

November 21, 2019

Subject Property:

157 Abbott Street

Lot A, District Lot 202, Similkameen Division Yale District,
Plan KAP81594

Application:

Development Variance Permit PL2019-8636

157 Abbott Street is being subdivided into 11 new RD3 lots.

The developers are proposing to vary Section 6.2 of Subdivision and Development Bylaw 2004-81, Section 00400: Schedule "G" – Roads, Table 3.0, reducing the required K value from 7 to 3 for the proposed lane. The K-Value represents the horizontal distance along which a 1% change in grade occurs on the vertical curve. It expresses the abruptness of the grade change in a single value.

Information:

The staff report to Council and Development Variance Permit PL2019-8636 will be available for public inspection from **Friday, November 22, 2019 to Tuesday, December 3, 2019** at the following locations during hours of operation:

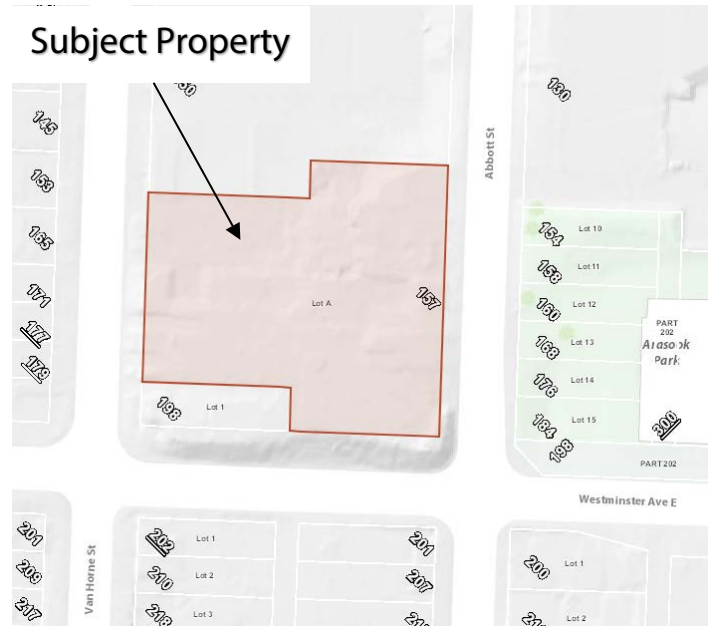
- Penticton City Hall, 171 Main Street (8:30 am to 4:30 pm, Mon. to Fri., excluding statutory holidays)
- Penticton Library, 785 Main Street
- Penticton Community Centre, 325 Power Street

You can also find this information on the City's website at www.penticton.ca/publicnotice.

Please contact the Planning Department at (250) 490-2501 with any questions.

Council Consideration:

Council will consider this application at its Regular Council Meeting scheduled for **6:00 pm, Tuesday, December 3, 2019** in Council Chambers at Penticton City Hall, 171 Main Street.



Public Comments:

You may appear in person, or by agent, the evening of the Council meeting, or submit a petition or written comments by mail or email no later than **9:30 am, Tuesday, December 3, 2019** to:

Attention: Corporate Officer, City of Penticton

171 Main Street, Penticton, B.C. V2A 5A9

Email: corpadmin@penticton.ca

No letter, report or representation from the public will be received by Council after the conclusion of the December 3, 2019 Council Meeting.

Please note that all correspondence submitted to the City of Penticton in response to this Notice must include your name and address and will form part of the public record and will be published in a meeting agenda when this matter is before the Council or a Committee of Council. The City considers the author's name and address relevant to Council's consideration of this matter and will disclose this personal information. The author's phone number and email address is not relevant and should not be included in the correspondence if the author does not wish this personal information disclosed.

Blake Laven, RPP, MCIP

Manager of Planning

Date: December 03, 2019
To: Donny van Dyk, Chief Administrative Officer
From: Michael Hodges, Development Infrastructure Manager
Subject: Development Variance Permit PL2019-8636 (157 Abbott Street)

File No: 2019 PRJ-124

Staff Recommendation

THAT Council deny "Development Variance Permit PL2019-8636" for Lot A District Lot 202 Similkameen Division Yale District Plan KAP81594, a permit to vary Subdivision and Development Bylaw Schedule G section 00400.

Strategic priority objective

Asset & Amenity Management: The City of Penticton will ensure the services we provide to our residents and visitors are reliable and cost effective by proactively investing into our natural and built assets.

Community Design: The City of Penticton will attract, promote and support sustainable growth and development congruent with the community's vision for the future.

Background

In June 2018, City Council amended the Official Community Plan (from High Density Residential to Medium Density Residential) and gave zoning approval (Zoning Amendment Bylaw 2018-36) to a development proposal for 157 Abbott Street, which proposed the creation of 11 new RD3 (Residential Infill) zoned lots with rear lane access.

In December 2018, City Council supported a recommendation (505/2018) for a land exchange between the City and the developer to provide to the City the land associated with the laneway in the development in exchange for unused land fronting on Westminster Avenue East. At this time, a concept for the design of the laneway was introduced. The concept was described as a 'living lane'. The lane right-of-way was proposed to be 6.0m in width, which is standard, but would provide only 4.0m of paving with 1.0m of landscaping boulevard on either side of the pavement. Council approved Development Variance Permit (PL2019-8577) on October 1st, 2019 (438/2019) to allow this variance from the Subdivision and Development Bylaw.

The developer has applied for an additional variance to the Subdivision and Development Bylaw for the laneway design. In this case, the requested variance pertains to the vertical alignment of the lane.

The City's lane and road design criteria is outlined in the Subdivision and Development Bylaw Schedule G section 00400. This section requires that all vertical and horizontal alignments are designed utilizing the Bylaw standards and the guidelines in the current edition of the Transportation Association of Canada's

The requested variance relates to the “K-value”, which is used in the engineering and design of roadways and lanes to define the abruptness of a grade change. A K-value represents the horizontal distance along which a 1% change in grade occurs on the vertical curve. The Bylaw specifies the minimum vertical curve as defined by the K-value in Table 3.0 as 7. An extract of the Subdivision and Development Bylaw describing these standards can be found in Attachment C.

The applicant is proposing to vary the Subdivision and Development Bylaw to decrease the K value from 7 to 3. In this specific design the K-value represents the length of lane that it takes to transition from 6% grade going up to 6% grade going down. The Bylaw requires approximately 84 meters for this transition and the request from the developer is to reduce this to 31 meters. The letter of intent from the applicant can be found in attachment E.

Financial implication

The applicant for 157 Abbott Street will be responsible for the design and construction of the lane. Once the section is constructed the works will become part of the City road network and it will be the City's responsibility for all maintenance costs.

Analysis

The applicant has provided design drawings showing both the proposed lane with the variance and the Bylaw compliant lane to illustrate the differences between the two options. These drawings are found in attachment B.

Typically when assessing if a variance to the Subdivision and Development Bylaw is supportable, staff ask two questions: “Can the Bylaw be followed?” and “Are the requirements of following the Bylaw extremely onerous on the developer, or surrounding neighborhood?” If either of these show a compelling reason to vary the Bylaw, then we look at the standard that is being proposed.

In terms of precedents for such a variance, the City has varied the requirements of the Subdivision and Development Bylaw twice in the last year and once it was a very similar request to what has been made (a variance to K-values). The difference was that, in both of these cases, it was not possible to construct the road to the Bylaw requirements without acquisition of private land. In this specific case a Bylaw-compliant lane can be constructed by the applicant without having to do so.

Staff's review of the proposed design concludes that constructing a Bylaw-compliant lane is no more onerous than constructing a lane with the proposed variance. While we understand that the Developer would prefer the Bylaw requirements be changed in this case, however staff don't see this request is based on technical design or construction constraints, but the preference of the developer to achieve an outcome different to the Bylaw.

The applicant has stated that the change to the lane design will eliminate the need for future retaining wall variances, and that such variances will be required if the lane is constructed in accordance with the Bylaw. The drawings provided by the applicant, however, do not confirm this conclusion, and in staff's assessment of the drawings, construction of a non-compliant lane does not reduce the required retaining wall variances.

For the reasons provided staff are recommending that Council deny this variance.

The proposed design with the variance does not present significant risks to the community. The design that the applicant is proposing meets the minimum requirements in the Traffic Association of Canada guidelines. Meeting these guidelines will ensure the proposed lane is safe for the users. Further, where a preliminary design for the lane showed a K-value of 1, the design in the application shows an improved K-value of 3.

However, it is staff's conclusion that despite meeting the Traffic Association of Canada Guidelines, the lane is not likely to function as well as a Bylaw-compliant road due to its overall design. The lane only has one entrance with a 'hammerhead' turn-around at the north end, and serves 11 lots that are zoned for up to three dwellings each. This will make this a highly-trafficked lane with a significant number of driveways and parking off the lane. As a result of the earlier variance, the developer has reduced the width of the paved portion of the lane from 6 to 4 meters, with trafficable landscaping. The proposed lane will have a maximum grade of 6% and have a sharper than standard transition over the crest back into the 6% grade down. While none of these items individually create a reason for significant concern Staff are worried that all of these factors will create a lane that does not function as well as it could if it adhered to the Bylaw.

Alternate recommendations

THAT Council approve "Development Variance Permit PL2019-8636" for Lot A District Lot 202 Similkameen Division Yale District Plan KAP81594, a permit to vary Subdivision and Development Bylaw Schedule G section 00400.

Attachments

Attachment A – Location Map

Attachment B – Proposed design drawings

Attachment C – Subdivision and Development Bylaw extract

Attachment D - Development permit number PL2019-8636

Attachment E– Letter of intent

Respectfully submitted,

Michael Hodges
Development Infrastructure Manager

Concurrence

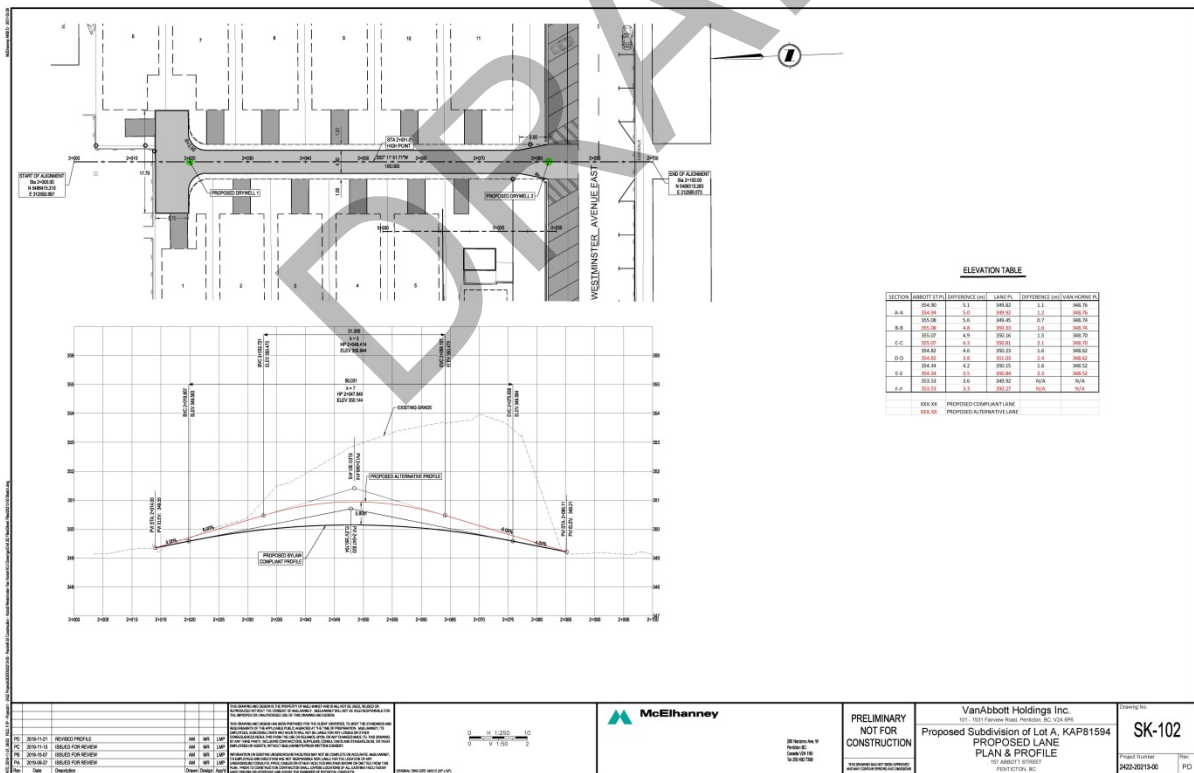
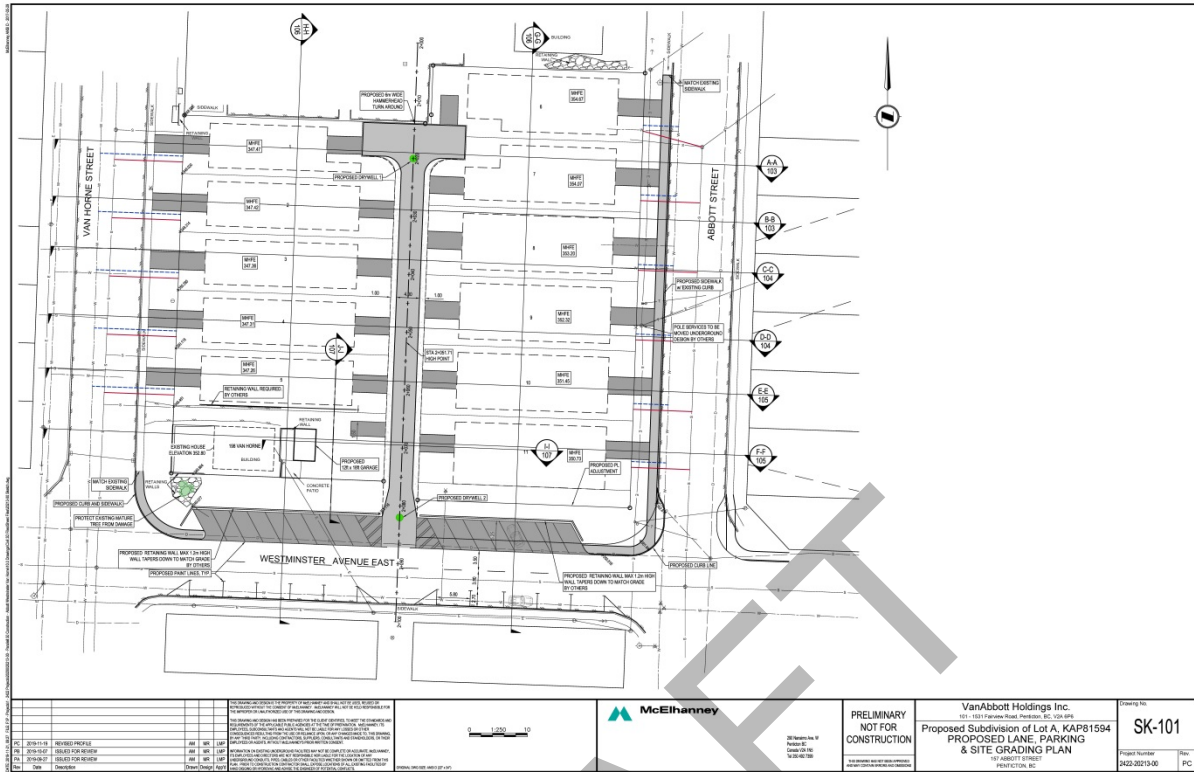
Acting Director of Development Services	General Manager of Infrastructure	Chief Administrative Officer
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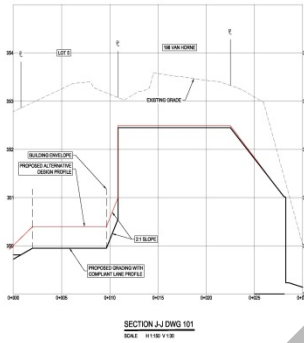
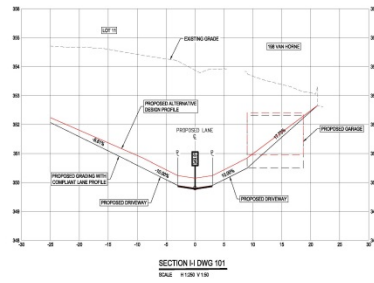
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Attachment A -Property Location Map



Attachment B – Proposed design drawings



[illegible]

SECTION 00400: Schedule "G" – ROADS, Table 3.0. (Page 3 of 10)

3.0 ROAD CLASSIFICATION DESIGN CRITERIA - TABLE 3.0

	URBAN										LANES			
	RURAL ROADS					LOCAL					COLLECTOR			
	Local	Collector	Residential	Industrial	Commercial	Residential	Industrial	Commercial	Residential	Commercial	Industrial	Commercial	Residential	Commercial
Standard Drawing No.	S-R10	S-R11	S-R2	S-R4a	S-R4	S-R5	S-R6	S-R8a	S-R12	S-R12a	S-R6	S-R8a	S-R12	S-R12a
TRAC Classification	RLU50	RCU60	ULU50	ULU50	ULU50	ULU50	ULU50	ULU50	ULU50	ULU50	UCU60	UCU60	UCU60	UCU60
Horizontal Alignment:														
Design Speed (km/h)	50	80	50	50	50	50	50	50	50	50	50	50	50	30
Right-of-Way Width	16	20	16	20	16	20	20	20	20	20	21	21	21	7.5
Road Width	8.0	10	8.5	12	12	12	12	12	12	12	14	14	14	7.5
Travel Lane Width	2 x 3.0	2 x 3.5	2 x 3.0	2 x 3.5	2 x 3.5	2 x 3.5	2 x 3.5	2 x 3.5	2 x 3.5	2 x 3.5	2 x 3.5	2 x 3.7	2 x 3.7	-
Paved Parking Allowance	2 x 1.0	2 x 1.5	2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 3.3	2 x 3.3	2 x 3.3	-
Gravel Shoulder Width	2 x 1.0	2 x 0.5	-	-	-	-	-	-	-	-	-	-	-	-
Gravel Rounding	2 x 0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Boulevard Width	4.0	5.0	3.75	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	3.5	3.5	-
Cable Strip Width	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Curve Centerline Radii ^a	100	160	100	100	100	100	100	100	100	100	150	150	150	50
Min. Crowned Crossfall (%)	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Max. Crowned Crossfall (%)	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Max. Superelevation (m/m)	0	0	0	0	0	0	0	0	0	0	0.04	0.04	0.04	0
Intersection Angle (deg)	70-110	70-110	70-110	70-110	70-110	70-110	70-110	70-110	70-110	70-110	70-110	70-110	70-110	70-110
Vertical Alignment:														
Min. Grade Asphalt (%)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Min. Grade Concrete (%)	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-
Max. Grade (%) ²	11	10	15	12	12	12	12	12	11	11	11	11	11	11
Max. Grade at Intersection (%)	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Min. K Value (sag)	12	16	6	6	6	6	6	6	6	6	9	9	12	12
Min. K Value (crest)	7	13	7	7	7	7	7	7	7	7	13	13	7	7
Concrete Works:														
Curb Type	-	-	Rollover	Rollover	Rollover	Rollover	Rollover	Rollover	Rollover	Rollover	Rollover	Rollover	Rollover	Rollover
Detail Drawing	-	-	C4	C4	C4	C4	C4	C4	C4	C4	C4	C4	C4	C4
Sidewalk Requirement ³	-	-	One Side ^a	One Side ^a	Both Sides ^a	Both Sides ^a	Both Sides ^a	Both Sides ^a	Both Sides ^a	Both Sides ^a	Both Sides ^a	Both Sides ^a	Both Sides ^a	Both Sides ^a
Sidewalk Width	-	-	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Minimum Road Structure ²														
Min. Granular Sub-Base (mm)	150	200	150	200	200	200	200	200	200	200	300	300	150	150
Min. Granular Base (mm)	75	100	75	100	100	100	100	100	100	100	100	100	75	75
Min. Asphalt Thickness (mm)	50	75	50	75	75	75	75	75	75	75	2 x 50	2 x 50	50	50



City of Penticton
171 Main St. | Penticton B.C. | V2A 5A9
www.penticton.ca | ask@penticton.ca

Development Variance Permit

Permit Number: DVP PL2019-8636

Conditions of Permit

1. This permit is issued subject to compliance with all of the bylaws of the City, except as specifically varied or supplemented by this Permit.
2. This permit applies to:

Legal: Lot A, District Lot 202, Similkameen Division Yale District, Plan KAP81594
Civic: 157 Abbott Street
PID: 026-772-108
3. This permit has been issued in accordance with Section 498 of the *Local Government Act*, to vary Subdivision and Development Bylaw Schedule G section 00400. This section requires that all vertical and horizontal alignments are designed utilizing the Bylaw standards and the current edition of the Transportation Association of Canada guidelines. The Bylaw specifies the minimum vertical curve as defined by the K-Value in Table 3.0 as 7. Section 6.2 of Subdivision and Development Bylaw 2004-81, reducing the pavement width of a lane as listed in Table 3 of Section 00400: Schedule "G" – Roads at a minimum width of 6.0m to a minimum width of 4.0m.

General Conditions

4. In accordance with Section 501 of the *Local Government Act*, the lands subject to this permit shall be developed in general accordance with this permit and the plans attached as Schedule A.
5. In accordance with Section 504 of the *Local Government Act*, if the holder of this permit does not commence the development authorized by this permit within 2 years of the date of this permit, this permit shall lapse.
6. This permit is not a building permit. In order to proceed with this development, the holder of this permit must hold a valid building permit issued by the Building Inspection Department.
7. This permit does not constitute any other municipal, provincial or federal approval. The holder of this permit is responsible to obtain any additional municipal, federal, or provincial approvals prior to commencing the development authorized by this permit.
8. This permit does not include off-site infrastructure costs that may be required at the building permit stage, such as Development Cost Charges (DCC's), road improvements and electrical servicing. There may be substantial infrastructure and servicing costs payable at a later date. For more information on servicing and infrastructure requirements please contact the Development Engineering Department at (250) 490-2501. For more information on electrical servicing costs, please contact the Electric Utility at (250) 490-2535.

Authorized by City Council, the 3rd of December, 2019

Issued this _____ day of _____, 2019

Angela Collison,
Corporate Officer

DRAFT

157 Abbott Street- Letter of Intent

Development Variance Permit to the Subdivision & Development Bylaw for the Lane at 157 Abbott St, specifically related to the K-Value (Crest).

November 15, 2019
Michael Hodges, Development Infrastructure Manager
City of Penticton
171 Main Street
Penticton, BC V2A 5A9

Dear Michael,

RE: Development Variance Permit to the Subdivision & Development Bylaw for the Lane at 157 Abbott Street, K-Value (Crest):

Letter of Intent:

Request:

Van Abbott Holdings Inc. is respectfully submitting a formal Development Variance Permit to the City of Penticton for the property located at 157 Abbott Street, Penticton. Van Abbott Holdings Inc. is proposing to subdivide this property into eleven fully serviced lots with rear lane.

The intent is to build more desirable family oriented units in the downtown area. These lots will be a community within our community, designed like no other subdivision in Penticton. Our vision is to keep with the character of the neighbourhood, while gently modernizing it.

This submission seeks to propose a lane design that is unique to Penticton, inspired by 'Living Lanes' in other progressive communities. For this specific variance, VanAbbott is seeking to vary the K value (crest) from 7 to 3. Our professional consultant, McElhanney Ltd. confirms; that this meets the Transportation Association of Canada Guidelines, and requires the posting of a 20km/hr. signage.

Key comments:

- Speed reduction of lane to 20km/hr. and reduce the K-crest from 7 to 3
- Allows VanAbbott to keep within the 11% maximum slop requirements (no variances), currently at 6%
 - All of the above meets Transportation Association of Canada Guidelines
- This recommended plan prevents additional variances at the building permit stage on approximately 7-9 of the 11 lots for maximum retaining wall heights
- VanAbbott understood at time of purchase;
 - that the site would require excessive servicing
 - Slopes of Abbott St. and VanHorne St. are very difficult and this lane would require similar slope
 - Slope of Abbott street at the corner of Westminster and Abbott is 7.7%

Background:

- Purchased in May 2, 2017
- VanAbbott Holdings believes that this will be a unique neighbourhood in the city core that will attract a vibrant mix of; families looking for homes with the opportunity for mortgage helpers and granny-suites, those interested in building single family homes or duplexes, providing a broad range of rental units from basement suites, carriage houses to full home rentals all in one neighbourhood. An offering that is not widespread currently in this community.
- Council has been supportive of this innovation project and their recent unanimous support of the Lane width variance, Oct. 1, 2019

Proposal:

- Refer to Appendix A for more detail:
- The proposed profile detailed in drawing SK-102 contains one (1) crest with the following k values:
 - PVI 2+048.414, K Value (crest)= 3
- As per the Transportation Association of Canada Geometric Design Guide for Canadian Roads, 2017 (TAC) K Factors to Provide Stopping Sight Distance on Crest Vertical Curves the minimum required design k value to provide stopping sight distance at a design speed of 30km/h is 2. To provide stopping sight distance at a design speed of 20km/h the minimum required design k value is 3.
- Precedent for VanAbbott's requested variance has been established in April of this year with the 'Ellis One' project, with a similar variance to K-Values. Refer to Appendix B.

Financial Implications:

- There is no financial impact to the City associated with these requested slope variances

Neighbourhood Consultation:

- VanAbbott conducted a neighbourhood consultation in June 2018, approximately 45 people attended the event
- Neighbourhood was quite supportive and happy to see that the property was to be developed as residential lots versus a large scale apartment building.
- Neighbours took the opportunity to speak with both the VanAbbott Team as well as City Staff about their concerns for traffic calming required at the corner of Abbott St. and Westminster and their need for incremental parking in the neighbourhood

Benefits:

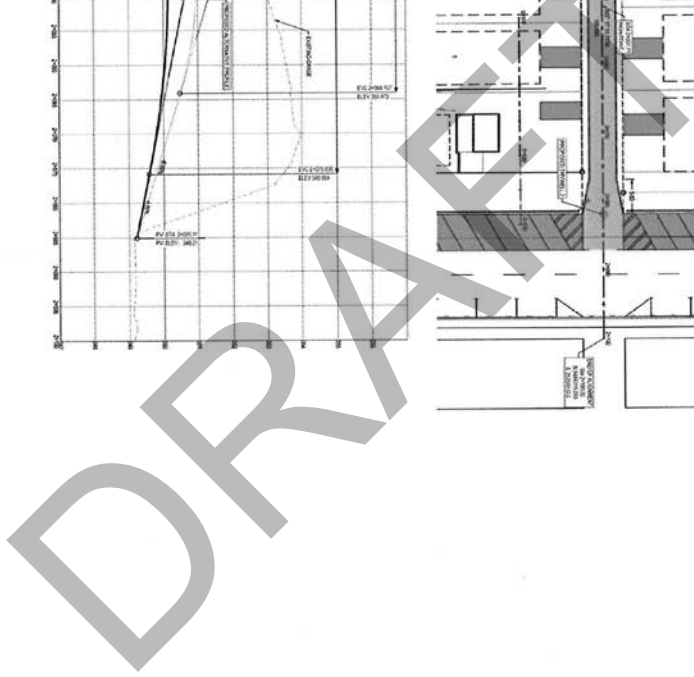
- The lane is intended to be a vibrant community connector that in the future may connect through to the Kiwanis building located just north of the proper, and welcome the neighbours to the south to use it as part of their walking routes
- Attract people to move to Penticton that are looking for this type of housing opportunity
- Assist in further upgrading the neighbourhood
- Incremental parking stalls will be created in an already congested neighbourhood according to the Commercial & Residential neighbours alike
- The lane is designed for neighbours to get out and meet each other and spend time together
- Create a new neighbourhood that the City as well as the landowners can be proud of

In conclusion, please accept the enclosed application package for 157 Abbott Street. We would greatly appreciate your consideration in granting the request for the Development Variance Permit to the Subdivision & Development Bylaw as it relates to the lane K-value (crest) from 7 to 3 lane at 157 Abbott.

Respectfully,
VanAbbott Holdings Inc.

DRAFT

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Appendix B:



Council Report

penticton.ca

Date: April 16, 2019
To: Donny van Dyk, Chief Administrative Officer
From: Michael Hodges, Development Infrastructure Manager
Address: 110 Ellis Street - laneway
Subject: 110 Ellis Street – Lane alignment and design
Subdivision & Development Bylaw Variance Request

Staff Recommendation

THAT Council, with properly posted speed reductions to 20 km/h, support the Development Variance Permit to vary the minimum road vertical curve in the lane at the Back of 110 Ellis Street to be reduced from a K Value of 12 to 1 as allowed in the Transportation Association of Canada Guidelines.

AND THAT Council, require the Developer to enter into a Maintenance Agreement for snow clearing of the entire lane to Westminster until a suitable turnaround can be constructed.

Background

The 'Ellis-One' condominium development at 110 Ellis Street was approved by Council in 2018 and will contain 51 units, adding over 100 new residents to the downtown core. The property being developed contains challenging topography and access constraints with the configuration of the existing laneway. Through the design process staff worked with the developer to identify ways to incorporate vehicle access into the building design and not unreasonably impact the pedestrian environment and visual impact along Ellis Street. The subject property and laneway location is shown in attachment A.

The eventual building design that was approved by Council split vehicle access into two locations – one from Ellis Street and one from the rear lane – taking advantage of the topographical constraints and providing for a high quality design solution along the Ellis Street frontage. The design however comes with challenges around the laneway access and in order to accommodate the rear laneway design a variation to the City's Subdivision and Development Bylaw standards is required.

A typical laneway designed to the City's bylaw standards would see a maximum grade of 11% and Vertical Curve that allowed for 66 metres of lane length to transition to the maximum grade to comply with the City's Subdivision and Development Bylaw.

Staff are requesting that Council support Staff in reducing the Vertical Curve in the 100 Block Ellis Street lane to allow the lane to transition to the 11% grade required over less of a distance required under the bylaw. This

will reduce the length of the transition from 66 metres to 20 metres – providing for a shorter distance between the high point of the lane and low point of the lane.

The main reason for the requested variance is largely based on the fact that the laneway between Ellis Street and Van Horne Street is already non-compliant to City bylaws. The lane is constructed from Westminster Avenue East intersection to the rear of the property at 146 Ellis Street. This current lane accesses the property at 146 Ellis, but does not allow for a turnaround of vehicles, unless they enter private property, where opportunity exists. The lane to the north of 146 Ellis Street that is behind the 'Ellis One' development has not been fully constructed and was a dirt lane on the natural slope of approximately 14% grade. This section of lane was occasionally accessed by residents to access the rear of their properties, but due to existing grades cannot be extended north to Vancouver Avenue.

A photo of the existing lane prior to the development commencing is shown in Attachment B. A photograph is the lane, in its current condition as the new development takes place is also shown in Attachment B, the eventual design of the laneway to access the new development subject to the Variance proposal.

Proposal

Staff have been working with the developer and designers of 110 Ellis Street on their development, 'Ellis One' into a 51 unit apartment building which was previously approved by Council. To meet the parking requirements the developer is proposing the two lower floors as parking, one accessed from the ground floor along Ellis Street and the second floor accessed directly from the lane.

During the initial planning and design the City agreed that the lane could be constructed to access the development, but it was not possible to extend the lane through to Vancouver Avenue. The intention was to have a hammer-head turnaround incorporated into the building entrance to allow for vehicles in the lane to turn around without having to enter the building. (Attachment E)

During the detailed design of the project and the laneway it was determined that the impact on the existing landowners would be significant if the lane was constructed to City requirements. To achieve the vertical curves required in the bylaw the lane would need to be raised significantly starting behind 160 Ellis Street and increasing as the lane moved north. This would restrict access to the properties fronting onto Ellis Street to the point that access from the lane would not be possible without significant alteration of the rear of the private properties. It would also require approval to fill in the rear of the Van Horne Street properties along the laneway, although the impact would be less as their rear grades are higher and lifting the lane would potentially improve their access.

The City's lane and road design criteria is outlined in the Subdivision and Development Bylaw Schedule G section 00400. This section requires that all vertical and horizontal alignments are designed utilizing the Bylaw standards and the current edition of the Transportation Association of Canada guidelines. The Bylaw specifies the minimum vertical curve as defined by the K-Value in Table 3.0 as 12. An extract of the Subdivision and Development Bylaw referencing these standards can be found in Attachment C.

A K-Value represents the horizontal distance along which a 1% change in grade occurs on the vertical curve. It expresses the abruptness of the grade change in a single value. It is used in the engineering and design of roadways and lanes.

The Developer has submitted a road design for approval with a supporting letter (Attachment D) from their design professional requesting the reduction of two of the Subdivision and Development bylaw requirements while confirming that the road still complies with the minimum design requirements as set out in the Transportation Association of Canada Guidelines. The following Sections of the Subdivision & Development Bylaw are proposed to be reduced to accommodate the proposed road design:

- Reduce the minimum Vertical Curve radius as specified in Schedule G Section 004400 Table 3 from a K-Value of 12 to 1 as outlined in the Traffic Association of Canada Guidelines; and
- Reduce the design and posted speed limit from 30km/h to 20km/h.

Staff consider that upgrading the lane to a City standard is not possible, without significant negative impact on private property. The proposed design is considered to be an appropriate design solution for this location and the intended eventual use of the laneway. Based on the information provided Staff are recommending that Council support the developer's request to vary the bylaw requirements.

The attached drawings (Attachment E) show the designed lane alignment that will meet the reduced standard.

Financial Implication

The developers for 110 Ellis Street will be responsible for the design and construction of the lane. Once the section is constructed the works will become part of the City road network and it will be the City's responsibility for all maintenance costs.

The current use of the lane does not trigger a high priority on snow clearing, however, with the proposed residential development using the lane as its primary access for many of the units this will increase the priority of the lane. It is the Staff recommendation that the developer and strata enter into a maintenance agreement to provide snow clearing to the lane, as the city will not be able to turn our equipment around in the proposed turnaround. This will mean that there will be no additional cost on the City for snow clearing from this development. The Development will be required to clear the snow from the entire lane to allow access for their residents to Westminster Avenue East.

Neighborhood Consultation

The Developer has contacted the owners of the neighboring properties to get their approval and support for this proposal. Currently the City has been provided letters of support from the affected neighbors.

The main reason that the developer is requesting this variance is at the request from the owner of 160 Ellis Street. If the lane was constructed to City Bylaws it would need to be raised at the back of 160 Ellis Street. They currently use this area for their business and need access to the lane. The developer has requested this variance to accommodate the needs of the owner of 160 Ellis Street and a letter of support from the owner has been provided to staff.

The neighbors at 131 and 145 Van Horne Street are affected by the works and they have agreed to the works taking place on their property. The variance proposed reduces the impact of the lane on their properties. While still impacted the owners have submitted a letter of support for the proposal and approval from some of the works to be carried out on their properties.

The developer has spoken with the three properties to the north of development entrance (109, 113 and, 121 Van Horne Street) as they do occasionally use the lane to access their properties. The design for the lane is not impacted by the proposed variance.

Analysis

The design solution proposed is considered to be reasonable for the proposed development and the adjacent properties. Given the topographical constraints that exist along the laneway and the relatively low usage of the lane, staff are supportive of the proposed variance. The inability for the laneway to access Vancouver Avenue will restrict the amount of vehicles that use the southern portion of the lane to those within the Ellis once development and existing and future developments to the south.

The existing lane will be greatly improved by the proposed works and the impact on the existing properties will be minimal. Staff cannot see a way to upgrade with lane to access the new development without this variance and believe that compliance with the bylaw will create a significant impact on the developer and the surrounding properties to achieve the Bylaw requirements.

The City received advice from a third party traffic consultant who reviewed the proposal from the developer and concluded that the impact of the change to the K-value was acceptable with a minor change that has been incorporated, and compliant to the Traffic Association of Canada Guidelines.

The traffic consultant did highlight concerns about the design of the driveway entrance and the grade. The concern is that the 11% grade on the road and the turn into the building will be difficult and challenging in wet or ice conditions. In response the developer has provided a report to address the concerns detailing their reconditions on the ability for passenger vehicles to access the building and to turn around in the lane. This additional report is also located in Attachment D.

The developer's Design Consultant has confirmed that the laneway design will meet good engineering practice and Transportation Association of Canada guidelines and even though the City's design standard will be altered, they believe that the proposed road design will result in a safe and accessible configuration for the public.

Due to the final design of the access to the building, the hammerhead turnaround will not be suitable for the City fleet of snow plows. Staff are advising Council that if this design is allowed to be constructed the City will not be able to provide snow clearing to this development. The development (eventual Strata Corporation) will have to arrange for a smaller private snow plow to maintain this entire lane when required. As outlined in the staff recommendation, a condition of approval for this variance will be that the developer enter into a maintenance agreement requiring the development be responsible for lane snow clearing and maintenance. If at some point in the future a development occurs, between 110 Ellis Street and Westminster Avenue East, the City will work to have a turnaround installed that will allow access for our snow clearing equipment. This will mean that the 110 Ellis Street would only need to remove the snow up until any new turnaround and then the City will be able to remove snow from the turnaround to Westminster Ave.

Support for Alternative Recommendation 1

Council have the ability to deny the Development Variance Permit. This would require the developer to design the lane in accordance with the Bylaw and negotiate to compensate the affected properties, or to

rebuild the entrance to the building. This is not the preferred option of Staff, given the negative impacts on the adjacent properties.

Alternate recommendations

Alternative recommendation 1 - THAT Council deny the Development Variance Permit.

Attachments

Attachment A – Location of the lane

Attachment B – Lane photographs – pre development & current situation

Attachment C – Extract from the Subdivision and Development Bylaw

Attachment D – Letter from the Designer Engineer

Attachment E – Design drawings – showing the K-value of 1

Attachment F – Draft Development Variance Permit PL2019-8506

Respectfully submitted,

Michael Hodges
Development Infrastructure Manager

Concurrence

Director <i>MH</i>	Acting Chief Administrative Officer
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Council Report

Page 5 of 13

Attachment A – Location of the lane



Council Report

Page 6 of 12

Attachment B – Photo of the existing lane pre-development

The lane can be seen below with the existing asphalt ending behind 146 Ellis and the undeveloped lane continuing up the hill.



Attachment B – Photo of the lane – during development

The lane as it exists today during the construction process for the development. The vehicle access to the development from the laneway will be from the northern most opening in the parkade wall. The laneway grade will be brought back up to the vehicle entrance point to the building – the design standard subject to this Variance is required to be lowered to accommodate the access and laneway topographical challenges.



Attachment C – Extract from the Subdivision and Development Bylaw

CITY OF PENTICTON	SUBDIVISION & DEVELOPMENT BYLAW	SECTION 00400 – ROADS
SUBDIVISION & DEVELOPMENT	SCHEDULE "G"	PAGE 1 OF 10
BYLAW 2004-81	DESIGN CRITERIA	NOVEMBER 2004

1.0 GENERAL

- 1.1** All road classifications and designations for vertical and horizontal alignment elements will be designed utilizing information contained in this section, and in compliance with:
 - 1.1.1** The current edition of the Transportation Association of Canada - Geometric Design Guide for Canadian Roads.
- 1.2** Consulting Engineers retained by the Owner to design the works and services must consult with the City to determine what existing information may be of assistance to them.
- 1.3** The City may require an independent Traffic Impact Study to determine the requirements or warrants for deceleration and acceleration turning lanes or traffic control signalization for access off major roads for safety reasons and to minimize disruption to traffic.

SECTION 00400: Schedule "G" – ROADS, Table 3.0. (Page 3 of 10)

3.0 ROAD CLASSIFICATION DESIGN CRITERIA - TABLE 3.0

	RURAL ROADS						URBAN						LANES	
	Local	Collector	Local	Residential	Industrial	Commercial	Residential	Collector	Industrial	Commercial	Residential	Commercial	Residential / Multi-Family	Commercial
Standard Drawing No.	S-R10	S-R11	S-R2	S-R4a	S-R4	S-R5	S-R6	S-R6a	S-R12	S-R12a				
TAC Classification	RLU50	RCU60	ULU50	ULU60	ULU50	UCU60	UCU60	UCU60						
Horizontal Alignment:														
Design Speed (km/h)	50	60	50	50	50	50	60	60	30	30				
Right-of-Way Width	16	20	16	20	20	20	21	21	8	7.5				
Road Width	8.0	10	8.5	12	12	12	14	14	6	7.5				
Travel Lane Width	2 x 3.0	2 x 3.5	2 x 3.0	2 x 3.5	2 x 3.5	2 x 3.5	2 x 3.5	2 x 3.7	2 x 3.3	2 x 3.3				
Paved Parking Allowance	2 x 1.0	2 x 1.5	2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 3.3	2 x 3.3	2 x 3.3				
Gravel Shoulder Width	2 x 1.0	2 x 0.5	-	-	-	-	-	-	-	-				
Gravel Rounding	2 x 0.5	2 x 0.5	-	-	-	-	-	-	-	-				
Shoulder Width	4.0	3.0	3.75	4.0	4.0	4.0	3.5	3.5	-	-				
Cable Strip Width	-	-	-	-	-	-	0.5	0.5	-	-				
Curve Centerline Radii	100	150	100	100	100	150	150	150	50	50				
Min. Crowned Crossfall (%)	2	2	2	2	2	2	2	2	2	2				
Max. Crowned Crossfall (%)	4	4	4	4	4	4	4	4	4	4				
Max. Superelevation (m/m)	0	0	0	0	0	0	0.04	0.04	0	0				
Intersection Angle (deg)	70-110	70-110	70-110	70-110	70-110	70-110	70-110	70-110	70-110	70-110				
Vertical Alignment:														
Min. Grade Asphalt (%)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0				
Min. Grade Concrete (%)	-	-	0.5	0.5	0.5	0.5	0.5	0.5	-	-				
Max. Grade (%)	11	10	15	12	12	11	11	11	11	11				
Max. Grade at Intersection (%)	8	8	8	8	8	8	8	8	8	8				
Min. K Value (m)	12	18	6	6	6	6	9	9	12	12				
Min. K Value (crest)	7	13	7	7	7	7	13	13	7	7				
Concrete Works:														
Curb Type	-	-	Roller	Roller	Roller	Roller	Roller	Roller	Roller	Roller				
Detail Drawing	-	-	C4	C4	C4	C4	C4	C4	C4	C4				
Sidewalk Requirement	-	-	One Side	One Side	Both Sides	One Side	One Side	Both Sides	Both Sides	Both Sides				
Sidewalk Width	-	-	1.5	1.5	1.5	1.5	-	1.5	-	1.5				
Minimum Road Structure														
Min. Granular Sub-Base (mm)	150	200	150	200	200	200	300	300	150	150				
Min. Granular Base (mm)	75	100	75	100	100	100	100	100	75	75				
Min. Asphalt Thickness (mm)	50	75	50	75	100	100	75	75	50	50				

Attachment D – Letter from the Design Engineer

DRAFT



April 2, 2019

Ecora File No.: CP-17-601

City of Penticton
171 Main Street
Penticton, BC V2A 5A9

Attention: Michael Hodges
Development Infrastructure Manager

Reference: Ellis One – Lane Design Review Response

In response to the "Ellis One (Ellis Street-Van Horne Street Lane) Lane Design Review" performed by Peter A. Truch (Dated March 25, 2019), Ecora Engineering and Resource Group Ltd (Ecora) would like to address the three (3) concerns identified: Vertical Curve Length, Vertical % Grade of the area North of the paved lane, and Parkade Transition from the Lane into the structure.

Vertical Curve Length

In the civil design drawings dated March 15, 2019 the length of vertical curve is 13m with a corresponding K-Value of 1.00. Mr. Truch has recommended increasing this curve length to 20m. Please see attached drawing showing this revision.

Vertical % Grade

Mr. Truch has identified the portion of lane beyond the entrance of the parkade and extent of paved surface as 14% which is steeper than the City's S&D bylaw (maximum 11% for a lane). However, since the design intention of this portion of the lane is to limit the otherwise substantial impact to surrounding neighbours and deter normal traffic that may utilize this portion, Ecora believes the 3% exceedance is safe and acceptable for this scenario. As such, a warning sign (W-14) will be posted at the end of pavement indicating a dead end.

Parkade Transition

As the parkade entrance must transition from a 10% lane profile to a "flat" parking slab, an unordinary problem arises for the building structure which is solved by a custom concrete slab. Since this "intersection" will see a very limited number of vehicles (passenger cars and trucks) from the 25 stall parkade level, Ecora believes the current design is safe and acceptable for this scenario. As such, surfacing improvements will be made to increase traction for vehicles.

As well, Mr. Truch has identified this entrance as a 'hammerhead' style turn-around by which vehicles utilizing this lane may require the space to turn around and leave safely. Please see attached drawing which illustrates adequate space required to successfully complete the maneuver. While the CAD design vehicle is shown as a passenger car, the dimensions meet that of a Ford F150 pickup truck. As such, a legal easement will be registered over the parkade entrance permitting access.

We trust this information meets your present requirements. If you have any questions or comments, please contact the undersigned.

Ecora Engineering & Resource Group Ltd.
501 Winnipeg Street, Penticton, BC V2A 6M8 | P: 250.492.2227 | F: 250.492.2135
www.ecora.ca



Sincerely

Ecora Engineering & Resource Group Ltd.

 4/2/2019

Mike Young, P. Eng.
Senior Civil Engineer
Direct Line: 250.469.9757 x1005
mike.young@ecora.ca

ecora

2



March 18, 2019

Ecora File No.: CP-17-601

City of Penticton
171 Main Street
Penticton, BC V2A 5A9

Attention: Michael Hodges
Development Infrastructure Manager

Reference: Ellis One – Lane Design Profile

As a requirement of providing access for personal vehicles to the second storey of the Ellis One condo development at 110 Ellis Street, Ecora Engineering & Resource Group Ltd. (Ecora) has designed the lane profile so as to minimize impact to surrounding neighbours and adhere to a maximum grade of 11%.

We note that the existing lane had a K-Value of less than 1 leading into a 17% grade up a gravel hill. This is extremely difficult and most likely impossible to navigate with most cars. As this proposed lane leads to a parkade, all vehicle types must be accommodated.

As per the Transport Association of Canada Geometric Design Guide for Canadian Roads, where good street lighting prevails, the following formula may be used to calculate the minimum k-value required based on the comfort of the passengers:

$$K = \frac{V^2}{395}$$

Section 3.3.3.5
Eq 3.3.8

Where:

V = the design speed [km/h]

By utilizing a posted speed limit of 20 km/h for the lane, a minimum k-value can be calculated to be 1.0. As such, a 20 km/h speed limit will be posted at the lane entrance off Westminster Ave E and a streetlight will be placed above the low point in the sag curve (~0+020) to supplement existing lighting in the area.

This k-value is less than the minimum value of 6.0 listed in the CoP Subdivision and Development Bylaw 2004-81, however based on the TAC, Ecora believes the designed profile complies with best engineering practices and is more than adequate to provide a safe transition between grades.

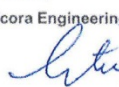
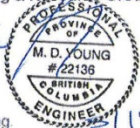
We trust this information meets your present requirements. If you have any questions or comments, please contact the undersigned.

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Sincerely

Ecora Engineering & Resource Group Ltd.



3/14/2019

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c: Wildstone Construction & Engineering

