City of Kelowna Public Hearing AGENDA



Tuesday, August 9, 2016 6:00 pm Council Chamber City Hall, 1435 Water Street

Pages

1. Call to Order

THE CHAIR WILL CALL THE HEARING TO ORDER:

1. (a) The purpose of this Hearing is to consider certain bylaws which, if adopted, shall amend *Kelowna 2030* - Official Community Plan Bylaw No. 10500 and Zoning Bylaw No. 8000.

(b) All persons who believe that their interest in property is affected by the proposed bylaws shall be afforded a reason-able opportunity to be heard or to present written submissions respecting matters contained in the bylaws that are the subject of this hearing. This Hearing is open to the public and all representations to Council form part of the public record. A live audio feed may be broadcast and recorded by Castanet.

(c) All information, correspondence, petitions or reports that have been received concerning the subject bylaws have been made available to the public. The correspondence and petitions received after July 26, 2016 (date of notification) are available for inspection during the course of this hearing and are located on the information table in the foyer of the Council Chamber.

(d) Council debate on the proposed bylaws is scheduled to take place during the Regular Council meeting after the conclusion of this Hearing. It should be noted, however, that for some items a final decision may not be able to be reached tonight.

(e) It must be emphasized that Council will not receive any representation from the applicant or members of the public after conclusion of this Public Hearing.

2. Notification of Meeting

The City Clerk will provide information as to how the Hearing was publicized.

3. Individual Bylaw Submissions

3.1 1975 Kane Road, BL11261 (Z16-0026) - Terrance & Joan Raisanen

To rezone the subject properties to the RM5 - Medium Density Multiple Housing zone to facilitate a proposed 119 unit multi-family rental project with two 5-storey buildings.

3.2 1555, 1547 & 1543 Bedford Avenue (now known as 1545 Beford Avenue), 36 - 86 BL11262 (Z16-0019) - Al Stober Construction Ltd.

To rezone the subject properties to the RM5 - Medium Density Multiple Housing zone to facilitate a proposed 63 unit 4 $\frac{1}{2}$ storey multi-family building.

4. Termination

5. Procedure on each Bylaw Submission

(a) Brief description of the application by City Staff (Land Use Management);

(b) The Chair will request that the City Clerk indicate all information, correspondence, petitions or reports received for the record.

(c) The applicant is requested to make representation to Council regarding the project and is encouraged to limit their presentation to 15 minutes.

(d) The Chair will call for representation from the public in attendance as follows:

(i) The microphone at the public podium has been provided for any person(s) wishing to make representation at the Hearing.

(ii) The Chair will recognize ONLY speakers at the podium.

(iii) Speakers are encouraged to limit their remarks to 5 minutes, however, if they have additional information they may address Council again after all other members of the public have been heard a first time.

(e) Once the public has had an opportunity to comment, the applicant is given an opportunity to respond to any questions raised. The applicant is requested to keep the response to a total of 10 minutes maximum.

(f) Questions by staff by members of Council must be asked before the Public Hearing is closed and not during debate of the bylaw at the Regular Meeting, unless for clarification.

(g) Final calls for respresentation (ask three times). Unless Council directs that the Public Hearing on the bylaw in question be held open, the Chair shall state to the gallery that the Public Hearing on the Bylaw is closed.

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Note: Any applicant or member of the public may use visual aids (e.g. photographs, sketches, slideshows, etc.) to assist in their presentation or questions. The computer and ELMO document camera at the public podium are available. Please ask staff for assistance prior to your item if required.

REPORT TO COUNCIL



Date:	July 25 th , 201	6		Kelowna
RIM No.	1250-30			
То:	City Manager			
From:	Community P	lanning Department (AG	C)	
Application:	Z16-0026		Owner:	Terrance and Joan Raisanen
Address:	1975 Kane Rd		Applicant:	Broadstreet Properties - Adam Cooper
Subject:	Rezoning App	lication		
Existing OCP Designation:		MRM - Multiple Unit Residential (Medium Density)		
Existing Zone:		A1 - Agriculture		
Proposed Zone:		RM5 - Medium Density Multiple Housing		

1.0 Recommendation

THAT Rezoning Application No. Z16-0026 to amend the City of Kelowna Zoning Bylaw No. 8000 by changing the zoning classification of Lot B, Section 33, Township 26, ODYD, Plan 22004, located on 1975 Kane Rd, Kelowna, BC from the A1 - Agriculture zone to the RM5 - Medium Density Multiple Housing zone, be considered by Council;

AND THAT the Zone Amending Bylaw be forwarded to a Public Hearing for further consideration;

AND THAT final adoption of the Zone Amending Bylaw be subsequent to the following:

To the outstanding conditions identified in Attachment "A" associated with the report from the Community Planning Department dated June 20th 2016.

2.0 Purpose

To rezone the subject properties to the RM5 - Medium Density Multiple Housing zone to facilitate a proposed 119 unit multi-family rental project with two 5-storey buildings.

3.0 Community Planning

The Official Community Plan (OCP) Future Land Use Map identifies the area as MRM - Medium Density Multiple Residential. A rezoning to the RM5 zone is consistent with this designation and the proposal for a multi-family building meets many of the OCP's urban infill goals. Adding additional density within a village centre increases the viability of the nearby commercial area and walkability within the neighbourhood. Residents are only metres from the Glenmore Village shopping centre. Further, additional density is well supported in this area by nearby parks, outdoor amenities,

transit, and the site is on a direct route to UBCO once John Hindle Drive is completed. The location has a Walk Score of 65 out of 100 which means it is somewhat walkable and some errands can be accomplished on foot. The applicant intends to market the housing as rental. By providing a rental housing product, the applicant will qualify for a tax exemption. Data from the CMHC's fall 2015 Rental Market Report indicates that:

- Kelowna's apartment vacancy rate declined to 0.7% in October 2015 compared to 1.0% in October 2014.
- Kelowna's apartment availability rate declined to 0.9% in October 2015 compared to 1.7% in October 2014.

Therefore, increasing the rental supply will benefit the Kelowna housing market. Based upon the above rationale, Staff are recommending support to Council for the land use. It should be noted that the details of the proposed Development Permit have not been finalized and will require four variances that will be brought forth for Council's consideration should Council choose to support the land use. The four variances are:

- 1. Increase in height from 4 stories to 5 stories
- 2. Decrease in the number of parking stalls required from 184 to 153 stalls (~17%).
- 3. Side yard (west) landscape buffer reduction from 3.0 m to 1.22 m.
- 4. Rear yard landscape buffer reduction from 3.0m to <3.0m (tbd).

4.0 Proposal

4.1 <u>Project Description</u>

The subject property is currently vacant. The proposal is for a 119-unit rental apartment building with a mix of 1, 2, & 3 bedroom units. The proposal has ground-oriented units along Kane Rd and along Valley Rd. The form and character will be commented on further by Staff when the Development Permit is ready for review.

4.2 <u>Site Context</u>

The site is located within the Glenmore Village Centre neighbourhood. The subject property is designated MRM (Multiple Residential - Medium Density) and the lot is within the Permanent Growth Boundary. Specifically, the adjacent land uses are as follows:

Orientation	Zoning	Land Use	
North	C3 - Neighbourhood Commercial	Commercial	
East	RU1 - Large Lot Housing	Residential	
	A1 - Agriculture	Agriculture	
South	RM3 - Low Density Multiple Housing	Residential	
West	RM3 - Low Density Multiple Housing	Vacant	
	RM5 - Medium Density Multiple Housing	Residential	



Subject Property Map: 1975 Kane Rd

4.3 Zoning Analysis Table

Zoning Analysis Table				
CRITERIA	RM5 ZONE REQUIREMENTS	PROPOSAL		
	Development Regulations			
Height	18.0 m / 4.5 storeys	tbd / 5 storeys 鱼		
Front Yard (north)	Min 6.0 m except for 1.5 m for ground oriented housing	6.0 m 7.22 m		
Side Yard (east)	4.5 m (up to 2 ½ storeys) 7.0 m (above 2 ½ storeys)	6.0 m 7.22 m		
Side Yard (west)	4.5 m (up to 2 ½ storeys) 7.0 m (above 2 ½ storeys)	> 4.5 m		
Rear Yard (south)	9.0 m	>9 m		
Site coverage of buildings	40 %	29%		
Site coverage of buildings, driveways & parking	65 %	58 %		
FAR	1.1 + (0.04 to 0.1) = 1.14 to 1.2 Max	1.18		
Parking Regulations				

CRITERIA	RM5 ZONE REQUIREMENTS	PROPOSAL
Minimum Parking Requirements	184 parking stalls	74 stalls in parkade <u>+ 79 surface stalls</u> = 153 parking stalls ●
Ratio of Parking Stalls	Full size: 50% Min Medium Size: 40% Max Small Size: 10% Max	Full size: 63.7% (96 stalls) Medium Size: 36.3% (55 stalls) Small Size: 0% (0 stalls) 2 Accessible
Minimum Drive Aisle Width	7.0 m	7.0 m
Setback (Parking)	1.5 m	tbd
	Other Regulations	
Minimum Bicycle Parking Requirements	Class 1: 60 bikes Class 2: 12 bikes	Class 1: 60 bikes Class 2: 40 bikes
Private Open Space	29,762 ft ²	33,025 ft ²
Landscape Buffer	Front yard: 3.0 m Side yard: 3.0 m Rear yard: 3.0 m	Front yard: 6.0 m Side yard (east): 6.0m Side yard (west): 1.22 m Rear yard: <3.0 m

• Variance to reduce the landscape buffer (rear yard)

5.0 Current Development Policies

5.1 Kelowna Official Community Plan (OCP)

Development Process

Compact Urban Form.¹ Develop a compact urban form that maximizes the use of existing infrastructure and contributes to energy efficient settlement patterns. This will be done by increasing densities (approximately 75 - 100 people and/or jobs located within a 400 metre walking distance of transit stops is required to support the level of transit service) through development, conversion, and re-development within Urban Centres (see Map 5.3) in particular and existing areas as per the provisions of the Generalized Future Land Use Map 4.1.

Sensitive Infill.² Encourage new development or redevelopment in existing residential areas to be sensitive to or reflect the character of the neighbourhood with respect to building design, height and siting.

6.0 Technical Comments

- 6.1 Building & Permitting Department
 - 1) Development Cost Charges (DCC's) are required to be paid prior to issuance of any Building Permit(s).
 - 2) Placement permits are required for any sales or construction trailers that will be on site. The location(s) of these are to be shown at time of development permit application.

¹ City of Kelowna Official Community Plan, Policy 5.2.3 (Development Process Chapter).

² City of Kelowna Official Community Plan, Policy 5.22.6 (Development Process Chapter).

- 3) A Building Code analysis is required for the structure at time of building permit applications, but the following items may affect the form and character of the building(s):
 - a. Any security system that limits access to exiting needs to be addressed in the code analysis by the architect.
 - b. Access to the roof is required per NFPA and guard rails may be required and should be reflected in the plans if required.
- 4) A Geotechnical report is required to address the sub soil conditions and site drainage at time of building permit application.
- 5) Fire resistance ratings are required for storage, janitor and/or garbage enclosure room(s). The drawings submitted for building permit is to clearly identify how this rating will be achieved and where these area(s) are located.
- 6) An exit analysis is required as part of the code analysis at time of building permit application. The exit analysis is to address travel distances within the units, number of required exits per area, door swing direction, handrails on each side of exit stairs, width of exits etc.
- 6.2 Development Engineering Department
 See Memo (Attachment 'A') dated June 20th 2016
- 6.3 Fire Department
 - 1) Construction fire safety plan is required to be submitted and reviewed prior to construction and updated as required.
 - 2) Engineered Fire Flow calculations are required to determine Fire Hydrant requirements as per the City of Kelowna Subdivsion Bylaw #7900. Should a hydrant be required on this property it shall be operational prior to the start of construction and shall be deemed a private hydrant
 - 3) This building shall be addressed off of the street it is accessed from. A visible address must be posted on this street as per City of Kelowna By-Laws.
 - 4) Sprinkler drawings are to be submitted to the Fire Dept. for review when available.
 - 5) A fire safety plan as per section 2.8 BCFC is required at occupancy. The fire safety plan and floor plans are to be submitted for approval in AutoCAD Drawing format on a CD.
 - 6) Fire Department access is to be met as per BCBC 3.2.5. -
 - 7) Approved Fire Department steel lock box acceptable to the fire dept. is required by the fire dept. entrance and shall be flush mounted
 - 8) All requirements of the City of Kelowna Fire and Life Safety Bylaw 10760 shall be met.
 - 9) Fire alarm system is to be monitored by an agency meeting the CAN/ULC S561 Standard.
 - 10) Contact Fire Prevention Branch for fire extinguisher requirements and placement.
 - 11) Fire department connection is to be within 45M of a fire hydrant unobstructed.
 - 12) Ensure FD connection is clearly marked and visible from the street.
 - 13) Standpipes to be located on intermediate landings.
 - 14) Sprinkler zone valves shall be accessible as per fire prevention bylaw.

- 15) Dumpster/refuse container must be 3 meters from structures or overhangs or in a rated room in the parking garage.
- 16) Do not issue BP unless all life safety issues are confirmed.

7.0 Application Chronology

Date of Application Received (incomplete):April 29th 2016Date Public Consultation (Public Open House):July 4th 2016

Report prepared by:

Adam Cseke	-
Reviewed by: Approved for:	Terry Barton, Urban Planning ManagerRyan Smith, Community Planning Department Manager

Attachments: Engineering Memo (Attachment 'A') DRAFT DP /DVP

CITY OF KELOWNA

MEMORANDUM

Date: File No.:	June 20, 2016 Z16-0026		
То:	Land Use Management (AC)		
From:	Development Engineering Manager (SM)		
Subject:	1975 Kane Rd at Valley Rd	Lot B ODYD Plan 22004	

The Development Engineering Branch comments and requirements regarding this application to rezone from A-1 Agriculture 1 zone to RM5 Medium Density Multiple Housing are as follows:

- .1) General
 - a) The postal authorities must be contacted to determine whether or not a "community mailbox" will be utilized, and if so, its location should be determined and the proposed location shown on the construction plans. Please contact the Canadian Post Corporation, Delivery Services, P.O. Box 2110, Vancouver, B.C. V6B 4Z3 (604) 662-1381 in this regard.
 - b) Where there is a possibility of a high water table or surcharging of storm drains during major storm events, non-basement homes may be required. This must be determined by the engineer and detailed on the Lot Grading Plan required in the drainage section.
 - c) Provide easements as may be required.

.2) Dedications

- a) On the Kane Road frontage, provide an additional 2.6m dedication for a roadway allowance widening matching the adjacent parcels to the west.
- b) Dedicate additional road allowance widening for a roundabout at the Valley Rd intersection

.3) Geotechnical Study.

a) Provide a comprehensive geotechnical report (3 copies), prepared by a Professional Engineer competent in the field of hydro-geotechnical engineering to address the items below: <u>NOTE</u>: The City is relying on the Geotechnical Engineer's report to prevent any damage to property and/or injury to persons from occurring as a result of problems with soil slippage or soil instability related to this proposed subdivision.

SCHEDULE	А	
This forms part	of development	
Permit #	Z16-0019	City of Kolowpa
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The Geotechnical reports must be submitted to the Planning and Development Services Department (Planning & Development Officer) for distribution to the Works & Utilities Department and Inspection Services Division prior to submission of Engineering drawings or application for subdivision approval.

- Area ground water characteristics, including any springs and overland surface drainage courses traversing the property. Identify any monitoring required.
- (ii) Site suitability for development.
- (iii) Site soil characteristics (i.e. fill areas, sulphate content, unsuitable soils such as organic material, etc.).
- (iv) Any special requirements for construction of roads, utilities and building structures.
- Suitability of on-site disposal of storm water and sanitary waste, including effects upon adjoining lands.
- ii) Recommendations for items that should be included in a Restrictive Covenant.
- iii) Any special requirements that the proposed subdivision should undertake.
- iv) Any items required in other sections of this document.
- v) Recommendations for erosion and sedimentation controls for water and wind.
- vi) Recommendations for roof drains and perimeter drains.
- vii) Recommendations for construction of detention or infiltration ponds if applicable.

.4) Water

- a) The property is located within the Glenmore Ellison Improvement District service area.
- b) Ensure an adequately sized domestic water and fire protection system is in place. The developer is required to make satisfactory arrangements with the GEID for these items. All charges for service connection and upgrading costs are to be paid directly to the GEID.

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.5) Sanitary Sewer

- a) Provide an adequately sized sanitary sewer connection. Only one service is to be provided for this development.
- b) Decommissioning of the existing small diameter service at the main and the installation of the new service will be at the applicant's cost. The estimated cost of construction for bonding purposes including 40% escalation is **\$20,000**
- c) Perform a downstream capacity analysis of the City's Sanitary Sewer system based on the proposed development unit count.

.6) Drainage

- a) A requirement of this rezoning application will be to prepare a storm water management plan complete with a detailed Site Grading Plan including storm detention, erosion and sedimentation controls required onsite.
- b) Show details of dedications, rights-of-way, setbacks and non-disturbance areas on the lot Grading Plan.
- c) There is a possibility of a high water table or surcharging of storm drains during major storm events. This should be considered in the design of the onsite system.

.7) Roads

- a) Kane Road is designated an urban collector road. Dedicate and construct the road to match the existing road section to the west and also construct the corner rounding at the Valley Road intersection so that it will also accommodate the construction of a future roundabout, including curb and gutter, separate sidewalk, storm drainage system with catch basins, road works, landscaped boulevard complete with underground irrigation system, and street lights. The estimated cost of construction for bonding purposes including 40% escalation is \$69,400
- b) On Kane Road a future asphalt overlay is required for the full road frontage up to the centre line of the road however, the City wishes to complete this work at a later date as part of a larger project; therefore cash in-lieu of construction is required. The deferred revenue cash amount is \$21,875
- c) Valley Road is designated an urban collector road. Construct to a full urban standard including monolithic sidewalk, curb and gutter, sidewalk, piped storm drainage system, road work and street lights. The estimated cost of construction for bonding purposes including 40% escalation is \$122,600
- Vehicle access to the subject property will be from Valley Road. It will be necessary to dedicate and construct a painted left turn bay for north bound traffic entering the site.
- e) Other comments may be forthcoming pending submission of Development Permit Drawings for on-site and directly adjacent-to-site zones.

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.8) Power and Telecommunication Services and Street Lights

b) Prior to issuance of Building Permit, the applicant must make servicing applications to the respective Power and Telecommunication utility companies. The utility companies are required to obtain the City's approval before commencing construction.

.9) Design and Construction

- b) Design, construction supervision and inspection of all off-site civil works and site servicing must be performed by a Consulting Civil Engineer and all such work is subject to the approval of the City Engineer. Drawings must conform to City standards and requirements.
- c) Engineering drawing submissions are to be in accordance with the City's "Engineering Drawing Submission Requirements" Policy. Please note the number of sets and drawings required for submissions.
- d) Quality Control and Assurance Plans must be provided in accordance with the Subdivision, Development & Servicing Bylaw No. 7900 (refer to Part 5 and Schedule 3).
- e) A "Consulting Engineering Confirmation Letter" (City document 'C') must be completed prior to submission of any designs.
- f) Before any construction related to the requirements of this subdivision application commences, design drawings prepared by a professional engineer must be submitted to the City's Development Engineering Department. The design drawings must first be "Issued for Construction" by the City Engineer. On examination of design drawings, it may be determined that rights-of-way are required for current or future needs.

.10) Servicing Agreements for Works and Services

- b) A Servicing Agreement is required for all offsite works and services on City lands in accordance with the Subdivision, Development & Servicing Bylaw No. 7900. The applicant's Engineer, prior to preparation of Servicing Agreements, must provide adequate drawings and estimates for the required works. The Servicing Agreement must be in the form as described in Schedule 2 of the bylaw.
- c) Part 3, "Security for Works and Services", of the Bylaw, describes the Bonding and Insurance requirements of the Owner. The liability limit is not to be less than \$5,000,000 and the City is to be named on the insurance policy as an additional insured.

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.11) Other Engineering Comments

- b) Provide all necessary Statutory Rights-of-Way for any utility corridors required, including those on proposed or existing City Lands.
- c) If any road dedication affects lands encumbered by a Utility right-of-way (such as BC Hydro Gas, etc.) please obtain the approval of the utility prior to application for final subdivision approval. Any works required by the utility as a consequence of the road dedication must be incorporated in the construction drawings submitted to the City's Development Manager.

.12) Bonding and Levey Summary

(a) Bonding

i)	Roadworks Kane Rd	\$ 69,400
i)	Roadworks Valley Rd	\$122,600
i) (i)	Sanitary Sewer	\$ 20,000
2.1	O	

Storm Drainage Included in roadworks item

Total bonding including 40% escalation

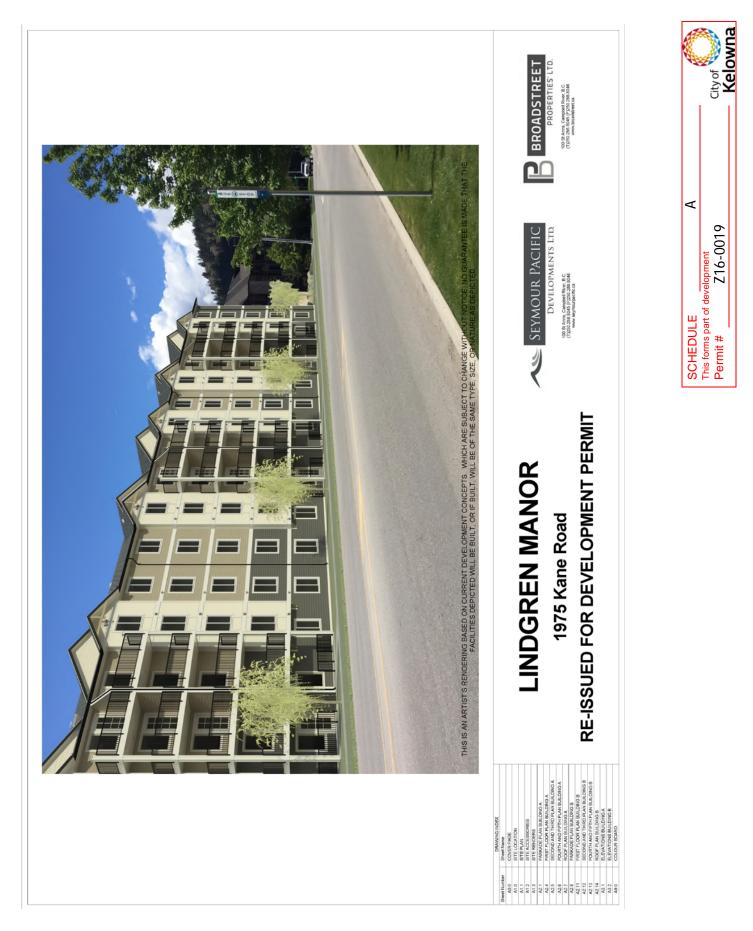
\$ 212,000

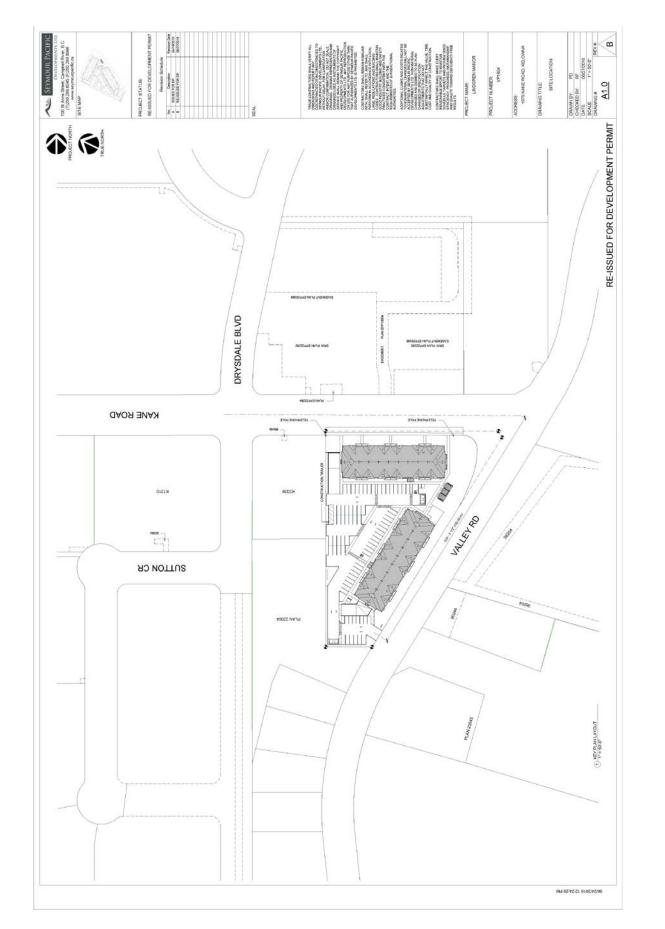
- (iii) Watermain TBD by GEID
- (iv) Power and communications TBD by others
- (b) Cash Levy
 - (i) Future Asphalt Overlay Kane Rd Frontage \$21,875

.13) Charges and Fees

- b) Development Cost Charges (DCC's) are payable
- c) Fees per the "Development Application Fees Bylaw" include:
 - Street/Traffic Sign Fees: at cost if required (to be determined after design).
 - ii) Survey Monument, Replacement Fee: \$1,200.00 (GST exempt) only if disturbed.
 - iii) Engineering and Inspection Fee: 3.5% of construction value (plus GST).

Steve Muenz, P. Eng. √ Development Engineering Manager JF

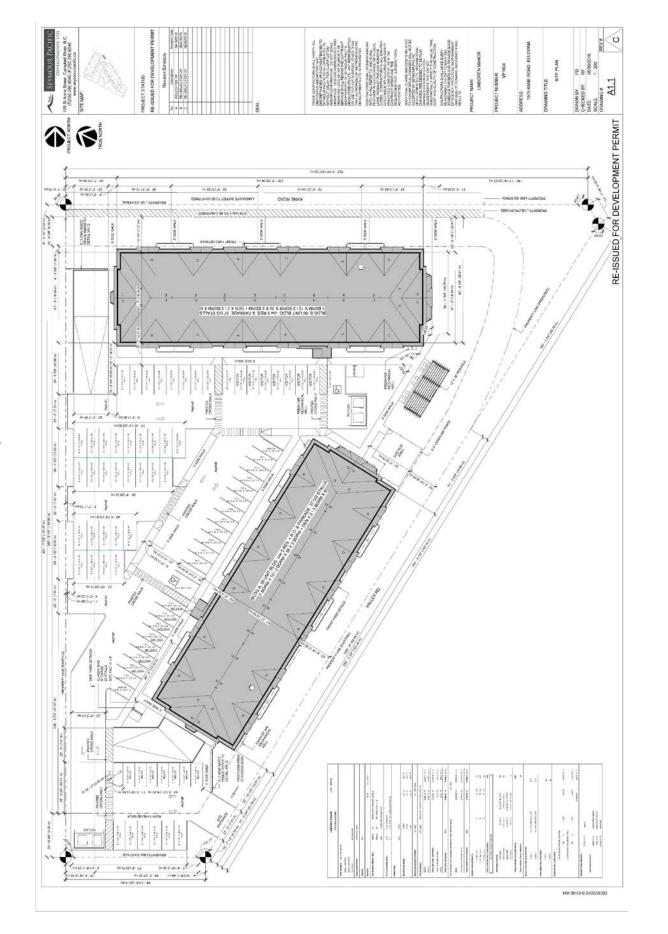








City of Kelowna



City of Kelowna

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Z16-0019

SCHEDULE This forms part of development Permit # Z16-00



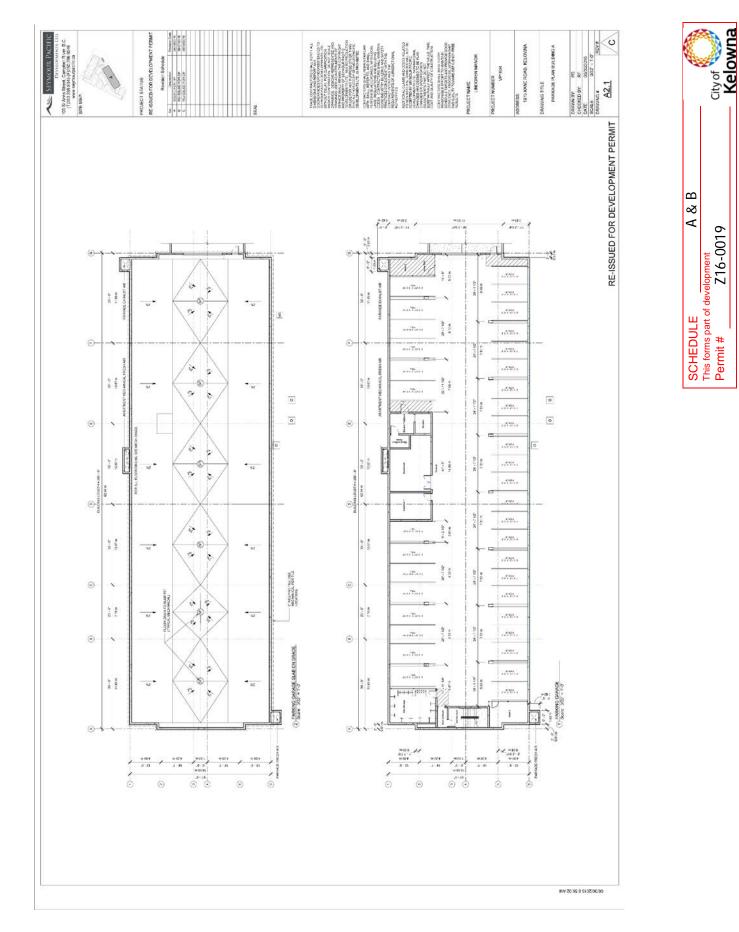
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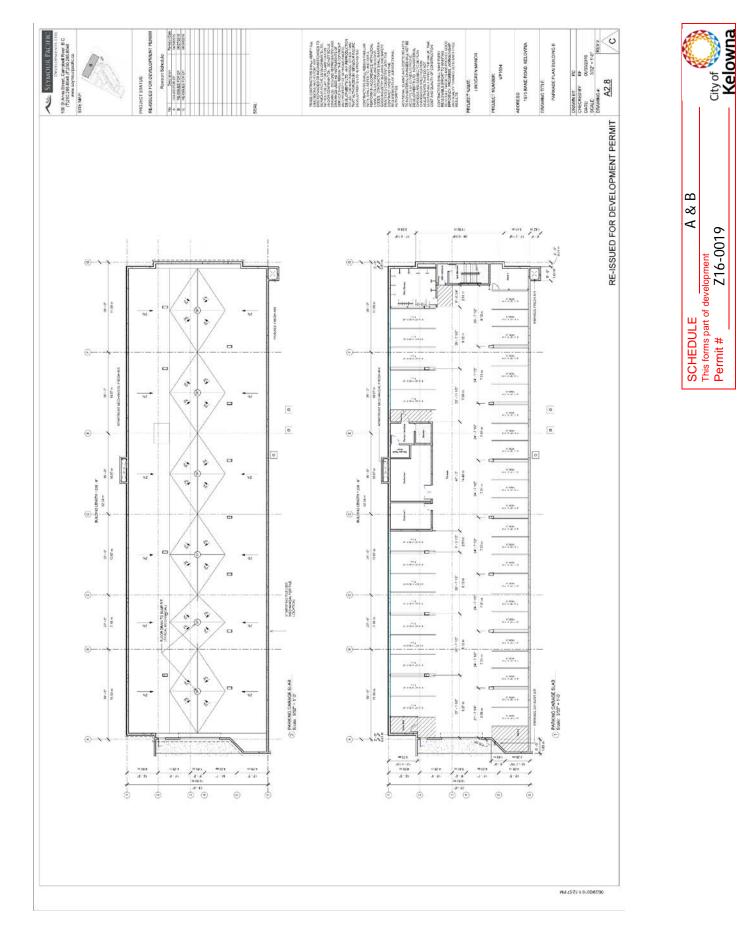
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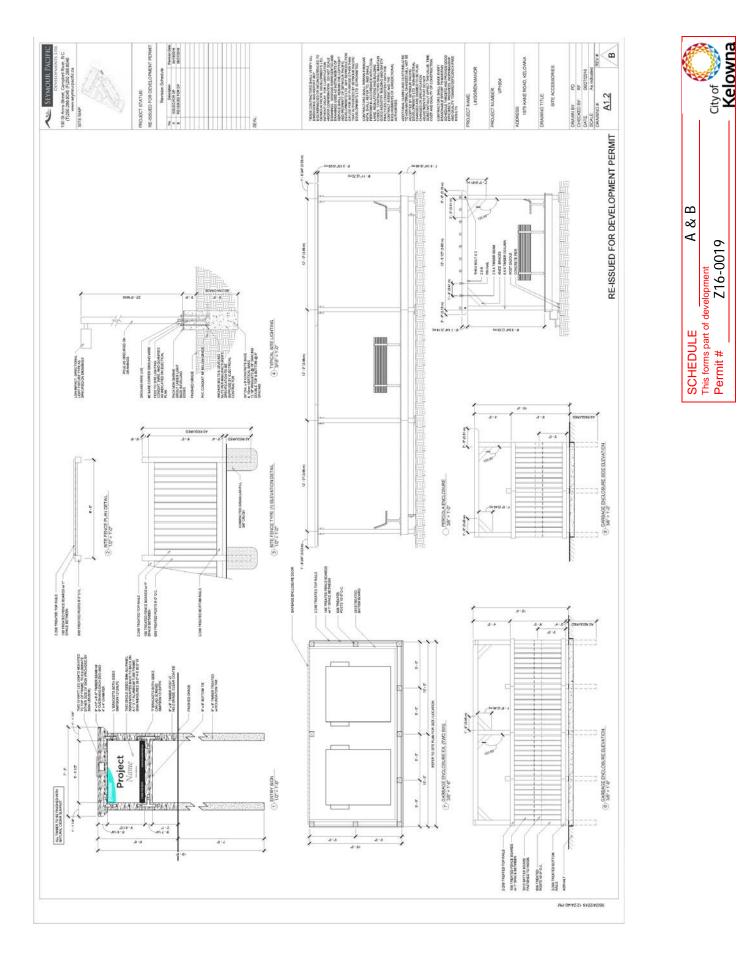
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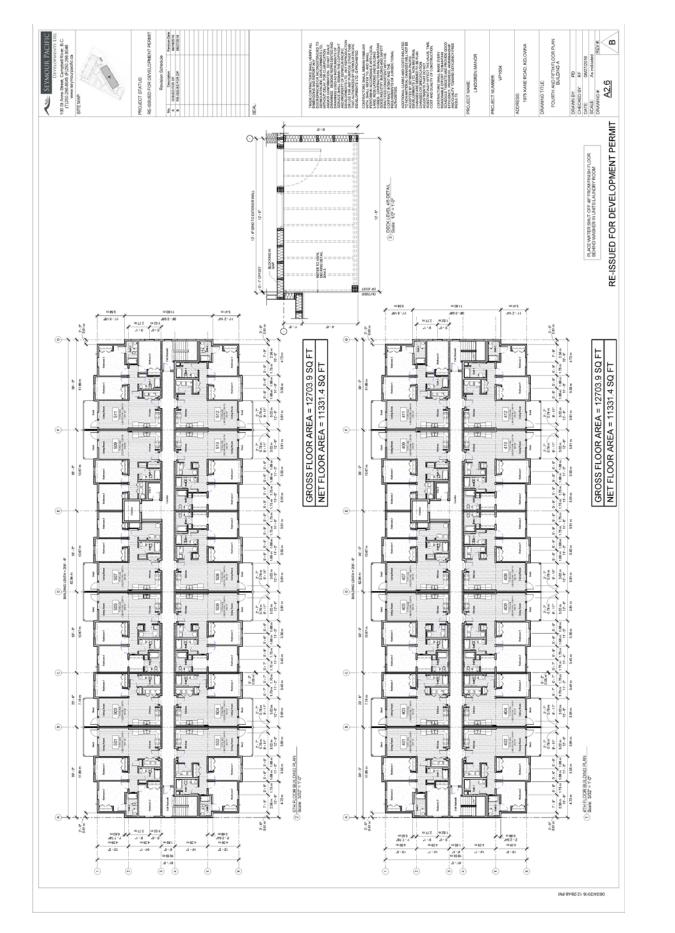






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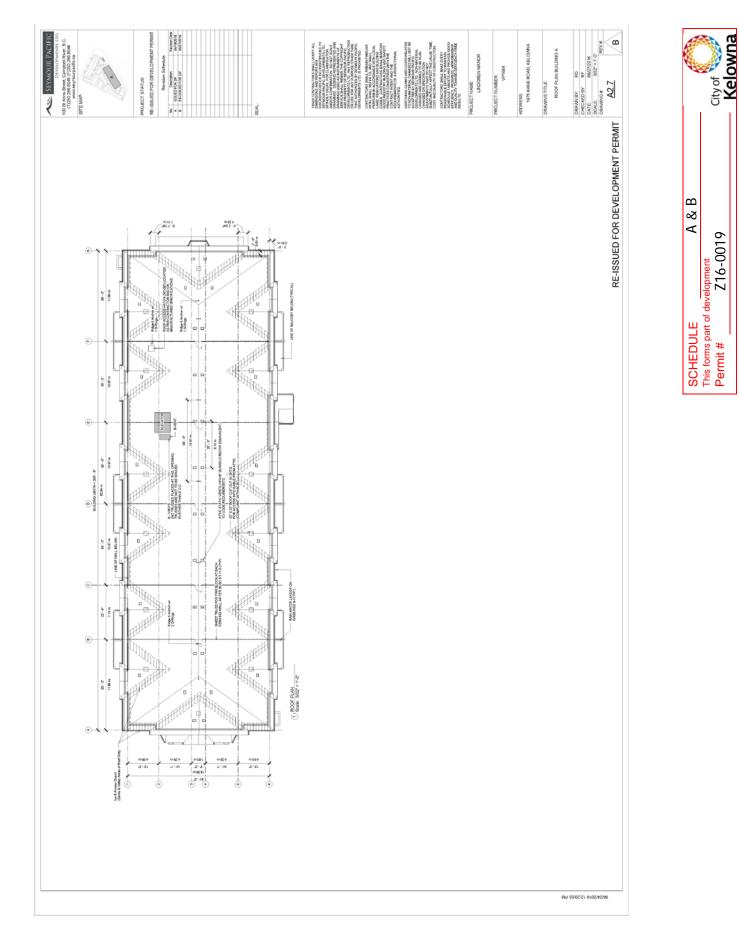




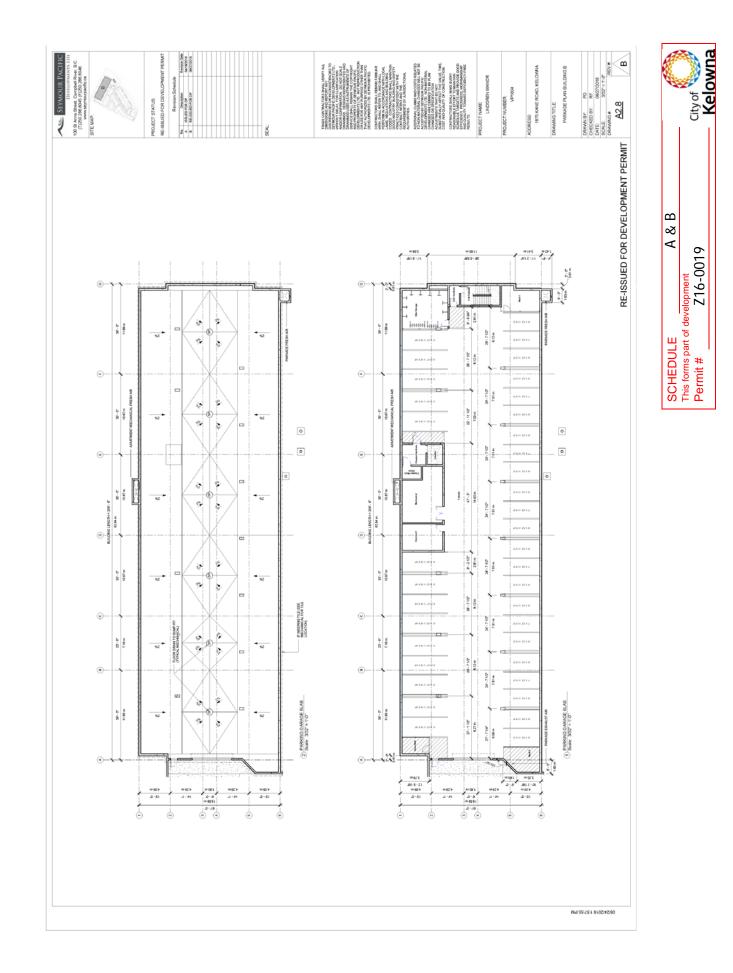


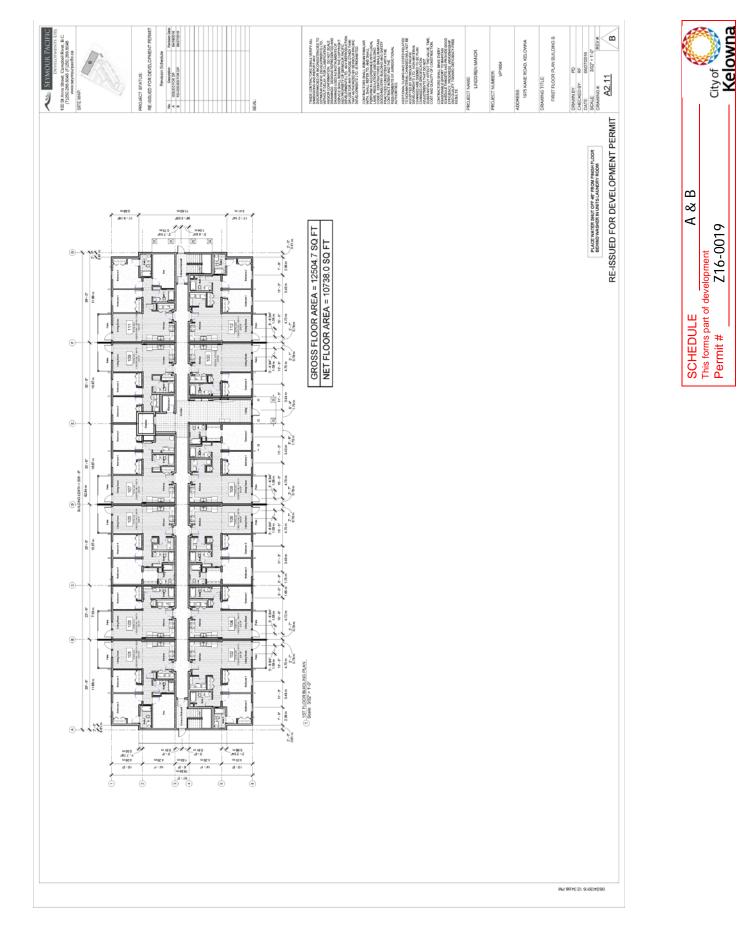


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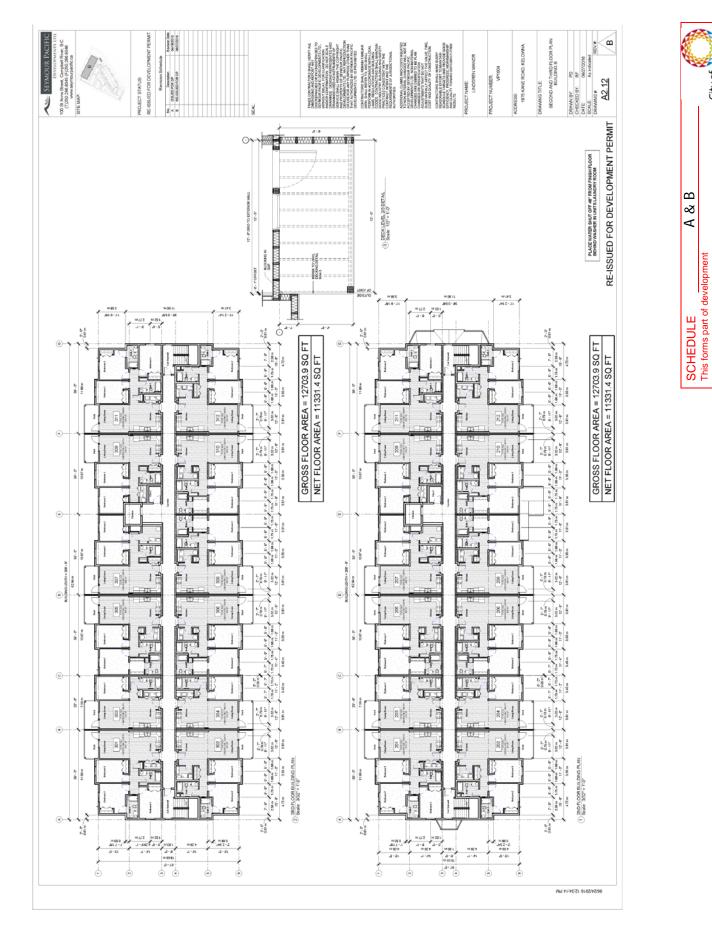






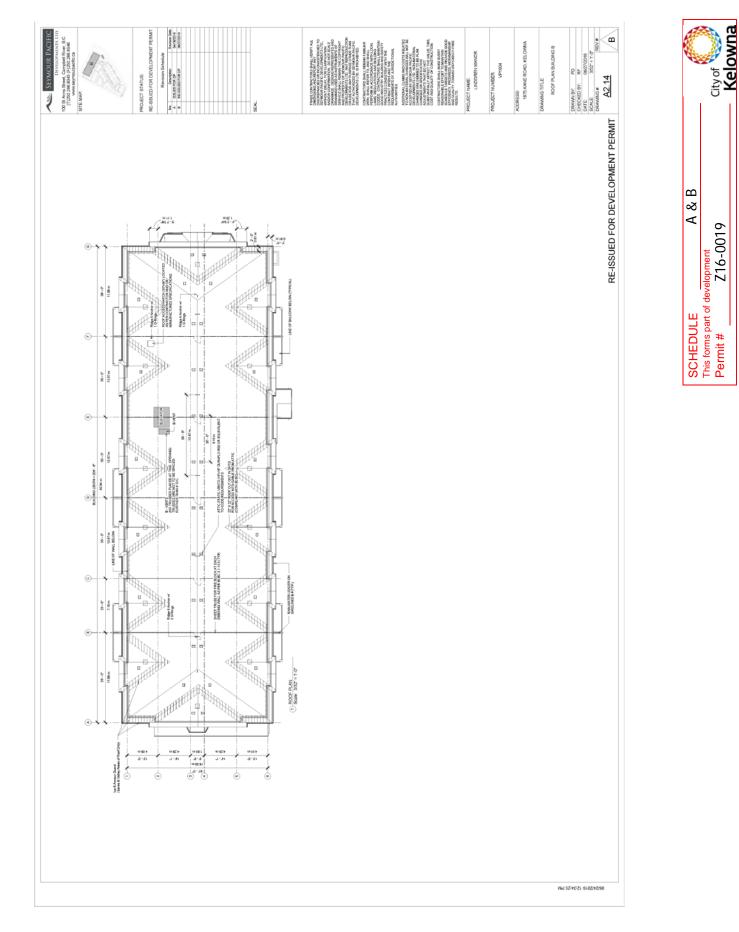


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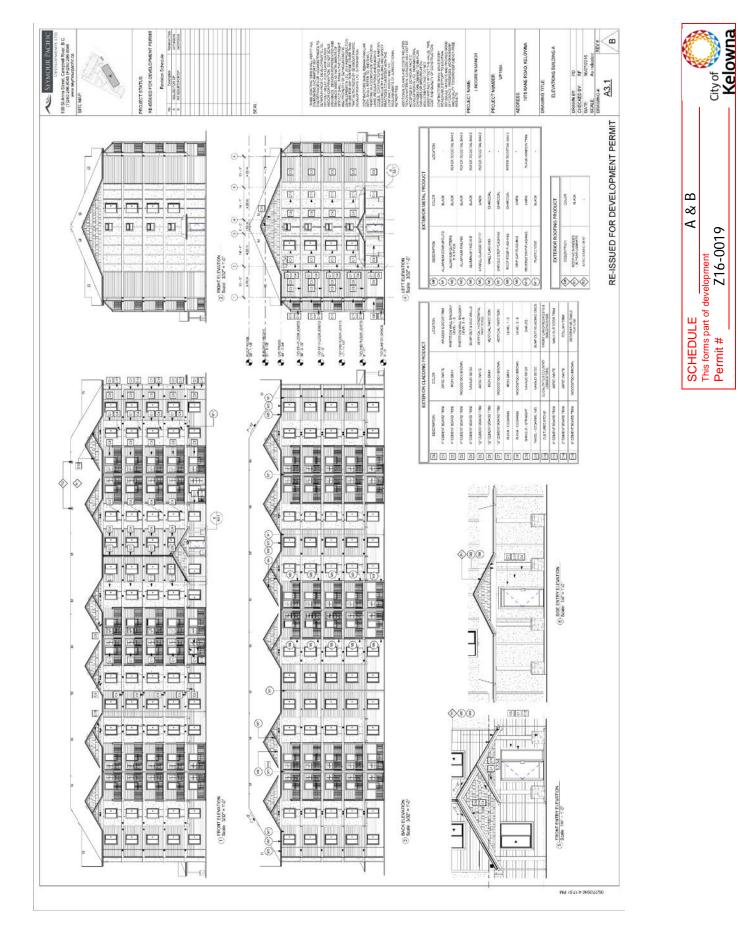


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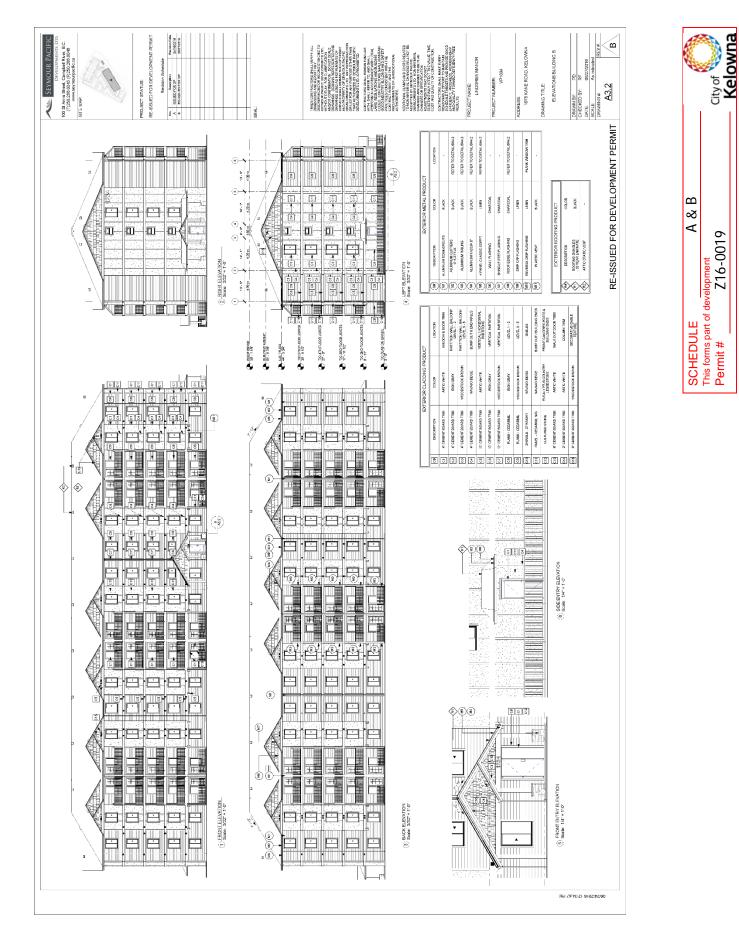
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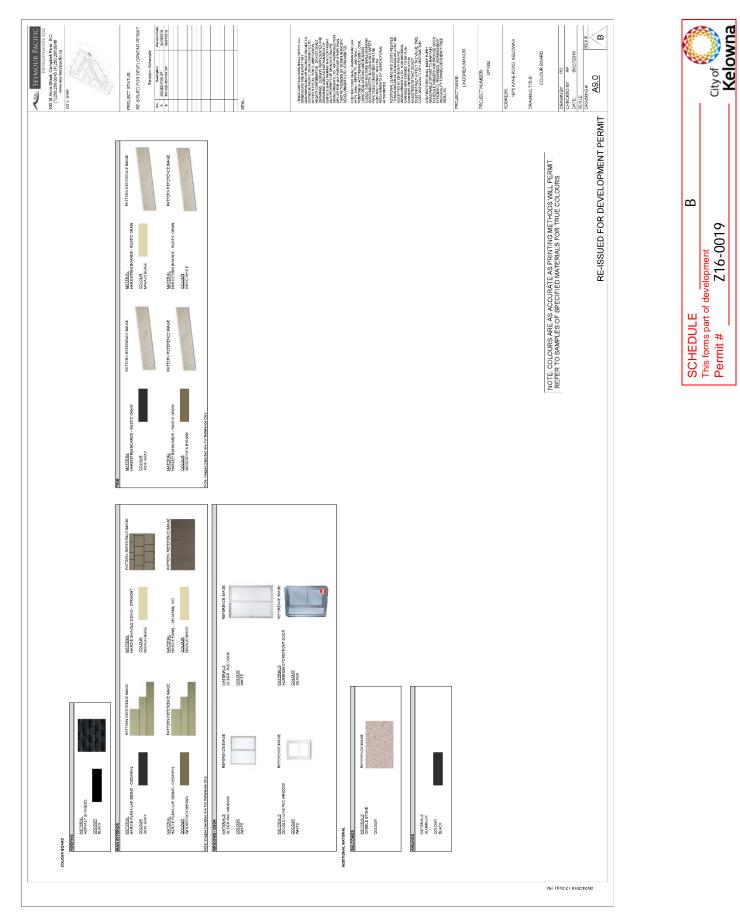


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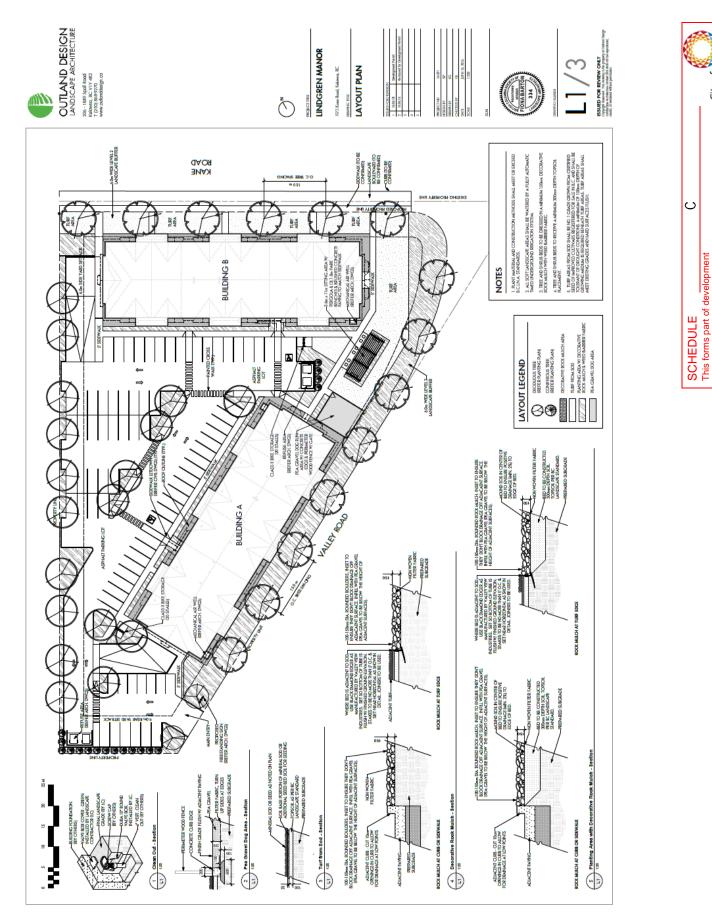


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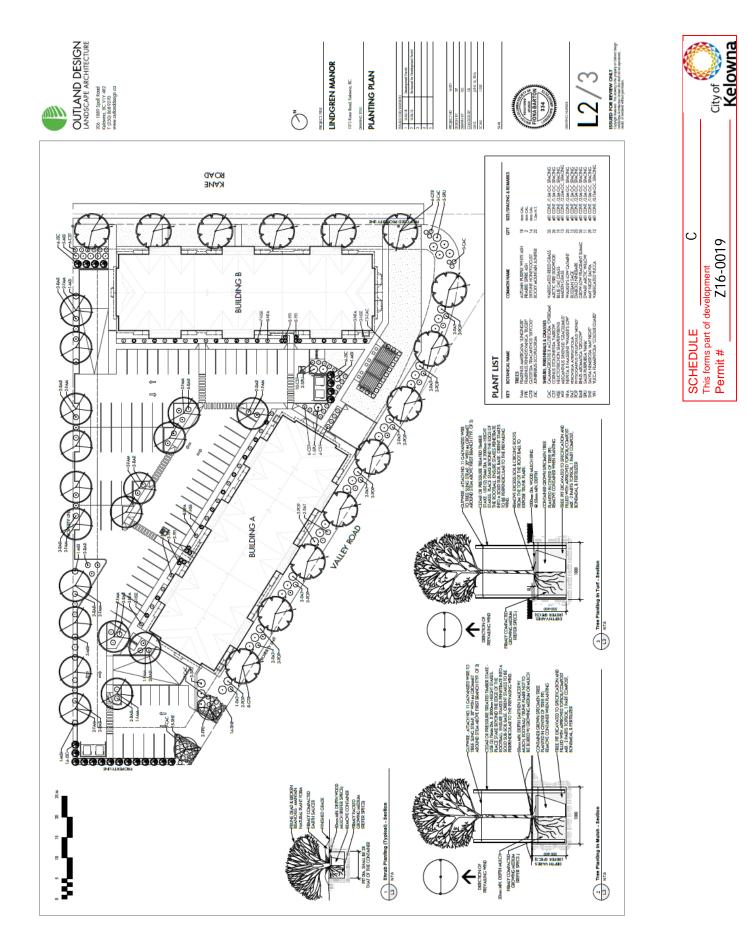


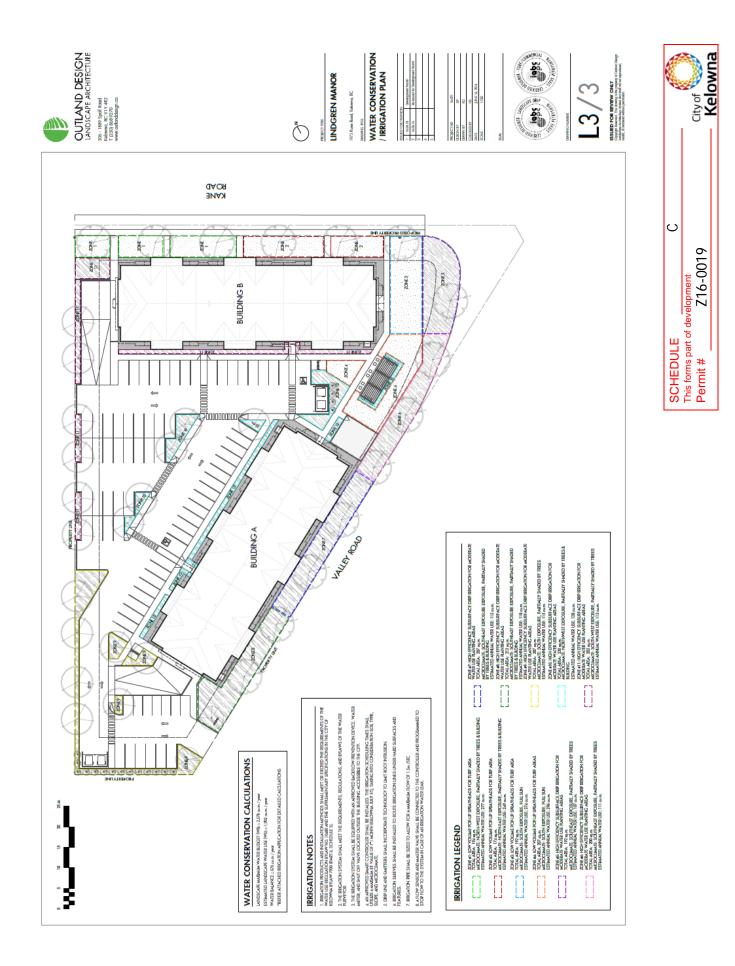
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City of Kelowna

Z16-0019







June 16, 2016

Lindgren Manor

C/o Broadstreet Properties Ltd. / Seymour Pacific Developments Ltd. 100 St. Ann's Road, Campbell River, BC V9W 4C4 Attn: Rachel Ricard, Development Officer Via email to: <u>rachel.ricard@seymourpacific.ca</u>

Re: Proposed Lindgren Manor Development - Preliminary Cost Estimate for Bonding

Dear Rachel:

Please be advised of the following preliminary cost estimate for bonding of the proposed landscape works shown in the Lindgren Manor conceptual landscape plan dated 16.06.16;

• 2,645 square metres (28,470 square feet) of improvements = \$86,292.50

This preliminary cost estimate is inclusive of trees, shrubs, turf, mulch, topsoil & irrigation.

You will be required to submit a performance bond to the City of Kelowna in the amount of 125% of the preliminary cost estimate. Please do not hesitate to contact me with any questions about the landscape plan.

Best regards,

Permit #

Z16-0019

City of

Kelowna

SCHEDULE

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This forms part of developmer

Jun from

Steve Petryshyn, MBCSLA, CSLA, CID as per Outland Design Landscape Architecture

206-1889 Spall Road, Kelowna, BC, V1Y 4R2 P 250.868.9270 outlanddesign.ca



REPORT TO COUNCIL



Date:	July 25, 2016			Kelowna
RIM No.	1250-30			
То:	City Manager			
From:	Community Planning Department (AC)			
Application:	Z16-0019		Owner:	AI Stober Construction Ltd.
Address:	1555, 1547 &	1543 Bedford Ave	Applicant:	Meiklejohn Architects Inc.
Subject:	Rezoning Application			
Existing OCP Designation:		MRM - Multiple Unit Residential (Medium Density)		
Existing Zone:		RU1 - Large Lot Housing		
Proposed Zone:		RM5 - Medium Density Multiple Housing		

1.0 Recommendation

THAT Rezoning Application No. Z16-0019 to amend the City of Kelowna Zoning Bylaw No. 8000 by changing the zoning classification of Lot 9-11, District Lot 141, ODYD, Plan KAP10012, located on 1555, 1547, & 1543 Bedford Ave Kelowna, BC from the RU1 - Large Lot Housing zone to the RM5 - Medium Density Multiple Housing zone, be considered by Council;

AND THAT the Zone Amending Bylaw be forwarded to a Public Hearing for further consideration;

AND THAT final adoption of the Zone Amending Bylaw be subsequent to the following:

To the outstanding conditions identified in Attachment "A" associated with the report from the Community Planning Department dated July 5th 2016.

To the applicant completing the area wide Traffic Study to the satisfaction of the City's Development Engineering Department.

2.0 Purpose

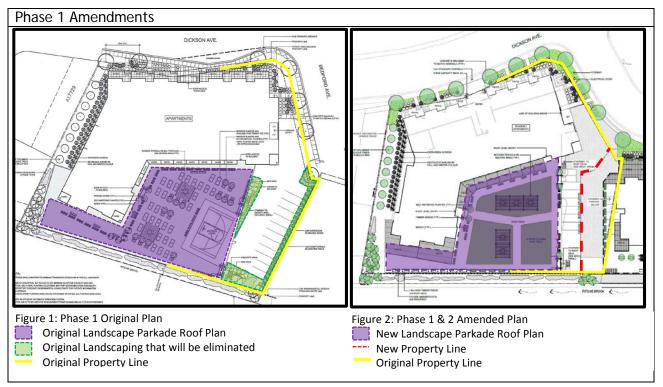
To rezone the subject properties to the RM5 - Medium Density Multiple Housing zone to facilitate a proposed 63 unit 4 ½ storey multi-family building.

3.0 Community Planning

The Official Community Plan (OCP) Future Land Use Map identifies the area as MRM - Medium Density Multiple Residential. A rezoning to the RM5 zone is consistent with this designation and the proposal for a multi-family building meets many of the OCP's urban infill goals. Adding additional density within an urban centre increases the viability of the nearby commercial area and walkability within the neighbourhood. Residents are only 200 metres from the Landmark area on

Dayton Street. Further, additional density is well supported in this area by nearby parks, outdoor amenities, the Parkinson Recreation Centre, and rapid transit. The location has a Walk Score of 75 out of 100 which means it is very walkable and most errands can be accomplished on foot. Based upon this rationale, Staff are recommending support to Council for the land use.

It should be noted that the details of the proposed development are complex and will require a number of variances that will be brought forth for Council's consideration should Council choose to support the land use. Further, this development proposal involves amending the developer's previously approved Phase 1 plans (located at 1525 Dickson Ave) which is currently under construction. The amendments include moving the shared property line in order to create a single access parking lot to both buildings from Bedford Ave. The parkades from both projects will be accessed through this shared parking lot. There are further variances to Phase 1 in order to reduce the landscaping requirements and the amount of parking.



Overall the proposed multi-family development will require seventeen (17) variances. Three (3) setback variances are related to the shared property line with Phase 1. Six (6) setback variances and one (1) site coverage variance are related to providing a parkade as part of the development. The remaining variances can be classified into three categories: parking, site coverage, & roadway.

- i. Parking: Phase 1 will need a 4 vehicle stall reduction (originally when Council approved the development, there was no parking reduction for Phase 1). Phase 2 needs a single vehicle stall reduction and the applicant is also requesting to amend the ratio of vehicle sizes to decrease the proportion of full sized vehicle stalls and to increase the proportion of medium and compact car sized vehicle stalls.
- ii. Site Coverage: Two (2) site coverage variances are needed in order to provide the parkade and avoid a surface parking lot which is an important design guideline to consider within the OCP. The applicant is squeezing in as many parking stalls as possible in order to meet their desired unit count.

iii. Roadway: One variance (1) is related to the local roadway (Bedford Road). The applicant is applying to reduce the minimum road right-of-way width by 3.0m to an overall width of 15.0m. This variance is required to the Subdivision Servicing Bylaw as the existing policy requires the same road right-of-way widths for multi-family developments regardless of the type of fronting road (e.g. arterial, collector or local road classification). Staff are aware of this issue and the need for revisions to the policy to create a more context sensitive solution; future updates to the Subdivision Servicing Bylaw will address this issue for future developments.

Due to sequencing and City procedures, the variance permits will need to be divided into two sets and considered by Council at two different meetings. The first set of variances will be the two variances related to the Subdivision & Servicing Bylaw. In order to proceed to final reading of the Zoning Bylaw, all the engineering conditions must be met which include the Development Engineering requirements. The second set of variances related to the Zoning Bylaw will be considered by Council once the RM5 zone is approved and all the conditions are met.

During the Phase 1 (1525 Dickson Ave) Council approval process, Council requested that any future development in the neighbourhood produce a Traffic Impact Study that reviewed the potential for full build out in the area. The final report (see attachments) determined that the proposed 63 unit development (Phase 2) does not trigger any further requirements due to its anticipated small amount of trip generations even though certain intersections are currently failing. According to the Traffic Study, the failing intersections are due to the surrounding land use and existing neighbourhood. However, the City's Development Engineering group has requested further revisions to the full build-out portion of the traffic study. Staff are recommending that Council add a condition to final reading that the full area wide Traffic Study be completed in order to review the variances and development permit in context.

4.0 Proposal

4.1 Project Description

The three subject properties are currently vacant and will be consolidated. The proposal is for a 63-unit rental apartment building. Out of the proposed 63 units, 20 units are proposed to take the form of micro-studio units with the remainder 43 units built as 1 bedroom units. Micro-studio units are defined as residential units smaller than 29 m². All micro-studio units are Development Cost Charges (DCCs) exempt as per Part 26 Section 933.4 of the *Local Government Act*. The applicant will also have the opportunity to apply to the City's housing grant program for a 10 year tax exemption. This incentive is available to all rental housing projects when the vacancy rate is below 3%.

The proposal has 4 ground-oriented townhouse units which is similar to phase 1 and is encouraged by the City's Urban Design Guidelines. The form and character will be commented on further by Staff when the Development Permit is ready for review.

4.2 <u>Site Context</u>

The site is located within the Landmark Tech Centre neighbourhood. The subject property is designated MRM (Multiple Residential - Medium Density) and the lot is within the Permanent Growth Boundary. Specifically, the adjacent land uses are as follows:

Orientation	Zoning	Land Use
North	RU1 - Large Lot Housing	Residential
East	RU1 - Large Lot Housing	Residential
South	RM3 - Low Density Multiple Housing	Residential
West	RU6 - Two Dwelling Housing RM3 - Low Density Multiple Housing	Residential

Subject Property Map: 1555, 1547, & 1543 Bedford Ave



4.3 Zoning Analysis Table

	Zoning Analysis Table					
CRITERIA	RM5 ZONE REQUIREMENTS	PROPOSAL				
	Development Regulations					
Height	18.0 m / 4.5 storeys	14.3 m / 4.5 storeys				
	Min 6.0 m except for	2.8 m to parkade 1				
Front Yard (north)	1.5 m for ground oriented housing	2.8 m to townhouses				
		8.4 m to apartments				
Side Yard (east)	4.5 m (up to 2 ½ storeys)	1.5 m to parkade ²				
	7.0 m (above 2 ½ storeys)	7.0 m to apartments				
	4.5 m (up to 2 ½ storeys)	4.5 m to parkade				
Side Yard (west)	7.0 m (above 2 ½ storeys)	7.0 m to apartments				
Rear Yard (south)	9.0 m	11.9 m to apartments				
		3.0 m to parkade ³				
Site coverage of buildings	40 %	75.6% 4				
Site coverage of buildings	40 %	75.0% -				
Site coverage of						
buildings, driveways &	65 %	85.2 % <mark>5</mark>				
parking						
FAR	1.1 +0.1+0.2 = 1.39 Max	1.06				
FAR	$1.1 \pm 0.1 \pm 0.2 \equiv 1.39$ Max	1.00				
	Parking Regulations					
Minimum Dorking		63 stalls in parkade				
Minimum Parking Requirements	74 parking stalls	+ 10 surface stalls				
Requirements		= 73 parking stalls ⁶				
	Full size: 50% Min	Full size: 42.5% (31 stalls) ²				
Ratio of Parking Stalls	Medium Size: 40% Max	Medium Size: 45.2% (33 stalls) ⁸				
	Small Size: 10% Max	Small Size: 12.3% (9 stalls) ⁹				
Minimum Drive Aisle	7.0 m	7.0 m				
Width						
Setback (Parking)	1.5 m	2 stalls affected: <1.5 m 10				
	Other Regulations					
Minimum Bicycle Parking	Class 1: 32 bikes	Class 1: 32 bikes (wall mounted				
Requirements	Class 2: 7 bikes	bike racks in parkade) Class 2: 7 bikes				
Private Open Space	795 m ²	869 m ²				
	795111	Front yard: 1.5 m ¹¹				
	Front yard: 3.0 m	Side yard (east): 1.5 m^{-12}				
Landscape Buffer	Side yard: 3.0 m	Side yard (west): 0.0m ¹³				
	Rear yard: 3.0 m	Rear yard: 3.0m				
	Subdivision and Servicing Bylaw Reg					
Minimum Road Width	18.0 m	15.0m ¹⁴				
	Phase 1 Variances (1525 Dickson					
Minimum Parking		Reduce from 104 parking stalls to				
Requirements	See DP14-0197	100 parking stalls ¹⁵				
Setback (Parking)	1.5 m	0.0 m for 9 stalls 16				
	Side yard: 3.0m (1.5m provided in					
Landscape Buffer	Phase 1)	Side yard: 0.0m ¹⁷				
	•					

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	Zoning Analysis Table									
CRITERIA	RM5 ZONE REQUIREMENTS	PROPOSAL								
Landscaping	n/a	Eliminate three landscape islands proposed in Phase 1. Landscape plan will need to be amended. No variances are necessary.								
Variances Related to Parkade 1 Variance to reduce the front yard setback for the parkade from 6.0 m to 2.8 m. 2 Variance to reduce the side yard (east) setback for the parkade from 4.5 m to 1.5 m. 3 Variance to reduce the rear yard setback for the parkade from 9.0 m to 3.0 m. 4 Variance to reduce the site coverage of buildings from 40% to 75.6%. 11 Variance to the front yard landscape buffer from 3.0 m to 1.5 m. 12 Variance to the side yard (east) landscape buffer from 3.0 m to 1.5 m. 13 Variance to the side yard (west) landscape buffer from 3.0 m to 0.0 m. Variances Related to Shared Property Line 10 Variance to reduce the setback from a property line for two parking stalls. 14 Variance to the side yard (east) landscape buffer on Phase 1 from 1.5 m to 0.0 m.										
 ⁶ Variance to reduce the number of ⁷ Variance to reduce the proportion ⁸ Variance to increase the proportio ⁹ Variance to increase the proportio ¹⁴ Variance to the minimum road rig 	ge of buildings, driveways, & parking from 65% to off-street parking stalls from 74 to 73. of full sized vehicle stalls from 50% to 42.5%. n of medium sized vehicle stalls from 40% to 45.29 n of compact car sized vehicle stalls from 10% to 7 ht-of-way from 18.0 m to 15.0 m. of parking stalls in phase 1 of the development fr	%. 12.3%.								

5.0 Current Development Policies

5.1 Kelowna Official Community Plan (OCP)

Chapter 5: Development Process

Compact Urban Form.¹ Develop a compact urban form that maximizes the use of existing infrastructure and contributes to energy efficient settlement patterns. This will be done by increasing densities (approximately 75 - 100 people and/or jobs located within a 400 metre walking distance of transit stops is required to support the level of transit service) through development, conversion, and re-development within Urban Centres (see Map 5.3) in particular and existing areas as per the provisions of the Generalized Future Land Use Map 4.1.

Sensitive Infill.² Encourage new development or redevelopment in existing residential areas to be sensitive to or reflect the character of the neighbourhood with respect to building design, height and siting.

6.0 Technical Comments

6.1 Building & Permitting Department

1) Development Cost Charges (DCC's) are required to be paid prior to issuance of any Building Permit(s).

¹ City of Kelowna Official Community Plan, Policy 5.2.3 (Development Process Chapter).

² City of Kelowna Official Community Plan, Policy 5.22.6 (Development Process Chapter).

- 2) Placement permits are required for any sales or construction trailers that will be on site. The location(s) of these are to be shown at time of development permit application.
- 3) A Hoarding permit is required and protection of the public from the staging area and the new building area during construction. Location of the staging area and location of any cranes should be established at time of DP.
- 4) A Building Code analysis is required for the structure at time of building permit applications, but the following items may affect the form and character of the building(s):
 - a. Any security system that limits access to exiting needs to be addressed in the code analysis by the architect.
 - b. Spatial calculation should be provided for the building face adjacent to the existing parking lot.
- 5) A Geotechnical report is required to address the sub soil conditions and site drainage at time of building permit application. This property falls within the Mill Creek flood plain bylaw area and compliance is required. Minimum building elevations are required to be established prior to the release of the Development Permit. This minimum Geodetic elevation is required for all habitable spaces including parking garages. This building may be designed to low, which may affect the form and character of the building.
- 6) We strongly recommend that the developer have his professional consultants review and prepare solutions for potential impact of this development on adjacent properties. Any damage to adjacent properties is a civil action which does not involve the city directly. The items of potential damage claims by adjacent properties are items like settlement of foundations (preload), damage to the structure during construction, additional snow drift on neighbour roofs, excessive noise from mechanical units, vibration damage during foundation preparation work etc.
- 7) Fire resistance ratings are required for storage, janitor and/or garbage enclosure room(s). The drawings submitted for building permit is to clearly identify how this rating will be achieved and where these area(s) are located.
- 8) An exit analysis is required as part of the code analysis at time of building permit application. The exit analysis is to address travel distances within the units, number of required exits per area, door swing direction, handrails on each side of exit stairs, width of exits etc.
- 9) Size and location of all signage to be clearly defined as part of the development permit. This should include the signage required for the building addressing to be defined on the drawings per the bylaws on the permit application drawings.
- 10) Mechanical Ventilation inlet and exhausts vents are not clearly defined in these drawings for the enclosed parking storey. The location and noise from these units should be addressed at time of Development Permit.
- 11) Full Plan check for Building Code related issues will be done at time of Building Permit applications. Please indicate how the requirements of Radon mitigation and NAFS are being applied to this structure at time of permit application.
- 6.2 <u>Development Engineering Department</u>
 - See Memo (Attachment 'A') dated July 5th 2016

6.3 <u>Fire Department</u>

- 1) Construction fire safety plan is required to be submitted and reviewed prior to construction and updated as required.
- 2) Engineered Fire Flow calculations are required to determine Fire Hydrant requirements as per the City of Kelowna Subdivsion Bylaw #7900. Should a hydrant be required on this property it shall be operational prior to the start of construction and shall be deemed a private hydrant
- 3) This building shall be addressed off of the street it is accessed from. A visible address must be posted on this street as per City of Kelowna By-Laws.
- 4) Sprinkler drawings are to be submitted to the Fire Dept. for review when available.
- 5) A fire safety plan as per section 2.8 BCFC is required at occupancy. The fire safety plan and floor plans are to be submitted for approval in AutoCAD Drawing format on a CD.
- 6) Fire Department access is to be met as per BCBC 3.2.5. -
- 7) Approved Fire Department steel lock box acceptable to the fire dept. is required by the fire dept. entrance and shall be flush mounted
- 8) All requirements of the City of Kelowna Fire and Life Safety Bylaw 10760 shall be met.
- 9) Fire alarm system is to be monitored by an agency meeting the CAN/ULC S561 Standard.
- 10) Contact Fire Prevention Branch for fire extinguisher requirements and placement.
- 11) Fire department connection is to be within 45M of a fire hydrant unobstructed.
- 12) Ensure FD connection is clearly marked and visible from the street.
- 13) Standpipes to be located on intermediate landings.
- 14) Sprinkler zone valves shall be accessible as per fire prevention bylaw.
- 15) Dumpster/refuse container must be 3 meters from structures or overhangs or in a rated room in the parking garage.
- 16) Do not issue BP unless all life safety issues are confirmed.

7.0 Application Chronology

Date of Application Received (incomplete):	December 24^{th} 2015
Date Terms of Reference for Traffic Study received:	January 25^{th} 2016
Date Terms of Reference deemed incomplete:	February 3^{rd} 2016
Date revised Terms of Reference submitted:	February 18^{th} 2016
Date Terms of Reference approved:	February 25^{th} 2016
Date Traffic Study submitted:	March 4^{th} 2016
Date Application deemed complete and circulated:	March 17^{th} 2016
Date Public Consultation:	June 29^{th} 2016
Date Public Consultation:	June 29 th 2016

Report prepared by:

Adam Cseke

Reviewed by:	Terry Barton, Urban Planning Manager
Approved for:	Ryan Smith, Community Planning Department Manager

Attachments:

Attachment A - Development Engineering Memo Schedule A - Applicant's Conceptual Renderings Schedule B - Overall Site Plan Traffic Impact Analysis

CITY OF KELOWNA

MEMORANDUM

Date:
File No.:July 5, 2016
Z16-0019To:Community Planning (AC)From:Development Engineering Manager(SM)Subject:1543, 1547, 1555 Bedford Ave RevisedRU1 - RM5

Development Engineering Department have the following comments and requirements associated with this rezoning application. The road and utility upgrading requirements outlined in this report will be a requirement of this development.

The Development Engineering Technologist for this project is Sergio Sartori.

- 1. Domestic Water and Fire Protection
 - (a) The existing lots are serviced with small diameter water services (3). The developer's consulting mechanical engineer will determine the domestic and fire protection requirements of this proposed development and establish hydrant requirements and service needs. The estimated cost of this construction for bonding purposes is **\$10,000.00**
 - (b) The applicant, at his cost, will arrange for the removal of the existing services and the installation of one new larger metered water service.
 - (c) The developer must obtain the necessary permits and have all existing utility services disconnected prior to removing or demolishing the existing structures. The City of Kelowna water meter contractor must salvage existing water meters, prior to building demolition. If water meters are not salvaged, the developer will be invoiced for the meters.
- 2. <u>Sanitary Sewer</u>
 - (a) The existing lots are serviced with 100mm diameter sanitary services (3). The developer's consulting mechanical engineer will determine the requirements of this proposed development and establish the required size and preferred location of the new service. Only one service will be permitted for this development. The applicant, at his cost, will arrange for the removal of all existing small diameter services and the installation of a new larger service. The estimated cost of this construction for bonding purposes is **\$8,000.00**
- 3. <u>Storm Drainage</u>
 - (a) The developer must engage a consulting civil engineer to provide a storm water management plan for these sites which meets the requirements of the City Storm Water Management Policy and Design Manual. The storm water management plan must also include provision of lot grading plans, minimum basement elevations (MBE), if applicable, and provision of a storm drainage service and recommendations for onsite drainage containment and disposal systems.

Attachme	nt A	
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		Kelowna

- (b) Only one service will be permitted for this development. The applicant, at his cost, will arrange for the installation of one new overflow service. The estimated cost of this construction for bonding purposes is **\$5,000.00**
- 4. <u>Road Improvements</u>
 - (a) Bedford Ave must be upgraded to an urban standard(SS-R5) along the full frontage of this proposed development, including curb and gutter, sidewalk, landscaped boulevard complete with street trees drainage system including catch basins, manholes and pavement removal and replacement, street lighting and re-location or adjustment of utility appurtenances if required to accommodate the upgrading construction. The estimated cost of this construction for bonding purposes is \$42,000.00
- 5. <u>Transportation</u>
 - a) The proposed development does not trigger further requirements based on the traffic impact assessment (TIA).
 - b) The Landmark Traffic Study does require revisions for City Transportation & Mobility approval.

6. <u>Subdivision</u>

- (a) Grant Statutory Rights of Way if required for utility services.
- (b) Dedicate 2.5m width along the full frontage of Bedford Avenue subject to Council approval of the Development Variance Permit.
- (c) Provide a 4.5m Statutory Right of Way (SROW) along the full frontage of Ritchie Brooke subject to Council approval of the Development Variance Permit.
- (d) Lot consolidation.
- (e) If any road dedication or closure affects lands encumbered by a Utility right-of-way (such as Hydro, Telus, Gas, etc.) please obtain the approval of the utility. Any works required by the utility as a consequence of the road dedication or closure must be incorporated in the construction drawings submitted to the City's Development Manager.
- 7. <u>Electric Power and Telecommunication Services</u>
 - a) All proposed distribution and service connections are to be installed underground. Existing distribution and service connections, on that portion of a road immediately adjacent to the site, are to be relocated and installed underground as the subject properties are within the "Capri Landmark Urban Centre".
 - b) Streetlights must be installed on Dickson Ave & Bedford Street.
 - c) Make servicing applications to the respective Power and Telecommunication utility companies. The utility companies are required to obtain the City's approval before commencing construction.
 - d) Re-locate existing poles and utilities, where necessary. Remove aerial trespass(es).

8. Engineering

a) Road and utility construction design, construction supervision, and quality control supervision of all off-site and site services including on-site ground recharge drainage collection and disposal systems, must be performed by an approved consulting civil engineer. Designs must be submitted

Attachment	А	
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to the city engineering department for review and marked "issued for construction" by the city engineer before construction may begin.

9. <u>Design and Construction</u>

- (a) Design, construction supervision and inspection of all off-site civil works and site servicing must be performed by a Consulting Civil Engineer and all such work is subject to the approval of the City Engineer. Drawings must conform to City standards and requirements.
- (b) Engineering drawing submissions are to be in accordance with the City's "Engineering Drawing Submission Requirements" Policy. Please note the number of sets and drawings required for submissions.
- (c) Quality Control and Assurance Plans must be provided in accordance with the Subdivision, Development & Servicing Bylaw No. 7900 (refer to Part 5 and Schedule 3).
- (d) A "Consulting Engineering Confirmation Letter" (City document 'C') must be completed prior to submission of any designs.
- (e) Before any construction related to the requirements of this subdivision application commences, design drawings prepared by a professional engineer must be submitted to the City's Works & Utilities Department. The design drawings must first be "Issued for Construction" by the City Engineer. On examination of design drawings, it may be determined that rights-of-way are required for current or future needs.

10. Servicing Agreements for Works and Services

- (a) A Servicing Agreement is required for all works and services on City lands in accordance with the Subdivision, Development & Servicing Bylaw No. 7900. The applicant's Engineer, prior to preparation of Servicing Agreements, must provide adequate drawings and estimates for the required works. The Servicing Agreement must be in the form as described in Schedule 2 of the bylaw.
- (b) Part 3, "Security for Works and Services", of the Bylaw, describes the Bonding and Insurance requirements of the Owner. The liability limit is not to be less than \$5,000,000 and the City is to be named on the insurance policy as an additional insured.

11. <u>Geotechnical Report</u>

As a requirement of this application the owner must provide a geotechnical report prepared by a Professional Engineer qualified in the field of hydro-geotechnical survey to address the following:

- (a) Area ground water characteristics.
- (b) Site suitability for development, unstable soils, etc.
- (c) Drill and / or excavate test holes on the site and install pisometers if necessary. Log test hole data to identify soil characteristics, identify areas of fill if any. Identify unacceptable fill material, analyse soil sulphate content, Identify unsuitable underlying soils such as peat, etc. and make recommendations for remediation if necessary.
- (d) List extraordinary requirements that may be required to accommodate construction of roads and underground utilities as well as building foundation designs.
- (e) Additional geotechnical survey may be necessary for building foundations, etc.

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Permit #	Z16-0019	City of Kelowna
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12. Bonding and Levy Summary

(a) <u>Bonding</u>

Water service upgrades	\$ 10,000
Sanitary sewer service upgrades Storm overflow services	\$ 8,000 \$ 5,000
Bedford Street frontage improvements	\$ 42,000

Total Bonding

\$65,000.00

NOTE: The bonding amount shown above are comprised of estimated construction costs escalated by 140% to include engineering design and contingency protection and are provided for information purposes only. The owner should engage a consulting civil engineer to provide detailed designs and obtain actual tendered construction costs if he wishes to do so. Bonding for required off-site construction must be provided and may be in the form of cash or an irrevocable letter of credit, in an approved format.

The owner must also enter into a servicing agreement in a form provided by the City.

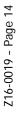
12. Development Permit and Site Related Issues

Access and Manoeuvrability

- (i) Access to the site will be permitted from Bedford Ave.
- (ii) Indicate on the site, the locations of loading bays as well as the garbage and recycle bins.

Steve Muenz, P. Eng. Development Engineering Manager SS

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existing houses next to new building



2.neighbour's driveway



2.duplex along dickson ave



m+m









100 dickson

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1.comer of burtch rd & dickson ave

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condo & landmark tech centre neighbourhood



landmark tech

centre

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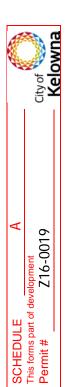
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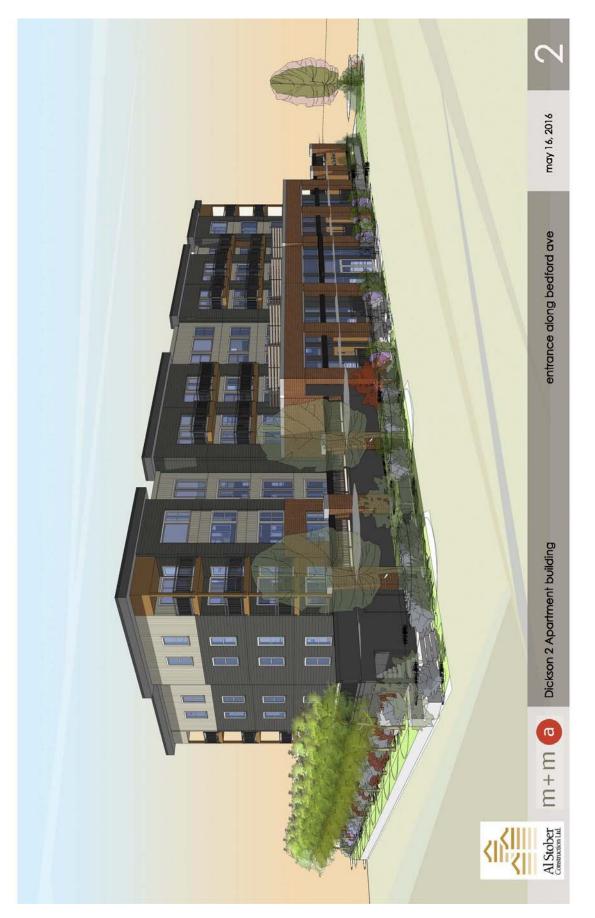
site context

dec 24, 2015



Dickson 2 Apartment building





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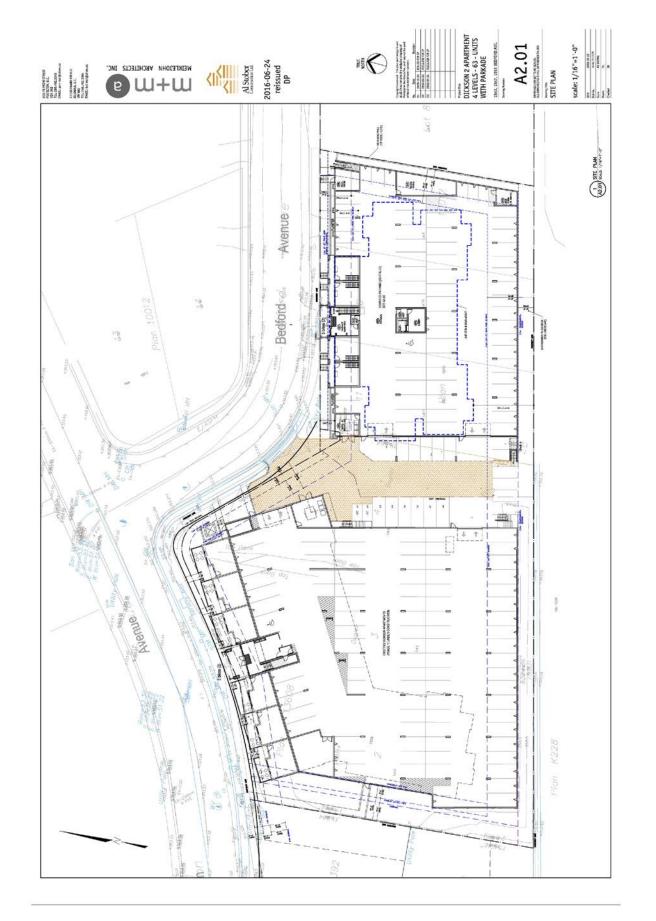
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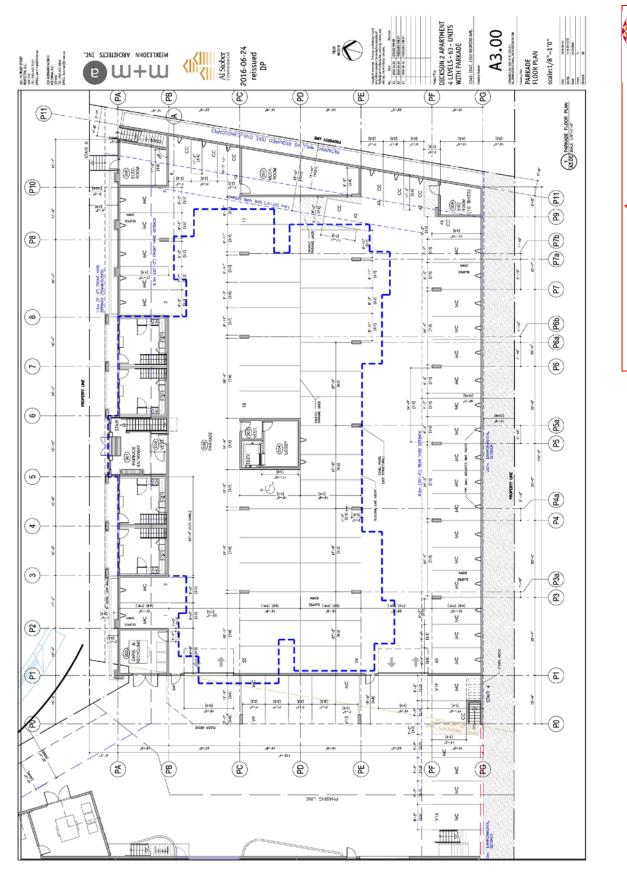


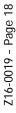




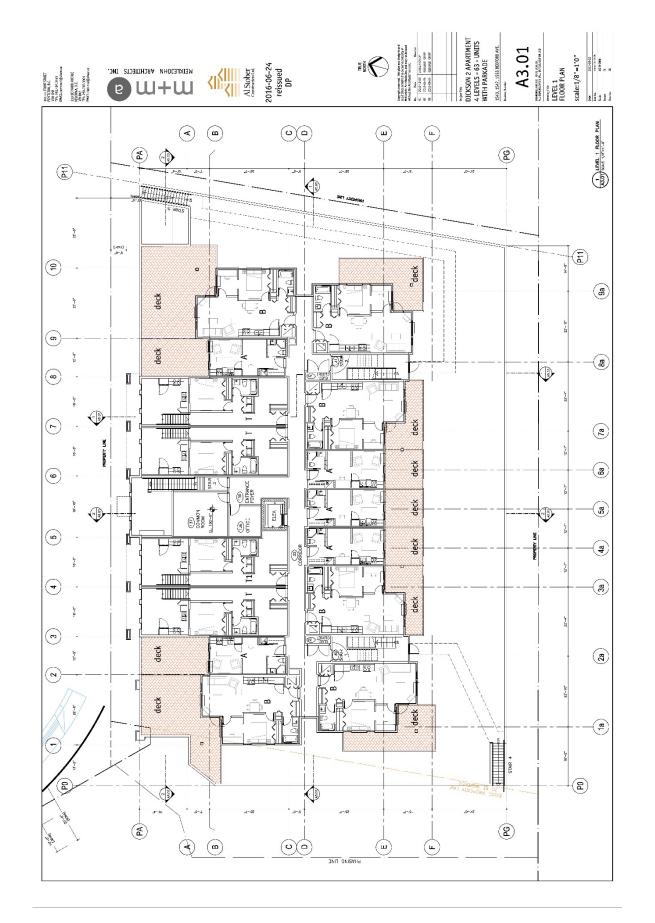
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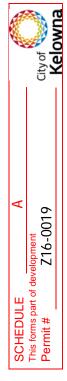
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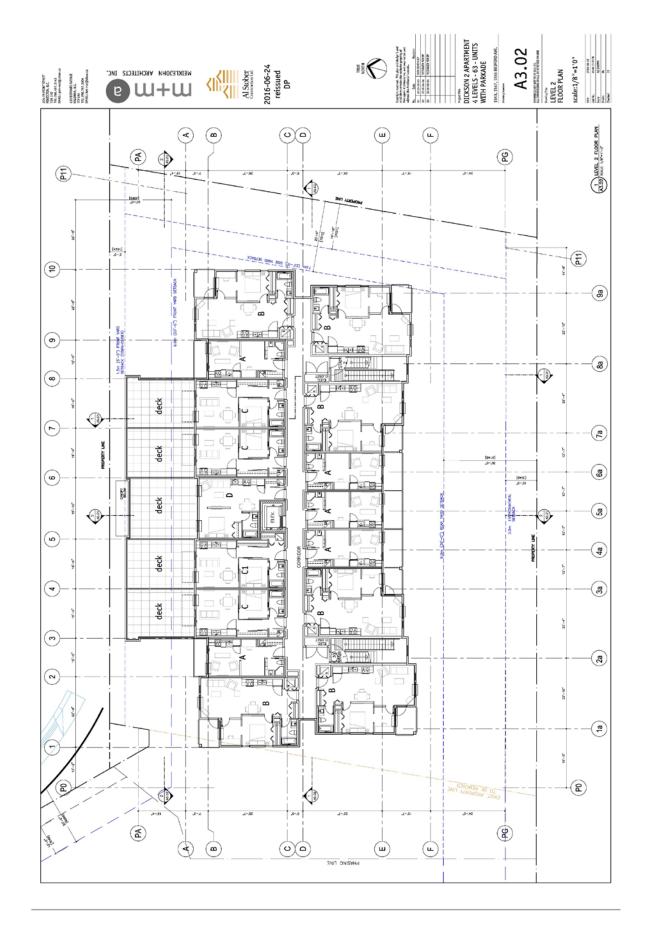








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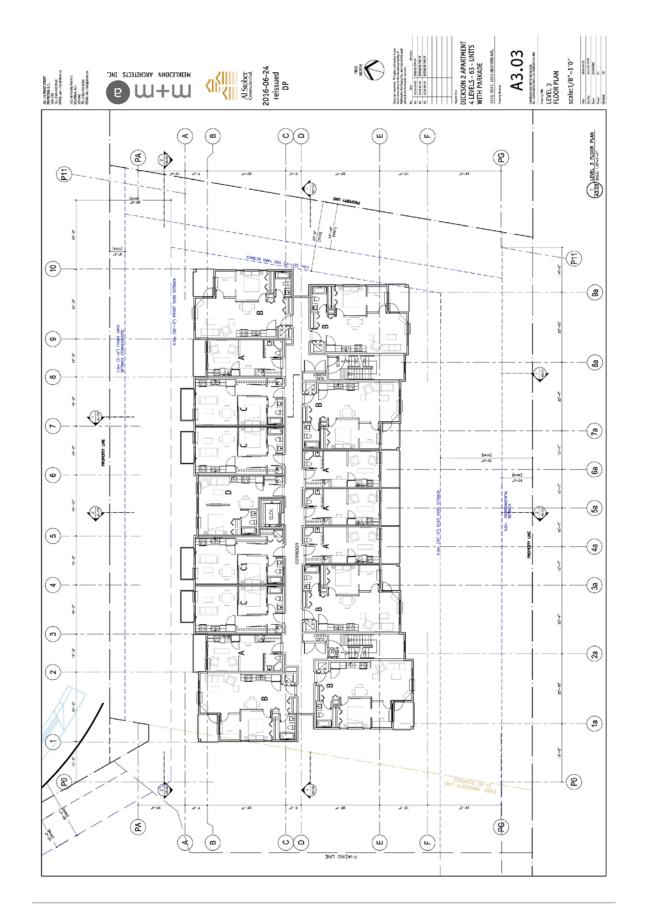




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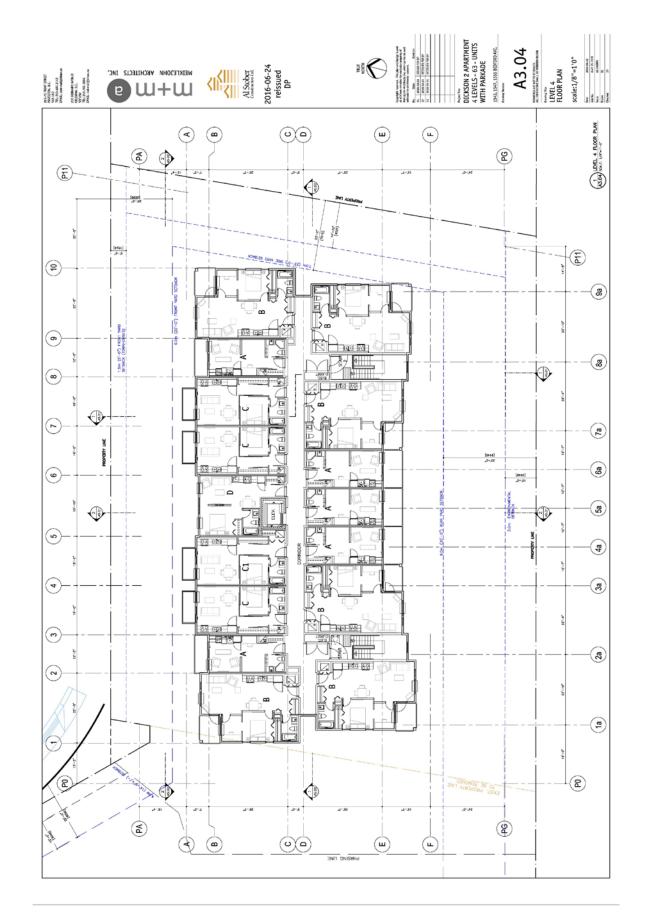
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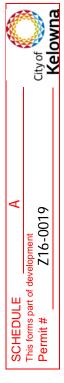
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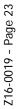
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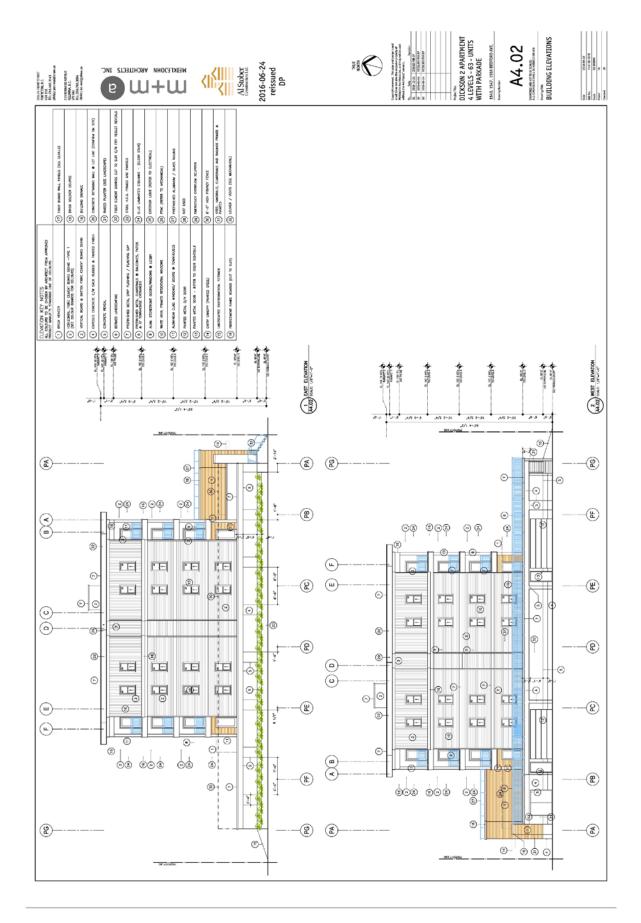


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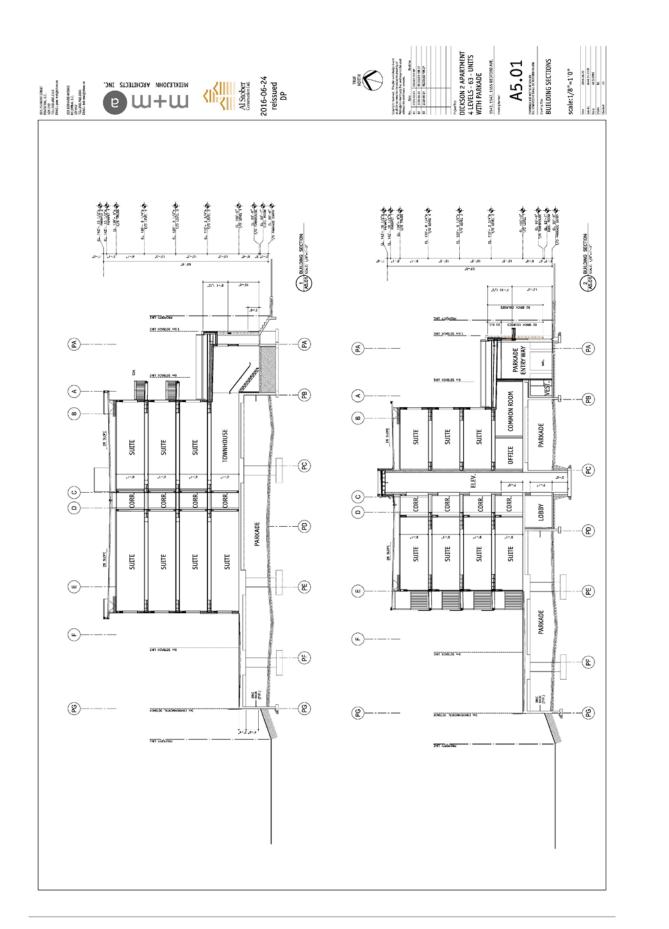












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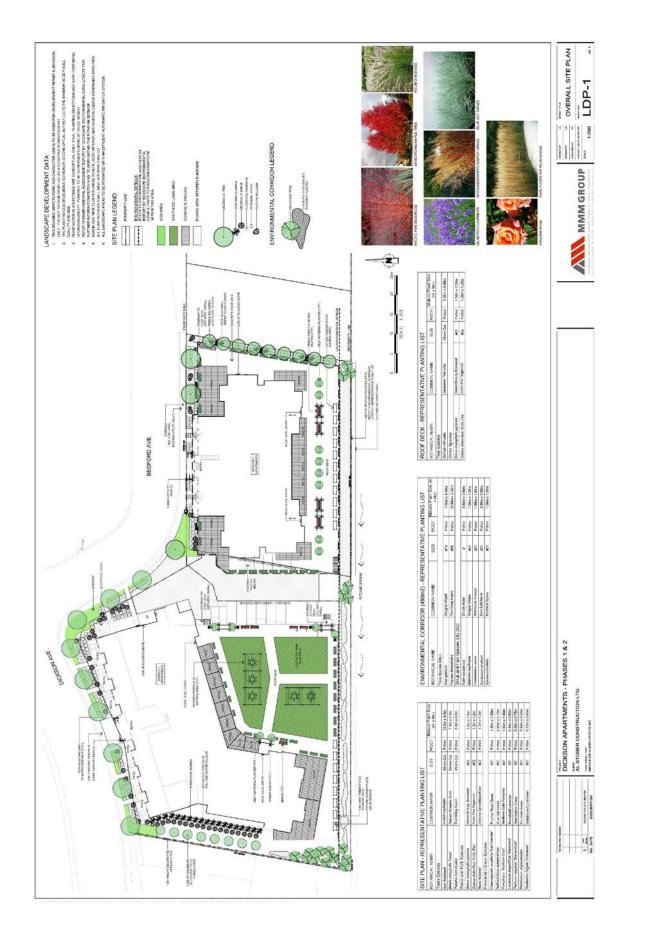
City of Kelowna

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Z16-0019

SCHEDULE This forms part of development Permit # Z16-0





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SCHEDULE This forms part of development

Z16-0019

Permit #



Project No.: 14132 File No.: 5-L-003

March 4, 2016

Harry Issler Al Stober Construction Ltd. 1700 – 1631 Dickson Avenue Kelowna, BC V1Y 0B5 COST TIME QUALITY

Dear Harry:

Re: Landmark Neighbourhood Traffic Impact Analysis

We are pleased to provide the Traffic Impact Assessment of the anticipated traffic generated by the proposed development of the Landmark and Dickson neighbourhood.

This report is based on the review of previously completed traffic studies in the subject area, discussions with City of Kelowna Staff, and our work on previous traffic studies for similar projects in the Okanagan. The background morning and afternoon peak hour traffic volumes, and full buildout and phasing of the Landmark Neighbourhood is included within this submission.

The Traffic Impact Study has been prepared to determine the effect the proposed Residential and Office Development, combined with the anticipated community growth, will have on adjacent roadways and the City of Kelowna major roadway infrastructure. This report addresses the off-site planning, traffic generation and distribution, traffic analysis, and recommendations for major street improvement requirements. A Terms of Reference for the Traffic Impact Assessment was prepared and the study requirements reviewed in a meeting with City of Kelowna Engineering Staff.

March 4, 2016 Al Stober Construction Ltd. Page 2 of 25 Reference: Landmark Neighbourhood Traffic Impact Analysis

A) Introduction

The subject area is located within the Dickson Avenue residential neighbourhood and the Landmark Business Park, as noted in the hatched area on Figure 1 below.



Figure 1 – Study Area with the Current City of Kelowna Zoning

Dickson Avenue, from Burtch Road to Dayton Street is a minor collector that serves single family, town house, and multi-family units, and provides the western entry to the Landmark Business Centre. Bedford Avenue is a local road (90m to the east of the 'T' intersection with Burtch Road) that connects to Dunn Street, with both local streets serving single family homes and multi-family units. Dayton Street, from Springfield Road to Dickson Avenue is a minor collector that serves both the Landmark Business Centre and the Commercial/Industrial area south of the Landmark Business Centre.

The 2020 horizon for the background traffic analysis is based on the completion of the southbound right turn lane on Dayton Street at the Springfield Road intersection and the elimination of the westbound left run from the Dickson Avenue and Burtch Road intersection.

B) BACKGROUND INFORMATION

Existing traffic counts were completed for the following intersections:

- Sutherland Avenue and Burtch Road, November 5, 2015 by City of Kelowna;
- Sutherland Avenue and Burtch Road, July 11, 2014, by City of Kelowna;
- Springfield Road and Dayton Street, November 5, 2015 by City of Kelowna;
- Dickson Avenue and Dunn Street, September 24, 2015, by CTQ;
- Dayton Street and Dolphin Avenue, November 5, 2015, by CTQ; and,
- Dayton Street and Dickson Avenue, November 6, 2015, by CTQ.

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The future (2020, and 2030) traffic volumes were prepared based on the assessment of the traffic information listed above and have been factored up by an annual traffic growth rate of 2%. The 2020, and 2030 background AM and PM Peak Hour traffic volumes for intersections adjacent to the subject area are presented in the appendix.

As part of the approval for the apartment building located on the corner of Dickson Avenue and Bedford Avenue (currently under construction by Al Stober Construction Ltd.) offsite improvements were required to the Dickson Avenue and Burtch Road intersection, and the Dayton Street and Springfield Road intersection. Figure 2 shows the development of the median islands that will restrict the left turn from Dickson Avenue.

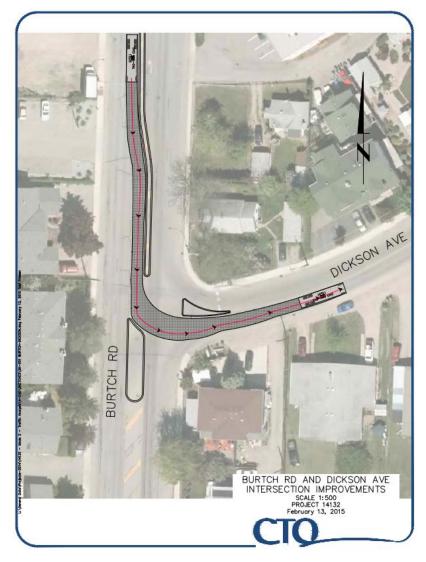


Figure 2 – Dickson Avenue and Burtch Road

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Figure 3 shows the development of the right turn lane on Dayton Street at the Springfield Road intersection.

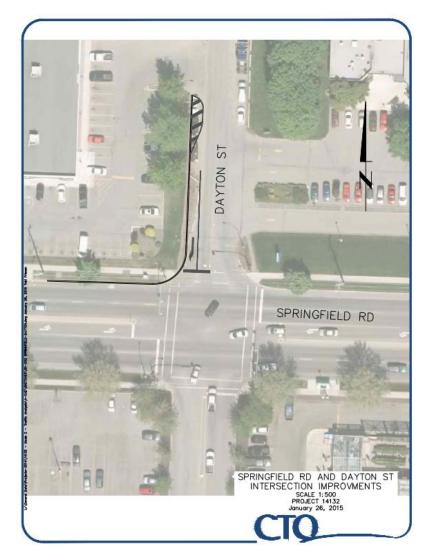


Figure 3 – Dayton Street and Springfield Road

The above noted intersection improvements have been bonded by AI Stober Construction Ltd. (ASC), and the works are anticipated to be completed in 2016.

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C) TRAFFIC GENERATION and DISTRIBUTION

The Study area is anticipated to have infill completed in the areas as shown on Figure 4. There is an 80 unit apartment currently under construction on the Corner of Dickson Avenue and Bedford Avenue by ASC. ASC is currently in the planning stages for a 70 unit apartment on Bedford Avenue with completion anticipated by 2018. ASC is planning on developing a 15 unit townhouse with an adjacent commercial unit on Dunn Street in conjunction with the proposed Landmark 7 office tower on Dayton Street with completion anticipated by 2030.

The Dickson neighbourhood is forecast to develop as per the future land use identified within the current Official Community Plan, with a further conversion of the single family homes to a mix of multi-family and town house units. It is anticipated an additional 234 multi-family units will be added by other developers prior to 2030.



Figure 4 – Anticipated Study Area Buildout

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The analysis periods used in this study are the weekday AM and PM peak hours that coincide with the peak hour periods on the adjacent streets. The basis of traffic generation data used for the study is the Institute of Transportation Engineers (ITE) 9th Edition Trip Generation Rates Manual. The AM and PM Peak Hour Rates used to determine the development traffic generations are as per the ITE Trip Generation Rates Manuals.

The anticipated 2020 buildout of the Landmark Neighbourhood consists of the following mix of uses:

- 80 Low Rise Apartment Units (currently under construction);
- 70 Low Rise Apartment Units, on Bedford Avenue; and,
- 70 Low Rise Apartment Units, on Dunn Street.

By 2020 the site is anticipated to generate the following off-site peak hour traffic volumes, as presented in Table 1 below:

	Units	т	ITE Vehicle Trip Generation Rates						Expected Units	Gener	Total ated	Trips		al Dist enerat			
Description /					Pass	AM	AM	PM	PM		Delle	AM	PM	AM	AM	PM	PM
ITE Code		Weekday	AM	PM	Ву	In	Out	In	Out		Daily	Hour	Hour	In	Out	In	Out
Resd. Condo / Townhouse ITE Code 230	Dwelling Unit	5.81	0.44	0.52		17%	83%	67%	33%	80.0	465	35	42	6	29	28	14
Resd. Condo / Townhouse ITE Code 230	Dwelling Unit	5.81	0.44	0.52		17%	83%	67%	33%	70.0	407	31	36	5	26	24	12
Resd. Condo / Townhouse ITE Code 230	Dwelling Unit	5.81	0.44	0.52		17%	83%	67%	33%	70.0	407	31	36	5	26	24	12
											1,279	97	114	16	81	76	38

Proposed Landmark Centre Phase 1 Development

Table 1 – Landmark Neighbourhood Phase 1 (2020) Buildout Trip Generation Rate Table

The anticipated 2020 buildout for the Landmark Neighbourhood is anticipated to generate the following off-site peak hour traffic volumes:

- AM generation of 97 trips; and,
- PM generation of 114 trips.

The anticipated distribution of traffic generated from the Phase 1 build out is presented in Figure 5 for the AM Peak Hour, and Figure 6 for the PM Peak Hour, on the following page.

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Figure 5 – Anticipated Phase 1 AM Peak Hour Traffic Distribution



Figure 6 – Anticipated Phase 1 PM Peak Hour Traffic Distribution

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The anticipated 2030 buildout of the Landmark Neighbourhood consists of the following mix of uses:

- Office Tower with 120,000 ft² of office space; and,
- 3,000 ft² of Neighbourhood Commercial, on the main floor of the office tower.

Phase 2 of the Landmark Neighbourhood is anticipated to generate the following off-site peak hour traffic volumes, as presented in Table 2 below:

Proposed Landmark Centre Phase 2 Development

	Units	ITE Vehicle Trip Generation Rates								Expected Units	Total Generated Trips			Total Distribution of Generated Trips			
Description / ITE Code	L	Weekday	АМ	РМ	Pass By	AM In	AM Out	PM In	PM Out		Daily	AM Hour	PM Hour	AM In	AM Out	PM In	PM Out
Office Park by CoK	KSF ²	25.21	1.85	2.23		72%	28%	36%	64%	120.0	3,025	222	268	160	62	96	172
											3,025	222	268	160	62	96	172

Table 2 – Landmark Neighbourhood Phase 2 Buildout Trip Generation Rate Table

The anticipated 2030 buildout (Phase 1 plus Phase 2) for the Landmark Neighbourhood is anticipated to generate the following off-site peak hour traffic volumes:

- AM generation of 319 trips; and,
- PM generation of 382 trips.

The anticipated distribution of traffic generated from the combined Phase 1 and Phase 2 build out is presented in Figure 7 for the AM Peak Hour, and Figure 8 for the PM Peak Hour, on the following page.

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Figure 7 – Anticipated Phase 1 and Phase 2 AM Peak Hour Traffic Distribution



Figure 8 – Anticipated Phase 1 and Phase 2 PM Peak Hour Traffic Distribution

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The anticipated buildout by others in the Dickson Area consists of the following mix of uses:

- 150 Low Rise Apartment Units, on Dickson Avenue; and,
- 84 Low Rise Apartment Units, on Dickson Avenue.

By 2030 the buildout by others in the Dickson Neighbourhood is anticipated to generate the following off-site peak hour traffic volumes, as presented in Table 3 below:

	Units	ITE Vehicle Trip Generation Rates								Total Generated Trips			Total Distribution of Generated Trips			
Description / ITE Code		Weekday	АМ	РМ	AM In	AM Out	PM In	PM Out		Daily	AM Hour	PM Hour	AM In	AM Out	PM In	PM Out
Resd. Condo / Townhouse ITE Code 230	Dwelling Unit	5.81	0.44	0.52	17%	83%	67%	33%	150.0	872	66	78	11	55	52	26
Resd. Condo / Townhouse ITE Code 230	Dwelling Unit	5.81	0.44	0.52	17%	83%	67%	33%	84.0	488	37	44	6	31	29	14
				·						1,360	103	122	17	86	81	40

Proposed Dickson Avenue Development, by Others

The anticipated 2030 buildout by others for the Dickson Neighbourhood is anticipated to generate the following off-site peak hour traffic volumes:

- AM generation of 103 trips; and
- PM generation of 122 trips.

The anticipated distribution of traffic generated from the Dickson Neighbourhood build out is presented in Figure 9 for the AM Peak Hour, and Figure 10 for the PM Peak Hour, on the following page.

Table 3 – Dickson Neighbourhood by Others (2030) Buildout Trip Generation Rate Table

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Figure 9 – Anticipated Dickson Neighbourhood AM Peak Hour Traffic Distribution



Figure 10 – Anticipated Dickson Neighbourhood PM Peak Hour Traffic Distribution

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D) TRAFFIC ANALYSIS

The operations of the intersections have been analyzed utilizing Highway Capacity Manual Synchro 8 software for signalized and unsignalized intersections. An operational level of service is determined for each movement based upon the calculated delay.

The Levels of Service (LoS) for signalized intersections are as follows:

- LoS A represents less than 10 seconds of average delay and is considered a good operating condition;
- LoS B represents greater than 10 seconds and less than 20 seconds of average delay and is considered a good operating condition;
- LoS C represents greater than 20 seconds and less than 35 seconds of average delay and is considered a fair operating condition;
- LoS D represents greater than 35 seconds and less than 55 seconds of average delay and is considered a fair operating condition;
- LoS E represents greater than 55 seconds and less than 80 seconds of average delay and is considered a poor operating condition; and,
- LoS F represents more than 80 seconds of average delay and is considered a failed operating condition.

The LoS for unsignalized intersections are as follows:

- LoS A represents less than 10 seconds of average delay and is considered a good operating condition;
- LoS B represents greater than 10 seconds and less than 15 seconds of average delay and is considered a good operating condition;
- LoS C represents greater than 15 seconds and less than 25 seconds of average delay and is considered a fair operating condition;
- LoS D represents greater than 25 seconds and less than 35 seconds of average delay and is considered a fair operating condition;
- LoS E represents greater than 35 seconds and less than 50 seconds of average delay and is considered a poor operating condition; and,
- LoS F represents more than 50 seconds of average delay and is considered a failed operating condition.

Generally, and in accordance with the *Ministry of Transportation Site Impact Analysis Requirements Manual*, in urban areas, improvements are considered when the overall intersection performance nears LoS E. For arterial streets, through traffic improvements are to be considered when the performance nears LoS D and the volume to capacity (v/c) ratio is greater than 0.80. The City of Kelowna uses a v/c ratio threshold of 0.90 and LoS of D.

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The background and background plus development intersection analysis results for the Weekday AM and PM Peak Hour traffic for the 2020, and 2030 horizon years are presented on the following tables.

Background Traffic Analysis

Table 4 presents the intersection analysis results for the 2020 AM and PM Peak Hour background traffic. The Synchro analysis reports for each intersection are included in the appendix.

	Control	Period	Critical V/C	Delay (Sec)	Overall LOS	Comment
Sutherland Avenue and Burtch		AM	0.38	9.9	А	
Road	Signal	PM	0.61	12.2	В	NB Left LoS B; Storage length 32m NB Through LoS A; Storage length 49m
Burtch Road and Dickson Avenue	Stop	AM	0.24	2.9	А	
buildin toad and bicksoff Avenue	Sign	PM	0.52	4.3	А	WB Right LoS C; Storage length 23m
	Ciava al	AM	0.51	12.1	В	
Burtch Road and Springfield Road	Signal	PM	0.95	30.0	С	SB Left LoS E; Storage length 57m WB Left LoS C; Storage length 73m
Dolphin Avenue and Dayton	Stop	AM	0.09	2.6	А	
Street	Sign	PM	0.16	3.7	А	
Dickson Avenue and Dayton	Stop	AM	0.11	2.6	А	
Street	Sign	PM	0.17	3.0	А	
		AM	0.51	7.9	А	
Springfield Road and Dayton Street	Signal	PM	0.85	17.0	В	WB Left LoS D; Storage length 32m SB Through and Left LoS D; Storage length 62m SB Right LoS C; Storage length 43m
Dickson Avenue and Dunn Street	Stop	AM	0.22	0.7	А	
	Sign	PM	0.08	0.8	А	
Dickson Avenue and Bedford	Stop Sign	AM	0.22	0.3	А	
Avenue	Jigin	PM	0.09	0.3	А	

Table 4 - 2020 Background AM and PM Peak Hour Intersection Performance

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Table 5 presents the intersection analysis results for the 2030 AM and PM Peak Hour background	
traffic. The Synchro analysis reports for each intersection are included in the appendix.	

	Control	Period	Critical V/C	Delay (Sec)	Overall LOS	Comment
		AM	0.50	11.6	В	
Sutherland Avenue and Burtch Road	Signal	PM	0.85	17.7	В	NB Left LoS C; Storage length 85m NB Through LoS B; Storage length 82m
Durtah Dood and Diakoon Ayonya	Stop	AM	0.26	2.7	А	
Burtch Road and Dickson Avenue	Sign	PM	0.56	4.2	А	WB Right LoS C; Storage length 27m
		AM	0.66	15.8	В	EB Left LoS C; Storage length 32m
Burtch Road and Springfield Road	Signal	PM	1.08	70.7	E	SB Left LoS F; Storage length 100m EB Left LoS F; Storage length 35m WB Through LoS F; Storage length 307m
Dolphin Avenue and Dayton	Stop	AM	0.09	2.6	А	
Street	Sign	PM	0.16	3.7	А	
Dickson Avenue and Dayton	Stop	AM	0.11	2.6	А	
Street	Sign	PM	0.17	3.7	А	
		AM	0.61	9.6	А	
Springfield Road and Dayton Street	Signal	PM	1.10	26.5	С	WB Left LoS F; Storage length 33m SB Through and Left LoS D; Storage length 68m SB Right LoS C; Storage length 55m NB Left LoS D; Storage length 42m
	Stop	AM	0.22	0.7	А	
Dickson Avenue and Dunn Street	Sign	PM AM PM	0.08	0.8	А	
Dickson Avenue and Bedford	Stop Sign	AM	0.22	0.3	А	
Avenue	Jigi i	PM	0.09	0.3	А	

Table 5 - 2030 Background AM and PM Peak Hour Intersection Performance

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Table 6 provides a summary of upgrades required to bring network operation into satisfactory operation, resulting from the projected growth in 2020 and 2030 background traffic.

Intersection	Year	Upgrade
Sutherland Avenue and Burtch Road	2030	No improvements required
Burtch Road and Dickson Avenue	2020	The background traffic analysis is based on the completion of the elimination of the westbound left turn from the Dickson Avenue and Burtch Road intersection. Works to be completed by ASC prior to 2020.
	2030	No improvements required
Burtch Road and Springfield Road	2030	Addition of westbound Right Turn Lane Addition of southbound Left Advance Phase Addition of northbound Through Lane (Conversion of northbound Right Turn Lane to combined Through and Right Lane). SB Left LoS E; Storage length 82m EB Left LoS D; Storage length 44m WB left LoS E; Storage length 140m
Dolphin Avenue and Dayton Street	2030	No improvements required
Dickson Avenue and Dayton Street	2030	No improvements required
Springfield Road and Dayton Street	2020	The background traffic analysis is based on the completion of the southbound right turn lane on Dayton Street at the Springfield Road intersection. Works to be completed by ASC prior to 2020.
	2030	Addition of westbound Left Advance Phase Addition of southbound Left Turn Lane SB Left LoS E; Storage length 67m
Dickson avenue and Dunn Street	2030	No improvements required
Dickson Avenue and Bedford Avenue	2030	No improvements required

Table 6 - Background Traffic Intersection Upgrades

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Background plus Development Traffic Analysis

Table 7 presents the intersection analysis results of the 2020 AM and PM Peak Hour background plus Phase 1 of Landmark Area Traffic. The Synchro analysis reports for each intersection are included in the appendix.

	Control	Period	Critical V/C	Delay (Sec)	Overall LOS	Comment	
Sutherland Avenue and Burtch		AM	0.39	8.5	А		
Road	Signal	PM	0.63	12.6	В	NB Left LoS B; Storage length 35m NB Through LoS A; Storage length 52m	
Burtch Road and Dickson Avenue	Stop	AM	0.26	3.2	А		
Dui ICH RUdu dhu Dicksoff Avenue	Sign	PM	0.56	4.8	А	WB Right LoS C; Storage length 26m	
	Signal	AM	0.71	11.6	В		
Burtch Road and Springfield Road	Signar	PM	0.96	30.7	С	SB Left LoS E; Storage length 57m WB Left LoS C; Storage length 74m	
Dolphin Avenue and Dayton	Stop	AM	0.09	2.5	А		
Street	Sign	PM	0.17	3.6	А		
Dickson Avenue and Dayton	Stop	AM	0.14	2.4	А		
Street	Sign	PM	0.18	3.0	А		
			AM	0.49	8.2	А	
Springfield Road and Dayton Street	Signal	PM	0.90	18.4	В	WB Left LoS D; Storage length 29m SB Through and Left LoS D; Storage length 71m SB Right LoS C; Storage length 45m	
Diskson Avenus and Dupp Street	Stop	AM	0.22	1.2	А		
Dickson Avenue and Dunn Street	Sign	PM	0.09	1.5	А		
Dickson Avenue and Bedford	Stop Sign	AM	0.22	1.3	А		
Avenue	Jigit	PM	0.13	0.9	А		

Table 7 - 2020 Background plus Phase 1 of Landmark Area AM and PM Peak Hour Intersection Performance

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Table 8 presents the intersection analysis results of the 2030 AM and PM Peak Hour background plus Phase 1 and Phase 2 of the Landmark Area Traffic. The Synchro analysis reports for each intersection are included in the appendix.

	Control	Period	Critical V/C	Delay (Sec)	Overall LOS	Comment
		AM	0.66	10.8	В	
Sutherland Avenue and Burtch Road	Signal	PM	0.90	21.1	С	NB Left LoS D; Storage length 104m NB Through LoS B; Storage length 100m
Burtch Road and Dickson Avenue	Stop	AM	0.36	3.7	А	
builtin Road and Dickson Avenue	Sign	PM	0.79	8.1	А	WB Right LoS D; Storage length 59m
		AM	0.86	15.9	В	EB Left LoS D; Storage length 29m
Burtch Road and Springfield Road	Signal	PM	1.09	67.9	E	SB Left LoS F; Storage length 81m EB Left LoS E; Storage length 54m WB Through LoS F; Storage length 306m
Dickson Avenue and Dayton	Stop	AM	0.14	2.4	А	
Street	Sign	PM	0.21	3.4	А	
Dolphin Avenue and Dayton	Stop	AM	0.11	2.2	А	
Street	Sign	PM	0.19	3.4	А	
		AM	0.94	21.0	С	
Springfield Road and Dayton Street	Signal	PM	1.23	41.8	С	SB Through and Left LoS F; Storage length 122m SB Right LoS D; Storage length 97m NB Left LoS F; Storage length 60m
Dieleson Avenue and Dunn Street	Stop	AM	0.29	2.3	А	
Dickson Avenue and Dunn Street	Sign	PM	0.29	3.1	А	
Dickson Avenue and Bedford	Stop Sign	AM	0.29	0.7	А	
Avenue	JIGH	PM	0.17	1.1	А	

Table 8 - 2030 Background plus Phase 1 and Phase 2 Buildout AM and PM Peak Hour Intersection Performance

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Table 9 provides a summary of upgrades resulting from the projected 2020 and 2030 background plus Phase 1 and Phase 2 Landmark Area Development traffic.

Intersection	Year	Upgrade
Sutherland Avenue and Burtch Road	2030	No improvements required
Burtch Road and Dickson Avenue	2020	The background traffic plus Phase 1 and Phase 2 analysis is based on the completion of the elimination of the westbound left turn from the Dickson Avenue and Burtch Road intersection. Works to be completed by ASC prior to 2020.
	2030	No improvements required
Burtch Road and Springfield Road	2030	Addition of westbound Right Turn Lane Addition of southbound Left Advance Phase Addition of northbound Through Lane (Conversion of northbound right turn lane to combined Through and right lane). SB Left LoS E; Storage length 82m EB Left LoS E; Storage length 54m WB left LoS E; Storage length 158m
Dolphin Avenue and Dayton Street	2030	No improvements required
Dickson Avenue and Dayton Street	2030	No improvements required
Springfield Road and Dayton Street	2020	The background traffic plus Phase 1 and Phase 2 analysis is based on the completion of the southbound right turn lane on Dayton Street at the Springfield Road intersection. Works to be completed by ASC prior to 2020.
	2030	Addition of westbound Left Advance Phase Addition of southbound Left Turn Lane SB Left LoS E; Storage length 76m
Dickson avenue and Dunn Street	2030	No improvements required
Dickson Avenue and Bedford Avenue	2030	No improvements required

Table 9 - Background plus Phase 1 and Phase 2 Development Traffic Intersection Upgrades

Table 10 presents the intersection analysis results of the 2030 AM and PM Peak Hour background plus Phase 1 and Phase 2 of the Landmark Area Traffic, plus the development by others in the Dickson Area Traffic. The Synchro analysis reports for each intersection are included in the appendix.

	Control	Period	Critical V/C	Delay (Sec)	Overall LOS	Comment
Cuth onloged Assessors and Doutleb		AM	0.72	11.5	В	
Sutherland Avenue and Burtch Road	Signal	PM	0.90	21.0	В	NB Left LoS D; Storage length 103m NB Through LoS B; Storage length 98m
Burtch Road and Dickson Avenue	Stop	AM	0.37	4.1	А	
Dui tui kudu di lu Dicksuit Avenue	Sign	PM	0.77	7.0	А	WB Right LoS C; Storage length 49m
		AM	0.87	16.3	В	EB Left LoS D; Storage length 30m
Burtch Road and Springfield Road	Signal	PM	1.30	83.0	F	SB Left LoS F; Storage length 94m EB Left LoS F; Storage length 42m WB Through LoS F; Storage length 298m
Dickson Avenue and Dayton	Stop	AM	0.14	3.4	А	
Street	Stop Sign	PM	0.20	3.6	А	
Dolphin Avenue and Dayton	Stop	AM	0.11	2.1	А	
Street	Sign	PM	0.19	3.3	А	
		AM	0.94	21.1	С	
Springfield Road and Dayton Street	Signal	PM	1.18	31.0	С	WB Left LoS F; Storage length 36m SB Through and Left LoS F; Storage length 83m SB Right LoS D; Storage length 79m NB Left LoS E; Storage length 48m
	Stop	AM	0.23	2.4	А	
Dickson Avenue and Dunn Street	Sign	PM	0.26	3.2	А	
Dickson Avenue and Bedford	Stop Sign	AM	0.30	1.6	А	
Avenue	JULI	PM	0.17	1.5	А	

Table 10 - 2030 Background plus Phase 1 and Phase 2 Buildout and Development by Others AM and PM Peak Hour Intersection Performance March 4, 2016 Al Stober Construction Ltd. Page 20 of 25

Table 11 provides a summary of upgrades resulting from the projected 2020 and 2030 background plus Phase 1 and Phase 2 Landmark Area Development traffic.

Intersection	Year	Upgrade
Sutherland Avenue and Burtch Road	2030	No improvements required
Burtch Road and Dickson Avenue	2020	The background traffic plus Phase 1 and Phase 2 and Dickson Area analysis is based on the completion of the elimination of the westbound left turn from the Dickson Avenue and Burtch Road intersection. Works to be completed by ASC prior to 2020.
	2030	No improvements required
Burtch Road and Springfield Road	2030	Addition of westbound Right Turn Lane Addition of southbound Left Advance Phase Addition of northbound Through Lane and Right Turn Lane SB Left LoS E; Storage length 74m EB Left LoS D; Storage length 54m WB left LoS E; Storage length 146m
Dolphin Avenue and Dayton Street	2030	No improvements required
Dickson Avenue and Dayton Street	2030	No improvements required
Springfield Road and Dayton Street	2020	The background traffic plus Phase 1 and Phase 2 and Dickson Area analysis is based on the completion of the southbound right turn lane on Dayton Street at the Springfield Road intersection. Works to be completed by ASC prior to 2020.
	2030	Addition of westbound Left Advance Phase Addition of southbound Left Turn Lane SB Left LoS E; Storage length 114m
Dickson avenue and Dunn Street	2030	No improvements required
Dickson Avenue and Bedford Avenue	2030	No improvements required

Table 11 - Background plus Phase 1, Phase 2, and Dickson Area by Others Development Traffic Intersection Upgrades

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E) Alternative Transportation Modes

With the development of the Dickson Area a sidewalk will be added to the south side of Dickson Avenue from Burtch Road to the Landmark 6 Parkade. With the redevelopment of the Dickson area, sidewalks will also be added to one side of both Dunn Street and Bedford Avenue.

ASC has a bond in place for the extension of the sidewalk from Landmark 6 to Springfield Road on the west side of Dayton Avenue. The sidewalk on the west side of Dayton Avenue is planned for installation by ASC by the fall of 2016. The proposed sidewalk configuration is shown in Figure 11 below.

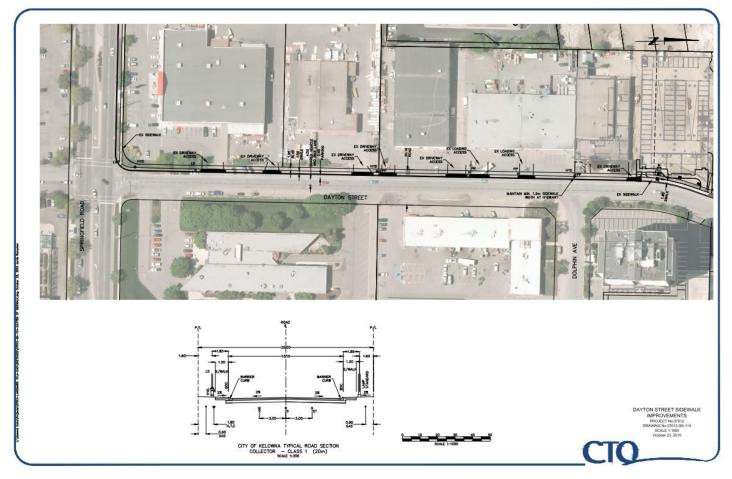


Figure 11 – Dayton Street Sidewalk

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A crosswalk is proposed to be installed on Dickson Avenue adjacent to the Landmark 3, 4 and 5 entries. The crosswalk would include curb extensions that would shorten the distance of the roadway crossing, and provide enhanced visual clues for the approaching vehicles. The proposed crosswalk configuration is shown in Figure 12 below. The crosswalk is scheduled for completion by ASC in 2016.

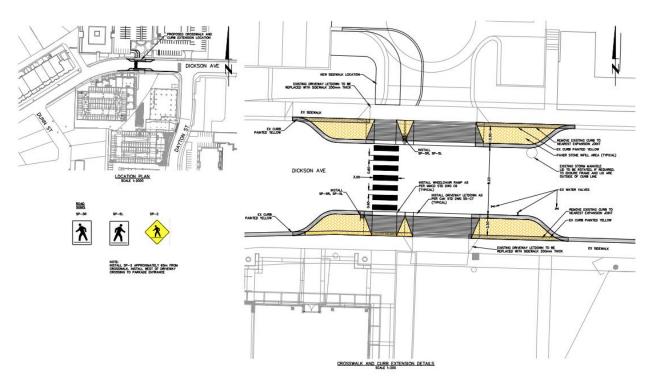


Figure 12 – Proposed Dickson Avenue Crosswalk

With the development of the Landmark 7 Office Tower; a cross walk is recommended mid-block on Dayton Street between Dickson Avenue and Dolphin Avenue, for pedestrian connectivity between Landmark 2 and the midpoint of the Landmark 6 and Landmark 7 office towers. ASC has provided the City of Kelowna Engineering Department with a request to complete the crosswalk construction in 2016.

Landmark Centre Walk Score

Kelowna is considered a car dependant city, where most errands require a car. The average Walk Score for Kelowna is 42. The Landmark area on the other hand is considered very walkable with a Walk Score of 72, as shown in Figure 12, from the WalkScore.com website. Information on the area from Walk Score is presented in Figure 13, and the walking distance covered in 20 minutes from the Landmark area is presented in Figure 14.

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Reference: Landmark Neighbourhood Traffic Impact Analysis



A few nearby public transportation options.

About your score



Figure 12 – Walk Score for Landmark Area

About this Location



1628 Dickson Ave has a Walk Score of 72 out of 100. This location is Very Walkable so most errands can be accomplished on foot.

This location is in Kelowna. Nearby parks include Parkinson Recreational Park, Stillingfleet Park and Jack Robertson Memorial Park.

Figure 13 – Walk Score Information

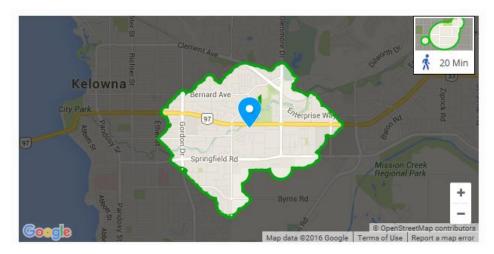


Figure 14 – Walking Distance in 20 Minutes

Reference: Landmark Neighbourhood Traffic Impact Analysis

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Transit Operations

The Landmark neighbourhood is well served by transit. Figure 15 identifies the adjacent bus stops for the local routes. Local transit service is provided on Springfield Road (Route 8: University to OK College) and Highway 97 (Route 9: Shopper Shuttle). The Highway 97 Transit Exchange (Route 97: Okanagan) adjacent to Landmark 3 provides rapid bus service between downtown and UBCO. There are currently no plans to bring transit service to the Landmark Centre via either Dayton Street or Dickson Avenue.



Figure 15 – Landmark Area Bus Stop Locations

Bicycle Network

Springfield Road and Burtch Road have bike lanes developed adjacent to the vehicle travel lanes on the roadway. Sutherland Avenue has a multi-use path developed that links the Highway 97 pedestrian overpass and the Parkinson Recreation Centre with the Burtch Road and Sutherland Avenue corridors.

The cross-section of the Collector roadways for both Dickson Avenue and Dayton Street are based on a share the road width for combined vehicle and bike riders, as per the City of Kelowna Standard Detail SS-R5 Collector-Class 1 (20m right of way), with an asphalt width of 13.1m.

Portions of Dickson Avenue and Dayton Street are currently rural with no curb and gutter or sidewalk. Upgrades resulting from adjacent development will bring the roadways to the Class 1, collector roadway standard.

The completed urban portions of Dickson Avenue adjacent to the Landmark Centre were completed as per the standard in place at the time of construction with an asphalt width of 12.1, with on street parking on both sides of the roadway.

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F) CONCLUSION

There are no systems or operational constraints resulting from the anticipated 2020 growth in background traffic plus the Phase 1 development of the Landmark Area, based on the scheduled installation of the right turn lane on Dayton Street at the Springfield Road intersection in combination with the elimination of the left turn from Dickson Avenue at the Burtch Road intersection.

The anticipated growth in background traffic by 2030 will require improvements to the Springfield Road and Burtch Road intersection as follows:

- Addition of a westbound right turn lane;
- Addition of an advance southbound left turn phase; and,
- Addition of North Bound Through lane (Conversion of North Bound Right Lane to a combined trough and right turn).

The anticipated growth in background traffic by 2030 will require improvements to the Springfield Road and Dayton Street intersection as follows:

- Addition of a southbound left turn lane; and,
- Addition of an advance westbound left turn phase.

The addition of the anticipated development of the Landmark Area by ASC, combined with the Dickson Area Development by others; did not result in any additional system improvements over and above those resulting from the anticipated growth in the 2030 background traffic.

With the completion of the pedestrian facilities noted above, the Landmark Area will be able to accommodate the anticipated increase in traffic and pedestrian activity beyond the 2030 horizon.

We would be pleased to meet and discuss the findings of this report.

Yours truly,

CTQ CONSULTANTS LTD.

Jave Coller

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