

# Staff Report to Council

Planning & Development

FILE: 4520-08-2019-04

REPORT DATE: October 18, 2019      MEETING DATE: December 10, 2019  
TO: Mayor and Council  
FROM: Alex Wallace, Manager of Community Development  
SUBJECT: Soil Removal and Fill Deposit Permit Application – 14406  
Rippington Road

CHIEF ADMINISTRATIVE OFFICER REVIEW/APPROVAL:



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RECOMMENDATION(S): THAT Council:

- A. Approve the issuance of a Soil Removal and Fill Deposit Permit to Jent Construction Ltd. for 14406 Rippington Road with the following conditions:
  - A.1 A Highway Use Permit & Traffic Management Plan be submitted and approved by the Director of Engineering or their designate to prevent the obstruction of traffic or staging of trucks on any road; AND
  - A.2 No dirt, debris or mud shall be permitted on any road. Roads must be kept clean and swept three times daily at minimum, or more as required, with the final cleaning occurring at the end of the workday. Rippington Road and access to site must be monitored at all times during fill activities, and any debris removed right away; AND
  - A.3 Filling activities are prohibited on Saturdays, Sundays and statutory holidays and restricted to the hours between 7:00 a.m. to 5:00 p.m. on weekdays; OR
- B. Other.

## PURPOSE

The purpose of the application is to deposit 920 cubic metres of structural fill on the site to achieve the minimum flood construction level required for the construction of a new single family home. No soil is required to be exported from the property.

☐ Information Report

☒ Decision Report

☐ Direction Report

## DISCUSSION

### Background:

There is currently one existing home on the property, which is occupied by the owner's son and his family. According to the applicant, the current home has mold, rot, and major moisture issues making the home unsafe for the long term livability.

On March 28, 2019 a non-adhering residential use application to build a secondary residence for 14406 Rippington Road was presented to the AAC for comments. The Committee did not feel that the application met the required criteria and recommended that Council be informed that the Agricultural Advisory Committee did not support the non-adhering residential use application to allow an additional residence on the property.

On April 16, 2019 at the regular Council meeting, the Agricultural Land Commission (ALC), Non-Adhering Residential Use application was presented to City Council. Upon presentation, Council decided that the non-adhering residential use application to allow an additional residence on the property would not be forwarded to the ALC. There is no option to appeal this decision.

On August 21, 2019 the contractor applied for a Soil Removal and Fill Deposit permit for 920 cubic metres of structural fill to be deposited on the 9.96 hectares (24.61 acres) Rippington Road site. The intent of the soil removal and fill deposit works is to bring in structural fill to meet the minimum flood plain elevation (2.45 metres Geodetic Survey of Canada datum for locations in the Rural Floodplain) in anticipation of building a new primary residence. The proposal is to live in the existing house during construction of the new house and once the new primary residence is complete the existing house will be decommissioned.

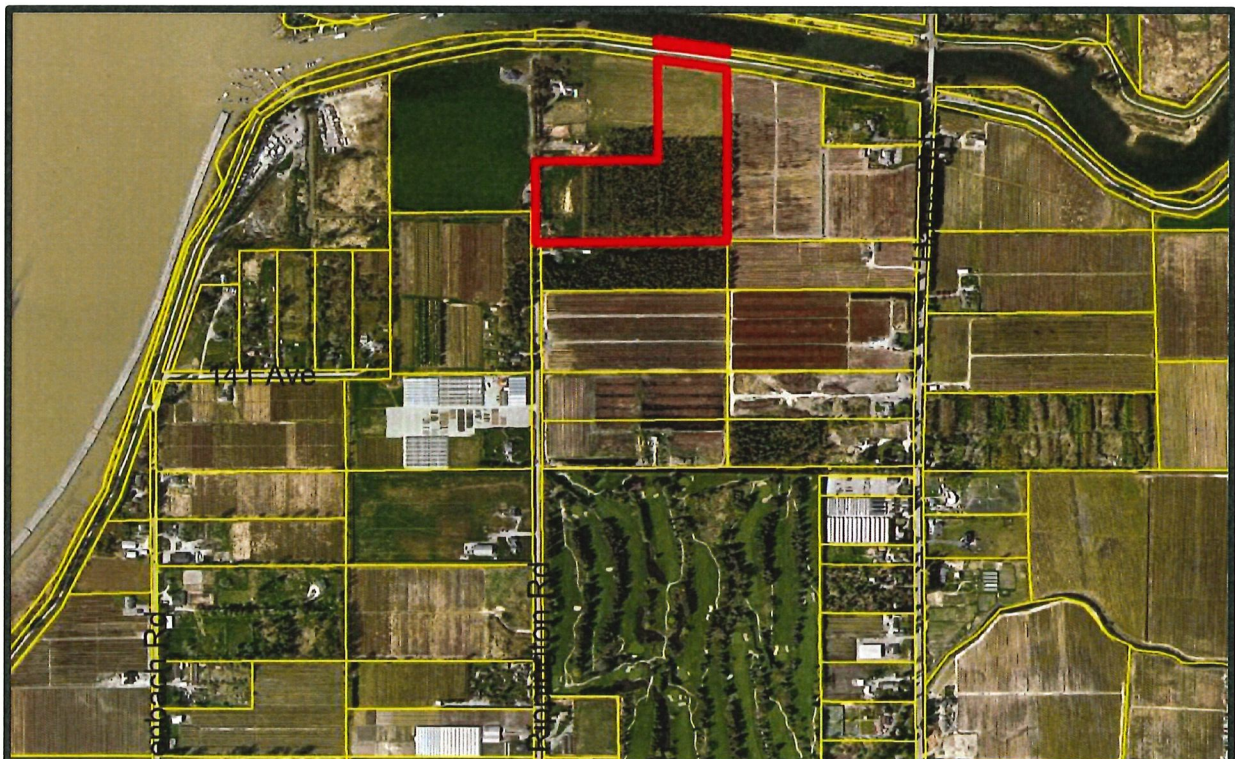
The Soil Removal and Fill Deposit Regulation Bylaw regulates the removal of soil or the depositing of fill on lands within the City. When the deposit of fill or removal of soil is 500 cubic metres or greater, the proposed activities require Council authorization before issuance of a permit.

The bylaw requires the following information from applicants:

- Topographic information about the placement or removal of soil signed and sealed by a Qualified Professional;

- A description of the composition and volume of the soil to be deposited or removed;
- Method of soil removal or fill deposits;
- Proposed accesses to the site during the operations including the proposed routes and schedules of trucks;
- Proposed measures to prevent tracking of soil or other material onto highways and measures for cleaning the highways abutting the parcel where fill is to be placed;
- Proposed measures to control erosion, drainage and soil stability during and after removal or deposit signed and sealed by a Qualified Professional; and,
- Certification that the soil to be removed or fill to be deposited meets the applicable provincial ministry's criteria.

The subject property is zoned A-1 (General Agriculture), Official Community Plan (OCP), land use designation is Agricultural. The Subject Property is located at the north-east end of Rippington Road.



**Figure 1: Aerial Photo Map**

The current application requests to import 920 cubic metres of structural fill to build up the existing ground elevation to meet the minimum flood construction level identified in the City's Floodplain Designation and Construction Control Bylaw (Attachment B),

plus a freeboard allowance of 0.3 metres (approximately 1 foot). As per the Geotechnical Report prepared by Braun Geotechnical Ltd. the suggested moderate freeboard allowance of 0.3 metres accounts for a moderate climate change scenario that may not have been considered at the time of Flood Construction Level establishment. The flood construction level outlined in the Floodplain Designation and Construction Control Bylaw may be exceeded; as per Subsection 8.1 of the Soil Removal and Fill Deposit Regulation Bylaw, if:

- (a) a written report by a qualified professional stating the justification is submitted;
- (b) Council approves the height increase, and
- (c) The Agricultural Land Commission approves the height increase if within the agricultural land reserve.

The applicants' intended excavation and fill work will progress as follows:

- The fill site for the house foundation will have a footprint of 630 square metres and will be built up with structural fill that will be trucked in from Pitt River Quarries and placed with a 230 excavator.
- The structural fill will then be preloaded with native soil obtained from the site.
- All fill activity will be placed and compacted as per Braun Geotechnical Ltd. recommendations. Once required compaction of structural fill is achieved, the preload fill material will be removed and reused as landscape fill around the site. No soil will be exported from the site.

To reduce the potential negative impacts on the surrounding agriculture land, the following measures will be taken:

- Construct a dedicated access off the existing driveway with 75 millimetre clear crush gravel centred with non-woven geotextile.
- The signed and sealed Erosion and sediment control plan shall be implemented and monitored through to completion by Braun Geotechnical Ltd.

#### Relevant Policy, Bylaw or Legislation:

The Soil Removal and Fill Deposit Regulation Bylaw No. 2593, 2013 regulates the placement of fill or the removal of soil or other material on land in the City.

The Floodplain Designation and Construction Control Bylaw No. 2384, 2008 regulates the minimum Flood Construction Level.

The Highway and Traffic Bylaw No. 2260, 2006 regulates traffic and the use of highways and other areas in the City.



Council Policy C030, Geotechnical Report Guidelines, provides information to prospective applicants and their engineering professionals on when geotechnical reports are required and sets out the standards and requirements to be addressed in those reports.

#### Analysis:

#### Geotechnical Report

Policy No. C030 "Geotechnical Report Guidelines" applies to projects requiring fill and soil consolidation to support a foundation. The policy sets out the standards and requirements to be addressed in those reports. Braun Geotechnical has prepared design drawings dated August 7, 2019 (Attachment D) and a Structural Fill report dated September 17, 2019 (Attachment C). The report states that the calculated structural fill volume is based on test pit exploration carried out at the site during 2019. As per the report prepared and sealed by Braun Geotechnical Ltd; the estimated structural fill volumes are presented in the table below:

Estimated Soil Quantity	Type of Material	Quantity (m <sup>3</sup> )
<b>to be REMOVED</b>	<b>Preload surcharge fill (onsite soil)</b>	<b>0</b>
<b>To be DEPOSITED</b>	<b>Landscape Fill<sup>1</sup> (onsite soil)</b>	<b>0</b>
	<b>Structural Fill (MMCD Base gravel - Pitt River Quarries)</b>	<b>920</b>

Table 1 Structural Fill Volumes

#### Road Cleaning

According to the provisions of the Soil Removal & Fill Deposit Regulation Bylaw, "dirt, mud, and debris resulting from a removal or deposit operation which is tracked onto public roads must be removed daily or as directed by the Director." The access to the property is off Rippington Road. Staff will work with the contractor, Jent Construction Ltd. to resolve any concerns that may arise throughout the length of the permit. The following conditions will be added to the Highway Use Permit and the Soil Removal and Fill Deposit Permit:

- No obstruction to traffic or staging on the road permitted at any time (even with traffic control in place). This would require a Traffic Management Plan and/or further approval from the City.

- No dirt, debris or mud on the road. Roads to be kept clean and swept three times daily minimum or more if required, the last time occurring at the end of the workday. Rippington Road and access to site must be monitored at all times during fill activities, and any debris removed right away.

### *Operations Hours*

The filling would be prohibited on Saturdays, Sundays and statutory holidays and restricted to the hours between 7:00 a.m. to 5:00 p.m. on weekdays. The duration for fill activity stated on the application is for one month, if more time is required the contractor may apply for an extension at which time the permit can be extended monthly for up to 12 months from the date of issuance.

### *Agricultural Advisory Committee (AAC)*

The intent of the soil removal and fill deposit works was presented to the Agricultural Advisory Committee with specifics of the application on October 10, 2019. Unlike the Non-Adhering Residential Use Application presented on March 28, 2019, the Committee moved to support the Soil Removal and Fill Deposit Application for 14406 Rippington Road pending the removal of the existing dwelling.

### *Agricultural Land Commission*

The Applicant has provided written verification from the ALC that the purposed scope of work was submitted and reviewed and is consistent with the Agricultural Land Reserve Use Regulation (Attachment G). No further action is required by the ALC unless the project size and scope changes where the thresholds established under the ALC Act or Regulations are being exceeded. Should the scope change the applicant will be required to file a Notice of Intent with the ALC and a soil permit will not be issued until approval comes from the ALC.

### *Archaeological Sites*

According to mapping system made accessible by the Ministry of Forests, Lands, and Natural Resource Operations, no archaeological sites are identified on the site. It is expected that, if archaeological artifact finds are discovered during the fill process, the contractor would report these finds directly to appropriate provincial authorities.

### COUNCIL STRATEGIC PLAN ALIGNMENT

- ☐ Principled Governance    ☐ Balanced Economic Prosperity    ☐ Corporate Excellence  
☒ Community Spirit & Wellbeing                      ☒ Transportation & Infrastructure Initiatives  
☐ Not Applicable

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### FINANCIAL IMPLICATIONS

☐ None      ☐ Budget Previously Approved      ☐ Referral to Business Planning  
☒ Other

The City will receive a levy of \$0.50/cubic metres for the material being placed on site. The estimated amount of structural fill to be deposited is 920 cubic metres. The \$ 460 levy collected would be placed in transportation reserves.

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### PUBLIC PARTICIPATION

☒ Inform      ☐ Consult      ☐ Involve      ☐ Collaborate      ☐ Empower

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### KATZIE FIRST NATION CONSIDERATIONS

Referral      ☐ Yes      ☒ No

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### SIGN-OFFS

Written by:

Ashley Seed, Engineering Technician

Reviewed by:

Alex Wallace, Manager of Planning & Development

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### ATTACHMENT(S):

- A. Neighbourhood OCP Map
- B. Floodplain Designation and Construction Control Bylaw No. 2384, 2008 Schedule A
- C. Geotechnical Engineer-Report
- D. Geotechnical Preload Fill Plan, Section and Specifications
- E. ALC Confirmation for Floodplain elevation requirements
- F. Council Policy C030, Geotechnical Report Guidelines
- G. ALC confirmation of assessment
- H. Site plan attached to ALC confirmation
- I. Erosion & Sediment Control Plan
- J. Truck Route Network

McDonald Rd

McNeil Rd

McQuarrie Rd

Fenton Rd

Charlier Rd

Harris Rd

141 Ave

Rip Rd

Ripington Rd

-  Agricultural - 8 Hectare Minimum Parcel Size
-  Tourist Commercial
-  Open Space
-  Outdoor Recreation (Agricultural)



## 14406 Rippington Rd - Neighbourhood OCP

0 125 250 500 750 1,000  
Meters

Map Created: 2019/03/13

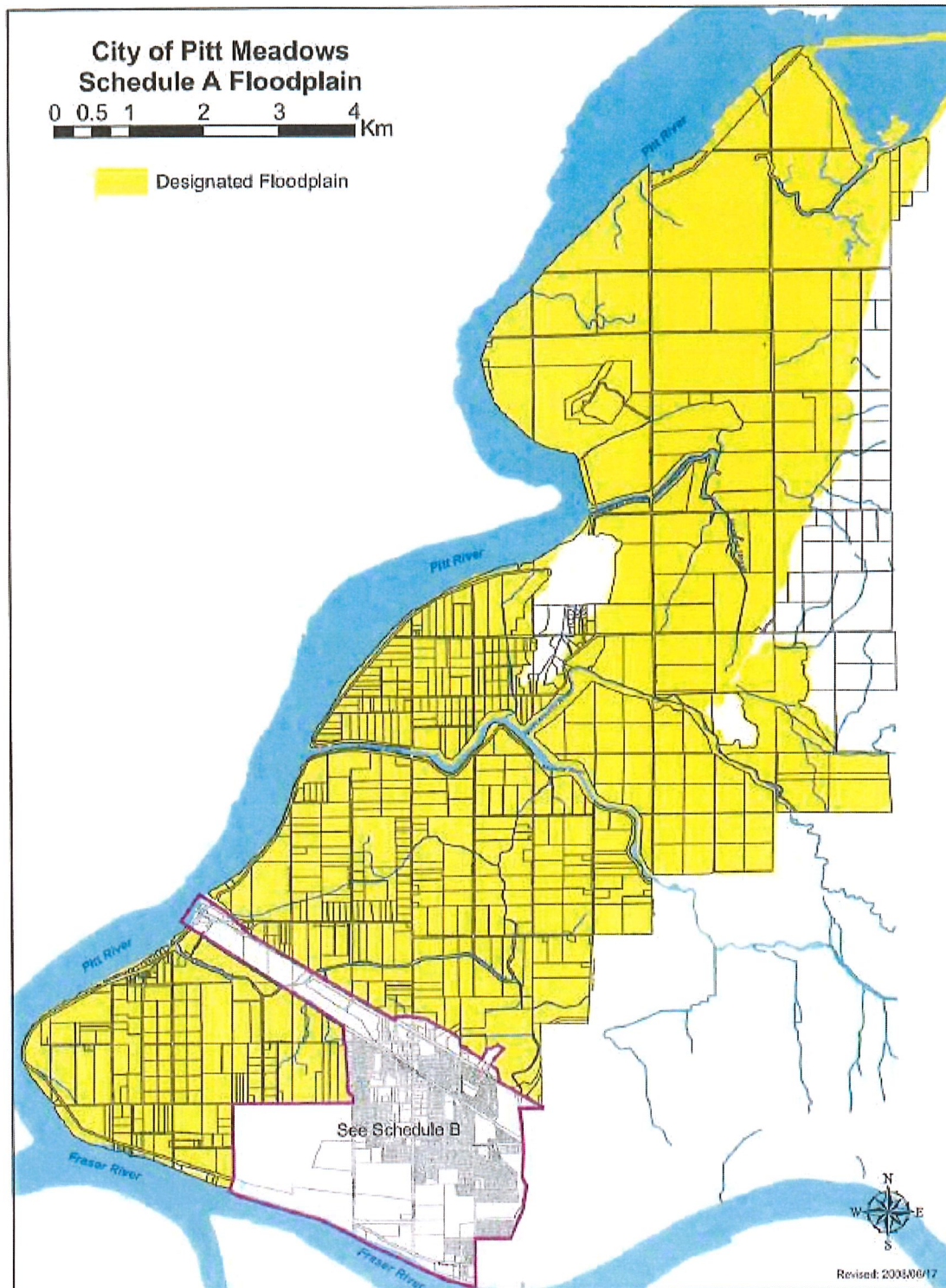




CITY OF PITT MEADOWS  
FLOODPLAIN DESIGNATION AND CONSTRUCTION CONTROL  
BYLAW NO. 2384, 2008.

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SCHEDULE A:







***Foundations,  
Excavation &  
Shoring  
Specialists***

Braun Geotechnical  
102 – 19049 95A Ave.  
Surrey, BC  
V4N 4P3  
Tel: 604-513-4190  
Fax: 604-513-4195  
[info@braungeo.com](mailto:info@braungeo.com)

[www.braungeo.com](http://www.braungeo.com)

***Foundations***

***Excavation &  
Shoring***

***Slope Stability***

***Natural Hazards***

***Pavement Design  
and Management***

***Reinforced Soil  
Walls and Slopes***

September 17, 2019  
Reference: 19-8183

Via email: [nickfaber@jent.com](mailto:nickfaber@jent.com)

**Nick Faber**  
20164 123A Avenue  
Maple Ridge, BC V2X 6A7

Re: Proposed Structural Fill  
New Single Family Dwelling on Agricultural Lands  
14406 Rippington Road, Pitt Meadows, BC

This letter is provided to confirm a structural fill volume for the proposed single family dwelling (SFD) at the above referenced property. The structural fill is required to achieve the minimum flood construction level (FCL) identified for the area as El.2.45m by City of Pitt Meadows plus a freeboard allowance of 0.3m for a moderate climate change scenario that may not have been considered at the time of FCL establishment.

It is understood that City of Pitt Meadows requires a letter signed and sealed by a Professional Engineer confirming structural fill volumes to be placed on lands within the Agricultural Land Reserve (ALR).

The calculated structural fill volume is based on test pit exploration carried out at the site during 2019 and on the following design drawings (attached for reference):

- Site Preparation by Preload Method for Proposed Rural Residential SFD, 14406 Rippington Road, Pitt Meadows, BC (rev1 September 13, 2019);
- Erosion and Sediment Control, Proposed Rural Residential SFD, 14406 Rippington Road, Pitt Meadows, BC (rev1 September 17, 2019)

Fill used for preload surcharge will be obtained from site excavations and re-used as landscape fills to restore permanent slopes surrounding the selected SFD location. As such, the preload surcharge fill volumes were excluded from permanent fill calculations. Estimated structural fill volumes are presented in the table below.

Estimated Soil Quantity	Type of Material	Quantity (m <sup>3</sup> )
to be REMOVED	Preload surcharge fill (onsite soil)	0
To be DEPOSITED	Landscape Fill <sup>1</sup> (onsite soil)	0
	Structural Fill (MMCD Base gravel - Pitt River Quarries)	920

Note: 1. Preload surcharge fill to be re-used as permanent landscape fill surrounding SFD.


This letter is prepared for the exclusive use of Nick Faber, the property Owner and his designated representatives and may not be used by other parties without the written permission of Braun Geotechnical Ltd. The City of Pitt Meadows may also rely on the findings of this report.

If during development plans change from those described in this letter and reference drawings, Braun Geotechnical should be provided the opportunity to confirm or modify estimations, as required.

We hope the above meets with your requirements. Should any questions arise, please do not hesitate to contact the undersigned.

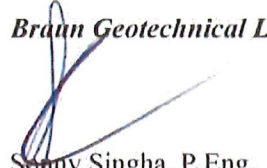
Yours truly,

**Braun Geotechnical Ltd.**

  
James Wetherill, P.Eng.  
Geotechnical Engineer

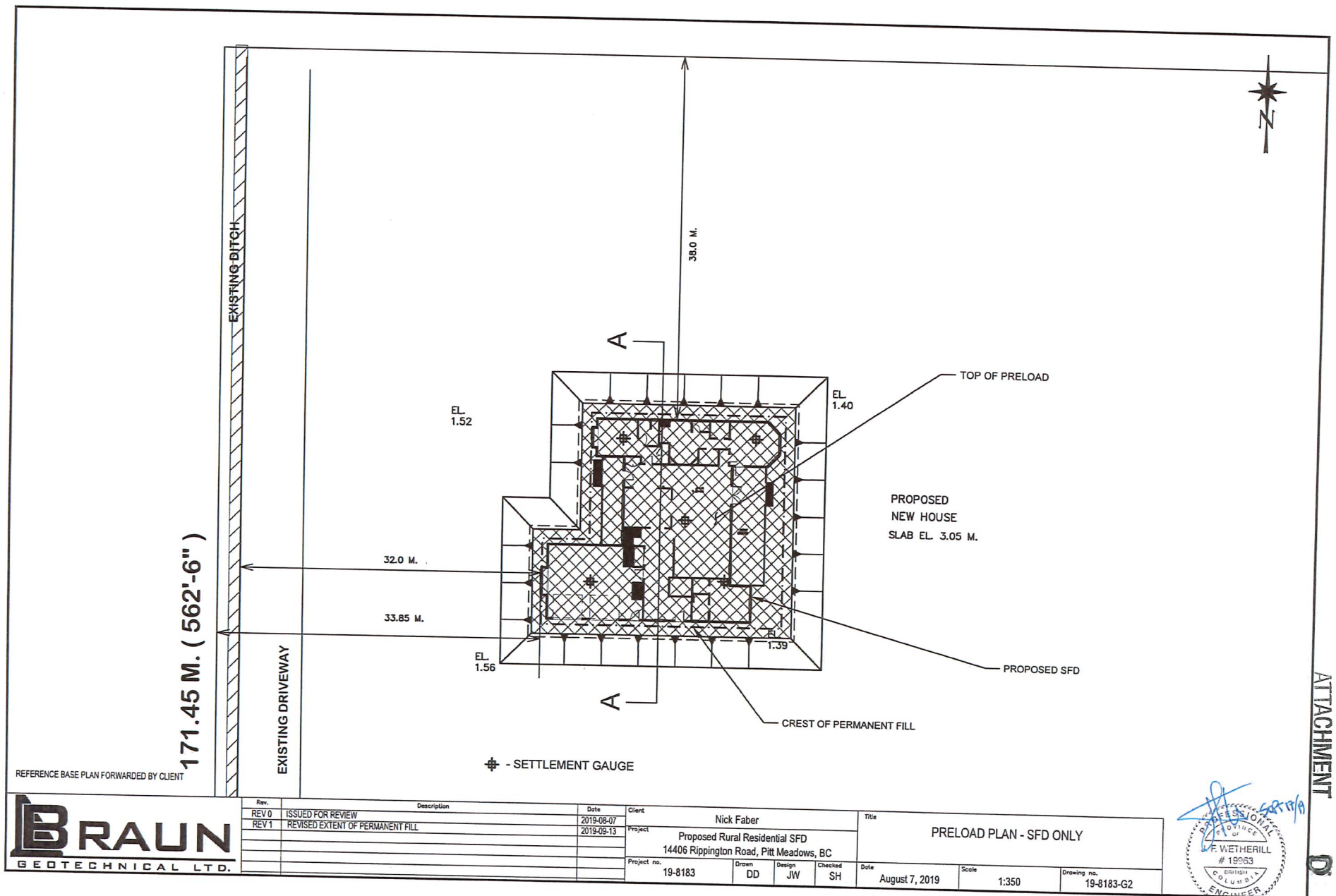


**Braun Geotechnical Ltd.**

  
Sonmy Singha, P.Eng.  
Geotechnical Engineer

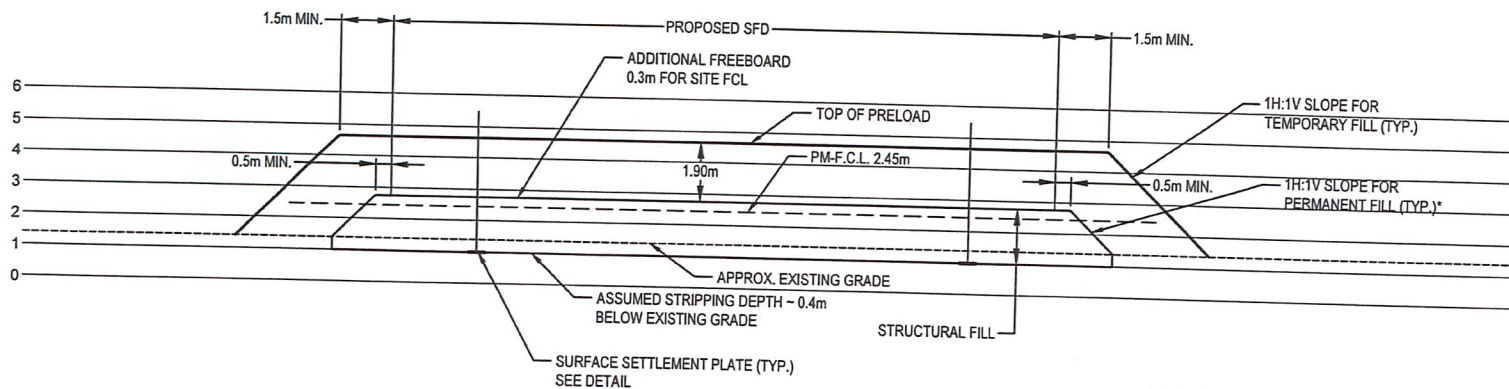
Encl: Preload Plan 2019-09-13  
ESC Plan 2019-09-17

z:\2019 projects\19-8183 custom home - 14406 rippington road, pitt meadows, bc\structural fill letter 19-8183 2019-09-17.docx



ATTACHMENT





SECTION A-A

LEGEND

PM-F.C.L. - FLOOD CONSTRUCTION LEVEL  
(PITT MEADOWS RURAL FLOODPLAIN BY-LAW 2384)

\* ASSUMES 2.5H:1V PERMANENT SLOPES (OR FLATTER)



Rev.	Description	Date	Client	Title
REV 0	ISSUED FOR REVIEW	2019-08-07	Nick Faber	PRELOAD SECTION
REV 1	REVISED EXTENT OF PERMANENT FILL	2019-09-13	Project Proposed Rural Residential SFD 14406 Rippington Road, Pitt Meadows, BC	
			Project no. 19-8183	
			Drawn DD	
			Design JW	
			Checked SH	
			Date August 7, 2019	
			Scale 1:150	
			Drawing no. 19-8183-G3	



SFD Preload and Monitoring Specifications:

1.0 Work Included

The contractor shall provide all necessary labour, materials and equipment to carry out the work, including the following:

- Construction of site fills and preloads completed as shown on the drawings and as specified including all related works.  
See Architectural Drawings for layout coordinates of the building.
- Necessary temporary erosion control measures including silt fencing and temporary drainage swales as required.
- Necessary steps required to protect instrumentation and appurtenances from damage and disturbance due to any causes including on-site operations, vandalism and weather.
- Repair or replace any instruments that are damaged or disturbed as a result of the contractor's operations or failure to provide adequate protection.
- Co-operate fully with the Geotechnical Engineer and provide all reasonable assistance as necessary for instrument readings and measurements.
- Provide "As-Built" site plan surveyed by a registered BC Land Surveyor (BCLS) at completion of preload fill placement.
- Obtain settlement gauge readings and measurements of fill thickness and levels at intervals specified below.

2.0 Execution

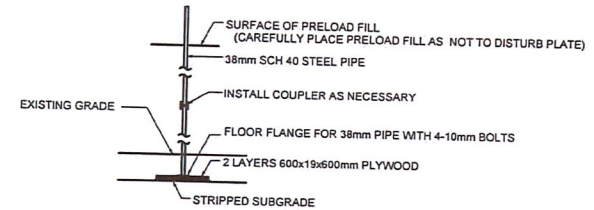
- The work shall be carried out in accordance with applicable bylaws and regulations
- The contractor shall submit details of his proposed construction schedule, construction methods and equipment to the Geotechnical Engineer prior to construction.
- Establish survey benchmark outside the influence of the subject preload or any other preloads in the area.
- Strip subgrades and obtain field review by the Geotechnical Engineer.
- Place Settlement gauges at the locations shown on the attached plan. Measure gauge pipe lengths, base and top elevations at time of installation.
- Construct site preload fills to finished lines and levels shown on the drawings in a single stage. Consideration should be given to placement of permanent fills to at least 300mm above proposed slab on grade level to account for anticipated settlements. Additional permanent fill may be required following preload removal based on actual settlements.
- Settlement gauge readings should be obtained initially at the time the gauges are installed and at day 0, 3, 7, and 14 following installation of site fills to the specified level. Settlement gauges are typically surveyed once every two weeks after the initial monitoring period. Survey for gauge monitoring should be carried out using a closed loop level rod survey to an accuracy of  $\pm 2\text{mm}$ . BCLS preferred but not essential for gauge monitoring.
- Rainwater run-off shall be controlled at all times by sloping site grades as necessary to avoid ponding and erosion.
- Temporary drainage measures are to be implemented such that surface run off does not discharge onto adjacent properties.
- Immediately after placement of fill is complete a survey of the preload fill area should be carried out by a registered BC Land Surveyor (BCLS). The location of the fill placed with respect to the property lines as well as the location of instrumentation should be plotted by the BCLS and forwarded to Braun Geotechnical for review.

3.0 Materials

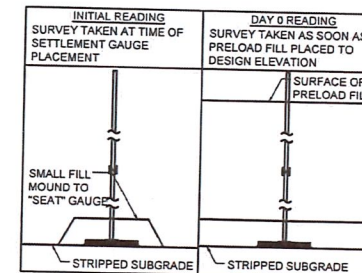
- Permanent site fills below grade supported areas should typically consist of clean, free draining, well-graded sand and gravel with less than 5% fines (percent passing No. 200 sieve). Silty fill may also be used as permanent fill, subject to review and acceptance of the material and site conditions by Braun Geotechnical. Permanent site fills should be compacted in maximum 300 mm thick lifts to at least 95% Modified Proctor Maximum Dry Density (MPD). Compaction of the initial and second lifts should be carried out using placement equipment to avoid potential for subgrade disturbance.
- Preload fill materials including consideration for use of excavated silty soils as preload material would be subject to review and acceptance of the material and site conditions by Braun Geotechnical.

4.0 Post - SFD Preload

- On successful completion of the preload, the material should be moved to ancillary structure areas on prepared structural fill platform and spread out a minimum 0.6m thickness. Monitoring of this surcharge fill is not required.
- Stockpiling of preload fills on the structural fill platform is not recommended.



SURFACE SETTLEMENT GAUGE DETAIL (NTS)



Rev.	Description	Date	Client
REV 0	ISSUED FOR REVIEW	2019-08-07	Nick Faber
REV 1	REVISED EXTENT OF PERMANENT FILL	2019-09-13	
			Project
			Proposed Rural Residential SFD
			14406 Rippington Road, Pitt Meadows, BC
			Project no.
			19-8183
			Drawn
			DD
			Design
			JW
			Checked
			SH

Title			
PRELOAD SPECIFICATIONS			
Date	August 7, 2019	Scale	NTS
Drawing no.	19-8183-G4		





**Ashley Seed**

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**From:** ALC Soil Enquiries ALC:EX <ALC.Soil@gov.bc.ca>  
**Sent:** September-27-19 11:47 AM  
**To:** Ashley Seed  
**Subject:** RE: Soil Permits

Good morning Ashley,

I'm glad I could help!

You are correct that the *ALR Use Regulations* only mentions the resulting elevation after the placement of fill or removal of soil must be consistent with the minimum elevation level established by the local government.

So long as the applicant is meeting that minimum threshold and the total area from which soil is removed or on which fill is placed is 1,000 m<sup>2</sup> or less in relation to the principal residence, they are consistent with the *ALR Use Regulations*.

Cheers,

**Jenny Huynh**

Soil Resource Technician | Provincial Agricultural Land Commission  
201-4940 Canada Way, Burnaby BC, V5G 4K6 | T 778-572-1995  
<http://www.alc.gov.bc.ca>

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**From:** Ashley Seed [mailto:ASeed@pittmeadows.ca]  
**Sent:** Thursday, September 26, 2019 6:16 PM  
**To:** ALC Soil Enquiries ALC:EX  
**Subject:** RE: Soil Permits

Hey Jenny

Thanks for connecting me with Lindsay!

I have a question related to a soil permit application I'm working on- they are in the ALC but are consistent with Part 5 of the ALR regulation (they have provided an email from Saba from your office with verification) they are bringing in structural fill for a the build of a new primary residence to bring the elevation up to the flood construction height but they are planning on adding .3m over and above the required elevation in our bylaw of 2.45....the application will be going before our council but I just wanted to make sure that doesn't put them outside the exemptions for you guys? I checked your regulations and I found specifics for minimum elevations but not maximum....your insight would be really appreciated.

Thanks so much!

Ashley Seed | Engineering Technician

**COUNCIL POLICY C030**

13 - Planning &amp; Development

**Geotechnical Report Guidelines**

Effective Date: October 2, 2007

Revised Date: July 3, 2012

Reaffirmed Date: July 21, 2015

**1. Purpose**

The City is relying on the geotechnical engineer's report to avoid, or at least mitigate as specified, any damage to property and/or injury to persons from occurring as a result of geotechnical concerns relating to proposed development.

This policy provides information to prospective applicants and their engineering professionals on when geotechnical reports are required and sets out the standards and requirements to be addressed in those reports.

**2. Policy****Application**

A geological and geotechnical review, report, study or site specific study is required by the City to support Development Permit, Building Permit, and Rezoning or Subdivision applications in areas as determined by the City from time to time.

A geological and geotechnical review may be required when any of the following conditions apply:

- The project is located on or within 15 metres of a natural, existing or proposed slope greater than 20%
- The project proposes to direct storm water to an existing or proposed slope greater than 20%
- The project will require site grading involving more than 500 m<sup>3</sup> or cuts/fills in excess of 1.2 metres in depth or height
- The project will require pre-load or soil consolidation to support a foundation.



### **Level of Safety**

The professional engineer shall consider the following requirements when determining whether a property is “safe” or can be “safely used”:

- The extent of property damage and damage/harm to life and limb which occurs is not likely to be in any way greater than the damage or harm which would occur prior to the development taking place.

A detailed geotechnical review and onsite investigation shall be undertaken by qualified professional geological or geotechnical engineers in order to determine whether the proposed development can occur in a safe manner and to describe mitigation requirements to be employed, where appropriate. The professional shall be guided by the City’s requirement that development shall have a level of safety for any and all geotechnical failures with a 0.5% probability of failure occurring in a 50 year period (a return period of 1:10,000) for applications requiring rezoning, subdivision or development permit approval and a 2% probability of failure occurring in a 50 year period (a return period of 1:2475) for building permit applications.

The City reserves the right to modify this standard to suit the proposed development.

### **Report Requirements**

A geotechnical report shall address the following minimum requirements pertaining to slope and soil stability:

- The professional geotechnical engineer has reviewed all information available to the consultant, including previous geotechnical reports and relevant materials located within the City’s Geotechnical Library. Each report shall describe the specific information reviewed and onsite tests conducted to arrive at the conclusions and recommendations within the report
- Each report shall contain all logs of geotechnical explorations (boring, test pits, trench logs, etc.) conducted on the property, plus a statement explaining the sufficiency in number and depth in order to evaluate site conditions and acquire data to justify all conclusions and recommendations
- The scope and intent of the proposed development
- Statement that there is no net decrease in overall slope and soil stability resulting from the proposed development or works
- Identification, probability and consequences of risks and a statement that slope/soil instabilities will be mitigated by the owner/developer to provide for the safe occupation and use of the development lands and adjacent nearby lands
- Other factors which the professional geotechnical engineer considers relevant to the review, including an assessment of risk, potential consequences, and mechanisms to guarantee ongoing maintenance of slope/soil stabilities over time



- A construction management plan, monitoring and reporting requirements by the professional geotechnical engineer
- Sign and seal each report/letter submitted to the City.

### **Professional Assurances**

The professional geotechnical engineer **MUST** provide in writing the following specific geotechnical assurances **to the City** with each report/letter:

- The professional geotechnical engineer has carried out all necessary surface and subsurface investigations that the Engineer considers necessary to provide the review, design and supervision undertaking being given and adherence to these guidelines
- The professional geotechnical engineer will provide the review, design and supervision such that, in the Engineer's opinion, the site is suitable for the proposed development and the proposed development does not and will not compromise in any way the stability of the soil on-site or soil on lands which are adjacent or nearby, and will not cause or contribute to such soils becoming susceptible to land slip, land slide, rock fall, mud/land flow, debris flow, torrent, erosion, slumping, creeping, settling, avalanches or other such occurrence
- In the professional geotechnical engineer's opinion, in the event of any land slip, land slide, rock fall, mud flow, debris flow, debris torrent, erosion, slumping, settling or other such occurrence, which occurs after the proposed development is completed, the extent of the property damage and damage to life and limb which occurs is not likely to be in any way greater than the damage or harm which would occur prior to the development taking place
- The professional geotechnical engineer's undertaking that he/she is retained by the owner/developer to review, consult, design and fully supervise the construction of the proposed development, and that on completion of the work, he/she will confirm in writing that he/she has fulfilled the review, design and supervision undertakings and the proposed development can be safely used for its intended purpose, taking into consideration future changes which could reasonably occur to the proposed development over time. In the event the retainer is terminated for any reason by the owner/developer, the Engineer shall be obligated to immediately notify the City in writing of that fact
- The professional geotechnical engineer's undertaking that he/she shall notify the City if he/she becomes aware of changes or new information which could affect the outcome of their geotechnical review and/or recommendations.



### **Professional Liability Insurance**

The professional geotechnical engineer shall provide the City with evidence of occurrence based professional liability insurance coverage which does not lapse in the amount of at least \$2,000,000 as provided to their client.

### **Covenants**

The owner/developer may be required by the City to register a covenant against the property title at the Land Titles Office as a notification to future land owners. The covenant will incorporate provisions included in the geotechnical report(s) and indemnify the City against all claims. During the construction phase enforcement of the covenant provisions are the joint responsibility of the owner/developer and the professional geotechnical engineer.

### **Security**

The owner/developer may be required by the City to provide bonding as security for performance of the on-site and off-site construction works and secure the provisions outlined in the geotechnical report(s) pertaining to that construction.

### **Peer Review**

The City may require a professional geotechnical engineer peer review for conformance to good engineering practice and adherence to these guidelines on a case by case basis. The peer review shall be completed by a qualified professional geotechnical engineer engaged directly by the City. Any costs incurred by the City to conduct a peer review shall be borne by the owner/developer. The Engineer engaged by the City shall notify the professional geotechnical engineer and owner/developer in writing of the peer review.



Nick Faber

Subject: FW: Structural Fill.

From: ALC Soil Enquiries ALC:EX [mailto:ALC.Soil@gov.bc.ca]

Sent: August 21, 2019 8:56 AM

To: 'Nick Faber' <jent1@shaw.ca>

Subject: RE: Structural Fill.

Hi Nick,

I apologize for the delay in response. Our department has been dealing with an overwhelming number of inquiries and files at this time. Your patience is greatly appreciated.

In regards to your proposal, the Agricultural Land Commission (ALC) understands:

- You propose to build a 346 m<sup>2</sup> primary residence on 14406 Rippington Road, Pitt Meadows
- You propose to build two ancillary structures to the residence:
  - o 9.3 m<sup>2</sup> septic tanks
  - o A 201 m<sup>2</sup> driveway
- Preload will be removed upon completion of the foundation of the home and will be used to build the driveway
- The 1028 m<sup>2</sup> existing driveway is an right of way easement **necessary** for access to the adjacent property

The above information is consistent with the *Agricultural Land Reserve Use Regulation, Part 5 – Soil or Fill Uses Section 35 (a)(i)*, which states:

#### Permitted soil or fill uses

**35** Subject to section 36 [*prohibited fill*], the removal of soil from, or the placement of fill on, agricultural land for one or more of the following purposes is permitted if all applicable conditions are met:

(a) constructing or maintaining a structure for farm use or for a principal residence if both of the following conditions are met:

**(i) the total area from which soil is removed or on which fill is placed is 1 000 m<sup>2</sup> or less;**

Furthermore, please note, as described in the *Agricultural Land Reserve Use Regulation, Part 5 – Soil or Fill Uses Section 36* states the below materials are prohibited from being used as fill:

#### Prohibited fill

**36** The following must not be used as fill on agricultural land:

(a) construction or demolition waste, including masonry rubble, concrete, cement, rebar, drywall and wood waste;

## Ashley Seed

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**From:** Nick Faber <jent1@shaw.ca>  
**Sent:** October-24-19 1:34 PM  
**To:** Ashley Seed  
**Subject:** FW: Structural Fill.  
**Attachments:** 14406 SITE PLAN #1.pdf; 11406 Main Floor.pdf

Hi Ashley,

This is what I had originally sent to Saba. The site plan attached clearly shows the existing house with the notation that it will be decommissioned.

Thanks  
Nick.

---

**From:** Nick Faber [mailto:jent1@shaw.ca]  
**Sent:** July 15, 2019 8:31 PM  
**To:** 'ALC Soil Enquiries ALC:EX' <ALC.Soil@gov.bc.ca>  
**Subject:** RE: Structural Fill.

Hi Saba,

I've attached the site plan of the proposed principal dwelling and as well the main floor plan of the house.

- The main floor plan of the house is 2,533 sq. ft., plus a 400 sq. ft. bonus room above the garage.
- The structural fill material will consist of a 3" minus gravel and ¾" road mulch. I anticipate the engineer design will require about a 24" preload. The excess preload material when removed, will be using to construct the driveway.
- The site plan doesn't show it, but we will be constructing a driveway from the existing driveway to the attached garage entrance.
- The only ancillary structures that will be installed will be two 5' x 10' septic tanks. The existing house will be decommissioned and no other structures will be built.

If you require any additional information please let me know.

Thanks  
Nick Faber.  
604 – 240-2454

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**From:** ALC Soil Enquiries ALC:EX [mailto:ALC.Soil@gov.bc.ca]  
**Sent:** July 10, 2019 12:32 PM  
**To:** 'Nick Faber' <jent1@shaw.ca>  
**Subject:** RE: Structural Fill.

Hi Nick,

N



14406 RIPPINGTON RD.

LEGAL - LOT B, PL NWP73898

ZONING -- A1

AREA -- 9.9587 Ha. ( 24.61 ACRES )

146.74 M. ( 481'-5" )

HAY FIELD

211.85 M. ( 695'-1" )

256.30 M. ( 840'-11" )

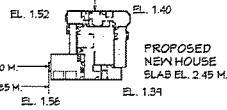
362.7 M. ( 1190'-3" )

171.45 M. ( 562'-6" )

EXISTING DITCH

EXISTING DRIVEWAY

RIPPINGTON RD.



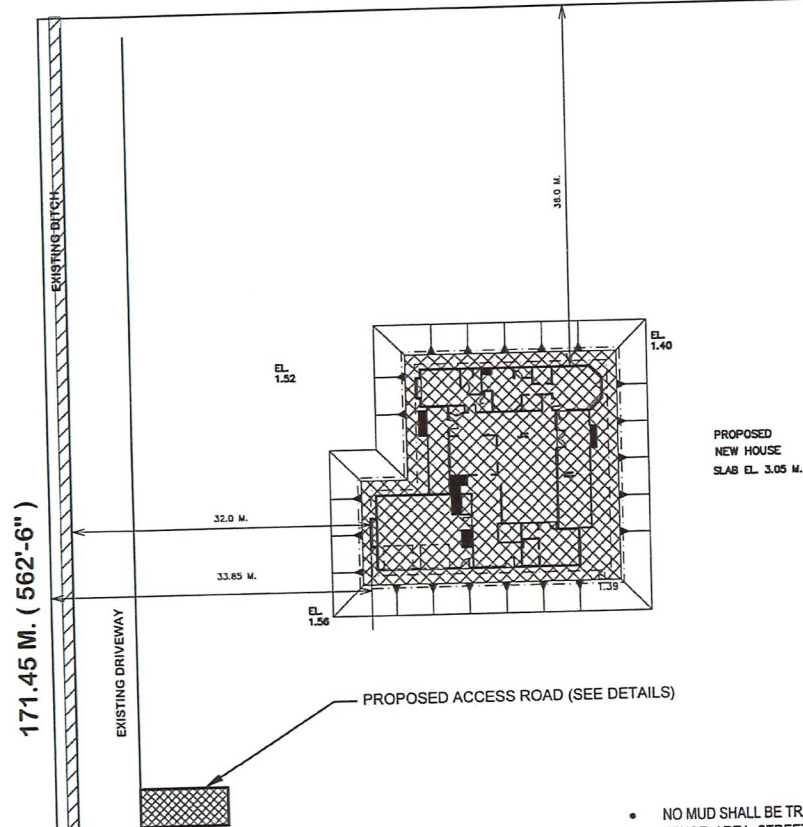
EXISTING HOUSE TO BE  
DECOMMISSIONED

EXISTING DITCH

401.76 M. ( 1318'-1" )



256.30 M. ( 840'-11" )



LEAVE AS MUCH EXISTING VEGETATION IN PLACE AS PRACTICAL DURING BUILDING CONSTRUCTION

- NO MUD SHALL BE TRACKED OUTSIDE OF THE CONTRACTORS FENCE AREA. STREET SWEEPERS SHALL BE CONTRACTED AS REQUIRED AND MONITORING OF THE ROADS SHALL BE CARRIED OUT BY THE CONTRACTOR. NO FLUSHING OF ROADS IS PERMITTED. IN DRY PERIODS, APPROPRIATE DUST SUPPRESSION MEASURES SHALL BE UNDERTAKEN.

REFERENCE BASE PLAN FORWARDED BY CLIENT

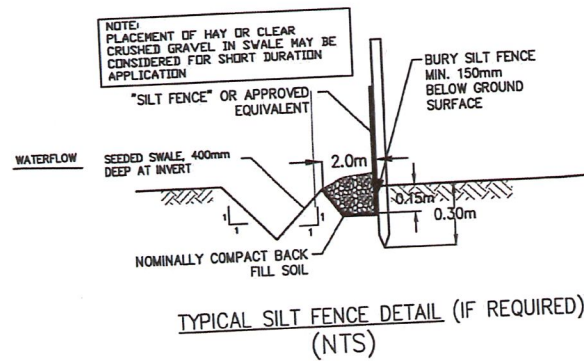
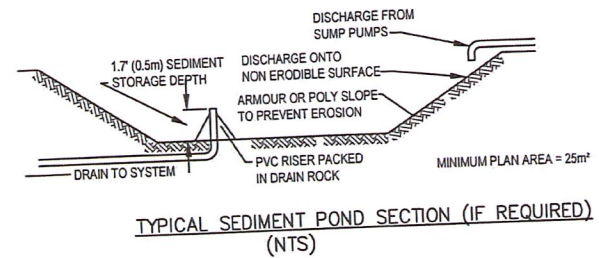
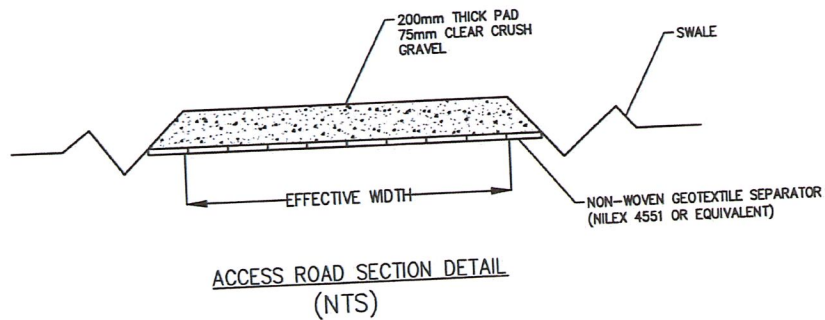
**BRAUN**  
GEOTECHNICAL LTD.

Rev.	Description	Date
REV 0	ISSUED FOR REVIEW	2019-08-21
REV 1	REVISED BASE PLAN	2019-09-17

Client	Nick Faber		
Project	Proposed Rural Residential SFD 14406 Rippington Road, Pitt Meadows, BC		
Project no.	19-8183	Drawn	DD
		Design	JW
		Checked	SS

Title		EROSION AND SEDIMENT CONTROL PLAN		
Date	August 20, 2019	Scale	1:500	Drawing no.
				19-8183-ESC-02





**BRAUN**  
GEOTECHNICAL LTD.

Rev.	Description	Date	Client	Title
REV 0	ISSUED FOR REVIEW	2019-08-21	Nick Faber	EROSION AND SEDIMENT CONTROL DETAILS
REV 1	REVISED BASE PLAN	2019-09-17	Proposed Rural Residential SFD 14406 Rippington Road, Pitt Meadows, BC	
			Project no. 19-8183	Drawn DD Design JW Checked SS Date August 20, 2019 Scale 1:150 Drawing no. 19-8183-ESC-03





# NOTES:

## 1. Sediment Control

- 1.1. The Owner and/or Site Contractor are responsible for all erosion and sediment control methods on site, in accordance with the City of Pitt Meadows and Land Development Guidelines for the Protection of Aquatic Habitat manual published by BC Ministry of Water, Land and Air Protection, and Fisheries and Oceans Canada (available on line through the following website: <http://www.dfo-mpo.gc.ca/Library/165353.pdf>).
- 1.2. All work shall be undertaken and completed in such a Manner as to prevent the release of sediment laden water into any water course, storm sewer, or drainage system.
- 1.3. The erosion and sediment control works shall remain in place and shall be maintained until sediment laden water from the construction activities is no longer generated.
- 1.4. No sediment laden water from the work site shall be pumped out or otherwise discharged directly to a storm sewer system, water course, or other drainage system.
- 1.5. Sediment Ponds and/or mechanical filtration equipment may be required to meet the discharge from the property.

## 2. Reviews

- 2.1. Once the erosion and sediment control works have been completed, and before the start of any other on-site construction, the erosion and sediment control works shall be reviewed by Braun Geotechnical to ensure that they are installed and constructed in accordance with the approved drawings. Any deficiencies in the sediment control works shall be corrected before proceeding with any other on-site construction.
- 2.2. Throughout the duration of the project daily reviews of all components of the erosion and sediment control works shall be conducted by the contractor to verify that they are functioning properly and the inspections shall be documented in a log book. During periods of significant rainfall, Braun Geotechnical should be contacted to carry out field reviews on a minimum weekly basis to review that the sediment control works are functioning properly.
- 2.3. If on site detention of water is deemed necessary by Braun Geotechnical, details of the proposed facility would be provided.

## 3. Monitoring and Sampling (If Required)

- 3.1. Dip tests shall be taken at the discharge point for the sediment control works and screened by turbidity testing for NTU's and pH:
  - Within four hours of the initial discharge.
  - Weekly, except where there is no discharge during the week.
  - During or immediately after the significant rainfall event (25 mm within 24 hrs)

If NTU exceeds 20 over background (measured at the nearest stream receptor), storm water samples shall be collected in approved sample bottles. The samples shall be delivered or sent to an approved laboratory to be analysed for total suspended solids (TSS) and pH determination.
- 3.2. The total suspended solids (TSS) levels must not be greater than the following:
  - i.) 25mm/L during the summer months (May 15-Oct 15)
  - ii.) 75mm/L during the winter months (Oct 15-May 15)

and pH must be between 6.0 and 9.0.
- 3.3. If the measured TSS levels exceed the seasonal limits or if the pH is less than 6.0 or greater than 9.0, the Contractor may be required to cease activities until appropriate remedial measures have been undertaken and the TSS levels are less than the above limits.

## 4. Maintenance

- 4.1. Should any part of the sediment control works become damaged or blocked or in any other way not function properly, the Contractor shall take all steps necessary to repair and/or remove such damage, or blockage, or other cause of malfunction, and shall immediately contact Braun Geotechnical (Consultant).
- 4.2. All storm drains within the vicinity of the site shall be inspected daily. Any sediment accumulated by the storm drain inlet protection device shall be removed. The drain protection device shall be cleaned and replace when they have become blinded by sediment.
- 4.3. Gravel access pad to be checked daily and maintained as required by the Contractor.

## 5. Enforcement

- 5.1. Failure to implement an Erosion Sediment Control Plan or comply with the Erosion Sediment Control Criteria may result in a Stop Work Order. This responsibility is with the Project Environmental Monitor (Braun Geotechnical).



Rev.	Description	Date	Client				Title			
REV 0	ISSUED FOR REVIEW	2019-08-21	Nick Faber				EROSION AND SEDIMENT CONTROL NOTES			
REV 1	REVISED BASE PLAN	2019-09-17								
			Project				Proposed Rural Residential SFD 14406 Rippington Road, Pitt Meadows, BC			
			Project no.				Date			
			19-8183				August 20, 2019			
			Drawn DD				Scale			
			Design JW				NTS			
			Checked SS				Drawing no.			
							19-8183-ESC-04			



 Provincial Highway/Translink  
 City Truck Routes  
 Limited Use Truck Route (Max 26,100 Kg)

