



TOWN OF VIEW ROYAL

JOINT ADVISORY COMMITTEE MEETING TUESDAY, JANUARY 25, 2022 @ 7:00 pm VIEW ROYAL MUNICIPAL OFFICE- TEAMS MEETING

AGENDA

In light of the COVID-19 pandemic, this Joint Advisory Committee meeting will be held electronically. Should you wish to listen to this meeting by telephone, please use the following phone number and conference ID:

Phone: 778-402-9227

Conference ID: 145 700 047#

If you have any questions, please contact the Administration Department at 250-479-6800.

1. **CALL TO ORDER**
2. **APPROVAL OF AGENDA**
(motion to approve)
3. **MINUTES, RECEIPT & ADOPTION OF**
4. **CHAIR'S REPORT**
5. **PETITIONS & DELEGATIONS**
6. **BUSINESS ARISING FROM PREVIOUS MINUTES**
7. **R E P O R T S**
 - 7.1 **STAFF REPORTS**
 - a) **Rezoning Application 2021/03 – 10 Erskine Lane**
 1. Report dated January 6, 2022 from the Senior Planner, presented at January 11, 2022 Committee of the Whole meeting Pg. 2-63
 2. Staff Presentation..... Pg.64-77
 3. Comments from the Applicant
8. **CORRESPONDENCE**
9. **NEW BUSINESS**
10. **CLOSED MEETING RESOLUTION**
11. **TERMINATION**



TOWN OF VIEW ROYAL PLANNING & DEVELOPMENT REPORT

TO: Committee of the Whole **DATE:** January 6, 2022
FROM: J. Chow, MCIP, RPP **MEETING DATE:** January 11, 2022
Senior Planner **FILE NO.:** 3360-20-2021/03

REZONING APPLICATION 2021/03 – 10 ERSKINE LANE

RECOMMENDATION

THAT the January 6, 2022 report from the Senior Planner titled “Rezoning Application 2021/03 – 10 Erskine Lane” be received for information.

CHIEF ADMINISTRATIVE OFFICER’S COMMENTS

I concur with the recommendation.

DIRECTOR OF DEVELOPMENT SERVICES’ COMMENTS

I concur with the recommendation.

DIRECTOR OF ENGINEERING’S COMMENTS

I concur with the recommendation.

PURPOSE OF REPORT

To introduce a rezoning application to amend the *CD-12: Comprehensive Development (Erskine Lane)* zone to increase the building height, floor space ratio and number of multifamily residential units for the property at 10 Erskine Lane.

BACKGROUND

The 2774 m² site is located before the Erskine Lane cul-de-sac as shown in Figure 1. It is bordered by townhouses at 14 Erskine Lane on the west and the Galloping Goose Regional Trail on the south. Trans-Canada Highway is further to the east. There are two detached dwellings on the property, which was rezoned to the site-specific *CD-12: Comprehensive Development*

(*Erskine Lane*) zone in 2008 to permit apartment use. The property was rezoned under the previous Official Community Plan.



Figure 1.

When the property was rezoned in 2008, the following were identified as desirable community amenity contributions:

1. *Upgrade of the connection to the Galloping Goose Trail to the east of the Land, including a 1.8 metre brushed-finished sidewalk between the land and the trail connection. Trail connection is to extend from the paved road surface to the Galloping Goose trail and is to be 2.0 metres in width and constructed to a standard acceptable to the Director of Engineering.*
2. *Construction of a 1.8 metre brushed-finish concrete sidewalk [from] the frontage of the land and continuing to Watkiss Way.*

The rezoning (Land Use Bylaw, 1990, No. 35, Amendment Bylaw No. 708, 2008) and Development Permit 04-08 were approved on the same date on June 3, 2008. The community amenities were secured in a development agreement covenant to be registered prior to development permit issuance. It appears that the Development Permit was never issued, and therefore the covenant was not registered. The development permit approval lapsed after 24 months. Processes at Town Hall have substantially changed since this time to avoid this situation occurring again and covenants are now required in registerable format before adoption of bylaws.

The applicant introduced the current proposal at the November 9, 2021 Committee of the Whole meeting. Committee members discussed community feedback, amenities from prior applications, the in-progress traffic impact assessment, and the unit mix.

PROJECT INFORMATION

The proposal is to amend the *CD-12: Comprehensive Development (Erskine Lane)* zone to increase the permitted building height, floor space ratio and number of multifamily residential

units. The rezoning application addresses zoning issues of land use, density, and standards for lot coverage, percentage of impervious surface, the height and siting of buildings in general. A development concept has been provided but consideration of the specific design would only be formally considered by Council in a development permit application if the rezoning is approved.

The following attachments to this report provide more detailed information on the proposal:

1. Subject Property Map
2. Subject Property Orthophoto
3. Letter from Applicant
4. Development Concept Architectural Plans
5. Civil Drawing
6. Traffic Impact Assessment

Development Concept

The development concept (Attachment 4) is for a five-storey 43-unit apartment building with the top floor set back as shown in Figures 2-3. A driveway at the east end of the building would provide access to underbuilding and surface parking.

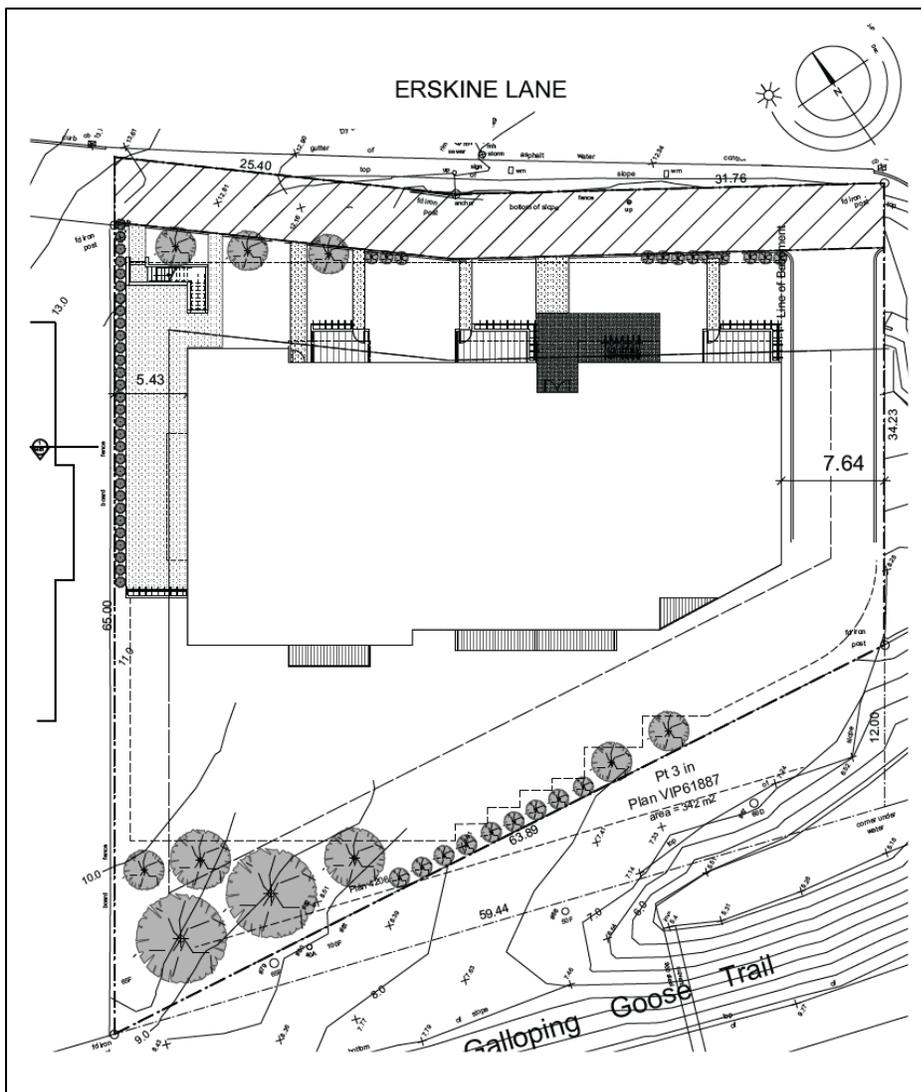


Figure 2. Site Plan



Figure 3. Front and side elevations
Site Data Summary

Site Area	2774 m ²
Floor Area	3851.7 m ²
Floor Space Ratio	tbc
Units/Hectare	tbc
Building Height	17.5 m
Storeys	5
Site Coverage	tbc
Units	43
Vehicle Parking	53* (53 required)
Accessible Parking	1 (1 required)
Secure Bicycle Parking	43 (43 required)

*includes accessible parking space

Unit Mix

Units by number of bedrooms	Proposed
0-bedroom units	5
1-bedroom units	18
2-bedrooms units	20

Official Community Plan Context

The site is designated Mixed Residential in the Official Community Plan, which supports multifamily use. It is on the periphery of the Hospital Neighbourhood Centre and would provide additional residential density to support the commercial and employment components of the centre. The proposal is generally in keeping with other OCP policies, including the following:

- The development promotes complete streets through the provision of additional pedestrian and cycling amenities
- The development concept is street oriented with ground level units having a direct connection to the street
- The building form makes efficient use of limited land
- This site is in a location with multimodal transportation opportunities

Proposed Zone

The proposal is to amend the *CD-12: Comprehensive Development (Erskine Lane)* as follows:

	Existing	Proposed
Principal uses	Residential Apartment	No change
Maximum number of residential units	30	43
Floor Space Ratio	0.85:1	1.38*
Building Height	12m	17.5m
Storeys	Three	Five
Lot Coverage	35%	tbc
Siting of Buildings and Structures from a lot line		
- Front	7.5m	No change
- Rear	10m	5.4m
- Side	7.5m	No change
- Side, Flanking	6m	No change

* FSR and Site Area after road dedication will need to be confirmed.

Design Comment

While the form and character of the development would be formally addressed at the development permit stage, the application provides a level of detail in the development concept to help illustrate the applicant's intent. Council will formally review the form and character of the project through a development permit application after rezoning.

Staff notes the following:

- A context illustration with the townhouses next door should be provided. While the applicant proposes that a hedge be planted, this may not be adequate to address privacy and overlook issues for the Townhouse units.
- Stepping back the upper floor of the building reduces the massing and would add visual interest to the roofline
- The building and parking are sited to preserve a stand of trees at the south end of the property

Environment

The site is not within any Development Permit Areas for the purpose of environmental protection. There are mature fir trees in the southwest corner and along the west property line. The site has been designed to retain the trees in the southwest corner as a buffer to the Galloping Goose

Regional Trail. The trees along the west property line will have to be removed to facilitate the development, but a hedge is proposed to be installed for privacy.

At the southeast corner, the property is separated from the trail by a storm water detention pond that appears to have been formed by the former railbed. Staff recommends native plant restoration in this area. Also, Craigflower Creek is located 50m+ to the south on the other side of the Galloping Goose Trail. The development permit area only applies to land within 30m of the Creek.

A Site Disclosure Statement is not required for this application as the site has been used for residential purposes and there are no indications from the applicant or Town records that the site has a history of Schedule 2 activities (specified commercial or industrial purposes that have the potential to cause contamination).

Community Amenity Contribution

Staff recommends that, subject to agreement between the applicant and Council, a covenant be registered concurrent with fourth reading of the rezoning bylaw to formally secure the community amenity contributions from the 2008 rezoning of this property (to permit 30 apartment units) and that a cash amenity rate of \$4000 per unit as per the Community Amenity Contributions Policy apply to the additional 13 units in the current proposal. Alternatively, a covenant could be registered to secure a cash amenity rate of \$4000 per unit as per the Community Amenity Contributions Policy for the total 43 units proposed. This alternative is not recommended as many Erskine Lane residents have continued to express a desire for the community amenities considered in the 2008 rezoning.

The Community Amenity Contribution Policy target rate is \$4,000 per apartment residential unit, to be provided prior to building permit issuance. For the additional 13 apartment residential units, the voluntary contribution would be \$52,000 minus any tangible community amenity contributions that Council and the applicant agree to. In this case staff recommends native planting on the boulevard and other steep public land adjacent to the Erskine Lane cul-de-sac (Figure 4) as a potential tangible amenity (further discussion in Servicing section of this report).



Figure 4. Erskine Lane cul-de-sac

Official Community Plan Policy *HS1.4 Housing Amenity Contributions* supports a housing amenity contribution to the Town, which could be directed to the CRD Regional Housing Trust Fund. The Community Amenity Contributions policy is for 10% of cash amenities received to be transferred to the CRD Regional Housing Trust Fund to supplement the Town's annual contribution.

BC Transit suggests improving the eastbound bus stop at Watkiss Way / Erskine Lane / Stoneridge Drive intersection by installing a level and accessible platform with a shelter; however, it should be noted a roundabout is proposed for that intersection and the improvements may already be addressed in that project.

Transportation Impact

While the transportation impact assessment (Attachment 7) concludes the proposed development would not significantly impact traffic volumes, the following information is required to fully meet the Town's Transportation Impact Assessment guidelines:

- Commentary on vehicle and bicycle parking
- Brief review of Transportation Demand Management measures

This site has excellent proximity to the Galloping Goose Regional Trail and there may be some TDM measures that can reduce demand for automobile use.

BC Transit supports the application as it would increase density along the Local Transit Network (LTN) transit corridor, helping to increase and sustain transit ridership for Route 22 Vic General/Hillside Centre and Route 39 Westhills/Interurban/Royal Oak/UVic. The LTN service provides connections to local neighborhoods and local destinations as well as to Rapid and Frequent Transit Networks. This service is vital for the use of residents to get to work, school, or local shopping centers.

The Ministry of Transportation and Infrastructure is also reviewing the Traffic Impact Assessment. Ministry approval is required prior to final reading of the rezoning bylaw because the site is within 800m of an intersection of a controlled access highway.

Site Servicing

The requirements of *Subdivision and Development Servicing Bylaw No. 985, 2017* include provision of sidewalks along the site frontages, no net increase in post-development site runoff, and that storm water entering the Town's drainage system will meet the requirements of *Storm Water Regulation Bylaw No. 902, 2015*.

The Engineering Department acknowledges the servicing concept's estimate (Attachment 8) that there is sufficient downstream capacity for the expected sewer flow from the proposed development. Stormwater management will be provided onsite, to be detailed in the development permit.

The additional stormwater drainage loading due to the proposed rezoning is not part of the Town's Master Drainage Plan and DCC program; however, a 2021 drainage analysis undertaken by Colquitz Engineering revealed that the downstream system has sufficient capacity for proposed development under the current OCP land use designation and this current rezoning application. Consequently, no downstream upgrades to the municipal drainage system are required for this rezoning proposal.

The boulevard and other public land along the Erskine Lane cul-de-sac include steep terrain leading to a storm water detention pond abutting the railway bed now used for the Galloping Goose Regional Trail. While the Town's landscape standard for boulevards is grass and trees, in this the context staff recommends the complete removal of invasive species and as a community amenity restoring the lands with native vegetation as a more natural alternative. Armoring the overland drainage course to protect against erosion would be a standard servicing requirement.

Road dedication of approximately 4.8m in depth along the north edge of the property is required because the width of the Erskine Lane road allowance is substandard. Road dedication was also required for recent rezonings across the street at 9 Erskine Lane and to a smaller extent at 7 Erskine Lane. It is recommended that a covenant be registered concurrent with the rezoning to ensure that the dedication is provided prior to building permit issuance.

NEXT STEPS

The following items and any other issues identified by the Committee should be addressed for the application to move forward:

1. Clarification of site area and floor space ratio after road dedication
2. Agreement with the applicant on community amenity contributions
3. Confirm if Watkiss Way bus stop improvements are part of the Watkiss Way/Erskine Lane/Stoneridge Drive roundabout as a potential tangible community amenity
4. Further Traffic Impact Assessment information on
 - a. Vehicle parking
 - b. Bicycle parking
 - c. Opportunities for Transportation Demand Management
5. A context illustration with the townhouses next door should be provided

RECOMMENDATION

THAT the January 6, 2022 report from the Senior Planner titled "Rezoning Application 2021/03 – 10 Erskine Lane" be received for information.

SUBMITTED BY: 

J. Chow MCIP RPP, Community Planner

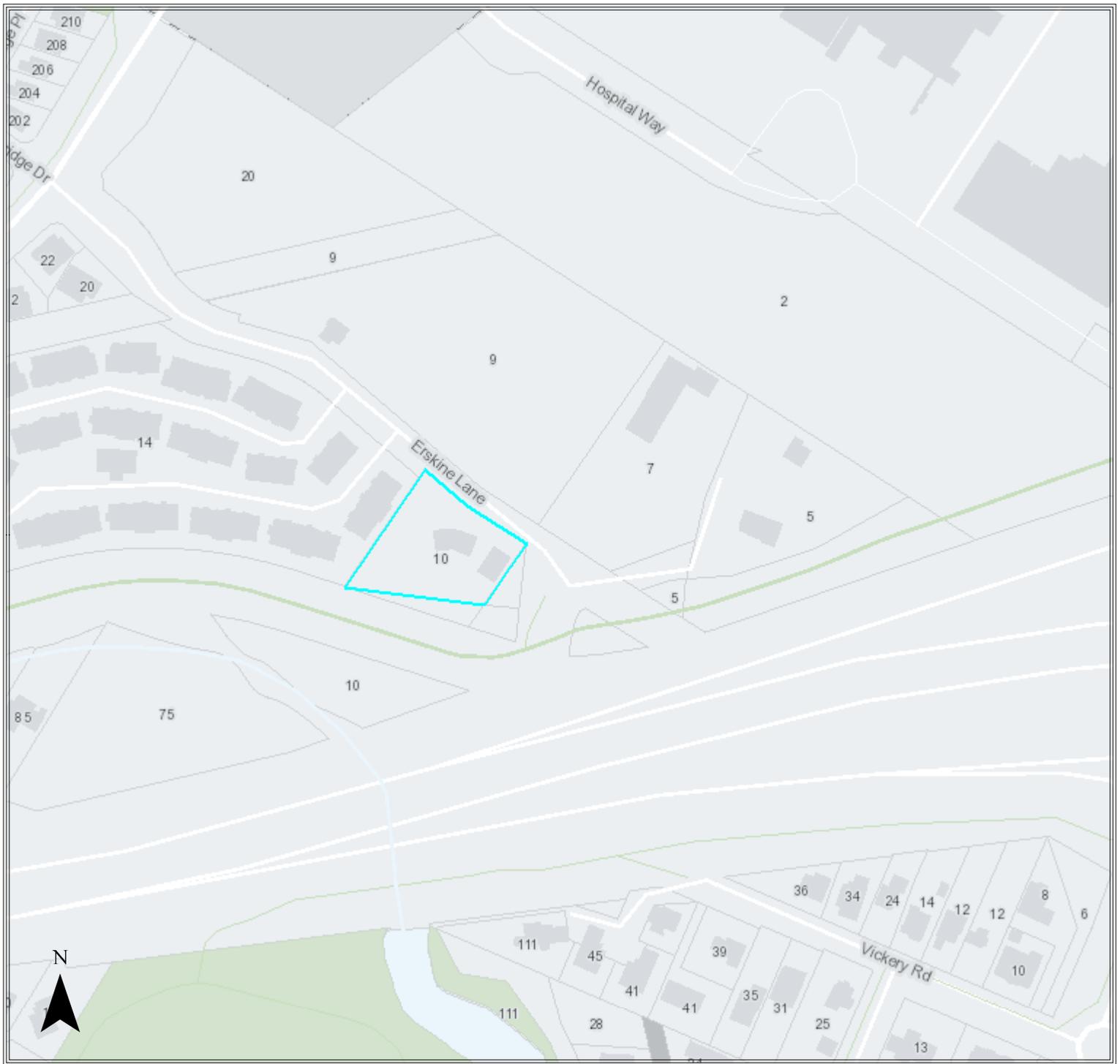
REVIEWED BY: 

L. Chase MCIP RPP, Director of Development Services

ATTACHMENTS:

1. Subject Property Map
2. Subject Property Orthophoto
3. Letter from Applicant – Wiser Projects, October 6, 2021 (4 pages)

4. Development Concept Architectural Plans – Parsi Development (11 pages)
5. Civil Drawings – Westbrook Consulting, October 1, 2021
6. Traffic Impact Assessment – Watt Consulting, November 23, 2021 (35 pages)



ArcGIS Web Map

Parcel information

Scale 1:2,500

The Town of View Royal does not guarantee the accuracy of any plans or drawings supplied. Proceed with caution and hand dig as necessary to confirm underground infrastructure locations.





Legend

Notes



1: 1,390

Important: This map is for general information purposes only. The Capital Regional District (CRD) makes no representations or warranties regarding the accuracy or completeness of this map or the suitability of the map for any purpose. This map is not for navigation. The CRD will not be liable for any damage, loss or injury resulting from the use of the map or information on the map and the map may be changed by the CRD at any time.

70.6 Meters

35.3

0

70.6



Wiser Projects

Competent. Creative. Committed.

View Royal Town Hall
45 View Royal Avenue
Victoria, BC V9B 1A6

October 6, 2021

RE: Rezoning application for 10 Erskine Road

Dear Mayor and Council

We are pleased to submit the following Rezoning application for 10 Erskine Lane on behalf of Parsi Development, with the goal of bringing a new 5-storey, 43-unit rental project to View Royal. The site was previously rezoned in 2010 but the project was unable to be completed at that time; the plans have been revised with two added storeys and an additional 13 units to meet the growing demand for secured rental in the community. The following letter provides a project summary and rationale and submission details.

Project Summary

The project is located at 10 Erskine Lane, which is to the north of the Trans-Canada Highway and adjacent to the Galloping Goose trail. The project was rezoned in 2010 to the CD-12 Zone, which allowed for 3 storeys and 30 units with underground parking.

The building design has been updated to include 5 storeys and 43 units, ranging from studios to 2-bedrooms. Vehicular and bicycling parking requirements are met, with 53 stalls of vehicle parking and 43 Class I bicycle parking stalls and a 6-space rack at the entrance of the building.

The project is in a well-serviced area, with easy access to the Galloping Goose Regional Trail; bus stops on Watkiss Way (300m) and additional bus servicing at Victoria General Hospital; and commercial services such as Quality Foods, a pharmacy, and medical offices and banking located within approximately 1km or a 15-minute walk. Several local parks are nearby, as well as View Royal Park across the Trans-Canada Highway.

Project Rationale and Policy Support

This project will offer 43 units of attainable rental homes for View Royal, and is supported by a range of policies. Table 1 below summaries those supporting policies:

Table 1: Project Policy Summary

Policy Document	Policy	Project Rationale/Comments
OCP: Land Use	GOAL: Create an inclusive community that provides housing and transportation options, and services and and facilitates for families and individuals of diverse backgrounds, cultures, ages and economic means	This project offers a range of unit sizes suitable for individuals, couples, seniors, or young families.
	POLICY LU 4.2: Support walking, cycling, and transit; and LU 4.4 High quality development	This project is ideally located near many amenities, services, and transportation options, reducing the need for personal vehicle use. The design follows many urban design best practices and will be an attractive addition to the street.
	LU 5.2: Sustainable development patterns	This project is sensitive infill in an area that promotes walking, cycling, and transit.
	LU 5.4: Urban growth boundary	This project is within the UGB
OCP: Transportation and Community	Objective TR1: Recognize walking, cycling and transit as priority modes of transportation in View Royal.	This project promotes walking, cycling and transit due to its proximity to amenities, services, and cycling infrastructure.
OCP: Housing	Objective HS1A: Create and maintain a range of housing types and tenures to meet the needs of current and future View Royal residents, including families, seniors, people with disabilities and ow-income households.	This housing project offers rental homes that are an alternative to large single-family homes. The units would be suitable for a range of demographics, including seniors and families
	Objective HS1B: Work toward an increase in the supply of housing that is affordable for young families, and encourages existing residents to remain in the community as their lifestyles and income levels change.	While these units will be market units, their size and scale make them attainable for a range of demographics and income levels.
	Policy HS1.1: Range of Housing Types	This project offers a range of housing types.
	Policy HS1.2: Age in Place	The unit sizes in this project would be suitable for seniors.
	Policy HS 1.7: Multi-unit housing	This project offers modest density in the form of multi-unit apartment building, which is justified based on its proximity to services and amenities.

	Policy HS 1.10 Affordability through design	The smaller unit sizes and economy of multi-family buildings will make these units more attainable than single family homes.
	Objective HS-2 Promote a more sustainable settlement pattern by encouraging the location of new compact housing near amenities, services and transit in the Change Areas, and within existing residential areas inside the urban containment boundary as targeted infill development.	The location of this project offers residents the option to walk, cycle, or transit to many of their needs, and avoids the ecological impact of greenfield development.
	Policy HS2.2 Infill housing	This project targets a range of demographics and is close to parks, schools, and other community amenities. Young/small families would benefit from the project's 2-bedroom units.
OCP - Natural Environment, Energy and Climate Change	Objective NE2: Achieve a balance between the living biological environment and the non-living built-form of the community.	This project is sensitive infill and reduces the impacts on local ecology.
	Policy NE2.11 Urban Growth Boundary	This site is within the Urban Growth Boundary.
	Policy NE4.9 Alternative Transportation	Residents of this site will easily be able to walk, cycle, or transit.
OCP - Economic Development	Policy ED3.1 Local Employees: Ensure an adequate match between housing stock and the housing needs of local employees	The units in this project would benefit a range of types of workers, who may find employment in nearby Victoria General Hospital; retail; and public service sectors.
Community Climate Action Plan (2012)	Policy 2.4.1: Increase Density - Intensity; Decrease Distance between Residential and Employment Areas;	This project is providing a gentle increase in density on a residential street, without changing the character of the street. It is within easy walking and cycling distance to employment and services.

While this project requires a rezoning to increase the allowable height of the project, the Urban Place Designation of Mixed Residential (M-R) allows for an FSR of up to 1.6 for low-rise apartments. The additional height of 5 storeys is not out of context in View Royal or in this area, with several 6+ storey buildings being recently approved and built along the Trans-Canada Highway. The nature of the sloped site also means that the height impact on neighbours and on the street are minimal.

Need

According to View Royal's Housing Needs Assessment Report, View Royal is experiencing a rapid increase in housing costs which is outpacing income growth. Currently, the predominant form of housing is single-family dwellings which are becoming increasingly unaffordable for even median-earning households. View Royal also has an aging population, which may lead to a higher demand for smaller units in accessible areas. This project offers "missing middle" housing, both in terms of typology/density, and in terms of attainability for families, seniors, and individuals.

Parsi Development has been committed to providing missing middle housing in the Capital Regional District for over 15 years. In Langford, they have completed their Casa Bella project and The Piano project, providing condos and townhouses at attainable prices. Parsi is currently working in Colwood to develop several secured-rental projects that also includes significant community amenity contributions. This project at Erskine Lane would provide similar, quality homes for residents of View Royal.

Conclusion

The proposed project at 10 Erskine Lane offers high quality, secured missing middle housing with access to a number of amenities, jobs, and services. The site already allows for a low-rise apartment building, and this rezoning would allow for an additional 13 units of missing middle housing, which are desperately needed in View Royal.

Thank you and please do not hesitate to reach out with any questions or comments.

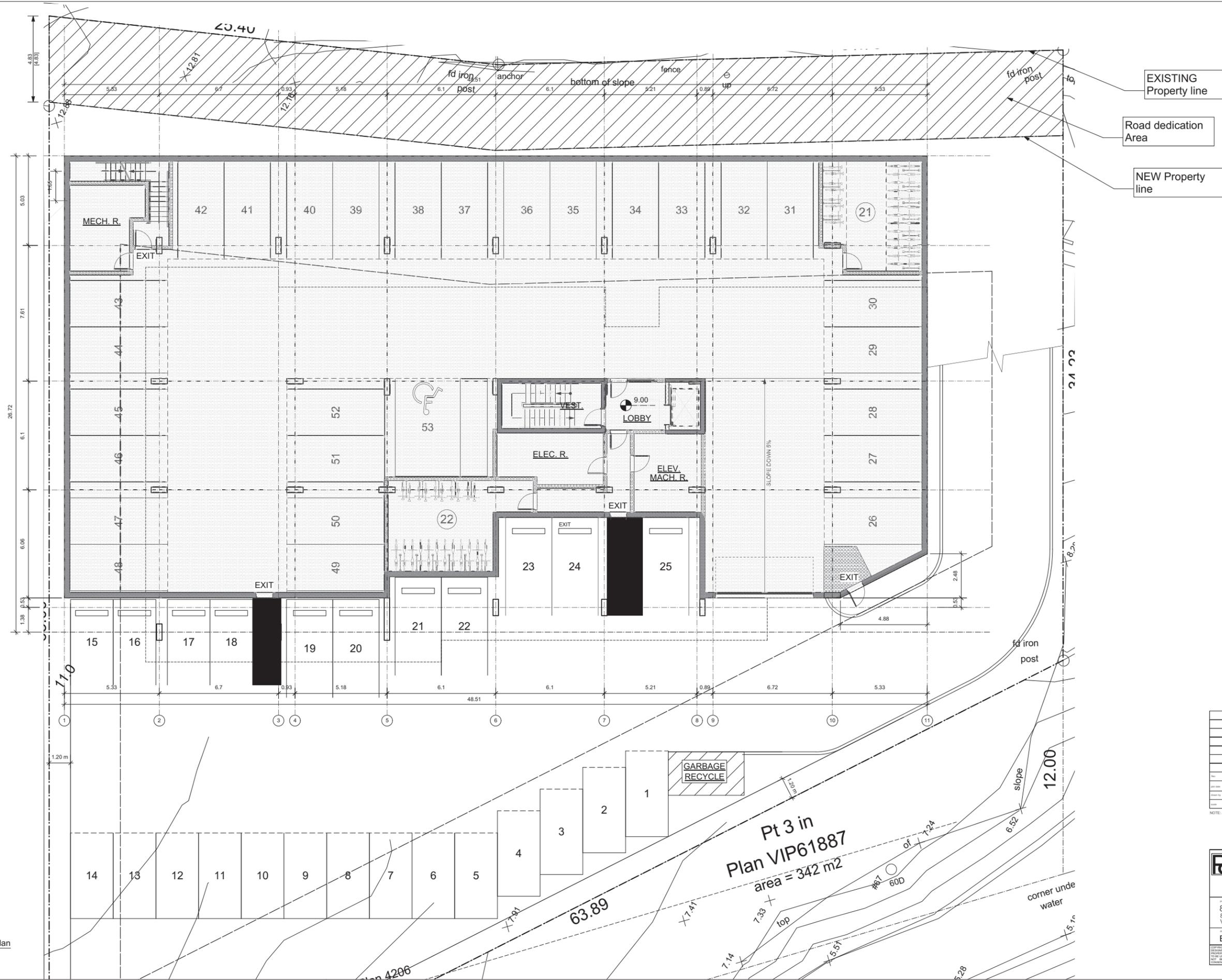


Eleni Gibson

Project Planner, Wiser Projects

p. 250.857.6210

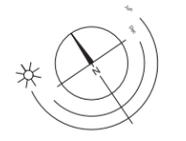
e. eleni@wiserprojects.com



EXISTING Property line

Road dedication Area

NEW Property line



0 2500 5000mm
1:100

No.	Date	Description

Parsi Development Ltd.

8&10 ERSKINE Lane
8&10 ERSKINE Lane
View Royal, BC

Basement Plan

Project No. A201

Scale: 1/8"=1'-0"

DATE: 2024

NOTE: All dimensions are shown in millimeters.

1 Basement Plan
A201 1/8"=1'-0"

Pt 3 in
Plan VIP61887
area = 342 m²



1 Front Elevation- NORTH
A301 3/32"=1'-0"



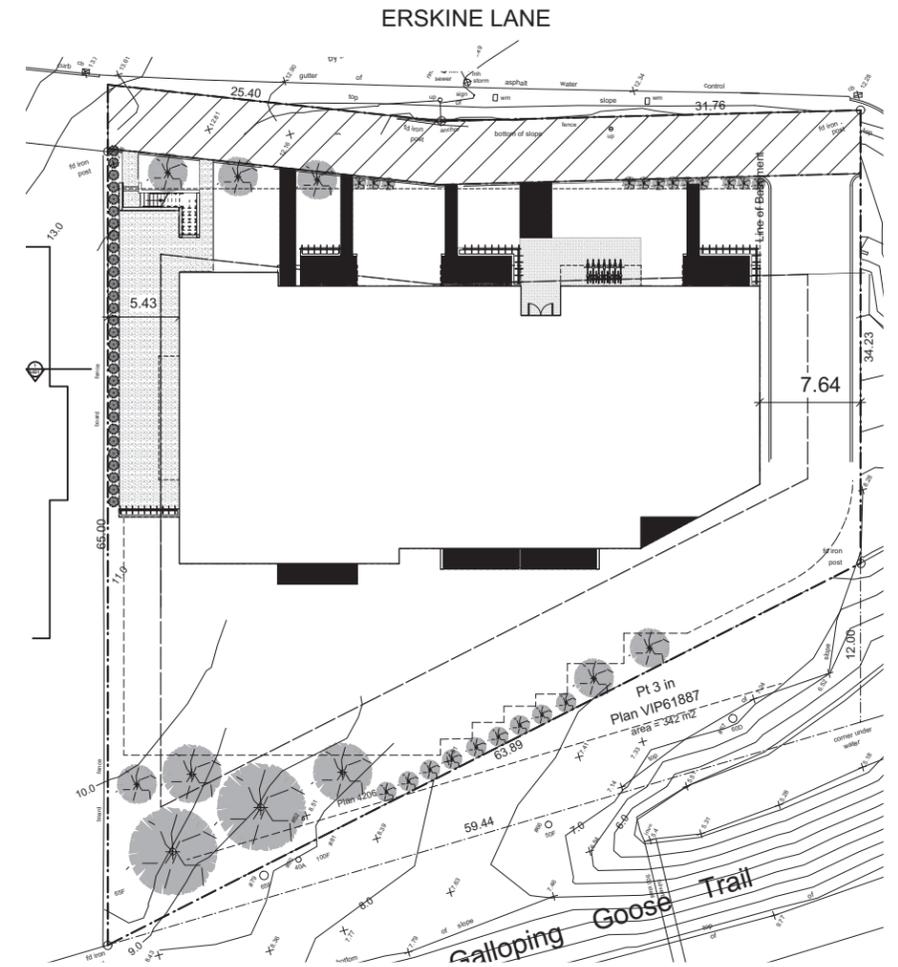
2 Side Elevation - EAST
A301 3/32"=1'-0"



3 Side Elevation - WEST
A301 3/32"=1'-0"



4 Back Elevation - SOUTH
A302 3/32"=1'-0"



1 Front Elevation- NORTH
A301 3/32"=1'-0"

SPATIAL SEPRATION CALCULATION

• OCCUPANCY : GROUP C - RESIDENTIAL

	EXPOSING BUILDING FACE	RATIO L/H	LIMITING DISTANCE	UNPROTECTED OPENING LIMITS	PROVIDED
NORTH	• 637.1 m ² (6 858 s.f.)	44 / 15.7	N/A - Facing street	N/A - Facing street	35.8 % (228.4 m ²)
EAST	• 196.9 m ² (2 120 s.f.)	16.5 / 12.5	7.6 m	75.6% (148.8 m ²)	25.4 % (50 m ²)
SOUTH	• 590.0 m ² (6 353 s.f.)	39 / 16	N/A - Facing Galloping Goose	N/A - Facing Galloping Goose	36.7 % (213.8 m ²)
WEST	• 277.9 m ² (2 992 s.f.)	22 / 12.5	5.4 m	44.8% (124.4 m ²)	31.8 % (88.44 m ²)

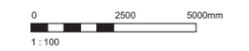
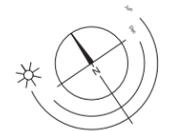


Table 3.2.3.1.-D
Unprotected Opening Limits for a Building or Fire Compartment that is Sprinklered Throughout
Forming Part of Article 3.2.3.1.

Exposing Building Face	Area of Unprotected Opening for Groups A, B, C, D and F, Division 3 Occupancies, %											
	Limiting Distance, m											
Max. Area, m ²	0	1.2	1.5	2.0	2.5	3	4	5	6	7	8	9
10	0	16	24	42	66	100						
15	0	16	20	34	50	74	100					
20	0	16	20	30	42	60	100					
25	0	16	18	26	38	52	90	100				
30	0	14	18	24	34	46	78	100				
40	0	14	16	22	30	40	64	96	100			
50	0	14	16	20	28	36	56	82	100			
60	0	14	16	20	26	32	50	72	98	100		
80	0	14	16	18	22	28	42	58	80	100		
100	0	14	16	18	22	26	36	50	68	88	100	
150 or more	0	14	14	16	20	22	30	40	52	66	82	100

No.	Date	Description	Checked by	Approved by

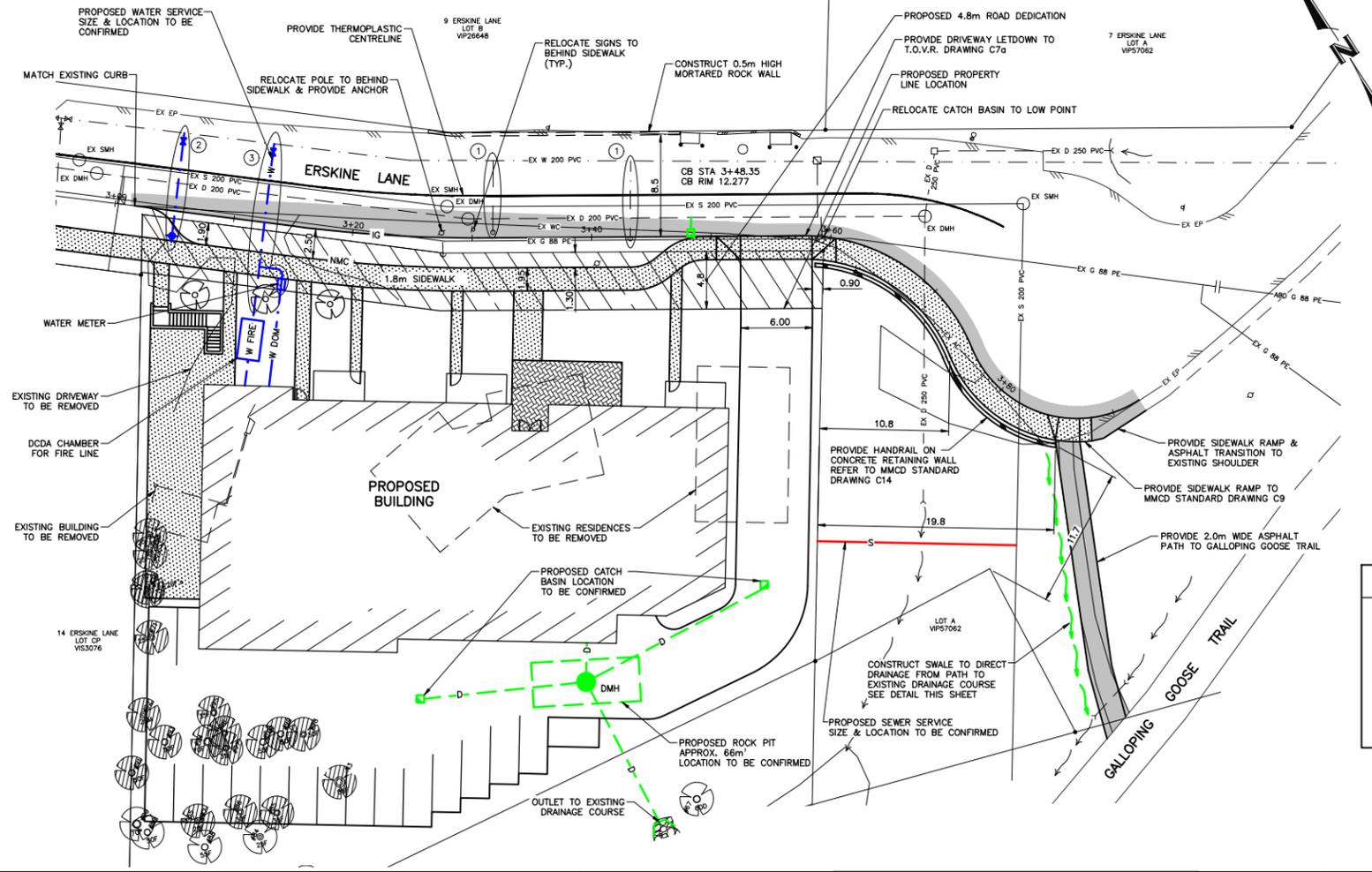
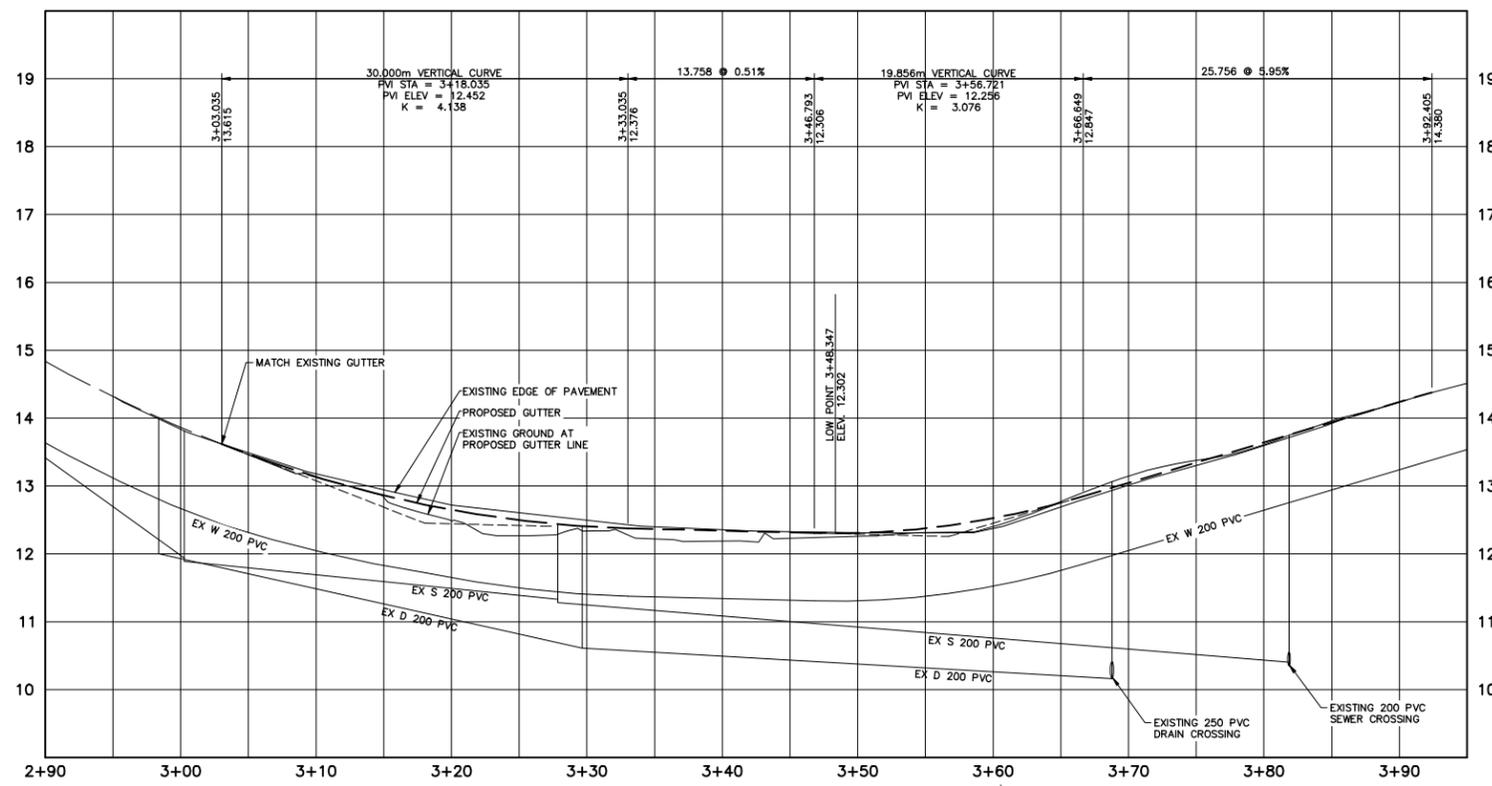
NOTE: All dimensions are shown in millimeters.

Parsi Development Ltd.

8&10 ERSKINE Lane
8&10 ERSKINE Lane
View Royal, BC

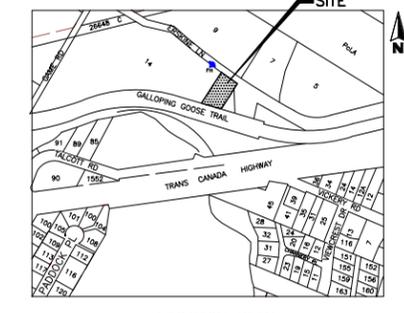
SPATIAL SEPRATION CALCULATION

A303



LEGEND

[Symbol]	PROPOSED ASPHALT PAVEMENT
[Symbol]	PROPOSED 1.8m WIDE CONCRETE SIDEWALK 100mm THICK EXCEPT 150mm THICK AND REINFORCED AT DRIVEWAY CROSSINGS
[Symbol]	PROPOSED BRICK PAVERS
[Symbol]	EXISTING TREE
[Symbol]	TREE TO BE REMOVED



GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS TO BE IN ACCORDANCE WITH THE TOWN OF VIEW ROYAL STANDARD SPECIFICATIONS AND DRAWINGS UNLESS OTHERWISE NOTED.
- WHEN A CONFLICT BETWEEN THE SPECIFICATIONS ARISES, THE MOST STRINGENT SHALL APPLY.
- OBTAIN A PERMIT TO CONSTRUCT WORKS ON A MUNICIPAL RIGHT OF WAY FROM THE TOWN OF VIEW ROYAL ENGINEERING DEPARTMENT 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.
- OBTAIN A DEMO PERMIT PRIOR TO REMOVAL OF ANY NON-CONFORMING STRUCTURES.
- CONTACT BC HYDRO, TELUS, SHAW CABLE AND TERASEN GAS 48 HOURS PRIOR TO THE START OF ANY EXCAVATION.
- EXPOSE ALL EXISTING SERVICES AT CONNECTION AND CROSSING POINTS 48 HOURS PRIOR STARTING CONSTRUCTION ON ANY SUCH SERVICES. ENSURE ENGINEER HAS CONFIRMED THE HORIZONTAL AND VERTICAL LOCATION.
- BED ALL PIPE USING CLASS 'B' BEDDING.
- WHERE A TRENCH IS UNDER OR WITHIN 1.0m OF THE EDGE OF A ROAD OR DRIVEWAY, USE PITRUN GRAVEL BACKFILL FROM THE TOP OF THE PIPE BEDDING TO THE TOP OF THE ROAD, PARKING OR DRIVEWAY SUBGRADE.
- DO NOT START ANY BACKFILL OPERATION UNTIL THE WORK HAS BEEN INSPECTED BY THE ENGINEER.
- AFTER CONSTRUCTION, RESTORE WORK AREAS AND ALL EXISTING FEATURES TO THEIR ORIGINAL CONDITION OR BETTER.
- MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS ALONG ERSKINE LANE, WATKISS WAY AND THE GALLOPING GOOSE TRAIL DURING CONSTRUCTION.
- COMPACT TRENCH BACKFILL, ROAD BASE, AND DRIVEWAY BASE TO 95% MODIFIED PROCTOR DENSITY.
- ADJUST ALL PROPOSED AND EXISTING APPURTENANCES TO MEET THE FINAL DESIGN GRADES.
- CONSTRUCT SEWER, DRAIN, WATER AND ROADS WITHIN PRIVATE PROPERTY IN ACCORDANCE WITH THE BC PLUMBING CODE AND NATIONAL BUILDING CODE. CONSTRUCTION SHALL BE INSPECTED AND APPROVED BY THE TOWN OF VIEW ROYAL INSPECTORS.
- INSTALL APPROPRIATE SILT SCREENS TO PROTECT WATER RUNOFF DURING CONSTRUCTION.

SEWER AND DRAIN

- SEWER AND DRAIN SERVICE CONNECTIONS TO BE PVC DR28 AT A MINIMUM GRADE OF 2.0% COMPLETE WITH INSPECTION CHAMBERS. CATCH BASIN LEADS TO BE 150# PVC DR28 UNLESS OTHERWISE NOTED. WHERE COVER IS LESS THAN 750mm, USE DUCTILE IRON PIPE.
- SEWER AND DRAIN PIPE UP TO AND INCLUDING 150mm DIAMETER TO BE PVC DR28 AND DR35 FOR 200mm DIAMETER AND OVER. PIPE TO BE C.S.A. APPROVED PVC.

CRD WATER

- CONSTRUCTION SHALL NOT PROCEED WITHOUT FIRST OBTAINING CRD WATER SERVICES ACCEPTANCE OF THE DESIGN DRAWINGS AND A CONSTRUCTION PERMIT FROM VIHA.
- CONTRACTOR SHALL BE REGISTERED WITH WORK SAFE BC.
- CRD WATER SERVICES SHALL REMOVE EXISTING WATER SERVICES AT THE DEVELOPER'S EXPENSE.
- ALL WATERWORKS CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH CRD WATER SERVICES ENGINEERING SPECIFICATIONS AND STANDARD DRAWINGS.
- CRD WATER SERVICES SHALL INSTALL HYDRANT AS PER STANDARD DRAWING 1.3 AT THE DEVELOPER'S EXPENSE.
- MARK WATER MAINS AND SERVICES BELOW GRADE USING A METALLIC DETECTABLE REINFORCED UNDERGROUND UTILITY MARKING TAPE. THE TAPE SHALL BE MINIMUM 150mm WIDE, METALLIC BLUE IN COLOUR AND SHALL BE MARKED "CAUTION: WATER LINE BURIED BELOW". INSTALL TAPE ON TOP OF THE PIPE CUSHION 300mm ABOVE THE TOP OF THE PIPE. PROVIDE "SHORTCUT" MARKING TAPE OR APPROVED EQUAL.
- CRD WATER SERVICES SHALL INSTALL THE FIRE AND DOMESTIC SERVICES COMPLETE WITH WATER METER AT THE DEVELOPER'S EXPENSE.
- MAINTAIN A MINIMUM OF 3m HORIZONTAL CLEAR SEPARATION AND 450mm CLEAR VERTICAL SEPARATION BETWEEN WATER SERVICES AND SEWER SERVICES. SANITARY OR STORM/RAIN IN SPECIAL CIRCUMSTANCES, WHERE A SANITARY SEWER OR STORM DRAIN SERVICE IS LOWER THAN A WATER SERVICE BY MORE THAN 450 MM IN ELEVATION THE HORIZONTAL OFFSET MAY BE REDUCED TO NO LESS THAN 1.0m EXCEPT WHERE NOTED AND APPROVED BY CRD WATER SERVICES. VIHA APPROVAL IS REQUIRED FOR ANY REDUCTION IN THE SEPARATION.
- MAINTAIN A MINIMUM OF 1.5m HORIZONTAL CENTRE TO CENTRE AND 150mm CLEAR VERTICAL SEPARATION BETWEEN WATER MAINS AND ELECTRICAL CONDUITS, GAS MAINS AND TELEPHONE CONDUITS EXCEPT WHERE NOTED AND APPROVED BY CRD WATER SERVICES.
- MAINTAIN A MINIMUM OF 1.0m HORIZONTAL CENTRE TO CENTRE AND 150mm CLEAR VERTICAL SEPARATION BETWEEN WATER SERVICES AND ELECTRICAL, GAS AND TELEPHONE SERVICES EXCEPT WHERE NOTED AND APPROVED BY CRD WATER SERVICES.
- CONTRACTOR SHALL CONDUCT A PRESSURE TEST IN ACCORDANCE WITH CRD WATER SERVICES ENGINEERING SPECIFICATIONS AND IN THE PRESENCE OF CRD PERSONNEL.
- CONTRACTOR SHALL FLUSH AND DISINFECT WATER MAINS IN ACCORDANCE WITH AWWA STANDARDS AND AS APPROVED BY CRD WATER SERVICES. WATER SAMPLES FOR HEALTH TESTS SHALL BE COLLECTED AND PROCESSED BY CRD. PROVIDE 24 HOURS NOTICE TO CRD.
- NEUTRALIZE CHLORINE SOLUTIONS IN ACCORDANCE WITH MINISTRY OF ENVIRONMENT AND FISHERIES AND OCEANS CANADA REGULATIONS PRIOR TO DISCHARGE TO ANY DRAINAGE COURSE.
- CONTRACTOR SHALL PROVIDE 24 HOUR NOTICE TO CRD WATER SERVICES PRIOR TO PROCEEDING WITH ANY WATERWORKS.
- CRD WATER SERVICES SHALL MAKE ALL CONNECTIONS TO EXISTING WATER MAINS AT DEVELOPER'S EXPENSE. CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE TO CRD WATER SERVICES FOR WORK REQUIRED BY CRD WATER SERVICES FORCES.
- WHERE PRACTICAL, SERVICE LINES AND METER BOXES SHALL BE INSTALLED TO FINISHED GRADE, OUTSIDE OF DRIVEWAYS OR PAVED AREAS.
- ANY TEMPORARY OR PERMANENT CONNECTION TO THE JUAN DE FUCA WATER DISTRIBUTION SYSTEM OR THE CRD SUPPLY SYSTEM SHALL BE PERFORMED BY CRD WATER SERVICES PERSONNEL ONLY.

ROAD

- CONSTRUCT ALL ROADWAYS AND CUL DE SACS IN ACCORDANCE WITH THE TOWN OF VIEW ROYAL STANDARD SPECIFICATIONS AND AS SHOWN ON THE TYPICAL SECTION AND DETAIL DRAWINGS.
- CONTRACTOR TO ENSURE EXISTING MONUMENTS ARE NOT DISTURBED DURING CONSTRUCTION. ANY MONUMENTS IN DANGER OF DISTURBANCE ARE TO BE REFERENCED BY AND, IF DISTURBED, BE REPLACED BY A B.C.L.S. AT THE CONTRACTOR'S EXPENSE.
- SIDEWALK TO INCLUDE EXPANSION JOINTS AND COMPACTION TO MMCD STANDARD DRAWINGS C1 AND C2.
- PROVIDE MILLED AND SEALED JOINTS FOR ASPHALT AND INCLUDE COMPACTION TESTS.
- RE-ESTABLISH ANY LANDSCAPING THAT IS DISTURBED DURING CONSTRUCTION.
- RESTORE ANY IRRIGATION LINES THAT ARE DISTURBED DURING CONSTRUCTION.

PARKS

- OBTAIN A PARKS PERMIT FROM THE TOWN OF VIEW ROYAL PARKS DEPARTMENT PRIOR TO THE START OF ANY CONSTRUCTION.
- PROTECT ALL TREES EXCEPT THOSE TO BE REMOVED FROM DAMAGE DURING CONSTRUCTION.
- HAND DIG WHERE ROOTS OVER 50mm ARE ENCOUNTERED.
- OBTAIN PERMISSION FROM THE ENGINEER, DEVELOPER AND THE TOWN OF VIEW ROYAL PRIOR TO REMOVAL OF ANY TREES ON PRIVATE OR PUBLIC PROPERTY. A COPY OF THE TREE PERMIT SHALL BE PRESENTED TO THE TOWN OF VIEW ROYAL WORKS INSPECTOR PRIOR TO THE START OF ANY CONSTRUCTION.
- THE PROJECT ARBORIST TO BE RESPONSIBLE FOR SUPERVISING THE INSTALLATION OF BARRIER FENCING AT APPROPRIATE LOCATIONS.
- THE ARBORIST TO DIRECT THE REMOVAL OF TREES WITHIN THE SEWER AND DRAIN EASEMENTS AND RIGHT OF WAYS AND TO PRUNE ROOTS ENCOUNTERED DURING TRENCHING TO ENSURE THE PRESERVATION OF THE OAK TREES.
- THE ARBORIST TO DETERMINE THE SENSITIVE ROOT ZONES AREAS AND BE ONSITE TO SUPERVISE TRENCHING AND ROAD CONSTRUCTION.

HYDRO, TELEPHONE, CABLE, STREETLIGHTING AND GAS

- CONTACT BC ONE CALL AT 1-800-474-6886 A MINIMUM OF 72 HOURS PRIOR TO START OF CONSTRUCTION.
- PROPOSED DEVELOPMENT TO BE SERVICED UNDERGROUND.
- BC HYDRO, TELUS, SHAW CABLE AND TERASEN GAS FACILITIES ARE SHOWN SCHEMATICALLY ON THIS DRAWING. REFER TO UTILITY COMPANY DRAWINGS FOR CONSTRUCTION DETAILS.
- CONSTRUCT UNDERGROUND HYDRO, TELEPHONE AND CABLE/SIGNAL AS SPECIFIED AND IN ACCORDANCE WITH BC HYDRO, TELUS AND SHAW CABLE STANDARD SPECIFICATIONS AND DRAWINGS.
- IF GAS IS REQUIRED, THE DEVELOPER IS TO CONTACT FORTISBC AT 1-800-224-2710 A MINIMUM OF 90 DAYS PRIOR TO INSTALL. FORTISBC GAS SHALL INSTALL GAS SERVICE TO THE PROPERTY LINE.

ISSUED FOR REZONING

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND SERVICES ON THIS DRAWING MAY NOT BE ACCURATE OR COMPLETE. THE ACTUAL HORIZONTAL AND VERTICAL LOCATIONS MUST BE CONFIRMED BY UTILITY COMPANIES AND THE CONTRACTOR PRIOR TO THE START OF ANY EXCAVATION

LEGEND - Proposed services shown bold

WATER	W	EDGE PAVE.	E	GAS	G	ROAD SIGN	S	HYDRANT	H	MANHOLE	M
SEWER	S	NON-MTBLE CURB	NMC	UNDERGROUND UTL.	H/T/C	ASPHALT	A	VALVE	V	CLEANOUT	CO
DRAIN	D	MOUNTABLE CURB	MC	COBRA/DAVIT LIGHT	CDL	CONCRETE	C	METER	M	CATCHBASIN	CB
DITCH/SWALE	D/S	FLAT CURB	FC	ORNAMENTAL STREETLIGHT	OSL	GRAVEL	G	REDUCER	R	MONUMENT	MO
CULVERT	C	BARRIER CURB	BC	POWER POLE	PP	BRICK	B	FLUSH	F	LOT PIN	LP
HEADWALL	H	INVERT GUTTER	IG	ANCHOR	A	TREE	T	BUSHLINE	B	LEAD PLUG	LP

SEAL

No.	DESCRIPTION	DATE	SIGN

REVISIONS

WESTBROOK Consulting Ltd.
 #115 - 866 Goldstream Ave., Victoria, BC V9B 0J3
 Telephone: 250-391-8592 Facsimile: 250-391-8593

PROJECT
 10 ERSKINE LANE
 PARSİ DEVELOPMENTS LTD.
 PRELIMINARY SERVICING

WESTBROOK PROJECT No. 2368
 GOVERNING AUTHORITY FILE No.
 SHEET OF REV. 1 Page 28
 WESTBROOK DRAWING No. 236801

WESTBROOK CONSULTING LTD. - 2021-10-05 10:20AM H:\Unactive Projects\2368 - 10 Erskine Lane\GAC Drawing\236801.dwg

10 ERSKINE LANE DEVELOPMENT

Transportation Impact Assessment

PERMIT TO PRACTICE WATT CONSULTING GROUP LTD. SIGNATURE _____ DATE _____ PERMIT NUMBER 1001432 ENGINEERS & GEOSCIENTISTS BRITISH COLUMBIA



Author: Tanner Vollema, EIT

Reviewer: Andy Kading, P.Eng., P.E.

Date: November 23, 2021

File No.: 3174.B01



TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Study Area	1
2.0	EXISTING CONDITIONS	2
2.1	Current Land Use	2
2.2	Road Network.....	2
2.3	Traffic Model – Background Information	3
2.4	Existing Traffic Conditions (2021).....	4
2.4.1	Traffic Counts	4
2.4.2	Analysis Results.....	6
3.0	OPENING DAY (2023)	8
3.1	Growth Rate	8
3.2	Concurrent Developments	8
3.3	Changes to the Road NETWORK.....	9
3.4	Background Volumes (2023)	9
4.0	POST DEVELOPMENT	10
4.1	Proposed Land Use	10
4.2	Trip Generation.....	11
4.3	Trip Assignment.....	12
4.4	Opening Day Conditions.....	14
4.4.1	AM Peak Hour	14
4.4.2	PM Peak Hour.....	16
5.0	10-YEAR POST DEVELOPMENT HORIZON (2033).....	18
5.1	Background Volumes (2033)	18
5.2	Post Development Volumes (2033).....	19
5.3	Long Term Conditions	20
5.3.1	AM Peak Hour	20
5.3.2	PM Peak Hour.....	22



6.0	ACCESS REVIEW	24
6.1	Spacing.....	24
6.2	Sightlines	25
7.0	ACTIVE TRANSPORTATION	25
7.1	Pedestrians and Cyclists.....	25
7.2	Transit.....	26
8.0	CONCLUSIONS	26
9.0	RECOMMENDATIONS	28

APPENDICES

Appendix A: Synchro Background

LIST OF FIGURES

Figure 1: Development Site and Key Intersections	2
Figure 2: 2021 Existing Volumes	5
Figure 3: Watkiss Way / Erskine Lane Roundabout – Concept Sketch.....	9
Figure 4: 2023 Background Volumes	10
Figure 5: Site Plan	11
Figure 6: Trip Assignment	13
Figure 7: 2023 Post Development Volumes	14
Figure 8: 2033 Background Volumes	19
Figure 9: 2033 Post Development Volumes	20

LIST OF TABLES

Table 1: Existing 2021 Conditions	6
Table 2: Trip Generation Summary – AM and PM Peak Hour	12
Table 3: Opening Day (2023) Traffic Conditions – AM Peak Hour.....	15
Table 4: Opening Day (2023) Traffic Conditions – PM Peak Hour	17



Table 5: Long-Term (2033) Traffic Conditions – AM Peak Hour..... 21
Table 6: Long-Term (2033) Traffic Conditions – PM Peak Hour..... 23



1.0 INTRODUCTION

Watt Consulting Group was retained by Wisser Projects to undertake a Transportation Impact Assessment (TIA) of a proposed residential development located at 10 Erskine Lane in View Royal. The TIA examines the existing conditions as well as the opening day background and post development conditions and the long-term (10-year post development) conditions. The TIA includes a site access review and a review of the active transportation networks within the vicinity of the site.

1.1 STUDY AREA

The development is located at 10 Erskine Lane in the Town of View Royal. The study area includes the following key intersections:

- Watkiss Way / Erskine Lane / Stoneridge Drive;
- Burnside Road W / Watkiss Way;
- Watkiss Way / Hospital Access / Mall Access; and
- Watkiss Way / Chancellor / Helmcken Road.

Error! Reference source not found. shows the study intersections and site location.

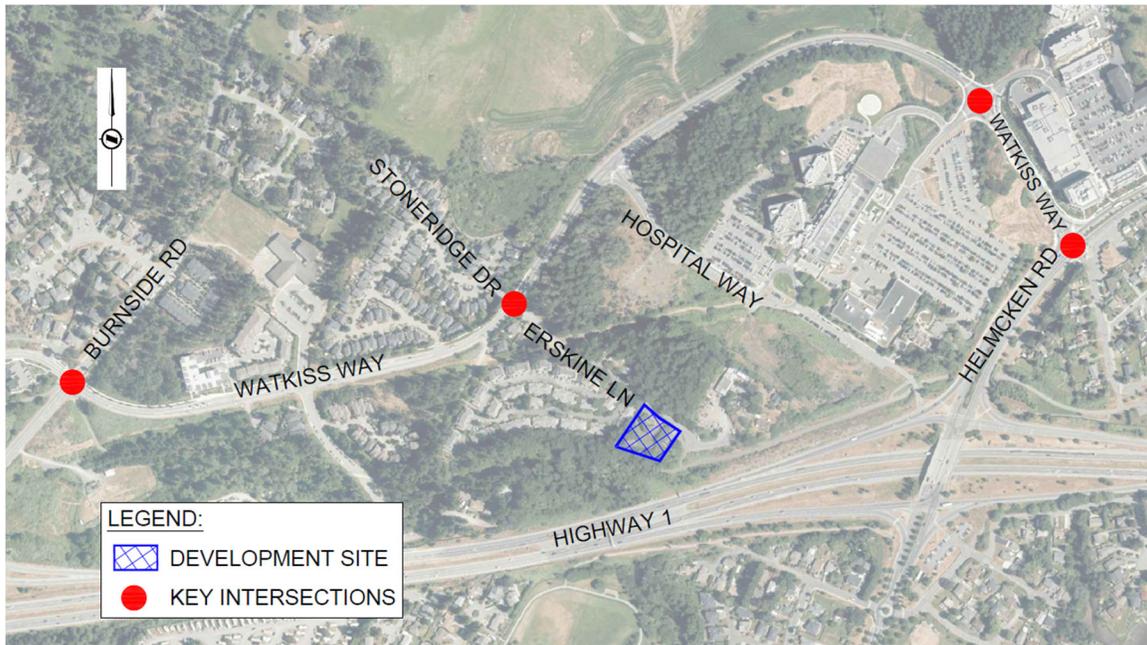


Figure 1: Development Site and Key Intersections

2.0 EXISTING CONDITIONS

2.1 CURRENT LAND USE

The development site is currently occupied by two single-family homes. The surrounding land use is a mix of single-family and multi-family residential, along with the Victoria General Hospital to the north. Multiple multi-family developments are planned near the site, including at 5 Erskine Lane, 7 Erskine Lane, and 9 Erskine Lane. Additionally, a new BC Transit HandyDart facility is planned at the Burnside Road / Watkiss Way intersection.

2.2 ROAD NETWORK

Watkiss Way is a two-lane major road with a posted speed limit of 50km/h. Burnside Road W is a two-lane collector road with a posted speed limit of 50km/h. Erskine Lane and Stoneridge Drive are two-lane local roads with a posted speed limit of 30km/h.

As Erskine Lane dead-ends south of the proposed site, all site traffic will use the intersection of Watkiss Way / Erskine Lane to access the site. The four-legged



intersection of Watkiss Way / Erskine Lane is currently stop-controlled on Erskine Lane, although a roundabout is planned to be constructed in the short term (currently in design).

The Watkiss Way / Burnside Road intersection is a four-legged signalized intersection. The northbound leg has a separate left / through lane and right turn lane, with the northbound left turn having protected / permitted phasing during the PM peak hour.

The Watkiss Way / Hospital Access intersection is a single lane roundabout with a westbound-right by-pass from Watkiss Way into the Eagle Creek Village commercial development.

Helmcken Road is a major road that runs primarily northeast / southwest near the development site (for the purposes of this study, Helmcken Road is considered to run north / south). Helmcken Road has a variable cross-section ranging from 6 lanes south of Watkiss Way to 2 lanes north of Watkiss Way, with a combination of raised center median, dedicated left turn lanes and a two-way-center-left-turn-lane that provides access to residential properties between Burnside Road and Watkiss Way / Chancellor Avenue. The intersection of Helmcken Road / Watkiss Way / Chancellor Avenue is a four-legged signalized intersection. Dedicated left turn lanes, including dual northbound lefts, are provided on all approaches to the intersection and the Helmcken Road southbound approach includes a channelized right turn island. The left turn movements on Helmcken Road have protected left turn phasing. The eastbound left turn movement (Watkiss Way onto Helmcken Road) has protected/permitted left turn phasing.

2.3 TRAFFIC MODEL – BACKGROUND INFORMATION

Weekday AM and PM peak hour traffic conditions were modeled using Synchro 10 and SIDRA 8 for the opening year full build-out and 10-year post opening year with and without the development traffic to identify short-term and long-term impacts of the development. Synchro was used to analyze conditions at the stop-controlled and signalized intersections, while SIDRA was used only to analyze traffic conditions at the Watkiss Way / Hospital Access / Mall Access roundabout and the future Watkiss Way /



Erskine Lane roundabout. Queue lengths for all intersections were determined by SimTraffic.

Synchro software (Synchro 9/10) provides analysis using the Highway Capacity Manual (2010) methodology, while SimTraffic integrates established driver behaviors and characteristics to simulate actual conditions by randomly “seeding” or positioning vehicles travelling throughout the network. The software generates measures of effectiveness that include level of service (LOS), delay and 95th percentile queue length. Intersections are analyzed to determine the level of service, delays and 95th percentile queue lengths. The levels of service are broken down into six letter grades with LOS A being excellent operations and LOS F indicating failing operations. Level of service C is generally considered to be an acceptable LOS by most municipalities. Level of service D is generally considered to be on the threshold between acceptable and unacceptable operations. A description of level of service and Synchro software is provided in **Appendix A**.

2.4 EXISTING TRAFFIC CONDITIONS (2021)

2.4.1 TRAFFIC COUNTS

Traffic turning movement counts were conducted at the Watkiss Way / Erskine Lane intersection on Wednesday, September 8, 2021, during both the AM and PM peak hours (8-9AM and 4-5PM respectively). For the remaining key intersections, traffic count data was taken from previously conducted TIA's at 9 Erskine Lane and 7 Erskine Lane with counts for those taken on the following dates:

- Watkiss Way / Burnside Road: November 14, 2018
- Watkiss Way / Hospital Access: November 13, 2018
- Helmcken Road / Watkiss Way / Chancellor Avenue: January 20, 2020

The Watkiss Way volumes were adjusted to 2021 volumes using the Watkiss Way / Erskine Lane counts to determine the volume on Watkiss Way. The Helmcken Road, Burnside Road, and Hospital Access volumes were adjusted to 2021 using an annual growth rate of 0.5% on Helmcken Road and 1% on all other roads (see **Section 3.1.1** for growth rate determination). The resulting 2021 volumes are shown in **Figure 2**.



Note that by January 2020, traffic on Highway 1 was able to free-flow at McKenzie Avenue / Admirals Road, resulting in reduced Helmcken Road volumes (approximately -13% in the AM and -9% in the PM); however, key elements of the interchange such as the dual right turn (free flow) from McKenzie to Highway 1 and the southbound cloverleaf were not completed at that time. The completion of the interchange is expected to have further reduced the traffic volumes on the Helmcken Road, Burnside Road, and Watkiss Way corridors as the increased capacity and free-flow at the interchange draws traffic away from the circuitous routing previously utilized to avoid the delays at Highway 1 / McKenzie / Admirals. As a result, the traffic volumes utilized for this study should be considered conservative.



Figure 2: 2021 Existing Volumes



2.4.2 ANALYSIS RESULTS

The existing 2021 volumes were analyzed in Synchro / SIDRA software to determine the existing 2021 conditions during the AM and PM peak hours, using the existing signal timings for each intersection. The analysis results are summarized in **Table 1**.

TABLE 1: EXISTING 2021 CONDITIONS

Intersection (EW / NS)	Movement	AM Peak			PM Peak		
		LOS	Delay (s)	95 th % Queue (m)	LOS	Delay (s)	95 th % Queue (m)
Watkiss Way / Burnside Road	EB L/T/R	C	21.9	36.3	B	11.8	23.7
	WB L/T/R	C	30.9	31.8	C	31.2	50.5
	NB L/T	B	10.9	55.7	A	9.8	55.1
	NBR	A	1.9	24.7	A	1.8	18.0
	SB L/T/R	A	6.7	28.3	B	11.3	56.4
Watkiss Way / Erskine Lane / Stoneridge Drive	EB L/T/R	A	0.0	3.4	A	0.2	3.5
	WB L/T/R	A	0.5	5.1	A	0.4	6.6
	NB L/T/R	B	13.1	11.1	B	12.3	10.8
	SB L/T/R	C	16.5	8.3	B	14.3	7.1
Watkiss Way / Hospital Access / Eagle Creek Village Access	EB L/T/R	B	7.8	26.6	A	9.0	20.7
	WB L/T	A	7.2	25.7	A	6.7	13.5
	WBR	A	0.0	3.2	A	2.0	2.5
	NB L/T/R	A	7.0	11.6	B	13.7	18.5
	SB L/T/R	A	7.4	10.7	A	9.5	14.8
Watkiss Way / Chancellor Ave / Helmcken Road	EB L/T	D	39.9	49.8	E	65.8	83.2
	EBR	A	5.4	37.0	B	15.4	75.9
	WBL	C	24.2	6.7	D	47.5	10.5
	WB T/R	B	15.7	1.7	C	29.2	1.6
	NBL	E	72.2	46.9	E	77.9	42.1
	NB T/R	B	12.7	51.1	B	11.1	52.9
	SBL	D	47.6	8.4	E	76.0	12.0
	SBT	C	28.4	101.0	C	24.2	158.6
SBR	A	3.6C	24.2	A	1.3	25.8	



Under 2021 existing volumes, the signalized Watkiss Way / Burnside Road intersection operates well with all movements at LOS C or better during both the AM and PM peak hours. The two-way stop controlled Watkiss Way / Erskine Lane intersection operates well with all movements at LOS A/B during both peak hours except for the southbound movement which is at LOS C in the AM. The Watkiss Way / Hospital Access roundabout operates well under existing conditions with all movements at LOS A/B during both peak hours.

At the signalized Helmcken Road / Watkiss Way intersection, the northbound left turn movement operates at a LOS E during both peak periods. During the PM peak hour, the eastbound left / through and southbound left movements are also at LOS E. The remaining movements are at LOS D or better (most at C or better) during both peak hours. There is no left turn queuing issues at this intersection; however, for the eastbound right turn the queue is approximately 10m (1-2 vehicles) longer than the lane which means at times eastbound left/through and right turning vehicles may block each other.



3.0 OPENING DAY (2023)

The proposed development is expected to be completed by 2023. The 2023 background volumes were determined by adding known concurrent developments and applying a growth rate to the remaining existing volumes.

3.1 GROWTH RATE

Annual growth rates for traffic along the study area roads were determined by comparing historical traffic volumes along Watkiss Way and Helmcken Road. Based on CRD traffic count data, between 2008 and 2014 the average daily traffic along Watkiss Way grew less than 1% annually, while volumes on Helmcken Road grew 0.2% annually between 2014 and 2019.

There is limited opportunity for additional development on the Watkiss Way corridor, especially given that the lands in the District of Saanich along Watkiss Way are currently in the Agricultural Land Reserve and are unlikely to be developed. The Helmcken Road corridor is currently at or near capacity, with traffic often backed up to the Wilkinson / Interurban intersection; therefore, limited traffic growth (in a one-hour time period) is expected on Helmcken Road. Based on the above, a 0.5% growth rate was used for Helmcken Road, and a 1% growth rate was used on the remaining roads in the study area.

3.2 CONCURRENT DEVELOPMENTS

There are multiple concurrent developments occurring along the Watkiss Way corridor, including multi-family developments at 5 Erskine Lane, 7 Erskine Lane, and 9 Erskine Lane, as well as the BC Transit HandyDart facility on the southeast corner of the Burnside Road / Watkiss Way intersection. The trip assignments for 5 Erskine Lane, 7 Erskine Lane and 9 Erskine Lane are based on TIAs conducted for the development by WATT, while the HandyDart trip assignment is based on the WSP *HandyDart Operations and Maintenance Facility Traffic Impact Study* update memo (dated June 2, 2020).



3.3 CHANGES TO THE ROAD NETWORK

By 2023, the Watkiss Way / Erskine Lane intersection is planned to be upgraded to a single lane roundabout (concept sketch shown in **Figure 3**). Therefore, the intersection will be modelled as a roundabout in the analysis of the opening day background and post development conditions.

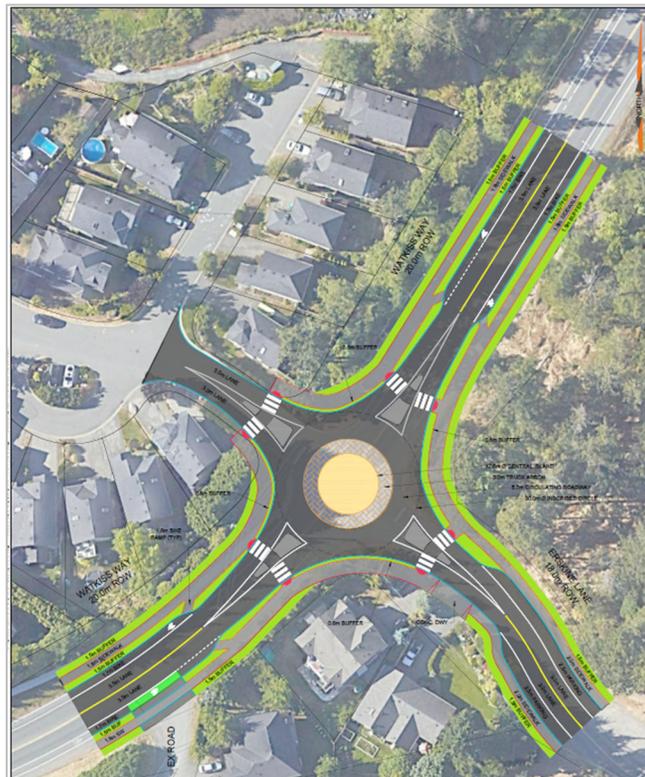


Figure 3: Watkiss Way / Erskine Lane Roundabout – Concept Sketch

3.4 BACKGROUND VOLUMES (2023)

The 2023 background volumes were determined by applying the growth rate determined in Section 3.1 to the existing volumes, and then adding the volumes expected to be generated from the concurrent developments. The resulting 2023 AM and PM peak hour volumes are shown in **Figure 4**. The background volumes were then analyzed in Synchro / SimTraffic / SIDRA software to determine the 2023 background conditions (see **Section 4.4** for the analysis results).



Figure 4: 2023 Background Volumes

4.0 POST DEVELOPMENT

4.1 PROPOSED LAND USE

The proposed development is a 5-storey multi-family residential building containing 43 residential units. The development will include surface and underground parking and will be accessed via a single access on Erskine Lane. The development is expected to be completed by 2023. The site plan is shown in **Figure 5**.



Figure 5: Site Plan

4.2 TRIP GENERATION

The number of site trips expected to be generated from the proposed development were calculated using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* (11th Edition). The *Trip Generation Manual* provides trip rates for a wide variety of land uses gathered from actual sites across North America over the past 40 years.

The results of the trip generation are summarized in **Table 2**. The development is expected to generate 16 trips (4 inbound / 12 outbound) during the AM peak hour and 17 trips (10 inbound / 7 outbound) during the PM peak hour.



TABLE 2: TRIP GENERATION SUMMARY – AM AND PM PEAK HOUR

ITE Code	Land Use	Units	Trip Rate	Trips In	Trips Out	Total Trips
AM Peak Hour						
221	Multifamily Housing (Mid-Rise)	43 Units	0.37 / unit	4	12	16
Total (AM Peak):				4	12	16
PM Peak Hour						
221	Multifamily Housing (Mid-Rise)	17 Units	0.39 / unit	10	7	17
Total (PM Peak):				10	7	17

4.3 TRIP ASSIGNMENT

The trip assignment for the primary trips were based on the existing traffic patterns and the key origins and destinations for traffic in the area. The trips generated by the development during the AM and PM peak hours were assigned based on the following distribution ratios:

Inbound Trips (AM and PM):

- 15% of inbound trips come from Helmcken Road (North);
- 35% of inbound trips come from Helmcken Road (South);
- 10% of inbound trips come from Burnside Road (North);
- 35% of inbound trips come from Burnside Road (South); and
- 5% of inbound trip come from Eagle Creek Village.

Outbound Trips (AM and PM):

- 30% of outbound trips are heading to Helmcken Road (North);
- 35% of outbound trips are heading to Helmcken Road (South);
- 10% of outbound trips are heading to Burnside Road (North);
- 20% of outbound trips are heading to Burnside Road (South); and
- 5% of outbound trips are heading to Eagle Creek Village.

The resulting trip assignment is shown in **Figure 6**.

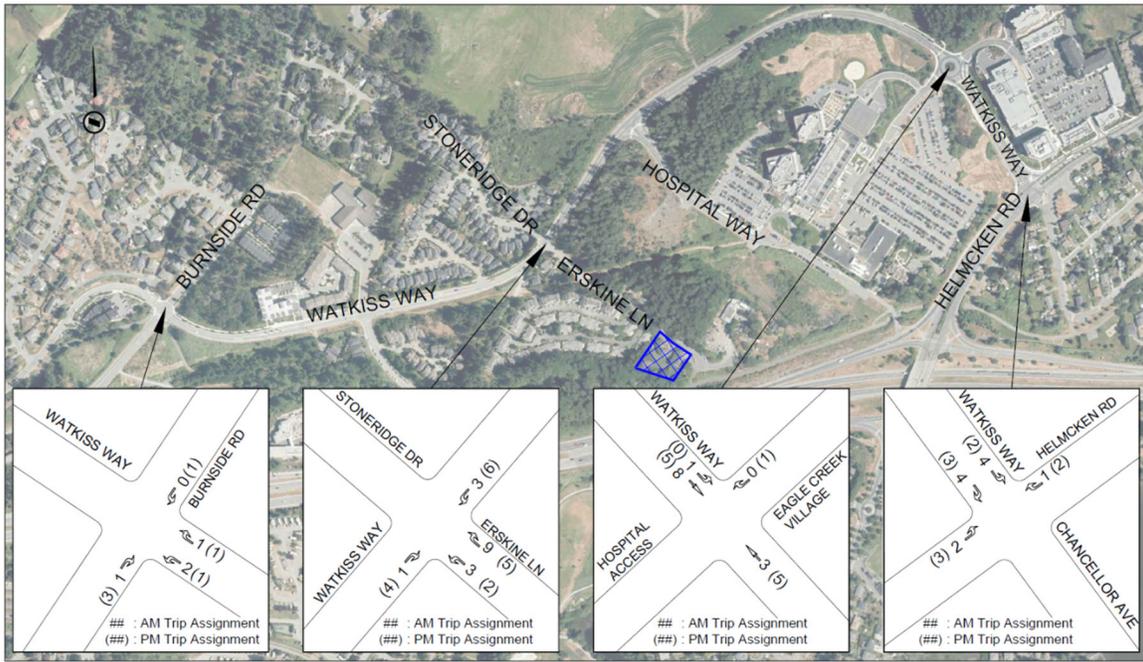


Figure 6: Trip Assignment

The 2023 post development volumes were obtained by adding the trips generated by the site to the 2023 background volumes. The resulting 2023 post development volumes are shown in **Figure 7**.



Figure 7: 2023 Post Development Volumes

4.4 OPENING DAY CONDITIONS

The opening day (2023) background and post development volumes were analyzed in Synchro / SimTraffic / SIDRA software to determine the opening day conditions during the AM and PM peak hours. The post development conditions were compared to the background conditions during each peak hour to determine the impact of the development on the study area road network. The modelling included the new Watkiss Way / Erskine Lane single-lane roundabout that is expected to be constructed by 2023.

4.4.1 AM PEAK HOUR

The 2023 background and post development AM peak hour analysis results are summarized in **Table 3**.



TABLE 3: OPENING DAY (2023) TRAFFIC CONDITIONS – AM PEAK HOUR

Intersection (EW / NS)	Movement	2023 Background Conditions – AM Peak			2023 Post Development Conditions – AM Peak		
		LOS	Delay (s)	95 th % Queue (m)	LOS	Delay (s)	95 th % Queue (m)
Watkiss Way / Burnside Road	EB L/T/R	B	19.5	31.9	B	19.4	33.5
	WB L/T/R	D	49.2	43.9	D	51.0	46.5
	NB L/T	B	13.4	58.2	B	13.5	58.4
	NBR	A	2.0	24.3	A	2.0	28.3
	SB L/T/R	A	7.7	31.9	A	7.7	34.6
Watkiss Way / Erskine Lane / Stoneridge Drive	EB L/T/R	A	6.1	15.9	A	6.2	13.7
	WB L/T/R	A	5.2	12.0	A	5.2	10.4
	NB L/T/R	A	7.0	16.4	A	7.3	15.2
	SB L/T/R	A	4.2	5.8	A	4.3	5.2
Watkiss Way / Hospital Access / Eagle Creek Village Access	EB L/T/R	B	15.2	34.0	B	15.6	37.1
	WB L/T	A	8.0	33.4	A	8.1	32.0
	WBR	A	0.0	29.2	A	0.0	1.8
	NB L/T/R	A	8.2	12.5	A	8.3	13.5
	SB L/T/R	A	8.0	11.9	A	8.0	11.7
Watkiss Way / Chancellor Ave / Helmcken Road	EB L/T	D	42.5	65.0	D	42.8	62.8
	EBR	A	4.8	51.6	A	4.8	46.9
	WBL	C	23.4	6.2	C	23.4	6.1
	WB T/R	B	14.8	1.7	B	14.8	1.3
	NBL	F	116.2	62.6	F	120.0	52.6
	NB T/R	B	15.4	38.0	B	15.6	59.4
	SBL	D	50.2	10.6	D	50.4	8.9
	SBT	C	34.5	113.3	C	35.0	102.1
	SBR	A	4.6	25.5	A	4.7	26.2

Under 2023 AM peak hour background volumes, the Watkiss Way / Burnside Road intersection operates adequately, with the westbound movement at LOS D while the remaining movements are at LOS A/B. The Watkiss Way / Erskine Lane and Watkiss Way



/ Hospital Access roundabouts operate well (all movements at LOS A/B) in the AM peak hour under background conditions.

At the Watkiss Way / Helmcken Road intersection, the northbound left turn is failing (LOS F) under background conditions. The remaining movements are at LOS D or better during the AM peak. Signal timing adjustments to the intersection in Synchro resulted in all movements operating at LOS D or better and should be considered to improve the operations of the Watkiss Way / Helmcken Road intersection.

Under post development volumes, the addition of site traffic does not impact the operations of the study intersections in the AM peak hour. No changes to the levels of service occur at any of the intersections as a result of development traffic. All 95th percentile turn lane queues at Watkiss Way / Helmcken Road are less than the provided storage.

4.4.2 PM PEAK HOUR

The 2023 background and post development PM peak hour analysis results are summarized in **Table 4**.



TABLE 4: OPENING DAY (2023) TRAFFIC CONDITIONS – PM PEAK HOUR

Intersection (EW / NS)	Movement	2023 Background Conditions – PM Peak			2023 Post Development Conditions – PM Peak		
		LOS	Delay (s)	95 th % Queue (m)	LOS	Delay (s)	95 th % Queue (m)
Watkiss Way / Burnside Road	EB L/T/R	B	11.5	25.5	B	11.5	25.1
	WB L/T/R	D	35.5	50.8	D	35.9	54.0
	NB L/T	B	10.8	55.8	B	10.8	52.1
	NBR	A	1.8	20.1	A	1.8	21.6
	SB L/T/R	B	14.5	78.9	B	14.7	70.1
Watkiss Way / Erskine Lane / Stoneridge Drive	EB L/T/R	A	6.5	18.1	A	6.7	18.7
	WB L/T/R	A	6.1	13.7	A	6.2	15.7
	NB L/T/R	A	5.0	11.2	A	5.1	13.3
	SB L/T/R	A	4.5	5.6	A	4.5	4.6
Watkiss Way / Hospital Access / Eagle Creek Village Access	EB L/T/R	B	11.0	25.6	B	11.1	31.5
	WB L/T	A	7.9	28.9	A	8.0	30.4
	WBR	A	0.9	3.8	A	0.8	3.4
	NB L/T/R	B	17.1	20.7	B	17.3	23.1
	SB L/T/R	B	12.1	19.0	B	12.3	21.0
Watkiss Way / Chancellor Ave / Helmcken Road	EB L/T	E	69.2	114.5	E	69.4	146.2
	EBR	C	20.8	85.4	C	21.1	85.5
	WBL	D	47.7	10.3	D	47.8	11.2
	WB T/R	C	29.0	1.8	C	29.0	2.1
	NBL	F	95.2	82.3	F	96.8	73.6
	NB T/R	B	12.0	84.9	B	12.0	60.5
	SBL	E	77.3	13.4	E	77.3	12.0
	SBT	C	26.5	172.7	C	26.6	181.8
SBR	A	3.0	24.1	A	3.2	23.4	

Under 2023 PM peak hour background volumes, the Watkiss Way / Burnside Road intersection operates adequately with the westbound movement operating at LOS D while the remaining movements are at LOS A/B. The roundabouts at Watkiss Way /



Erskine Lane and Watkiss Way / Hospital Access operate well (LOS A/B for all movements) under PM background conditions.

At the Watkiss Way / Helmcken Road intersection, under background conditions, there are multiple movements at LOS E/F in the PM peak hour, including the eastbound left / through movement and the northbound and southbound left turn movements. Signal timing adjustments to the intersection in Synchro resulted in all movements operating at LOS D or better and could be considered to improve the operations of the Watkiss Way / Helmcken Road intersection. The eastbound left/through and eastbound right turn queues extend beyond the right turn lane with and without the development traffic. Both the eastbound left/through and right turn movements are impacting the adjacent lane movements traffic. The northbound and southbound left turn queue lengths are less than the provided storage with and without the development.

Under post-development conditions, the addition of site traffic does not impact the operations or queue lengths at the study intersections during the PM peak hour, and the levels of service are unchanged with the addition of site traffic compared to background conditions.

5.0 10-YEAR POST DEVELOPMENT HORIZON (2033)

In order to determine the long-term impact of the proposed development, the long-term background and post development conditions were examined for the 10-year post development horizon (2033).

5.1 BACKGROUND VOLUMES (2033)

The long-term 2033 background volumes were determined by applying the annual growth rates of 0.5% to Helmcken Road and 1% to all other roads to the 2023 background volumes plus the concurrent developments. The resulting 2033 background volumes are shown in **Figure 8**.



Figure 8: 2033 Background Volumes

5.2 POST DEVELOPMENT VOLUMES (2033)

The 2033 post development volumes were obtained by adding the trips generated by the site to the 2033 background volumes. The resulting 2033 post development volumes are shown in Figure 9.



Figure 9: 2033 Post Development Volumes

5.3 LONG TERM CONDITIONS

The long-term (2033) background and post development volumes were analyzed in Synchro / SimTraffic / SIDRA software to determine the long-term conditions during the AM and PM peak hours. The post development conditions were compared to the background conditions during each peak hour to determine the long-term impact of the development on the study area road network.

5.3.1 AM PEAK HOUR

The 2033 background and post development AM peak hour analysis results are summarized in **Table 5**.



TABLE 5: LONG-TERM (2033) TRAFFIC CONDITIONS – AM PEAK HOUR

Intersection (EW / NS)	Movement	2033 Background Conditions – AM Peak			2033 Post Development Conditions – AM Peak		
		LOS	Delay (s)	95 th % Queue (m)	LOS	Delay (s)	95 th % Queue (m)
Watkiss Way / Burnside Road	EB L/T/R	C	20.7	35.3	C	20.7	38.1
	WB L/T/R	E	61.8	46.9	E	64.8	47.2
	NB L/T	B	16.2	61.8	B	16.2	66.7
	NBR	A	2.1	27.9	A	2.1	30.2
	SB L/T/R	A	8.6	38.3	A	8.6	39.0
Watkiss Way / Erskine Lane / Stoneridge Drive	EB L/T/R	A	6.5	16.5	A	6.6	20.0
	WB L/T/R	A	5.4	13.6	A	5.5	13.7
	NB L/T/R	A	7.5	17.0	A	7.8	18.0
	SB L/T/R	A	4.4	7.7	A	4.5	7.2
Watkiss Way / Hospital Access / Eagle Creek Village Access	EB L/T/R	B	18.7	36.7	B	19.4	37.3
	WB L/T	A	8.7	33.0	A	8.8	33.1
	WBR	A	0.0	4.0	A	0.0	40.2
	NB L/T/R	A	8.9	11.8	A	9.0	14.7
	SB L/T/R	A	8.9	12.1	A	8.9	13.4
Watkiss Way / Chancellor Ave / Helmcken Road	EB L/T	D	45.3	66.8	D	46.0	73.2
	EBR	A	6.3	55.9	A	6.5	62.0
	WBL	C	23.9	7.0	C	24.0	7.3
	WB T/R	B	15.4	2.3	B	15.4	0.7
	NBL	F	166.8	86.3	F	171.2	83.7
	NB T/R	B	18.1	81.9	B	18.2	87.0
	SBL	D	51.8	8.9	D	52.0	9.5
	SBT	D	38.2	140.0	D	38.5	179.4
SBR	A	5.7	25.1	A	5.8	25.6	

Under 2033 background conditions, the westbound movement at the Watkiss Way / Burnside Road intersection operates at LOS E during the AM peak hour with the existing signal timing. The remaining movements are at LOS C or better. The operations of the



intersections can be improved to acceptable levels (LOS D or better for all movements) by optimizing the signal timing. The Watkiss Way / Erskine Lane and Watkiss Way / Hospital Access roundabouts operate well, with all movements at LOS A/B under AM peak hour background conditions.

At the Watkiss Way / Helmcken Road intersection, the northbound left turn will operate at a LOS F under 2033 background conditions and the 95th percentile queues do not exceed the storage. Multiple other movements are at LOS D, including the southbound left, southbound through, and eastbound left / through movements. Signal timing adjustments to the intersection in Synchro resulted in all movements operating at LOS D or better and could be considered to improve the operations of the Watkiss Way / Helmcken Road intersection.

Under 2033 post development conditions, the addition of development traffic does not impact the operations or queues at the study intersections during the AM peak hour. The levels of service of all movements are unchanged from 2033 background conditions.

5.3.2 PM PEAK HOUR

The 2033 background and post development PM peak hour analysis results are summarized in **Table 6**.



TABLE 6: LONG-TERM (2033) TRAFFIC CONDITIONS – PM PEAK HOUR

Intersection (EW / NS)	Movement	2033 Background Conditions – PM Peak			2033 Post Development Conditions – PM Peak		
		LOS	Delay (s)	95 th % Queue (m)	LOS	Delay (s)	95 th % Queue (m)
Watkiss Way / Burnside Road	EB L/T/R	B	11.6	28.4	B	11.5	29.7
	WB L/T/R	D	41.1	60.6	D	41.4	71.7
	NB L/T	B	12.7	80.6	B	12.8	86.4
	NBR	A	1.8	20.6	A	1.8	23.4
	SB L/T/R	B	19.1	91.2	B	19.2	91.1
Watkiss Way / Erskine Lane / Stoneridge Drive	EB L/T/R	A	6.9	17.3	A	7.1	18.8
	WB L/T/R	A	6.4	14.9	A	6.6	19.2
	NB L/T/R	A	5.2	12.8	A	5.3	13.2
	SB L/T/R	A	4.7	5.7	A	4.7	5.0
Watkiss Way / Hospital Access / Eagle Creek Village Access	EB L/T/R	B	12.6	28.1	B	12.7	27.7
	WB L/T	A	8.5	31.8	A	8.6	30.5
	WBR	A	1.0	2.4	A	1.0	5.5
	NB L/T/R	C	22.7	21.6	C	23.0	23.4
	SB L/T/R	B	14.2	22.0	B	14.5	22.7
Watkiss Way / Chancellor Ave / Helmcken Road	EB L/T	E	71.5	157.1	E	71.7	168.8
	EBR	C	27.8	86.9	C	28.1	85.7
	WBL	D	48.7	14.1	D	48.8	12.9
	WB T/R	C	30.0	0.7	C	30.0	2.2
	NBL	F	114.5	97.5	F	116.9	106.8
	NB T/R	B	13.7	104.3	B	13.7	118.4
	SBL	E	79.0	11.0	E	79.0	11.5
	SBT	C	28.6	186.4	C	28.7	202.9
SBR	A	3.7	22.8	A	3.9	24.5	

Under 2033 background volumes, the Watkiss Way / Burnside Road intersection operates adequately during the PM peak hour, with all movements at LOS D or better and most at LOS A/B. The roundabouts at Watkiss Way / Erskine Lane and Watkiss Way /



Hospital Access operate well under background volumes, with all movements at LOS C or better during the PM peak hour.

At the Watkiss Way / Helmcken Road intersection, there are multiple failing movements during the PM peak hour, with the northbound left turn at LOS F and the southbound left and eastbound left / through movements at LOS E under background conditions. Signal timing adjustments to the intersection in Synchro resulted in all movements operating at LOS D or better and should be considered to improve the operations of the Watkiss Way / Helmcken Road intersection. The northbound left turn 95th percentile queue lengths will be within 10m of the back of the storage available in the dual lanes without the development. The eastbound 95th percentile queues will not extend back to the Watkiss / Hospital / Eagle Creek roundabout however, the eastbound left / through and eastbound right turn queues will block each other and extend the queues in the single lane section with and without the development.

Under 2033 post development conditions, the addition of the development traffic does not impact the operations of the study intersections during the PM peak hour. The LOS of all movements are unchanged from 2033 background conditions. In the 2033 post-development scenario the northbound left turn exceeds the provided dual lane storage by 10m (less than 2 vehicle lengths). This can be handled by the additional storage length provided for the outside left turn lane which has an additional 10m of parallel storage (105m) compared to the inside left turn lane (95m). Adjustments to signal timing, in the long term, may also improve this queue length.

6.0 ACCESS REVIEW

6.1 SPACING

The proposed site access is located on Erskine Lane 270m south of Watkiss Way, which exceeds the TAC recommended minimum corner clearance of 15m for local roads from a stop-controlled major intersection. The spacing between the access and the driveway for the adjacent property is 70m, which exceeds the 5m spacing recommended by TAC. Based on the above, the access spacing for the proposed development is appropriate.



6.2 SIGHTLINES

The TAC *Geometric Design Guide for Canadian Roads (2017)* provides recommended minimum intersection sight distances for drivers turning out onto a road from a stop-controlled intersection. For turning onto a road with a speed limit of 30km/h, TAC recommends a sight distance of 65m looking to the right and 55m looking to the left (Tables 9.9.4 / 9.9.6).

The development access is located at the south end of Erskine Lane. For exiting drivers looking left (to the north), the sightline is 120m, which exceeds the TAC recommendation. For drivers looking to the right (south), the sight line extends to the end of Erskine Lane, a distance of 45m. Although this is 20m less than the TAC recommendation, the only traffic on Erskine south of the proposed access is to the 5 Erskine Lane and 7 Erskine Lane developments which both have accesses at the end of Erskine Lane. Drivers exiting the 10 Erskine Lane development will be able to see traffic exiting the 5 Erskine Lane and 7 Erskine Lane developments and therefore will be able to adequately determine when it is safe to turn out of the development. As a result, the sightlines for the 10 Erskine Lane access are adequate.

7.0 ACTIVE TRANSPORTATION

7.1 PEDESTRIANS AND CYCLISTS

Currently, Erskine Lane does not have any pedestrian or cyclist infrastructure, however since Erskine Lane is a dead-end roadway less than 300m in length with low volumes and speeds, pedestrians and cyclists may travel on Erskine Lane without requiring dedicated infrastructure. However, with the development of 5, 7, and 9 Erskine Lane upgrades to the pedestrian / bicycle facilities on Erskine Lane are planned as per the Town of View Royal VRSD-R10 cross section.

There are bike lanes on both sides of Watkiss Way and Helmcken Road within the study area, as well as on Burnside Road north of Watkiss Way. Watkiss Way has a sidewalk along the north side of the road that runs from Burnside Road to the transit stop east of



Erskine Lane. With 9 Erskine Lane development there will be sidewalk provided along their Watkiss Way frontage.

The development site is adjacent to the Galloping Goose multi-use pathway, which offers a connection to the Victoria General Hospital and the Eagle Creek Village commercial area as well as to downtown Victoria and Langford (via the E&N Rail Trail). A paved connection to the Goose is located 30m from the access. There is also an informal gravel pathway on CRD utility right-of-way (informally referred to as the 'Hospital Trail') located 140m north of the site off Erskine Lane. This pathway is usable by pedestrians but is not fully accessible. The Hospital Trail provides a connection to the Victoria General Hospital to the east and to the transit stop at the Watkiss Way / Talcott Road intersection to the west.

7.2 TRANSIT

The nearest transit stops are located 290m northwest of the site on Watkiss Way, just east of Erskine Lane. These stops are serviced by BC Transit Routes #22 (Vic General / Hillside Centre), #39 (Westhills / Interurban / Royal Oak / UVic), and #53 (Victoria General Hospital / Langford Exch). All three routes provide frequent service (every 15-30min) and provide connections to the University of Victoria, Camosun College (Interurban Campus), the shopping centres at Royal Oak and Hillside Centre, and downtown Victoria and Langford. The site is also within 500m of the bus stops at the Helmcken Road interchange. Routes 14, 47, 48, 50, 51, 61, 65, 66 and 99 stop at the Helmcken Road Interchange bus stops and provide service to downtown, UVIC, Esquimalt, Royal Jubilee Hospital, Langford and Colwood (Langford Exchange and Colwood Exchange), and Sooke. This site very well serviced by transit within a short walk (less than 500m).

8.0 CONCLUSIONS

The Watkiss Way / Burnside Road, Watkiss Way / Erskine Lane, and Watkiss Way / Hospital Access intersections operate well under existing conditions, with all movements at LOS C or better during the AM and PM peak periods. At the Watkiss Way / Helmcken Road intersection, the northbound left turn operates at LOS E during both peak hours,



and the southbound left and eastbound left / through movements also operate at LOS E during the PM peak hour.

By 2023 (opening day of the proposed development), a roundabout is expected to be installed at the Watkiss Way / Erskine Lane intersection. Additionally, the concurrent developments at 5 Erskine Lane, 7 Erskine Lane, 9 Erskine Lane, and the HandyDart facility are expected to be completed. Under 2023 background conditions, the Watkiss Way / Burnside Road signal operates adequately with all movements at LOS D or better in both peak hours, while the Watkiss Way / Erskine Lane and Watkiss Way / Hospital Access roundabouts operate well (LOS A/B) in both the AM and PM. At the Watkiss Way / Helmcken Road intersection, under background conditions the northbound left turn drops to LOS F in the AM peak hour (and remains at a LOS F in the PM), and the southbound left and eastbound left / through remain at LOS E in the PM. The development does not significantly impact the traffic operations in 2023, with no changes to the intersection LOS occurring as a result of the addition of site traffic. The eastbound queues at Helmcken Road / Watkiss Way exceed the left/through and right turn lanes by several vehicles and block each other adding to the queue length in the single lane section; however, this queue does not cause any issues.

In the long-term 10-year post-development horizon (2033), at the Watkiss Way / Burnside Road intersection the westbound movement drops to LOS E in the AM under background volumes. The roundabouts at Watkiss Way / Erskine Lane and Watkiss Way / Hospital Access continue to operate well in the long-term in both peak hours. The northbound left movement at Watkiss Way / Helmcken Road continues to fail (LOS F) in both peak hours in 2033, with the southbound left and eastbound left / through at LOS E in the PM peak hour. The development does not significantly impact the traffic operations in the long term, with no changes to the intersection levels of service occurring in 2033 as a result of the addition of site traffic. The eastbound 95th percentile queues do increase with and without the development; however, the queue does not extend back to the Watkiss Way / Hospital / Eagle Creek intersection and the development adds almost no additional queue length. In the PM peak hour, under post development volumes, the northbound left turn queue is expected to exceed the northbound dual left turn lane



storage (95m) by 10m; however, the outside left turn lane has an additional 10m of parallel storage that can accommodate this queue.

Assessment and adjustment of the Helmcken Road / Watkiss Way intersection may improve traffic operations; however, the impacts of changes in signal timing on queue lengths and pedestrian crossings are critical to consider.

The proposed access location is spaced appropriately from both the nearest driveway and nearest intersection and has adequate sightlines to allow drivers to easily exit the site.

This site provides easy access to the adjacent Galloping Goose Trail and to transit stops. There is also the gravel “Hospital Trail” that connects to the Hospital and transit stops to the west. At the transit stops residents would be able to access buses to all key exchanges and destinations in Greater Victoria. The 5, 7, and 9 Erskine Lane developments are expected to add bicycle and pedestrian facilities on Erskine Lane as per Town of View Royal plans.

9.0 RECOMMENDATIONS

The 10 Erskine Lane development is to extend the upgraded Erskine Way cross section on their frontage (extension of 5 Erskine, 7 Erskine, and 9 Erskine frontage improvements).

On-going monitoring of the signal timing at Watkiss Way / Helmcken Road should be undertaken by MoTI and Town of View Royal.



APPENDIX A: SYNCHRO BACKGROUND



SYNCHRO MODELLING SOFTWARE DESCRIPTION

The traffic analysis was completed using Synchro (Signal and stop-controlled intersections), SimTraffic traffic modeling software and SIDRA (for roundabout intersections). Results were measured in delay, level of service (LOS) and 95th percentile queue length. Synchro is based on the Highway Capacity Manual (HCM 2010) methodology. SimTraffic integrates established driver behaviours and characteristics to simulate actual conditions by randomly “seeding” or positioning vehicles travelling throughout the network. The simulation is run five times (five different random seedings of vehicle types, behaviours and arrivals) to obtain statistical significance of the results. SIDRA provides results using HCM 2010 methodology as well. SIDRA and Synchro uses measures of effectiveness to return the results of the analysis.

Levels of Service

Traffic operations are typically described in terms of levels of service, which rates the amount of delay per vehicle for each movement and the entire intersection. Levels of service range from LOS A (representing best operations) to LOS E/F (LOS E being poor operations and LOS F being unpredictable/disruptive operations). LOS E/F are generally unacceptable levels of service under normal everyday conditions.

The hierarchy of criteria for grading an intersection or movement not only includes delay times, but also takes into account traffic control type (stop signs or traffic signal). For example, if a vehicle is delayed for 19 seconds at an unsignalized intersection, it is considered to have an average operation, and would therefore be graded as an LOS C. However, at a signalized intersection, a 19 second delay would be considered a good operation and therefore it would be given an LOS B. The table below indicates the range of delay for LOS for signalized and unsignalized intersections.



Table A1: LOS Criteria, by Intersection Traffic Control

Level of Service	Unsignalized Intersection Average Vehicle Delay (sec/veh)	Signalized Intersection Average Vehicle Delay (sec/veh)
A	Less than 10	Less than 10
B	10 to 15	11 to 20
C	15 to 25	20 to 35
D	25 to 35	35 to 55
E	35 to 50	55 to 80
F	More than 50	More than 80



To introduce a rezoning application to amend the *CD-12: Comprehensive Development (Erskine Lane)* zone to increase the building height, floor space ratio and number of multifamily residential units for the property at 10 Erskine Lane.



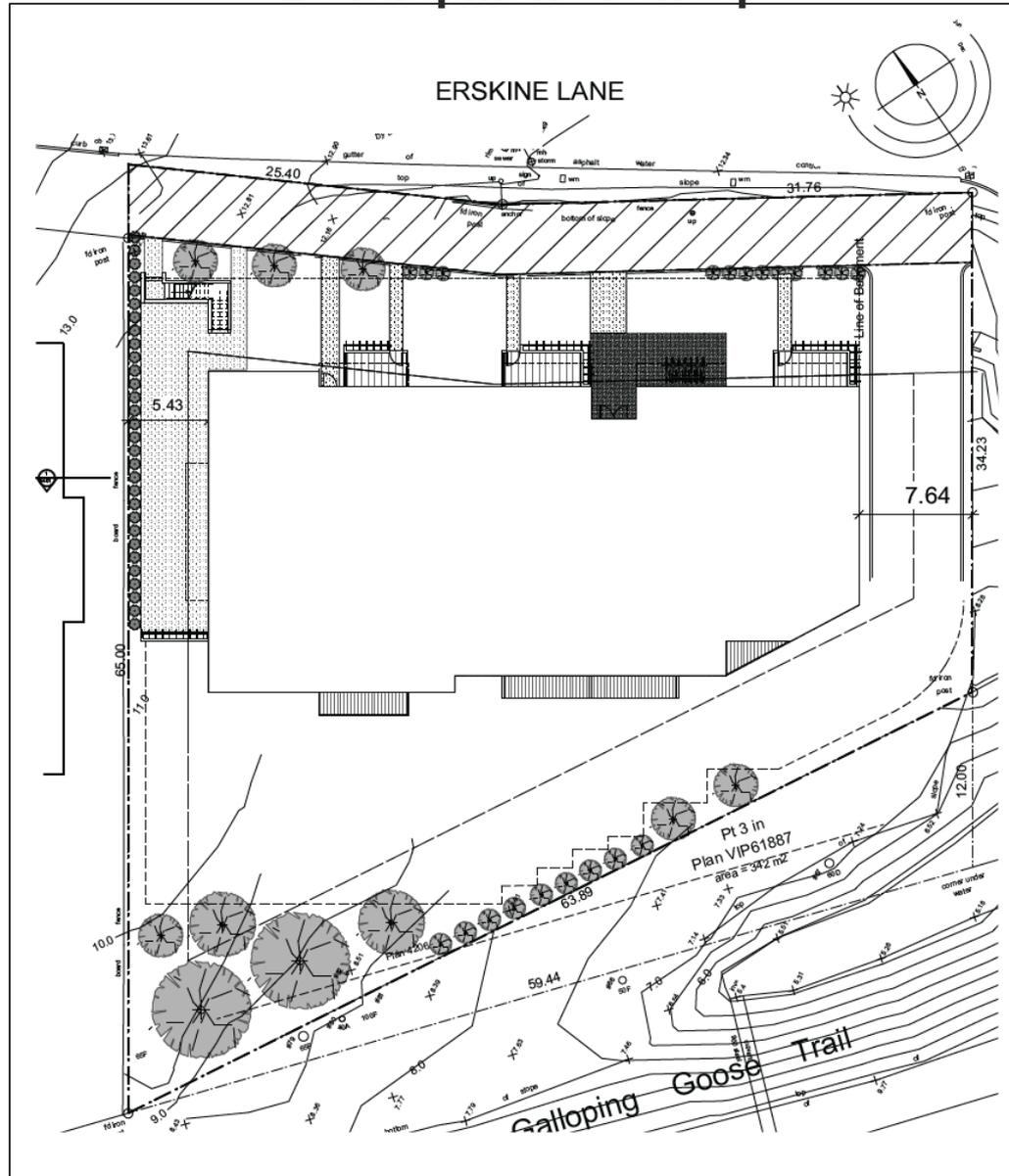


Zoning history

Rezoned in 2008 for 30 apartment units with following identified community amenity contributions:

- 1. Upgrade of the connection to the Galloping Goose Trail to the east of the Land, including a 1.8 metre brushed-finished sidewalk between the land and the trail connection. Trail connection is to extend from the paved road surface to the Galloping Goose trail and is to be 2.0 metres in width and constructed to a standard acceptable to the Director of Engineering.*
 - 2. Construction of a 1.8 metre brushed-finish concrete sidewalk [from] the frontage of the land and continuing to Watkiss Way.*
- Community amenities were to be secured in a covenant
 - The covenant was not registered
 - The development permit was approved but not issued and has since lapsed
 - Processes at Town Hall have substantially changed since this time to avoid this situation occurring again and covenants are now required in registerable format before adoption of bylaws.

Development Concept





1 Front Elevation - NORTH
A301



2 Side Elevation - EAST
A301



3 Side Elevation - WEST
A301



Site Data Summary

Site Area	2774 m²
Floor Area	3851.7 m ²
Floor Space Ratio	tbc
Units/Hectare	tbc
Building Height	17.5 m
Storeys	5
Site Coverage	tbc
Units	43
Vehicle Parking	53* (53 required)
Accessible Parking	1 (1 required)
Secure Bicycle Parking	43 (43 required)

Unit Mix

Units by number of bedrooms	Proposed
0-bedroom units	5
1-bedroom units	18
2-bedrooms units	20



Design Comment

Development concept helps illustrate the applicant's intent. Form and character to be formally addressed through a development permit application after rezoning.

Staff notes the following:

- A context illustration with the townhouses next door should be provided. While the applicant proposes that a hedge be planted, this may not be adequate to address privacy and overlook issues for the Townhouse units.
- Stepping back the upper floor of the building reduces the massing and would add visual interest to the roofline
- The building and parking are sited to preserve a stand of trees at the south end of the property



Official Community Plan Context

The site is designated Mixed Residential in the Official Community Plan, which supports multifamily use. It is on the periphery of the Hospital Neighbourhood Centre and would provide additional residential density to support the commercial and employment components of the centre. The proposal is generally in keeping with other OCP policies, including the following:

- The development promotes complete streets through the provision of additional pedestrian and cycling amenities
- The development concept is street oriented with ground level units having a direct connection to the street
- The building form makes efficient use of limited land
- This site is in a location with multimodal transportation opportunities



Proposed Zone

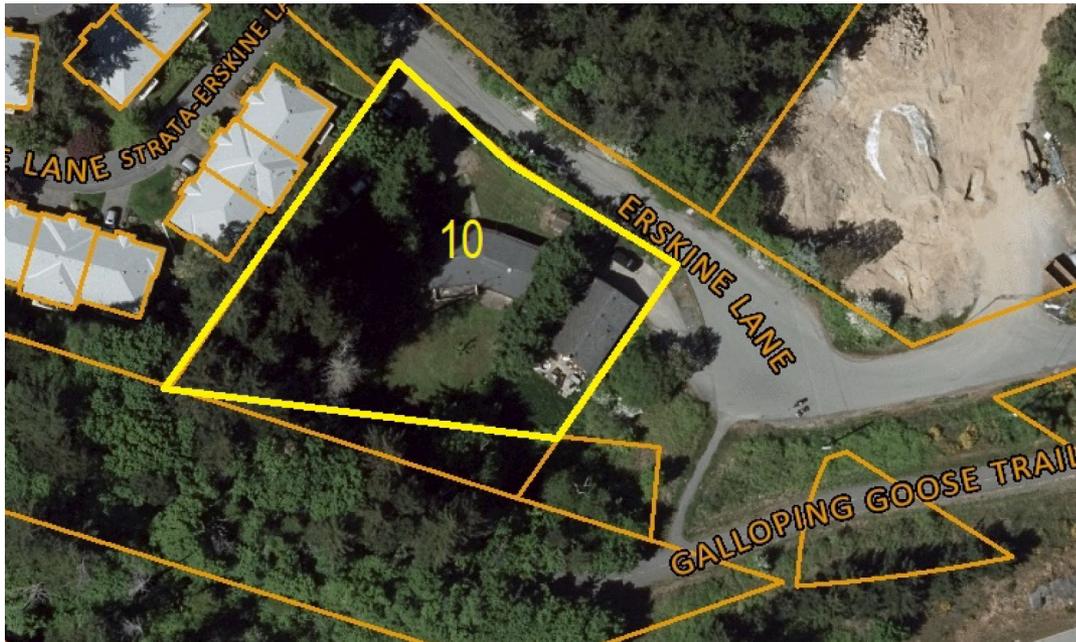
	Existing	Proposed
Principal uses	Residential Apartment	No change
Maximum number of residential units	30	43
Floor Space Ratio	0.85:1	1.38*
Building Height	12m	17.5m
Storeys	Three	Five
Lot Coverage	35%	tbc
Siting of Buildings and Structures from a lot line		
- Front	7.5m	No change
- Rear	10m	5.4m
- Side	7.5m	No change
- Side, Flanking	6m	No change

*Site area after road dedication will need to be confirmed.



Environment

- Not within any environmental Development Permit Areas
- Mature fir trees in the southwest corner and along the west property line.
- Site has been designed to retain the trees in the southwest corner as a buffer to the Galloping Goose Regional Trail.
- Trees along the west property line be removed and replaced with hedge





Community Amenity Contribution

Staff recommends a covenant to

- Formalize community amenity contributions from the 2008 rezoning of this property for previously approved 30 apartment units – sidewalk to Watkiss Way and trail
- Cash amenity rate of \$4000 per unit as per policy apply to additional (13) units minus native plant restoration of boulevard and public land fronting cul-de-sac
- Under the Town's CAC Policy 10% of the contribution is provided to the Regional Housing Trust Fund to supplement the Town's annual contribution.



Alternatively, a covenant to secure a cash amenity rate of \$4000 per unit as per policy for the total 43 units proposed.



Transportation Impact

- The additional 13 units would not impact traffic volumes
- Additional impacted needed on
 - Commentary on vehicle and bicycle parking
 - Brief review of Transportation Demand Management measures. Site has excellent proximity to the Galloping Goose Regional Trail
- BC Transit supports the application as it would increase density along the Local Transit Network (LTN) transit corridor
- Ministry of Transportation and Infrastructure approval is required prior to final reading of the rezoning bylaw because the site is within 800m of an intersection of a controlled access highway.



Site Servicing

- Standard requirements include: sidewalks along the site frontages, no net increase in post-development site runoff, and storm water quality
- Servicing concept estimates that there is sufficient downstream capacity for the expected sewer flow from the proposed development
- The additional stormwater drainage loading due to the proposed rezoning is not part of the Town's Master Drainage Plan and DCC program; however, a 2021 drainage analysis indicates no downstream upgrades to the municipal drainage system are required for this rezoning
- Road dedication is required because the width of the Erskine Lane road allowance is substandard. Road dedication was also required for recent rezonings across the street at 9 Erskine Lane and to a smaller extent at 7 Erskine Lane.



NEXT STEPS

The following items and any other issues identified by the Committee should be addressed for the application to move forward:

1. Clarification of site area and floor space ratio after road dedication
2. Agreement with the applicant on community amenity contributions
3. Confirm if Watkiss Way bus stop improvements are part of the Watkiss Way/Erskine Lane/Stoneridge Drive **roundabout** as a potential tangible community amenity
4. Further Traffic Impact Assessment information on
 - a. Vehicle parking
 - b. Bicycle parking
 - c. Opportunities for Transportation Demand Management
5. A context illustration with the townhouses next door