMS No. 6432227 v. 10)

In reply to queries from Committee, staff noted that this is the opportunity to provide any additional request or comments. Staff clarified that both small and large tankers can be used, with some additional dredging of the Fraser River.

Discussion took place on the appropriateness of this location for this expansion and concerns regarding the proximity to residential and industrial areas.

As a result of the discussion, the following **motion** was introduced:

It was moved and seconded

(1) That Council states its opposition to the Tilbury Phase 2 LNG Expansion Project;

(2) That if the project proceeds, the comments outlined in the staff report titled "Tilbury Phase 2 LNG Expansion Project", dated June 1, 2020, from the Director, Sustainability and District Energy be endorsed and submitted to the BC Environmental Assessment Office and the Impact Assessment Agency of Canada to support the provincial and federal environmental assessments;

(3) That meetings with the appropriate federal and provincial ministers be scheduled;

(4) That copies of the comments and the staff report be sent to our local Members of Parliament and Members of Legislative Assembly; and

(5) That copies of the comments and the staff report be sent to all Mayors of Metro Vancouver municipalities asking for their respective Council's support.

The question on the motion was not called as discussion took place on receiving comments from various interested groups and organizations regarding the project.

Direction was provided to staff to send out a media release to ensure the community and organizations, such as the Fraser River Estuary Management Group, have an opportunity to provide input on the project.

Staff was requested to provide a memorandum on an LNG project being planned in Boston.

The question on the motion was then called and it was **CARRIED** with Cllr. Loo opposed.

COMMUNITY SAFETY DIVISION

4. **SOIL USE FOR THE PLACEMENT OF FILL APPLICATION FOR THE PROPERTY LOCATED AT 5800 NO. 7 ROAD (MAHAL)**
(File Ref. No. 12-8080-12-01) (REDMS No. 6471502 v. 12)

Staff provided an overview of the application noting that (i) the applicant wants to convert a cranberry farm into a vegetable and ornamental tree farm, (ii) the top soil will be removed and soil that is appropriate for vegetable and ornamental tree farming will be brought in, (iii) the applicant is providing a significant performance bond to the City to guarantee the farming aspect of the project.

In reply to a query from Committee, Paul Mahal, Owner, 5800 No. 7 Road, advised that the family will be farming the land.

In reply to further queries from Committee, staff noted that the applicant has guaranteed they will use Richmond soil wherever they are able and Richmond can only obtain a maximum of $15,000 in performance bonds as per the city's bylaws.

In response to queries from Committee, Jessica Stewart, Agrologist, and Tom Elliot, Agrologist, Madrone Environmental Services Ltd., provided details on (i) soil composition, (ii) high water table on the property, (iii) removal of the top soil, (iv) the high cost of hiring outside labourers to farm the land, (v) the surrounding ditches and berms of the property, (vi) high cost and reliability of a pump system all year round, and (vii) artificially suppressing the water table.

It was moved and seconded

(1) That the 'Soil Use for the Placement of Fill' application submitted by Paul Mahal (the "Applicant") proposing to deposit soil on the property located at 5800 No. 7 Road to transition a former cranberry bog to allow for the growing of vegetables and ornamental trees be authorized for referral to the Agricultural Land Commission (ALC) for the ALC to review and determine the merits of the proposal from an agricultural perspective as the Applicant has satisfied all of the City's current reporting requirements, provided that the fill soil be sourced from Richmond and Delta; and

(2) That the City recommend to the Agricultural Land Commission (ALC) that a further significant performance bond be required.

The question on the motion was not called as in reply to a query from Committee, staff advised that application meets city requirements and has been reviewed by various departments.

The question on the motion was then called and it was **CARRIED** with Cllr. Wolfe opposed.

Discussion then took place on examining increasing the size of the City bonds required for soil fill applications.

As a result of the discussion, the following **referral motion** was introduced:

It was moved and seconded
That staff examine the potential size of bonds in relation to soil fill applications.

CARRIED

5. OPTIONS FOR A RESIDENTIAL BACKYARD CHICKEN PROGRAM

(File Ref. No. 12-8000-01) (REDMS No. 6483312)

In response to a query from Committee, staff noted that regulations of the program will not be strictly enforced unless complaints are received and variances are not permitted on density.

It was moved and seconded
That "Option 2: Allow the keeping of backyard chickens on all ALR properties and properties outside of the ALR with a parcel size of no less than 2,000 m^2" as outlined in the staff report titled "Options for a Residential Backyard Chicken Program" from the General Manager, Community Safety, dated June 22, 2020, be approved.

The question on the motion was not called as in reply to queries from Committee, staff advised that Canada has a low risk of contracting avian flu and the proposed licencing fee for backyard chickens is similar to dog licencing fees.

Discussion took place on (i) the need for comprehensive backyard chicken regulations, (ii) endorsing option 3 as outlined in the staff report with some amendments, and (iii) setting a minimum and maximum number of chickens.

As a result of the discussion, the following **amendment motion** was introduced:

It was moved and seconded
That option two be amended to allow the keeping of 2 to 8 chickens.

The question on the amendment motion was not called as in response to queries from Committee, staff advised that regulations are enforced on a complaint basis and chicken coops need to be kept clean and sanitized.

The question on the amendment motion was then called and it was **CARRIED** with Cllrs. Day, Greene, Steves and Wolfe opposed.

In reply to further queries from Committee, staff noted that backyard chickens require daily maintenance and owners are responsible for the care of the chickens.

The question on the main motion, as amended, which reads as follows:

That "Option 2: Allow the keeping of backyard chickens on all ALR properties and properties outside of the ALR with a parcel size of no less than 2,000 m^2", as outlined in the staff report titled "Options for a Residential Backyard Chicken Program" from the General Manager, Community Safety, dated June 22, 2020 and allowing the keeping of 2-8 chickens, be approved.

was then called and it was **CARRIED** with Cllrs. Day, Greene, Steves and Wolfe opposed.

COMMUNITY SERVICES DIVISION

6. **STEVESTON TRAM FEASIBILITY STUDY**
(File Ref. No. 11-7000-01) (REDMS No. 6474329)

It was moved and seconded
That Option 1: Maintain Current Tram Program as detailed in the report titled "Steveston Tram Feasibility Study", dated May 29, 2020, from the Director, Arts, Culture & Heritage Services be endorsed.

The question on the motion was not called as discussion took place on (i) potentially duplicating the tram while maintaining the spirit of the tram, (ii) a trackless tram system, and (iii) an automatic or battery powered tram system.

Staff was requested to flag the Steveston Tram matter for future discussions and not lose sight of the potential for the project.

The question on the motion was then called and it was **CARRIED**.

PLANNING AND DEVELOPMENT DIVISION

7. **QUADRICYCLE BUSINESS – PROPOSED VEHICLE FOR HIRE BYLAW AMENDMENT TO PERMIT PERMANENT OPERATION**
(File Ref. No. 12-8275-06) (REDMS No. 6468151)

It was moved and seconded

(1) That the third reading of Vehicle for Hire Bylaw No. 6900, Amendment Bylaw No. 10128, to add regulations and requirements for the operation of a quadricycle, be rescinded.

(2) That Vehicle for Hire Bylaw No. 6900, Amendment Bylaw No. 10128, to add revised regulations and requirements for the operation of a quadricycle, be given third reading.

CARRIED

8. **APPLICATION BY CITY VANCOUVER ACADEMY INC. FOR A TEMPORARY COMMERCIAL USE PERMIT FOR THE PROPERTY AT UNITS 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 AND 2170 - 8766 MCKIM WAY**
(File Ref. No. TU 20-890760) (REDMS No. 6486096)

It was moved and seconded

(1) That the application by City Vancouver Academy Inc. for a Temporary Commercial Use Permit (TCUP) for the property at Units 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 and 2170 - 8766 McKim Way to permit education use (limited to an independent school offering grades 10 to 12) be considered for one year from the date of issuance; and

(2) That this application be forwarded to the September 8, 2020 Public Hearing at 7:00 p.m. in the Council Chambers of Richmond City Hall.

The question on the motion was not called as in reply to queries from Committee, staff noted that (i) education commercial allows for tutoring; however, does not permit K-12 instruction, (ii) the applicant is aware of the zoning issue and is requesting the temporary allowance while they search for a permanent location, and (iii) should the applicant require an extension, they would require Council approval.

The question on the motion was then called and it was **CARRIED**.

9. **APPLICATION BY IBI GROUP ARCHITECTS TO AMEND SCHEDULE 2.10 OF OFFICIAL COMMUNITY PLAN BYLAW 7100 (CITY CENTRE AREA PLAN) AND REZONE 5740, 5760, AND 5800 MINORU BOULEVARD FROM "INDUSTRIAL RETAIL (IR1)" TO "SCHOOL AND INSTITUTION USE (SI)" AND "HIGH DENSITY MIXED USE AND AFFORDABLE RENTAL HOUSING (ZMU46) – LANSDOWNE VILLAGE (CITY CENTRE)"**
(File Ref. No. RZ 18-807640) (REDMS No. 6401336)

Staff provided an overview of the application and highlighted that (i) all commercial tenants have been relocated, (ii) the two social service agencies will have first right of refusal when the building is complete, (iii) a non-profit housing operator has been secured, (iv) keeping all the affordable housing units in one area is preferable for operational efficiencies, (v) the affordable housing units will be increased from 47 units to 88 units, (vi) the City Centre Area Plan will be amended to grant additional affordable housing density bonus, and (vii) residents of the affordable housing units will have access to the outdoor amenity spaces and an indoor amenity space.

It was moved and seconded

(1) That Official Community Plan Bylaw 7100, Amendment Bylaw 10136, to amend Schedule 2.10 of Official Community Plan Bylaw 7100 (City Centre Area Plan), to amend:

(a) Section 2.2 "Jobs and Business" and the "Specific Land Use Map: Lansdowne Village", to encourage office development along the east side of Minoru Boulevard (between Ackroyd Road and Alderbridge Way) and pedestrian-oriented retail uses at grade along Lansdowne Road (between No. 3 Road and Minoru Boulevard); and

(b) Section 4.0 "Implementation & Phasing Strategies", to clarify City Centre Area Plan density bonusing requirements with respect to the Richmond Affordable Housing Strategy and Official Community Plan Market Rental Housing Policy, and permit bonus density to be increased, on a site-specific basis, for rezoning applications that provide additional affordable housing to address community need,

be introduced and given first reading.

(2) That Official Community Plan Bylaw 7100, Amendment Bylaw 10137, for amending Schedule 2.10 of Official Community Plan Bylaw 7100 (City Centre Area Plan), to facilitate the construction of a high-rise, high density, mixed use development, including the designation of a 7 m (23 ft.) wide strip of land along the north side of 5740 Minoru Boulevard as City "Park" and the remainder of 5740, 5760, and 5800 Minoru Boulevard as "Village Centre Bonus" area (to permit an additional 1.0 floor area ratio for office use only), be introduced and given first reading.

(3) That Bylaw 10136 and Bylaw 10137, having been considered in conjunction with:

(a) the City's Financial Plan and Capital Program; and

(b) the Greater Vancouver Regional District Solid Waste and Liquid Waste Management Plans;

are hereby found to be consistent with said program and plans, in accordance with Section 477(3)(a) of the Local Government Act.

(4) That Bylaw 10136 and Bylaw 10137, having been considered in accordance with OCP Bylaw Preparation Consultation Policy 5043, are hereby found not to require further consultation.

(5) That Richmond Zoning Bylaw 8500, Amendment Bylaw 10138, to create the "High Density Mixed Use and Affordable Rental Housing (ZMU46) - Lansdowne Village (City Centre)" zone, and to rezone

5740, 5760, and 5800 Minoru Boulevard from "Industrial Retail (IR1)" to "School and Institution Use (SI)" and "High Density Mixed Use and Affordable Rental Housing (ZMU46) - Lansdowne Village (City Centre)", be introduced and given first reading.

The question on the motion was not called as in reply to queries from Committee, staff noted that the design of the green space will be refined through the Development Permit process and all affordable housing units, non-profit organization offices and amenity space will be consolidated into one building.

The question on the motion was then called and it was **CARRIED** with Cllr. Greene opposed.

10. **REPORT BACK ON TEMPORARY ROAD CHANGES IN STEVESTON VILLAGE FOR CANADA DAY**
(File Ref. No.)

It was moved and seconded
That staff continue to monitor pedestrian, cyclist and motorist operations in Steveston Village for crowding and when necessary, report back on the need for temporary road changes to add additional space.

The question on the motion was not called as a staff memorandum dated July 6, 2020 was referenced (attached to and forming part of these Minutes as Schedule 1) and in reply to a query from Committee, staff noted that if the same configuration as Canada Day was done on a Friday to Sunday basis, the estimated cost would be about 15% more than option two as outlined in the memorandum.

The question on the motion was then called and it was **CARRIED** with Cllrs. Greene and Wolfe opposed.

ADJOURNMENT

It was moved and seconded
That the meeting adjourn (6:48 p.m.).

CARRIED

Certified a true and correct copy of the Minutes of the meeting of the General Purposes Committee of the Council of the City of Richmond held on Monday, July 6, 2020.

Mayor Malcolm D. Brodie
Chair

Sarah Goddard
Legislative Services Associate

City of Richmond

Memorandum
Planning and Development Division
Transportation

To:	Mayor and Councillors	**Date:**	July 6, 2020
From:	Lloyd Bie, P.Eng. Director, Transportation	**File:**	10-6360-06-01/2020-Vol 01
Re:	**Report Back on Temporary Road Changes in Steveston Village for Canada Day**		

As directed at the June 22, 2020 Council meeting, this memorandum summarizes staff observations and merchant feedback regarding the temporary road changes in Steveston Village implemented on July 1st for Canada Day.

Staff Observations

Staff were on site throughout the day to observe attendance, business operations, and the impacts of the temporary road changes on pedestrian, cyclist and motorist circulation through Steveston Village. Overall, the cool and overcast weather with afternoon showers contributed to a smaller number of visitors compared to recent weekends.

The temporary road changes were implemented without incident and vehicle traffic generally flowed well with the presence of traffic control personnel. Occasional minor but typical delays were observed on Third Avenue between Moncton Street and Chatham Street for northbound motorists at Chatham Street due to left turning vehicles. Sufficient on- and off-street parking was available with ample space available north of Moncton Street. With the one-way system on Bayview Street, the widened temporary pathway better accommodated two-way pedestrian and cyclist traffic. Cyclists typically transited through the area and did not stop; as a result, there was sufficient bike parking.

Feedback from Steveston Businesses

The notice distributed to businesses on June 25, 2020 encouraged merchants to provide post-implementation feedback by noon on July 3rd. A total of five responses were received from businesses, including one sent prior to the implementation of the road changes. One business (located on Moncton Street) was supportive of road closures during weekends and busy times for the summer months while the other four businesses (two on Moncton Street and two on First Avenue) were opposed to any further or extended closures, citing on-street parking loss and increased vehicle circulation due to the one-way operation on Bayview Street.

Richmond

Next Steps

While pedestrian and cyclist volumes on Canada Day were lower than typical, staff anticipate increased crowds in Steveston Village as the warmer summer season and re-opening measures progress. Table 1 identifies three options for Council's consideration to address the potential that pedestrian and cyclist volumes will consistently exceed the capacity of existing infrastructure and additional space will be needed to maintain physical distancing guidelines.

Table 1: Options to Maintain Physical Distancing in Steveston Village

Option	Scope
1 Monitor	• Staff continue to monitor pedestrian, cyclist and motorist operations for crowding • When necessary, report back on the need for temporary road changes to add additional space
2 One-Way Moncton St & Bayview St	• Implement one-way systems on Moncton St and Bayview St on weekends only • One-way system on Moncton St will preserve some on-street parking • Implementation could be weather-dependent (only when fair weather forecast) • Estimated cost per day: $12,000
3 One-Way Bayview St	• Implement one-way system on Bayview St on weekends only • One-way system on Bayview St only will preserve two-way vehicle movements and all on-street parking on Moncton St • Implementation could be weather-dependent (only when fair weather forecast) • Estimated cost per day: $6,000

Staff will be available to discuss the options at the General Purposes Committee to be held July 6, 2020. In the interim, if you have any questions, please contact me at 604-516-9934.

Lloyd Bie, P.Eng.
Director, Transportation

LB:jc

cc: SMT

City of Richmond

Report to Committee

To:	Community Safety Committee	**Date:**	June 19, 2020
From:	Cecilia Achiam General Manager, Community Safety	**File:**	12-8080-12-01/Vol 01
Re:	**Soil Use for the Placement of Fill Application for the Property Located at 19740 River Road (Sidhu)**		

Staff Recommendation

That the 'Soil Use for the Placement of Fill' application submitted by Sukminder (Minder) Sidhu (the "Applicant") for the Property located at 19740 River Road proposing to deposit peat to develop and expand the current cranberry farming operation be authorized for referral to the Agricultural Land Commission (ALC) for the ALC to review and determine the merits of the proposal from an agricultural perspective as the Applicant has satisfied all of the City's current reporting requirements.

Cecilia Achiam
General Manager, Community Safety
(604-276-4122)

Att. 6

REPORT CONCURRENCE	
ROUTED TO:	**CONCURRENCE**
Engineering	☒
Policy Planning	☒
Sustainability	☒
Transportation	☒
SENIOR STAFF REPORT REVIEW	**INITIALS:** CJ
APPROVED BY CAO	

Staff Report

Origin

The City of Richmond is in receipt of a 'Soil Use for the Placement of Fill' application for the property located at 19740 River Road (the "Property"). The intent of the application is to deposit peat (the "Soil") for the purpose of developing an unfarmed section of the property (northwest portion) and creating a new cranberry cell.

The Property is situated within the Agricultural Land Reserve (ALR) and is subject to provisions of the *Agricultural Land Commission Act (ALC Act)* and its regulations (the "Regulations"), and the City's Soil Removal and Fill Deposit Regulation Bylaw No. 8094 (the "Soil Bylaw").

Pursuant to applicable Provincial regulations, a 'Soil Use for the Placement of Fill' application requires authorization from local government in order to be referred to the Agricultural Land Commission (ALC) for their review and approval. As such, this application must be submitted to the City for review and a decision from Council. Should the application be referred to the ALC and should it subsequently be approved by the ALC, the Applicant would be required to satisfy the City's requirements outlined in the Soil Bylaw before a soil deposit permit would be issued by the City.

The Applicant has satisfied all of the City's referral requirements for submission to the ALC.

This report supports Council's Strategic Plan 2018-2022 Strategy #2 A Sustainable and Environmentally Conscious City:

> *Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.*
>
> *2.1 Continued leadership in addressing climate change and promoting circular economic principles.*
>
> *2.3 Increase emphasis on local food systems, urban agriculture and organic farming.*

Analysis

The Property is zoned AG1 (Agriculture). The current zoning permits a wide range of farming and compatible uses consistent with the provisions of the *ALC Act* and *Regulations* and the City's Official Community Plan and Zoning Bylaw 8500. The Applicant is applying to deposit 32,000 cubic metres of peat over approximately 5.3 ha of the 35.73 ha Property at an average depth of 0.6m to expand the existing cranberry operations. The proposed peat deposit area does not contain an Environmentally Sensitive Area or a Riparian Management Area.

Uses on Adjacent Lots

- To the North: ALR – Land is not in agricultural production
- To the East: ALR – Fraser River
- To the South: ALR – Land is in agricultural production
- To the West: ALR – Land is in agricultural production

Table 1: Existing Information and Proposed Changes for the Property

Item	**Existing**
Owner(s)	Jagbar Farms Ltd. (Directors: Sukhminder & Nasib Kaur Sidhu)
Lot Size	35.73 hectares (88.29 acres)
Applicant	Sukminder (Minder) Sidhu (the "Applicant")
Consultant	Jessica Stewart, P. Ag., GIT (Madrone Environmental Services Ltd.)
Consultant	Dr. Stephen Ramsay, P.Eng.
Current Land Uses	A significant portion of the Property is a cranberry farm; proposed peat deposit area is not currently farmed
Proposed Land Uses	Transition unfarmed area into an additional cranberry cell
Official Community Plan Designation	Agriculture
ALR Designation	Property is within the ALR
Zoning	Agriculture (AG1)
Riparian Management Area	None
Environmental Sensitive Area	None

Project Overview

The Applicant, whose family has owned the Property since the 1960's, is proposing to deposit 32,000 cubic metres of peat within the undeveloped northwest portion of the Property to further develop and expand the current cranberry farming operation. The proposed peat deposit area is approximately 5.3 ha at an average depth of 0.6m.

The Applicant has provided a Soil Placement Plan (Attachment 1) developed by a qualified agrologist, Jessica Stewart, P. Ag., GIT, (the "Agrologist") of Madrone Environmental Services Ltd. In addition, a Farm Plan Summary (Attachment 2) provides information related the creation/implementation of the expanded cranberry operation. Figure 5 (Attachment 3) identifies the proposed peat deposit area and proposed planting plan.

The Applicant has advised that the project will take two years to complete. The timeline for completion is heavily dependent on ensuring the appropriate peat – as recommended by the

Agrologist – is sourced to complete the project. Peat sourcing has not commenced at this time due to the considerable period of time involved with respect to the soil deposit application process and seeking approval from the City and ALC. The Applicant has stated that potential sources include sites in the Queensborough area.

Following completion of the project, expansion of the current cranberry growing operations will, as per the Agrologist, increase to a "total cranberry production [of] approximately 30 ha" over the entire property.

Richmond Food Security and Agricultural Advisory Committee (FSAAC) Consultation

The Applicant presented the proposal to the FSAAC on June 18, 2020. The FSAAC unanimously supported the proposal and passed the following motion:

> *That the Food Security and Agricultural Advisory Committee support the ALR Soil Use for Placement of Fill Application at 19740 River Road, with the understanding that the imported material will be exclusively peat.*

Agricultural Considerations

The Agrologist has submitted a Soil Placement Plan (the "Placement Plan") and a Farm Plan. The Placement Plan summarizes the following:

- Site description;
- Land capability assessment (ie. current soil conditions);
- Soil importation plan;
- Proposed site monitoring;
- Agricultural plan post-soil deposition/placement;
- Current hydrology; and
- Summary of the Agrologist's recommendations.

The Placement Plan indicates current soil conditions within the proposed soil deposit area are considered to be low in nutrient value and have a poor fertility rating. It is proposed that the imported peat be deposited over the existing soil which had been imported as per a previous ALC approval in 2000. It must also be noted that sand had been imported by a previous land owner for a proposed sawmill that did not come to fruition.

The Agrologist states that the "soil sourced and brought to site should be a rich dark colour and humic to mesic in organic decomposition. Peat soils with a high quantity of roots, particularly large roots and tree branches should be screened before placement." As per the Agrologist, the addition of an organic matter (ie. peat), will amend the current soil conditions and provide an appropriate growing medium for the future cranberry crop. With the addition of the peat: "the post-fill Land Capability for Agricultural ratings will improve from Class 3F minor to moderate fertility limitations to Class 2W, or mild limitations due to high water table (excess wetness)." As per the Agrologist, Class 2 lands have minor limitations that require good ongoing management practices or slightly restrict the range of crops, or both.

The Farm Plan summarizes the following:

- Proposed agricultural plan;
- Project rationale;
- Current land use;
- Soil management; and
- Farm implementation costs.

The Placement Plan and Farm Plan satisfy City reporting requirements.

Bruce McTavish (MSc, MBA, PAg, RPBio) has reviewed the proposal from an agricultural perspective on behalf of the City and has no concerns regarding the land capability assessment provided by the Agrologist as it relates to the current conditions of the Property. In addition, Mr. McTavish has confirmed that the proposal meets all requirements of *ALC Policy P-10 - Criteria for Agricultural Capability Assessments.*

Should the proposal be approved, the City will require that a qualified agrologist be retained to monitor the peat deposit project and provide regular reporting. Should an agrologist not be retained or cease providing regular oversight and reporting, the City would reserve the right, as per the Permit conditions, to suspend and/or void the Permit until such time as a new qualified agrologist, agreeable to the City and ALC, is retained to monitor the project and provide regular reporting.

Drainage & Geotechnical Considerations

As per the Placement Plan, the completed peat deposit area "will [in future years] be intentionally flooded to 'wet pick' the berries every fall". As such, a Water Management Assessment (Attachment 4) has been provided and been reviewed by staff. The Water Management Assessment provides an explanation of the on-site drainage and diking system used throughout the three existing cranberry fields currently farmed by the owner. The engineer-of-record (Dr. Stephen Ramsey, P. Eng.) states that "the proposed drainage system will not have any adverse impacts on adjacent properties".

The Applicant has also provided a Geotechnical Assessment (the "Assessment") and topographic survey. The Assessment (Attachment 5) provides an evaluation of previous authorized soil deposition undertaken in 2000. As per the Assessment: "No adverse geotechnical impacts have been noted occurred during the previous 20 years". In addition, the Assessment states "[t]he proposed soil placement will not have any geotechnical impacts on any of the adjacent properties".

Soil deposit permit conditions will provide staff the latitude to request a geotechnical report at any time and in addition to requiring a closure report from the geotechnical engineer following completion of the project.

Engineering staff are satisfied with the conclusions of both assessments.

The proposal to raise the Property to improve the agricultural viability is consistent with the City's current Flood Protection Management Strategy (FPMS) which identifies raising land levels within all areas of the City as a key overall long-term objective. At the January 27, 2020 Regular Council Meeting, Council made a referral for staff to review the FPMS and provide comments with regard to the raising of land, specifically as it relates to agricultural land and agricultural viability. Staff are preparing a response to this referral.

Environmental Considerations

There is no Environmentally Sensitive Area designated within the proposed peat placement area or a Riparian Management Area within close proximity of the peat placement area. There will be no impacts to trees due to peat deposit operations.

As per Permit conditions, all work undertaken in or around a watercourse, must be completed in compliance with the *Water Sustainability Act*, under the guidance of a Qualified Environmental Professional (QEP). The City will require that erosion and sediment control measures be installed and inspected by a QEP should it be deemed necessary by City staff.

Financial Costs and Considerations for the Applicant

Unlike typical soil deposit projects, the Applicant intends to only import peat to complete the project. The Applicant has stated that peat importation will not result in him receiving any tipping fees as is typically collected with other types of soil.

The Applicant has provided a table outlining the upfront and estimated future project costs to expand the current cranberry farming operation (Attachment 6).

Road and Traffic Considerations

Transportation staff have reviewed the proposal. A Traffic Management Plan will be required to be submitted and reviewed by City staff prior to the Permit being issued to ensure site traffic is properly managed and public safety is addressed. River Road does have a 9T load limit; however, trucks will be permitted to use this roadway if there is no alternative route to the destination.

Soil Deposit Permit Requirements and City Inspection and Project Oversight Protocols

Should the proposal receive ALC and City approval, City staff will prepare a comprehensive Permit that sets out a number of conditions, including but not limited to:

- Oversight by a professional agrologist;
- Source site inspection requirements;
- On-site monitoring and reporting requirements;
- Measures needed to eliminate impacts, including drainage, to neighbouring properties and City infrastructure;
- Permitted hours/days of operation;
- An approved Traffic Management Plan; and

- Security deposits (further explained below).

Site monitoring, source site inspection and Qualified Professional reporting requirements are intended to be similar to the requirements for the Sixwest Holdings soil deposit project located on Westminster Highway. This will include an on-site monitor to inspect each load of peat prior to deposition and maintain an accurate daily log of trucks depositing peat on the Property. The Agrologist will be required to inspect and approve all source sites. At the sole discretion of the City, alternate measures may be required (i.e. survey) in order to determine the volume of peat deposited on the Property.

In addition, due to the location of the jet fuel pipeline to the north of the proposed peat placement area, the Applicant will need to ensure that the pipeline owner or any other government body having authority over the pipeline has provided approval to undertake work before the City will provide a Permit. Such activities would warrant that the Applicant notify BC 1 Call prior to commencing with the project.

No peat will be permitted to be imported/deposited until such time as all City and ALC requirements have been satisfied and the Permit has been issued by the City.

In addition to the expected reporting requirements of the Agrologist or other qualified professionals to the City and ALC, City staff will maintain proactive inspections and enforcement on the Property that will include the following:

- multiple site inspections of the Property per week at the onset of the project to ensure conditions of the Permit are being maintained;
- weekly site assessments to continue to be undertaken when peat importation is underway to ensure the Permit conditions are respected;
- meet on-site with the site supervisor a minimum of two times per month;
- maintain communications with the Agrologist and the project coordinator on a monthly basis;
- review the Agrologist's reports to ensure conditions of the Permit are being satisfied;
- advise the ALC of any concerns relative to the project and request that ALC staff undertake inspections to ensure compliance with the ALC approval conditions; and
- advise pipeline owner representatives or responsible government authority of any concerns relative to the project and request that said representatives undertake inspections to ensure compliance with any provincial and/or federal standards when conducting work within the defined buffer zone.

Security Bonds

Should the peat deposit project receive approval, the City will require that the Applicant provide the following security bonds:

- $5,000 pursuant to s. 8(d) of the current *Boulevard and Roadway Protection Regulation Bylaw No. 6366* to ensure that roadways and drainage systems are kept free and clear of materials, debris, dirt, or mud resulting from the soil deposit activity; and

- $10,000 pursuant to s. 4.2.1 of the current *Soil Removal and Fill Deposit Regulation Bylaw No. 8094* to ensure full and proper compliance with the provisions of this Bylaw and all other terms and conditions of the Permit.

In addition to the security bonds provided to the City, the ALC has the authority to require a performance bond to ensure that all required mitigation and monitoring measures are completed. The bond required by the ALC is also intended to ensure the rehabilitation of the Property in the event the project is not completed. ALC performance bonds and the approved volumes from four previous approvals for projects within the City are as follows:

- $70,000 – 17,500m^3 (Athwal - approved May 2020)
- $160,000 – 48,000m^3 (City of Richmond - approved June 2017)
- $290,000 – 140,000m^3 (Sixwest Holdings - approved January 2017)
- $500,000 – 102,080m^3 (Sunshine Cranberry Farms Ltd. - approved January 2014)

As per the Permit conditions, security deposits will not be returned until all conditions as stated in the Permit and the ALC approval are satisfied in their entirety, to the satisfaction of the City. City staff is to conduct a final inspection and receive confirmation from the ALC that the project has been completed as per ALC approval prior to closing the file.

Alternatives to Council Approval

Should Council not authorize staff to refer the proposal to the ALC for their review and decision; the application will be considered to be rejected. Council may add additional recommendations for ALC consideration and/or conditions within a referral to the ALC, similar to conditions already provided within this report.

Financial Impact

None.

Conclusion

Staff is recommending that the 'Soil Use for the Placement of Fill' application for the Property located at 19740 River Road be authorized for referral to the ALC to determine the merits of the proposal from an agricultural perspective as the Applicant has satisfied all of the City's current reporting requirements.

Mike Morin
Soil Bylaw Officer, Community Bylaws
(8625)

Carli Williams, P.Eng.
Manager, Business Licence and Bylaws
(4136)

Att. 1: Soil Placement Plan (rev. 03 July 2019)
2: Farm Plan Summary (rec. 09 Jun 2020)
3: Agricultural Planting Plan – Fig. 5 (28 Jun 2019)
4: Water Management Assessment (30 Mar 2020)
5: Geotechnical Assessment (30 Mar 2020)
6: Project Cost Table (rec. 09 Jun 2020)

Attachment 1

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environmental services ltd.

SOIL PLACEMENT PLAN

Jagbar Farms
19740 River Road, Richmond

FOR:

Mr. Sukhminder Sidhu
Jagbar Farms Ltd.
19740 River Road, Richmond

BY:

Jessica Stewart, P.Ag., G.I.T.
Madrone Environmental Services Ltd.

May 2, 2019
Revised: July 3, 2019

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SOIL PLACEMENT PLAN

19740 River Road, Richmond

1 Synopsis

Mr. Sukhminder Sidhu, the owner of the property at 19740 River Road, proposes to import approximately 32,000 m³ of exclusively peat soil to depth of approximately 0.6 m over 5.3 ha of land located in the un-farmed northwest corner of the property. The property is an active cranberry farm with a total area of 36.8 ha (90.9 acres); the purpose of importing peat is to improve the agricultural limitations of the northwest area, which will allow Mr. Sidhu to expand his cranberry farm to this portion of the site.

The soil placement area (5.3 ha) will be diked on all sides (the west side is currently diked), as is normal for cranberry farming. The fields are flooded with water during harvest time (October) to facilitate a "wet pick". The material for the dikes (sand, gravel) is already located on site.

The proposed 5.3 ha soil placement area is limited primarily by low nutrient holding capacity and low fertility at the Class 3F level, and dense subsoils (3D) due to compaction of the underlying soils during previous soil placement/importation. There are additional mild limitations due to stoniness (2P) and excess wetness (2W).

The intent of topsoil placement is to introduce an organic matter amendment to the predominantly sandy soils placed in the northwest of the property and planting cranberry plants in this area. Jagbar Farms intends to engage local companies to source and import the soil. I have proposed the following basic plan for the site:

1 Prior to any importation, remove all identified construction waste, including large boulders, concrete, rebar, gyproc, and garbage as shown at Placemarks 7, 9, and 14

on **Figure 1**of this report. There may be other pieces scattered around the site. A large rake attachment (to a tractor) can be used to remove large (i.e. >0.2 m) fragments but hand removal may be required for smaller pieces not removed by the rake.

2 I recommend construction of the dikes **before** placement of the organic peat soil to avoid potential run-off issues to adjacent lands on the north, northeast/east (River Road) and west sides (reservoir, then the CN Railway).

3 Since Jagbar Farms is experienced in dike construction and maintenance and has the required materials available on site, I will defer the exact installation of the dikes to them.

4 The proposed access point to the site is from the second entrance at 20000 River Road. Trucks will travel across the farm access road (dike) to the placement site, which should clean the truck tires of tracked sediment. A wheel wash can be installed at 20000 River Road if the gravel access roads are insufficient at sediment removal.

5 Place locally sourced (if possible), mesic to humic peat on the surface of the 5.3 ha fill area and spread it to a uniform depth of 0.6 m. A surveyor can assist with staking the final elevation throughout this area.

6 The sourced peat soil should consist of clean soil from an uncontaminated source; it should have less than 20% coarse fragments (i.e. gravel, cobbles, boulders > 2.5 cm), should not be clay-rich, and should not contain any foreign material. Madrone can assist with screening soil sites for potential contaminants (preliminary studies) and assessing coarse fragment content of incoming soil loads. Sites should also be checked for potential invasive plant species.

7 Since the cranberry bog will be intentionally flooded to "wet pick" the berries every fall, there are no constructed slopes required to drain the site (the land is level).

8 The soil placement operation should be monitored at regular intervals through the process. I recommend monitoring reports every 3000 m^3 in the first year of the project.

9 Once complete a final report should be issued on the condition and final, improved land capability of the filled area. This will be required by the ALC for the return of security bonds posted for the duration of the project.

2 Introduction

Mr. Sukhminder ("Minder") Sidhu of Jagbar Farms Ltd. (Jagbar Farms) retained Madrone Environmental Services Ltd. (Madrone) to prepare a Soil Placement Plan for a portion of the property located at 19740 River Road, Richmond B.C. (**Figure 1**). In addition to preparing a placement plan that adheres to local bylaws[1] and the Agricultural Land Reserve (ALR) General Regulation[2] and ALR Use Regulation[3], a Soil Placement Plan comprises a soil survey of the existing property, soil and climatic restrictions to agriculture, as well as a determination of the land capability for agriculture based on our field assessment.

Jagbar Farms is an active cranberry farm that is part of the Ocean Spray cranberry co-operative. Mr. Sidhu has owned and farmed this property with his family since 1982 (the first cranberry harvest was fall of 1983)[4]. Prior to 1982, Jagbar Farms owned a blueberry acreage less than 1 km from the property. Mr. Sidhu is a long-standing farmer in the City of Richmond and currently has farm status on this property. Jagbar Farms owns additional farmland in the area.

[1] https://www.richmond.ca/__shared/assets/BL809447443.pdf Soil Removal and Fill Deposit Regulation Bylaw No. 8094. City of Richmond. Accessed March 5, 2019

[2] http://www.bclaws.ca/civix/document/id/complete/statreg/171_2002 Agricultural Land Commission Act

Agricultural Land Reserve General Regulation. Accessed March 5, 2019

[3] http://www.bclaws.ca/civix/document/id/complete/statreg/30_2019 Agricultural Land Commission Act

Agricultural Land Reserve Use Regulation. Accessed March 5, 2019

[4] https://digital.lib.sfu.ca/cfu-859/cra0039-005 Bell Farms Ltd, May Brothers Farms Ltd, Columbia Cranberry Company Ltd, and Jagbar Farms Ltd and Canadian Farmworkers Union, Local 1 - Labour Relations Board of British Columbia Decision - CRA0039-005. Accessed March 5, 2019

PHOTO 1. GREAT BLUE HERON
Flying over a Richmond cranberry bog during fall harvest. Photo credit: Anton Bielousov.
http://sakvoiazh.ru/

Mr. Sidhu wishes to expand his cranberry farm by importing exclusively peat to a depth of approximately 0.6 m in the northwest corner of his property, which will improve the fertility of the soil for cranberry farming. This plan pertains to approximately 5.3 ha of land located in the northwest corner of the property (the "soil placement area").

This part of the property has been previously elevated by prior permitted soil placement (ALC permits in 1991 and 2000); the placement intended to elevate the area from flooding posed by the Fraser River and to elevate new cranberry plants above the high water tables. As such, this area of the property is not underlain by native soils but rather imported soils. It is not currently farmed or used for any other purpose.

3 Site Description

The proposed soil deposit site is located in the northwest corner of the property, which is situated at 19740 River Road in Richmond, BC, approximately 9.7 km northeast of Richmond centre on Lulu Island (**Figure 1**). The property is bound to the north by residential properties (no farming indicated), to the east by River Road (and the Fraser River), to the south by a vacant and forested property, and to the west by the Canadian Pacific (CP) Railway.

The legal description of the property is: Block 5N Plan NWP5172 Section 28 Range 4W Land District 36 Except Plan 2 ALL PTNS OF; LYING TO THE NE OF THE NE LIMIT OF THE SRW AS SHOWN ON 5172 S&E BYLAW 50800 & PCL A (RD199324E) S&E S&E BYLAW 50800 Manufactured Home Reg.# B03764.

The property ID is 002-525-836. According to BC Assessment, the property is 36.8 ha (90.93 acres) in extent. The property is zoned AG1 (Agricultural) according to the Richmond Zoning Bylaw 2011 and the property is within the Agricultural Land Reserve (ALR).

3.1 Historical Land Use

I reviewed aerial photography images from 1982, 1986 (the earliest images available via Google™Earth Pro), 2009, and conducted research regarding past use of the property. The farm used to be owned by Jack Bell, who was the first commercial cranberry grower in the province (starting with three acres planted at an unidentified property in 1946)[5]. Jagbar Farms purchased the farm in fall of 1982 and performed their first cranberry harvest on the property in the fall of 1983[6].

The 1982 airphoto shows a large clearing near the current farm storage situated at the River Road driveway entrance. Approximately half of the property is still forested in this photo. By 1986, the site is completely cleared of forest and blueberry established in the northwest corner of the property (where the proposed peat placement is situated). The remainder of the property is a cranberry farm in the 1986 airphoto. There is an irrigation canal established along the southeast side of the property at River Road; this is still in place today. Some access roads were also constructed but these have been upgraded by importing fill (to elevate them above the cranberry bog).

The 2009 airphoto appears to have been taken during the fall when all the surrounding cranberry and blueberry plant leaves have turned red. The farm appears very similar to current day; there are cranberry plants on the majority of the property, as well as a well-developed network of dikes, irrigation canals and reservoirs, and access roads/farm roads. The northwest corner of the property has been filled by soil brought to the site between 1991 and approximately 2005. The remainder of the property has not been filled by imported soil.

[5] https://orderofbc.gov.bc.ca/members/obc-1991/1991-jack-bell/ 1991 Order of British Columbia recipient, Jack Bell. Accessed March 5, 2019

[6] https://digital.lib.sfu.ca/cfu-859/cra0039-005 SFU Digitized Collections: Bell Farms Ltd, May Brothers Farms Ltd, Columbia Cranberry Company Ltd, and Jagbar Farms Ltd and Canadian Farmworkers Union, Local 1 - Labour Relations Board of British Columbia Decision - CRA0039-001. Accessed March 5, 2019

According to a readily available City of Richmond Report[7], Jagbar Farms received approval from the ALC and the City of Richmond in August of 2000 (the date of the staff report) to deposit 52,000 m^3 of fill in the northwest corner of the property. This area is 2.0 ha in extent on the supplied map for the August 2000 report and abuts the reservoir built adjacent to the railway on the west side of the property. The Soil Conservation Permit was issued for five years. Prior to this permit, another soil permit was issued by the ALC on July 17, 1991 for a two year period to deposit 10,000 m^3 of fill on site to grow cranberries and blueberries that were growing on flood-prone land.

3.2 Current Land Use – Property and Surrounding Area

Jagbar Farms has a farm storage facility (constructed 2014 to 2015) located on site, in addition to a manufactured home near the River Road entrance. The majority of the property or approximately 24.7 ha is occupied by cranberry plants or farm infrastructure such as dikes, farm roads, and irrigation canals and reservoirs. Approximately 2600 m^2 of the property situated on the southwest side of property is outdoor storage for farm machinery, including tractors, excavators, harvesting machinery, and implements.

The surrounding area is actively farmed for cranberries, blueberries, and forage crops[8]. There are also several dairy farms in the area. River Road is a heavy industrial area with trucking and manufacturing businesses, shipyards, and railways.

3.3 Climate

The nearest Environment Canada weather station is at Richmond Nature Park[9], located approximately 6.2 km to the southwest at an elevation of 3 m above mean sea level. The records from 1981 to 2010 show a mean annual precipitation of 1262 mm, a daily average temperature of 11°C (among the highest in Canada), and 2244 effective growing (> 5°C) degree days (Environment Canada, 2011).

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[7] https://www.richmond.ca/__shared/assets/0828_item131305.pdf Application for Soil Conservation Permit (Soil Placement). August 22, 2000. Accessed March 5, 2019

[8] Farm Activity information in the surrounding area gathered by data from City of Richmond Interactive Map Program, BC Assessment, and Google Earth Pro imagery for 2018.

[9] http://climate.weather.gc.ca/climate_normals/index_e.html Richmond Nature Park climate station. Accessed March 5, 2019

For comparison, the UBC ClimateWNA_Map[10] program normals data for the period spanning 1981 to 2010 shows that the property area receives approximately 1255 mm of precipitation annually and 2279 effective growing degree days > 5°C. This correlates well with the Richmond Nature Park data.

Due to the distribution of when precipitation falls, the property is designated a 3A(1) in the Climatic Capability for Agriculture scheme of Coligado, 1980. Class 3 aridity limitations indicate drought or aridity between May 1 and September 30 resulting in moisture deficits, which are limiting to plant growth and could require moderately intensive management. This will dictate that certain crops will require irrigation for dry periods in mid-summer to early fall

3.4 Landscape and Topography

The property is situated on a delta formed by the Fraser River, which is located approximately 25 m northeast of the property boundary at River Road. The local topography is level with no bedrock outcrops or discernible streams.

Lulu Island was below sea level and covered by the marine waters of the Salish Sea at the end of the Fraser Glaciation approximately 11,000 years ago. After isostatic rebound (and recession of marine waters) and growth of the delta by deposition of clay and silt by the Fraser River (and later sandy deposits), the land naturally vegetated with forested wetlands Before the property was cleared for farming, it was a forested wetland situated adjacent to the Fraser River intertidal zone.

The landscape has been altered by soil importation in the northwest corner; this has raised the land by an estimated 2.5 m (and up to 3 m) above the natural elevation (see **Photo 2**, below). The remainder of the site has not been elevated by fill; a geodetic control marker located in the southern part of the property (in the cranberry field, **Photo 3**) is situated at approximately 1.8 m above sea level[11]. This is the main topographic information I have found for this area; there is no topographic land survey data (available through Jagbar Farms) or contours available from iMapBC or the Richmond Interactive Map.

[10] http://www.climatewna.com/ ClimateWNA_Map program. Accessed March 5, 2019

[11] http://a100.gov.bc.ca/pub/mascotw/protected/final_long.html?Q_GCM_NO=473793 Geodetic Control Marker, GCM No: 473793. Accessed March 5, 2019

According to the Richmond Interactive Map program[12] the Flood Construction Level (FCL) for developments in this area is 3.5 m GSC; this is the minimum elevation of the base of the foundation required for any new building (including the farm storage facility) in this part of the Fraser River floodplain. River Road is a dike that forms the eastern limit of the North Dike of Lulu Island[13].

The surficial geology of this area was mapped by Armstrong (1980) as post-glacial Salish Sediments. These sediments are composed of bog, swamp and shallow lake deposits. There is lowland peat up to 14 m thick overlying Fraser River overbank deposits comprised of sand, silt, and clay.

[12] https://maps.richmond.ca/rim/ Richmond Interactive Map Program. V. 1.12. Accessed March 5, 2019

[13] http://www.env.gov.bc.ca/wsd/public_safety/flood/maps/richmond_3.pdf Ministry of Environment: Richmond Dike Map. Accessed March 5, 2019

PHOTO 2. APPROXIMATELY 2.5 M OF FILL HAS BEEN PREVIOUSLY PLACED
Over the northwest corner of the property, including where the farm storage facility is situated at the River Road entrance.

PHOTO 3. LOOKING NORTHEAST
Across the cranberry farm. This photo was taken from an access road that also acts as a dike. The field is partly flooded by melting snow and ice.

The majority of cranberry farm is situated in a flooded peat bog that has been diked for over 30 years. Mr. Sidhu and I did not excavate the peat soils due to flooded conditions; furthermore, we did not want to damage the producing cranberry plants. The mapped and assessed soils are described in detail in the next sections of this report.

3.5 Published Soils and Land Capability Data

This section of the report summarizes the characteristics of the surveyed and mapped soils and Land Capability for Agriculture (LCA) ratings for the property. LCA ratings describe the general suitability of the land for agriculture as seven classes for mineral soil and seven classes for organic soil.

The capability classes are modified into subclasses when limitations to agriculture exist. There are twelve subclasses for mineral soils and nine subclasses for organic soils. A detailed description of LCA rating classes and subclasses is provided in Appendix C.

The soils in this area were mapped by Luttmerding in the 1980's as part of the soil survey titled "Soils of the Langley-Vancouver Map Area". The soil maps were printed at a scale of 1:50,000 and are based on a reconnaissance level soil survey and air photo interpretation and represent a broad interpretation of soils and agricultural capability. I provide a site-specific assessment of the agricultural capability of the property in Section 4, below.

Soil survey maps show that the majority of the property is mapped as the Lulu and Richmond soils (south and west sides), which are organic soils. A small portion of the northern part of the property, including the proposed soil placement site, is mapped as a mix of the Delta and Blundell soils, which are mineral soils with an organic capping. The remaining east portion of the property at River Road is mapped as the Tsawwassen soils, which are anthropogenic (human-modified) sands and gravelly sands dredged and diked along the Fraser River. A summary of the mapped soil properties is summarized in Table 1 and are shown on **Figure 2** in Appendix A. I emphasize that the soils surveyed by Luttmerding are not necessarily accurate but in absence of test pits in the cranberry field, provide a snapshot of the potential soils that may be found in this area.

Table 1. Summary of Mapped[14] Soil Properties

Soil Series	Parent Material	Texture	Drainage	Classification
Lulu	Partially decomposed organic deposits (40 cm – 1.6 m), overlying deltaic sediments	Organics: mesic Deltaic sediments: moderately-fine to fine silty clay to silty clay loam.	Very poorly drained	Terric Mesisol
Richmond	Well-decomposed organic deposits (40 cm – 1.6 m) overlying deltaic sediments	Organics: humic Deltaic sediments: fine to medium-textured silt loam to silty clay loam.	Very poorly drained	Terric Humisol
Blundell	10 – 40 cm organic material over medium-textured deltaic deposits	Poorly decomposed organic surface with medium grained sandy silt loam under layering. Saline and peaty conditions present.	Poor to very poor; high groundwater table	Rego Gleysol
Delta	Medium to moderately fine-textured deltaic deposits	Silt loam or silty clay loam grading to silty clay loam or silty clay. Saline conditions present.	Poor; high groundwater table	Orthic Humic Gleysol
Tsawwassen	Anthropogenic (placed for dike, road construction, modified by people)	Coarse, gravelly sand	Moderately Well Drained	Orthic Regosol

The Soil Capability for Agriculture Map (Canada Land Inventory, 1998)[15] shows the property area is dominated by organic soils and is therefore not assigned a capability class. However, according to the Province of B.C. Soil Information Finder Tool (SIFT), which is based on data collected from Provincial Soil Surveys, the assessed capability of land for agriculture for the Delta and Blundell soil complex is Class 4W, 3N, 2D. For the Lulu and Richmond Soils, it is O4WL, and for the Tsawwassen Soils, it is 5FA. A description of each of these capability classes is described in Table 2, below.

[14]Based on mapping by Luttmerding (1980) and the Soil Information Finder Tool; actual soils on site are described in Section 4.0 of this report.

[15]http://sis.agr.gc.ca/cansis/publications/maps/cli/250k/agr/cli_250k_agr_92g_sw.jpg Soil Capability for Agriculture. Map 92g-SW. Vancouver.

Table 2. Summary of Mapped[16] Land Capability for Agriculture

Soil Series	LCA Rating	Description of Land Capability Rating
Lulu & Richmond Soils	O4WL	Organic Soils with Class 4W limitation and Class 4L limitation. Class 4W is defined as "frequent or continuous occurrence of excess water during the growing period causing moderate crop damage and occasional crop loss. Water level is near the soil surface during most of the winter and/or until late spring preventing seeding in some years, or the soil is very poorly drained". Class 4L -
Blundell & Delta Soils	4W, 3N, 2D	Class 4W – frequent or continuous occurrence of excess water during the growing period or very poorly drained, as above for the Lulu, Richmond soils. Class 3N (salinity) – soils have moderate salt content from 0 to 50 cm and/or have high salt content from 50 to 100 cm [depth]. Most crops are adversely affected. Class 2D (undesirable soil structure and/or low perviousness) – soils have a root restricting layer within 50 to 75 cm of the mineral soil surface, or the upper 25 cm has a slightly sticky wet consistent and usually has a texture of silty clay loam, clay loam, or sandy clay, or the slowest permeability is usually 0.5 to 1.0 cm/hr in the upper 100 cm.
Tsawwassen	5FA	Class 5F (fertility) – soils with very severe nutrient imbalances, extreme acidity or alkalinity and/or extremely high levels of carbonates. Fertility status restricts the range of crops. Class 5A (soil moisture deficiency) – soil moisture deficit is from 266 to 340 mm.

4 Field Assessment

I visited the property on February 21, 2019 to assess the soils in the proposed soil placement site and discuss the importation plan with Mr. Sidhu. Conditions were sunny with excellent visibility; recent snowfall had begun to melt, but was partly frozen with ice throughout the area. I was met on site by Mr. Sidhu, who excavated the soil pits with a machine in the proposed placement site.

[16] Based on mapping by Luttmerding (1980) and the Soil Information Finder Tool; actual soils on site are described in Section 4.0 of this report.

As part of my assessment, I have described soil profiles in three excavated soil pits that ranged in depth from 0.7 m to 1.3 m. The first soil pit was dug to refusal by the machine due to dense subsoils. Soil pit locations were selected randomly around the northwest part of the property (the proposed placement area) and were marked by GPS in the field (**Figure 1** in Appendix A). Detailed observations of soil properties, including soil texture, drainage, consistency, structure, colour, horizon classification and thickness, and evidence of gleying or mottling were noted during my assessment. Soil Pit Descriptions and photos are located in Appendix B. Note that no soil nutrient or pH testing was performed in this assessment.

Following my soil survey, I traversed the site and made additional surface observations in the areas around the test pits, such as the location of ditches, vegetation, and other features such as dikes and irrigation canals. These are described by Placemark Number (PM #) and shown on **Figure 1**.

4.1 General Observations

The northwest portion of the property has been filled and is situated approximately 2.5 to 3 m (estimated – the property has not been surveyed at this time however a survey will be prepared if requested as part of a soil permit application with the City of Richmond) above the grade of River Road and the remainder of the property, which is a cranberry farm.

Slopes over the northwest area are less than 2% (near level). At Placemarks 7, 9, and 14, I observed three stockpiles between 10 m^3 and 20 m^3 containing boulders, concrete, rebar, and gyproc. As outlined in the Soil Placement Plan (Section 5.0), these should be removed prior to peat placement.

Along the northern property line, I observed that the majority (but not all) of the neighbouring properties have been elevated by soil placement. I have surmised that this has been done to bring the residences to the required Flood Construction Level for the area (3.5 m GSC currently), which is approximately 1.7 m above the natural grade recorded by local geodetic markers. There are no obvious agricultural activities being conducted on these smaller properties. Between the properties, there is extensive growth of blackberry, surrounded by large alder and cottonwood trees.

PHOTO 4. BOULDER, CONCRETE STOCKPILE SITUATED AT PM 7 IN THE PROPOSED PLACEMENT AREA.

On the west side of the proposed soil placement area, I observed that an approximately 0.5 m high berm has been installed. Beyond this, there is a water reservoir constructed for irrigation. Adjacent to this reservoir, there is an access road and dike that is owned by CN Rail. The railway is situated to the west of the access road. Beyond the railway there are the neighbouring cranberry and blueberry farms.

The proposed soil placement area does not have any vegetation nor has it been prepared for farming (i.e. decompacted, raked, diked, or planted). There was some snowmelt and ice accumulation on the surface. During our excavation, the pits filled somewhat quickly with water from both the surface and from high water tables.

PHOTO 5. LOOKING NORTHWEST
Along the western property line at the reservoir, access road/dike, and the CN Railway. The property boundary is indicated by the black dashed line.

PHOTO 6. STOCKPILE OF COARSE SAND AND GRAVEL
Situated at PM 18 on the property – this will be used to construct dikes around the imported peat, which will allow cranberry farming.

PHOTO 7. LOOKING NORTHWARDS
Across the proposed soil placement area, which has been filled as of 2005 and does not feature any vegetation.

4.2 Soil Observations

The soil brought to the site between 1991 and 2005 is a mix of many soil types that have been placed to construct a soil profile. Since this is not native soil, it cannot be correlated to the mapped soil series of Luttmerding (1980).

The soil has been in place for between 14 and 28 years, which has allowed some development of the profile through natural pedogenic processes. There is still great variation in texture, colouring, and horizon thickness between the three profiles.

In Pit 1, soil textures range from a sandy loam to a sandy clay loam with approximately 5% cobbles and 1% boulders at 50 cm. The lowest horizon is very firm due to compaction during soil placement activities in the past. There is light gleying in the middle Bgj horizon due to fluctuating water tables.

Soil Pit 2 features approximately 1 m of sandy loam containing coarse sand and 10% coarse gravel. Below this, the texture is loamy sand with between 5 and 10% coarse gravel. The pit was very wet when excavated and quickly collapsed. The lower horizon extended to 1.3 m deep and was found to be firm due to compaction (similar to Pit 1).

The last pit, Pit 3, was found to contain exclusively loamy sand to a depth of 1 m. The upper B horizon, which extends to approximately 55 cm, has dark grey to dark brown colouring that is highly variable, and contains approximately 5% coarse gravel. The lower horizon has 10% coarse gravel and is an olive brown to olive grey colour.

All soil pits were wet due to both surface flooding (melting snow and ice) and high groundwater tables (saturated soil conditions). There is light gleying observed in Pits 1 and 2 whereas Pit 3 has dominantly brown and olive colours.

As these are anthropogenic soils that have not changed significantly since they were placed between 1991 and 2005, I have not attempted to classify them using the Canadian System for Soil Classification.

4.3 Land Capability for Agriculture

In this section I will indicate my LCA ratings for the surveyed soil in the northwest portion of the site using the specific criteria presented in Land Capability Classification for Agriculture in British Columbia (Kenk and Cotic, 1983). The agricultural capability of the proposed placement area is dependent upon the existing soil and site conditions.

Based on my soil pit observations, I have found that the dominant limitation for agriculture is low fertility[17] at a Class 3F due to low quantities of organic matter in the soil (inferred by soil texture and colouring, but not soil testing at this time) and low nutrient holding capacity due to sandy loam and loamy sand soil textures. This was found in ¨Pits 2 and 3.

In Pit 2, there is a stoniness limitation of Class 2P due to the 10% coarse gravels present in the upper 25 cm of the soil. This is improvable through stone removal via rake, or by placement of 0.6 m of peat soil without coarse fragments.

There is also a Class 3D limitation found in both Pits 1 and 3 due to very firm subsoils. In Pit 1, this starts at 0.5 m (very firm sandy clay loam) and in Pit 3 this starts at 0.55 m due to very firm loamy sand. This is due to compaction of the soil during placement activities. This can be improved somewhat through sufficient deep ploughing or ripping to break up the dense subsoil. Deep ripping must be done when the soil is not saturated, (generally

[17] Generally, fertility can be assigned following analysis by labs but we have found that actual test samples can return a wide range of nutrient and pH values, particularly if the soil is imported from several sites. At this time, we have not performed soil testing due to the anticipated large differences between samples tested at this site.

Mid to late summer). It is possible that there has been some cementation of the horizons over time. Ripping may be required more than once, since soils can regain high bulk densities over time. Alternatively, the placement of 0.6 m of uncompacted peat at the surface will negate the 2D limitation, as this horizon will be over 1 m deep.

For all soil pits, this is a mild Class 2W wetness limitation due to locally high water tables, low perviousness (compacted subsoils in pits 1 and 3), and surface ponding throughout the proposed peat placement area.

The 2W, 2P and 3D limitations can only be improved to the next most serious limitation, which is the fertility limitation. Mr. Sidhu is seeking to improve the 3F limitation by importing exclusively peat topsoils leveled to 0.6 m deep and planting cranberry plants.

5 Topsoil Placement Plan

5.1 Rationale for Topsoil Placement

Between 1991 and 2005, Mr. Sidhu imported subsoils with two permits issued by the ALC and the City of Richmond. The soil was placed for the following purposes:

- To elevate the land above the natural grade (which is approximately 1.8 m above sea level, as indicated by the geodetic control marker located in the cranberry field to the south of the proposed soil placement area) to improve the agricultural limitations of excess wetness and high water tables in the naturally-occurring peat soils, and re-plant cranberries here following placement;
- To bring sand to the site, which is required in cranberry bog construction to ensure rapid water movement;
- To elevate the land to the Flood Construction Level required to construct the farm storage facility situated at River Road (the FCL is 3.5 m GSC); and
- To maintaining the farm access roads and dikes on the site. Formerly, many access roads were built using sawdust and wood materials but since many sawmills have closed around the province, it is harder to obtain these products (according to Mr. Sidhu). There is a stockpile of sand and minor gravel that is approximately 1400 m^3 situated at Placemark 18 on Figure 1.

According to the New Brunswick Department of Agriculture, Fisheries and Aquaculture[18]:

> *"Sand is used in cranberry bog construction to ensure rapid water movement through the upper soil layer and prevent water ponding on the bed surface.* ***Cranberries will not flourish under constantly wet soil conditions.*** *Ponded water in the beds may cause problems with root rot and eventual death of the vines. A moist, well oxygenated root zone approximately six inches deep is preferred by the plants. Ideal sand texture is classified as 80% coarse sands (particle size from 0.2 &2 mm) and 18% fine sand (particle size between 0.02 and 0.2 mm). This size distribution allows enough coarse material for good drainage …"*

The northwest portion of the site has been prepared through importation of sandy loams, loamy sand, and minor sandy clay loams but requires both surrounding dikes and a "peat capping" to provide organic matter to the cranberry plants. This is preferred over importing sawdust, which is difficult to source due to the closure of sawmills throughout the province.

The BC Cranberry Grower's Association recommends up to 30 cm of sawdust when using this as an organic matter amendment[19]. Mr. Sidhu would like to import 0.6 m of peat as the peat will decompose and settle over time and as such will not be permanently situated at 0.6 m above grade. Sand-based cranberry plantings depend on fertilizers for their nutrients for optimal yields[20].

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[18] https://www2.gnb.ca/content/gnb/en/departments/10/agriculture/content/land_development/cranberry.html New Brunswick Department of Agriculture, Fisheries and Aquaculture: Cranberry Site Selection. Accessed March 6, 2019

[19] https://delta.civicweb.net/document/39534 Ministry of Agriculture and Lands, Guidelines for Farm Practices Involving Fill. 2006. Accessed March 6, 2019

[20] http://www.umass.edu/cranberry/downloads/chartbooks/2015%20chartbook/2015%20Chart%20book%20FINAL%20Nutrition.pdf?_ga=1.76704021.1821567400.1483116588 University of Massachusetts: Nutrition Management For Producing Bogs 2015. Accessed March 6, 2019

5.2 Basic Topsoil Importation Plan

I recommend that topsoil placement proceed through a series of well-defined steps:

Step 1. Removal of construction waste (i.e. concrete, gyproc) and boulders from the surface of the proposed placement area.

This should be done prior to soil placement so that this material is not inadvertently mixed with the peat soils brought to the site. The boulders may be used in road or berm construction but I will defer this to Mr. Sidhu. The remaining waste should be removed from the property as it is not suitable for agricultural land.

Step 2. Construction of the dikes surrounding the placement area.

Prior to topsoil importation, I recommend construction the dikes required around the north, east, and south sides of the placement area. There is a dike built along the west side of the placement area that is approximately 0.5 m high – this may require improvements.

If the dikes are constructed prior to placement, this will reduce the potential for nuisance transport of sediment-laden water off-site, and reduce compaction of the peat soils if done after placement (due to machines operating around the perimeter. I will defer the exact order of operations to Mr. Sidhu but have made this recommendation on the basis of both erosion and sediment control and good topsoil management practices.

Step 3. Importation and monitoring of peat topsoil

Next, good quality well-draining, black to dark brown and mesic to humic[21] peat soil ideally sourced from local sites (Richmond, Delta, and potentially Burnaby) is spread over the deposit area. I estimate that approximately 32,000 m^3 of fill will be spread over the northwest site area of 5.3 ha. The peat will be spread to a uniform thickness of 0.6 m, with no slopes or varying thickness required. The soil placement area, depth of peat, and volume of soil is shown on **Figure 3** in Appendix A. The proposed dike locations are also shown on this figure.

[21] If unsure of the decomposition of the sourced peat soils, Madrone or a retained agrologist can assess these soils on site or at their source site.

There will be decomposition and settling of the peat soils over time. As such, the 0.6 m grade elevation is not expected to be maintained.

Peat soils should not be handled during excessively wet conditions as this may result in compaction of the soils. Operations should cease during periods of high precipitation, i.e. 25 mm in a 24 hour period. If peat soils are stockpiled, the piles should not exceed 5 m in height and should slope less than 30%. This will reduce erosion of the stockpiles.

According to Mr. Sidhu, the preferred access is via the separate entrance with the civic address of 20000 River Road. This is shown on **Figure 3**. Trucks will travel along graveled access roads to the placement site, which should clean the truck tires. If excessively wet conditions occur or soil is tracking onto River Road, a wheel wash can be installed at the 20000 River Road entrance. This access point is well clear of obstructions (i.e. no trees or shrubs surrounding the entrance). As well, there is a gate installed here to control access to the site. River Road is an approved truck route close to Westminster Highway and Highway 91.

5.3 Sourced Peat Soil

5.3.1 Physical Properties of Acceptable Source Soil

Soil sourced and brought to site should be a rich dark colour and humic to mesic in organic decomposition. Peat soils with a high quantity of roots, particularly large roots and tree branches should be screened before placement. Products of wood-processing such as wood shavings, sawdust or wood chips are not appropriate. Soils with high clay content (which can happen if machines "grab" too much of the underlying silty clay and clay loam subsoils common in the Richmond, Lulu, and Triggs soils of the Richmond area) or coarse fragments larger than fine gravels (2.5 cm or greater) are not desirable and should be avoided.

Soils should be checked for these parameters ideally before arriving on site. If stony soils are unintentionally brought onto the site, the soils should be raked or sorted to remove the stones. A standard operating procedure (SOP) can be followed – an example SOP has been included in Appendix E.

Soils should be free of foreign or non-soil material and uncontaminated. Foreign material includes but is not limited to concrete, asphalt, waste, garbage, and lumber. As a large quantity of soil is sourced from properties featuring recently-demolished residences, I advise Mr. Sidhu and any contracted earthworks operators to check that demolished house

waste (including potential underground storage tanks, or UST's) has been removed from the source site prior to any excavations and transfers of soil to the property.

Weedy or invasive species control should be practiced, under the direction of the monitoring Agrologist. After the topsoil has been placed, the site should be inspected to determine if further treatments are necessary before establishing the cranberry crop. Since Mr. Sidhu is a highly experienced cranberry farmer, I will defer the exact treatments and preparations of the topsoil for cranberry planting to him.

To reiterate, any soil imported would have to be monitored to ensure it does not contain:

- Excessive coarse gravel, cobbles or stones;
- Contaminants;
- Foreign material;
- Excessive clay;
- Invasive plant species such as Japanese Knotweed and Himalayan Blackberry; or
- Other undesirable substances.

5.3.2 Chemical Properties of Acceptable Fill Material

Contaminated soils must not be used as fill. The supplier should warrant that the source soil is free from contamination. Fill should not come from areas that have histories of industrial or commercial land use. If contaminated fill material is brought onto the site, Jagbar Farms will assume liability for remediating the site or removing the contaminated material. **I encourage Jagbar Farms to include an agreement with their earthworks contractors and soil truckers that assigns liability for contaminated soils. An example inclusion agreement is included in Appendix D of this report.**

Currently, Madrone conducts a desktop environmental assessment as well as a site visit to assess for any visible non-soil material and invasive species in each fill site. I also recommend obtaining Phase 1 reports for large sites (i.e. >3000 m^3 of soil) that are less than 2 years old from contractors. If a Phase 1 report is not available, I encourage Mr. Sidhu or his earthworks contractor to contact Madrone for a pre-importation site assessment and desktop study.

6 Hydrology

There are no mapped or observed natural watercourses on site. The entire farm has a contained reservoir and dike system such that no drainage leaves the site. I understand that dikes will be constructed around the proposed placement area, which will contain any surface water accumulated in this area.

Jagbar Farms has maintained a contained reservoir and drainage system on this property for nearly 40 years and as such, I will defer the exact design of their drainage and irrigation systems to them. The City of Richmond may require detailed drainage plans as part of a soil placement permit.

7 Post-Fill Land Capability for Agriculture

Following proper topsoil placement as per my recommendations, I estimate that the post-fill Land Capability for Agriculture ratings will improve from Class 3F minor to moderate fertility limitations to Class 2W, or mild limitations due to high water tables (excess wetness). The undesirable soil structure/root restricting layer limitation (3D) and the stoniness limitation (2P), will be eliminated as the existing subsurface will then be too deep to affect the growth of cranberries (>1.0 m) through placement of 0.6 m of peat soils.

Jagbar Farms has over 35 years of cranberry farming experience and will amend the peat soils to ensure the proper pH range is reached prior to planting of the cranberry plants following topsoil placement.

8 Agricultural Plan – City of Richmond

The City of Richmond has required a proposed Agricultural Plan including:

1. Drainage Requirements/Rationale
2. Irrigation Requirements/Rationale and Water Sources
3. Proposed Agricultural Operator
4. Proposed Planting Plan on a Site Plan
5. Agricultural Improvement Cost Estimate (including material costs, drainage costs, irrigation costs and installation costs)

8.1 Drainage and Irrigation

The property dykes, water reservoirs, pumps, and most of the irrigation system were designed and implemented prior to the first harvest in the early 1980's. The entire cranberry farm (existing, **not** the proposed northwest corner) is dyked, with access roads established on these dykes. All water is therefore kept within the dykes.

Irrigation water is pumped from the Fraser River; a City of Richmond drainage lift station runs through the approximate centre of the property (**Figure 4**). The drainage ditch connects to a pump house situated in the large (8-9 m wide) water reservoirs that run across the entire western perimeter of the property. In the southeast corner of the property (at River Road), there is an approximately 400 m long ditch that drains southeast; this is the only drainage on the property that I could locate that connects to city infrastructure.

According to the City of Richmond Interactive Map, there are ditches situated on either side of the CN railway; these drain northwest towards No. 8 Road. The farm's water reservoirs are situated on the east side of the railway and they do not appear to connect as they are separated by a road (CN railway property).

The entire northern property line does not have any installed drainage between neighbouring properties. Dykes are planned along this perimeter to retain water in the cranberry farm proposed for this area.

The proposed extension of the cranberry farm will utilize the same water systems as current. The reservoirs to the west of the site will be used to irrigate the field, and flood the field during the wet pick in October.

8.2 Agricultural Operator

The proposed agricultural operator is Jagbar Farms. The farm hires labourers to maintain the field year-long. Jagbar Farms has been an established farm business since the 1970's.

8.3 Agricultural Plan – Planting & Costs

The peat will settle for one year (this is a standard practice). The soil will be tested and adjusted for nutrients (i.e. nitrate, phosphorus, potassium, sulphur) and pH prior to planting.

According to Mr. Sidhu, cranberry vines are planted in March. The vines are acquired from an American cranberry plant seller. The required amount of vines is approximately 2000 lbs per acre. This equates to approximately 26,000 lbs of vines to plant the 5.3 ha area (13. 09 acres). The planting plan is shown on **Figure 5**.

From many years of experience in farming cranberries, Mr. Sidhu is well informed of the costs of planting per acre. This includes irrigation, soil management, and farm labour. The current cost to plant the 5.3 ha proposed cranberry farm extension area is $25,000 to $30,000 per acre.

This equates to $330,000 to $393,000. This includes labour to construct the berms and irrigation systems for the area.

9 Summary of Recommendations

Jagbar Farms wishes to import approximately 32,000 m^3 of exclusively peat topsoils to improve primarily the fertility limitations for cranberry bog agriculture in the northwest portion of the existing farm. Following soil placement, a cranberry bog will be established here. Based on the existing site conditions, I have proposed the following basic plan for importing soil to the site at 19740 River Road:

1. Prior to any importation, remove all identified construction waste, including large boulders, concrete, rebar, gyproc, and garbage as shown at Placemarks 7, 9, and 14 on **Figure 1** of this report. Due to the layer of snow on the site, there may be additional boulders and construction debris scattered over the surface that also require removal. A large rake attachment can be used to remove large (i.e. >0.2 m) fragments but hand removal may be required for smaller pieces not removed by the rake.
2. I recommend construction the dikes **before** placement of the peat soil to avoid potential run-off issues to adjacent lands on the north, northeast /east (River Road) and west sides (reservoir, then the railway).

3 Since Jagbar Farms is experienced in dike construction and maintenance and has the required materials available on site, I will defer the exact installation of the dikes to them.

4 Placing locally sourced (if possible), good-quality peat on the surface of the 5.3 ha fill area and spreading to a uniform depth of 0.6 m. A surveyor can assist with staking the final elevation throughout this area to ensure that the thickness does not exceed 0.6 m.

5 The sourced peat soil should consist of clean soil from an uncontaminated source; it should have less than 20% coarse fragments (i.e. sediment > 2.5 cm), should not be clay-rich, and should not contain any foreign material. Large roots and woody debris should also be avoided as this may pose a hindrance to cultivation.

6 Madrone can assist with screening soil sites for potential contaminants (preliminary studies) and assessing coarse fragment content of incoming soil loads. Sites should also be checked for potential invasive plant species.

7 Since the cranberry bog will be intentionally flooded to "wet pick" the berries every fall, there are no constructed slopes required to drain the site.

8 The soil placement operation should be monitored at regular intervals through the process. I suggest a monitoring schedule in Section 8, below.

9 Once complete a final report should be issued on the condition and final, improved land capability of the filled area. It is expected that this project will require approximately 2 years to complete however this depends on how quickly peat soils can be sourced and brought to the site. A large subdivision excavation, for example, may yield a large portion of peat soils in a very short time.

9.1 Monitoring

Should Mr. Sidhu's soil placement application be jointly approved by the ALC and the City of Richmond, the terms of the soil deposit permit will indicate that Madrone is expected to conduct inspections of the site and materials and to provide inspection reports.

Mr. Sidhu or his contractor (if he selects one as an agent in this process) should contact Madrone before beginning any site preparation work or topsoil placement to develop a monitoring schedule that meets the conditions of its permit and conforms to my recommendations for the site.

Monitoring visits should be scheduled to coincide with important project milestones and randomly when the site is active. The important milestones are:

- The removal of all construction debris and boulders from the soil placement area;
- The construction of the dikes around the soil placement area prior to peat importation, to ensure that no off-site transport of sediment or excess water (which can be introduced by imported soils if transported in a wet state) off the site onto neighbouring lands, which can pose a nuisance. At this stage an inspection by the City of Richmond may be required as well.
- The beginning and end of peat importation, to ensure that the peat has sufficient organic matter (mesic to humic in decomposition), is free of undesirable materials and textures (i.e. excess clay), and to ensure that it has been placed at the intended thickness of 0.6 m uniformly throughout the placement area.
- When the peat has been completely spread and is prepared for cranberry planting at which point a closure report can be prepared for the project and issued to the ALC and the City of Richmond.

Furthermore, Madrone or your Agrologist monitor will inspect the site for the spread of any invasive plant species or soil erosion and transport issues (i.e. peat stockpiles sloping too steeply, resulting in rill erosion).

9.2 Reporting

I recommend preparing periodic monitoring reports every 3000 m^3 of imported soil during the first year and reports every 5000 m^3 after the first year if there are no significant project issues (such as excessive soil stoniness, invasive species spread). In addition, a closure report should be prepared once the project is complete. The report should include an assessment of the final land capability for agriculture ratings and a comparison between the initial and final LCA ratings.

It should contain an estimate of the volume of topsoil placed and details about fill source site. I recommend that accurate and complete records of all fill brought to the site, including truck counts, be kept. A Traffic Management Plan can be prepared outlining the proposed truck routes to the site upon request by the City of Richmond following submission of this report.

10 Conclusions

Experienced cranberry farmer Minder Sidhu of Jagbar Farms proposes to place approximately 32, 000 m³ of peat topsoils to 5.3 ha of the northwest portion of the property to improve moderate soil infertility (3F due to sandy subsoils and low nutrient holding capacity) and dense subsoil (3D) limitations, in addition to minor stoniness (2P). The final land capability is predicted to be a Class 2W due to excess water (2W) in the winter months.

The placement of a peat capping in the northwest placement area of the property will introduce organic matter required for new cranberry plants that will be grown here. This will bring Jagbar's total cranberry production to approximately 30 ha.

PHOTO 8. CRANBERRY THRESHING MACHINE DURING WET PICK IN OCTOBER.
Photo Credit: Anton Bielousov. http://sakvoiazh.ru/

Prepared by:

**This is a digitally signed duplicate of the official manually signed and sealed document*

BRITISH COLUMBIA INSTITUTE OF AGROLOGISTS 3050 Jessica Stewart P.Ag.

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12 Limitations

The evaluations contained in this report are based on professional judgment, calculations, and experience. They are inherently imprecise. Soil, agricultural, hydrological, and drainage conditions other than those indicated above may exist on the site. If such conditions are observed, Madrone should be contacted so that this report may be reviewed and amended accordingly.

The recommendations contained in this report pertain only to the site conditions observed by Madrone at the time of the inspection. This report was prepared considering circumstances applying specifically to the client. It is intended only for internal use by the client for the purposes for which it was commissioned and for use by government agencies regulating the specific activities to which it pertains. It is not reasonable for other parties to rely on the observations or conclusions contained herein.

Madrone completed the field survey and prepared the report in a manner consistent with current provincial standards and on par or better than the level of care normally exercised by Professional Agrologists currently practicing in the area under similar conditions and budgetary constraints. Madrone offers no other warranties, either expressed or implied.

APPENDIX A

Maps & Figures

MADRONE environmental services ltd	**PROJECT:** Fill Assessment: 19740 River Road		**LOCATION:** Richmond, BC	**CLIENT:** Jagbar Farms	**DOSSIER:** 19.0063
	ASSESSED BY: Jessica Stewart, G.I.T., P.Ag.	**FIELD VISIT:** February 14, 2019	**MAP SCALE:** 1:5,500	**MAPPING DATE:** March 06, 2019	**DRAWN BY:** Jessi Yellowlees

FIGURE 1: Overview Of Property

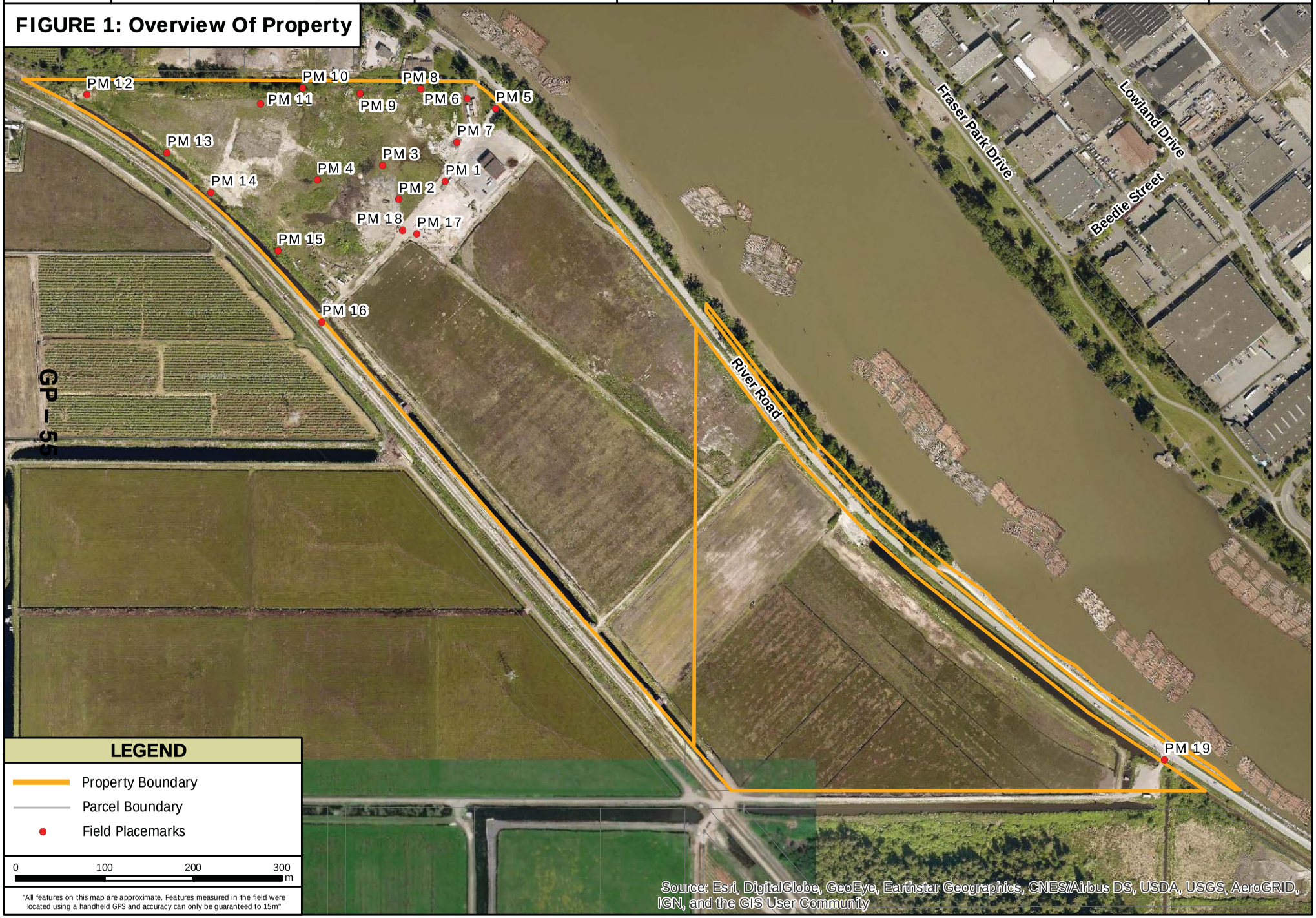


Figure 2. Soil Information Finder Tool - Surveyed Soils by Luttmerding (1980)

BC Soil Survey Polygons

1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user

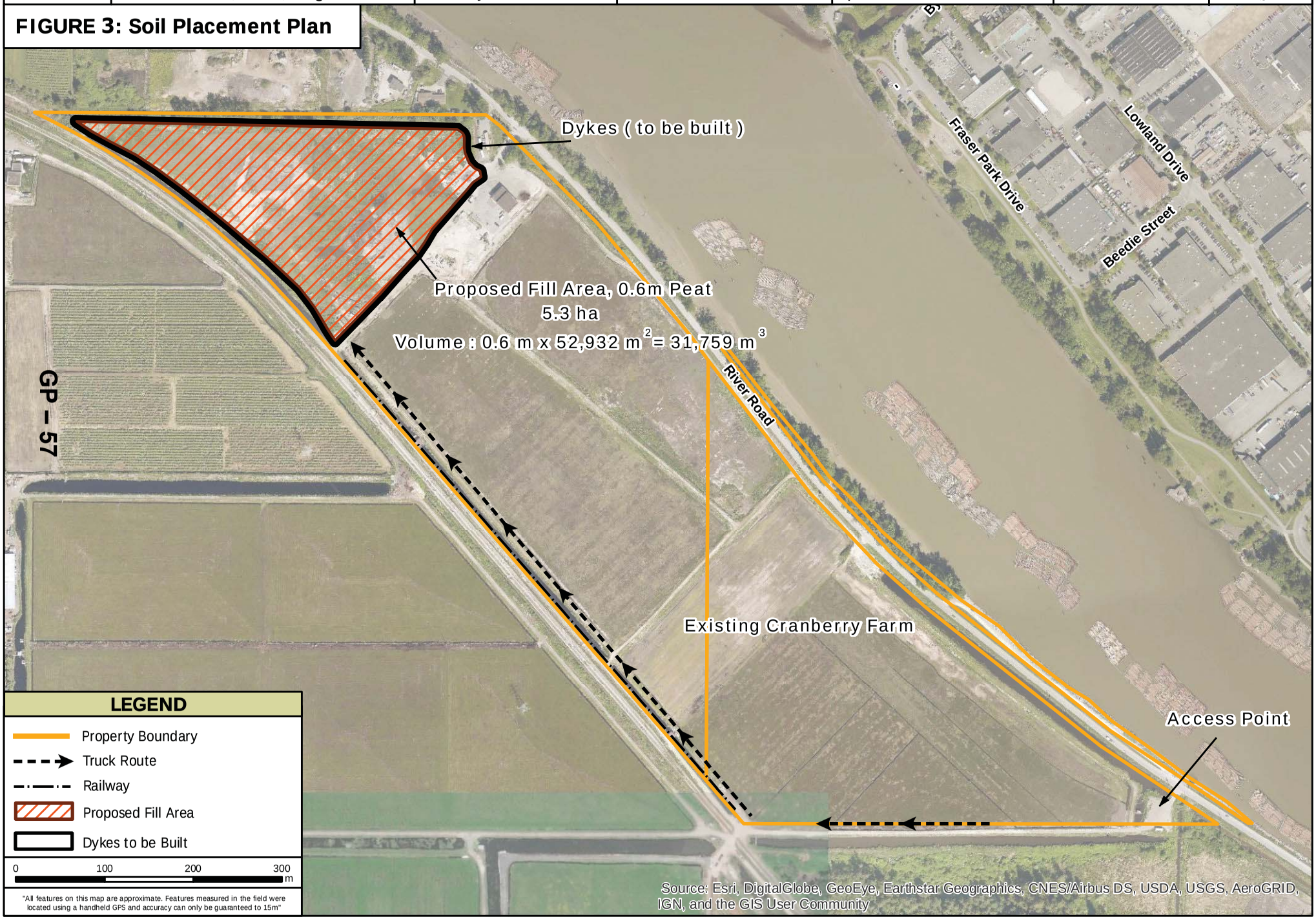
https://governmentofbc.maps.arcgis.com/apps/MapSeries/index.html?appid=cc25e43525c5471ca7b13d639bbcd7aa

Web AppBuilder for ArcGIS

Burnaby, USDA FSA, DigitalGlobe, GeoEye, CNES/Airbus DS | Esri, HERE, Garmin, iPC, NRCan |

MADRONE environmental services ltd.	**PROJECT:** Fill Assessment: 19740 River Road		**LOCATION:** Richmond, BC	**CLIENT:** Jagbar Farms	**DOSSIER:** 19.0063
	ASSESSED BY: Jessica Stewart, G.I.T., P.Ag.	**FIELD VISIT:** February 14, 2019	**MAP SCALE:** 1:5,500	**MAPPING DATE:** April 11, 2019	**DRAWN BY:** Jessi Yellowlees

FIGURE 3: Soil Placement Plan



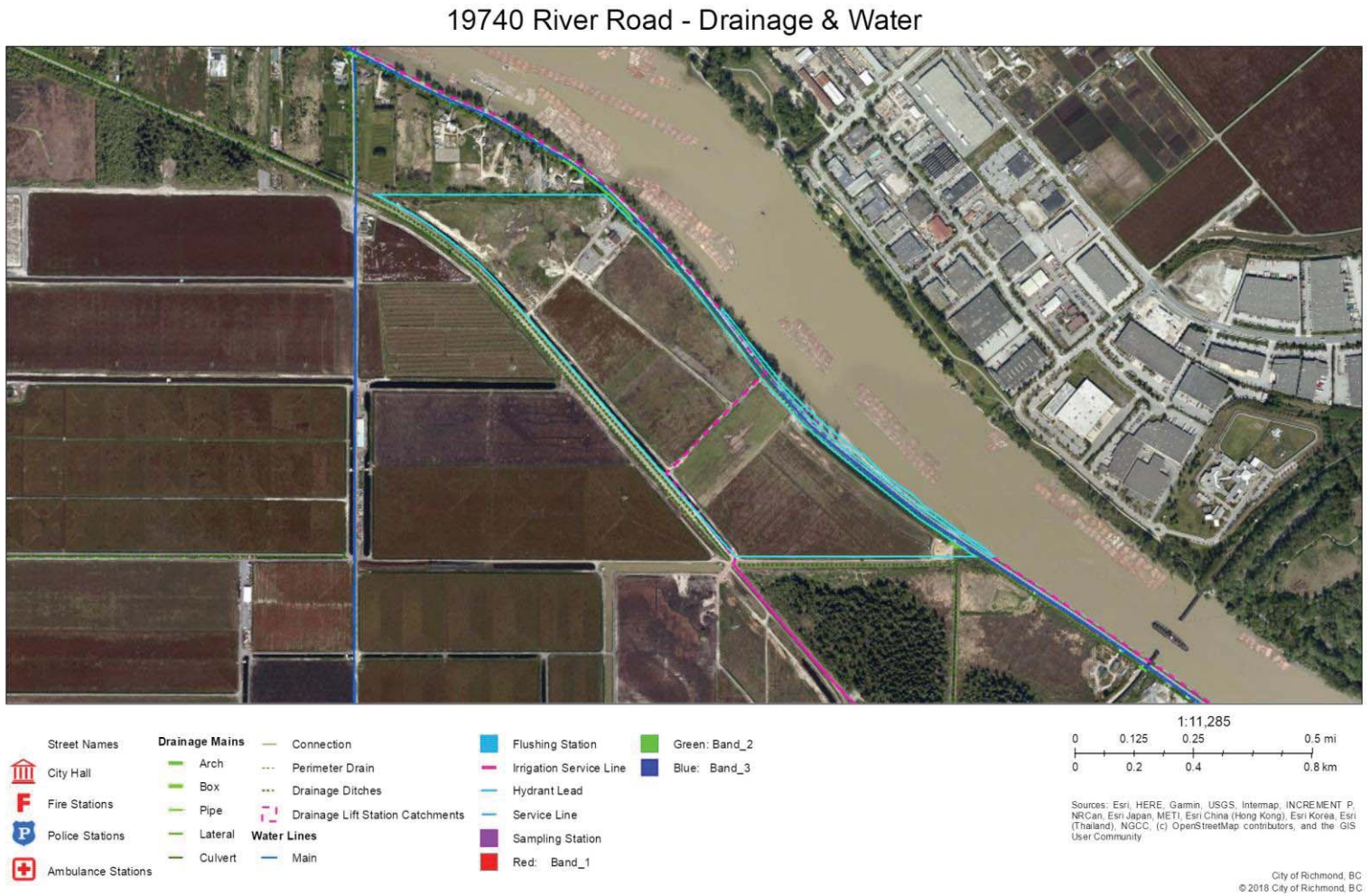
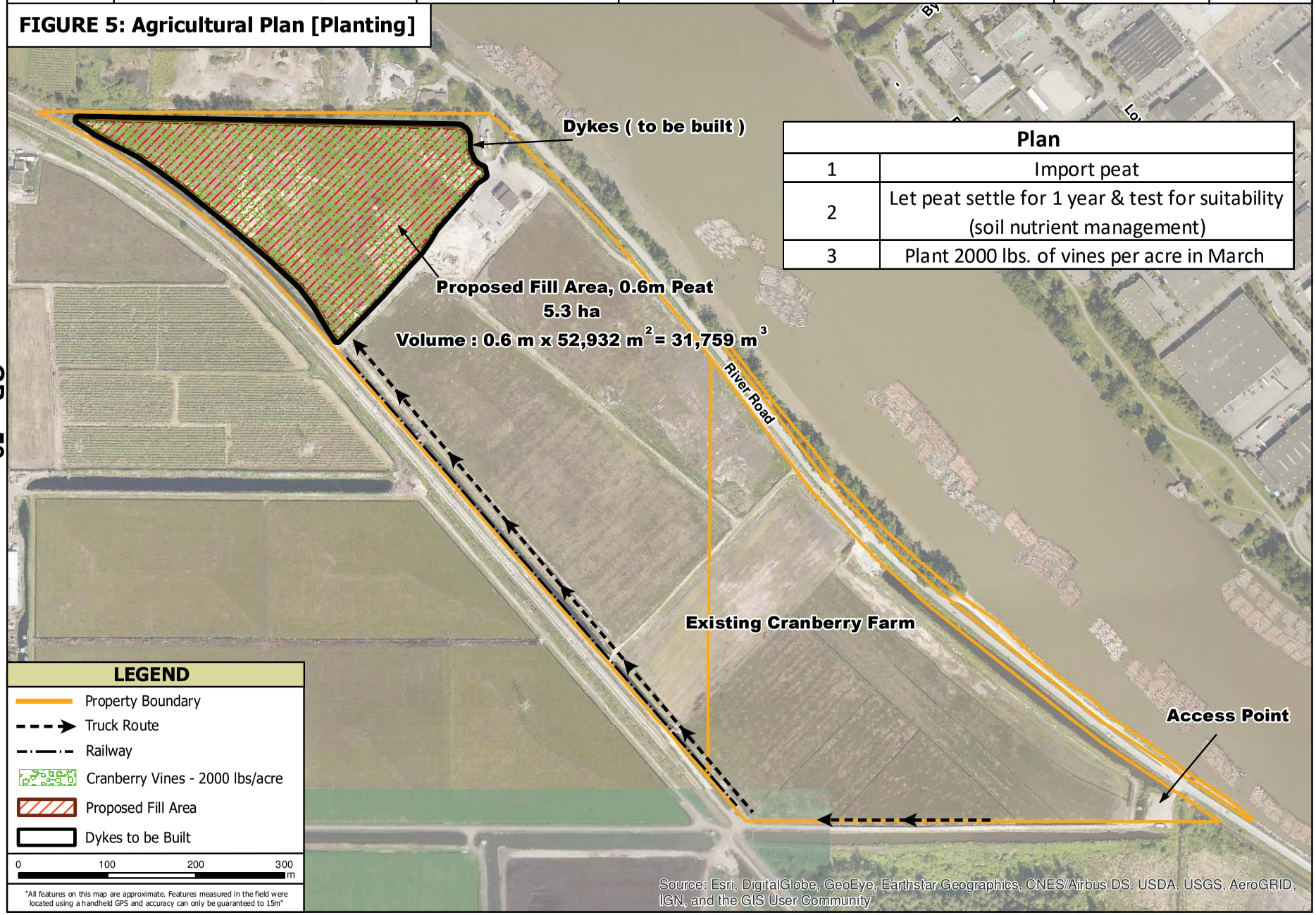


FIGURE 4. DRAINAGE AND WATER INFRASTRUCTURE RELATIVE TO THE SUBJECT PROPERTY. DATA FROM THE CITY OF RICHMOND INTERACTIVE MAP PROGRAM.

MADRONE environmental services ltd	**PROJECT:** Fill Assessment: 19740 River Road		**LOCATION:** Richmond, BC	**CLIENT:** Jagbar Farms	**DOSSIER:** 19.0063
	ASSESSED BY: Jessica Stewart, G.I.T., P.Ag.	**FIELD VISIT:** February 14, 2019	**MAP SCALE:** 1:5,500	**MAPPING DATE:** June 28, 2019	**DRAWN BY:** Jessi Yellowlees

FIGURE 5: Agricultural Plan [Planting]



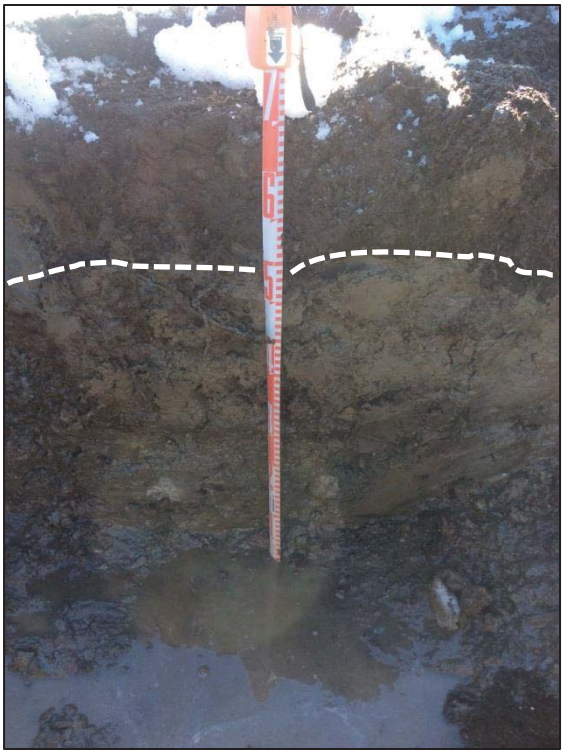
Plan	
1	Import peat
2	Let peat settle for 1 year & test for suitability (soil nutrient management)
3	Plant 2000 lbs. of vines per acre in March

APPENDIX B

Soil Pit Descriptions & Photographs

Pit 1 – Soil Profile Description (Placemark 2, Figure 1)

Property	Value
Pit Depth	0.7 m (to refusal)
# of soil horizons	3
Horizon	Depth (m)
Ap	0-0.2
Bgj	0.2-0.5
IIBg	0.5-0.7+
Land Capability (unimproved)	3D, 2W



Comments: Approximately 20 cm of dark, grey brown sandy loam overlying a grey to olive grey sandy clay loam. The last horizon is a very firm, compacted, blue grey sandy clay loam. The very firm horizon at 50 cm correlates to a 3D limitation due to dense subsoils.

Soil Textures, Pit 1:

Horizon	Soil Texture
Ap	Sandy loam, <5% fine gravel, 1% cobbles
Bg	Sandy clay loam, <5% fine gravel.
IIBg	Sandy clay loam, contains coarse sand, 5% cobbles and 1% boulders, very firm.

Pit 2 – Soil Profile Description (Placemark 3, Figure 1)

Property	Value
Pit Depth	1.3 m
# of soil horizons	2
Horizon	Depth (m)
0-1.0	Bgj
1.0-1.3+	IIBg
Land Capability (unimproved)	2P, 3F, 2W

Comments: Approximately 1 m of olive grey sandy loam with fine gravel (approximately 10%) overlying grey brown, firm loamy sand (compacted). The sandy textures of this soil correlate to a reduced nutrient holding capacity (3F estimated). The 10% fine to coarse gravel in the upper 25 cm of the first horizon correlates to a 2P stoniness limitation.

Soil Textures, Pit 2:

Horizon	Soil Texture
Bgj	Sandy loam (coarse sand), 10% coarse gravel
IIBg	Loamy sand, <5% cobbles, 5-10% coarse gravel, firm

Pit 3 – Soil Profile Description (Placemark 4, Figure 1)

Property	Value
Pit Depth	1.0
# of soil horizons	2
Horizon	Depth (m)
Bm	0-0.55
IIBg	0.55-1.0+
Land Capability (unimproved)	3F, 3D, 2W

Comments: Dark brown to dark grey (variable as seen in photo) loamy sand overlying very firm (compacted) olive grey brown loamy sand. The loamy sand textures in this soil correlate to a reduced nutrient holding capacity (3F estimated in absence of soil testing for this project).

Soil Textures, Pit 3:

Horizon	Soil Texture
Bm	Loamy sand, <5% coarse gravel
IIBg	Loamy sand, 10% coarse gravel, very firm

APPENDIX C

Land Capability for Agriculture Overview

Land Capability for Agriculture (LCA) in BC is a classification system that groups agricultural land into classes that reflect potential and limitations to agriculture. The classes are differentiated based on soil properties, landscape, and climate conditions. The system considers the range of possible crops and the type and intensity of management practices required to maintain soil resources but it does not consider suitability of land for specific crops, crop productivity, specific management inputs or the feasibility of implementing improvements.

There are two land capability hierarchies, one for mineral soils and one for organic soils. Each hierarchy groups the land into seven classes that describe the range of suited crops and required management inputs. The range of suited crops decreases from Class 1 to Class 7 (Class O1 and O7 for Organic soils) and/or the management inputs increase from Class 1 to Class 7. For example, Class 1 lands can support the broadest range of crops with minimal management units.

Lands in Classes 1 to 4 are considered capable of sustained agricultural production of common crops. Class 5 lands are considered good for perennial forage or specially-adapted crops. Class 6 lands are good for grazing livestock and Class 7 lands are not considered capable of supporting agricultural production.

LCA Classes are subdivided into subclasses based on the degree and kind of limitation to agriculture. Subclasses indicate the type and intensity of management input required to maintain sustained agricultural production and specify the limitation. For example, lands rated Class 2W have an excess water limitation that can be improved by managing water on the site.

Most lands are rated for unimproved and improved conditions. Unimproved ratings are calculated based on site conditions at the time of the assessments, without irrigation. Past improvements are assessed as part of the unimproved rating. Forested lands are assessed assuming they are cleared. Improved ratings are assigned assuming that existing limitations have been alleviated. Generally, improvement practices taken into account are drainage, irrigation, diking, stone removal, salinity alleviation, subsoiling, intensive fertilization and adding soil amendments.

LCA Classes

Table A describes the characteristics of each mineral and organic soil class. Mineral soil classes are 1–7 and organic soil classes are O1–O7.

Table A. LCA Classes

Class	Description	Characteristics
1 01	No or very slight limitations that restrict agricultural use	Level or nearly level. Deep soils are well to imperfectly drained and hold moisture well. Managed and cropped easily. Productive.
2 02	Minor limitations that require ongoing management or slightly restrict the range of crops, or both	Require minor continuous management. Have lower crop yields or support a slightly smaller range of crops that class 1 lands. Deep soils that hold moisture well. Managed and cropped easily.
3 03	Limitations that require moderately intensive management practices or moderately restrict the range of crops, or both	More severe limitations than Class 2 land. Management practices more difficult to apply and maintain. Limitations may: Restrict choice of suitable crops. Affect timing and ease of tilling, planting or harvesting. Affect methods of soil conservation.
4 04	Limitations that require special management practices or severely restrict the range of crops, or both	May be suitable for only a few crops or may have low yield or a high risk of crop failure. Soil conditions are such that special development and management conditions are required. Limitations may: Affect timing and ease of tilling, planting or harvesting. Affect methods of soil conservation.
5 05	Limitations the restrict capability to producing perennial forage crops or other specially adapted crops (e.g. Cranberries)	Can be cultivated, provided intensive management is employed or crop is adapted to particular conditions of the land. Cultivated crops may be grown where adverse climate is the main limitation, crop failure can be expected under average conditions.
6 06	Not arable, but capable of producing native and/or uncultivated perennial forage crops	Provides sustained natural grazing for domestic livestock. Not arable in present condition. Limitations include severe climate, unsuitable terrain or poor soil. Difficult to improve, although draining, dyking and/or irrigation can remove some limitations.
7 07	No capability for arable culture or sustained natural grazing	All lands not in class 1 to 6. Includes rockland, non-soil areas, small water-bodies.

LCA Subclasses for Mineral Soil

LCA Classes, except Class 1 which has no limitations, can be divided into subclasses depending upon the type and degree of limitation to agricultural use. There are twelve LCA subclasses to describe mineral soils (Table B). Mineral soils contain less than 17% organic carbon; except for an organic surface layer (SCWG, 1998).

Table B. LCA Subclasses for Mineral Soil

LCA Subclass	Map Symbol	Description	Improvement
Soil moisture deficiency	A	Used where crops are adversely affected by droughtiness, either through insufficient precipitation or low water holding capacity of the soil.	Irrigation
Adverse climate	C	Used on a subregional or local basis, from climate maps, to indicate thermal limitations including freezing, insufficient heat units and/or extreme winter temperatures.	N/A
Undesirable soil structure and/or low perviousness	D	Used for soils that are difficult to till, requiring special management for seedbed preparation and soils with trafficability problems. Includes soils with insufficient aeration, slow perviousness or have a root restriction not caused by bedrock, permafrost or a high water table.	Amelioration of soil texture, deep ploughing or blading to break up root restrictions. Cemented horizons cannot be improved.
Erosion	E	Includes soils on which past damage from erosion limits erosion (e.g. Gullies, lost productivity).	N/A
Fertility	F	Limited by lack of available nutrients, low cation exchange capacity or nutrient holding ability, high or low Ph, high amount of carbonates, presence of toxic elements or high fixation of plant nutrients.	Constant and careful use of fertilizers and/or other soil amendments.
Inundation	I	Includes soils where flooding damages crops or restricts agricultural use.	Diking
Salinity	N	Includes soils adversely affected by soluble salts that restrict crop growth or the range of crops.	Specific to site and soil conditions.
Stoniness	P	Applies to soils with sufficient coarse fragments, 2.5 cm diameter or larger, to significantly hinder tillage, planting and/or harvesting.	Remove cobbles and stones.
Depth to solid bedrock and/or rockiness	R	Used for soils in which bedrock near the surface restricts rooting depth and tillage and/or the presence of rock outcrops restricts agricultural use.	N/A
Topography	T	Applies to soils where topography limits agricultural use, by slope steepness and/or complexity.	N/A
Excess Water	W	Applies to soils for which excess free water limits agricultural use.	Ditching, tilling, draining.
Permafrost	Z	Applies to soils that have a cryic (permanently frozen) layer.	N/A

LCA Subclasses for Organic Soil

Organic soils are composed of organic materials such as peat and are generally saturated with water (SCWG, 1998). Subclasses for organic soils (Table C) are based on the type and degree of limitation for agricultural use an organic soil exhibits. There are three subclasses specific to organic soils. Climate (C), fertility (F), inundation (I), salinity (N), excess water (W) and permafrost (Z) limitations for organic soil are the same as defined for mineral soil.

Table C. LCA Subclasses for Organic Soil.

LCA Subclass	Map Symbol	Description	Improvement
Wood in the profile	B	Applies to organic soils that have wood within the profile	Removal
Depth of organic soil over bedrock and/or rockiness	H	Includes organic soils where the presence of bedrock near the surface restricts rooting depth or drainage and/or the presence of rock outcrops restricts agricultural use	N/A
Degree of decomposition or permeability	L	Applies to organic soils that are susceptible to organic matter decomposition through drainage	N/A

APPENDIX D

Inclusion in Fill Importation Assessment Reports

For each source site, the owner/operator of the receiving site should secure a written Soil Acceptance Agreement with the parties responsible for supplying and transporting soils. The agreement should specify that

1. The imported soil must not contain:
    a. any contaminants in concentrations that exceed the standards in Schedule 7, Column III of the Contaminated Sites Regulation under BC's Environmental Management Act, or
    b. any hazardous waste as defined in the Hazardous Waste Regulation of the Environmental Management Act,
2. The imported soil must not have been transported onto the donor site from another site,
3. The owner of the receiving site has the right to test and/or require the supplier to test for contaminants and soil texture, and to inspect the source site,
4. The supplier will provide *all* available site contamination reports pertaining to the imported soil and that at minimum a Preliminary Site investigation Phase 1 (or Stage 1) or Phase 2 (or Stage 2) report will be provided for any source site that is an industrial, government or large residential development,
5. The parties supplying/transporting soils are responsible for removing any soils and remediating any resulting contamination if the soils are found to be contaminated or if the supplier failed to supply all available site contamination reports pertaining to the imported soil, and
6. Any loads arriving at the site without proper documentation of the source of the soil and evidence of Soil Acceptance Agreement for the source site will be refused entry.

Entrance to the receiving site should be controlled and records should be maintained that identify the source of each load and the parties supplying/transporting the load. Consideration should be given to requiring security deposits from the suppliers/transporters.

APPENDIX E

Standard Operating Procedure: Stony Soils in Imported Fills

Objective

The objective of the SOP is to ensure soils in the upper 50 cm of the fill meet stoniness standards for Class 2P limitations; that is:

A. Total coarse fragment content (>2.5 cm or 1 inch): **less than 10%;**
B. Cobbles and stones (>7.5 cm or 3 inches): **less than 1%.**

Madrone recognizes that the identification of stoniness may be difficult; therefore, this SOP identifies measures at different stages in the importation of fill. Following all measures in this SOP will reduce the chance that stony soils will be incorporated in the fill.

Measures to be Implemented

Control of stoniness will be accomplished by measures implemented at

a) the source site,

b) upon entry to the receiving site;

c) at the dump site on the property.

The measures are:

1 inspect soils before dumping and keep them in separate stockpiles for either processing (stone removal) or later removal from site;

2 treat soils that have more than 1% cobbles and stones using a rake;

3 ensure that soils that have more than 10% gravel (2.5 to 7.5 cm) are buried at least 50 cm from the final grade of the fill.

Procedures

1 At **source site**. Fill with excessive coarse fragments will be identified at the source site and separated from non-stony soils. **Only non-stony soils will be delivered** to the fill site.

2 At **receiving site entrance**. All fill that contains excessive coarse fragments (based on visual inspection) will be identified upon entry and dumped separately from the fill, for removal or processing later. If stony soils are suspected in a load, this must be communicated to the project supervisor.

3 At **receiving site, at dumping site**. As fill is being dumped it must be inspected for stoniness, relative to the above standards. If the soil does not meet the standards, it must be removed from the fill and stockpiled separately for removal or processing later.

4 All separated stockpiles of stony material must be inspected, and the decision to remove or process should be made by the site supervisor.

5 All cobbles and stones greater than 7.5 cm or 3 inch diameter should be removed using the specially designed rake. After processing, the cobbles and stones should occupy less than 1% of the volume of soil. (fragments less than 7.5 cm cannot be removed by the rake).

6 If coarse fragments between 2.5 cm and 7.5 cm (1 and 3 inches) occupy more than 10% of the soil volume, after removal of cobbles and stones, the soil should only be used as a subsoil and should not be placed within 50 cm of the final grade of the fill.

The stoniness content of all fill will be assessed during routine site inspections by Madrone after every increment of 3000 m^3 fill volume (recommended volume – may be adjusted according to the project).

Summary of Soil Placement Plan and Farm Plan Proposals for Jagbar Farms, 19740 River Road – Intended for Policy Planning and Food Security and Agricultural Advisory Committee (FSAAC) Review

The City of Richmond (CoR) Policy Planning has requested a summary of the Soil Placement and Water Management Plans submitted to the City of Richmond and the Agricultural Land Commission (ALC) as part of a soil deposit application for Jagbar Farms, located at 19740 River Road, Richmond, BC. They further requested that the summary include a Farm Plan (or summarized Proposed Agricultural Plan).

We understand that the summary will be submitted to the CoR Food Security and Agricultural Advisory Committee (FSAAC) for their review when considering the project, which entails the placement of a maximum of 31,800 m^3 (rounded to 32,000 m^3) of solely local peat soils on 5.3 ha of the 36.8 ha property. The proposed depth of peat is 0.6 m, or approximately 2 feet.

This summary has been prepared by Madrone (Jessica Stewart, P.Geo, P.Ag., who prepared the Soil Placement Plan that accompanies the application) and Dr. Stephen Ramsay, P.Eng. (who prepared the Water Management Plan, Site Plan, and Addendum) on behalf of Mr. Sukhminder Sidhu, the landowner and applicant.

This letter summarizes the following information for the Property, as requested by the CoR:

a. A Site Plan
b. A Site Description
c. Legal Description
d. Zoning and Current Land Use
e. Soils Description and Unimproved Agricultural Capability
f. Soil Management Rationale/Improved Agricultural Capability
g. Recommended Agricultural Uses and Suitable Crops
h. Proposed Agricultural Plan including
    1. Drainage Requirements/Rationale
    2. Irrigation Requirements/Rationale and Water Sources
    3. Proposed Agricultural Operator
    4. Proposed Planting Plan with a site plan
    5. Agricultural Improvement Cost Estimate (including material costs, drainage costs, irrigation costs and installation costs)

Item a – Site Plan

The Site Plan was prepared by Dr. Stephen Ramsay P.Eng., utilizing the completed topographic land survey for the property. The proposed soil placement area is approximately 15% of the property. This area is 53,000 m^2 in extent, or rounded to 5.3 ha for the proposal.

Please see Attachment 1.

Item b – Site Description

The proposed soil deposit site is located in the northwest corner of the property, which is situated at 19740 River Road in Richmond, BC, approximately 9.7 km northeast of Richmond centre on Lulu Island (**Figure 1**). The property is bound to the north by residential properties (no farming indicated), to the east by River Road (and the Fraser River), to the south by a vacant and forested property, and to the west by the Canadian Pacific (CP) Railway.

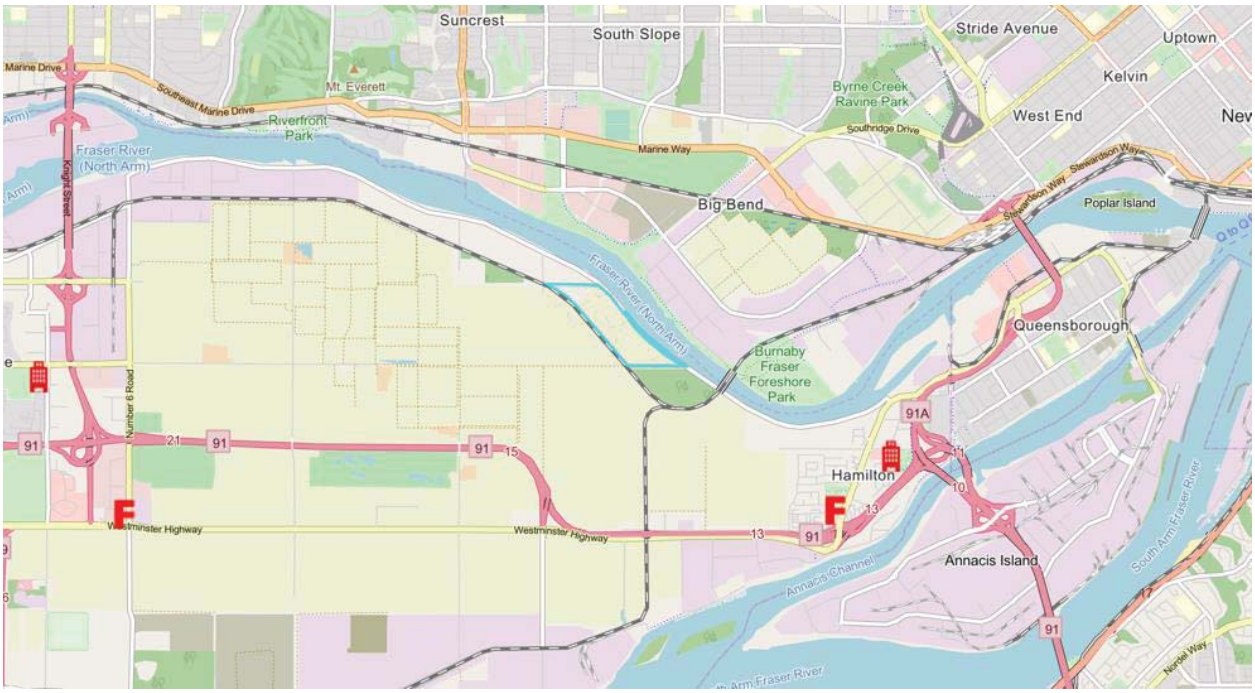


FIGURE 1 SITE LOCATION OUTLINED IN BLUE.

The property is situated on the defined (by CoR) Fraser River floodplain[1]. A topographic land survey completed in 2016 for the property shows that the current topographic range of the site is 2 to 6 m above sea

[1] https://www.richmond.ca/__shared/assets/Bylaw_8204_0410201225280.pdf Floodplain Designation and Protection Bylaw No. 8204. City of Richmond.

level (a.s.l.). The land has been artificially raised in places, as detailed in the Soil Placement Plan and the supplied Topographic Survey. The majority of the site has not been raised and is an existing, long-term cranberry farm.

Item c - Legal Description

The legal description of the property is:

Block 5N Plan NWP5172 Section 28 Range 4W Land District 36 Except Plan 2 ALL PTNS OF; LYING TO THE NE OF THE NE LIMIT OF THE SRW AS SHOWN ON 5172 S&E BYLAW 50800 & PCL A (RD199324E) S&E BYLAW 50800 Manufactured Home Reg.# B03764.

The property ID is 002-525-836.

Item d - Zoning and Current Land Use

The property is zoned AG1 (Agricultural) according to the Richmond Zoning Bylaw 2011 and the property is within the Agricultural Land Reserve (ALR).

Jagbar Farms has a farm storage facility (constructed 2014 to 2015) located on site, in addition to a manufactured home near the River Road entrance. The majority of the property or approximately 24.7 ha is occupied by cranberry plants or farm infrastructure such as dikes (
alternatively referred to as a berms), farm roads, and irrigation canals and reservoirs. Approximately 2600 m^2 of the property situated on the southwest side of property is outdoor storage for farm machinery, including tractors, excavators, harvesting machinery, and implements.

The surrounding area is actively farmed for cranberries, blueberries, and forage crops. There are also several dairy farms in the area. River Road is a heavy industrial area with trucking and manufacturing businesses, shipyards, and railways.

Item e - Soils Description and Unimproved Agricultural Capability

From the Soil Placement Plan pared by Madrone and dated July 3,2019 (Attachment 2):

The soil brought to the site between 1991 and 2005 is a mix of many soil types that have been placed to construct a soil profile and required elevation in the soil deposit area. Since this is not native soil, it cannot be correlated to the mapped soil series of the Langley-Vancouver Map Area survey[2].

[2] http://www.env.gov.bc.ca/esd/distdata/ecosystems/Soils_Reports/BC15/bc15-v3_report.pdf Soils of the Langley-Vancouver Map area. Report No. 15. British Columbia Soil Survey. H.A. Luttmerding (1981).

The imported soil has been in place for between 14 and 28 years (oldest deposits), which has allowed some juvenile development of the profile through natural pedogenic processes. There is still great variation in texture, colouring, and horizon thickness between the three test pits dug at the soil placement site.

In Pit 1, soil textures range from a sandy loam to a sandy clay loam with approximately 5% cobbles and 1% boulders at 50 cm. The lowest horizon is very firm due to compaction during soil placement activities in the past. There is light gleying in the middle Bgj horizon due to fluctuating water tables.

Soil Pit 2 features approximately 1 m of sandy loam containing coarse sand and 10% coarse gravel. Below this, the texture is loamy sand with between 5 and 10% coarse gravel. The pit was very wet when excavated and quickly collapsed. The lower horizon extended to 1.3 m deep and was found to be firm due to compaction (similar to Pit 1).

The last pit, Pit 3, was found to contain exclusively loamy sand to a depth of 1 m. The upper B horizon, which extends to approximately 55 cm, has dark grey to dark brown colouring that is highly variable, and contains approximately 5% coarse gravel. The lower horizon has 10% coarse gravel and is an olive brown to olive grey colour.

All soil pits were wet due to both surface flooding (melting snow and ice) and high groundwater tables (saturated soil conditions). There is light gleying observed in Pits 1 and 2 whereas Pit 3 has dominantly brown and olive colours.

As these are anthropogenic soils that have not changed significantly since they were placed between 1991 and 2005, Madrone have not attempted to classify them using the Canadian System for Soil Classification.

Using the specific criteria presented in Land Capability Classification for Agriculture in British Columbia, Madrone rated the agricultural capability of the proposed soil deposit area, which is dependent upon the existing soil and site conditions. Based on the Madrone soil placement plan, the current agricultural limitations are Class 2W, 2P, 3F, and 3D.

From the Soil Placement Plan dated July 3,2019:

Madrone have found that the dominant limitation for agriculture is low fertility at a Class 3F due to low quantities of organic matter in the soil (inferred by soil texture and colouring, but not soil testing at this time) and low nutrient holding capacity due to sandy loam and loamy sand soil textures. This was found in Pits 2 and 3.

In Pit 2, there is a stoniness limitation of Class 2P due to the 10% coarse gravels present in the upper 25 cm of the soil. This is improvable through stone removal via rake, or by placement of 0.6 m of peat soil without coarse fragments.

There is also a Class 3D limitation found in both Pits 1 and 3 due to very firm subsoils. In Pit 1, this starts at 0.5 m (very firm sandy clay loam) and in Pit 3 this starts at 0.55 m due to very firm loamy sand. This is due to compaction of the soil during placement activities. This can be improved somewhat through sufficient deep ploughing or ripping to break up the dense subsoil. Deep ripping must be done when the soil is not saturated, (generally Mid to late summer). It is possible that there has been some cementation of the horizons over time. Ripping may be required more than once, since soils can regain high bulk densities over time. Alternatively, the placement of 0.6 m of uncompacted peat at the surface will negate the 2D limitation, as this horizon will be over 1 m deep.

For all soil pits, this is a mild Class 2W wetness limitation due to locally high water tables, low perviousness (compacted subsoils in pits 1 and 3), and surface ponding throughout the proposed peat placement area.

Item f - Soil Management Rationale/Improved Agricultural Capability

The 2W, 2P and 3D limitations can only be improved to the next most serious limitation, which is the fertility limitation. Mr. Sidhu is seeking to improve the 3F limitation by importing exclusively peat topsoils leveled to 0.6 m deep and planting cranberry plants.

Following proper topsoil placement, Madrone estimated that the post-fill Land Capability for Agriculture ratings will improve from Class 3F minor to moderate fertility limitations to Class 2W, or mild limitations due to high water tables (excess wetness). The undesirable soil structure/root restricting layer limitation (3D) and the stoniness limitation (2P), will also be eliminated as the existing subsurface will then be too deep to affect the growth of cranberries (>1.0 m) through placement of 0.6 m of peat soils.

Jagbar Farms has over 35 years of cranberry farming experience and will amend the peat soils to ensure the proper pH range is reached prior to planting of the cranberry plants following topsoil placement.

Item g - Recommended Agricultural Uses and Suitable Crops

Soil survey maps[3] from 1981 show that the majority of the property soils, including the south and west sides, are mapped as the Lulu (Terric Mesisol) and Richmond soils (Terric Humisol), which are organic soils with very poor drainage. A small portion of the northern part of the property, including the proposed soil placement site, is mapped as a mix of the Delta and Blundell soils, which are mineral soils with an organic capping. The remaining east portion of the property at River Road is mapped as the Tsawwassen soils, which are anthropogenic (human-modified) sands and gravelly sands dredged and diked along the Fraser River.

[3] http://www.env.gov.bc.ca/esd/distdata/ecosystems/Soils_Reports/BC15/bc15-v3_report.pdf Soils of the Langley-Vancouver Map area. Report No. 15. British Columbia Soil Survey. H.A. Luttmerding (1981).

The Blundell soils have poor to very poor drainage and high groundwater tables. They are Rego Gleysols. The Delta soils also have poor drainage and high groundwater tables. The classification is Orthic Humic Gleysols.

Madrone emphasizes that the soils surveyed by Luttmerding are not necessarily accurate but in absence of test pits in the cranberry field, provide a snapshot of the potential soils that may be found in this area.

An airphoto and map review shows that the property area was a former peat bog that is naturally suitable for cranberry and blueberries due to acidic soils. This assumes that the excess wetness limitations can be managed by subsoiling and ditching as part of agricultural development.

In its current state, the proposed soil placement area is suitable for cranberry farming if an organic capping is sourced and placed (to improve the 3F limitation) on the imported soils originally placed to raise the site above the naturally poor to very poorly drained soils with high watertables (Delta, Blundell, Richmond and Lulu soil series).

Item h - Proposed Agricultural Plan

1. Drainage Requirements/Rationale

See Water Management Plan report, dated February 3,2020 (Attachment 3) and Addendum Letter (Attachment 4), dated March 30,2020

Drainage is provided within the field area by 100 mm perforated pipe installed at approximately 6 m spacing to conduct excess water to the perimeter ditch of the field.

The Water Management Report emphasizes that the proposed drainage is identical to the existing drainage system used successfully by Jagbar. The soil placement area contributes approximately 15% to the drainage area and is smaller than existing drainage areas on the farm.

2. Irrigation Requirements/Rationale and Water Sources

See Water Management Plan (Attachment 3) or Addendum (Attachment 4).

3. Proposed Agricultural Operator

The proposed agricultural operator is Jagbar Farms. Jagbar have extensive experience cranberry farming at the site since 1982.

4. Proposed Planting Plan with a site plan

Information from Mr. Sidhu:

- Approximately 3,000 lb/acre[4] of vines are required to plant the field (5.3 ha is 13.1 acres, therefore approximately 39,000 lbs of vines are required).

- The vines are obtained from pruning of existing field and are bundled (approximately 90%, the remaining 10% are to come from a neighbouring farm at no cost).

- The planting consists of distributing the vines in the field and disking (see photo of planting machine below)

PHOTO 1. CRANBERRY VINE PLANTING MACHINE OWNED BY JAGBAR FARMS

See Attachment 5, Agricultural Planting Plan for 5.3 ha area planted with cranberry vines.

[4] Note that the original planting plan in the Soil Placement plan report shows a minimum of 2000 lbs per acre – this has been increased to a preferred 3000 lbs per acre by Mr. Sidhu. The planting plan supplied with this summary has been updated to reflect this increase.

5. Agricultural Improvement Cost Estimate (including material costs, drainage costs, irrigation costs and installation costs)

Information from Mr. Sidhu:

- Vines for planting are obtained from the existing cultivated areas of the farm. This ensures consistency and uniformity of the crop. No vines will be purchased from outside sources. Currently, new farmers without existing plants/vines are required to purchase stock from the USA and prices are approximately $25,000 per acre[5].

- The first commercial crop is expected in approximately 3 years.

- The cost to maintain and cultivate is approximately $5,000/acre/yr ($5000 x 13.1 acres = $66,000/year)

- The cost of harvesting is approximately $1,000/acre ($1000 x 13.1 acres = $13,000)

Attachments

1. Site Plan (Topographic Survey)
2. Soil Placement Plan (Madrone)
3. Water Management Plan
4. Addendum Letter
5. Planting Plan for 5.3 ha (Madrone)

Prepared by:

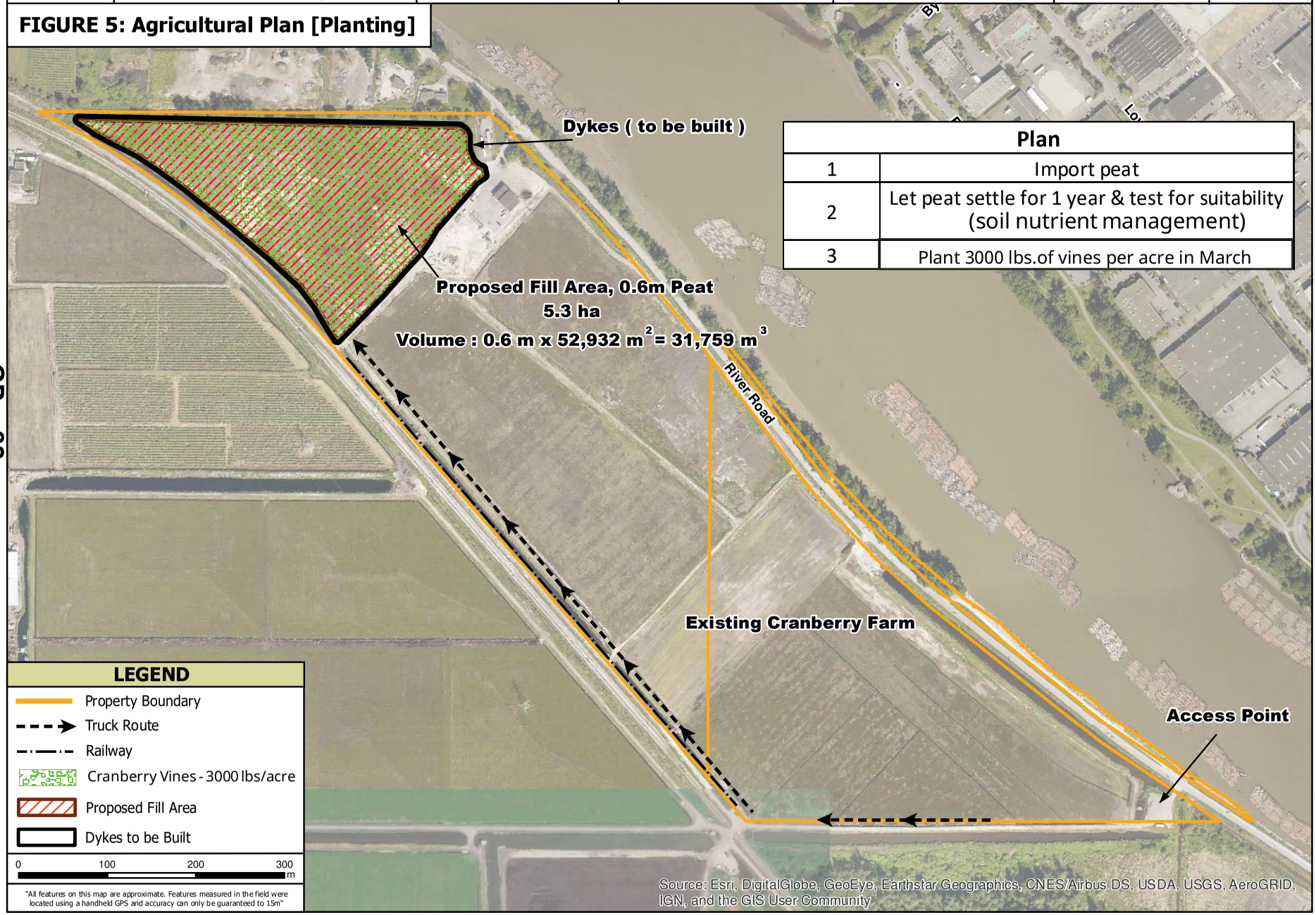
Dr. Stephen Ramsay, P.Eng.

Jessica Stewart, P.Geo., P.Ag.

[5] Pers. Comm. between Jessica Stewart and an anonymous former cranberry farmer in this area, who supplied this cost estimate to Madrone.

MADRONE environmental services ltd	**PROJECT:** Fill Assessment: 19740 River Road		**LOCATION:** Richmond, BC	**CLIENT:** Jagbar Farms	**DOSSIER:** 19.0063
	ASSESSED BY: Jessica Stewart, G.I.T., P.Ag.	**FIELD VISIT:** February 14, 2019	**MAP SCALE:** 1:5,500	**MAPPING DATE:** June 28, 2019	**DRAWN BY:** Jessi Yellowlees

FIGURE 5: Agricultural Plan [Planting]



Plan	
1	Import peat
2	Let peat settle for 1 year & test for suitability (soil nutrient management)
3	Plant 3000 lbs.of vines per acre in March

GREY OWL ENGINEERING

March 30, 2020

Jagbar Farms Ltd.
19740 River Road
Richmond, BC. V6Y 2C1

Attn: Sukhminder Sidhu

Re: Water Management Assessment – Jagbar Farms. Ltd. – 19740 River Road, No. 4 Road, Richmond, BC – ADDENDUM

Dear Sukhminder,

This addendum expands on the previous Water Management Assessment dated February 3, 2020 (see Soil Placement Application - Attachment 4)

The purpose of this addendum is to explain the drainage system used by Jagbar Farms and confirm that there will be no adverse impacts on surrounding properties.

Attachment 1 shows the subject property. Attachment 2 shows a schematic of the cranberry cultivation fields.

There are four (4) cranberry farming areas on the property. Three (3) are currently active cranberry farming (2, 3, and 4). The triangular area (1) is a proposal for a further cranberry farming area.

The Soil Placement Application relates to the triangular area (1) at the northwest end of the property. The three active farming areas have been cultivated for approximately thirty (30) years using the current and proposed water management and drainage arrangements. No adverse effects have been related during this operational period.

The three currently operational farming areas are completely surrounded by dikes located on the subject property.The proposed farming area will also be completely surrounded by similar dikes located

on the subject property. All four cranberry farming areas are also surrounded by a drainage ditch in each area internal to the dikes in each area.

There are three water management and drainage issues to be considered:

1) Drainage related to irrigation

   This has been dealt with in the previous Water Management Assessment. Irrigation is small compared to natural precipitation. Moreover, irrigation is limited to the growing seasons (April to September) when there is a net water budget deficit. In any event the irrigation is contained by the dyke system which is described more fully below. Therefore, there are no adverse affects to adjacent properties due to irrigation.

2) Drainage related to normal precipitation

   Natural precipitation has been dealt with in the previous Water Management Assessment. Again, the precipitation is entirely contained within the dyked system which will be described more fully below.

3) Drainage related to cranberry harvesting

   Harvesting is the limiting case due to the larger volume of water involved. The three current cranberry cultivation areas are operational in a cascade system to conserve water. See Attachment 2 for existing water flow between cranberry cultivation areas.

Water for cranberry harvesting proceeds from the highest elevation field (currently field 2) to lower elevation fields in sequence (2 to 3 to 4).Water is conserved by reusing in the cascade during harvesting.

Water is sourced from and ultimately discharged to the ditch system that connects to the Fraser River at the southeast corner of the property. (See Attachment 3). Water levels in the ditch systemare regulated by the control structures connecting to the Fraser River at the southeast corner of the property.

The ditch system extends along the south and west boundaries of the properties. There are pump stations along the west boundrary of the property to provide water for irrigation and harvesting. The water is distributed by fixed and mobile pipes.

Water is collected by a perimeter ditch system in each of the cranberry cultivation areas (see Attachment 4) and ultimately discharged to the ditch system at the southeast corner of the Fraser River connection.

This arrangement has been used continuously by Jagbar Farms for approximately 20 years.

We reiterate that the entire cultivation area, and each field is completely contained by dykes and perimeter drainage ditches.

Moreover, the south boundary and the west boundary of the property are adjacent to the ditch systems which separates and isolates the property from adjacent properties.

The Geotechnical Assessment confirms that no adverse impacts have been noted on any boundaries of the property or on the adjacent property using this water management system during the previous 20 year operational period of Jagbar Farms.

The east boundary property is bounded by the Fraser River dike and River Road. The eastern part of the boundary is separated and isolated from River Road the the Fraser River dike by a drainage ditch connected to the Fraser River.

The northeast boundary is bounded by the Kinder Morgan Pipeline right of way (ROW). The northern dyke is located approximately 15 m from the edge of the ROW.

The proposed fourth cranberry cultivation area will be constructed and operated in an identical manner to the three currently operating areas.

Harvesting water will be sourced from the ditch system on the southweat boundary of the property using the existing pump stations. Additional water will be sourced as required during the progression of the harvesting operation.

The harvesting water cascade will start with the proposed area and proceed sequentially through areas 1, 2, 3, and 4. The drainage will ultimately discharge to the ditch system at the southeast corner of the property area near the Fraser River connection.

Note that the four (4) cranberry cultivation fields (including the proposed new field) have areas of 24%, 23%, 32% and 49% of the total property area, respectively. Area 4 is the largest therefore the Areas 1, 2, and 3 are accomodated within the existing and demonstrated drainage capacity of Area 4.

Field (4) is the lowest and requires the largest quantity of water for harvesting (and incidentally, also contributes the largest quantity for irrigation and natural precipitation). Therefore, the proposed Field 1 contribution which is significantly smaller than existing operations and fits within the existing arrangements.

The proposed drainage system will not have any adverse impacts on adjacent properties.

Yours truly,

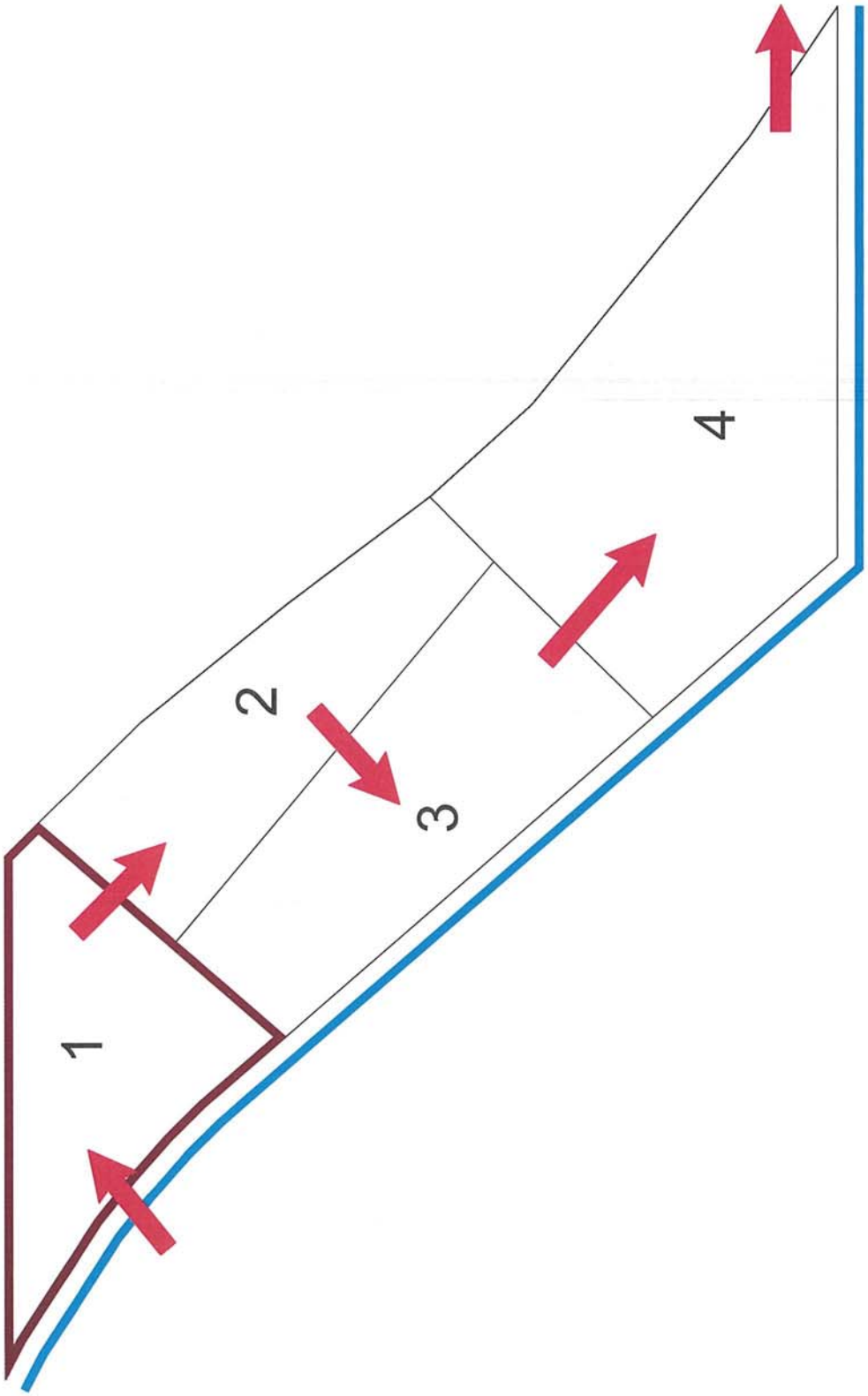
GREY OWL ENGINEERING LTD.

Dr. Stephen Ramsay P.Eng

MAR 3 0 2020

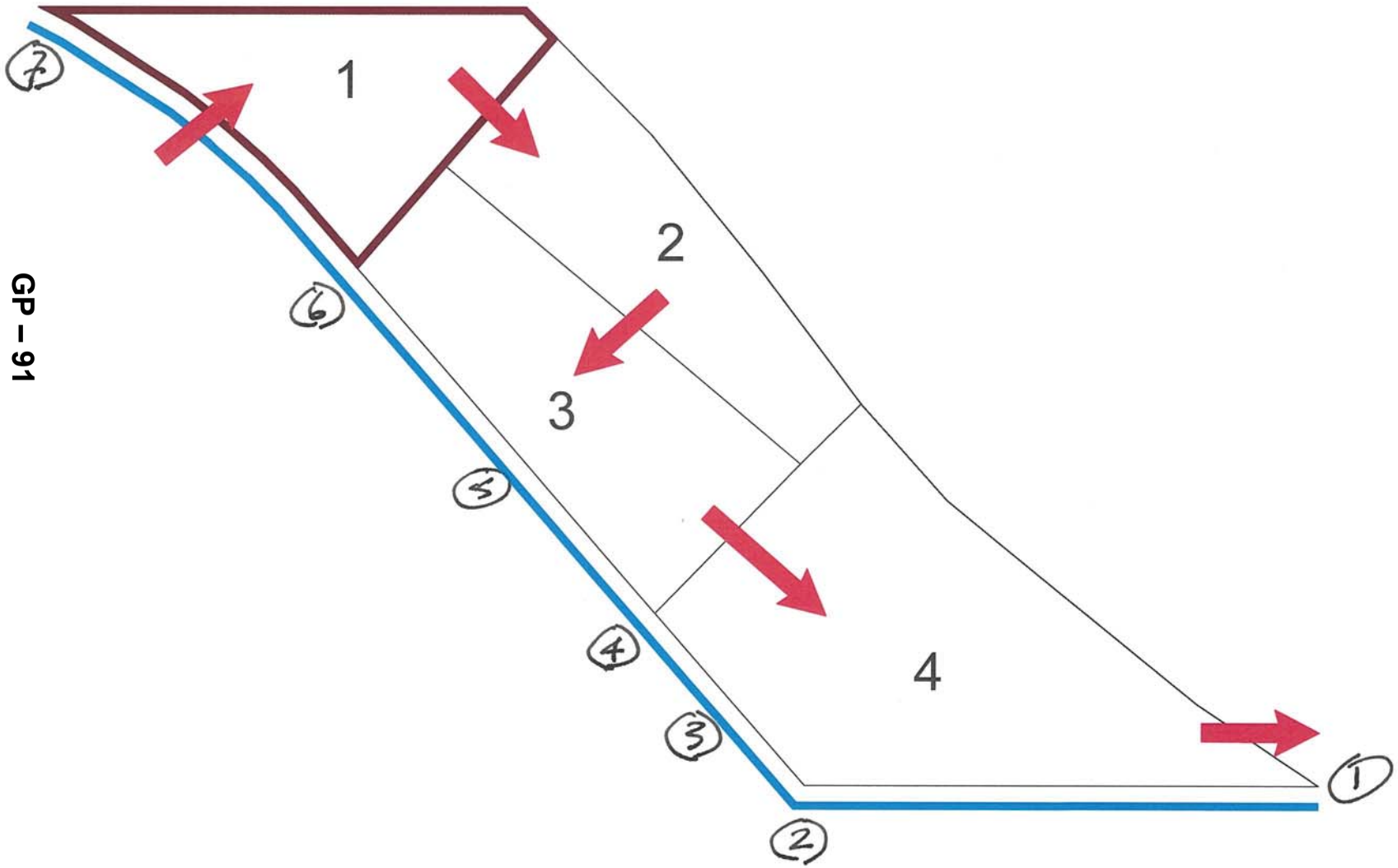
Attachment 1

Attachment 2


1
2
3
4

Attachment 3

Ditch system photo locations.



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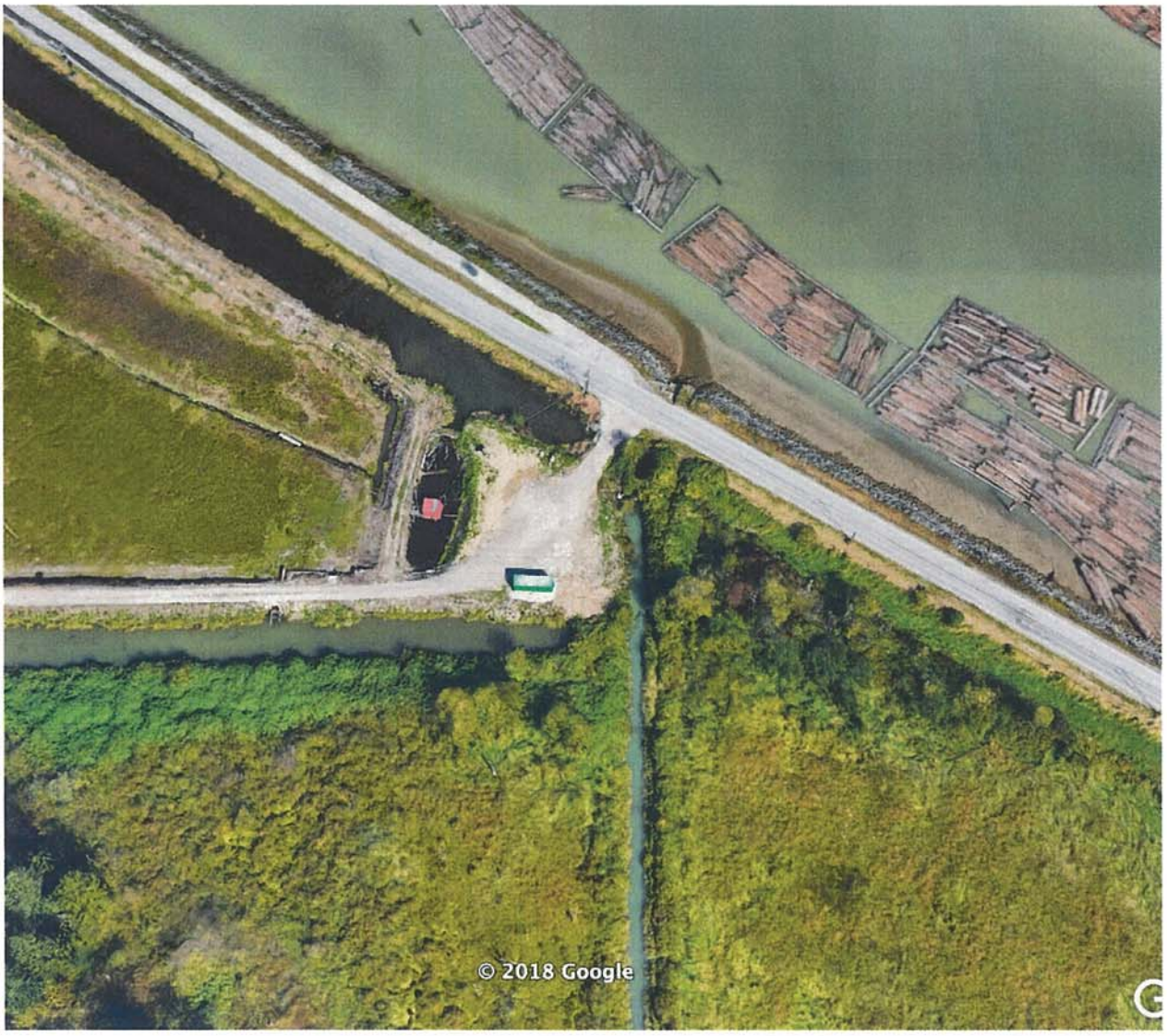

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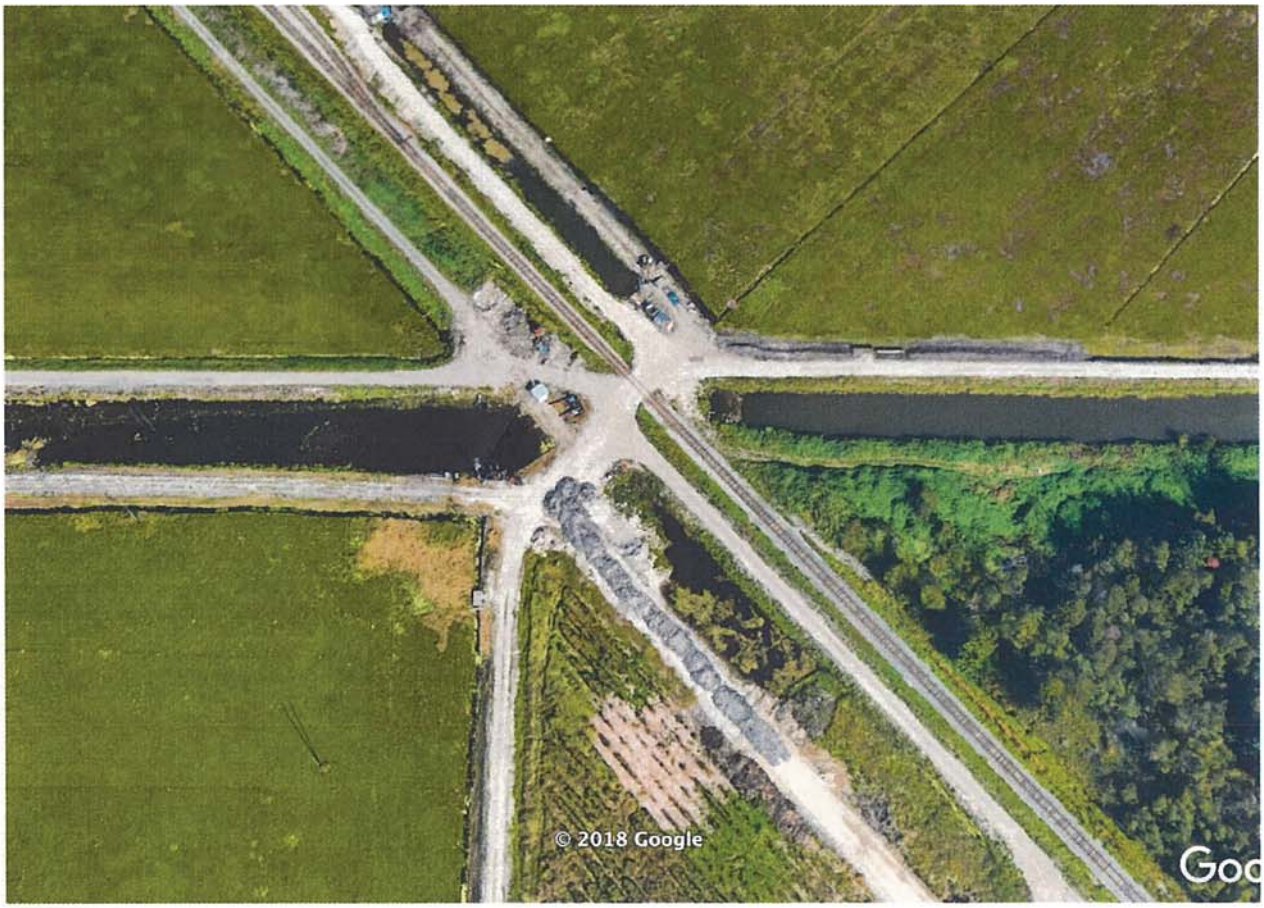

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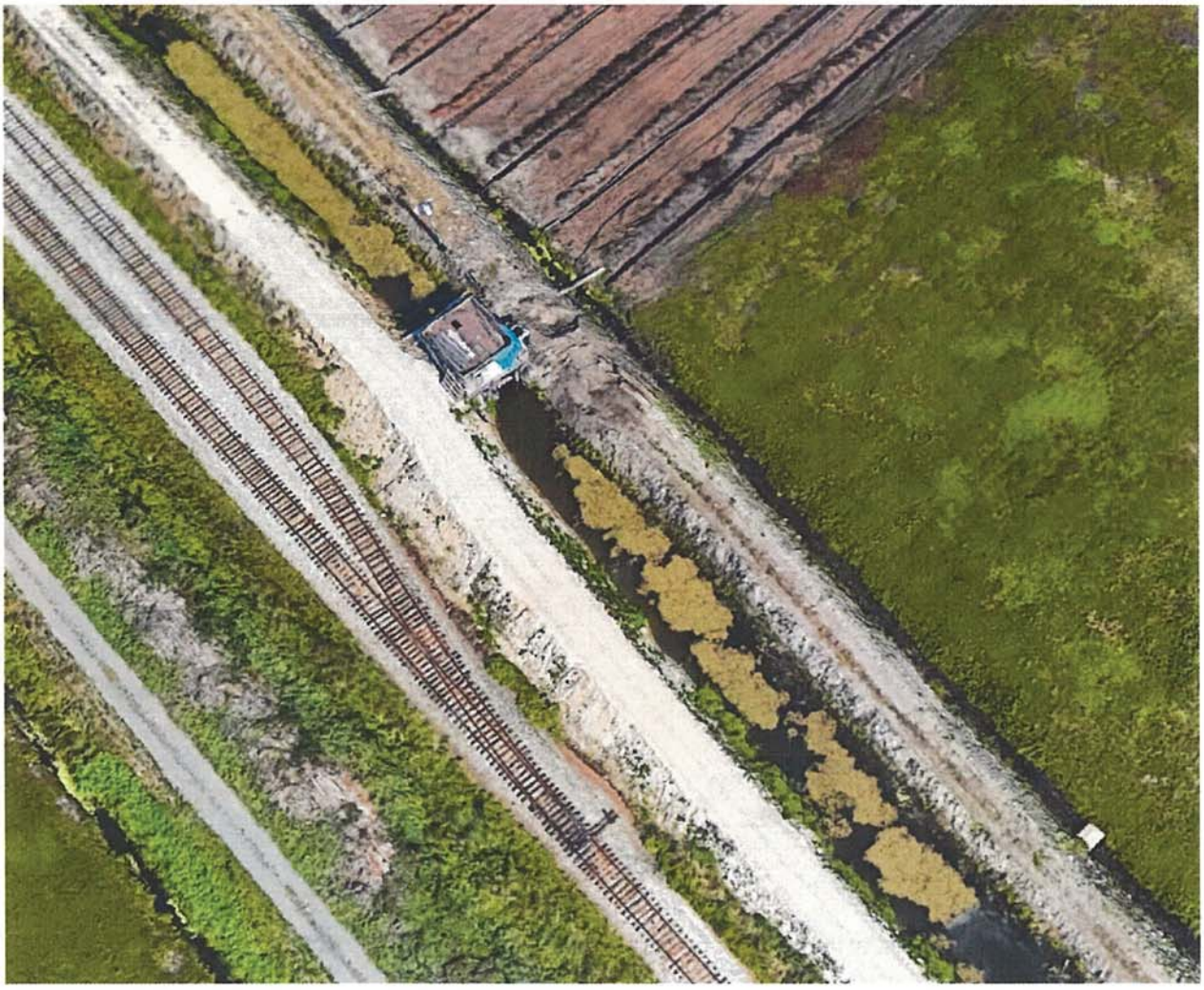
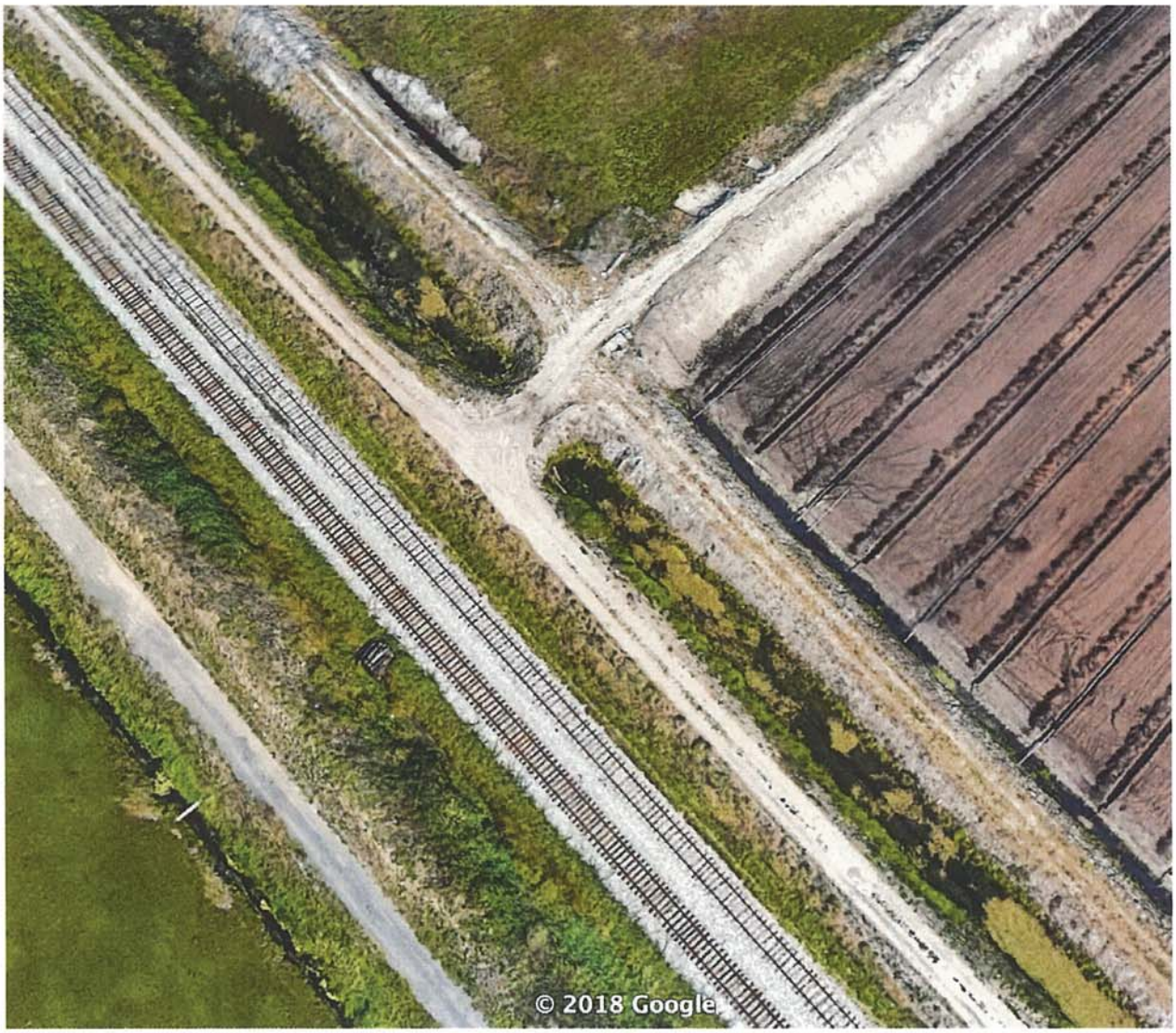
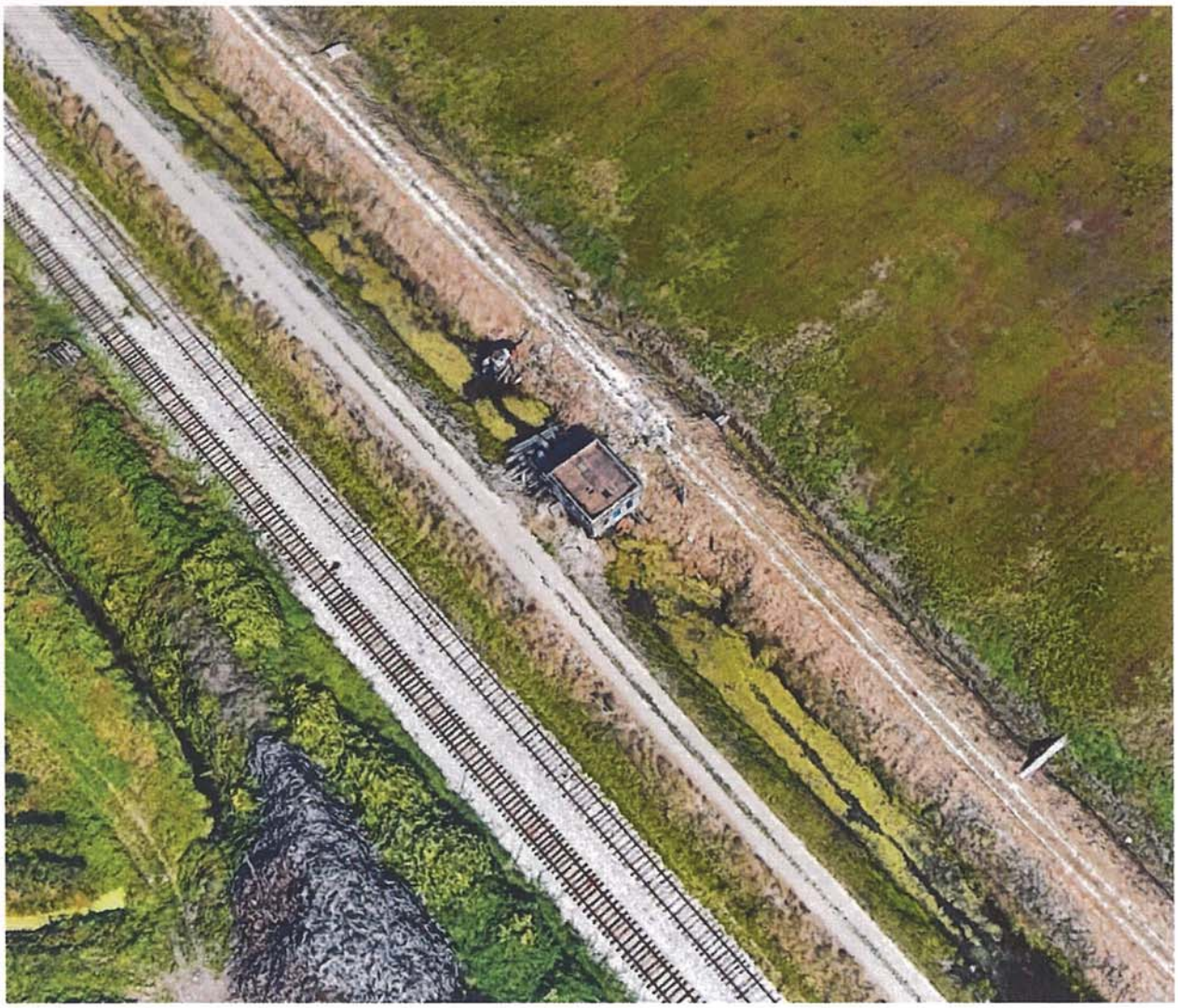



© 2018 Google

5



7

Attachment 4

ArcGIS Web Map

2019-08-30, 9:23:39 AM

Street Names
Community Centres
Richmond Oval
Skating Arenas
Swimming Pools
Libraries
City Hall
Fire Stations
Police Stations
Ambulance Stations

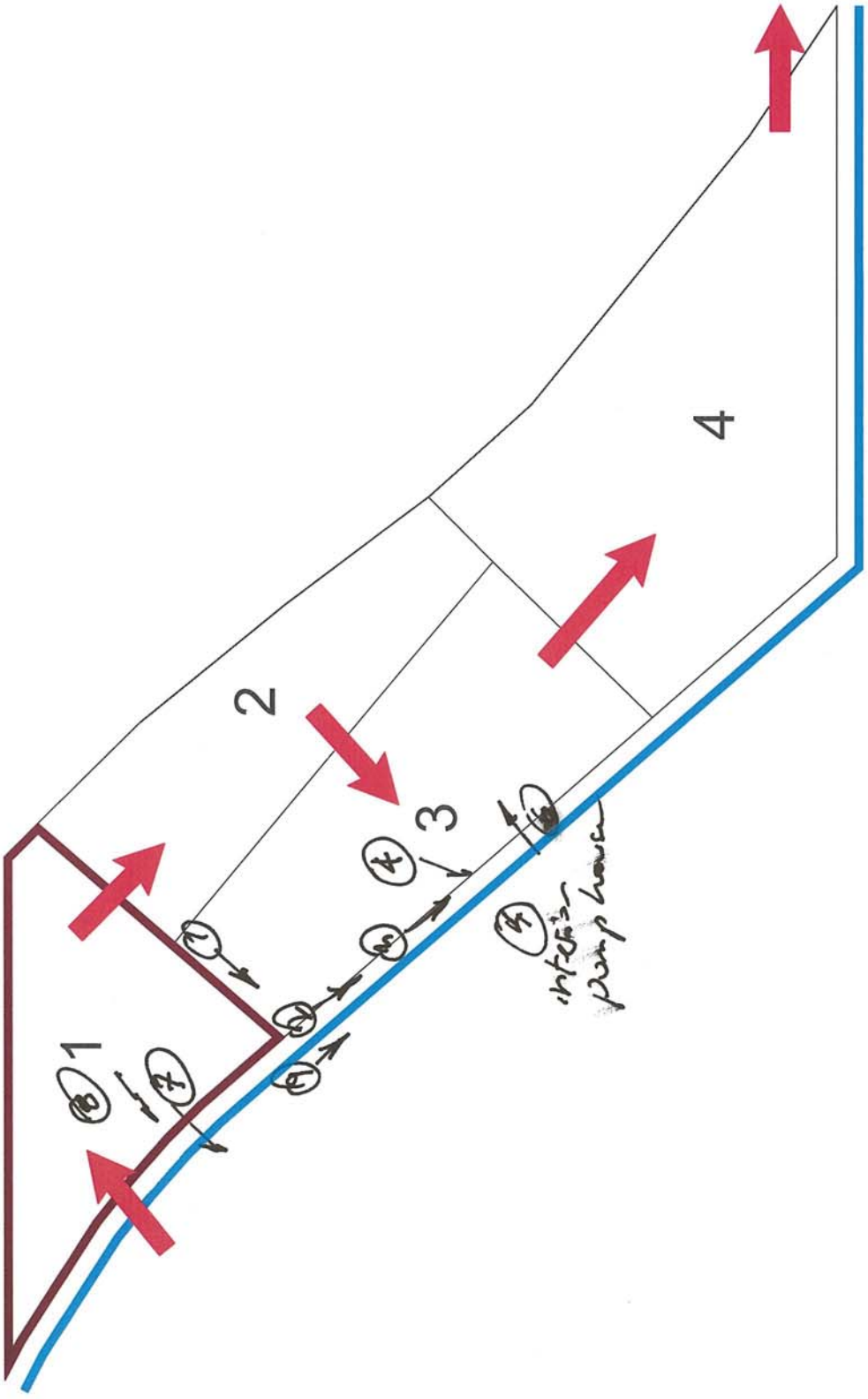
Red: Band_1
Green: Band_2
Blue: Band_3

1:7,523

0 0.075 0.15 0.3 mi
0 0.125 0.25 0.5 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

City of Richmond, BC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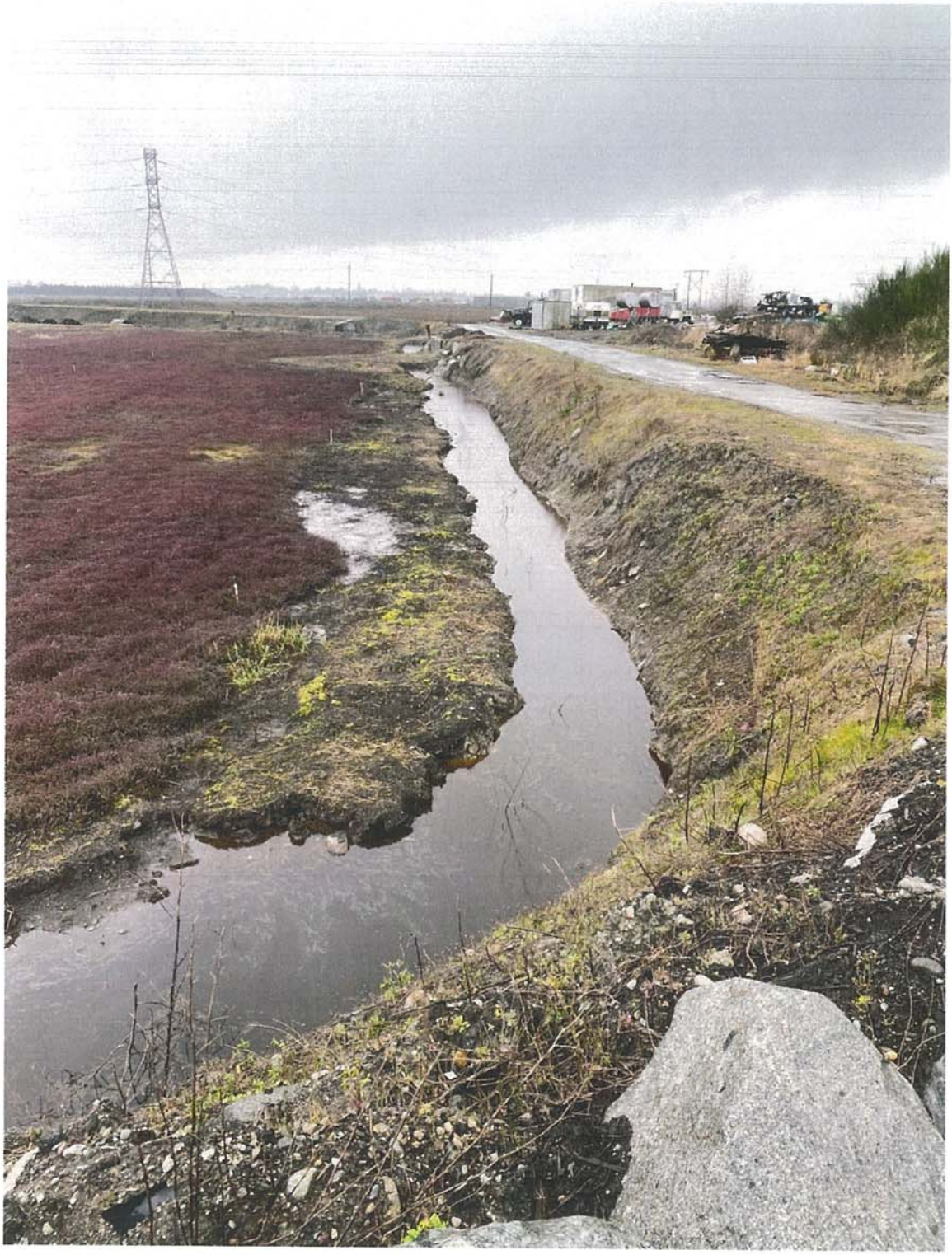
(1)



(2)

(3)

(4)

(5)

(6)

(7)

Attachment 5

March 30 , 2020

Jagbar Farms Ltd.
19740 River Road,
Richmond, BC
V6V 1M3

Attn: Sukhminder Sidhu

Re: 19740 River Road – Soil Deposit Application – Geotechnical Assessment – ADDENDUM

This Addendum expands on the previous Geotechnical Assessment dated February 3, 2020 (see Soil Placement Application – Attachment 4).

The purpose of this addendum is to confirm that there will be no adverse impacts on surrounding properties.

The commentary relates specifically to the soil placement area at the northwest end of the property.

The area has been filled previously to a depth of approximately 2.5m to establish the current elevation. The most recent fill was placed in approximately 2000 pursuant to the previous authorizations. No adverse geotechnical impacts have been noted occurred during the previous 20 years.

The south boundary is adjacent to the existing irrigation and drainage ditch system connecting to the Fraser River.

The southwest boundary is adjacent to the Richmond ditch system. The CP Rail right of way (ROW) is on the southwest side of the ditch. The CP Rail ROW shows no evidence of geotechnical issues and no adverse effects have been noted during the previous 20 years of cranberry cultivation.

The ditch on the south and southwest boundaries system shows no evidence of geotechnical issues and no adverse effects have been noted during the previous 20 years of cranberry cultivation.

The north boundary is adjacent to the Kinder Morgen pipeline ROW. The ROW shows no evidence of geotechnical issues and no adverse effects have been noted in the previous 20 years of cranberry cultivation.

The northeast boundary is adjacent to the Fraser River dike and River Road. The Fraser River dike and River Road show no evidence of geotechnical issues and no adverse effects have been noted in the previous 20 years of cranberry cultivation.

The proposed soil placement is separated from the Kinder Morgan ROW by a buffer of approximately 15m including the existing embarkment and proposed dike at the north boundary of the soil placement area.

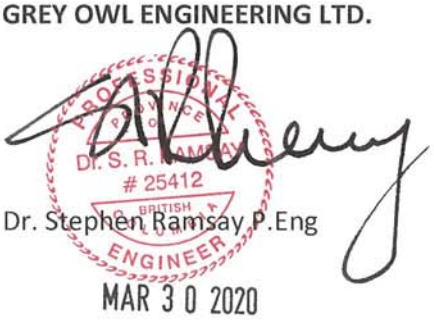
Attcahment 1 shows the Kinder Morgan ROW adjacent to the noth boundary of the subject property.

See figure 1 to 3 attached which demonstrates the separation of the Kinder Morgan ROW from the Jagbar Farms property and from the proposed soil placement areas. The separation exceeds the Kinder Morgan guidelines for concern with the ROW.

The proposed soil placement will not have any geotechnical impacts on any of the adjacent properties.

In summary, there are no indications of pre-existing geotechnical issues related to cranberry cultivation which has occurred continuously at Jagbar Farms for over 30 years. The proposed soil placement area has sufficient buffer and physical separation from adjacent properties to avoid any geotechnical impacts.

Yours truly,
GREY OWL ENGINEERING LTD.



Dr. Stephen Ramsay P.Eng

MAR 3 0 2020

Attachment 1.

ArcGIS Web Map

GP – 113

2020-04-13, 9:39:21 AM

- Air Parcels
- Strata
- Parcels (black line)
- Community Centres
- Richmond Oval
- Skating Arenas
- Swimming Pools
- Libraries
- Theatre
- City Hall
- Fire Stations
- Police Stations
- Ambulance Stations
- Hospitals

1:4,223

0 0.05 0.1 0.2 mi

0 0.075 0.15 0.3 km

ArcGIS Web Map

GP – 114

2020-04-13, 9:40:24 AM

- Air Parcels
- Strata
- Parcels (black line)
- Community Centres
- Richmond Oval
- Skating Arenas
- Swimming Pools
- Libraries
- Theatre
- City Hall
- Fire Stations
- Police Stations
- Ambulance Stations
- Hospitals
- Red: Band_1
- Green: Band_2
- Blue: Band_3

1:4,223

0 0.05 0.1 0.2 mi

0 0.075 0.15 0.3 km

ArcGIS Web Map

GP – 115

2020-03-27, 5:00:52 PM

1:528

0 0.005 0.01 0.02 mi

0 0.01 0.02 0.04 km

Property Address

- Air Parcels
- Strata
- Parcels (black line)
- Community Centres
- Richmond Oval
- Skating Arenas
- Swimming Pools
- Libraries
- Theatre
- City Hall
- Fire Stations
- Police Stations
- Ambulance Stations
- Hospitals
- Red: Band_1
- Green: Band_2
- Blue: Band_3

Attachment 2
Existing and Proposed Pipeline Route

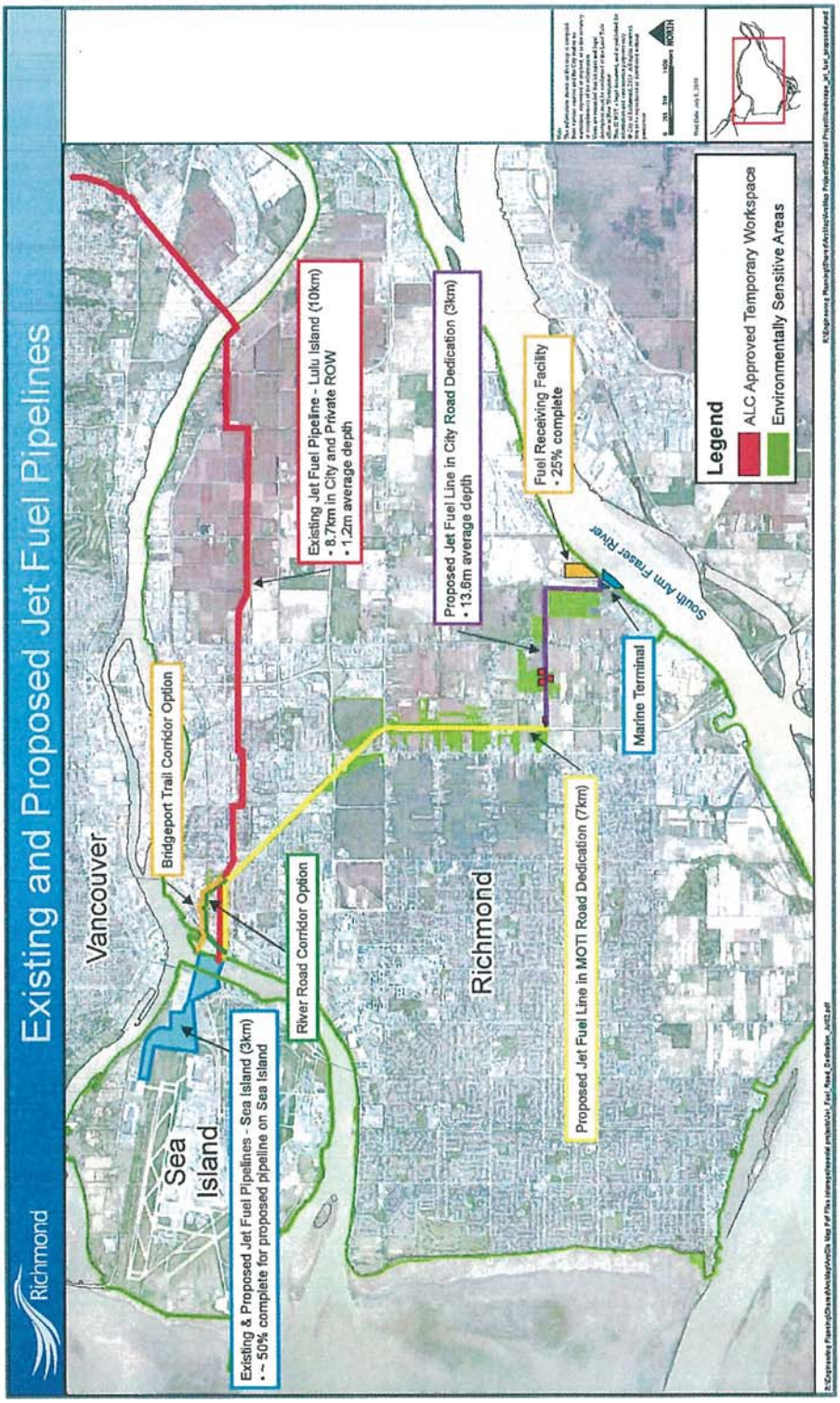


Figure 1
Kinder Morgan Pipeline ROW

Figure 2
Kinder Morgan pipeline ROW adjacent to northwest boundary of Jagbar Farms. ROW is separated from soil deposit by buffer including ROW, ditch, and embarkment at right.

Figure 3
Kinder Morgan ROW at left. Jagbar Farms at right.

Non-Farm Use Fill Application for 19740 River Road, Jagbar Farms (Peat only, development area of 5.3 ha or 13.1 acres)

Project Cost Estimates	
During peat importation - ongoing monitoring and reporting by Professional Agrologist as required by the ALC and the City of Richmond (generally per 3,000 m^3) – 10-12 visits for 32,000 m^3 of peat	**$6,000 (approx. $500 per monitoring visit and report, estimate from invoices for similar projects in area)**
Earthworks costs – 2 year maximum duration (Project management, load inspector, machine/labour costs, fuel, traffic management)	**The total cost of development of the soil deposit area is estimated at $23,000-$27,000/acre ($50,000-$60,000/ha) inclusive of earthworks, drainage (underground drainage within field and perimeter ditch drainage, irrigation, peat soil placement and grading and planting.** **These costs are typical based on previous experience at Jagbar Farms.**
Cranberry Farm implementation cost estimate in new 5.3 ha area (irrigation, installation of berms, labour, new cranberry plants, any other installations)	**See above.** **Total implementation cost approximately $292,000 (calculated via: $55,000 average x 5.3 ha)** **Cost to maintain and cultivate cranberry crop once established (see FSAAC Summary document): $5,000/acre/year = $66,000 per year for 13.1 acres** **No profit from crop for approximately 3 years (crop needs to grow, develop) from establishment**
ALC application fee (if proposal is forwarded to the ALC by the CoR)	**$1,500**
Final topographic survey	**$2,000-$4,000**[1]
Final Agrologist Report (Closure Report for ALC)	**$3,000-$4,000**[2]
Final Geotechnical Report (if required)	**$2,000-$4,000**
Project Cost Estimate (does not include upfront costs, detailed below)	**Approximately $309,000 *plus* $66,000 per year to maintain crop for initial three years of establishment until first commercial harvest** **Where cost is estimated as a range above, the average has been used in this calculation.**

[1] Cost of survey varies by company and complexity of terrain – area to be surveyed is 5.3 ha (13.1 acres).

[2] Includes potential fertility testing as part of ALC closure requirements (topsoil).

Upfront Costs (To Date, paid by Jagbar Farms)	
Soil Placement Plan	**$2,500**
Topographic Survey (Existing)	**$1,500**
Drainage Plan	**$1,500**
Geotechnical Report	**$1,500**
Application Fee (CoR)	**$600**
Total Upfront Costs Paid to Date	**$7,600**
Additional upfront costs, if required	**$5,000-$10,000 for ESC implementation such as gravel road rehabilitation, possible wheel wash installation[3]**
Peat Tipping Fees	**All structural fill required establish the existing grade of the soil placement area has been placed under previous authorizations (see Soil Placement Plan & Geotechnical Assessment). Sufficient material exists at the site for all anticipates earthworks related to the dikes and drainage system (no material necessary).** **The peat soil will be sourced from specified areas in Queensborough where previous peat soil has been sourced. This is to ensure consistency and uniformity of the soil through the Jagbar Farm operations and similar growing conditions throughout.** **The peat soil will be sourced from areas of Queensborough that are being developed requiring removal of the existing peat soil at**

[3] Large sites with 3+ year projects have ESC costs of over $35,000 (costs seen by Madrone in related projects). This is a cranberry farm with existing gravelled farm roads. The peat will be confined between berms therefore, run-off is not anticipated to be a management issue. The main ESC anticipated will be road improvements (bringing in fresh gravel, spreading) and potential wheel wash installation at entrance to ensure trucks do not track sediment onto River Road. If gravel is sufficient at cleaning tires, no wheel wash will be installed.

	those sites. The rate at which peat soil is sourced is dependent, in part, on the development in Queensborough and is expected to have a duration of about two (2) years. **Note that the peat soil will be extracted and trucked at the expense of the developer(s) of the Queensborough site(s) and is supplied at no cost to Jagbar Farms.** **This is not a commercial fill site and no fees are paid to Jagbar Farms for the peat soil.**

City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	June 11, 2020
From:	Jason Kita Director, Corporate Programs Management Group	**File:**	01-0103-01/2019-Vol 01
Re:	**2020 UBCM Community Excellence Awards**		

Staff Recommendation

That the City's entries for the Union of BC Municipalities (UBCM) Community Excellence Awards be endorsed, including:

1. Excellence in Governance: The City of Richmond's Organizational Development Program;
2. Excellence in Service Delivery: Community Wellness Strategy 2018-2023;
3. Excellence in Asset Management: Richmond Flood Protection Program; and
4. Excellence in Sustainability: Mitchell Island Environmental Stewardship Initiatives.

Jason Kita
Director, Corporate Programs Management Group
(778-233-0660)

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
CPMG	☑	
Community Services	☑	
Engineering	☑	
Sustainability	☑	
SENIOR STAFF REPORT REVIEW	**INITIALS:**	**APPROVED BY CAO**

Staff Report

Origin

The Union of BC Municipalities (UBCM) Community Excellence Awards recognize and celebrate UBCM members that have implemented projects or programs that demonstrate excellence in meeting the purposes of local government in BC. The awards are designed to profile promising practices and to encourage local governments to learn from the success of other members in order to implement changes in their own communities.

Entries for this year's awards submissions must include a resolution by Council indicating support for the entries to be considered for a 2020 award by August 14, 2020.

Analysis

The City of Richmond is committed to a culture of continuous improvement and our vision "to be the most appealing, livable and well-managed community in Canada." One of the ways in which we measure our success in achieving our objectives is through the awards and recognition the City receives from its peers in local government and from others. The City of Richmond has a lengthy list of awards and other accolades received in recent years, which are recorded on the City's website at: www.richmond.ca/discover/about/awards.

In particular, Richmond has received a number of awards from the UBCM through its Community Excellence Awards program. The UBCM is now accepting entries for its 2020 Community Excellence Awards in four categories. Staff have reviewed the award criteria and are recommending entries in the following categories:

Excellence in Governance
Governance is the process of decision-making and the means by which decisions are implemented (or not implemented). This category includes projects/programs that utilize governance processes or policies that are outcomes-based and consensus oriented, support and encourage citizen participation in civic decision-making, are efficient, equitable and inclusive, open and transparent; and exemplify best practices in accountability, effectiveness, and long-term thinking. This may include projects focused on staff, elected officials and/or the community at large.

City of Richmond entry: The City of Richmond's Organizational Development Program.

The City of Richmond's Organizational Development Program is a key component in establishing common values that govern the way the organization operates. As a corporate-wide initiative the program provides staff with a framework to keep corporate culture at the forefront, increase engagement, and improve functional collaboration, innovation, and communication with the objective of maximizing performance. Centred on the City of Richmond's vision, the Organizational Development Program outlines eight focus areas that each contribute to the City's corporate culture of continuous improvement: Values, Leadership, Customer Service, People, Structure, Aligned Strategies, Operational Performance, and Corporate Performance. These focus areas provide a common language and understanding for staff to make decisions, define

priorities, and drive outcomes. By clearly defining corporate-wide guidelines and standards, the organization is aligned on accountability, effectiveness, and long-term thinking. The Organizational Development Program has provided a foundation for a united, cohesive, and resilient work force that is able to quickly respond, adapt, and address unexpected challenges, such as the current COVID-19 pandemic.

Excellence in Service Delivery

Service delivery involves the actual production and provision of goods and services to the community, and should be integrated with community plans and aligned with financial plans. This category includes projects/programs that provide effective services in a proactive manner, demonstrate benefit to the community, and utilize performance measures, benchmarks and standards to ensure sustainable service delivery.

City of Richmond entry: Community Wellness Strategy 2018-2023.

In 2018, the City of Richmond, in partnership with Richmond School District-38 and Vancouver Coastal Health – Richmond adopted the 2nd five year Community Wellness Strategy. This strategy prioritizes wellness as a contributor to a vibrant, appealing and liveable community and identifies innovative approaches to most effectively impact wellness outcomes. By working cross-sector and collaboratively the potential impact on the community is anticipated to be much greater than any one of our individual organizations efforts might be. The strategy identifies key initiatives and actions to improve wellness for Richmond residents and to increase opportunities for individuals, neighbourhoods and communities to be active and healthy. Since its adoption a variety of successes have been realized including education for staff regarding mental well-being, expansion of the playbox, art truck and Walk Richmond programs, and implementation of a Food Map for Richmond Residents. The Strategy includes an evaluation framework, which outlines a logic model including indicators and data sources that serves as a guide for evaluating the overall Strategy.

Excellence in Asset Management

Asset management is an integrated business approach that involves planning, finance, engineering and operations to effectively manage existing and new infrastructure in order to maximize benefits, reduce risk and provide satisfactory levels of service to community users in a sustainable manner. This category includes projects/programs that demonstrate a comprehensive system of asset management policies and practices.

City of Richmond entry: Richmond Flood Protection Program.

The average elevation of the City of Richmond is one metre above sea level, and the City depends primarily on its diking infrastructure for protection against flood events. Considering the effects of climate change, such as sea level rise and increased storm intensity, it is essential for Richmond to have a robust perimeter diking system to mitigate potential inundation and ensure protection of lives and safeguarding of the City infrastructure. The City of Richmond updated its Flood Protection Management Strategy (FPMS) to overcome the existing and future anticipated challenges in order to maintain a high level of flood protection for the community. The FPMS

reviews the City's vision, regional guidelines, and innovation in flood protection to establish a world-class standard for Richmond's flood protection system. The City has also developed a Dike Master Plan, which provides area-specific solutions for perimeter dikes and recommends upgrades based on current climate change science.

Excellence in Sustainability

Sustainability means meeting current needs without compromising the ability of future generations to meet their own needs. This category recognizes UBCM members that incorporate a long-term sustainability lens by considering the four pillars - cultural, social, economic and environmental issues - in planning, policy and practice. Projects/programs that incorporate a long-term sustainability lens by considering cultural, social, economic and environmental issues in planning, policy and practice.

City of Richmond entry: Mitchell Island Environmental Stewardship Initiatives.

Mitchell Island is an important industrial hub within the City of Richmond that is connected to the ecologically sensitive Fraser River through the City's drainage infrastructure. Persistent environmental concerns have been noted in the area and in response Richmond implemented an island-specific program to promote environmental stewardship among local land and business owners, assess and monitor the health of the island environment, and improve collaboration between staff and senior governments. The program has generated new heights of cooperation amongst stakeholders on Mitchell Island, and additionally identified and mitigated numerous sources of Fraser River water contamination. Many businesses, once made aware of their impacts, have been quick to install pollution mitigation infrastructure such as settling ponds, pH correcting technologies, impervious surfaces, and wheel washes, resulting in measurable improvements to island storm discharge water quality.

Richmond has demonstrated excellence, leadership and innovation in all four areas being recommended for entry in this year's UBCM awards competition. With Council's endorsement of these entries, Staff will complete the award submission process prior to the deadline.

Financial Impact

None.

Conclusion

One of the ways in which the City of Richmond measures our success in achieving our objectives is through the awards and recognition the City receives from its peers in local government and from others. The Union of BC Municipalities (UBCM) Community Excellence Awards recognize implemented projects or programs that demonstrate excellence in local

government in BC. This provides a further opportunity for the City of Richmond to be recognized for its commitment to continuous improvement and excellence in municipal governance and service delivery.

Jason Kita
Director, Corporate Programs Management Group
(778-233-0660)

City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	June 19, 2020
From:	Lloyd Bie, P. Eng. Director, Transportation	**File:**	01-0154-04/2020-Vol 01
Re:	**TransLink 2020 Capital Cost-Share Program – Supplemental Applications**		

Staff Recommendation

That as described in the report titled "TransLink 2020 Capital Cost-Share Program – Supplemental Applications" dated June 19, 2020 from the Director, Transportation:

(a) the transit-related projects recommended for cost-sharing as part of the TransLink 2020 Bus Speed and Reliability Program be endorsed;

(b) should the above project receive final approval from TransLink, the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the funding agreements and the Revised Consolidated 5 Year Financial Plan (2020-2024) be updated accordingly; and

(c) staff be directed to implement the projects approved by TransLink and report back in one year as part of the City's proposed applications to TransLink's 2021 Capital Cost-Share Programs.

Lloyd Bie, P. Eng.
Director, Transportation
(604-276-4131)
Att. 4

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
Finance	☑	
Engineering	☑	
RCMP	☑	
Fire Rescue	☑	
SENIOR STAFF REPORT REVIEW	**INITIALS:** CS	**APPROVED BY CAO**

Staff Report

Origin

In October 2019, Council endorsed the submission of several road, bicycle and transit-related improvement projects for funding consideration from TransLink's 2020 capital cost-share funding programs. In response to a late call in March 2020 from TransLink for submissions to its 2020 Bus Speed and Reliability (BSR) Program, the City submitted eight applications. The City's 2020 BSR Program submissions have received preliminary approval and are anticipated to receive final approval in early July 2020. Staff are now seeking Council's endorsement of the projects and authorization to execute the anticipated funding agreements.

Beginning in March 2020, TransLink has made a number of operational changes in response to the COVID-19 pandemic to balance lower ridership with the need to maintain physical distancing, and address the loss of fare revenue, gas tax and other funding sources. TransLink has advised that there is no change at this time to its capital funding towards municipal cost-share programs and the 2020 programs will proceed.

This report supports Council's Strategic Plan 2018-2022 Strategy #5 Sound Financial Management:

> *Accountable, transparent, and responsible financial management that supports the needs of the community into the future.*
>
> *5.4 Work cooperatively and respectfully with all levels of government and stakeholders while advocating for the best interests of Richmond.*

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

> *Leadership in effective and sustainable growth that supports Richmond's physical and social needs.*
>
> *6.3 Build on transportation and active mobility networks.*

Analysis

TransLink 2020 Bus Speed and Reliability Program

TransLink's Bus Speed and Reliability (BSR) Program provides cost-share funding for feasibility studies and capital projects that support improved bus speed and reliability. TransLink may provide up to 100% cost-share funding for projects deemed to be high priority. For 2020, the BSR Program has $3.725 million with all funding available on a competitive basis. Of the total applications received, the City's projects are recommended to receive the most funding of any municipality and comprise 35% ($950,150) of the total funding recommended for approval (Figure 1). As summarized in Table 1 and described in detail below, the City submitted a total of eight applications to the 2020 BSR Program.

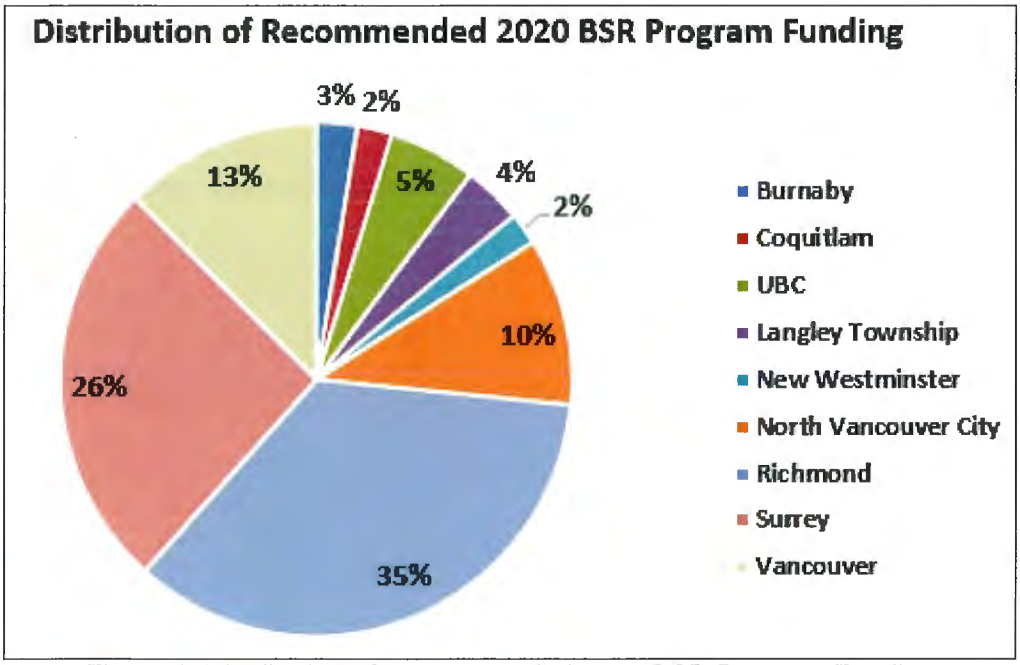


Figure 1: Distribution of Recommended 2020 BSR Program Funding

Table 1: Summary of Projects submitted to 2020 BSR Program

Category	# of Projects	General Scope
Capital Project	5	Implement measures recommended by Project Development studies completed as part of the approved 2019 BSR Program: (1) Steveston Highway and No. 5 Road in vicinity of Highway 99: Channelization of Traffic (2) Bridgeport Station and Transit Exchange: Bus Access (3) Bridgeport Station and Transit Exchange: Bus Egress (4) Eastbound Westminster Highway at Garden City Road: Signal Changes (5) Eastbound Westminster Highway at Garden City Road: Left-Turn Lane
Project Development	3	Undertake studies of "hot spot" locations in Richmond where buses are experiencing travel delays as identified by TransLink: (1) No. 3 Road (Cook Road-Steveston Highway) (2) Corridor and "Hot Spot" Analysis: various locations (3) Steveston Highway (Highway 99-Palmberg Road)

Steveston Highway and No. 5 Road in vicinity of Highway 99: Channelization of Traffic

As part of the 2019 BSR Program, the City received funding to retain a consultant to analyze delays for bus service along Steveston Highway in the vicinity of Highway 99 and identify potential solutions. As shown in Table 2, a number of bus routes travelling eastbound on Steveston Highway from Shell Road towards Highway 99 encounter major delays due to traffic congestion during peak periods with many bus operators opting to take a long detour through Riverside Industrial Park to avoid the congestion. Similarly, buses travelling northbound on No. 5 Road intending to make a right turn at Steveston Highway also encounter traffic congestion as both eastbound lanes on Steveston Highway can be occupied by traffic heading to southbound Highway 99.

Table 2: Bus Routes Impacted by Congestion on Steveston Highway and No. 5 Road in vicinity of Highway 99

Bus Route	Routing	Destination
403, 404, 408 (weekends), 413	Eastbound Steveston Hwy	Entertainment Blvd
Buses leaving Richmond Transit Centre "Not in Service" to begin peak period service south of the Fraser River (i.e., from Ladner, Tsawwassen or White Rock)	Northbound No. 5 Road and Eastbound Steveston Hwy	Highway 99 Southbound

In addition, a key traffic-related concern received by the City from the public is that eastbound traffic on Steveston Highway intending to access No. 6 Road or northbound Highway 99 via the Highway 99 overpass is blocked by congestion on Steveston Highway from No. 5 Road to Highway 99, which stems from queued southbound traffic for the George Massey Tunnel and/or last minute merging of motorists traffic using and blocking the inside lane.

To improve bus speed and reliability as well as overall traffic operations, particularly for eastbound traffic using the Highway 99 overpass, the 2019 BSR study examined numerous options and ultimately recommended new signage and pavement markings to better direct motorists and minimize weaving, as well as traffic signal modifications.

This proposed 2020 BSR Program project will implement the recommended measures that separate and channelize traffic movements along Steveston Highway and No. 5 Road, and modify the traffic signal at Steveston Highway-No. 5 Road (Attachment 1). The components of the project comprise the following measures:

- Eastbound Steveston Highway: Install continuous flexible delineators along the approaches to No. 5 Road and to Highway 99 to separate traffic destined for southbound Highway 99 (curb lane) and northbound Highway 99/eastbound Steveston Highway (inside lane).
- Eastbound Steveston Highway at Highway 99: Provide a bus-only lane at the Highway 99 southbound on-ramp approach.
- Northbound and Southbound No. 5 Road: Install continuous flexible delineators along the approach to Steveston Highway and provide exclusive and shared turning lanes.
- Southbound No. 5 Road to Eastbound Steveston Hwy: The southbound to eastbound left-turn movement will be restricted for trucks for safety considerations due to conflicts if two trucks are turning simultaneously. Truck drivers making this movement will need to detour via Horseshoe Way and Coppersmith Way. However, few trucks will be impacted by this proposed change as currently, three trucks in the morning and one truck in the afternoon peak periods typically make the southbound to eastbound turn movement.
- No. 5 Road-Steveston Highway: Modify traffic signal operation.
- Signage and Pavement Markings: Add new signage (overhead and shoulder-mounted) on Steveston Highway and No. 5 Road to notify motorists of the changes and modify pavement markings to accommodate the changes.

The proposed measures will benefit both bus and general traffic operations, and are compatible with any future changes in the area associated with potential improvements at the Steveston Highway-Highway 99 Interchange and the George Massey Tunnel crossing. The key benefit for motorists is that vehicle traffic will be channelled into the correct lane before approaching the Steveston Highway-No. 5 Road intersection, thereby reducing the congestion on eastbound

Steveston Highway from No. 5 Road to Highway 99 that arises from the last minute merging of traffic using and blocking the eastbound centre lane on Steveston Highway. Longer vehicle queues for traffic destined for Highway 99 southbound may result as the proposed improvements will direct motorists into the appropriate lane before approaching the Steveston Highway-No. 5 Road intersection.

Transit service in particular will benefit as the channelization will help buses to access:

- the eastbound bus-only lane on Steveston Highway for routes destined southbound on Highway 99; or
- the through eastbound lane on Steveston Highway across the Highway 99 overpass for routes destined for No. 6 Road.

Stakeholder Consultation and Public Awareness

Staff have shared the proposed measures with the Ministry of Transportation and Infrastructure (the Ministry), who did not identify any significant concerns. Prior to implementation, staff will undertake detailed design, discuss the measures in further detail with the Ministry and consult with local area businesses and stakeholders. Targeted consultation via a mail-out to residents and businesses within the area bordered by Williams Road, Shell Road, Entertainment Boulevard, and Dyke Road will occur in Q3 2020. The general public will be advised of the proposed measures prior to implementation via the City's regular communications channels (e.g., media release, information on City website, social media, etc).

Enforcement

The proposed measures are a notable change to traffic movements and staff anticipate that increased enforcement may be required to ensure motorists' compliance, particularly during the initial implementation phase. Staff have consulted with Richmond RCMP regarding the project and will continue to engage with RCMP throughout the project implementation.

ICBC Safety Audit of Proposed Improvements

At the City's request, ICBC staff carried out an independent safety audit of the proposed scope with an aim to improve the overall road safety performance of the project. The proposed design has incorporated ICBC's suggestions from the audit that are feasible and implementable within the project scope.

Implementation

Pending Council endorsement, the project will be implemented in Q4 2020/Q1 2021 following public and stakeholder consultation. Staff will monitor operations and report back in one year with any recommended modifications.

Bridgeport Station and Transit Exchange: Bus Access and Egress

As part of the 2019 BSR Program, the City received funding to retain a consultant to analyze delays due to traffic volumes for regional bus routes to/from south of the Fraser River when travelling between Highway 99 and the Bridgeport Exchange. These two proposed 2020 BSR

Program projects will implement the recommended measures to improve bus speed and reliability (Attachment 2).

- *Bridgeport Station Access*: From Highway 99, regional buses currently travel westbound Bridgeport Road and northbound Great Canadian Way. This project will re-route these buses along Gage Road and Beckwith Road, thus avoiding the congestion along the current route. The changes comprise new signage and pavement markings, and modification of the curb return at the northeast corner of Great Canadian Way-Beckwith Road to accommodate bus turning movements. Abutting business along Gage Road and Beckwith Road as well as residents on Beckwith Road east of Highway 99, who rely on these roads for access, will be informed of the proposed changes via mail notification.

- *Bridgeport Station Egress*: This project will modify signal operation and timing at Great Canadian Way-Sea Island Way to improve the operation performance and reduce the delay for regional bus routes when travelling from Bridgeport Exchange to Highway 99 via southbound Great Canadian Way and eastbound Sea Island Way. As a follow-up to the 2019 study, a separate study is currently underway to examine long-term improvements such as establishing a southbound bus-only lane on Great Canadian Way to further facilitate buses accessing Highway 99 southbound. These study findings will be reported back separately when completed.

Eastbound Westminster Highway at Garden City Road

As part of the 2019 BSR Program, the City received funding to retain a consultant to analyze the delays experienced by the 301 (Newton Exchange-Brighouse Station) service during peak hours at Westminster Highway-Garden City Road when making an eastbound to northbound left-turn. As recommended by the 2019 study, two separate projects are proposed for the 2020 BSR Program to reduce the delay in bus travel time (Attachment 3).

- *Traffic Signal*: Modify signal operation and timing to improve performance.

- *Eastbound Left-Turn Lane on Westminster Highway*: Increase the storage capacity for the eastbound left-turn lane by approximately 30 m to avoid the blockage of the left-turn bay by eastbound through vehicles and accommodate queuing during peak hours.

Project Development Studies

In addition to the above proposed capital projects, the City also submitted three Project Development studies as part of the 2020 BSR Program. All of the locations (Attachment 4) are identified by TransLink as key areas in Richmond where bus speed and reliability are negatively impacted. Subject to final approval by TransLink, each of the proposed projects will fund retaining a consultant to analyze the issues and identify potential solutions. If supported by the City and TransLink, the potential solutions may then be the subject of future cost-share applications to support implementation.

- *No. 3 Road (Cook Road-Steveston Highway)*: TransLink's 2019 Bus Speed and Reliability Report ranks No. 3 Road as #17 among the top 20 corridors in the region (and the only one in Richmond) contributing to person-hours of delay. The project will review and identify bus

speed and reliability issues in the southern portion of the corridor and develop conceptual designs or operational plans to address the issues. A similar analysis and review of the northern section of No. 3 Road (Cook Road-River Road) is anticipated to be undertaken as part of TransLink's planned RapidBus service between Richmond and the Expo Line.

- *Corridor and "Hot Spot" Analysis*: TransLink has identified several corridors as having high person-hours of delay as well as selected hot spot intersections. This project will review and identify bus speed and reliability issues for these corridors and hot spots, and develop conceptual designs or operational plans to address the issues at the following sites:

    - Garden City Road: Sea Island Way-Cook Road
    - Lansdowne Road: No. 3 Road-Kwantlen Street
    - Granville Ave: No. 3 Road-No. 4 Road
    - Horseshoe Way at No. 5 Road
    - Bridgeport Road at Viking Way

- *Steveston Highway (Highway 99-Palmberg Road)*: As the next phase of analysis of delays to bus operations along Steveston Highway in the vicinity of Highway 99, particularly in the westbound direction, this project will retain a QEP (Qualified Environmental Professional) to analyse and quantify the environmental impacts of widening Steveston Highway (Highway 99-150 m east of Palmberg Road) to provide an additional westbound lane to improve bus speed and reliability. An environmental impact analysis is required as there are ESA (Environmentally Sensitive Area) and RMA (Riparian Management Area) designations along this corridor that will need to be addressed if the road is to be widened.

Requested Funding and Estimated Project Costs

The total recommended funding for the City's Project Development and Capital Project applications to TransLink's 2020 Bus Speed and Reliability program is $950,150, which will support projects with a total estimated cost of $995,900 (Table 3). The City will receive 100% funding for the Project Development applications and will provide in-kind support via management of the consultant. Of the Capital Project applications, the City will contribute 10% of the estimated total cost towards two of the projects where the project is anticipated to improve travel speed and reliability for general traffic as well as buses. The City will receive 100% funding for the remaining three projects where the changes will primarily benefit bus performance. Overall, TransLink will fund 95% of the total costs with the City funding the balance of 5% of the total costs.

Table 3: Projects Approved as part of 2020 TransLink Bus Speed and Reliability Program

Category	Project	Requested TransLink Funding[1]	Proposed City Portion	Est. Total Project Cost
Project Development	No. 3 Road (Cook Road-Steveston Highway)	$100,000	$0	$100,000
	Corridor and Hot Spot Analysis	$100,000	$0	$100,000
	Steveston Highway (Highway 99-Palmberg Road)	$26,200	$0	$26,200
	Subtotal	**$226,200**	**$0**	**$226,200**

Category	Project	Requested TransLink Funding[1]	Proposed City Portion	Est. Total Project Cost
Capital Project	Bridgeport Station Access	$25,900	$0	$25,900
	Bridgeport Station Egress	$33,750	$3,750	$37,500
	Garden City Road-Westminster Highway: Signal Changes	$87,800	$0	$87,800
	Garden City Road-Westminster Highway: Eastbound Left-Turn Lane Extension	$198,500	$0	$198,500
	Steveston Highway (No. 5 Road-Hwy 99)	$378,000	$42,000	$420,000
	Subtotal	**$723,950**	**$45,750**	**$769,700**
	Total	**$950,150**	**$45,750**	**$995,900**

(1) The amounts shown represent the maximum funding contribution to be requested from TransLink based on the City's cost estimate for the project. The actual amount invoiced to TransLink follows project completion and is based on incurred costs.

Should TransLink not provide final approval, the projects will be deferred and the City will re-apply to TransLink as part of its 2021 BSR Program. All projects are deemed good candidates for future BSR Program funding as they benefit transit riders and were developed in collaboration with TransLink staff. Based on the submissions being successful, the City will enter into funding agreements with TransLink. The agreements are standard form agreements provided by TransLink and include an indemnity and release in favour of TransLink. Staff recommend that the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the agreements.

Financial Impact

The City's proposed total funding share of $45,750 can be accommodated within approved Transportation annual programs.

Conclusion

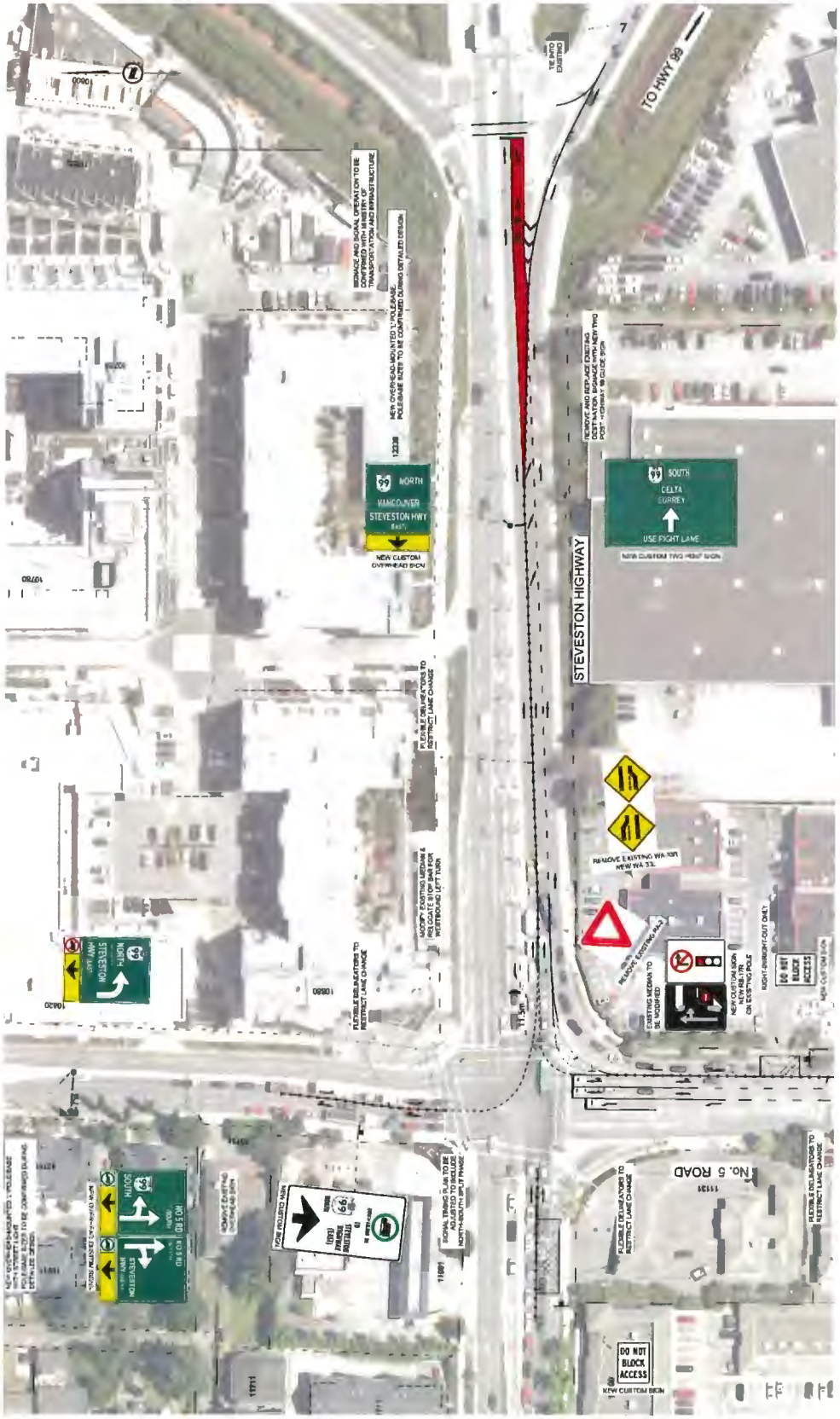
Eight projects submitted by the City have received preliminary approval by TransLink and are anticipated to receive final approval in July 2020 as part of its 2020 Bus Speed and Reliability program. Execution of the funding agreements and implementation of the projects will support advancing the goals of the *Official Community Plan* to achieve a higher transit mode share and improve traffic operations for the public at two key locations: Steveston Highway-No. 5 Road and Garden City Road-Sea Island Way.

Joan Caravan
Transportation Planner
(604-276-4035)
JC:lce

Fred Lin, P.Eng., PTOE
Senior Transportation Engineer
(604-247-4627)

Att.1: Steveston Highway and No. 5 Road in vicinity of Highway 99
Att.2: Bridgeport Station and Transit Exchange: Bus Access and Egress
Att.3: Eastbound Westminster Highway at Garden City Road
Att.4: Location of Project Development Studies

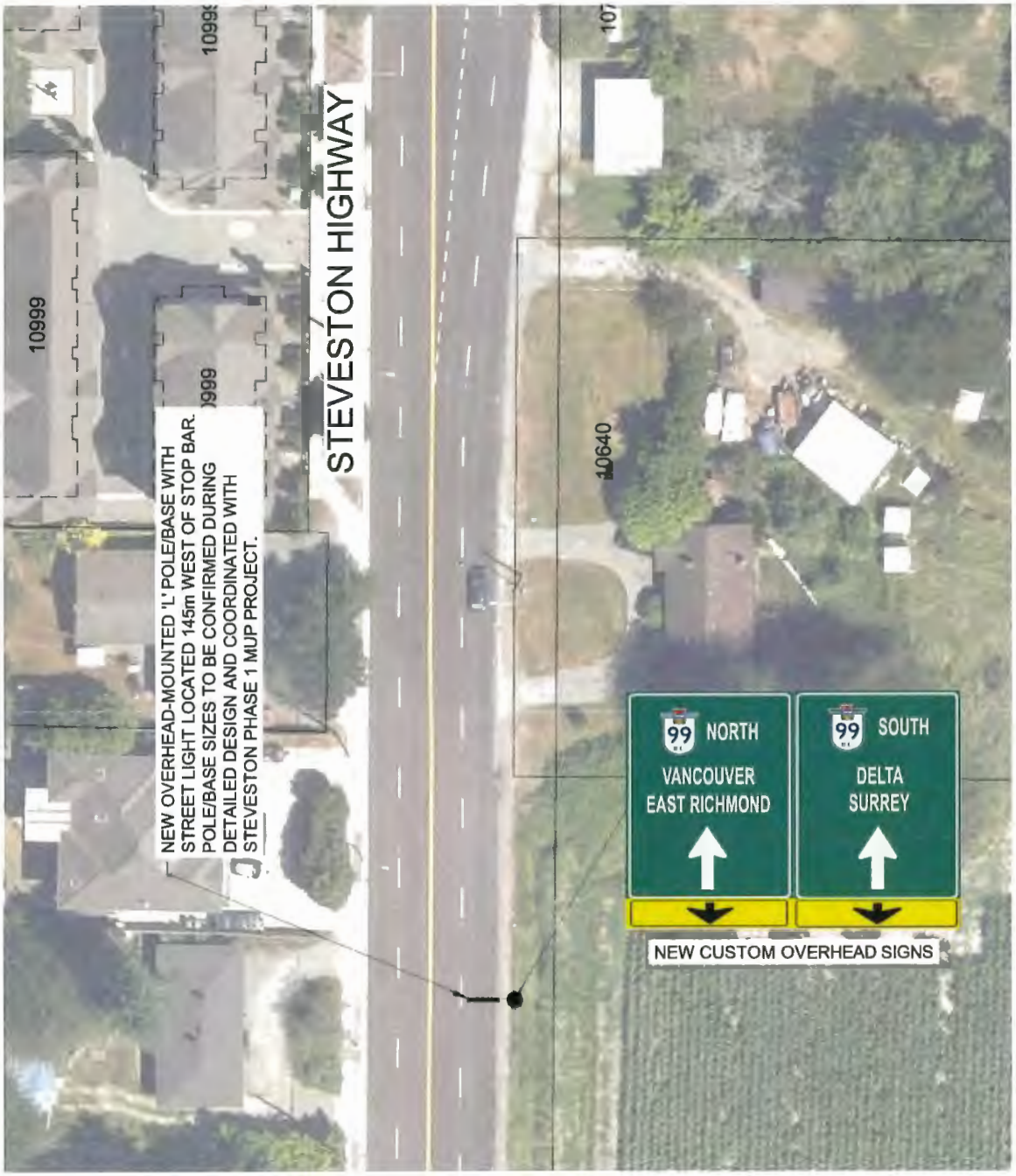
Steveston Highway and No. 5 Road in vicinity of Highway 99



Delineation and Channelization at Steveston Highway-No. 5 Road

GP – 136

Steveston Highway and No. 5 Road in vicinity of Highway 99



Overhead Signage on Steveston Highway west of Shell Road

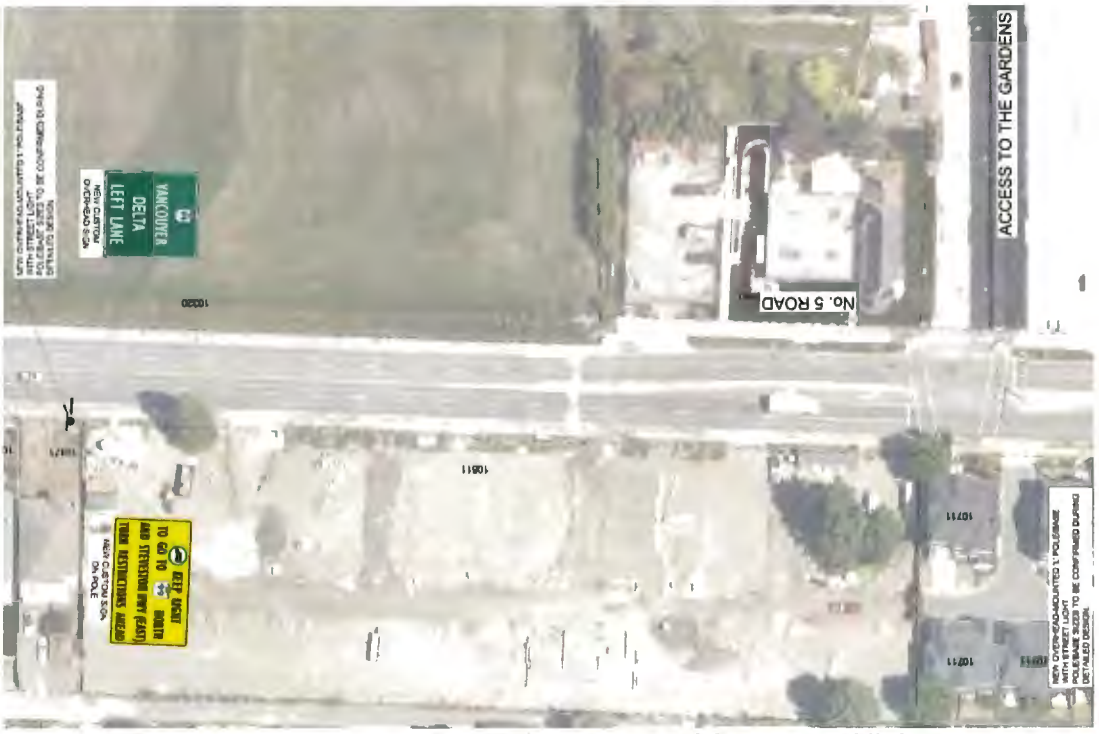
Steveston Highway and No. 5 Road in vicinity of Highway 99

Overhead Signage on Steveston Highway east of Shell Road

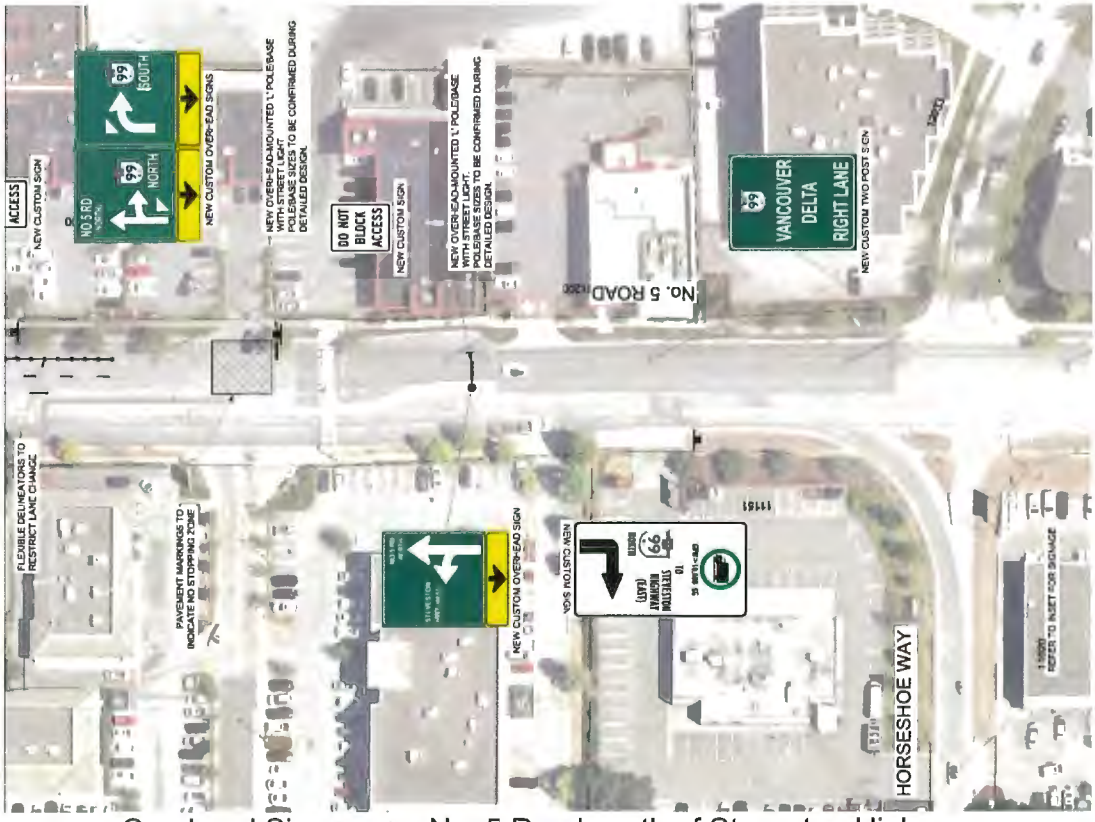
Steveston Highway and No. 5 Road in vicinity of Highway 99

Overhead Signage on Steveston Highway east of Coppersmith Place

Steveston Highway and No. 5 Road in vicinity of Highway 99



Overhead Signage on No. 5 Road north of Steveston Highway



Overhead Signage on No. 5 Road south of Steveston Highway

Steveston Highway and No. 5 Road in vicinity of Highway 99

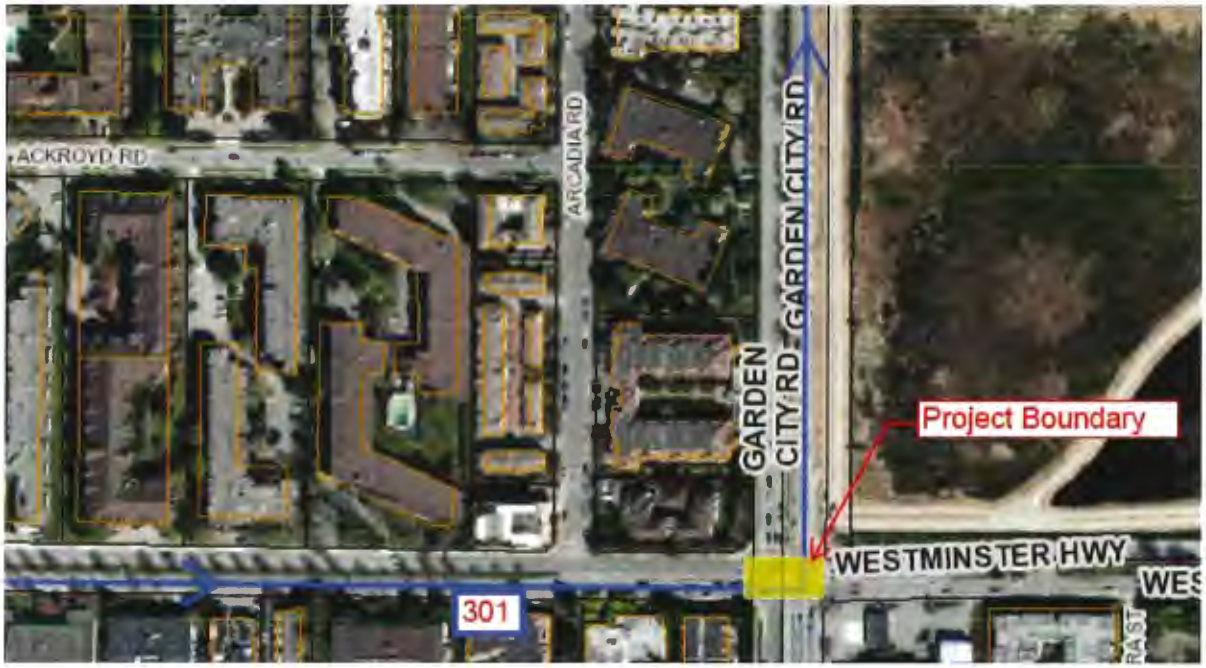
Shoulder-Mounted Signage for Truck Detour
for Southbound No. 5 Road to Eastbound Steveston Hwy Left-turn Movement

Bridgeport Station and Transit Exchange: Bus Access and Egress

Bridgeport Transit Exchange: New Routing for Regional Bus Access

Bridgeport Transit Exchange: Modification to Traffic Signal Operations for Bus Egress

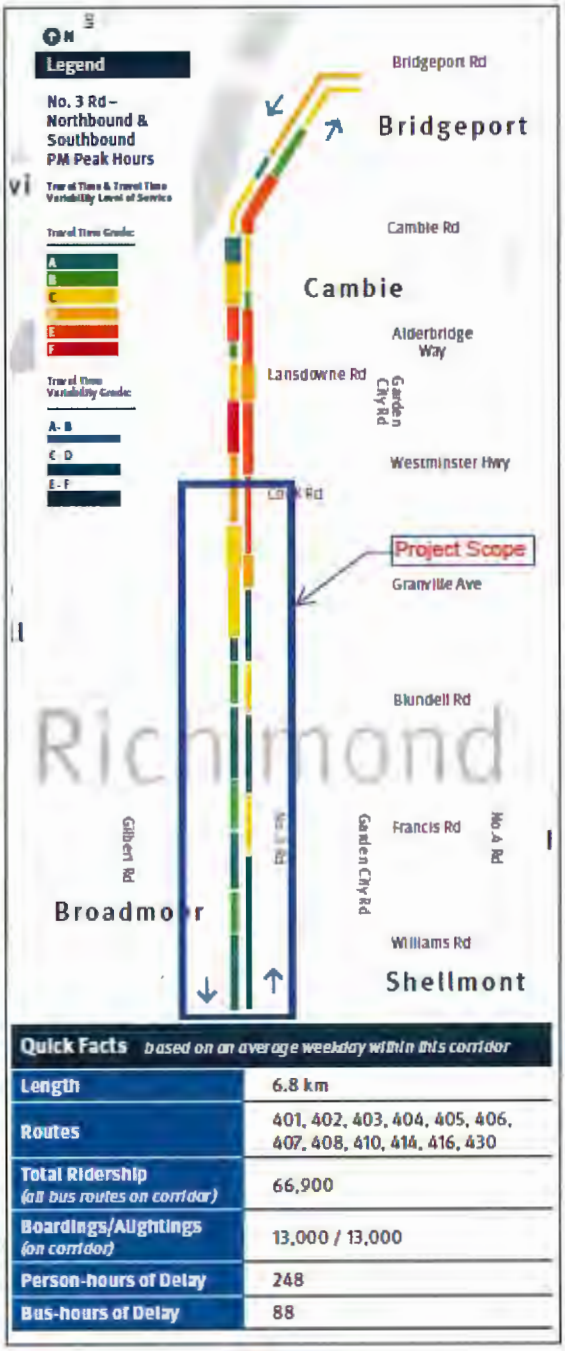
Eastbound Westminster Highway at Garden City Road



Westminster Highway-Garden City Road: Modification to Traffic Signal Operations

Eastbound Westminster Highway at Garden City Road: Extension of Left-Turn Lane

Location of Project Development Studies



Quick Facts *based on an average weekday within this corridor*	
Length	6.8 km
Routes	401, 402, 403, 404, 405, 406, 407, 408, 410, 414, 416, 430
Total Ridership *(all bus routes on corridor)*	66,900
Boardings/Alightings *(on corridor)*	13,000 / 13,000
Person-hours of Delay	248
Bus-hours of Delay	88

No. 3 Road (Cook Road-Steveston Highway)

Location of Project Development Studies

Corridor and "Hot Spot" Analysis: Various Locations

Steveston Highway east of Highway 99: Environmental Study

City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	July 6, 2020
From:	Wayne Craig Director, Development	**File:**	RZ 18-829789
Re:	**Application by 1058085 BC Ltd. for Rezoning at 10431 No. 5 Road from the "Single Detached (RS1/E)" Zone to the "Arterial Road Compact Two-Unit Dwellings (RCD)" Zone**		

Staff Recommendation

1. That Richmond Zoning Bylaw 8500, Amendment Bylaw 10197 to create the "Arterial Road Compact Two-Unit Dwellings (RCD)" zone, be introduced and given First Reading; and

2. That Richmond Zoning Bylaw 8500, Amendment Bylaw 10195, for the rezoning of 10431 No. 5 Road from "Single Detached (RS1/E)" to "Arterial Road Compact Two-Unit Dwellings (RCD)", be introduced and given First Reading.

Wayne Craig
Director, Development
(604-247-4625)

WC:na
Att. 7

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
Affordable Housing	☑	

Staff Report

Origin

1058085 BC Ltd. has applied for permission to rezone 10431 No. 5 Road from "Single Detached (RS1/E)" to a newly created "Arterial Road Compact Two-Unit Dwellings (RCD)" zone in order to create two lots and develop two front-to-back duplexes with vehicle access from the rear lane. A location map of the subject site is attached (Attachment 1). A Development Permit application is required prior to rezoning adoption to address the form and character of the proposed duplexes.

A new "Arterial Road Compact Two-Unit Dwellings (RCD)" zone is also being introduced to support the development of Arterial Road Compact Lot Duplexes envisioned in the Arterial Road Land Use Policy.

Findings of Fact

A Development Application Data Sheet (Attachment 2) providing details about the development proposal is attached.

Subject Site Existing Housing Profile

There is an existing single-family dwelling on the property, which will be demolished. The applicant has indicated that the existing house does not contain a secondary suite.

Surrounding Development

- To the North: A single-family dwelling on property zoned "Single Detached (RS1/B)" and designated in the Arterial Road Land Use Policy for Arterial Road Compact Lot Duplex.
- To the South: A single-family dwelling on property zoned "Single Detached (RS1/E)" and designated in the Arterial Road Land Use Policy for Arterial Road Townhouse.
- To the East: Across No. 5 Road, property zoned "Agriculture (AG1)".
- To the West: Across the lane, single-family dwellings on property zoned "Single Detached RS1/E)".

Related Policies & Studies

Official Community Plan (OCP) Designation

The OCP's Land Use Map designation for this property is "Neighbourhood Residential". This designation permits a range of residential uses including single-family and duplex buildings. This redevelopment proposal is consistent with this designation.

Arterial Road Policy

The Arterial Road Land Use Policy in the City's 2041 Official Community Plan Bylaw 9000 directs appropriate duplex developments onto certain major arterial roads outside the City Centre. The subject site is identified for "Arterial Road Compact Lot Duplex" on the Arterial Road Development Map and the proposal is in compliance with the Arterial Road Compact Lot Duplex Development Requirements under the Arterial Road Policy.

Lot Size Policy 5434

The subject property is located within the area governed by Single-Family Lot Size Policy 5434 (adopted by Council in 1990; amended in 1991 and 2006). This Policy permits rezoning and subdivision of lots along this section of No. 5 Road in accordance with compact lot single family or coach house zoning (i.e., a minimum with of 9 m with a maximum of two dwelling units per lot), provided there is access to an operational rear lane (Attachment 3).

The Single Family Lot Size Policy framework in general provides guidance with respect to the creation of new lots based on the lot width, depth, area and vehicle access. Lot Size Policy 5434 allows for the subdivision of the property to create two lots with a minimum width of 9 m provided vehicle access is from the rear lane. The subject application will create two lots with vehicle access from the rear lane consistent with the minimum subdivision standards in Lot Size Policy 5434.

The OCP Arterial Road Land Use Policy provides direction on the use of the subject property for residential duplexes on the same size lots as permitted under the Lot Size Policy. Compact lot duplexes will result in the same number of dwelling units as achieved via a rezoning to coach houses. Accordingly, the proposed rezoning is consistent with Lot Size Policy 5434.

Agricultural Land Reserve (ALR) Buffer Zone

A landscape buffer is required along the No. 5 Road frontage of this site. The buffer is intended to mitigate land use conflicts between the residential uses on the subject site and any agricultural land uses on the east side of No. 5 Road. The applicant is proposing a 4.0 m wide ALR buffer on site along the entire east property line.

In addition to the landscaping requirements of the buffer, a restrictive covenant will be registered on title, indicating that the landscaping within the ALR buffer cannot be removed or modified without the City's approval. The covenant would also identify that the landscape planting is intended to be a buffer to mitigate the impacts of noise, dust and odour generated from typical farm activities.

Floodplain Management Implementation Strategy

The proposed redevelopment must meet the requirements of the Richmond Flood Plain Designation and Protection Bylaw 8204. Registration of a flood indemnity covenant on title is required prior to final adoption of the rezoning bylaw.

Public Consultation

A rezoning sign has been installed on the subject property. Staff have not received any comments from the public about the rezoning application in response to the placement of the rezoning sign on the property.

The applicant conducted additional consultation with neighbouring properties along No. 5 Road (10311, 10333, 10337, 10411, 10451, and 10471 No 5 Road). No feedback or concerns were raised by the neighbours in regards to the consultation letter (Attachment 4).

Should the Planning Committee endorse this application and Council grant First Reading to the rezoning bylaw, the bylaw will be forwarded to a Public Hearing, where any area resident or interested party will have an opportunity to comment.

Public notification for the Public Hearing will be provided as per the *Local Government Act*.

Analysis

Site Planning and Architectural Character

The applicant proposes one duplex on each of the two lots to be created through rezoning and subdivision, for a total of four dwelling units ranging between approximately 114 m^2 (1,228 ft^2) to 120 m^2 (1,292 ft^2) in size. The duplexes are proposed to be in a "front-back" configuration with each unit having access to a detached garaged accessed from the existing rear lane. Outdoor private spaces will be provided at the front or rear yard of each dwelling unit.

The development proposal for duplexes is consistent with the land use designations in the Official Community Plan. Duplexes are considered as an appropriate infill development form within existing single-family neighbourhoods along arterial roads as they contribute to a greater variety of ground-oriented home ownership opportunities. In keeping with the architectural character of nearby single-family developments, the duplexes will be two storeys and will feature a peaked roof.

A survey and architectural plans showing the proposed subdivision plan is provided in Attachment 5. Further details of the architectural form and character of the proposed development and landscape design will be reviewed and finalized through the Development Permit application process.

Existing Legal Encumbrances

A Land Tax Deferment Act Agreement is currently registered on title. This agreement allows the property owner to defer payment of taxes. All deferred taxes must be paid and the agreement must be discharged from title prior to the preparation and registration of any legal documents associated with this rezoning application.

Transportation and Site Access

In accordance with Residential Lot (Vehicular) Access Regulation Bylaw No. 7222, vehicle access to the proposed lots is to be from the existing rear lane only. Each dwelling unit will have two vehicle parking space provided by a single-vehicle garage and an additional surface parking space located on the driveway in front of each garage. As a condition to rezoning, a restrictive covenant will be required to ensure that vehicle access to the future lots will be from the lane. Upgrades to the portion of the lane that abuts the subject site will be completed as part of future construction by the City at a later date. Cash-in-lieu contribution for the future works will be required at subdivision stage.

British Columbia Ministry of Transportation and Infrastructure (MOTI) Referral

The subject site is located within 800 m of a controlled access highway, and the rezoning application was referred to the BC Ministry of Transportation and Infrastructure (MOTI). Preliminary approval of the subject rezoning was granted on December 18, 2019. Prior to final adoption of the rezoning bylaw, final approval from MOTI is required.

Tree Retention and Replacement

The applicant has submitted a Certified Arborist's Report, which identifies on-site and off-site tree species, assesses tree structure and condition, and provides recommendations on tree retention and removal relative to the proposed development. The Report assesses three on-site trees, two of which are bylaw-sized trees, four trees on neighbouring properties, and two street trees on City property.

The City's Tree Preservation Coordinator has reviewed the Arborist's Report and supports the Arborist's findings, with the following comments:

- Four trees (tag #1, 2, 4 & 5) located on the neighbouring property to be retained and protected as per Arborist's Report recommendation. The level of tree protection is identified as part of the Tree Management Plan (Attachment 6).
- Two trees (tag #8 (21 cm caliper Apple tree) & #9 (28 cm caliper Plum tree)) located on City property within the rear lane are in poor condition and also conflict with the proposed driveway. It is recommended that removal of the two trees (tag #8 & #9) is completed and $1,950 towards the City's Tree Compensation Fund is required for the approval of these two removals.
- Two trees (tag #6 (10 cm caliper Yew tree) & #7 (20 cm caliper Weeping birch)) located on the development site are in poor condition and should be removed and replaced.
- One tree (tag #3 (26 cm caliper Windmill Palm)) located on the development site, is in good condition and identified in the Arborist Report to be retained and protected.
- Replacement trees should be specified at 2:1 ratio as per the OCP.

Tree Replacement

The applicant wishes to remove two on-site trees (Trees #6 and #7). Only one tree (Tree #7) is bylaw sized, therefore the 2:1 replacement ratio would require a total of two replacement trees. The applicant has agreed to plant four new trees on each lot proposed. A detailed Landscape Plan, including Tree Management Plan, will provide further details on the proposed location and tree species and will be secured at the Development Permit stage.

Tree Protection

A total of one tree on-site is to be retained and protected. Four neighbouring trees that are to be protected do not require tree protection measures as critical root zones do not extend beyond the property line but are identified as part of the Tree Management Plan shown in Attachment 6.

To ensure that the trees identified for retention are protected at development stage, the applicant is required to complete the following items:

- Prior to final adoption of the rezoning bylaw, submission to the City of a contract with a Certified Arborist for the supervision of all works conducted within or in close proximity to tree protection zones. The contract must include the scope of work required, the number of proposed monitoring inspections at specified stages of construction, any special measures required to ensure tree protection, and a provision for the arborist to submit a post-construction impact assessment to the City for review.
- Prior to demolition of the existing dwelling on the subject site, installation of tree protection fencing around all trees to be retained. Tree protection fencing must be installed to City standard in accordance with the City's Tree Protection Information Bulletin Tree-03 prior to any works being conducted on-site, and remain in place until construction and landscaping on-site is completed.

Affordable Housing Strategy

The applicant is required to comply with the Affordable Housing Strategy. In accordance with the Strategy, and a requirement as per the proposed "Arterial Road Compact Two-Unit Dwellings (RCD)" zone, a cash contribution of $8.50 per buildable square foot ($42,857.00) to the Affordable Housing Reserve is required prior to rezoning bylaw adoption.

Site Servicing and Frontage Improvements

Prior to subdivision, the developer will be required to:

- Provide a cash-in-lieu contribution in the amount of $16,653, consistent with Subdivision and Development Bylaw 8751 for future construction of the rear lane where it abuts the subject property to the City's ultimate standard.
- Pay Development Cost Charges (City and GVS & DD), School Site Acquisition Charge, and Address Assignment Fees.
- Pay current years property taxes (and following years taxes for subdivisions signed after September 1st) prior to subdivision completion.

- Enter into a Servicing Agreement (SA) to construct the servicing works outlined in Attachment 6 for a new 1.5 m boulevard behind the existing curb and gutter, a 1.5 m wide concrete sidewalk at the property line, and any other frontage improvements on No. 5 Road determined at the SA stage.
- Provide any SRWs necessitated by the engineering design and SA at no cost to the City, including a 1.5 m wide utility rights-of-way across the entire No. 5 Road frontage to accommodate storm Inspection Chambers and water meter boxes.

Development Permit Application

A Development Permit application is required to address the form and character of the proposed duplexes and must be processed to a satisfactory level prior to final adoption of the rezoning bylaw. Through the Development Permit, the following issues are to be further examined:

- Compliance with Development Permit Guidelines for duplex projects in the 2041 Official Community Plan (OCP).
- Review of the architectural character, scale and massing to ensure that the proposed duplexes are well designed, fit well into the neighbourhood, and do not adversely impact adjacent homes.
- Review of aging-in-place features in all units and the provision of a convertible unit on each lot.
- Refinement of the proposed site grading to ensure survival of the protected tree, and to provide appropriate transition between the proposed development and adjacent existing developments.
- Refinement of landscape design, including the location and type of fence proposed along the front property line within the required Statutory Right-of-Way (SRW), the provision of a holding area for garbage/recycling material collection, and the size and species of on-site replacement trees to achieve an acceptable mix of conifer and deciduous trees on-site.

Additional issues may be identified as part of the Development Permit application review process.

Proposed "Arterial Road Compact Two-Unit Dwellings (RCD)" Zone

An amendment to the Richmond Zoning Bylaw 8500 is proposed to create the new "Arterial Road Compact Two-Unit Dwellings (RCD)" zone in order to allow front to back duplexes be developed along arterial roads, as supported by the Arterial Road Land Use Policy.

The proposed "Arterial Road Compact Two-Unit Dwellings (RCD)" zone is drafted based on the Arterial Road Duplex/Triplex Development and Compact Lot Duplex Requirements under the Arterial Road Land Use Policy and the "Single Detached (RS)" zone. Provisions related to density, minimum lot size and lot width are based on the arterial road duplex development requirements as approved by Council; provisions related to the lot coverage, building setbacks and building heights are drafted based on the "Single Detached (RS)" zone in order to ensure that

the form and character of duplexes along arterial road is compatible with the adjacent single-family dwellings.

Permitted Density

Maximum permitted density is proposed to be one two-unit housing unit per lot. The maximum floor area ratio (FAR) is "0.6" if the owner, at the time Council adopts a Zoning Amendment Bylaw to include the owner's lot in the RCD zone, contributes to the affordable housing reserve.

Lot Coverage

The lot coverage is 50% for buildings with no more than 70% of a lot may be occupied by buildings, structures and non-porous surfaces. 20% of the lot area in the "Arterial Road Compact Two-Unit Dwellings (RCD)" zone is restricted to landscaping with live plant material.

On-Site Parking

On-site vehicle parking shall be provided according to the standards set out in Section 7.0 of Zoning Bylaw 8500, except that the maximum driveway width shall be 6.0 m. For the purpose of this zone only, a driveway is defined as any non-porous surface of the lot that is used to provide space for vehicle parking or vehicle access to or from a public road or lane. Where residents of a single dwelling unit intend to use two parking spaces, the spaces may be provided in a tandem arrangement, with one standard parking space located behind the other.

Financial Impact or Economic Impact

The rezoning application results in an insignificant Operational Budget Impact (OBI) for off-site City infrastructure (such as roadworks, waterworks, storm sewers, sanitary sewers, street lights, street trees and traffic signals).

Conclusion

The proposal to develop two front-to-back duplexes (four units in total) is consistent with the objectives of the Arterial Road Land Use Policy in terms of land use, character, and density. Overall, the project is attractive and a good fit with the neighbourhood. Further review of the project design will be required to ensure a high quality project, and will be completed as part of the future Development Permit process. On this basis, it is recommended that Richmond Zoning Bylaw 8500, Amendment Bylaw 10197 and Amendment Bylaw 10195 be introduced and given First Reading.

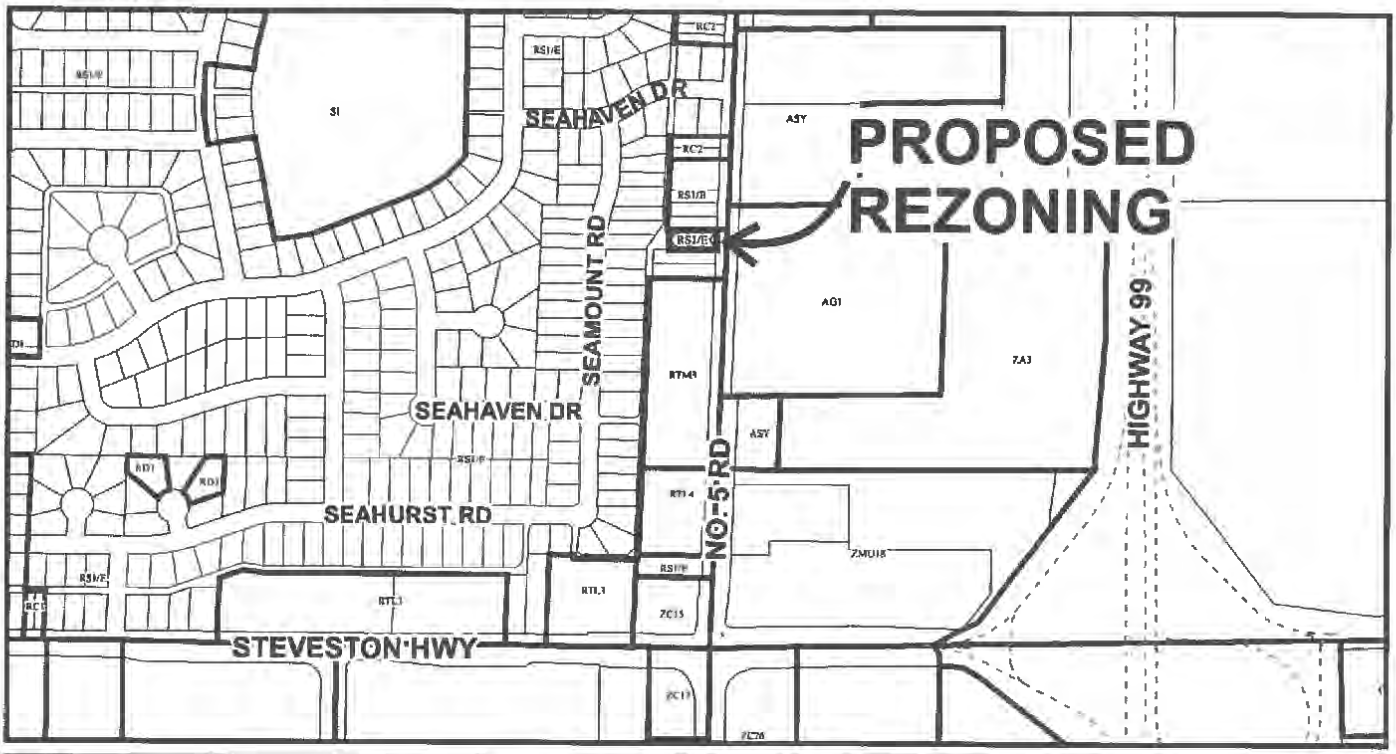
Nathan Andrews
Planning Technician
(604-247-4911)

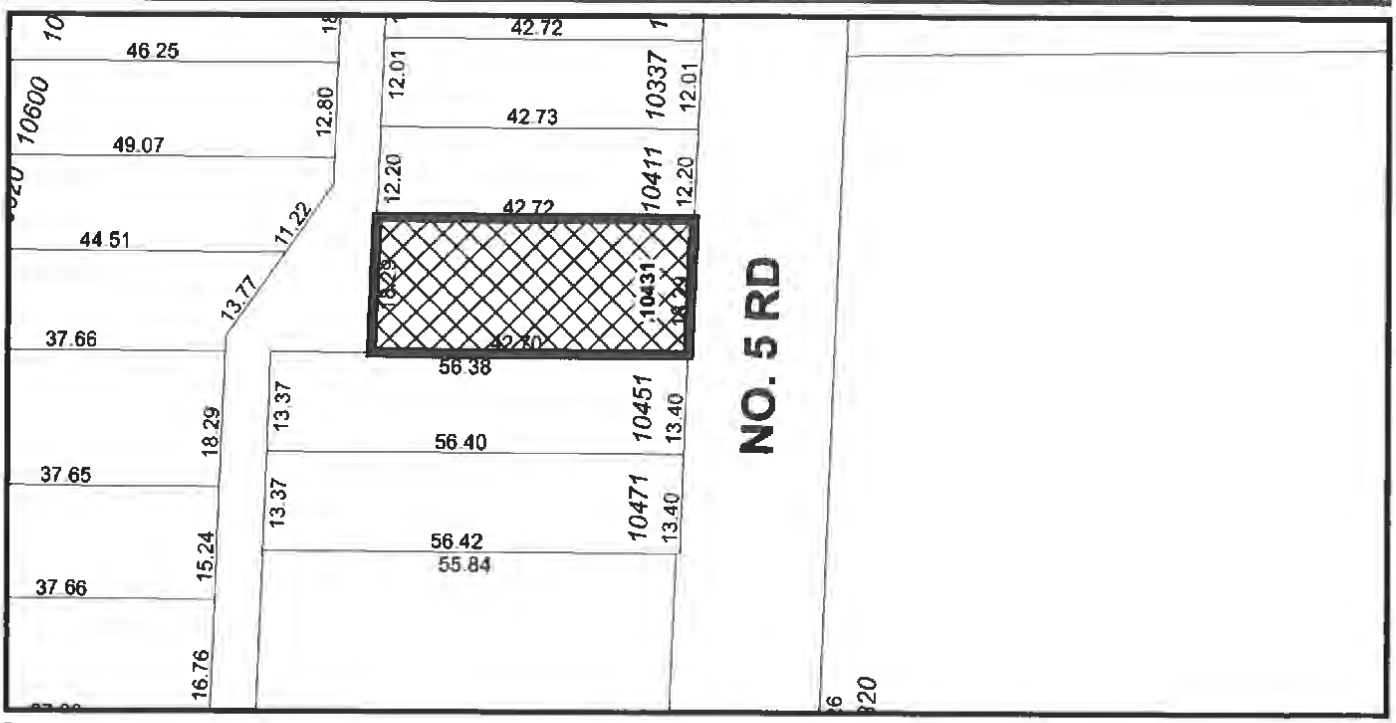
NA:blg

Attachments:
Attachment 1: Location Map/Aerial Photo
Attachment 2: Development Application Data Sheet
Attachment 3: Single-Family Lot Size Policy 5434
Attachment 4: Neighbour Consultation Letter and Map
Attachment 5: Survey and Proposed Subdivision Plan
Attachment 6: Tree Management Plan
Attachment 7: Rezoning Considerations

City of Richmond

ATTACHMENT 1





RZ 18-829789

Original Date: 09/19/18

Revision Date:

Note: Dimensions are in METRES

City of
Richmond

RZ 18-829789

Original Date: 09/20/18

Revision Date:

Note: Dimensions are in METRES

City of Richmond

Development Application Data Sheet

Development Applications Department

RZ 18-829789 **Attachment 2**

Address: 10431 No. 5 Road

Applicant: 1058085 BC Ltd.

Planning Area(s): Shellmont

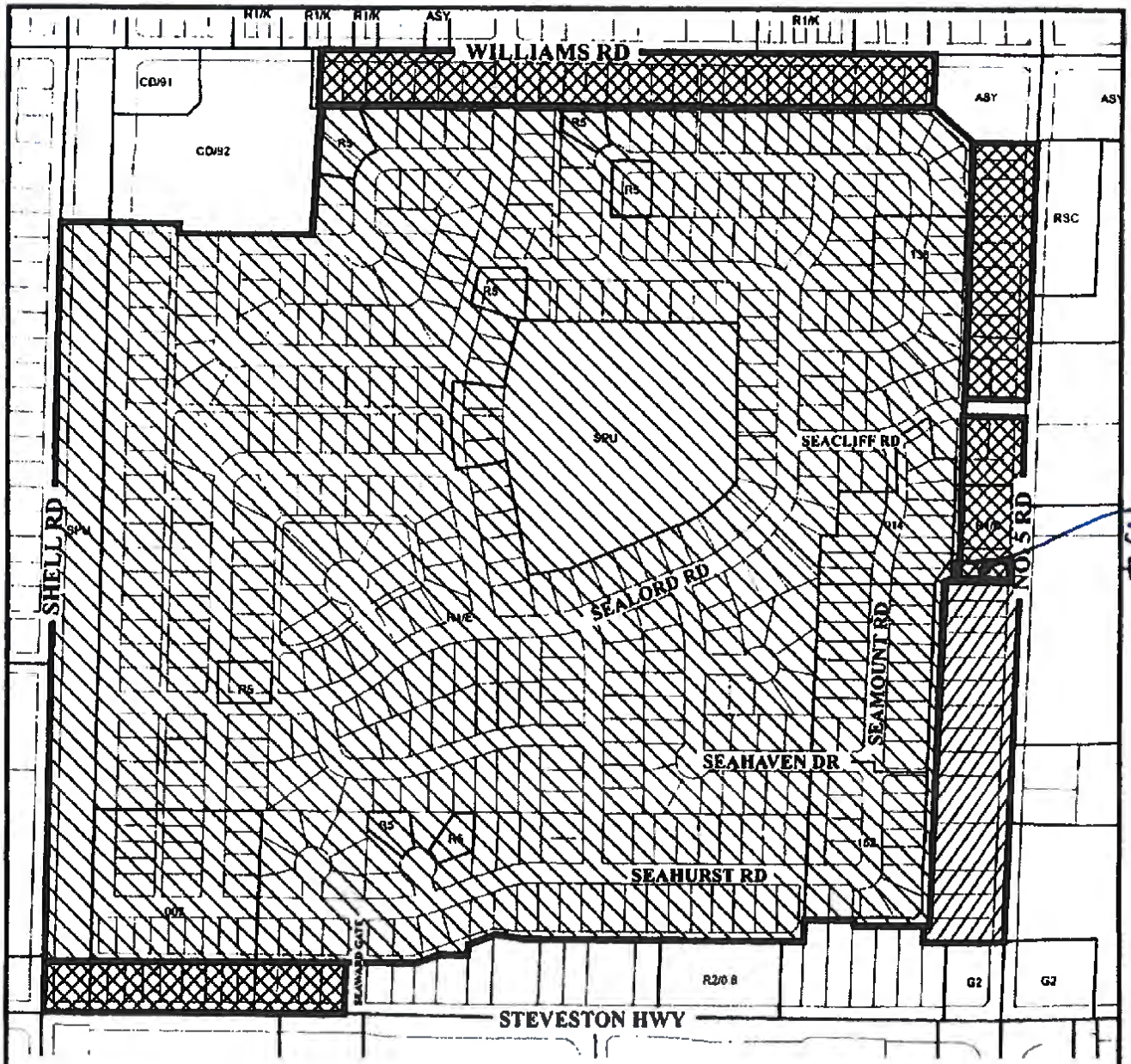
	Existing	Proposed
Owner:	1058085 BC Ltd	No change
Site Size (m^2):	781 m^2	2 lots each 390.5 m^2
Land Uses:	Single family dwelling	Compact Duplex
OCP Designation:	Neighbourhood Residential	No change
Area Plan Designation:	Neighbourhood Residential	No change
702 Policy Designation:	Single Family Lot Size Policy 5434	No change
Zoning:	Single Detached (RS1/E)	Arterial Road Compact Lot Duplex (RCD)
Number of Units:	1	4
Other Designations:	Arterial Road Compact Lot Duplex	No change

On Future Subdivided Lots	Bylaw Requirement	Proposed	Variance
Floor Area Ratio:	Max. 0.60	Lot A: 0.60 Lot B: 0.60	none permitted
Lot Coverage – Building:	Max. 50%	45% per lot	none
Lot Coverage – Non-porous Surfaces:	Max. 70%	61%	none
Lot Coverage – Live Landscaping:	Min. 20%	25%	none
Lot Coverage – Front Yard Landscaping:	Min. 50%	55%	none
Lot Size:	Min. 360 m^2	390.5 m^2 per lot	none
Lot Dimensions (m):	Width: Min. 9.0 m Depth: Min. 40.0 m	Width: 9.15 m per lot Depth: 42.71 m per lot	none
Setback – Front Yard:	Min. 6.0 m	6.3 m	none
Setback – Front Yard – Accessory Buildings:	Min. 15.0 m	31.1 m	none
Setback – Interior Side Yard:	Min. 1.2 m	1.2 m	none
Setback – Exterior Side Yard:	Min. 3.0 m	N/A	none
Setback – Rear Yard – Principal Building:	Min. 10.0 m	14.8 m	none

On Future Subdivided Lots	Bylaw Requirement	Proposed	Variance
Setback – Rear Yard – Principal Garage/Carport:	Within 1.2 m and 12.5 m	Within 5.5 m and 11.6 m	none
Height (m) – Principal Building:	Max. 2 ½ storeys or 9.0 m, whichever is less	8.05 m	none
Height (m) – Accessory Structures:	Max. 9.0 m	4.41 m	none
On-site Vehicle Parking Spaces:	2 spaces per dwelling unit	2 spaces per dwelling unit (8 spaces total)	none
Tandem Parking Spaces:	1 tandem parking space per dwelling	1 tandem parking space per dwelling	none

Other: Tree replacement compensation required for loss of significant trees.

* Preliminary estimate; not inclusive of garage; exact building size to be determined through zoning bylaw compliance review at Building Permit stage.



Subdivision permitted as per **R1/E** (18 m wide lots)

Subdivision permitted as per **R1-0.6 or R/9** (access to lane only) (No Multiple-family residential development is permitted.

Subdivision permitted as per **R1/B**

Policy 5434
Section 36-4-6

Adopted Date: 02/19/1990

Amended Date: 11/18/1991
10/16/2006

Subject: Rezoning of 10431 No 5 Road Richmond BC

Respected Home Owner

I am the owner of 10431 No 5 Road Richmond BC. I am writing his letter to get you informed about the development of the above property as we applied to City of Richmond to Rezone & Subdivide the lot from Single Detached (RS1/E) to make 2 Compact Duplex lots with vehicle access from an existing lane.

This letter is just an information to you as a Neighbour If you have any questions and concerns you can Contact my self or City of Richmond Planner

Natalie Cho
Planning Technician
Development Applications
City of Richmond
Tel: 604-276-4193
Email: NCho@richmond.ca
www.richmond.ca

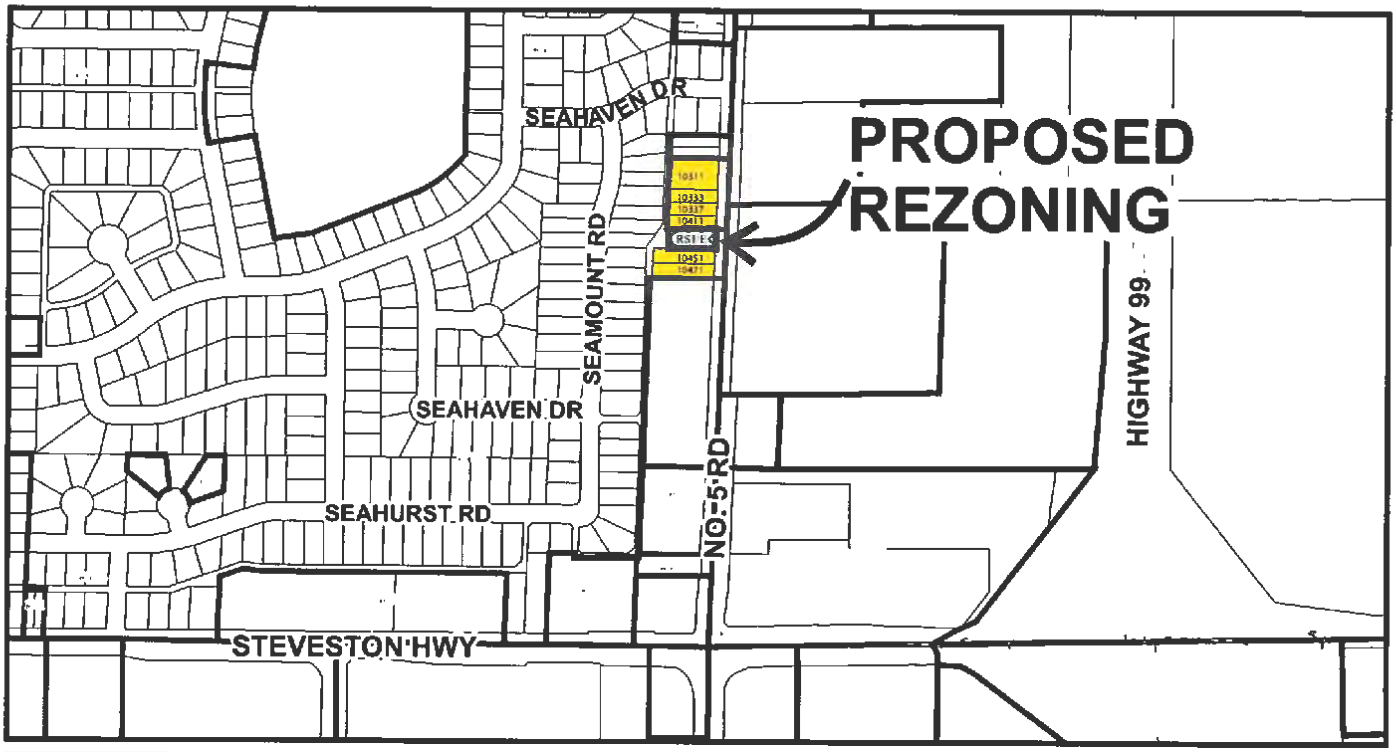
Thanks & Regards

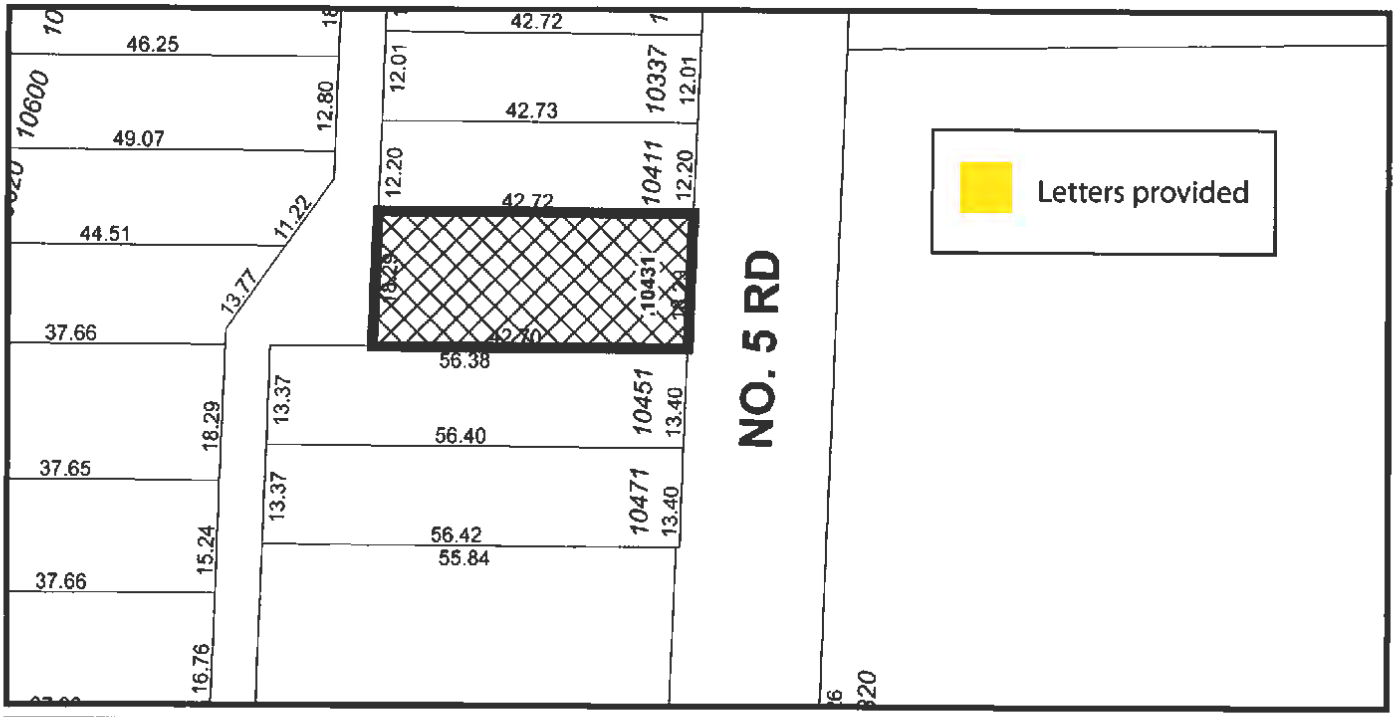
Syed Sajid Hassan

(Cell) 7788856434

1058085 BC LTD

City of Richmond





RZ 18-829789

Original Date: 09/19/18

Revision Date: 06/30/20

Note: Dimensions are in METRES

TOPOGRAPHIC SURVEY AND PROPOSED SUBDIVISION OF PARCEL "A" (RD34577E) LOT 356 SECTION 36 BLOCK 4 NORTH RANGE 6 WEST NEW WESTMINSTER DISTRICT PLAN 44778

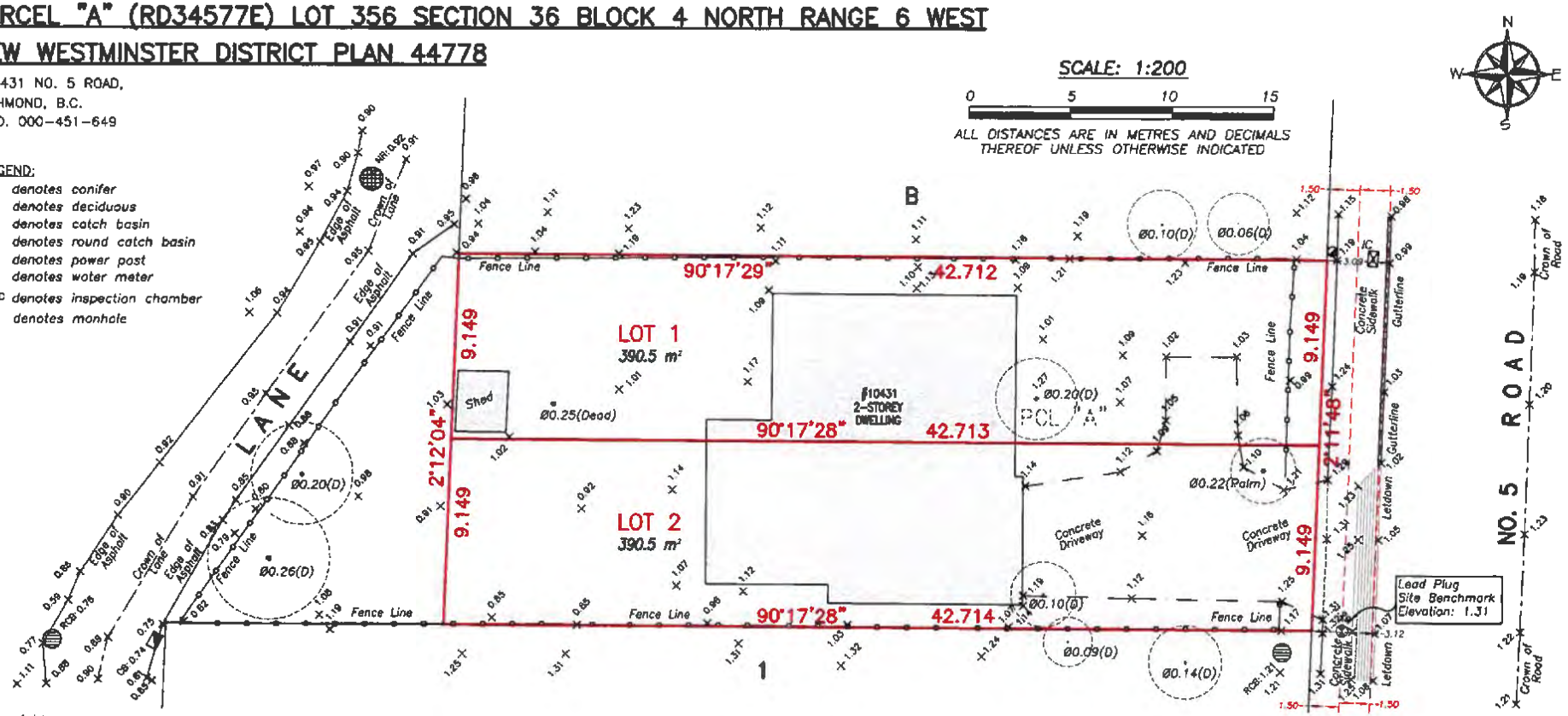
#10431 NO. 5 ROAD,
RICHMOND, B.C.
P.I.D. 000-451-649

SCALE: 1:200

0 5 10 15

ALL DISTANCES ARE IN METRES AND DECIMALS THEREOF UNLESS OTHERWISE INDICATED

LEGEND:
- (C) denotes conifer
- (D) denotes deciduous
- denotes catch basin
- denotes round catch basin
- denotes power post
- denotes water meter
- IC denotes inspection chamber
- denotes manhole



GP - 162

Canada and B.C. Land Surveyor
115 - 8833 Olin Crescent
Richmond, B.C. V6X 3Z7
Telephone: 214-8928
Fax: 214-8929
Email: officemate.com
Website: wow.jct am.com
Job No. 7229
FB-356 P92-94
Drawn By: CY/WK

DEG No. 7229-TOPO-03

NOTE:
Elevations shown are based on City of Richmond HP Benchmark network.
Benchmark: HP #190
Control Monument 94H1624
Elevation: 2.353m
Benchmark: HP #191
Control Monument 02H2403
Elevation: 1.664m

NOTE:
Use site Benchmark Lead Plug for construction elevation control.

NOTE:
This property is encumbered by Statutory Right of Way K124942.

CERTIFIED CORRECT:
LOT DIMENSION ACCORDING TO FIELD SURVEY.

JOHNSON C. TAM, B.C.L.S., C.L.S.

NOVEMBER 25th, 2019.

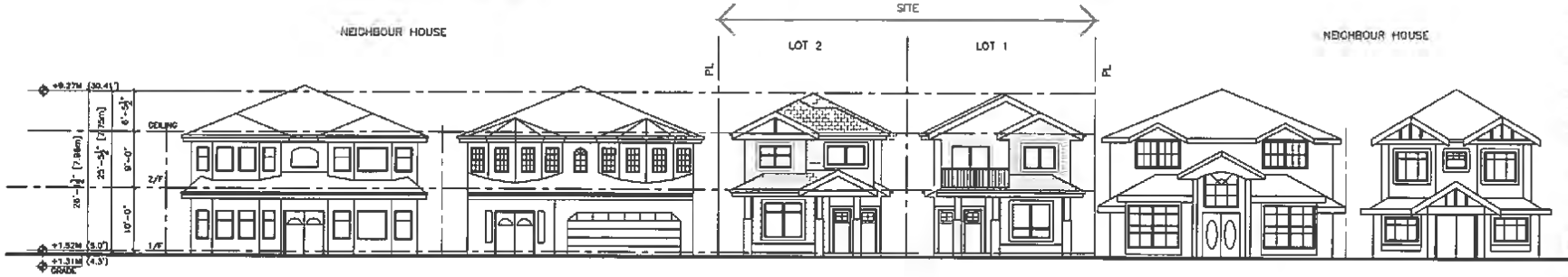
ATTACHMENT 5

SUBDIVISION AND REZONING FOR PROPOSED COMPACT TWO UNIT DWELLING (RCD) AT 10431 NO. 5 ROAD, RICHMOND, BC

DEVELOPMENT DATA

(A) CIVIC ADDRESS:	10431 NO 5 ROAD, RICHMOND, BC		
(B) LEGAL DESCRIPTION:	"A" LOT 356 SECTION 36 BLOCK 4 NORTH RANGE 6 WEST, NWD 44778		
(C) LOT AREA:	390.5 SM (4,203 SF) FOR EACH LOT AFTER SUBDIVISION. ORIGINAL LOT SIZE 781 SM		
(D) ZONING USE	CURRENT: RS1/F, PROPOSED: RCD		
	CURRENT ZONING (UNDER RS1/E ZONING)	PROPOSED REZONING (RCD)	PROPOSED
(E) FLOOR AREA RATIO	0.55 TO 464.5 SM	0.60 PER LOT (WITH AFFORDABLE HOUSING CONTRIBUTION)	0.6
	0.3 TO REST OF SITE AREA	TOTAL GROSS FLOOR AREA	234.25M (2521 SQ. FT.) PER LOT
		0.60 X390.5 SM = 234.3 SM (2,521 SF) FOR EACH LOT	TOTAL GFA 468.45M (5041 SQ. FT) FOR 2 LOTS
		COVERED PORCH 10% = 23.4 SM (252 SF)	14.4SM (155.3 SQ. FT.) 6.1% COVERED PORCH PER LOT
		GARAGE 25 SM PER UNIT (269 SF)	19.4 SM (208 SQ. FT.) GARAGE PER UNIT
(F) NUMBER OF UNIT:	1 PER LOT	2 PER LOT	2 UNITS PER LOT
(G) BUILDING COVERAGE:	MAX = 45%	SITE COVER = MAX 50% (2101 SF)	45% (1867 SQ. FT. / 4203 SQ. FT PER LOT)
		POROUS AREA-MIN 30%	39% REFER TO LANDSCAPE
		LIVE PLANT-MIN 20%	25% REFER TO LANDSCAPE
		LIVE PLANT AT FRONTYARD = MIN 50%	66% REFER TO LANDSCAPE
(H) BUILDING HEIGHT:	MAX HEIGHT = 9M	MAX MAIN BUILDING HEIGHT = 9M	BUILDING HEIGHT = 8.05M
		MAX GARAGE HEIGHT = 4M	GARAGE HEIGHT = 3.97M
(I) SETBACK:	FRONT YARD = 6M	FRONT YARD = 6M	FRONT YARD = 6.3M (20'6")
	SIDE YARD = 2M	SIDE YARD = 1.2M	NORTH SIDE YARD = 1.27M (4'2")
	REAR YARD = 6M	REAR YARD = 10M	SOUTH SIDE YARD = 1.27M (4'2")
			REAR YARD = 14.8M (48'8")
		GARAGE BETWEEN 1.2 TO 12.5M FROM REAR YARD	GARAGE = BETWEEN 5.5M TO 11.6M FROM REAR YARD
		GARAGE SIDE YARD = 1.2M	GARAGE = 1.2M SIDE YARD
(J) PARKING:	2 PER DWELLING UNIT	2 PER DWELLING UNITS	2 REGULAR PARKING IN TANDEM ARRANGEMENT
		VISITOR = NO REQUIREMENT	PER UNIT

1 / A1 LOCATION MAP
NTS



1 / A1 CONTEXT ELEVATION ALONG NO. 5 ROAD
1/8" TO 1'-0"

ERIC LAW ARCHITECT

PROPOSED COMPACT DUPLEX
10431 NO. 5 RD
RICHMOND BC

DEVELOPMENT SUMMARY

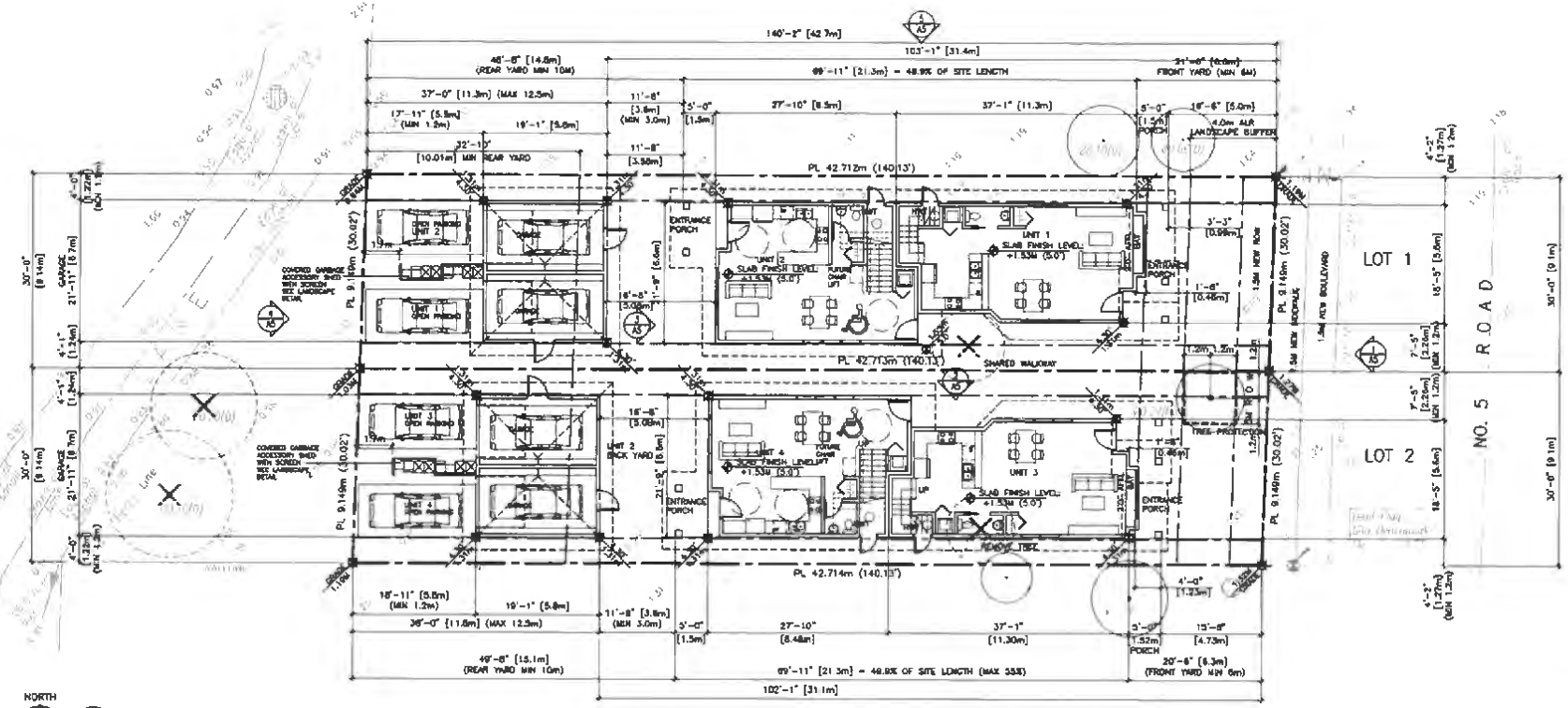
PROJECT NUMBER: 18-08
ISSUED: 12.30.2019
DRAWN BY: EL
CHECKED BY: EL
FILENAME: 18-08_DWF_191230-RZ.DWG

A1

REZONE

GP – 163

RZ 18-829789



NORTH

1 / A2 SITE PLAN G/F

1/8" TO 1'-0"

FINISH GRADE:
NW LOT CORNER: 0.84 NE HOUSE CORNER: 1.31
NE LOT CORNER: 1.19 SE HOUSE CORNER: 1.31
SE LOT CORNER: 1.32 SW HOUSE CORNER: 1.31
SW LOT CORNER: 1.19 NW HOUSE CORNER: 1.31
1.18 1.31

AVERAGE GRADE: 1.23 M (4.04')
MAX CROWN OF THE ROAD: 1.25M
SLAB LEVEL OF HOUSE: 1.53M

BUILDING HEIGHT: 9.27M = 1.23m + 8.04M

ALL THE UNITS IN THIS PROJECT SHALL INCORPORATE THE FOLLOWING FEATURES IN THE UNITS

(1) AGING IN PLACE FEATURES SHALL BE PROVIDED TO ALL UNITS.
(2a) STAIRWELL HANDRAILS
(2b) LEVER TYPE HANDLES FOR PLUMBING FIXTURE AND DOOR HANDLES
(2c) SOLID BLOCKING IN WASHROOM WALLS TO FACILITATE FUTURE GRAB BAR INSTALLATION BESIDE TOILETS, BATHTUBS AND SHOWERS

TOWNHOUSE SHALL MEET CITY'S STEP CODE REQUIREMENTS

ERIC LAW ARCHITECT

ISSUED
1 2018.07.13 FOR CITY REZONING REVIEW
2 2019.12.30 FOR CITY REZONING REVIEW

2 2019.11.22 REVISED GARAGE DR
1 2019.07.11 REVISED PER CITY RZ COMMENTS
REVISION

PROPOSED COMPACT DUPLEX
10431 NO. 5 RD
RICHMOND BC

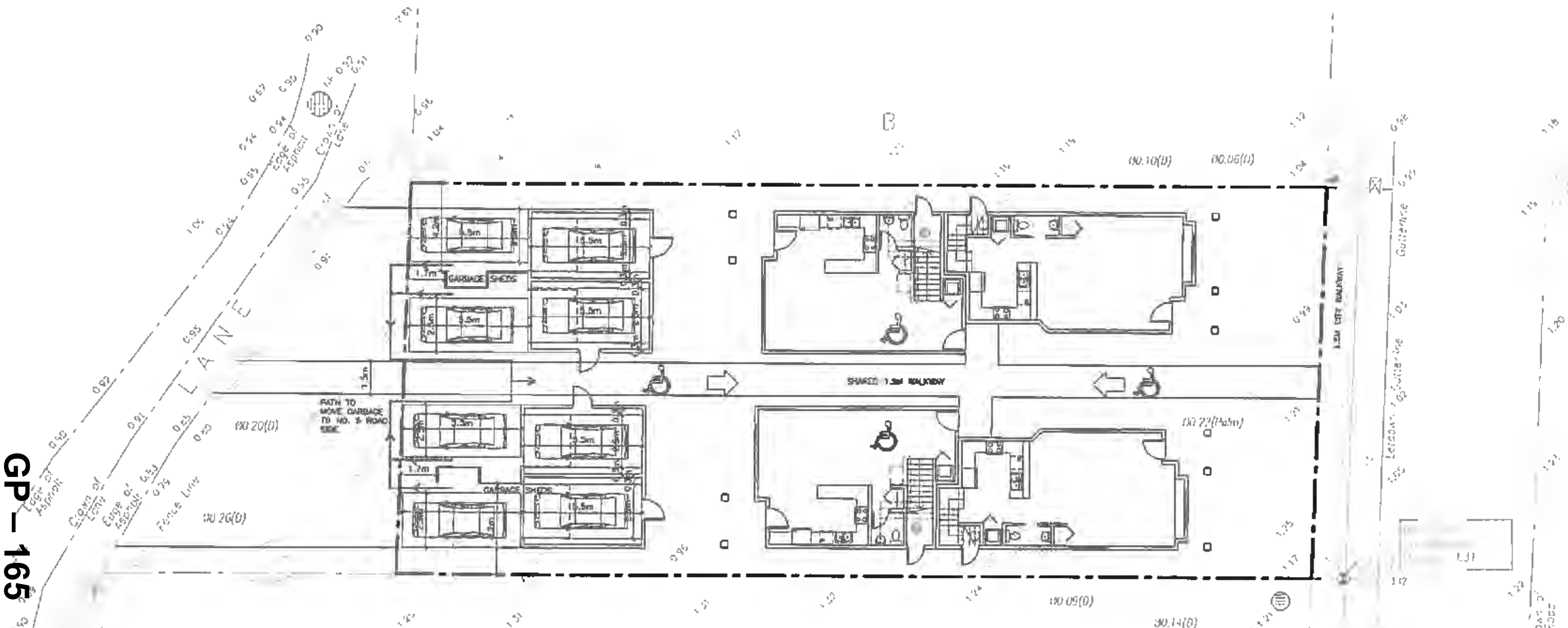
SITE PLAN-1F

PROJECT NUMBER 18-08
ISSUED 12 30 2019
DRAWN BY EL
CHECKED BY EL
FILENAME 18 08 DWG 191230-RZ.DWG

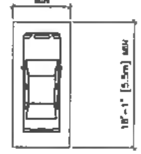
A2

REZONE

RZ 18-829789

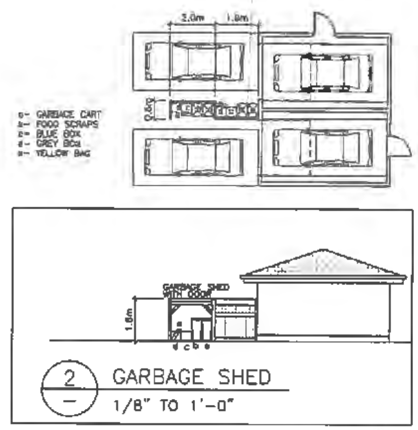


1 PARKING PLAN
1/8" TO 1'-0"



REGULAR CAR

ALL PARKING SHALL HAVE LEVEL 2 EV CHARGING OUTLETS LEVEL 2 EV CHARGING (208V TO 240V AC AND CURRENT OF 16A TO 80A)



2 GARBAGE SHED
1/8" TO 1'-0"

RZ 18-829789

ERIC LAW ARCHITECT

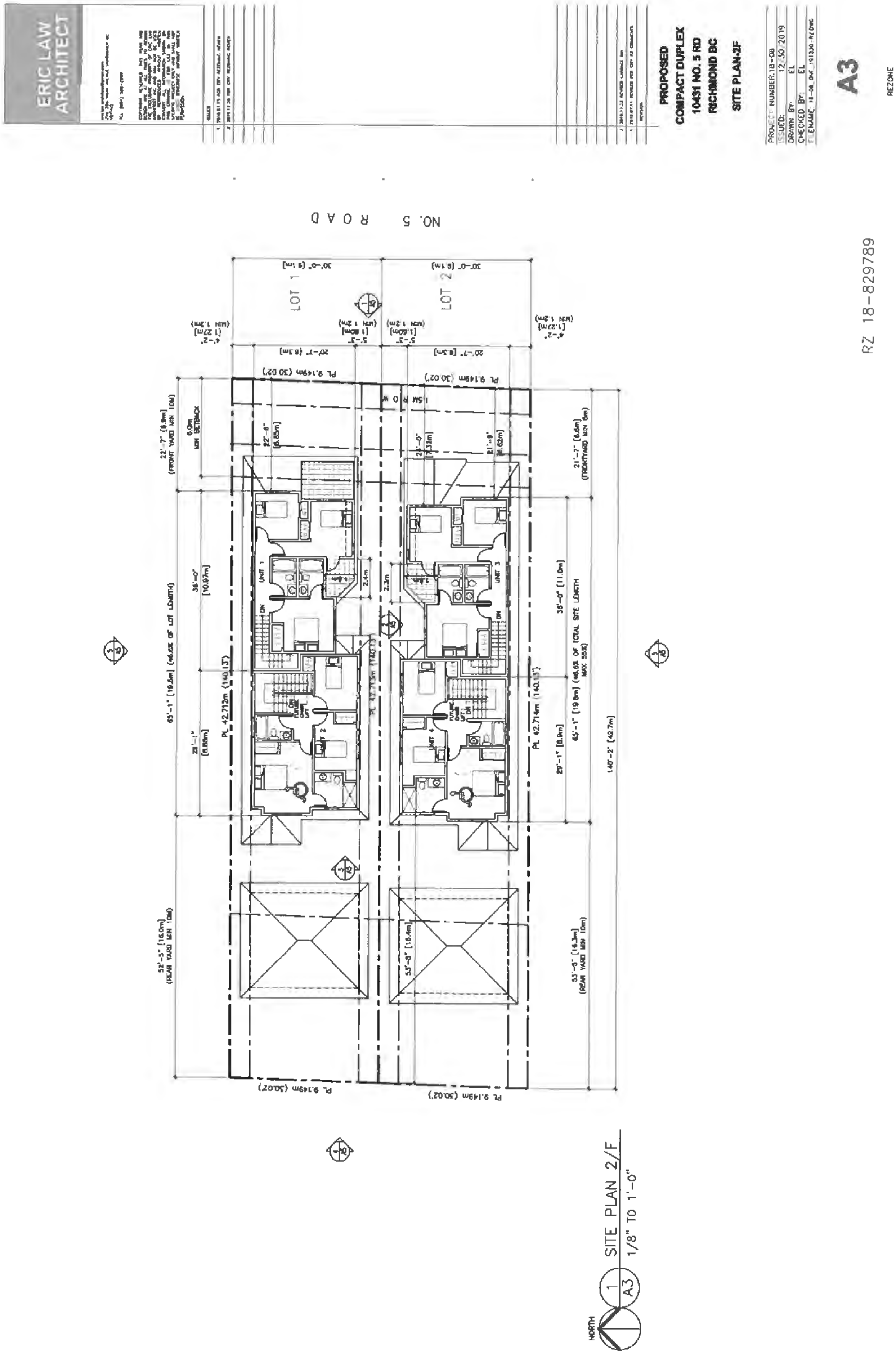
PROPOSED
COMPACT DUPLEX
10431 NO. 5 RD
RICHMOND BC

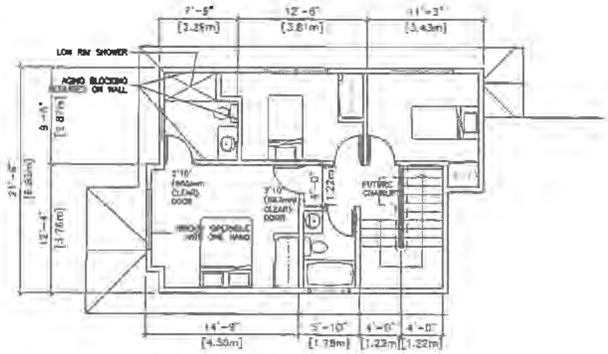
PARKING PLAN

PROJECT NUMBER: 18-08
ISSUED 12/30/2019
DRAWN BY: EL
CHECKED BY: EL

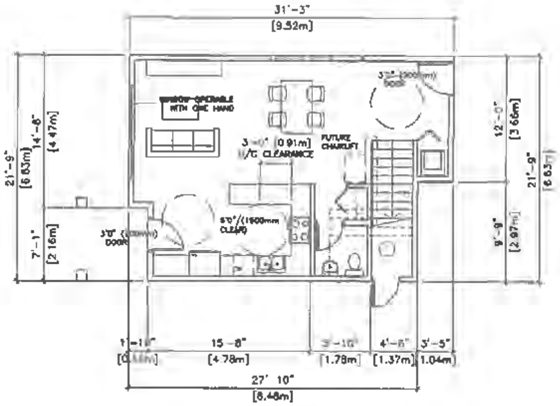
A2A

REZONE


ERIC LAW ARCHITECT
PROPOSED
COMPACT DUPLEX
10431 NO. 5 RD
RICHMOND BC
SITE PLAN-2F
A3
REZONE
NO. 5 ROAD
LOT 1
LOT 2
RZ 18-829789
SITE PLAN 2/F
1/8" TO 1'-0"
NORTH



2/F



1/F

1 / A4 CONVERTIBLE UNIT PLAN
3/16" TO 1'-0"

ALL THE UNITS IN THIS PROJECT SHALL INCORPORATE THE FOLLOWING FEATURES IN THE UNITS

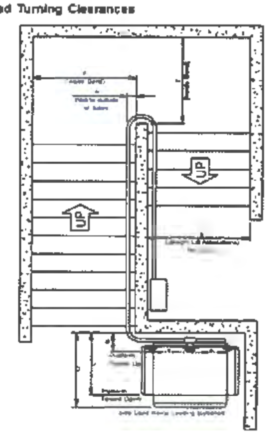
(1) AGING IN PLACE FEATURES SHALL BE PROVIDED TO ALL UNITS:
(a) STAIRWELL HANDRAILS
(b) LEVER TYPE HANDLES FOR PLUMBING FIXTURE AND DOOR HANDLES
(c) SOLID BLOCKING IN WASHROOM WALLS TO FACILITATE FUTURE GRAB BAR INSTALLATION BESIDE TOILETS, BATHTUBS AND SHOWERS

DUPLEX SHALL MEET CITY'S STEP CODE REQUIREMENTS

	CONVERTIBLE UNIT GUIDELINES
DOORS & DOORWAYS	- ENTRY DOORS ARE A MINIMUM 863 MM BUT IDEALLY 914 MM AND HAVE CLEAR ACCESS. - ENTRY DOOR CLEAR EXTERIOR FLOOR SPACE MIN. 1220 MM DEPTH BY DOOR WIDTH PLUS 600 MM ON LATCH SIDE (NOT NEEDED IF ROUGH IN WIRING PROVIDED FOR FUTURE AUTOMATIC DOOR OPENER). - INTERIOR DOORS TO MAIN LIVING AREAS, 1 BATHROOM AND 1 BEDROOM, MIN. 863 MM CLEAR OPENING WITH FLUSH THRESHOLDS MAX. 13 MM HEIGHT. DEMONSTRATE WHEELCHAIR ACCESS BETWEEN THE HALLWAY AND ROOMS AND WIDEN HALLWAY AND/OR DOORWAY(S) IF NECESSARY TO SECURE ACCESS. - PATIO/BALCONY MIN. 860 MM CLEAR OPENING. NOTE HOW ACCESSED. - - ALL INTERIOR THRESHOLDS WITHIN UNITS COMPLY WITH BC BUILDING CODE. - LEVER-TYPE HANDLES FOR ALL DOORS.
VERTICAL CIRCULATION	- STAIR LIFT, STAIRCASE WIDTH, FRAMING SUPPORT, AND LANDINGS, AS NOTED ON FLOOR PLANS IN COMPLIANCE WITH MANUFACTURER SPECIFICATIONS. OR VERTICAL LIFT, DEPRESSED SLAB AREA, AND LANDINGS, AS NOTED ON FLOOR PLANS IN COMPLIANCE WITH MANUFACTURER SPECIFICATIONS. FRAMING TO ACCOMMODATE SHAFT CONSTRUCTION WITHOUT IMPACT TO SURROUNDING STRUCTURE. - AT THE TOP OF ALL STAIRWAYS, WALLS ARE REINFORCED WITH 2" X 12" SOLID LUMBER AT 914 MM TO CENTRE.
HALLWAYS	- MIN. 900 MM WIDTH.
GARAGE	- MIN. 1 ACCESSIBLE PARKING SPACE WITH MIN. 4 M GARAGE WIDTH - ACCESS FROM GARAGE TO LIVING AREA MIN. 800 MM CLEAR OPENING
BATHROOM (MIN. 1)	- TOILET CLEAR FLOOR SPACE MIN. 1020 MM AT SIDE AND IN FRONT - WALL BLOCKING FOR FUTURE GRAB BAR INSTALLATION AT TOILET, TUB AND SHOWER. REINFORCED WITH 2" X 12" SOLID LUMBER IN ALL BATHTUB, SHOWER, AND TOILET LOCATIONS. - LEVER-TYPE HANDLES FOR PLUMBING FIXTURES. - PRESSURE AND TEMPERATURE CONTROL VALVES ARE INSTALLED ON ALL SHOWER FAUCETS - CABINETS UNDERNEATH SINK(S) ARE EASILY REMOVED. DEMONSTRATE BATH AND SHOWER CONTROLS ARE ACCESSIBLE (LAYOUT OR FIXTURE PLACEMENT).
KITCHEN FUTURE CHAIRLIFT	- CLEAR AREA NEEDED UNDER FUTURE WORK SPACE. - PLUMBING AND GAS PIPES (IN-WALL AND IN-FLOOR) LOCATED CLEAR OF UNDER COUNTER AREA OF FUTURE WORK SPACE (STOVE, SINK & MIN. 810 MM WIDE COUNTER). ALL PIPES ARE BROUGHT IN NO HIGHER THAN 304 MM TO 355 MM TO THE CENTRE OF THE PIPE FROM FLOOR LEVEL. - - CABINETS UNDERNEATH SINK ARE EASILY REMOVED. - 1500 MM TURNING DIAMETER OR TURNING PATH DIAGRAM. - LEVER-TYPE HANDLES FOR PLUMBING FIXTURES.
WINDOWS	- MIN. 1 WINDOW THAT CAN BE OPENED WITH A SINGLE HAND (BATHROOM, KITCHEN, LIVING ROOM)
OUTLETS & SWITCHES	- PLACEMENT LOCATIONS OF ELECTRICAL OUTLETS: BESIDE WINDOW, BOTTOM OF STAIRWAYS, BESIDE TOILET, ABOVE EXTERNAL DOORS (OUTSIDE AND INSIDE), ON FRONT FACE OF KITCHEN COUNTER, WITHIN PROXIMITY OF CONTROL CENTRE FOR SMART HOME OPTIONS. - UPGRADE TO FOUR-PLEX OUTLETS IN MASTER BEDROOM, HOME OFFICE, GARAGE, AND RECREATION ROOM

FUTURE CHAIRLIFT

Required Turning Clearances

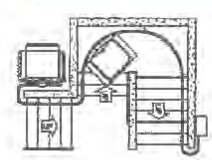


Turning Clearance Chart

[illegible]

Dim	Attachment Method	[illegible]	
		mm	in
A	Direct Mount	125	[illegible]
	Tower Mount	150	[illegible]
B	Direct Mount	[illegible]	[illegible]
	Tower Mount	345	[illegible]
C	Direct Mount	[illegible]	40
	Tower Mount	1040	41
D	Direct Mount	[illegible]	[illegible]
	Tower Mount	[illegible]	[illegible]
E	Direct Mount	[illegible]	[illegible]
	Tower Mount	[illegible]	[illegible]
F	Direct Mount	1140	[illegible]
	Tower Mount	[illegible]	[illegible]

Notes: [illegible]



RZ 18-829789

ERIC LAW ARCHITECT

[illegible]

ISSUE
1 2019.07.15 FOR DPT REZONING REVIEW
2 2019.12.30 FOR CITY REZONING REVIEW

REVISION

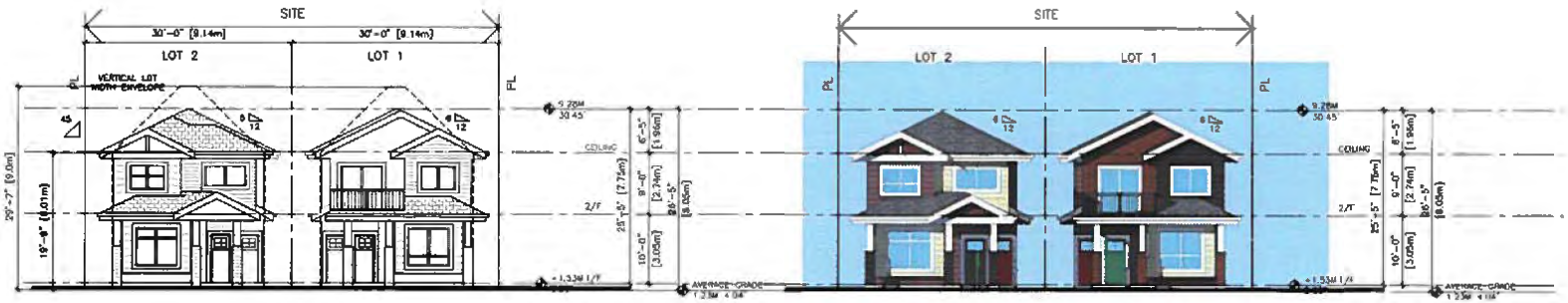
PROPOSED
COMPACT DUPLEX
10431 NO. 5 RD
RICHMOND BC

CONVERTIBLE UNIT

PROJECT NUMBER 18-08
ISSUED 12 30 2019
DRAWN BY E.
CHECKED BY EL
FILENAME 18-08 DWF 191230-RZ DWG

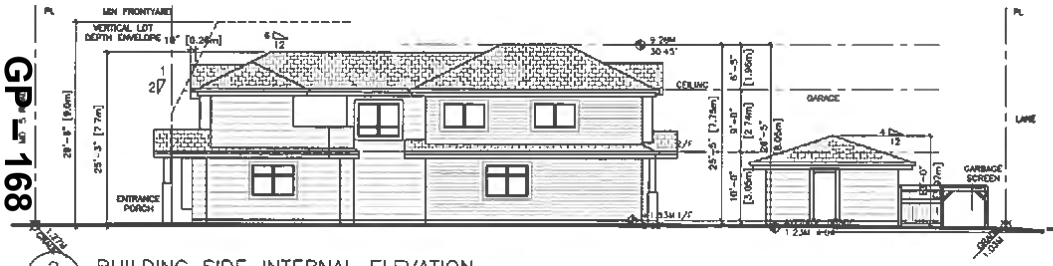
A4

REZONE



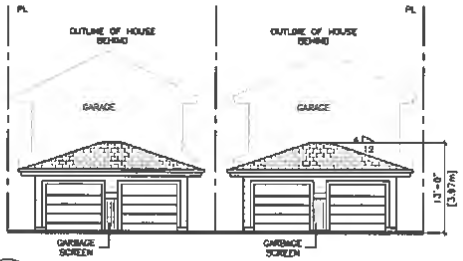
1 / A5 BUILDING FRONT ELEVATION (NO. 5 RD)
1/8" TO 1'-0"

HOUSE IMAGE

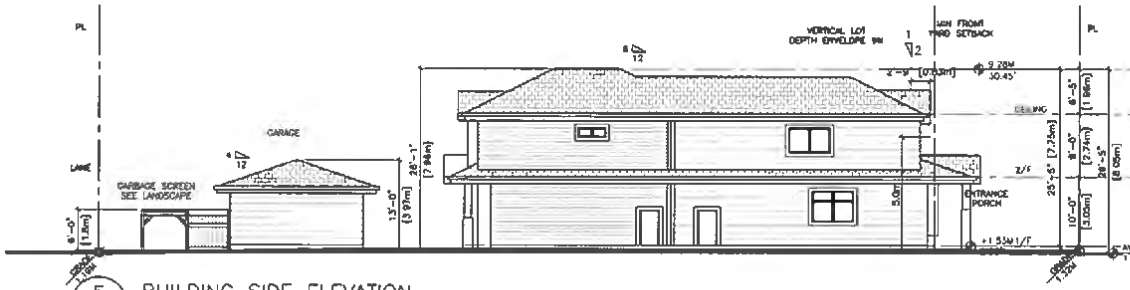


2 / A5 BUILDING SIDE INTERNAL ELEVATION
1/8" TO 1'-0"

3 / A5 BUILDING BACK ELEVATION (FACING LANE)
1/8" TO 1'-0"



4 / A5 GARAGE ELEVATION (FACING LANE)
1/8" TO 1'-0"



5 / A5 BUILDING SIDE ELEVATION
1/8" TO 1'-0"

GP - 168

ERIC LAW ARCHITECT

PROPOSED
COMPACT DUPLEX
10431 NO. 5 RD
RICHMOND BC

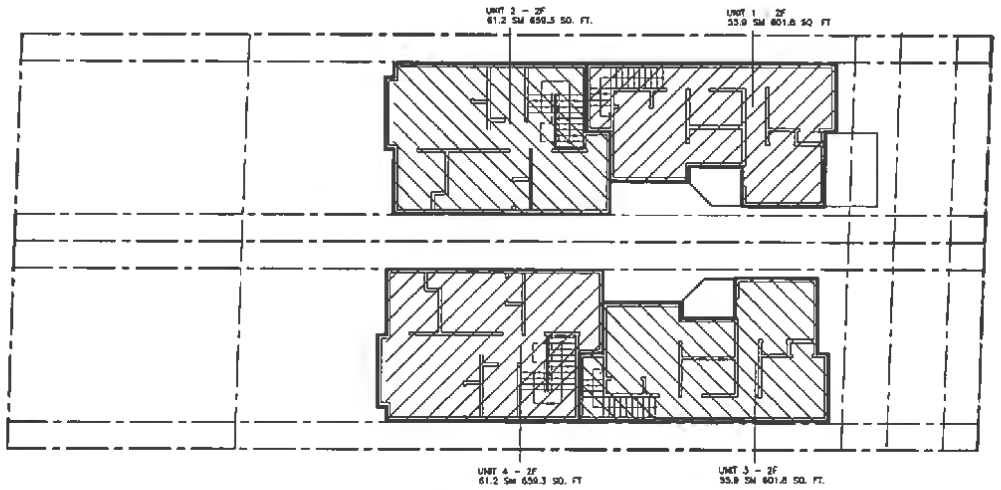
ELEVATIONS

PROJECT NUMBER: 18-08
ISSUED: 12/30/2019
DRAWN BY: EL
CHECKED BY: EL
FILENAME: 18-08_GNF_191230-RZ.DWG

A5

RZ 18-829789

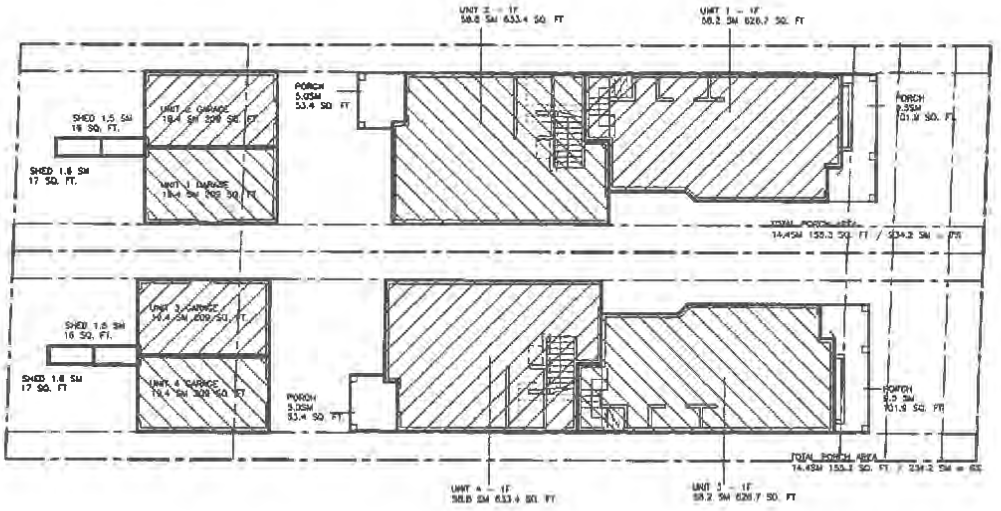
REZONE



1/A6 FLOOR AREA DIAGRAM 2/F

1/8" TO 1'-0"

UNIT 1– TOTAL AREA	114.1 SM 1228 SQ. FT.
UNIT 2– TOTAL AREA	120.1 SM 1293 SQ. FT.
UNIT 3– TOTAL AREA	114.1 SM 1228 SQ. FT.
UNIT 4– TOTAL AREA	120.1 SM 1293 SQ. FT.
TOTAL AREA	468.3 SM 5043 SQ. FT.



2/A6 FLOOR AREA DIAGRAM 1/F

1/8" TO 1'-0"

RZ 18-829789

ERIC LAW ARCHITECT

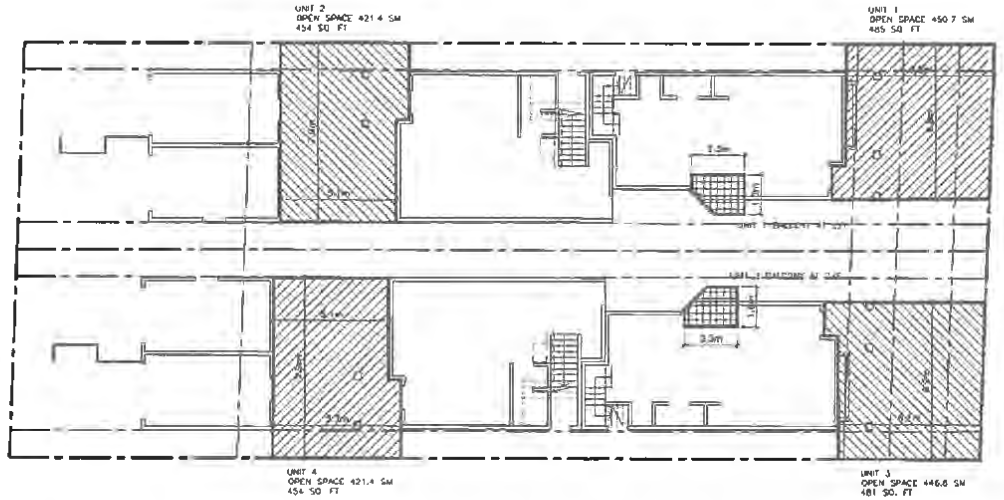
PROPOSED
COMPACT DUPLEX
10451 NO. 5 RD
RICHMOND BC

FAR DIAGRAM

PROJECT NUMBER	18-08
DATE	12 30 2019
DRAWN BY	EL
CHECKED BY	EL
FILENAME	18-08.DWG_191230-RZ.DWG

A6

REZONE



1/A7 OPEN SPACE
1/8" TO 1'-0"

2/A7 SITE COVER DIAGRAM
1/8" TO 1'-0" SITE COVERAGE 1867 SQ FT FOR EACH LOT

RZ 18 829789

ERIC LAW ARCHITECT
219-788 46th AVENUE VANCOUVER BC V5Y1K3
TEL (604) 566 2666

ISSUED
1 2019.07.15 FOR CITY REZONING REVIEW
2 2019.12.30 FOR CITY REZONING REVIEW

3 2019.11.22 REVISED CARSHARE BAY
4 2019.07.11 REVISED FOR CITY RZ COMMENTS
REVISION

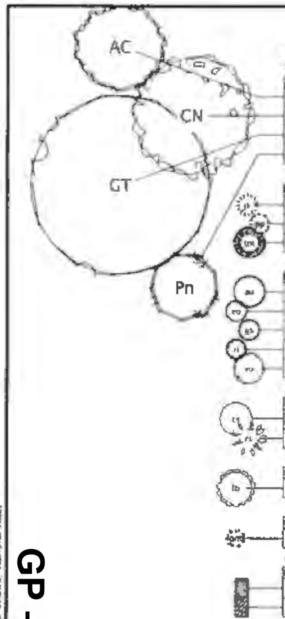
PROPOSED
COMPACT DUPLEX
10431 NO. 5 RD
RICHMOND BC

AREA DIAGRAM

PROJECT NUMBER	18-08
ISSUED	12/30/2019
DRAWN BY	EL
CHECKED BY	EL
FILENAME	18 08 DWF 191230-RZ DWG

A7

REZONE



PLANT LIST

TREES

CODE	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS	MATURE SIZE	SPACING
AC	2	Acer circinatum	Vine Maple	3m clump	B&B min. 50cm root ball dia.	10m height 5m spread	AS SHOWN
CN	2	Cornus nuttallii 'White Wonder'	White Wonder Pacific Dogwood	6cm cal	150cm standard B&B min. 50cm root ball dia.	21m height 21m spread	AS SHOWN
GT	2	Gleditsia triacanthos	Honey Locust	6cm cal	150cm standard B&B min. 50cm root ball dia.	21m height 21m spread	AS SHOWN
PN	2	Pinus nigra	Black Pine	3.5 m ht.	Dense tight habit B&B min. 50cm root ball dia.	12m height 6m spread	AS SHOWN

CONIFEROUS SHRUBS

CODE	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS	MATURE SIZE	SPACING
JA	2	Juniperus comm. 'Alpine Carpet'	Alpine Carpet Native Juniper	#2 pot	min. 60cm spread	25cm height 150cm spread	90cm
PP	19	Pinus mugo 'Pumilio'	Dwarf Mugo Pine	#2 pot	min. 30cm spread min. 20cm height	120cm height 150cm spread	90cm
TM	14	Taxus x media 'Hicksii'	Hick's Yew	1.0m ht.	B&B min. 45cm root ball dia.	6m height 1m spread	40cm

BROADLEAF EVERGREEN SHRUBS

CODE	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS	MATURE SIZE	SPACING
AU	4	Arbutus unedo 'Compacta'	Dwarf Strawberry Tree	#5 pot	min. 45cm height	300cm height 300cm spread	100cm
EO	24	Euonymus j. 'Aureomarginatus'	Golden Euonymus	#2 pot	min. 30cm height	130cm height 120cm spread	85cm
GS	28	Gaultheria shallon	Salal	#1 pot	min. 30cm height	100cm height 100cm spread	45cm
RI	31	Rhododendron 'Impeditum'	Impeditum Rhododendron	#2 pot	min. 30cm height	60cm height 75cm spread	65cm
VO	29	Vaccinium ovatum 'Thunderbird'	Evergreen Huckleberry	#2 pot	min. 60cm height	150cm height 150cm spread	100cm

DECIDUOUS SHRUBS

CODE	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS	MATURE SIZE	SPACING
CS	10	Cornus stolonifera	Redtwig Dogwood	#1 pot	min. 30cm height 5 cane	300cm height 300cm spread	90cm
RS	8	Ribes s. 'King Edward VII'	King Edward VII Currant	#1 pot	min. 40cm height	240cm height 120cm spread	75cm

VINES

CODE	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS	MATURE SIZE	SPACING
lb	2	Lonicera br. 'Scarlet Dropmore'	Dropmore Climbing Honeysuckle	#2 pot	min. 30cm height staked	500cm height 200cm spread	AS SHOWN

FERNS

CODE	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS	MATURE SIZE	SPACING
pm	31	Polystichum munitum	Swordfern	#1 pot	min. 25cm height	100cm height 100cm spread	60cm

GROUND COVERS

CODE	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS	MATURE SIZE	SPACING
AU	215	Arctostaphylos uva-ursi	Kinnikinnick	10cm pot	min. 25cm spread 40cm O.C.	10cm height 80cm spread	40cm
AR	600	Ajuga reptans	Bugle Weed	10cm pot	min. 25cm spread 30cm O.C.	10cm height 60cm spread	30cm

NOTES

1. COMPLIANCE, GOVERNMENT: ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY OF RICHMOND AND SHALL COMPLY WITH ALL STANDARDS AND REGULATIONS OF THE SAME. CONTRACTORS SHALL ENSURE COMPLIANCE OF ALL WORK PRIOR TO INSTALLATION.

2. COMPLIANCE, BCNTA/BCSLA: ALL MATERIAL, SHIPPING PROCEDURES AND INSTALLATION OF LANDSCAPE ELEMENTS SHALL CONFORM TO LATEST EDITION OF BCNTA/BCSLA LANDSCAPE STANDARD AVAILABLE AT COMMENCEMENT OF WORK.

3. COMPLIANCE, MMCD: ALL WORKS SHALL CONFORM TO THE LATEST MMCD DETAILS AND SPECIFICATIONS AVAILABLE AT COMMENCEMENT OF WORK WHERE NO SPECIFIC DETAIL, NOTE OR SPECIFICATION IS PROVIDED IN THE DRAWING SET OR ATTACHED MATERIALS.

4. CONCRETE, FORMS: THE CONTRACTOR SHALL COMPARE DIMENSIONS PROVIDED WITH SITE CONDITIONS AND IMMEDIATELY REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT AND THE ENGINEER. ONCE COMPLETED THE CONTRACTOR SHALL CALL FOR INSPECTION OF THE FORMS PRIOR TO PLACING STEEL REINFORCEMENT. CONTACT LANDSCAPE ARCHITECT A MINIMUM OF 48 HOURS PRIOR TO DESIRED INSPECTION TIME.

5. CONCRETE, REINFORCEMENT: ALL CONCRETE REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO POURING OF CONCRETE. CONTACT STRUCTURAL ENGINEER A MINIMUM OF 48 HOURS PRIOR TO DESIRED INSPECTION TIME.

6. GRADING, GENERAL: THE CONTRACTOR SHALL ESTABLISH GRADES SUCH THAT THERE IS IN ALL AREAS POSITIVE DRAINAGE TO AN ADJACENT DRAIN. MINIMUM SLOPES SHALL BE AS FOLLOWS:

PEDESTRIAN PAVED AREAS	1%
VEHICULAR PAVED AREAS	1%
LAWN AREAS	2%
PLANTED BEDS	5%

7. GRADING, ALLOWANCES AND TOPSOIL PLACEMENT: DEPTH OF PLANTING MEDIUM AFTER SETTLEMENT SHALL BE:

	ON GRADE
GRASS AREAS	150 mm
SHRUB BEDS	450 mm
GROUND COVER AREAS	450 mm
TREES	300 mm ALL AROUND ROOTBALL

N.B. ALL SOIL SHALL BE TESTED NOT MORE THAN 14 DAYS PRIOR TO INSTALLATION ON SITE. TESTING SHALL BE SPECIFIC TO THIS WORK. CONTRACTOR SHALL AMEND THE SOIL ACCORDING TO THE RECOMMENDATIONS OF THE SOILS TESTING LAB.

8. PLANT MATERIAL, QUANTITIES: CONTRACTOR SHALL CONFIRM ALL PLANT MATERIAL QUANTITIES. ANY DISCREPANCIES BETWEEN THE PLANT LIST AND THE DRAWING SHALL BE REPORTED TO THE CONSULTANT. IN CASE OF DISCREPANCY CONTRACTOR SHALL INSTALL PLANT MATERIAL AS PER DRAWING. IN CIRCUMSTANCES WHERE THERE IS A DISCREPANCY BETWEEN GROUND COVER QUANTITY AND SPACING THE SPACING REQUIREMENT WILL PREVAIL.

9. PLANT MATERIAL, SUBSTITUTIONS: NO SUBSTITUTIONS TO PLANT LIST SHALL BE MADE BY CONTRACTOR WITHOUT PRIOR WRITTEN AUTHORIZATION FROM CONSULTANT.

10. PLANT MATERIAL: ALL PLANT MATERIAL SHALL MEET MINIMUM SIZE REQUIREMENTS AS INDICATED IN THE PLANT LIST.

11. TREE LOCATIONS: TREES SHALL NOT BE PLANTED WITHIN 1.5 METRES OF BUILDING FOUNDATIONS, RETAINING WALLS OR FENCES EXCEPT AS SPECIFICALLY NOTED ON THE PLANTING PLAN. TREES IN LAWN AREAS SHALL BE LOCATED WITHIN A MINIMUM 1 METRE DIAMETER MULCHED RING.

12. SODDING, BOULEVARD: CONTRACTOR SHALL INSTALL TOP SOIL AND TURF WITHIN ALL STREET BOULEVARDS. SODDING SHALL CONTINUE ALONG SUCH BOULEVARDS TO THE EDGE OF DISTURBANCE OR TO THE BOUNDARY OF THE WORK AS DEFINED ON SITE BY THE LANDSCAPE ARCHITECT.

13. MULCH: PLANTING AREAS SHALL BE MULCHED WITH 50 MM OF HEMFIR BARK MULCH. THE USE OF CEDAR MULCH OR ANY MIX CONTAINING CEDAR IS NOT PERMITTED.

14. IRRIGATION: AN IRRIGATION SYSTEM SHALL BE INSTALLED AS A DESIGN/BUILD BY AN ACCREDITED IRRIGATION CONTRACTOR. THE SYSTEM SHALL PROVIDE FULL COVERAGE. THE GENERAL CONTRACTOR SHALL PROVIDE SLEEVES AND CORING AS NECESSARY. A PLAN OF THE PROPOSED SYSTEM SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.

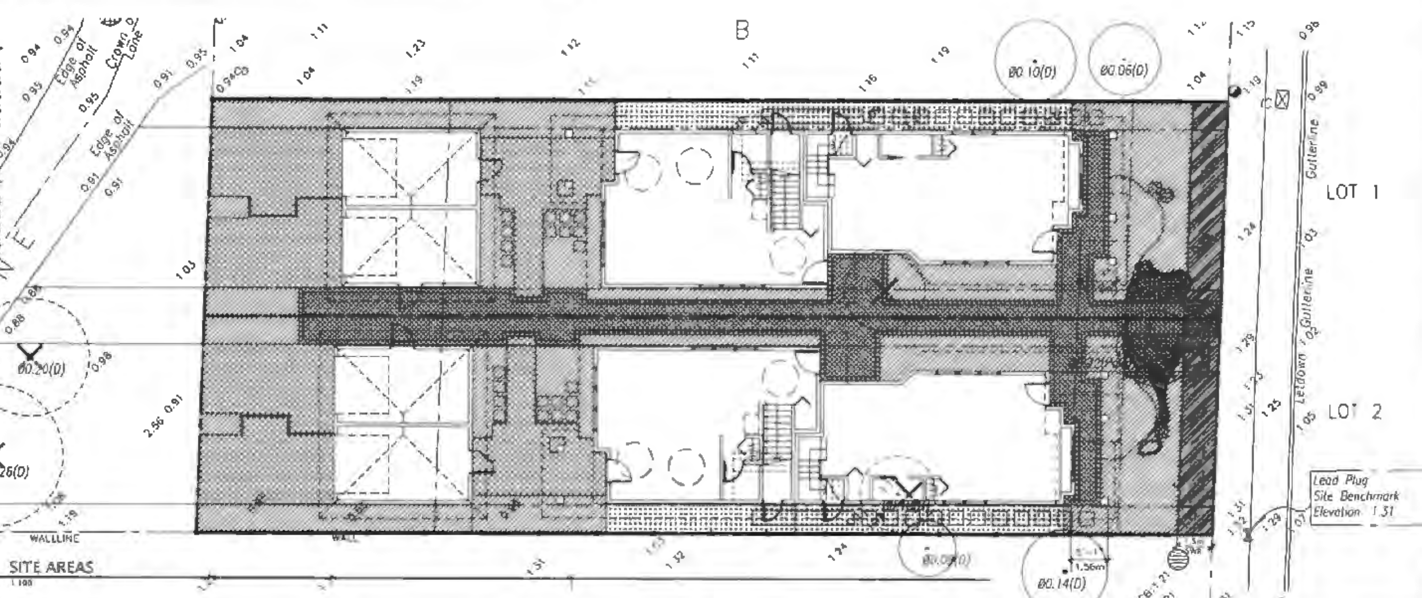
LOT 1 - SITE AREA

BLDG FOOTPRINT	157.8	m2	41%
IMPERVIOUS PAVING	56.0	m2	14%
PERVIOUS PAVING	52.8	m2	14%
LIVE PLANT	99.5	m2	25%
SIDEYARD	24.4	m2	6%
TOTALS	390.5	m2	

LOT 2 - SITE AREAS

BLDG FOOTPRINT	157.8	m2	41%
IMPERVIOUS PAVING	56.0	m2	14%
PERVIOUS PAVING	54.7	m2	14%
LIVE PLANT	97.6	m2	25%
SIDEYARD	24.5	m2	6%
TOTALS	390.5	m2	

NOTE: FOR LOTS 1 & 2
FRONT YARD LIVE PLANT AREA = 66%



01 / L0-01 SITE AREAS 1:100

GP – 171

DATE	ISSUED FOR	REV
2018 07 15	REZONING	A
2018 11 11	BUILDING PERMIT	B
2018 12 24	BUILDING PERMIT	C

This drawing has been prepared solely for the use of the CLIENT and there are no representations of any kind made by Donald V. S. Duncan to any party with whom Donald V. S. Duncan has not entered into a contract.
This drawing shall not be used for construction purposes until the seal appearing hereon is signed and dated by the Landscape Architect.

Consultants:
Architectural: Eric Law Architect
Arborist
Civil
Structural
Mechanical
Electrical

Donald V. S. Duncan
DEVELOPMENT CONSULTANT
LANDSCAPE ARCHITECT
603 - 720 Eleventh Street
New Westminster BC
Canada V3M 6B9
778 791 4475
dvsduncan@gmail.com

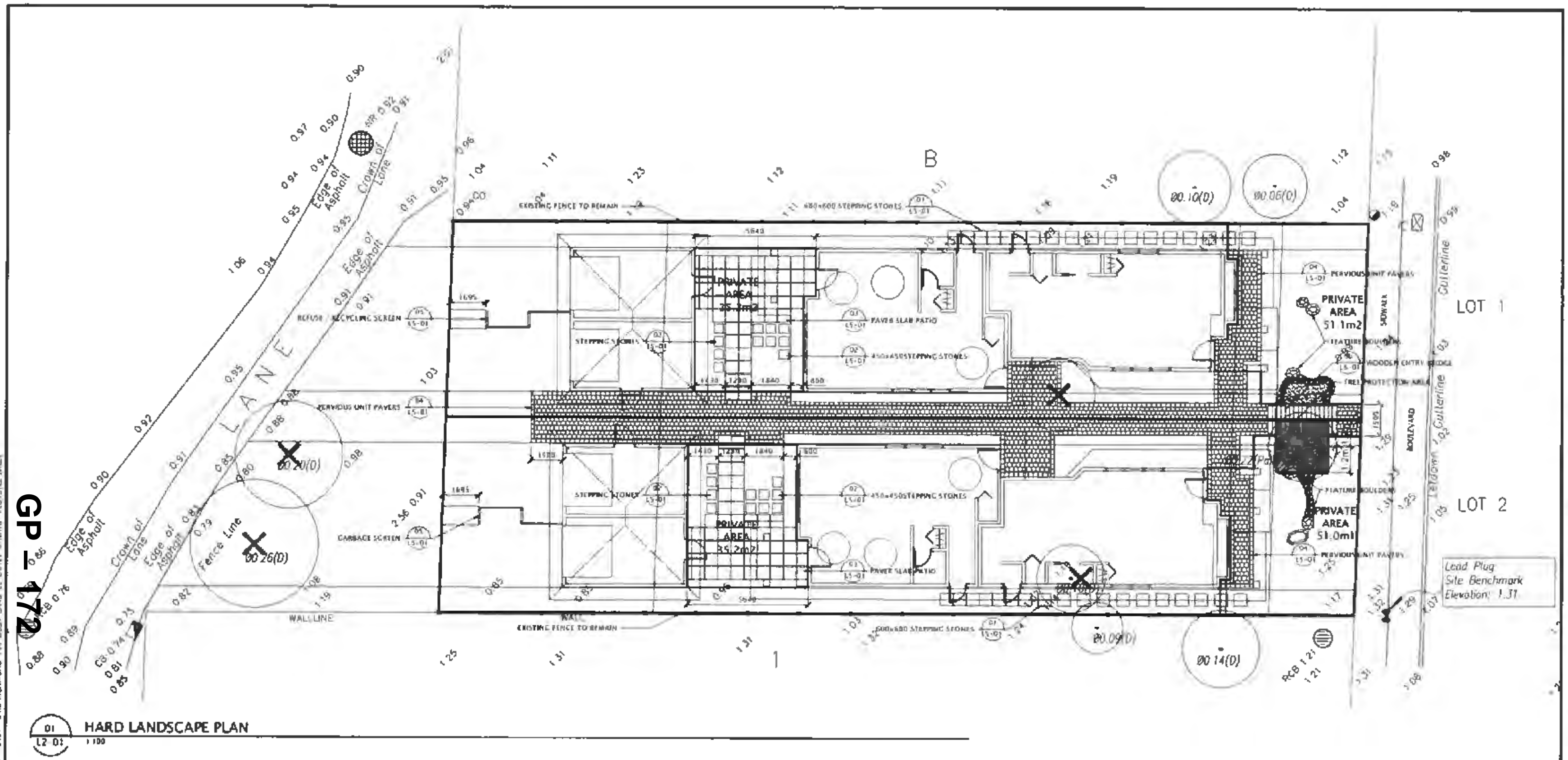
Project Leader: D.Duncan
Drawn: D.Duncan
Revision: C

RESIDENTIAL DEV.
10439 & 10455 No. 5 Road
Richmond BC
prepared for
1058085 BC LTD.
6411 Blundell Road
Richmond BC

Drawing Title: INFORMATION

Check Scale (may be photo reduced): 0 1inch 0 10mm

Project No: 18-0041
Drawing No: L0-01



HARD LANDSCAPE PLAN
01 L2.01
1:100

DATE	ISSUED FOR	REV
2018 07 15	REZONING	A
2018 11 11	BUILDING PERMIT	B
2018 12 24	BUILDING PERMIT	C

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This drawing shall not be used for construction purposes until the seal appearing hereon is signed and dated by the Landscape Architect.

Consultants
Architectural: Eric Law Architect
Arborist
Civil
Structural
Mechanical
Electrical

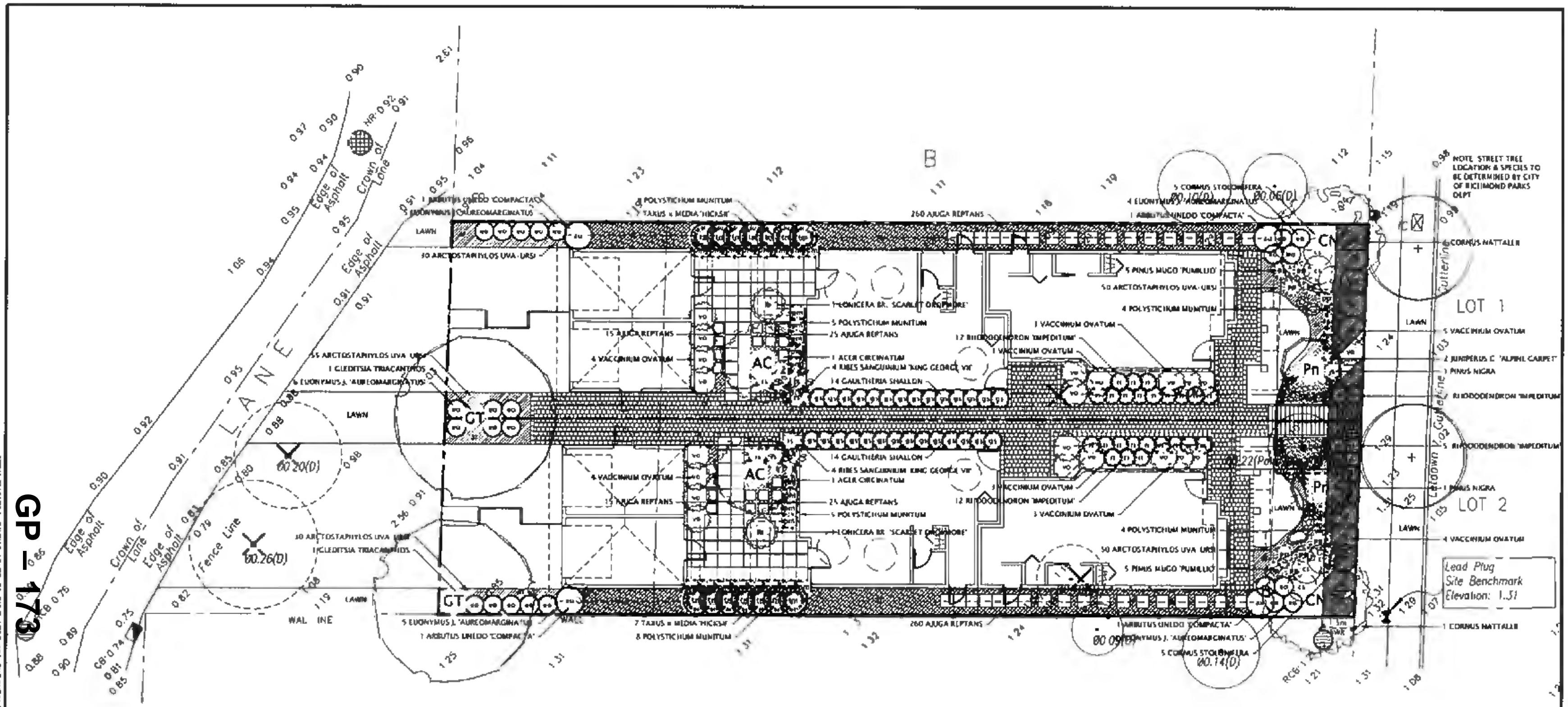
Donald V. S. Duncan
DEVELOPMENT CONSULTANT
LANDSCAPE ARCHITECT
405 - 220 Eleventh Street
New Westminster BC
Canada V3M 5N9
778 79 4121
dvsduncan@gmail.com

Revision: C
Project Leader: D Duncan
Drawn: D Duncan

RESIDENTIAL DEV.
10439 & 10455 No. 5 Road
Richmond BC
prepared for
1058085 BC LTD.
6411 Blundell Road
Richmond BC

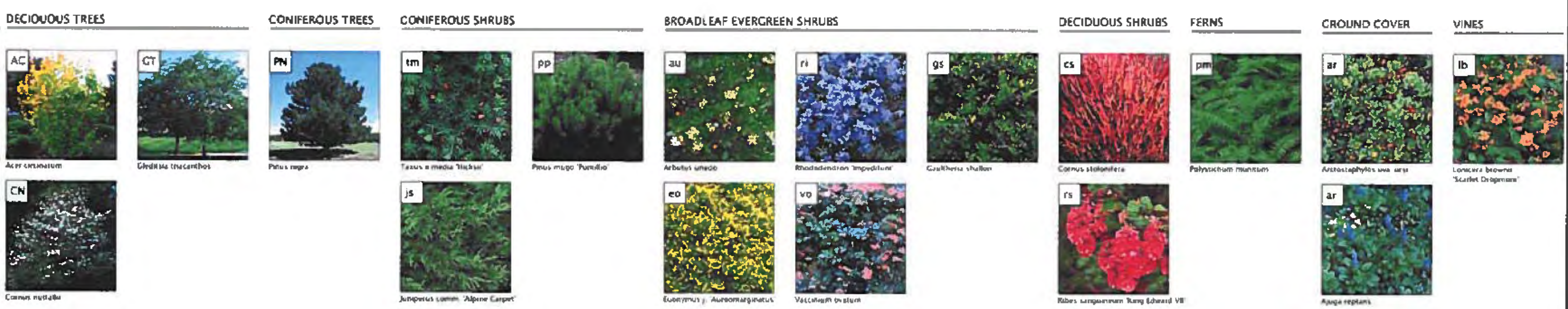
Drawing Title: HARD LANDSCAPE PLAN

Check Scale (may be photo reduced)
Project No: 18 0041
Drawing No: L2.01



01
L4-01

SOFT LANDSCAPE PLAN
1:100



DATE	ISSUED FOR	REV
2018-07-15	REZONING	A
2018-11-11	BUILDING PERMIT	B
2018-12-24	BUILDING PERMIT	C

This drawing has been prepared solely for the use of the CLIENT and there are no representations of any kind made by Donald V. S. Duncan to any party with whom Donald V. S. Duncan has not entered into a contract.

This drawing shall not be used for construction purposes until the seal appearing hereon is signed and dated by the Landscape Architect.

Consultants

Architectural: Eric Law Architect
Arborist
Civil
Structural
Mechanical
Electrical

N

DV SD **Donald V. S. Duncan**
DEVELOPMENT CONSULTANT
LANDSCAPE ARCHITECT
601 - 220 Eleventh Street
New Westminster BC
Canada V3M 6N9
778 791 4321
dvsduncan@gmail.com

C Revision
Project Leader: D.Duncan
Drawn: D.Duncan

RESIDENTIAL DEV.
10439 & 10455 No. 5 Road
Richmond BC
prepared for
1058085 BC LTD.
6411 Blundell Road
Richmond BC

Drawing Title
SOFT LANDSCAPE PLAN

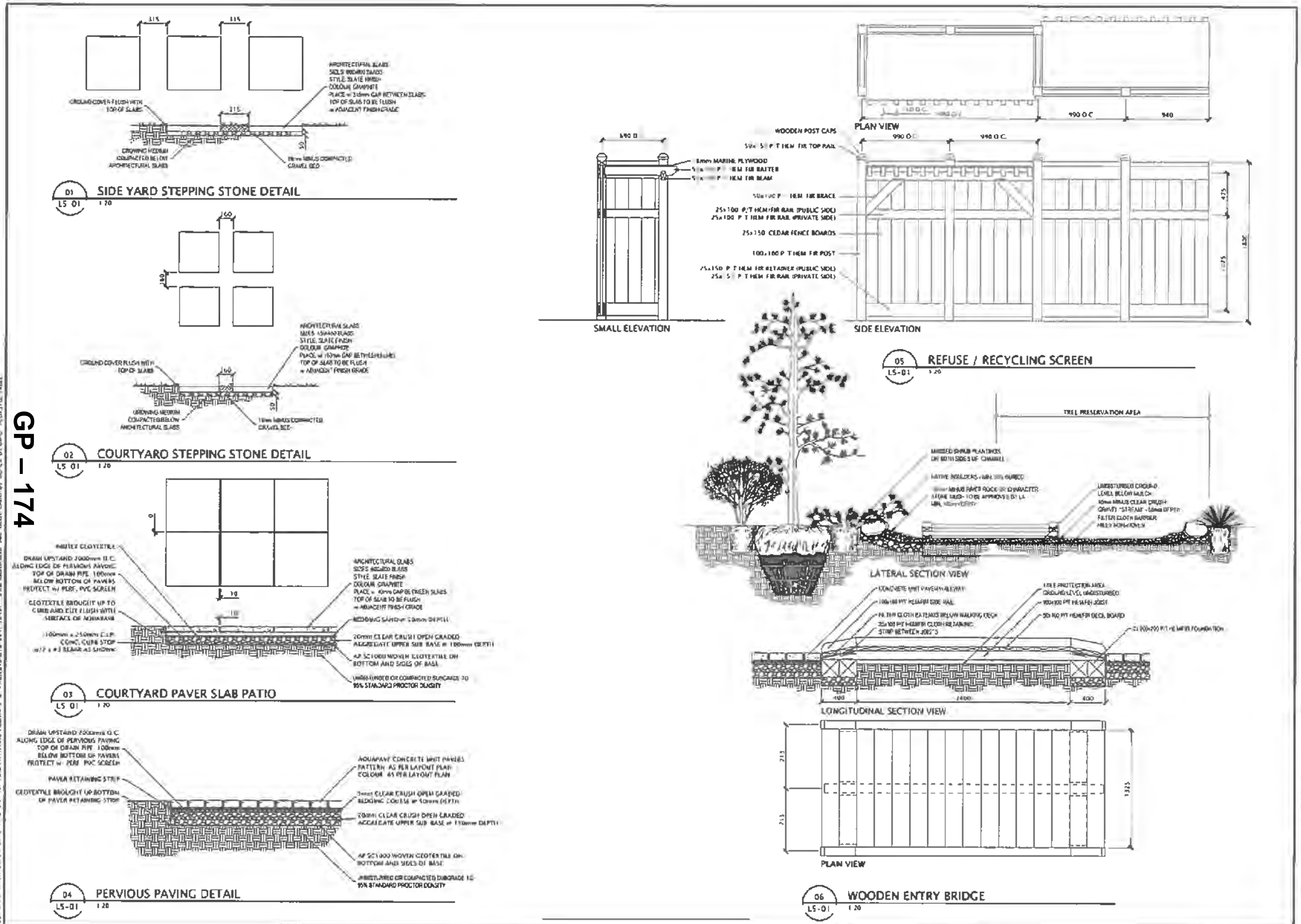
Check Scale (may be photo reduced) 0 1inch 0 10mm

Project No. 18-0041

Drawing No. L4-01

PLOT DATE December 24, 2019 TIME 9:21 PM FULL PATH AND FILENAME D: PROJECTS 018 0041 10431 5 RD RICHMOND 5RD DILLY LAND 02 DD-14 01.DWG PLOTSTYLE TABLE

GP – 173



GP – 174

DATE	ISSUED FOR	REV
2018 07 15	REZONING	A
2018 11 11	BUILDING PERMIT	B
2018 12 24	BUILDING PERMIT	C

Consultants

Architectural
Arborist — Eric Law Architect
Civil
Structural
Mechanical
Electrical

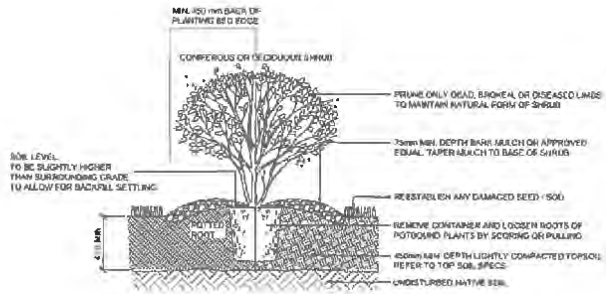
Donald V. S. Duncan
DEVELOPMENT CONSULTANT
LANDSCAPE ARCHITECT

Project Leader: D.Duncan
Drawn: D.Duncan
Revision: C

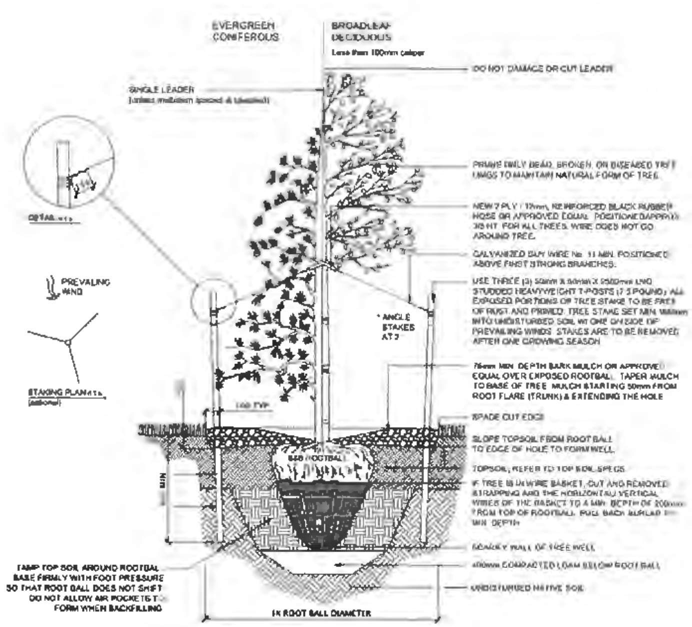
RESIDENTIAL DEV.
10439 & 10455 No. 5 Road
Richmond BC
prepared for
1058085 BC LTD.
6411 Blundell Road
Richmond BC

Drawing Title
LANDSCAPE DETAILS

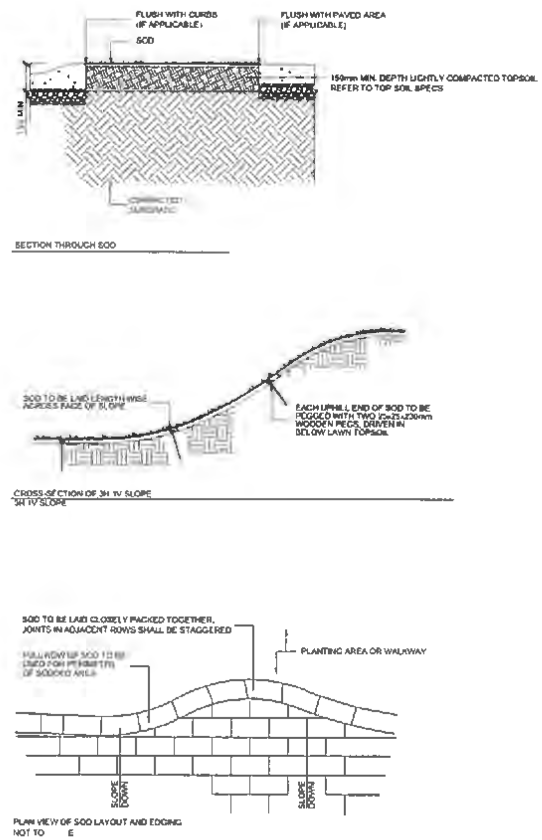
Project No: 18-0043
Drawing No: L5-01



01 / LS 02 SHRUB INSTALLATION DETAIL



02 / LS-02 TREE INSTALLATION DETAIL



03 / LS-02 TURF INSTALLATION DETAIL

DATE	ISSUED FOR	REV
2018 07 15	REZONING	A
2018 11 11	BUILDING PERMIT	B
2018 12 24	BUILDING PERMIT	C

This drawing has been prepared solely for the use of the CLIENT and there are no representations of any kind made by Donald V. S. Duncan to any party with whom Donald V. S. Duncan has not entered into a contract.

This drawing shall not be used for construction purposes until the seal appearing hereon is signed and dated by the Landscape Architect.

Consultants
Architectural: Eric Law Architect
Arborist
Civil
Structural
Mechanical
Electrical

Donald V. S. Duncan
DEVELOPMENT CONSULTANT
LANDSCAPE ARCHITECT
604 - 210 Eleventh Street
New Westminster BC
Canada V3M 6N9
778 791 6121
dvsduncan@gmail.com

Revision: C
Project Leader: D Duncan
Drawn: D Duncan

RESIDENTIAL DEV.
10439 & 10455 No. 5 Road
Richmond BC
prepared for
1058085 BC LTD.
6411 Blundell Road
Richmond BC

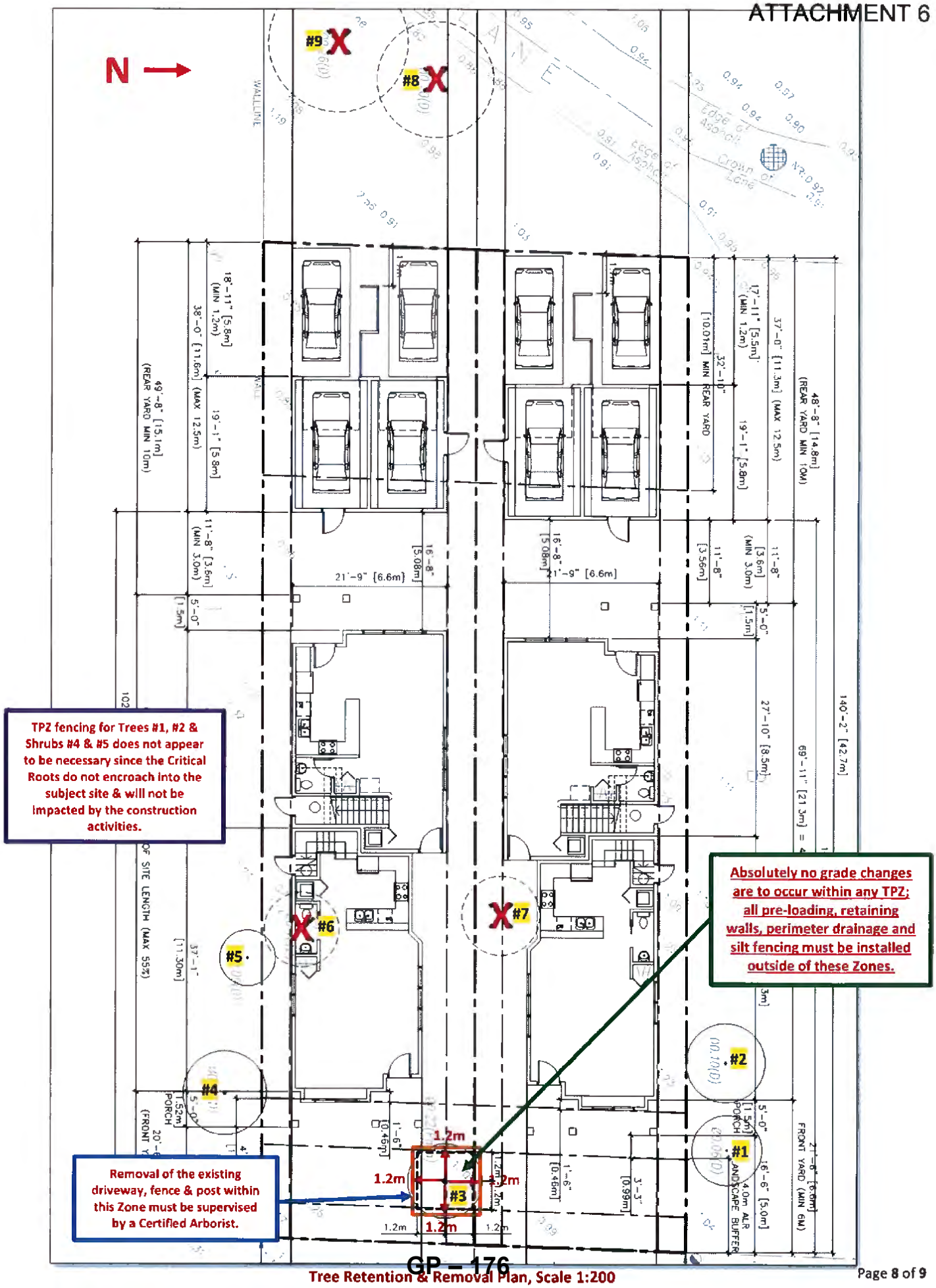
Drawing Title: LANDSCAPE DETAILS

Check Scale (may be photo reduced)

Project No: 18 0041

Drawing No: LS 02

GP – 175



GP – 176

Tree Retention & Removal Plan, Scale 1:200

City of Richmond

Rezoning Considerations

Development Applications Department
6911 No. 3 Road, Richmond, BC V6Y 2C1

Address: 10431 No. 5 Road **File No.:** RZ 18-829789

Prior to final adoption of Richmond Zoning Bylaw 8500, Amendment Bylaw 10195, the developer is required to complete the following:

1. Provincial Ministry of Transportation & Infrastructure Approval.
2. City acceptance of the developer's offer to voluntarily contribute $1,950 to the City's Tree Compensation Fund for the planting of replacement trees within the City.
3. Submission of a Contract entered into between the applicant and a Certified Arborist for supervision of any on-site works conducted within the tree protection zone of the trees to be retained. The Contract should include the scope of work to be undertaken, including: the proposed number of site monitoring inspections, and a provision for the Arborist to submit a post-construction assessment report to the City for review.
4. Registration of a flood indemnity covenant on title.
5. Payment of deferred taxes and the submission of a title search demonstrating that the Land Tax Deferment Act Agreement (BB780596) has been discharged from title. Note: this is required prior to the preparation of any legal documents associated with this rezoning application.
6. Registration of a legal agreement on title to ensure that landscaping planted along within the ALR buffer area along the east portion of the property (4.0 m wide, as measured from the east property line) is maintained and will not be abandoned or removed. The legal agreement is to identify the ALR buffer area and to indicate that the subject property is located across from active agricultural operations and is subject to impacts of noise, dust, and odour.
7. City acceptance of the developer's offer to voluntarily contribute $8.50 per buildable square foot (e.g. $42,857.00) to the City's affordable housing fund.
8. The submission and processing of a Development Permit* completed to a level deemed acceptable by the Director of Development.

Prior to a Development Permit* being forwarded to the Development Permit Panel for consideration, the developer must complete the following requirements:

1. Submission of a Landscape Plan, prepared by a Registered Landscape Architect, to the satisfaction of the Director of Development, and a cost estimate provided by the Landscape Architect, including installation costs. The Landscape Plan should:
   - comply with the guidelines of the OCP's Arterial Road Policy and should not include hedges along the front property line;
   - include a mix of coniferous and deciduous trees;
   - include the dimensions of tree protection fencing as illustrated on the Tree Retention Plan attached to this report; and
   - include the 8 required replacement trees with the following minimum sizes:

No. of Replacement Trees	Minimum Caliper of Deciduous Tree	or	Minimum Height of Coniferous Tree
8	6 cm		3.5 m

If required replacement trees cannot be accommodated on-site, a cash-in-lieu contribution in the amount of $750/tree to the City's Tree Compensation Fund for off-site planting is required.

Initial: _____

Prior to a Development Permit* being forwarded to Council for consideration, the developer must complete the following requirements:

1. Submission of a Landscape Security based on the cost estimate provided by the Landscape Architect, including the $6,000 security ($750/tree) to ensure that a total of 4 replacement trees are planted and maintained on each proposed lot (for a total of 8 trees), plus a 10% contingency.

At Demolition stage, the applicant(s) must complete the following requirements:

- Install tree protection fencing around all tree tag# 3 which is to be retained. Tree protection fencing must be installed to City standard in accordance with the City's Tree Protection Information Bulletin TREE-03 and must remain in place until construction and landscaping on-site is completed.

At Subdivision* stage, the developer must complete the following requirements:

- Provide a cash-in-lieu contribution in the amount of $16,653 for future lane construction to fulfill ultimate standards.
- Pay Development Cost Charges (City and GVS & DD), School Site Acquisition Charge, and Address Assignment Fees.
- Enter into a Servicing Agreement for the design and construction of frontage improvements along No. 5 Road, to include (but is not limited to): a 1.5 m wide treed/grass boulevard behind the existing curb/gutter, and a 1.5 m wide concrete sidewalk at the property line. This may trigger the need for a 0.1 m wide right-of-way for public-right-of-passage over the sidewalk along the development frontage (to be determined at the Servicing Agreement design review stage).
- Pay servicing costs associated with the following water, storm, and sanitary works:

Water Works:

- Using the OCP Model, there is 646 L/s of water available at a 20 psi residual at the No. 5 Road frontage. Based on your proposed development, your site requires a minimum fire flow of 95 L/s.
- The Developer is required to:
  - Submit Fire Underwriter Survey (FUS) or International Organization for Standardization (ISO) fire flow calculations to confirm the development has adequate fire flow for onsite fire protection. Calculations must be signed and sealed by a Professional Engineer and be based on Building Permit Stage building designs.
- At Developer's cost, the City is to:
  - Install 4 new 25mm water service connections to serve the four new homes at the proposed development, complete with meters and meter boxes. Meter boxes to be located within the new 1.5m wide utility right-of-way, see General Items.
  - Cut and cap, at main, the existing water service connection serving the development site.

Storm Sewer Works

- At Developer's cost, the City is to:
  - Complete a video inspection of the two existing storm sewer connections to confirm whether they are in adequate condition to service the development. If not adequate, the connections shall be replaced by the City at the developer's cost.

Sanitary Sewer Works

- At Developer's cost, the City is to:
  - Install a new sanitary service lateral complete with inspection chamber and a dual service connection at the adjoining property line of the newly subdivided lots.
  - Cut, cap, and remove the existing sanitary connection.

Frontage Improvements

- The Developer is required to:

Initial: _____

- Coordinate with BC Hydro, Telus and other private communication service providers:
  - When relocating/modifying any of the existing power poles, guy wires and above ground structures within the property frontages.
  - To determine if additional above ground structures are required and coordinate their locations (e.g. Vista, PMT, LPT, Shaw cabinets, Telus Kiosks, etc.). These should be located on site.
- Pay, in keeping with the Subdivision and Development Bylaw No. 8751, a $16,653 cash-in-lieu contribution for the design and construction of frontage upgrades as set out below:
  - Asphalt/Pavement (EP.0636) $5,307
  - Drainage (EP.0637) $5,307
  - Concrete Curb and Gutter (EP.0638) $3,660
  - Lighting (EP.0639) $2,379

General Items

- The Developer is required to:
  - Provide 1.5m wide utility rights-of-way across the entire No. 5 Road frontage to accommodate storm IC's and water meter boxes. No permanent structures such as fences, and storage sheds with concrete foundations, are allowed to be built on or across the utility rights-of-way
  - Enter into, if required, additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering, including, but not limited to, site investigation, testing, monitoring, site preparation, de-watering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.

Prior to Building Permit Issuance, the developer must complete the following requirements:

- Submission of a Construction Parking and Traffic Management Plan to the Transportation Department. Management Plan shall include location for parking for services, deliveries, workers, loading, application for any lane closures, and proper construction traffic controls as per Traffic Control Manual for works on Roadways (by Ministry of Transportation) and MMCD Traffic Regulation Section 01570.
- Obtain a Building Permit (BP) for any construction hoarding. If construction hoarding is required to temporarily occupy a public street, the air space above a public street, or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit. For additional information, contact the Building Approvals Department at 604-276-4285.

Note:

* This requires a separate application.

- Where the Director of Development deems appropriate, the preceding agreements are to be drawn not only as personal covenants of the property owner but also as covenants pursuant to Section 219 of the Land Title Act.

  All agreements to be registered in the Land Title Office shall have priority over all such liens, charges and encumbrances as is considered advisable by the Director of Development. All agreements to be registered in the Land Title Office shall, unless the Director of Development determines otherwise, be fully registered in the Land Title Office prior to enactment of the appropriate bylaw.

  The preceding agreements shall provide security to the City including indemnities, warranties, equitable/rent charges, letters of credit and withholding permits, as deemed necessary or advisable by the Director of Development. All agreements shall be in a form and content satisfactory to the Director of Development.

- Additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering may be required including, but not limited to, site investigation, testing, monitoring, site preparation, de-watering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.

Initial: _____

- Applicants for all City Permits are required to comply at all times with the conditions of the Provincial *Wildlife Act* and Federal *Migratory Birds Convention Act*, which contain prohibitions on the removal or disturbance of both birds and their nests. Issuance of Municipal permits does not give an individual authority to contravene these legislations. The City of Richmond recommends that where significant trees or vegetation exists on site, the services of a Qualified Environmental Professional (QEP) be secured to perform a survey and ensure that development activities are in compliance with all relevant legislation.

Signed

Date

City of Richmond

Bylaw 10195

Richmond Zoning Bylaw 8500
Amendment Bylaw 10195 (RZ 18-829789)
10431 No. 5 Road

The Council of the City of Richmond, in open meeting assembled, enacts as follows:

1. The Zoning Map of the City of Richmond, which accompanies and forms part of Richmond Zoning Bylaw 8500, is amended by repealing the existing zoning designation of the following area and by designating it **"ARTERIAL ROAD COMPACT TWO-UNIT DWELLINGS (RCD)".**

   P.I.D. 000-451-649
   Parcel "A" (RD34577E) Lot 356 Section 36 Block 4 North Range 6 West New Westminster District Plan 44778

2. This Bylaw may be cited as **"Richmond Zoning Bylaw 8500, Amendment Bylaw 10195".**

FIRST READING	
A PUBLIC HEARING WAS HELD ON	
SECOND READING	
THIRD READING	
OTHER CONDITIONS SATISFIED	
ADOPTED	

CITY OF RICHMOND
APPROVED by
APPROVED by Director or Solicitor

MAYOR

CORPORATE OFFICER

City of Richmond

Bylaw 10197

Richmond Zoning Bylaw 8500 Amendment Bylaw 10197 (Arterial Road Land Use Policy/Arterial Road Compact Lot Duplex [RCD])

The Council of the City of Richmond, in open meeting assembled, enacts as follows:

1. Richmond Zoning Bylaw 8500, as amended, is further amended at Section 5.15 [Affordable Housing] by inserting the following into the end of the table contained in Section 5.15.1.c regarding Affordable Housing density bonusing provisions:

Zone	Sum Per Buildable Square Foot of Permitted **Principal Building**
RCD	$8.50

2. Richmond Zoning Bylaw 8500, as amended, is further amended by inserting the following into Section 8 (Residential Zones), in numerical order:

8.18 Arterial Road Compact Two-Unit Dwellings (RCD)

8.18.1 Purpose

The **zone** provides for two **dwelling units** on a compact lot fronting an **arterial road** and with **lane access**, plus other compatible **uses**.

8.18.2 Permitted Uses

- **housing, two-unit**

8.18.3 Secondary Uses

- **boarding and lodging**
- **community care facility, minor**
- **home business**

8.18.4 Permitted Density

1. The maximum **density** is one **two-unit housing** unit per **lot**.
2. The maximum **floor area ratio** is 0.4 applied to a maximum of 464.5 m^2 of the **lot area**, together with 0.30 applied to the balance of the **lot area** in excess of 464.5 m^2.
3. Notwithstanding Section 8.16.4.2, the reference to "0.4" is increased to a higher **density** of "0.6" if the **owner**, at the time **Council** adopts a zoning amendment bylaw to include the **owner's lot** in the RCD **zone**, pays into the **affordable housing reserve** the sum specified in Section 5.15 of this bylaw.

4. Notwithstanding Sections 4.2.2 and 4.3, for the purposes of this **zone** only, the following items are not included in the calculation of maximum **floor area ratio**:
   a) up to 10% of the **floor area** total calculated for the **lot** in question, provided the **floor area** is used exclusively for covered areas of the **principal building** and the covered areas are:
      i) always open on two or more sides;
      ii) never enclosed; and
      iii) not located more than 0.6 m above the lowest horizontal floor.
   b) up to 25 m^2 per **dwelling unit** of **enclosed parking** within a **garage** located on-site, or **parking spaces** within an unenclosed **carport** located on-site, provided that such **enclosed parking** or **parking spaces** are not used for **habitable space**;
   c) one **accessory building** which is less than 10.0 m^2; and
   d) up to a maximum of 2.35 m^2 per **dwelling unit** for **floor area** occupied by those components of a **green building system** constructed or installed within the **principal building**.

5. Any portion of **floor area** in a **principal building** with a **ceiling height** which exceeds 5.0 m shall be considered to comprise two floors and shall be measured as such for the purposes of calculating **density**, except that a maximum of 10 m^2 of **floor area**, per **two-unit housing unit**, with a **ceiling height** which exceeds 5.0 m, provided such **floor area** is exclusively for interior entry and staircase purposes, are considered to comprise one floor.

8.18.5 Permitted Lot Coverage

1. The maximum **lot coverage** is 50% for **buildings**.
2. No more than 70% of a **lot** may be occupied by **buildings**, **structures** and **non-porous surfaces**.
3. 20% of the **lot area** is restricted to **landscaping** with live plant material.

8.18.6 Yards & Setbacks

1. The minimum **front yard** is 6.0 m, except that **accessory buildings**, **carports**, **garages** and **parking spaces** must be **setback** a minimum of 15.0 m.
2. The minimum **interior side yard** is 1.2 m.
3. The minimum **exterior side yard** is 3.0 m.
4. The minimum **rear yard** is 10.0 m for the **principal building**, except for a **corner lot** where the **exterior side yard** is 6.0 m, in which case the **rear yard** is reduced to 1.2 m.
5. Detached **accessory buildings** including **garages** or **carports** may be located in the **rear yard** but must be located:
   a) within 1.2 m and 12.5 m of the **rear lot line**;

b) no closer than 3.0 m to the exterior **side lot line**; and

c) no closer than 1.2 m to the interior **side lot line**.

6. Detached **accessory buildings** up to a maximum size of 10.0 m^2 may be located within the **interior side yard** and **rear yard** but no closer than 6.0 m of an **arterial road** and 3.0 m of a local **road**.

7. Notwithstanding Section 4.8, for the purpose of this **zone** only, the following projections shall be permitted, subject to the *Building Code*:

a) fireplaces and chimneys, whether enclosed or unenclosed, which form part of the **principal building** may project for a distance of:

i) 1.0 m into the **front yard**;

ii) 0.6 m into the **side yard**, limited to one exterior wall of the **principal building**, for the purposes of a chimney or fireplace assembly only, and shall not exceed 1.8 m in horizontal length. No masonry footing is permitted for the chimney or fireplace assembly; and

iii) 0.6 m into the **rear yard**.

b) **porches** which form part of the **principal building**, that are less than 5.0 m in **height** and open on those sides which face a public **road** may project for a distance of:

i) 1.5 m into the **front yard**;

ii) 0.6 m into the **exterior side yard**; and

iii) 1.5 m into the **exterior side yard** where the **exterior side yard** is 6.0 m.

c) **balconies** and **bay windows** which form part of the **principal building**, may project into any yard no more than 0.6 m.

d) **building** elements in the **principal building** that promote sustainability objectives such as solar panels, solar hot water heating systems and rainwater collection systems may project into the **side yard** and **rear yard** no more than 0.6 m.

e) other portions of the **principal building** which are less than 2.0 m in **height** may be located within the **rear yard** but no closer than:

i) 3.0 m of a **public road**;

ii) 6.0 m of an **arterial road**; and

iii) 1.2 m of the **rear lot line** or **side lot line**.

8. The minimum **building separation space** between the **principal building** and the **accessory building** is 3.0 m.

8.18.7 Permitted Heights

1. The maximum **height** for **principal buildings** is 2 ½ **storeys** or 9.0 m, whichever is less, but it shall not exceed the **residential vertical lot width envelope** and **the residential vertical lot depth envelope**. For a **principal building** with a flat roof, the maximum **height** is 7.5 m.

2. Notwithstanding Section 3.4, for the purpose of this **zone** only, **the residential vertical lot depth envelope** shall be a vertical envelope located at the minimum **front yard setback** requirement for the **lot** in question, calculated from the **finished site grade**, and formed by the plane rising vertically 5.0 m to a point and then extending upward and away from the required **yard setback** at a rate of two units of vertical rise for each single unit of horizontal run to the point at which the plane intersects to the maximum **building height**.

3. The ridge line of a front roof dormer may project horizontally up to 0.91 m beyond the **residential vertical lot depth envelope** but no further than the **setback** required for the **front yard**.

4. The ridge line of a side roof dormer may project horizontally up to 0.91 m beyond the **residential vertical lot width envelope** but no further than the **setback** required for the **interior side yard** or the **exterior side yard**.

5. The maximum **height** for **accessory structures** is 9.0 m.

8.18.8 Subdivision Provisions/Minimum Lot Size

1. The minimum **lot** dimensions and areas are as follows, except that the minimum **lot width** for **corner lots** is an additional 2.0 m:

Minimum frontage	Minimum lot width	Minimum lot depth	Minimum lot area
9.0 m	9.0 m	40.0 m	360.0 m²

8.18.9 Landscaping & Screening

1. **Landscaping** and **screening** shall be provided according to the provisions of Section 6.0.

8.18.10 On-Site Parking

1. On-site **vehicle** parking shall be provided according to the standards set out in Section 7.0, except that the maximum driveway width shall be 6.0 m.

2. For the purpose of this **zone** only, a "driveway" is defined as any **non-porous surface** of the **lot** that is used to provide space for **vehicle** parking or **vehicle access** to or from a public **road** or **lane**.

3. Notwithstanding Section 7.5.6, for the purpose of this **zone** only, where residents of a single **dwelling unit** intend to use two **parking spaces**, the spaces may be provided in a **tandem arrangement**, with one standard **parking space** located behind the other.

4. Notwithstanding Section 7.5.11, for the purpose of this **zone** only, a standard space must have a minimum length of 5.5 m and a minimum width of 2.5 m and a small space must have a minimum length of 4.6 m and a minimum width of 2.3 m.

8.18.11 Other Regulations

1. In addition to the regulations listed above, the General Development Regulations in Section 4.0 and Specific Use Regulations in Section 5.0 apply.

3. This Bylaw may be cited as **"Richmond Zoning Bylaw 8500, Amendment Bylaw 10197".**

FIRST READING	
A PUBLIC HEARING WAS HELD ON	
SECOND READING	
THIRD READING	
ADOPTED	

CITY OF RICHMOND
APPROVED by
APPROVED by Director or Solicitor

MAYOR

CORPORATE OFFICER

City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	June 29, 2020
From:	Wayne Craig Director, Development	**File:**	HA 19-881148
Re:	**Application by Kanaris Demetre Lazos for a Heritage Alteration Permit (HA 19-881148) and a Steveston Village Heritage Conservation Grant at 12111 3rd Avenue (Steveston Hotel)**		

Staff Recommendation

1. That a Heritage Alteration Permit (HA 19-881148) be issued which would permit the replacement of the existing roof on the building located at 12111 3rd Avenue; and

2. That a grant request in the amount of $72,800 be approved under the Steveston Village Heritage Conservation Grant Program to assist with the roof replacement work for the building located at 12111 3rd Avenue, and disbursed in accordance with Council Policy 5900.

Wayne Craig
Director, Development
(604-247-4625)

Barry Konkin
Director, Policy Planning
(604-276-4139)

WC/BK:cl

Att. 8

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
Finance Department	☑	

Staff Report

Origin

Kanaris Demetre Lazos has submitted applications to:

- Obtain a Heritage Alteration Permit (HA 19-881148) to replace the existing roof of the building at 12111 3rd Avenue, known as the Steveston Hotel, on a site zoned "Steveston Commercial (CS2)"; and
- Seek a grant in the amount of $72,800.00 through the Steveston Village Heritage Conservation Grant Program to assist with the proposed roof replacement work necessary to maintain the lifespan of the building at 12111 3rd Avenue.

A location map and aerial photo of the subject site are included in Attachment 1.

Findings of Fact

The Steveston Village is designated as a Heritage Conservation Area (HCA) in the Steveston Area Plan. 17 sites in the HCA are identified as protected heritage resources. The Steveston Hotel is one of these identified heritage resources. The hotel takes up a large portion of the west side of this block of 3rd Avenue at the west terminus of Moncton Street. The Steveston Area Plan and Heritage Procedures Bylaw 8400 require a Heritage Alteration Permit application for any exterior alterations proposed to the property as it is located within the HCA.

The Steveston Hotel is a two-storey utilitarian style building with a relatively flat façade and flat roof. The current use of the building is a hotel, restaurant, liquor primary establishment, and an existing non-conforming liquor store. The Statement of Significance describing the heritage value of the Steveston Hotel is included in Attachment 2.

Surrounding Development

Existing development immediately surrounding the subject property is as follows:

- To the north is a property that contains both the "Steveston Courthouse" at 12051 3rd Avenue (an identified heritage resource), as well as a vacant non-identified building at 12011 3rd Avenue. The property is zoned "Steveston Commercial (CS2)", and is the subject of a development application to permit a mixed use building containing two storeys of residential units over ground-level parking and commercial uses, and involves relocation of the Steveston Courthouse elsewhere on the property (RZ 17-794156). The application is currently under staff review and will be subject to a separate report to Council upon completion of the staff review.
- To the south and west, is the Gulf of Georgia Cannery National Historic Site on a property zoned "Light Industrial (IL)".
- To the east, across 3rd Avenue, is a new mixed use building ranging from one to three storeys on the former Rod's Lumber site at 12088 3rd Avenue, containing commercial and residential uses on a property zoned "Commercial Mixed Use (ZMU33) – Steveston Village".

Related Policies & Studies

Official Community Plan

The existing land use designation in the 2041 Official Community Plan (OCP) for the subject property is "Neighbourhood Service Centre".

The Official Community Plan (OCP) includes City-wide direction and Policy to "preserve, promote and celebrate community heritage".

This application is consistent with the land use designation and applicable policies in the OCP.

Steveston Area Plan

The Steveston Area Plan's land use designation for the subject site is "Heritage Mixed Use (Commercial-Industrial with Residential & Office Above)" (Attachment 3).

The Steveston Area Plan includes direction and policy to:

- Conserve significant heritage resources throughout the Steveston area and to conserve the identified heritage resources within the Steveston Village Node (e.g., as per the Steveston Village Conservation Strategy).
- Provide incentives to the private sector to conserve buildings and sites designated as having significant heritage value in the Steveston Village.
- Support a Heritage Conservation Grant Program to assist in conserving the identified heritage resources in the Steveston Village.

This application is consistent with the objectives and land use designation in the Steveston Area Plan.

Steveston Village Heritage Conservation Grant Program

The Steveston Heritage Conservation Grant Program was established in 2009 to provide financial assistance to property owners for the exterior conservation of the 17 identified heritage resources in the HCA, including maintenance to extend the lifespan of protected buildings. Funds for the Program are provided by contributions obtained through development applications in exchange for additional density, senior government and non-governmental organization grants, and private donations. Council Policy 5900 regarding the Grant Program was updated on November 13, 2018 to better promote and facilitate exterior conservation of the identified heritage resources and utilization of the funds collected through the Grant Program (Attachment 4). Council Policy 5900 is summarized below:

- The maximum grant amount per identified heritage resource is $150,000.
- An additional maximum grant of $100,000 per identified heritage building may be considered by City Council, with private matching funding, to achieve exceptional heritage conservation, as determined by City Council.

- The grant may not exceed 50% of the total cost of eligible expenses (however, for a site owned by a registered non-profit society, City Council may consider providing up to 75% of the total cost of eligible expenses).
- Eligible expenses include roof replacement.
- The owner may apply for a grant more than once as heritage conservation may occur in stages.
- A grant will not be provided where the work has already been undertaken prior to City Council approval.

The current balance of the Grant Program account is $1,072,450.92 as of May 31, 2020.

To-date, City Council has approved a total of two grants totalling $165,159.38 to the owners of the protected buildings containing the former Steveston Methodist Church at 3711/3731 Chatham Street and the Tasaka Barbership at 3891 Moncton Street. The grants are to be disbursed once staff receive the required documentation identified in Council Policy 5900, confirming the actual cost and scope of the completed work.

Further assessment of the subject Heritage Conservation Grant application as it relates to Council Policy 5900 is provided in the "Analysis" section of this report.

The subject application for a Heritage Alteration Permit to replace the roof of the Steveston Hotel and for a Heritage Conservation Grant is consistent with the land use designation and applicable policies in the Steveston Area Plan. It involves the conservation of the flat-roofed building form, which is a character-defining element of this heritage resource as indicated in the Statement of Significance. Roof replacement is one of the eligible expenses under the Heritage Conservation Grant Program as it is necessary to extend the physical life of the heritage resource.

Public Consultation

A development sign has been installed on the subject property. Staff have not received any comments from the public about the application in response to the placement of the sign on the property.

Richmond Heritage Commission

The Heritage Alteration Permit and Heritage Conservation Grant applications were presented to the Richmond Heritage Commission on June 10, 2020, and were supported. Although not identified as a condition of the Permit, the Commission suggested that the applicant install screening on the west and north sides of the rooftop mechanical equipment following completion of the roof replacement work in order to minimize the visual impact of the equipment from neighbouring properties. An excerpt from the Commission meeting minutes is included in Attachment 5.

The applicant has indicated that the existing mechanical equipment will be re-installed in their existing locations on the roof after the roof replacement work is completed and that, because the

feasibility of installing rooftop screening hasn't been investigated at this time, the applicant has agreed to pursue a separate Heritage Alteration Permit application for the rooftop screening in the future, to be considered by the Director of Development.

Analysis

The Steveston Hotel has undergone significant exterior alterations since it was constructed in the 1890's, such that few original features of the building remain, other than the building's simple lines and flat-roofed form. Attachment 6 includes photos of the Steveston Hotel from various eras. In recent years, Heritage Alteration Permits have been issued for the subject property:

- To remove decorative shutters and replace all upper-storey windows (HA 18-804880).
- For the painting of a mural on the south elevation of the building on the property as a Canada 150 project (HA17-776233).
- To allow the replacement of a window with a new entry door to provide a separate entrance to the restaurant in the hotel (HA17-766440).
- To allow reconfiguration of the lot lines of 12111 and 12011 3rd Avenue so that each lot can function independently of one another in terms of access and parking (HA 16-723477).

None of the work undertaken as part of the above Heritage Alteration Permit applications altered original features of the Steveston Hotel.

Heritage Alteration Permit Application

This proposal involves the replacement of the existing roof and repair of damage caused by leaks into the building. Specifically, the scope of work involves:

- Removal of the tar and gravel roof system, existing plywood and shiplap roof layers, and replacement of rotted joists and other structural elements, as required.
- Replacement with new plywood, and a new torch on roofing system complete with new roof drains, caps, flashing and vents.

A plan showing the area of the roof replacement work is shown in Plan # 1 to the Permit, and the Applicant's proposal and photos illustrating the existing condition of the roof are included in Attachment 7.

No changes are proposed to the height of the building and the existing building parapet will continue to conceal the rooftop mechanical equipment from 3rd Avenue.

The roof replacement work proposed with the subject Heritage Alteration Permit application will not alter original features of the Steveston Hotel and maintains its flat-roofed form, which is a character-defining element identified in the Statement of Significance.

The proposal is a necessary heritage conservation intervention that is intended to maintain the building's lifespan. Further conservation work to maintain the building will occur incrementally in the future.

Heritage Conservation Grant Application

The applicant has requested the maximum grant amount of $72,800 to assist with the proposed roof replacement work. The lower estimate for the proposed work is $145,600 (not including tax), and the requested amount is 50% of the total cost, consistent with Council Policy 5900. Two cost estimates from independent contractors are included in Attachment 8.

The proposed roof replacement work at the Steveston Hotel is eligible for a grant as Council Policy 5900 identifies that eligible expenses include roof replacement as it is necessary to extend the physical life of the protected building.

Staff have used the following evaluation criteria to assess the grant application, as per Council Policy 5900:

- How the proposed work contributes to preserving and enhancing the overall historic fabric of Steveston Village.
- The level of contribution of the proposed work in conserving the heritage character and conveying the historic significance of the building.
- How the proposed work helps extend the physical life of the building.
- The overall quality of the submission and the applicant's ability to carry out the project in a reasonable timeframe and secure other funding sources.

Overall, the application complies with the above criteria. The proposed roof replacement work contributes to extending the physical life of the building, which is showing signs of damage evident by leaks throughout the building. In doing so, the proposed work preserves its social and cultural value as a historic and continuing community gathering place and local business in Steveston Village. Since the proposed work conserves the existing flat-roofed form and simple form, which are character-defining elements of the building, its heritage value is not impacted or reduced. The applicant has indicated that he has the ability to carry out the project in a reasonable timeframe and to provide the required matching funds. As the application meets the evaluation criteria, staff support the grant application.

Should City Council approve the grant application, the roof replacement work must be completed before the grant is disbursed. As noted in Council Policy 5900, the applicant will be required to submit a letter confirming the actual cost of the completed work, as well as a project completion report demonstrating that the work was completed in accordance with the Heritage Alteration Permit.

Financial Impact

Funding for this $72,800 grant request is available in the Steveston Village Heritage Conservation Grant Program fund.

Conclusion

The applicant is seeking a Heritage Alteration Permit and Heritage Conservation Grant in the amount of $72,800 to assist with replacing the existing roof of the Steveston Hotel at 12111 3rd Avenue, which is one of the identified heritage buildings in the Steveston Village Heritage Conservation Area.

The proposed roof replacement work extends the physical life of the building and conserves the character-defining elements of the Steveston Hotel, thereby retaining its heritage value, and the grant application is consistent with the Council Policy 5900.

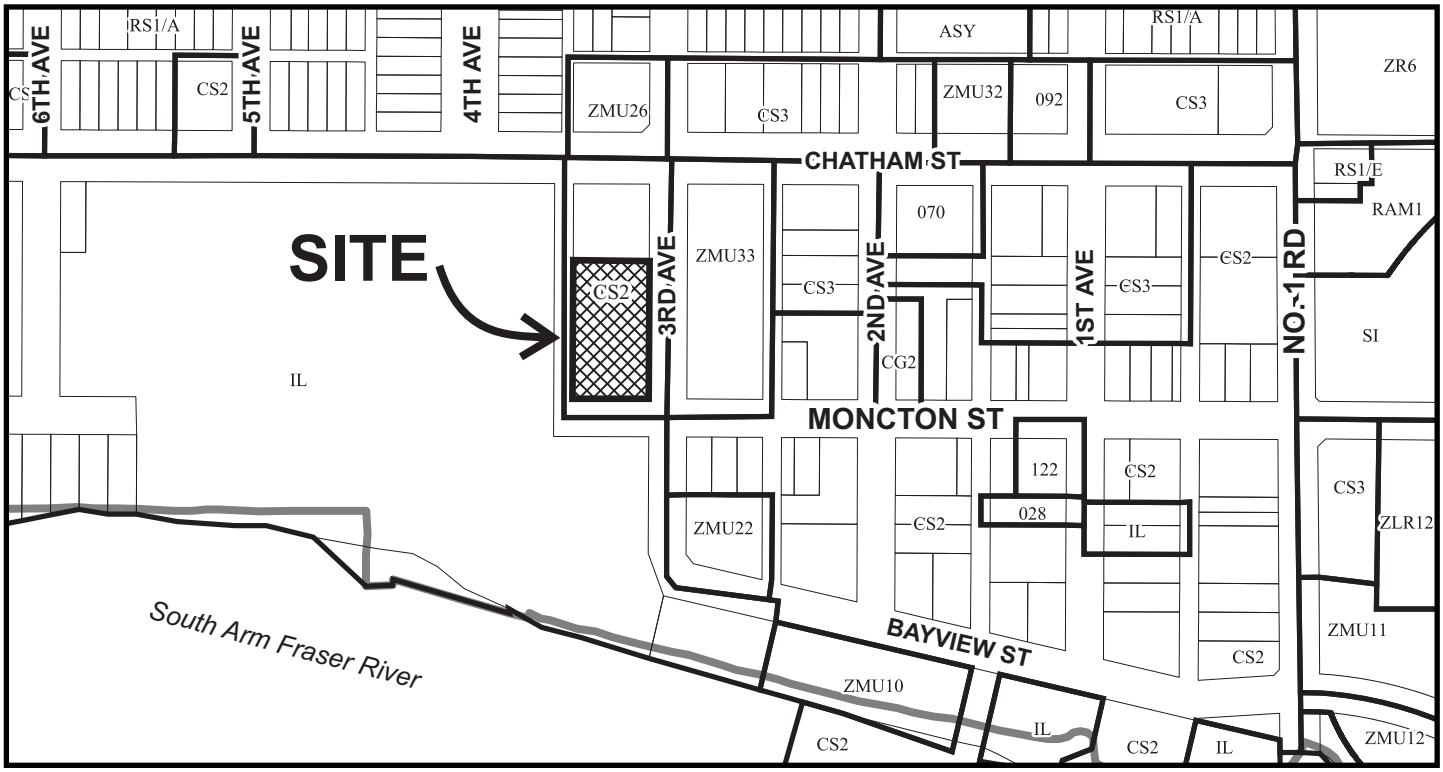
On this basis, staff recommend that the Heritage Alteration Permit be endorsed, and issuance by City Council be recommended.

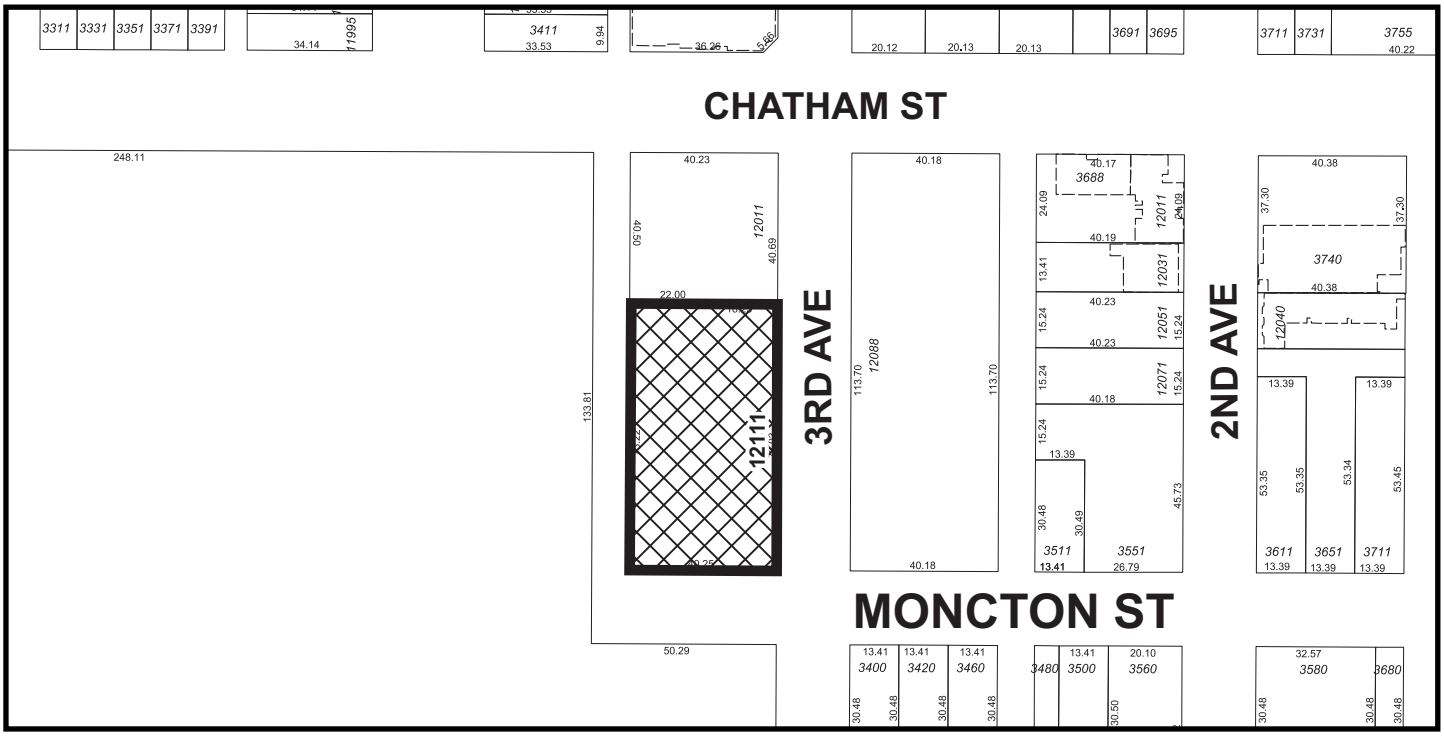
Cynthia Lussier
Planner 2
(604-276-4108)

CL:blg

Attachment 1: Location Map/Aerial Photo
Attachment 2: Statement of Significance for the Steveston Hotel
Attachment 3: Steveston Waterfront Neighbourhood Land Use Map
Attachment 4: Council Policy 5900
Attachment 5: Excerpt from the June 10, 2020 Richmond Heritage Commission Minutes
Attachment 6: Photos of the Steveston Hotel
Attachment 7: Applicant's Proposal and Photos of Existing Roof Condition
Attachment 8: Cost Estimates from Independent Contractors

City of Richmond





HA 19-881148

GP – 194

Original Date: 01/08/20

Revision Date:

Note: Dimensions are in METRES

City of
Richmond

HA 19-881148

GP – 195

Original Date: 01/08/20

Revision Date:

Note: Dimensions are in METRES

Moncton Street resources

22. 12111 3rd Avenue
Steveston Hotel/Sockeye Hotel

Description

The Steveston Hotel (Sockeye Hotel) takes up the west side of a full block along Third Avenue. The historic place is a two-storey, utilitarian structure with a flat, unarticulated façade and a flat roof. It directly fronts the street,without transition or landscaping.

Values

The Steveston Hotel is valued for its historic association with the development of the Steveston townsite and its social and cultural value as a community gathering place and local business. Constructed in 1894, the hotel represents the economic infrastructure which supported the local fishing and canning industries historically, and the tourism industry today. As an historic and longstanding fixture in the community, it is significant that this historic place has had continuing use as a gathering place for the town's citizens, and continues to operate in its original function today.

Architecturally, the Steveston Hotel is an excellent example of a building which predates the fire of 1918. A significant landmark building in the commercial downtown of the village, it represents the growth of Steveston as a prosperous frontier town in the late nineteenth and early twentieth centuries. It is also important to note the role of this building as a refuge for many after the fire, and its contribution to rebuilding the town seen in its temporary housing of the Steveston Post Office for a time.

Character-Defining Elements

The character-defining elements of the Steveston Hotel include:

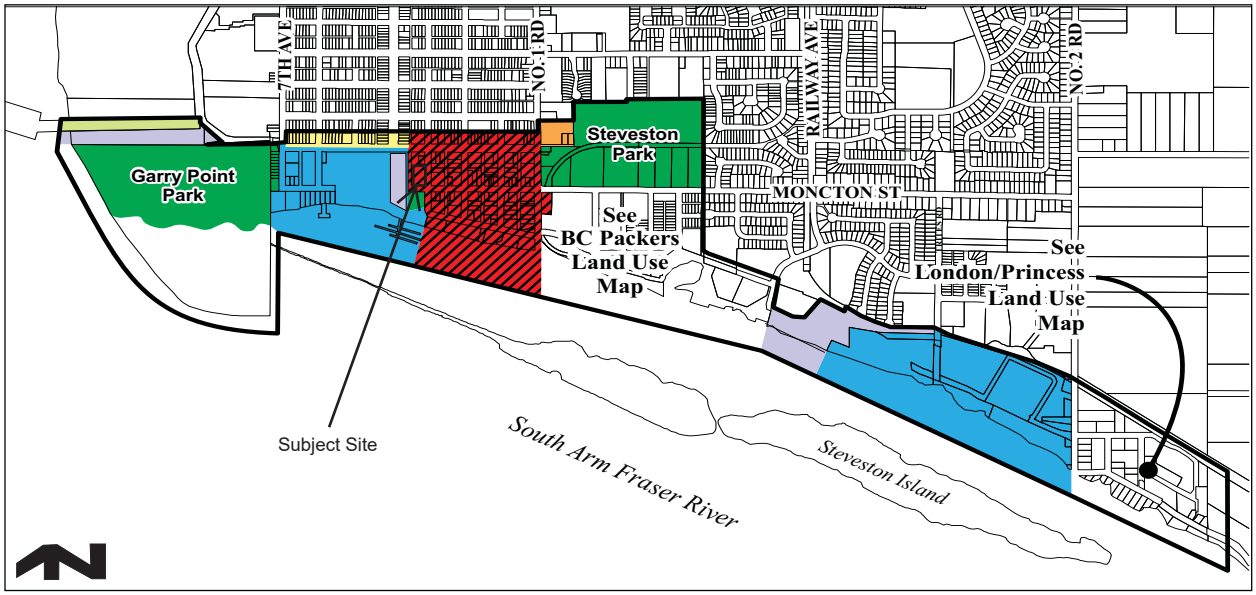
- The hotel's landmark status at the terminus of Steveston's main street
- Its prominent location at the corner of Moncton Street and 3rd Avenue
- The liveliness and diversity the establishment lends to the street edge along 3rd Avenue
- Surviving elements of its two stages of construction, seen in such elements as its flat-roofed form and simple lines

This resource met the following criteria:

Criterion 1:	The overall contribution of the resource to the heritage value and character of Steveston
Criterion 2:	The ability of the resource to represent a certain historical process, function and style
Criterion 3:	The level of importance of associations with an era in Steveston's history and development
Criterion 4:	The intactness and evocative qualities

Steveston Waterfront Neighbourhood Land Use Map

Bylaw 8432
2010/05/25



- Residential
- Multiple-Family (Including Congregate Care Housing with complementary Community/Commercial uses)
- Maritime Heritage
- Heritage Mixed Use (Commercial-Industrial with Residential & Office Above)
- Industrial
- Public Open Space
- Commercial
- Conservation Area

Page 1 of 4	Steveston Village Heritage Conservation Grant Program	Policy 5900
	Adopted by Council: April 27, 2009 Amended by Council: November 13, 2018	

POLICY 5900:

It is Council policy that:

The Steveston Village Heritage Conservation Grant (SVHCG) Program is established to provide financial assistance to property owners – on a cost share basis - for conserving the exterior of 17 heritage buildings in the Steveston Village Heritage Conservation Area, as identified in the Steveston Area Plan.

The 17 identified heritage buildings make a significant contribution to the heritage character of Steveston Village. The intent of the program is to help conserve the exterior of these significant buildings and support their continued legacy for future generations.

1. Program Funding Sources

The source of funds for the SVHCG Program includes:

- Density bonus contributions, as set out in the Steveston Area Plan*;
- Senior government and Non-Governmental Organization grants; and
- Other private donations.

*Specific sites within the "Steveston Village Land Use Density and Building Height Map" are identified for a maximum possible Floor Area Ratio (FAR) of 1.6. In order to achieve this maximum density, a contribution of $608.05 per m^2 ($56.49 per ft^2) - based on the increase in net building floor area between the 1.2 FAR base density and up to the 1.6 FAR maximum density - must be provided.

Contribution amounts may be reduced by an amount equivalent to any cash-in-lieu contributions received under the City's Affordable Housing Strategy.

The above contribution rate to the SVHCG Program will be revised, starting February 28, 2019, and then by February 28 every two years thereafter, by adding the annual inflation for the preceding two calendar years using the Statistic Canada *Vancouver Construction Cost Index – Institutional* inflation rate. The revised rates will be published in a City Bulletin.

2. Grant Amounts

- Maximum grant of $150,000 per identified heritage building. The grant may not exceed 50% of the total cost of eligible expenses (e.g. only projects with eligible expenses of $300,000 or more would be able to apply for the maximum amount).
- An additional maximum grant of $100,000 per identified heritage building may be considered by Council, with private matching funding, to achieve exceptional heritage conservation. Exceptional heritage conservation means a complete and comprehensive restoration of a building, in the opinion of Manager of Policy Planning and a retained heritage consultant, that would greatly enhance the heritage value of the Steveston Village Heritage Conservation Area. The final determination of what is exceptional will

be made by Council based on the project's overall contribution to conserving the character of Steveston Village.

- If the registered owner of the property containing one of the identified heritage buildings is a registered non-profit society, Council may consider providing up to 75% of the total cost of eligible expenses.
- As heritage conservation may occur in stages, an owner/developer may apply more than once; however, the total grant amount per identified heritage building is limited to $150,000, and for exceptional conservation projects, it is limited to $250,000.
- If no program funds are available, no grant applications will be considered (i.e., first-come, first-serve basis).

3. Eligible Expenses

Eligible expenses are limited to works related to the exterior conservation of the identified heritage buildings. These include, but are not limited to, the following:

- Façade restoration or rehabilitation to improve the appearance and convey the heritage significance of the building;
- Repair or restoration of the character-defining elements such as wood windows or original cladding;
- Reconstruction of lost heritage elements such as front porches or exterior trims;
- Roof replacement;
- Structural upgrades, including seismic upgrades, and stability work (e.g. new foundations) to extend the physical life of the building; and
- Directly related consultant costs, including the cost to prepare a conservation plan and architectural drawings, up to 10% of the total grant amount. Consultant costs without associated physical improvements to the building are not eligible.

Ineligible expenses include, but are not limited to, the following:

- General on-going maintenance work (e.g. power washing, gutter cleaning);
- Renovation or replacement of the non-historic elements of the building;
- New additions and/or construction of accessory buildings;
- Interior works; and
- Any other work deemed to be inappropriate at the discretion of the Manager of Policy Planning.

The Standards and Guidelines for the Conservation of Historic Places in Canada shall be used as a guide in determining eligible expenses. The Standards and Guidelines for the Conservation of Historic Places in Canada defines "conservation" as all actions or processes aimed at safeguarding the character-defining elements of a resource to retain its heritage value and extend its physical life.

4. Grant Applications

- Grant applications must be submitted in accordance with the procedures and forms provided by the City;
- Owners or developers of sites with identified heritage buildings may include public entities (e.g. City or other levels of government), and are eligible to apply for a grant;
- Contributors to the SVHCG Program may apply for a grant (e.g., if the site proposed to be redevelop contains one of the 17 identified heritage buildings). However, the required contribution must be provided to the City prior to final approval of the accompanying rezoning or a Heritage Revitalization Agreement application;
- All grant applications that meet the eligibility criteria will be considered by Council. A grant will not be provided where work has already been undertaken prior to Council approval;
- Final decision on all grant applications that meet the eligibility criteria will be made by Council;
- If Council approves the application, the eligible works must be completed before the grant is issued. The following items must be submitted and accepted by City staff prior to the grant's issuance:
  - A letter from the applicant/owner indicating the actual cost of the completed project accompanied by paid bills as proof and a request for payment of the grant;
  - A project completion report from the project manager (e.g., independent contractor who has completed the work) confirming that the work has been completed in accordance with the approved plans and specifications, including a complete list of actual improvements and installation methods. The report must include a copy of written warranties of all applicable work; and
  - Photographs of the completed project; and
- The completed works must be inspected and deemed satisfactory by the City staff.
- The works covered by the approved grant must be completed within 24 months of the date of the approval by Council. After 24 months from the date of the approval, the grant approval will expire.

5. Evaluation Criteria

The following considerations will form the basis for evaluation of grant applications:

- How the proposed work contributes to preserving and enhancing the overall historic fabric of Steveston Village;
- The level of contribution of the proposed work in conserving the heritage character and conveying the historic significance of the building;

- How the proposed work helps extend the physical life of the building; and
- The overall quality of the submission and the applicant's ability to carry out the project on a reasonable time-frame at reasonable costs and secure other funding sources.

Excerpt of the Minutes to
The Richmond Heritage Commission meeting

Wednesday, June 10, 2020 - 7:00 pm
Cisco Webex

Heritage Alteration Permit and Steveston Village Heritage Conservation Grant applications for 12111 3rd Avenue (HA 19-881148)

Staff summarized the Heritage Alteration Permit and Grant applications to highlight the key points.

The Commission was presented with historic photos of the building as well as photos provided by the applicant to illustrate the existing condition of the roof.

Staff noted the evaluation criteria against which the permit and grant applications are assessed.

In response to a query from the Commission, Staff provided information that: no grant had previously been issued for recent Heritage Alteration Permit applications to the Steveston Hotel; and that only two grants have been approved by City Council under the Steveston Village Heritage Conservation Grant Program.

Discussion occurred with respect to longer life roof systems that could be considered, and although not identified as a condition of the Permit, the Commission suggested that the applicant install screening on the west and north sides of the rooftop mechanical equipment following completion of the roof replacement work in order to minimize the visual impact of the equipment from neighbouring properties. It was also noted, however, that the roof replacement work, as proposed, is fully supported and should be completed as soon as possible.

It was moved and seconded:

That the Heritage Alteration Permit application for the proposed roof replacement at 12111 3rd Avenue and the Steveston Village Heritage Conservation Grant application in the amount of $72,800 be supported.

CARRIED

Sockeye Hotel, [ca. 1905]
City of Richmond Archives
Photography #1977 19 25

Sockeye Hotel, [ca. 1920]
City of Richmond Archives
Photography #1978 5 10

PLN - 142

Steveston Hotel, [undated]
City of Richmond Archives
Photography # 1997 42 1 200

Steveston Hotel, [2018]

KANARIS DEMETRE LAZOS
1310 SINCLAIR STREET WEST VANCOUVER BC. (604-4016902)

RE: 12111 3rd Ave Richmond BC (STEVESTON HOTEL)

NOVEMBER 15 2019

To: the members of the heritage committee of Richmond BC.

We have applied for a grant as per your guidelines.
According to your directions we had to apply for a HAP although the work we want to do is roofing replacement.

We applied for a HAP according to your directions.

The Steveston Hotel is in need to have the roof replaced.

There have been plenty of evident leaks throughout the building but especially in the pub areas.

We have been doing temporary repairs since we purchased this building.

We had two roofers and one contractor to take a look and do the appropriate inspections.

They have opened up a few sections of the flat roof and it looks like that some of the wood structure (roof joists) will need to be replaced and repaired.

We will need to remove all existing roof layers (Tar and Gravel….. The old style roofing) . Remove the existing plywood and shiplap.

Remove and replace all rotten joists and structural roofing members.

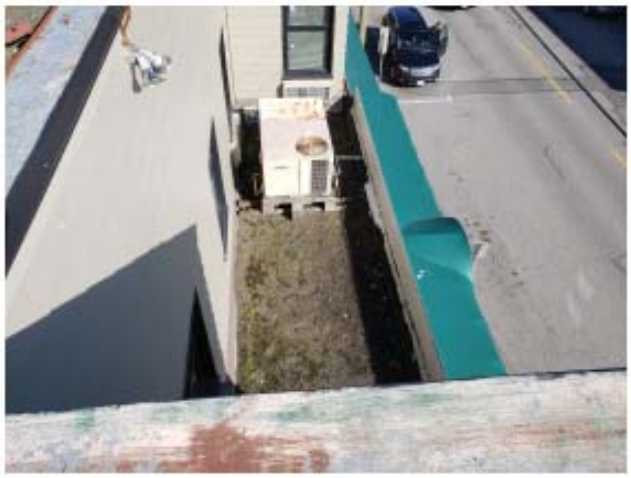
Install new exterior ⅝ T & G Plywood.

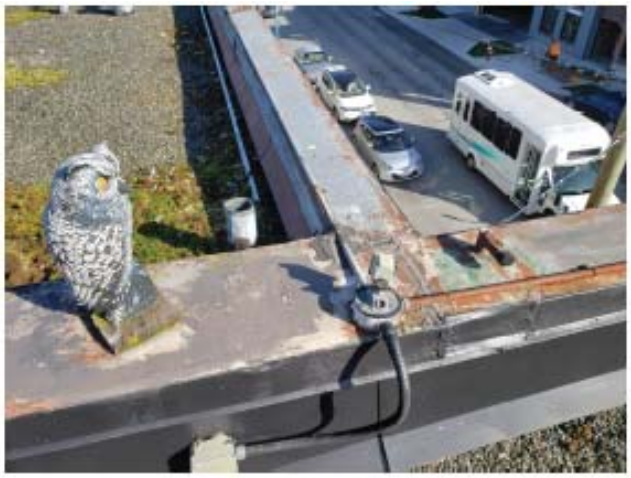
Install a new 3 ply torch on roofing system.

Install all new roof flashing , parapet wall flashings, roof vents & all new can strip.

We would like to have this work done during the spring of 2020 . April would be ideal.

KANARIS DEMETRE LAZOS (owner's authorized agent)





Gas Guys Outdoor Designs Ltd.
Unit 101 – 14772 64 Avenue
778-512-1000

ROOFING
REPLACEMENT for 12111 3rd Ave Richmond BC (Steveston Hotel)

February
15 2020

Remove
and dispose of existing 1 layer roof system to substrate.
.
Supply
and install 5/8 plywood over the entire roof surface .
.
Remove
and dispose of existing roof hardware such as drains, flashing, vents, etc.
.
Remove
and dispose of all perimeter cap flashing.
.
Supply
and install Base Sheet,
.
Supply
and install new plumbing vents, drains and all required
vent
flashing to replace the old ones.
Supply
and install sheet stripping ply to all perimeters and
curbs.
.
.
Supply
and install 250gr granulated cap sheet, fully torched on top of the new base sheet.
.
Supply
and install one layer of new granulated cap sheet stripping to all

perimeters
and curbs, fully torched.
.
Supply
and install MS detail liquid membrane at the base of all roof hardware and on top of all parapet walls .
.
Supply
and install 26-gauge metal perimeter cap flashing, standing
seam
style
.

.
Remove
and dispose of all perimeter metal cap flashings from the lower roof
.
Remove
and dispose of all roof hardware i.e.: drains, leads vents Etc.
.
.
Supply
and install 180 FF base sheet
.
Supply
and install as required, all new roof hardware such as drain, vents,
.
Supply
and install base sheet stripping ply to all perimeters and curbs for this lower roof section
.
Supply
and install 250 TP cap sheet fully torched adhered to existing roof
membrane
and all parapet walls and all existing curbs. .
.
.
Supply
and install 26-gauge metal cap flashing, to replace all existing cap flasshing
.
Inspect
roof upon completion to ensure all contract details are completed to
industry
standards
Life
expectancy of roof system quoted is 20 years

OUR
estimate and proposal for all above mentioned works is ……..**Total : $145,600,00+GST**

STRUCTURAL
REPAIRS:

NOTE:

A. we have not included any structural repairs . If structural repairs will be needed we will do so at $ 75.00 per hour plus costs of materials used.

B. If there will be a need for major structural repairs ie change roof joists you may need a building permit and most likely a structural engineer to attend these repairs. In this case you wll have to pay the related costs to the city for building permits and the costs to the structural engineer, Please be informed that we have a structural engineer to recommend when the time comes if need be,

C. Safety

of tenants and crews will be observed at all time (ground protection)

Please
Note:
D.
Daily
clean-up is included

E.
All membrane application performed by ticketed journeyman roofers employed directly
work
to be inspected upon completion by a senior member of Macbeth Roofing staff
to
ensure compliance with all aspects of this contract.

******The**
costs related to this inspection and its report is not included in our estimate. You may pay the inspector directly.

We
thank you for the opportunity to give you our quote and we look forwards to serve you

Our
estimate will be good as per your request until the end of APRIL 2020

Ranj Mann
ranj@thegasguys.ca

German Master Roofing

March 22,2020

Project: Steveston Hotel

We are pleased to send you our quote for your project in Richmond. If you have any questions, we are happy to answer them.

SCOPE OF WORK: Upper Flatroof (Tar and Gravel)

Note: Electrician has to remove all electrical cords before any work can start
If AC Units are being are being installed we have to discuss how to waterproof them (we don't know installing system (blocks or build up on roof)
Metal needs to be cut to keep molding.
Old Flag post has to be removed
New Flag post has to be checked
Kitchen units has to be lifted up for waterproofing
If the plywood under the metal cap flashing or walls are rotten they have to be changed on hourly basis (75 $ PER LABOUR)
New build up has to be approved by static engineer
There is a small flatroof on the front which we didn't put in our quote as we don't know how to acess it

We assumed that we remove the gravel and put down protection boards (sorpra board) and screw it down with hex plates and then 2 layer of torch on

ALTERNATIV: If Owner choose plywood over protection board we have to add Primer and First layer of torch on will be colvent 830 , 2 layer torch on will be the same . NOTE Plywood will add up extra weight for roof has to be approved by engineer

- **Get rid of all the gravel and put it in a bin**
- **Remove existing metal and get rid of old metal**
- **Deliver and screw down sopra board with hex plates and screws**
- **Deliver and waterproof all flat decks with 1 layer torch on 180**
- **Deliver and waterproof all flat decks with 1 layer 180 cap (colour black)**
- **Strip all curbs with 2 layer of torch on attached to flat roof (walls)**
- **Deliver and waterproof all drains and overflows as extra on necessary areas**
- **Deliver and waterproof Metal on Flatroof (drip edge) colour standard , 24 ga, 10" girth, 3 bend**

German Master Roofing

March 22,2020

-Deliver and change all existing bird houses, menzies and B-vents with new ones and waterproof them
-Deliver and install metal wall flashing 24 ga , colour the same as the old ones
-Deliver and install metal cap flashing 24 ga, colour the same as existing

- skylight has to be lifted and torched in
- existing Curbs has to be lifted, waterproofed and new metal has to be installed
Stucco has to be cut 3 feet up for torch on
Paver has to be removed by owner

No hights will be changed on the parapet walls .
We calculated ~~8,050~~ 18,050 sqf . After the work is done we measure and bill exact sqf.

Total FLATROOF : 172,970.- $

Total METAL : 33,470.-$

Total: 206,440.-$ + Gst

1) Any changes or additions made, requested or required to the above scope of work by any inspector, engineer, architect, designer or the like are chargeable and additional to this proposal.
2) German Master Roofing is not responsible for the sloping of the roof surface or the addition of sloping material
3) The above quote is based on continuous work, with the exception of weather related issues, and any delays to work, additional trips or start-ups are subject to additional charges.
4) German Master Roofing is not responsible for cutting holes in the roof for Menzies, Vents or drains
5) Garbage bin has to be on site, bin has to be provided by owner.
6) For the final bill German Master Roofing measures the exact sqft and bills accordingly.

Any other work requirements not included in the above are additional to this proposal and will be subject to a change of work order. The client will be informed

German Master Roofing

March 22,2020

BY SIGNING THIS DOCUMENT YOU AGREE TO THE FOLLOWING:

- Pay for building and street permits required to execute this contract are extra to the main contract

- All remaining materials shall be deemed the property of German Master Roofing and may be picked up by the company.

- I understand that roofing may cause the building to move or vibrate or bounce. German Master Roofing is not responsible for any damage to pictures, glassware, chandeliers, carvings or other items attached to the interior of the building.

- Should any damage to driveway, lawns, shrubs, walkways, gardens, trees, eavestroughing, siding, deck, fence, or any other property, German Master Roofing limits its liability to repair of the directly affected areas only.

- German Master Roofing is not responsible for leakage due to ice damming.

- German Master Roofing is not responsible for ponding water on flat roofs or EPDM gutter systems.

- Any contract cancelled prior to commencement is subject to a $500 administration fee plus any custom order items (i.e. skylights, flashings, etc.).

- German Master Roofing can cancel any job prior to commencement.

- German Master Roofing is not responsible for providing an on-site waste container.

- German Master Roofing will clean up all excess debris caused by roofing work

German Master Roofing

March 22,2020

of such change of work orders during job progression as required. All changes or additions of work will be approved by the client prior to proceeding with the work.

TERMS ARE: 20% upon signing, 30% upon commencement of work, 40% upon substantial completion and 10% holdback for 15 days.

Sincerely,
Markus Hillen
German Master Roofing

We propose to furnish material and labor completed, in accordance with the above specification for the sum of:
$_____

Plus GST $_____

TOTAL PAYMENT TERMS: $_____
Upon signing (20%): _____

Upon commencement (30%):_____

Upon Completion (40%):_____

Holdback (10%):_____

(3% will be charged on overdue account)

ACCEPTANCE:
The above prices, specifications and conditions are satisfactory and are hereby accepted.

Purchaser:_____

Signature:_____

Contractor Signature:_____

Date:_____

Any major repairs (over $300) will be discussed prior to proceeding with the work. German Master Roofing will not be responsible for cracking and other damage to old torch on or drywall caused by standard applications of roofing materials.

City of Richmond

Heritage Alteration Permit

Development Applications Division
6911 No. 3 Road, Richmond, BC V6Y 2C1

File No.: HA 19-881148

To the Holder: KANARIS DEMETRE LAZOS

Property Address: 12111 3rd AVENUE

Legal Description: LOT 2 SECTION 10 BLOCK 3 NORTH RANGE 7 WEST NEW WESTMINSTER DISTRICT PLAN EPP65456

(s.617, *Local Government Act*)

1. (Reason for Permit)
   - ☐ Designated Heritage Property (s.611)
   - ☐ Property Subject to Temporary Protection (s.609)
   - ☐ Property Subject to Heritage Revitalization Agreement (s.610)
   - ☑ Property in Heritage Conservation Area (s.615)
   - ☐ Property Subject to s.219 Heritage Covenant (Land Titles Act)
2. This Heritage Alteration Permit applies to and only to those lands shown cross-hatched on the attached Schedule "A" and any and all buildings, structures and other development thereon.
3. This Heritage Alteration Permit is issued to authorize the replacement of the existing roof at the building at 12111 3rd Avenue, as follows:
   - removal of the existing tar and gravel roof system, plywood and shiplap roof layers, and replacement of rotted joists and other structural elements, as required; and
   - replacement with new plywood, and a new torch on roofing system complete with new roof drains, caps, flashing and vents;

   for the areas of the building illustrated on the plan contained in Plan # 1.
4. This Heritage Alteration Permit is issued subject to compliance with all of the Bylaws of the City applicable thereto, except as specifically varied or supplemented by this Permit.
5. If the alterations authorized by this Heritage Alteration Permit are not completed within 24 months of the date of this Permit, this Permit lapses.

AUTHORIZING RESOLUTION NO. ISSUED BY THE COUNCIL THE DAY OF

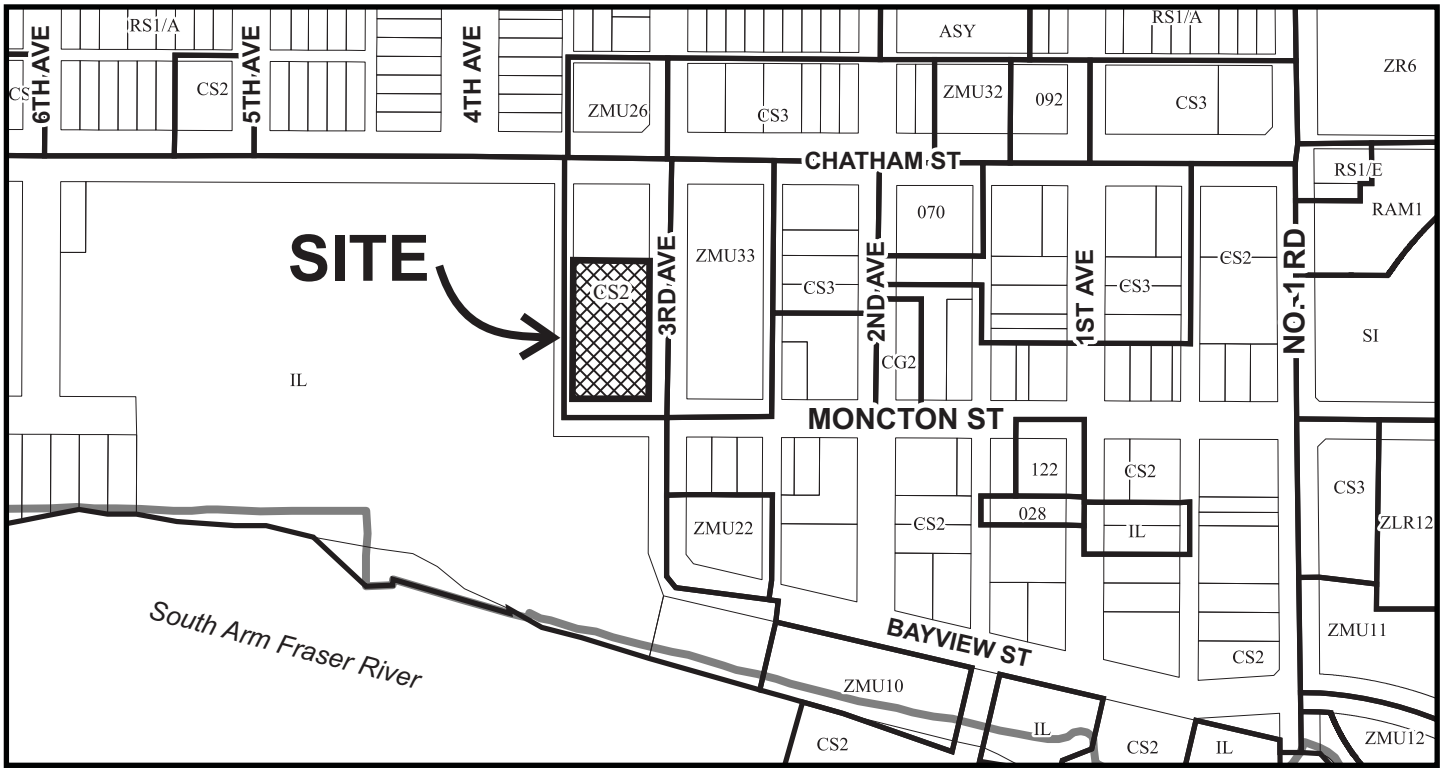
DELIVERED THIS DAY OF , 2020

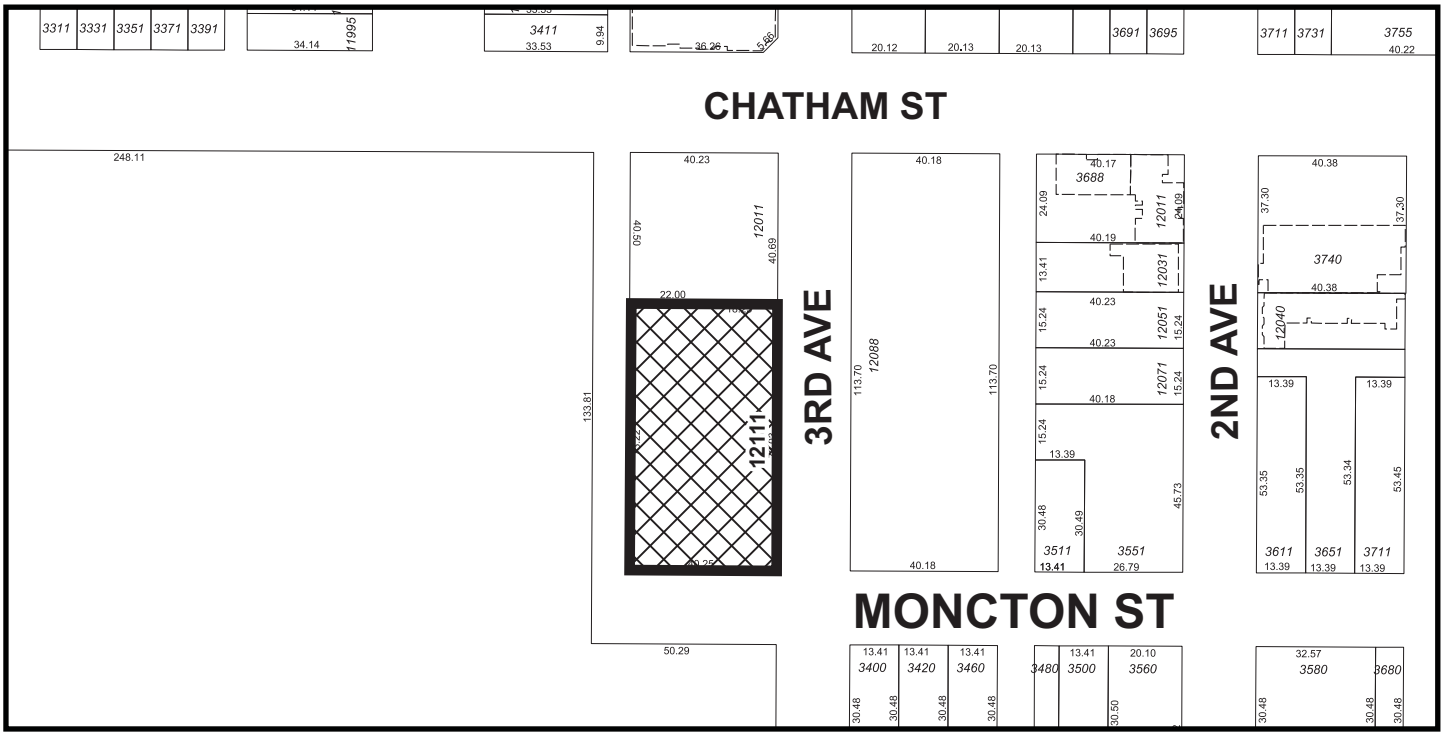
MAYOR

CORPORATE OFFICER

IT IS AN OFFENCE UNDER THE ***LOCAL GOVERNMENT ACT***, PUNISHABLE BY A FINE OF UP TO $50,000 IN THE CASE OF AN INDIVIDUAL AND $1,000,000 IN THE CASE OF A CORPORATION, FOR THE HOLDER OF THIS PERMIT TO FAIL TO COMPLY WITH THE REQUIREMENTS AND CONDITIONS OF THE PERMIT.

City of
Richmond



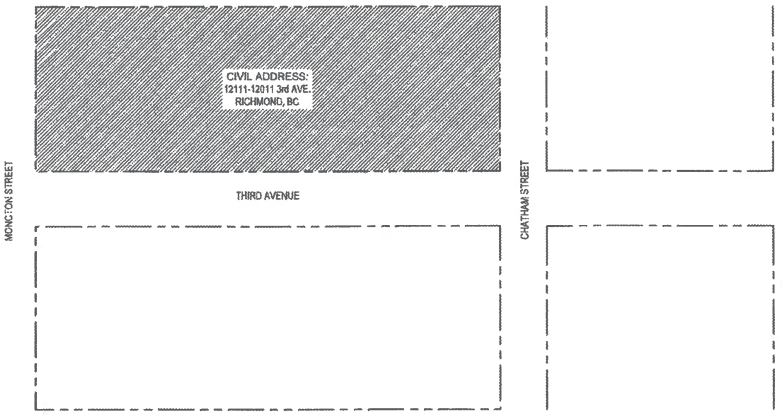


DP 19-881148
SCHEDULE "A"

Original Date: 01/08/20

Revision Date:

Note: Dimensions are in METRES



KEY PLAN
SCALE: NTS

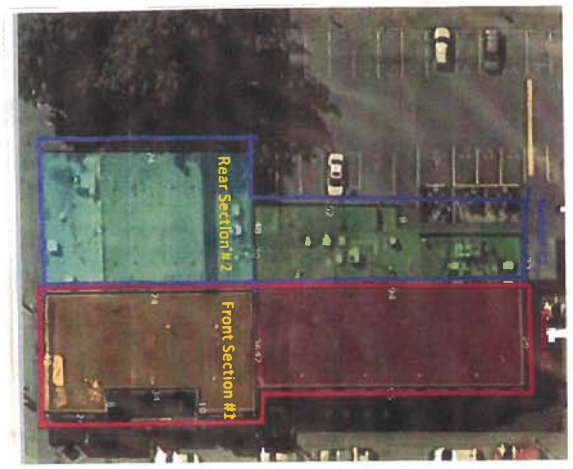
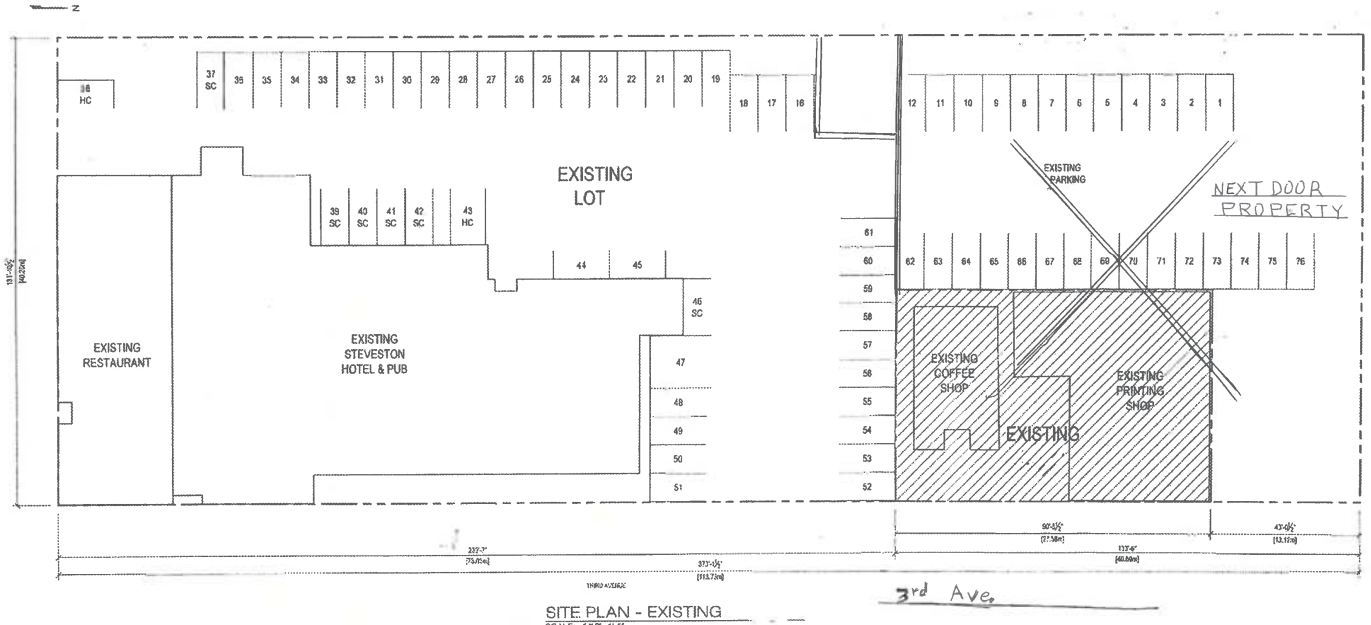


PHOTO OF EXISTING ROOF



SITE PLAN - EXISTING
SCALE: 1/16"=1'-0"

3rd Ave.

Note: screening of existing rooftop mechanical equipment to be completed in future, subject to approval by the Director of Development.

HAP. APPLICATION FOR ROOF REPLACEMENT STEVESTON HOTEL

HA 19-881148
June 29, 2020
Plan # 1

Vancouver, B.C. V6A 1
DIVISION of KDL CONSTRUCT
604.401.6802

ISSUES / REVISIONS

12111-12011 3rd AVE.
RICHMOND, BC

LEGAL DESCRIPTION:
LOT DL , Gp ,
NWD, PLAN

NOV-10-2019
ROOF REPLACEMENT

CIVIL ADDRESS:
12111-12011 3rd AVE.
RICHMOND, BC

EXISTING SITE & ROOF PLAN

1/16"=1'-0" Jan
MJJ
K.D. LAZOS
604-401-6802

City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	June 26, 2020
From:	Claudia Jesson Director, City Clerk's Office	**File:**	01-0105-01/2020-Vol 01
Re:	**Live-streaming of Council and Committee Meetings and of Council-School Board Liaison Committee Meetings and Development Permit Panel Meetings**		

Staff Recommendation

That staff receive direction regarding the live-streaming of Council and Standing Committee meetings and the live-streaming of Council-School Board Liaison Committee meetings and Development Permit Panel meetings, as outlined in the staff report titled "Live-streaming of Council and Committee Meetings and of Council-School Board Liaison Committee Meetings and Development Permit Panel Meetings" dated June 26, 2020 from the Director, City Clerk's Office.

Claudia Jesson
Director, City Clerk's Office
(604-276-4006)

Att. 1

REPORT CONCURRENCE	
CONCURRENCE OF SENIOR DIRECTOR	
SENIOR STAFF REPORT REVIEW	INITIALS:
APPROVED BY CAO	

Staff Report

Origin

At the June 15, 2020, General Purposes Committee, the topic of live-streaming of Council and Standing Committees was discussed and the following referral was endorsed:

> *That staff be directed to review the possibility of live-streaming to the City of Richmond's YouTube Channel all Standing Committee meetings and the Council-School Board Liaison Committee meetings and report back."*

This report supports Council's Strategic Plan 2018-2022 Strategy #8 An Engaged and Informed Community:

> *Ensure that the citizenry of Richmond is well-informed and engaged about City business and decision-making.*
>
> *8.1 Increased opportunities for public engagement.*

Analysis

Due to the pandemic and the requirements for physical distancing, a number of adjustments and enhancements have been made to the Council and Standing Committee meetings and related procedures to help reduce the spread of COVID-19. Following amendments to the Council Procedure Bylaw No. 7560, members of Council have been participating in Council and Standing Committee meetings via electronic means. Since the beginning of April 2020, the schedule of Standing Committees has been reduced, with only the General Purposes and Finance Committees meeting. In addition, the public has been enabled to participate in Council, Public Hearing and Standing Committee meetings by electronic means via a pre-registered phone participation process.

In addition to the existing streaming of Council meetings, all meetings of Open Council, Special Council, Public Hearings, General Purposes Committee and Finance Committee meetings are being live-streamed to the City of Richmond's (the "City's") YouTube channel, as a further effort to increase the public's access to Council during the pandemic. These meetings that have been live-streamed to the City's YouTube channel are for viewing only. The option for the public to participate remotely in live meetings is available through the pre-registration phone participation process. As a back-up measure, the regular process of the live-streaming of the 7:00 pm Regular Open Council meeting is also continuing to ensure for consistent meeting coverage.

In terms of general requirements for live-streaming, for an open meeting to be live-streamed to the City's YouTube channel, meeting participants need to be connected via the Webex meeting platform. In terms of staff support, a staff person is required to solely manage and monitor the technical component of live-streaming, in addition to other staff who are also present to support the meeting.

Additional Live-Streaming – During Pandemic

The reduced Standing Committee meeting schedule is currently in place until the end of July. Should the regular schedule of Standing Committee meetings resume in September, following the August Council meeting break, the additional Committees could be live-streamed to the City's YouTube channel. Should members of Council continue to participate by electronic means through the Webex platform, as per the current practice during the pandemic, the live-streaming of the Planning, Community Safety, Parks, Recreation and Culture, and the Public Works and Transportation Committees is quite feasible.

While the Anderson Room has had recent upgrades to the sound system, staff recommends that the current practice of all Council and Committee meetings taking place in the Council Chambers continues during the pandemic, as the Council Chambers provides more space and seating capacity for physical distancing. It should be noted that further measures to enhance and support physical distancing requirements are being explored for the Council Chambers.

In terms of staffing support, as noted above, an additional staff person from the City Clerk's Office would need to attend all the scheduled Committee meetings to enable the live-streaming component and monitor the streaming for quality control. In addition to the technical support position, additional staff from the City Clerk's Office would continue to be required, as per usual, for meeting support purposes.

To continually enhance the meeting process and provide options to the public to observe and participate remotely during the pandemic, staff also recommends that the live-streaming option be extended to the regularly scheduled meetings of the Development Permit Panel.

Continuing Live-Streaming – Post Pandemic

Post pandemic, after the physical distancing requirements are lifted, , the decision to continue or to stop the live-streaming of all Council and Standing Committee meetings, and other meeting discussed in this report, to the City's YouTube channel will need to be made. Should Council direct staff to continue to live-stream all meetings, staff will need to determine the best option for enabling the streaming. For Open Council and Public Hearing meetings, the existing option of using Council Chamber's video camera system could continue. In order to use the Council Chamber's video feed without using Webex, testing would need to be undertaken to ensure a non-Webex video feed could be live-streamed to YouTube, in addition to the City's current website location.

Following the pandemic, it is assumed that Standing Committees will return to being held in the Anderson Room. If live-streaming of Standing Committees is to continue post-pandemic, staff will need to determine what additional improvements are required to the Anderson Room to enable the live-streaming, such as installation of cameras.
Until a different option is available, the Webex platform could be utilized as an interim means for live-streaming from the Anderson Room provided all members attend in person and connect to Webex.

Live-Streaming the Richmond City Council/Richmond School Board Liaison Committee

The Terms of Reference for the Richmond City Council/Richmond School Board Liaison Committee specify that the Committee meets not less than four times per year, with the chair rotating between each party annually (Attachment 1). In addition to the annual rotation of the Chair, it should be noted that the administrative support is also rotated annually between City staff and School District staff. From a technical standpoint, it is feasible for this Liaison Committee's open meetings to be live-streamed during the pandemic should the Committee members participate via electronic means using the Webex platform. Post-pandemic, live-streaming may be a bit more challenging if Webex is no longer used and will depend on the presence of meeting room infrastructure required to enable live-streaming, such as actual cameras. The decision of streaming should be a joint decision of both City Council and the Richmond School Board. Should direction be provided to pursue live-streaming, both City and School Board staff will need to undertake a review of their respective areas and whether the technical requirements can be met and/or if additional equipment will be required.

Financial Impact

There are no financial impacts stemming from this report.

Conclusion

This report outlines the feasibility of live-streaming open Council and Standing Committee meetings, Council-School Board Liaison Committee meetings, and Development Permit Panel meetings, during and following the pandemic, and seeks Council's direction.

Claudia Jesson
Director, City Clerk's Office
(604-276-4006)

Att. 1 – Terms of Reference: Richmond City Council/Richmond School Board Liaison Committee

Terms of Reference
Richmond City Council/Richmond School Board Liaison Committee

Purpose
The purpose of the Council/School Board Liaison Committee is to provide a framework for cooperation between the City of Richmond and the Richmond School District No 38 in the planning, acquisition, development and operation of facilities, sites and services. These efforts will enhance both parties' abilities to fulfill their mandates and provide optimum benefits for the entire Richmond Community.

Mandate
The mandate of this committee shall be to ensure effective communication between parties, to make recommendations, and to provide input, feedback and comments to Council and to the School Board on resolution of issues and opportunities jointly affecting both parties. The committee respects the mandate and authority of each party as an independent authority.

Scope
The scope of the committee will include, but not be limited to, matters where joint or potential joint interests exist such as: land acquisition and disposition, development and operation of facilities, joint programs, co-location, cooperative planning, communication and consultation, accessibility and safety. Each party will identify areas of potential joint interest.

Principles
The principles guiding the relationship and the work of the Committee are:

Cooperation	Both parties to the agreement will be cooperative and strive for a cooperative relationship between each other.
Community Building	Both parties strive to build community.
Leadership	The Committee will provide leadership and ensure accountability to all of its actions.
Shared use	That school sites and recreation sites, facilities and resources will be shared.
Cooperative planning	That school sites, parks and recreation sites and facilities be co-operatively planned for maximum benefit for the community of Richmond.
Financial Sustainability	The parties will ensure financial sustainability.
Consultation	The parties to the agreement undertake ongoing consultation with each other on matters of mutual interest.
Efficiency & Effectiveness	That the resources of the both parties and stakeholder groups be efficiently used and extended for the maximum benefit of the community.
Partnership	Both parties value and respect an effective partnership with each other and other stakeholders in the City.

Objectives, Expectations and Outcomes

The primary objectives of the School Council Liaison Committee are political interface and liaison, communication and consultation and accountability and ratification of direction.

The objective of the City Council School Board Liaison Committee is to ensure authentic communication and dialogue between City Council and the School Board on matters of mutual interest. Processes will be in place to enable this dialogue. The Committee will be accountable for its recommendations and will ensure that all direction is ratified by City Council and the School District accordingly. Administrative staff will play a support role.

Committee Membership

- 2 councillors (need representation from PRCS, planning)
- 2 trustees

Committee Advisors

- 2 staff (designated by the CAO and by the Superintendent)
- Recording secretary
- Other, as necessary

Procedures

The Committee will meet not less than 4 times per year at the call of the chair. There will be no meetings in July and August each calendar year. The chair will rotate between each party annually, School Board in odd years and the City in even years. The chairing body will administer all committee activities. Each respective party will ratify minutes. Minutes will ensure recommendations for action are noted.

City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	June 19, 2020
From:	Tom Stewart, AScT. Director, Public Works Operations	**File:**	10-6000-00/Vol 01
Re:	**Award of Contract 6676P – Supply of Hydro-Vac Services**		

Staff Recommendation

1. That contract 6766P – Supply of Hydro-Vac Services for an initial three-year term be awarded on an "as and when requested" basis to McRae's Environmental Service Ltd as the most responsive and responsible bidder. The initial three-year term is estimated at $7,277,841 exclusive of taxes and 10% contingency; and

2. That approval from Council will be requested prior to staff executing an option to renew the contract for a further two-year term, for a maximum total term of five years; and

3. That the Chief Administrative Officer and the General Manager, Engineering and Public Works be authorized to execute the contract with McRae's Environmental Service Ltd.

Tom Stewart, AScT.
Director, Public Works Operations
(604-233-3301)

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
Finance Department	☑	
SENIOR STAFF REPORT REVIEW	**INITIALS:** CJ	**APPROVED BY CAO**

Staff Report

Origin

The City utilizes vacuum truck services to assist with the operation, maintenance and construction of underground assets. The services include, but are not limited to:

- Hydro excavation
- Flushing services
- Catch basin cleaning
- Hydraulic root cutting
- Pumping services
- Stand-by services
- Emergency and disaster response support

The City employs its own staffing to conduct these services; however, the City has made use of an external contractor to perform these services on an "as and when required" basis as determined by the City.

The City is currently in an agreement with McRae's to perform these services through a previous RFP originally posted on BC Bid. The final year of this agreement is due to expire in June, 2020 which necessitated the need to go back to market for a new contract.

Historical spend under the current contract is shown in Table 1.

Table 1 – Historical Spend275

Contract Year	Date	Value
1	June 2015 to June 2016	$1,753,275
2	June 2016 to June 2017	$1,955,057
3	June 2017 to June 2018	$2,281,115
4	June 2018 to June 2019	$2,200,404
*5	June 2019 to May 31, 2020	$2,239,642

* Note: data for year 5 is reflective of a portion of the contract year.

The general scope of this contract includes:

- Providing Hydro-Vac services on an "as and when required" basis for various job sites, including for work and projects in connection with all aspects of roads, utilities, parks, as well as emergencies; and

- Providing all the personnel, labour, supervision, management, facilities, vehicles, tools, equipment, devices, accessories, supplies, fuel, and other materials which are necessary or incidental to the supply of Hydro-Vac services.

This report supports Council's Strategic Plan 2018-2022 Strategy #1 A Safe and Resilient City:

Enhance and protect the safety and well-being of Richmond.

1.1 Enhance safety services and strategies to meet community needs.

1.2 Future-proof and maintain city infrastructure to keep the community safe.

1.3 Ensure Richmond is prepared for emergencies, both human-made and natural disasters.

1.4 Foster a safe, caring and resilient environment.

Analysis

RFP Process

RFP 6766P – Supply of Hydro-Vac Services was posted onto BC Bid on February 28, 2020 and closed on March 25, 2020.

The RFP advised interested proponents that the City would use an Evaluation Committee to score and determine which proposal provided the best overall value to the City.

Three proposals were received by the closing date from the following proponents:

- Badger Daylighting Ltd.
- McRae's Environmental Services Ltd.
- Super Save Hydro Vac Inc.

Table 2 provides a summary of the proposals received in response to the RFP. Bidders were requested to provide unit pricing based on historical and anticipated usage of the required services. In addition, proponents were required to provide fixed pricing for the initial three-year term.

Review Process

A cross functional committee evaluated the three proposals received in response to the posted RFP against pre-determined criteria that included:

- Corporate profile and methodology
- Response time capability
- Corporate Sustainability Practices, Circular Economy Practices and Social Responsibility (CSR) initiatives
- Financial proposal

The response received from McRae's was the only complete response received by the closing date. The proposal received from Badger Daylighting Ltd. did not respond to the City's requirement to provide hydraulic root cutting services, pumping services, stand-by services or overtime services. The proposal received from Super Save did not respond to the requirement to provide pumping services. The proposal received from McRae's was still evaluated to ensure it met the City's operational requirements.

Table 2 – Bid Summary and Award Recommendation

Name of Proponent	Award Recommendation	Proponents' Pricing (based on estimated service hours per annum)
McRae's Environmental Services Ltd.	**Recommended Proponent**	**$2,425,947**
Badger Daylighting Ltd.	Not recommended	$2,264,150*
Super Save Hydro Vac Inc.	Not recommended	$3,174,350*

* Denotes incomplete bid

The review team noted that:

- The response from McRae's demonstrated they were capable of meeting all of the service requirements described in the RFP. As the incumbent service provider, the City has had an excellent working relationship with McRae's in the past.
- The proposed unit rates for the new contract represented good value for money as the team still benchmarked the new rates against previous rates paid.
- McRae's provided a positive response to the circular economy assessment in the RFP that described how their current business practices align to the City's goals for a circular economy.

Contract Term

The recommended contract is for an initial three-year term, with an option to renew for one further two-year contract term. Pricing will be fixed during the initial term. Approval from Council will be requested prior to staff executing an option to renew the contract for a further two-year contract term, for a maximum total term of 5 years.

Financial Impact

The contract will be funded by various capital projects, receivable projects and the operating budget as applicable on an "as required" basis. The estimated value of the contract is shown in Table 3.

Table 3 – Estimated Contract Cost

Estimated Costs	
First year (July 2020- June 2021)	$2,425,947
Second year (July 2021- June 2022)	$2,425,947
Third year (July 2022 –June 2023)	$2,425,947
Optional fourth year – 2.5% increase (July 2023 – June 2024)	$2,502,483
Optional fifth year – 1.5% increase (July 2024 – June 2025)	$2,540,020
Subtotal	$12,320,344
Contingency 10%	$1,232,034
Total Estimated Costs (exclusive of taxes)	**$13,552,378**

Conclusion

This report presents the proposal bid summary results for Contract 6676P –Supply of Hydro-Vac Services.

It is recommended that the award of Contract 6676P be awarded to the most responsive and responsible bidder, McRae's Environmental Service Ltd. for an initial three-year term commencing on August 1, 2020, on an "as and when required basis". Approval from Council will be requested prior to staff executing an option to renew the contract for a further two-year contract term, for a maximum total term of five years.

Ben Dias
Manager, Sewerage & Drainage
(604-244-1207)

TS:bd

City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	July 20, 2020
From:	Peter Russell MCIP RPP Director, Sustainability and District Energy	**File:**	10-6125-05-01/2020-Vol 01

Re: **Library Cultural Centre Mechanical Upgrade Project**

Staff Recommendation

That the Conventional Equipment Replacement described as Option 1 on page 4 in the staff report titled "Library Cultural Centre Mechanical Upgrade Project", dated July 20, 2020, from the Director, Sustainability and District Energy, be approved.

Peter Russell
Director, Sustainability and District Energy
(604-276-4130)

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
Finance Department	☑	
Arts, Culture and Heritage Services	☑	
Library	☑	
Facilities & Project Development	☑	
REVIEWED BY SENIOR STAFF REPORT REVIEW	**INITIALS:** CJ	**APPROVED BY CAO**

Staff Report

Origin

In June 2016, Council endorsed a target to reduce greenhouse gas (GHG) emissions from civic buildings by 65% from 2007 levels by 2020. Achieving this target requires the replacement of equipment in existing buildings and/or the full replacement of existing facilities using low carbon mechanical systems. Consistent with this objective, the Minoru Centre for Active Living was constructed with double the amount of space of the facilities it replaced with no increase in energy consumption. In this context, the Library Cultural Centre (LCC) was identified as a project with potential to reduce GHG emissions because equipment renewal is required. On this basis, Council approved $1,870,000 in September 2018 to complete the LCC Equipment Renewal and Greenhouse Gas (GHG) Reduction Project. Project funding includes a $750,000 grant from the Federation of Canadian Municipalities. The City subsequently received approval for a $200,000 grant from CleanBC and $40,000 from Fortis BC to be applied to the project bringing the total available funding to $2,110,000.

This report supports Council's Strategic Plan 2018-2022 Strategy #2 A Sustainable and environmentally Conscious City:

> 1.1 *Continued leadership in addressing climate change and promoting circular economic principles.*

The purpose of this report is to update Council on the status of the project and advise that the Equipment Renewal and GHG Reduction Project is not financially viable. The report provides an overview of emergent challenges staff faced in developing the project and outlines the recommended Conventional Mechanical Retrofit. Given the condition of the equipment, a decision must be rendered at this time so that work can commence as soon as possible.

Analysis

The LCC is an essential cultural hub for residents of Richmond, with community and school programs, and public events hosted at this facility throughout the year. The LCC includes the City's Main Library Branch, the Arts Centre and Media Lab, the Richmond Art Gallery, the Richmond Museum, the Performance Hall, and the City of Richmond Archives.

The current heating, ventilation and air conditioning system was installed in 1992 and has exceeded its service lifespan of 15 to 25 years. The building's equipment consists of three boilers for space heating and domestic hot water and 2 chillers for cooling. Of these, one boiler and one chiller are shut down and beyond repairable condition. New chillers will need to include CFC-free refrigerants since the R-22 refrigerant was phased out in January 1, 2020. The replacement of LCC's mechanical system will ensure the reliability and continuity of the facility's heating and cooling services.

Equipment Renewal and GHG Reduction Project

Following the funding approval in September 2018, rigorous design reviews and rounds of value engineering were carried out with the objective of maintaining GHG emission reductions required for grant funding. The resulting design includes: replacement of the heating and cooling system with an air source heat pump, chiller, condensing gas boilers; electric boilers; installation of heat recovery equipment to capture waste heat from exhausted air; a new building automation system; and, more efficient pumps. The original scope of work was expected to yield a 90% reduction in GHGs. The resulting design forecasts a 60% GHG reduction (or 160 tonnes of GHGs) annually.

A 2020 BC Hydro study has shown that a recent group of similar projects have been delivered for a cost of $340 per tonne of avoided GHGs, when incentive and grant funding are not included. The Equipment Renewal and GHG Reduction Project cost is $440 per tonne of avoided GHGs, making it higher than recent comparators. The full cost of avoided GHGs is $1206 per tonne. This cost for the avoided GHGs represents considerable less value when prioritizing this project over others.

In order to ensure that cost estimates were accurate, the City issued a Request for Proposal (RFP) 6742P for the Richmond Library & Cultural Centre Mechanical Upgrade was posted to BC Bid on April 22, 2020 and closed on May 27, 2020. The bids have since been evaluated resulting in a qualified proponent with proven past experience of undertaking the work. Based on the bids, an additional $1,540,000 is required to complete the project. The Mechanical Engineer and Quantity Surveyor advised that the variance from the approved budget is due to the current uncertainty within the construction market, industry volatility and cost escalation. A contract for this scope of work will only be awarded if this option is chosen.

Completing the project per the current FCM funding agreement and timeline will be difficult. FCM has advised that a potential implication is that 20% of the $750,000 grant may be at risk. FCM is still hopeful an extension can be provided but to be conservative, the FCM grant has reduced by $150,000 bringing the total available funding to $1,960,000. If FCM determines that the full grant can be provided, City funding requirements will be reduced by $150,000.

The City's longstanding efforts to reduce GHGs from civic operations and buildings have been very effective and decarbonizing buildings will still be needed. The LCC project was triggered by the pending need to replace equipment but staff will continue to pursue GHG savings opportunities in future building retrofits and new construction projects as they arise. Staff access programs, services and grants offered by major utility companies and senior governments to ensure the City applies best practices and maintains its leadership position.

Conventional Mechanical Retrofit Project

The current heating and cooling equipment can be replaced with new but similar equipment. The proposed scope includes the replacement of three mid-efficiency boilers and two chillers. New boilers will improve efficiency by 15%. The chillers will be equipped with advanced technology, boosting equipment efficiency and reliability. CFC-free refrigerant R-134a will be used in these new chillers, which are also upgradable to operate with the next-generation, low global warming

potential (GWP) refrigerant R-513A in the future. As part of the equipment replacement, a new building automation system will be implemented to optimize operation.

Options

Option 1: Conventional Mechanical Retrofit Project [Recommended]

Replace the current mechanical system for a cost of $1,050,000 with new but similar equipment using approved capital funding. This option would see GHG emissions reduced by 10% compared to the current system. This option does not create an operational budget impact (OBI). If this option is approved, the City would forego capital grant funding. Unspent funds will be returned to the Carbon Tax Provision.

Option 2: Equipment Renewal and GHG Reduction Project [Not Recommended]

Implement a deep greenhouse gas emission and energy-efficient retrofit of heating and cooling systems using an additional $1,540,000 in capital funding with forecasted 60% GHG reduction (or 160 tonnes of GHGs annually compared to the current system). An OBI increase of $53,500 for utility and maintenance expenses is also required and can be considered in the 2021 budget process. If this option is approved, staff will award the contract to the lead proponent. In order to commence this work in 2020, an existing Council approved capital project can be utilized as a temporary funding source until the additional $1,540,000 can be funded by the Gas Tax Provision ($465,000) and Capital Building and Infrastructure Reserve ($1,075,000) and included as an amendment to the Revised Consolidated 5 Year Financial Plan (2020-2024). Unspent funds will be returned to the Capital Building and Infrastructure Reserve.

For comparison, staff also assessed performance metric information for both options against other libraries in the Lower Mainland that the City has access to (Attachment 1).

Note that staff efforts to reduce the costs and preparation for the RFP for this option resulted in consulting expenses of $155,000.

Table 1: Cost Comparison of LCC Mechanical Upgrade Options

	Option 1 Conventional Mechanical Retrofit Project (Recommended)	**Option 2** Equipment Renewal and GHG Reduction Project
Approved Capital Funding	$ 1,050,000	$ 1,960,000
Total Project Cost	$ 1,050,000	$ 3,500,000
Additional Funding Required	$ 0	$ 1,540,000

Financial Impact

Should the recommended Option 1 be endorsed, approved capital funding will be used. The City will forego grant funding by approving this option.

Conclusion

Staff recommend that Option 1 be endorsed so that the mechanical system upgrade at LCC can proceed. Completion of this project will reduce GHG emissions by 10%.

Poroshat Assadian, B.Arch CEM LEED
Corporate Energy Manager
(604-244-1239)

Att. 1: Energy and Greenhouse Gas (GHG) Intensities in the Lower Mainland

Attachment 1: Energy and Greenhouse Gas (GHG) Intensities in the Lower Mainland

The LCC is unique facility combining a broad range of uses. For comparison purposes, staff used available information from other regional libraries, see figures below.

Figure 1: Comparative Energy Use Intensity of Lower Mainland Libraries

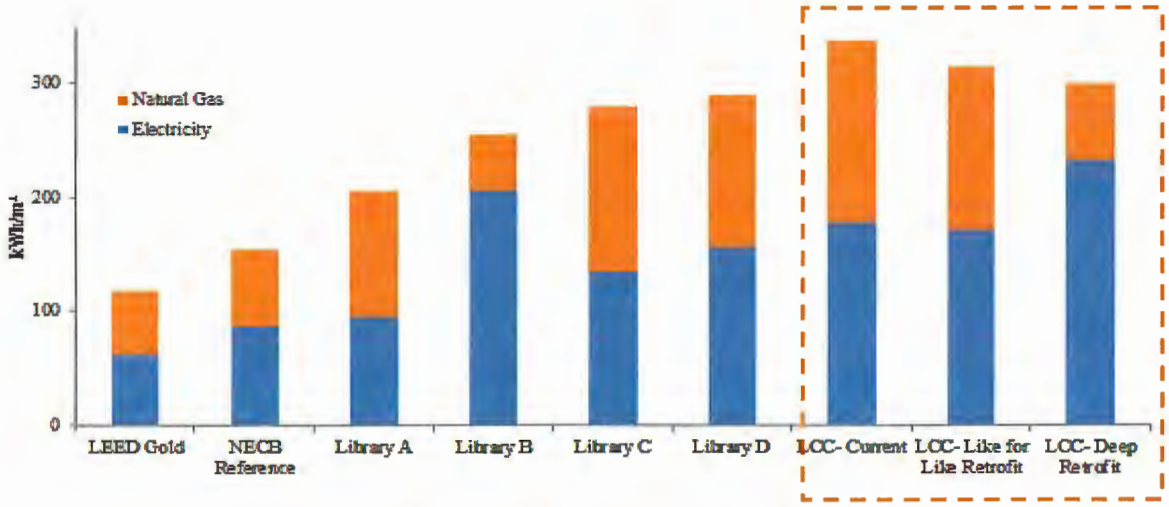
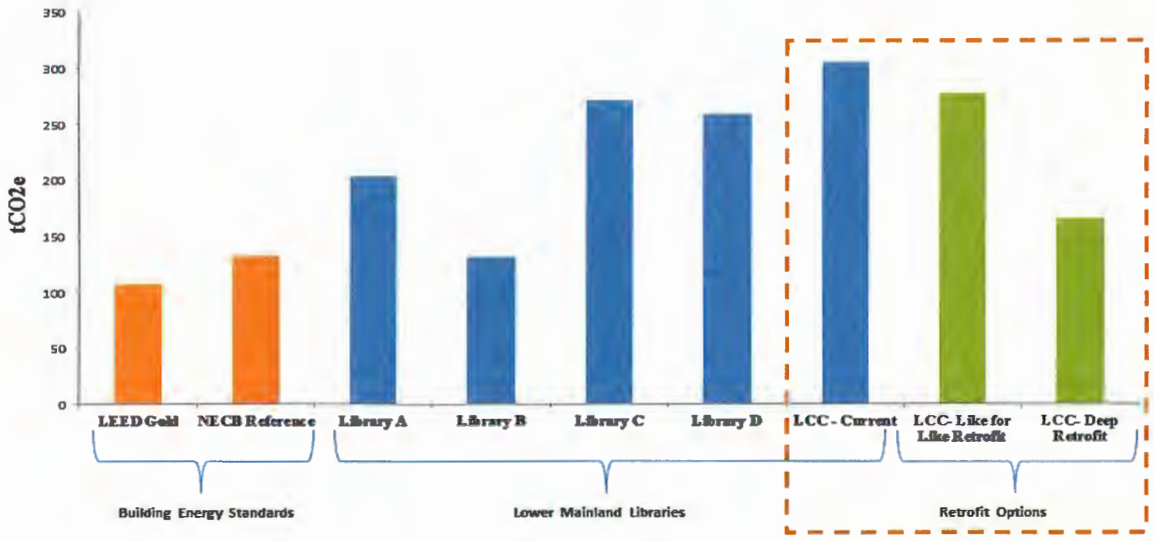


Figure 2 shows greenhouse gas GHG emission intensities for Lower Mainland library facilities. The deep energy retrofit option results in a 60% modelled reduction of GHG emissions from the current LCC mechanical system. Implementing a deep greenhouse gas emission and energy efficiently retrofit will lower the GHG emissions of the building close to the National Energy Code of Canada for Buildings 2011.

Figure 2: Comparative Greenhouse Gas Emission Intensity of Lower Mainland Libraries



Fact Sheet

BAN RAT POISONS
that are Killing B.C. Wildlife

Summary

Second-Generation Anticoagulant Rodenticides (**SGARs**) pose serious threats to B.C. wildlife species, the environment and human health. Their permitted use is inconsistent with the obligations owed by the government to protect its citizens and the environment from harmful chemicals. SGARs are dangerous, ineffective and unlawful - the government must take immediate action to prohibit the use of these products.

Background

The federal and provincial governments have an obligation to treat the well-being and protection of the environment as a primary consideration. It follows that SGARs should not pose any unacceptable risks if their use is to be permitted. To the contrary, despite acknowledging that SGARs are highly acutely toxic compounds that pose serious threats to the health and safety of children and non-target species, the federal government continues to register these products for commercial use.

Problem

SGARs are Dangerous

Poisoning native and endangered wildlife species

Many of B.C.'s treasured species face serious risks of SGAR poisoning. Small non-target mammals, birds and invertebrates feed directly on the SGAR baits, giving rise to the contamination of the food-chain and wider ecosystem. Rodenticides can enter the soil via decomposing carcasses, and poisons have even been found in the aquatic food web.

The highly toxic, persistent, bioaccumulative nature of SGARs makes them particularly dangerous to a wide range of predators and scavengers, including raptors, crows, raccoons, coyotes, weasels and snakes. Owls and other birds of prey are at a particularly high risk of secondary poisoning because of their dependence on rodents as a food source. Between 1988 and 2003, 70% of dead owls from B.C. had residues of at least one rat poison – and the number of owls dying by poisons has only escalated over the recent years.

Threatening children and pets

The American Association of Poison Control Centers receives 12,000 - 15,000 annual reports of rodenticide exposures in children under six years of age. Health Canada has determined observations in the U.S. to be representative of the situation in Canada. SGARs also put pets at risk of internal bleeding, and sometimes death. Since rodenticides are intended to be palatable for their target species, pets will also be inclined to consume these toxic products. Dogs and cats alike may also hunt or catch poisoned rodents.

SGARs are Ineffective

Short-term and counterproductive

SGAR baiting is not an effective method of controlling infestations long-term. Clearing a resident population simply makes space for new groups to move in, and poisoned rats mate faster to compensate for their thinning numbers. By distracting from the root of the problem (i.e., accessible food and shelter), relying on SGARs permits infestations to rebound. SGARs also reduce the efficacy of natural, costless and chemical-free rat control by poisoning raptors and other rodent predators. For instance, a barn owl pair and their chicks consume an average of 1,200 rodents per year.

SGARs are Unlawful

Failure of risk mitigation measures

The existing risk mitigation measures are incapable of adequately addressing the threats that SGARs pose to the environment. Requiring SGARs to be kept in tamper-proof bait boxes fails does nothing to stop target and non-target animals from directly consuming these products and thereafter being ingested by predators. Rats have been shown to feed on highly toxic indoor-restricted baits and move outdoors. Further, poisoned rats have been found to spend more time outside of their dens during all hours of the day and die above ground. Since rodents will disperse away from buildings and into surrounding natural habitats, the secondary-exposure risk for predators is not acceptably mitigated.

Inconsistent with the current regulatory framework

Despite the risks and contrary to the IPMA, SGAR use is not being replaced by non-toxic alternative measures of pest control. In B.C. alone, brodifacoum sales have increased by 36% and bromadiolone sales have increased by 136% between 2003 and 2010, with a total of 148kg of rodenticide active ingredient sold in 2010. While this may not seem like a significant amount, consider that most SGARs are formulated at less than 0.01% active ingredient given their high toxicity.

Solution

The precautionary principle enunciated by the federal Pesticide Products Act provides that full scientific certainty is not required to amend or cancel the registration of a product where there are reasonable grounds to believe such action is required to deal with a threat to the environment. It follows that SGARs should cease to be registered.

In the interim, B.C. must take action to protect its precious wildlife by (a) implementing a regulation that prohibits the sale, purchase or use of SGARs; and (b) urging the Minister of Health to initiate a special review of the registration of SGARs.

DEFEND THEM ALL FOUNDATION

OWL WATCH BC

SEA Social Environmental Alliance

Friends of Kings Community Nature Space

Questions & Answers

What are Rodenticides?

Rodenticides, colloquially referred to as "rat poisons," are pesticides used to kill rats, mice, and other rodents. Rodenticides are typically formulated as baits, which are designed to attract animals by incorporating flavours such as ground meat, vegetables, fish oil, molasses, or peanut butter. Most of the rodenticides used today are anticoagulant compounds that interfere with blood clotting and cause death from excessive bleeding. Deaths typically occur between four days and two weeks after rodents begin to feed on the bait.

What are Second-Generation Anticoagulant Rodenticides?

SGARs were developed in the 1970s to control rodents that are resistant to first-generation anticoagulants (FGARs), and such as, were designed to be highly toxic. Despite delivering a lethal dose in a single feeding, these poisons cause a slow, painful death for all consumers. Today, SGARs are the predominant form of rodent control worldwide. SGAR active ingredients that are currently registered in Canada include brodifacoum, bromadiolone, difenacoum and difethialone.

Why should we ban SGARs?

Wildlife advocates believe that banning SGARs is imperative to protect vulnerable and endangered species, including the barred owl and barn owl, who are critically threatened by the widespread use of SGARs in agricultural and urban areas. SGARs are particularly dangerous in comparison to other means of rodent control because they are highly toxic, but take days to kill. This means that rodents may continue to feed on the bait and end up ingesting far beyond the lethal dose by the time of their deaths. Worse yet, these poisons can persist in animal tissues at high levels, posing greater risks to non-target species that feed upon animals that have consumed the bait.

Will banning SGARs make rat problems in B.C. worse?

No - in fact, SGARs may actually be making rat problems worse. Again, by poisoning animals that feed on rodents, SGARs are effectively reducing a natural and chemical-free method of pest control. By eliminating the ability to rely on poisons, the pest control industry will be incentivized to develop informed, efficacious rodent management solutions. Some humane and sustainably-focused pest management companies have introduced more effective means of approaching rat infestations that do not involve harmful chemicals.

If poisons are ineffective, why do people still use them?

Poisoning is the easiest and cheapest method of controlling rats, and it is in the economic interests of pest control operators using poisons not to inform customers that results will only be temporary if preventative measures are not implemented. Surveyed pest control professionals have admitted that poisons alone fail to provide a long-term solution. Broader public education is needed to dispel the myth that using SGARs is the key to managing rodent infestations.

What alternative methods of pest control are available?

The primary step that sustainability-oriented pest management companies recommend is "rat-proofing" the premises of your home by addressing the active and potential access-points in the structures. Food and other resources that attract rats must be secured or eliminated. There are many resources online that can help homeowners manage rat problems themselves. Goodnature traps are nontoxic, and have been shown to be effective, more humane, and are inaccessible by non-target species, such as squirrels.

How are Rodenticides Regulated in Canada?

Pesticides in Canada are regulated by a multi-tiered legislative scheme. The mandate of the federal Pest Control Products Act (**PCPA**) is to protect the health of Canadians and the environment against unacceptable risks from the use of pesticides. Reasonable certainty that no unmitigable harm to the environment is required to justify the registration of pest control products. B.C.'s Integrated Pest Management Act (**IPMA**) builds on this mandate by implementing a proactive and preventative approach to managing pest populations. Toxic chemicals must be treated as a last resort, and used in a manner that minimizes hazards to the environment.

How does the Federal Government Regulate SGARs?

The PCPA sets the standards for regulation of pesticides in Canada. The Pest Management Regulatory Agency (**PMRA**) is the Health Canada branch responsible for administering the PCPA and Regulations. Pesticides must be registered under the PCPA before they can be manufactured, possessed, handled, stored, imported, distributed, or used in Canada.

The PMRA's main responsibilities include registering pest control products, re-evaluating pesticides currently on the market, and promoting sustainable pest management strategies. The PMRA must conduct a science-based evaluation of a product's risks and efficacy controlling the intended pest before approving registration.

SGARs are currently registered for commercial use only, meaning that are not available to the general public for use around the home. In response to concerns regarding secondary exposure risks, the PMRA imposed requirements that SGARs must be contained in tamper-resistant bait stations or placed in locations inaccessible to children and animals.

Does B.C. have jurisdiction to regulate SGARs?

Yes - Provinces may further restrict or prohibit the use, sale, storage, transportation and disposal of registered pesticides in their jurisdiction through the enactment of regulations, as long as they are consistent with and no less protective than the federal legislation. B.C.'s IPMA sets out requirements for the use and sale of pesticides in the province.

Licenses are required to sell, use or provide a service respecting SGARs. The IPMA Regulation sets out that licensees must act in accordance with integrated pest management principles (e.g., considering practical alternatives to pesticide use and the protection of human health and the environment). When they are needed, pesticides must be used in a manner that minimizes hazards to human health and the environment.

What can municipal governments do?

While municipalities do not have the jurisdiction to pass community-wide bans on rodenticides, they can implement bans on the use of poisons on City-owned property. Local governments can also submit and endorse resolutions to the Union of B.C. Municipalities for consideration.

In June 2020, the District of North Vancouver adopted a landmark motion to ban anticoagulant rodenticides on all District-owned properties and petition B.C. to follow suit. The ban was met with tremendous support as recent owl deaths have raised awareness of the harmful effects of rodenticides on North Vancouver's treasured owls and other wildlife. The District of Saanich has also brought a similar motion that will be heard in July, 2020.

For more information, please visit:
www.facebook.com/owlwatchbc
www.defendthemall.org/pagero
Contact: marie.turcott@defendthemall.org

City of Richmond

Memorandum
Planning and Development Division
Transportation

To: Mayor and Councillors **Date:** July 16, 2020

From: Lloyd Bie, P.Eng.
Director, Transportation **File:** 10-6360-06-01/2020-Vol 01

Re: **Estimated Costs for Temporary Road Changes in Steveston Village for August 2020**

As directed at the July 13, 2020 Council meeting, this memorandum provides the estimated costs to implement temporary road changes in Steveston Village for the BC Day weekend (August 1-3, 2020) as well as for the month of August 2020.

BC Day Weekend: August 1-3, 2020

The same scope of temporary road changes implemented on Canada Day will be implemented for the three days of the BC Day long weekend (Table 1). Drawing on the Canada Day experience, the traffic control plan will be refined to include the installation of three digital display boards to provide further guidance to motorists and modification of the hours of the road changes to 7:00 am to 9:00 pm on Saturday, and 9:00 am to 9:00 pm on Sunday and Monday. An earlier start time on Saturday is required for set up activities.

Table 1: Temporary Road Changes in Steveston Village for BC Day Weekend

Measure	Scope
Closure of Moncton Street	• 3-block closure between No. 1 Road and Third Avenue • North-south avenues remain open • North-south lanes open from Chatham St and Bayview St, and closed at Moncton St
One-Way Street System for Bayview Street	• Conversion from 2-way to 1-way westbound between No. 1 Road and Third Ave • Conversion of First and Third Avenues from 2-way to 1-way northbound between Bayview Street and Moncton Street to support vehicle and pedestrian circulation

Based on this scope, the total estimated cost to implement the temporary road changes for the three day BC Day weekend is $30,000. The two main cost components are traffic control personnel ($27,500) and set up/take down activities including signage and digital display board rental ($2,500). All set up/take down and traffic control work will be performed by Public Works personnel.

Month of August 2020

For the month of August, the same scope of temporary road changes implemented for the BC Day weekend can be implemented (Option 1). Two additional options are also feasible:

- Option 2: One-way system on Moncton Street eastbound rather than full closure, which will preserve on-street parallel parking on the north side of the street while providing increased space

for physical distancing on both sides of the street. This is the least expensive option, creates significant space for social distancing, and addresses some of the parking concerns identified in previous merchant surveys.

- Option 3: Hybrid of Options 1 and 2 with a one-way system on Moncton Street eastbound during weekdays and full closure of Moncton Street on weekends when higher pedestrian volumes are anticipated. This option creates more social distancing space on weekends when higher pedestrian volumes are anticipated while reducing costs compared to Option 1.

For all options, the temporary road changes remain in place 24 hours per day. For Options 1 and 3 that include the closure of Moncton Street, traffic control personnel are deployed from 9:00 am to 7:00 pm Monday to Thursday, and 9:00 am to 9:00 pm Friday to Sunday when higher pedestrian volumes are anticipated. The traffic control personnel will facilitate deliveries and manage traffic volumes, particularly at the intersections.

For Options 2 and 3 that include a one-way system on Moncton Street, additional physical protection is required to be installed between the expanded pedestrian space and the relocated parallel parking to ensure safety. An allowance for traffic control personnel is included to facilitate deliveries and manage traffic volumes.

Table 2 summarizes the total estimated costs to implement the temporary road changes for the period August 4-31, 2020 (i.e., beyond the BC Day weekend) for the identified options. All set up/take down and traffic control work will be performed by Public Works personnel for all options.

Table 2: Estimated Costs of Options for Temporary Road Changes in Steveston Village for August 2020

Option		Estimated Cost	
1	Closure of Moncton St & One-Way Bayview St	Traffic Control Set Up/Take Down **Total**	$115,000 $7,500 **$122,500**
2	One-Way Moncton St & One-Way Bayview St	Traffic Control Set Up/Take Down **Total**	$15,000 $17,500 **$32,500**
3	Weekday: One-Way Moncton St Weekend: Closure of Moncton St All Days: One-Way Bayview St	Traffic Control Set Up/Take Down **Total**	$81,500 $22,000 **$103,500**

If you have any questions, please contact me at 604-516-9934.

Lloyd Bie, P.Eng.
Director, Transportation

LB:jc

cc: SMT

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