# CITY OF KELOWNA

# **MEMORANDUM**

SCHEDULE A

This forms part of application

#<u>~1</u>

Planner Initials

AW



**Date:** January 10, 2018

**File No.:** Z17-0118

To: Community Planning (EW)

From: Development Engineering Manager (JK)

Subject: 1145 Pacific Ave RU6 to RM5

The Development Engineering Department has 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 Jason Angus

### 1. <u>Domestic Water and Fire Protection</u>

- a) This property is currently serviced with a 13mm-diameter water service. The developer's consulting mechanical engineer will determine the domestic, fire protection requirements of this proposed development and establish hydrant requirements and service needs. The applicant will arrange for the removal and disconnection of the existing service and the installation of one new larger service at the applicants cost.
- b) A water meter is mandatory for this development and must be installed inside the building on the water service inlet as required by the City Plumbing Regulation and Water Regulation bylaws. The developer or building contractor must purchase the meter from the City at the time of application for a building permit from the Inspection Services Department, and prepare the meter setter at his cost. Boulevard landscaping, complete with underground irrigation system, must be integrated with the on-site irrigation system
- 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. Sanitary Sewer

Our records indicate that this property is currently serviced with a 100mm-diameter sanitary sewer service. The applicant's consulting mechanical engineer will determine the requirements of the proposed development and establish the service needs. Only one service will be permitted for this development. If required, the applicant will arrange for the removal and disconnection of the existing service and the installation of one new larger service at the applicants cost.

### 3. Storm Drainage

The developer must engage a consulting civil engineer to provide a storm water management plan for this site which meets the requirements of the City Subdivision

Development and Servicing Bylaw 7900. 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

### 4. Road Improvements

(a) Pacific Ave must be upgraded to an urban standard along the full frontage of this proposed development, including curb and gutter, 1.5m sidewalk, drainage system including catch basins, manholes and pavement removal and replacement and re-location or adjustment of utility appurtenances if required to accommodate the upgrading construction. Road cross section to be used is a SS-R5

# 4. Road Dedication and Subdivision Requirements

- (a) Grant Statutory Rights of Way if required for utility services.
- (b) 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.
- (c) Dedicate 2.5m width along the full frontage of Pacific Ave.

# 5. <u>Development Permit and Site Related Issues</u>

a) Direct the roof drains into on-site rock pits or splash pads.

## 6. <u>Electric Power and Telecommunication Services</u>

The electrical and telecommunication services to this building must be installed in an underground duct system, and the building must be connected by an underground service. It is the developer's responsibility to make a servicing application with the respective electric power, telephone and cable transmission companies to arrange for these services, which would be at the applicant's cost.

Street lights along Pacific Ave must be installed.

### 7. Design and Construction

- (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.

# 8. <u>Servicing Agreement for Works and Services</u>

- (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.

## 9. Administration Charge

An administration charge will be assessed for processing of this application, review and approval of engineering designs and construction inspection. The administration charge is calculated as (3.5% of Total Off-Site Construction Cost plus GST).

### 9. Survey, Monument and Iron Pins

If any legal survey monuments or property iron pins are removed or disturbed during construction, the developer will be invoiced a flat sum of \$1,200.00 per incident to cover the cost of replacement and legal registration. Security bonding will not be released until restitution is made.

## 10. Geotechnical Report

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.



April 26, 2018

Alec Warrender, Planner City of Kelowna Planning Department 1435 Water Street Kelowna, BC V1Y 1J4

Re: Rezoning, and Development Application Development Rationale

**Anagram PROPERTIES Inc. - Pacific Avenue RENTALS** 

Address: 1145 Pacific Avenue

Dear Alec.

MQN Architects and Anagram PROPERTIES Inc. have been working on a second project in Kelowna and are submitting the accompanying documentation for rezoning and development applications. The project at 1145 Pacific Avenue builds on the approach taken with the recently submitted Clement Avenue RENTALS and is further detailed in the design rationale below.

# Design Rationale

MQN Architects is collaborating with Anagram PROPERTIES Inc. on the development of a multi-family rental development on Pacific Avenue in the Capri / Landmark area of Kelowna. The proposed development follows Anagram's corporate strategy of providing smart, sustainable and attainable properties. This purpose built rental project is situated a block south the Capri Centre Mall enabling residents to walk to work and social activities. Pacific Avenue is a mixed density neighbourhood which is surrounded by multiple family developments. Recent projects near to the Capri Centre Mall have focused on an increased density which is consistent with the proposal for 1145 Pacific Avenue and aligned with City of Kelowna's OCP.

Anagram PROPERTIES Inc. has selected this site in Kelowna for its central location. Pacific Avenue provides easy access to and from the Capri Centre Mall and to major thoroughfares and bus routes enabling residents reduce dependence on vehicular transit. To further enhance resident's ability to live car free, this project is providing two car share parking stalls which would be available to not just building residents but also residents of the surrounding neighbourhood. The Capri area and Gordon Drive have been evolving with new businesses locating in the area and increased residential density.

The OCP for the Capri / Landmark area states that the area is designated for generally 4 storeys with greater height (up to 12 storeys) at the Capri Mall site. The proposed building is 4 storeys of residential units on top of single level of parking. Due to the high water table this building is proposed with the parkade level at grade providing a total height of 5 storeys.



The current zoning for this property is RU6 residential which supports two dwelling residential. To achieve the proposed building scale on this site, the project is seeking a rezoning of the property to an RM5 Medium Density Apartment Housing zone.

Anagram PROPERTIES Inc. is interested in creating a design language for their projects which is shared across their developments in Kelowna. The 1145 Pacific Avenue project utilizes a similar exterior expression to the Clement project with colour banding highlighting the apartment balconies and neutral colour blocking of the protruding walls. The expression of the building includes a vertical entry feature to create street presence.

This project proposes varying the rear and side yard setbacks for the building. To achieve the parking required for this project the east side yard has been varied to 1.5m to accommodate the parking requirement. Residential units from the second to the fourth floor are stepped back to the 4.5m setback from the property line meeting the setback requirements and the fifth floor is 6.0m from the property line exceeding the setback requirements. The fifth floor is further inset on the east and west sides to reduce the scale of the building relative to the neighbouring properties. The rear yard of this project is varied to a 7.5m setback from the property line. The front yard of this facility is based on 2.5m dedication and a 1.5m setback to the ground and second level portion of the building. This setback is to accommodate ground level townhouses which front onto the street. The upper levels of the building are setback 6m from the original setback line and 3.5m from the proposed road dedication.

To achieve the proposed parking and massing of this project, the site coverage has been varied to 81% with 57% of that being the building and the remaining 24% being attributed to driveways and parking. Recognizing the potential impact that an increased site coverage will have on the storm water flow into the municipal systems we have been working with New Town Planning Services to identify storm water management options for this site. New Town has identified a preliminary concept which would include developing a storm retention tank beneath the proposed exterior driveway. The storm network would be composed of catch basins, drywells, and a variety of storm detention tanks. The storm retention tank and drywells would be designed to disperse the storm water through infiltration with storage capacity adequate to attenuate the 100-year storm, as per the City of Kelowna servicing bylaw requirements. Roof leaders and foundation drains would be designed to disperse to either rock pits or the storm network, at which point it would be allowed to infiltrate.

The Anagram building for Pacific Avenue has been designed to incorporate sustainability into project. Sustainable features for this project start from the location planning with the intent of providing housing within an urban location which reduces the need to vehicular travel. Two parking stalls have been included for car share parking providing residents and neighbours an option to owning a dedicated vehicle. The parking lot also includes four charging stations for electric vehicles spread between both the car share and private parking stalls. Approximately 100kw of solar power is planned for the project which would power the electric vehicle charging stations as well as providing electricity to the rental units and common areas.



To encourage alternative transit, a fully enclosed bicycle room for the residents providing secure, weather protected storage at the ground level. In addition to providing space for the storage of personal bikes, the client is also providing six shared bicycles for the building tenants which will be located within the parkade area along with a bicycle maintenance space for tenants. The City of Kelowna has been described as having the most extensive bicycle network for a city of its size and intends to build on this with its 20-year transportation plan. The inclusion of innovative programs such as this facility's bike share will augment Kelowna's vision.

Anagram PROPERTIES Inc. has made the decision to proceed with this project as a purpose built rental housing project. The project will apply to the City of Kelowna's Rental Housing Grants Program for a ten year tax abatement and to help offset DCC's. With recent rental vacancy rates in Kelowna 0.2% in 2017, the need for both rental and affordable housing is apparent. This project is designed to provide a variety of housing types from 1-3 bedroom mix to meet a diverse spectrum of needs for people seeking rental housing. The Pacific Avenue RENTALS project intends to help solve the rental housing crisis currently being experienced by the City of Kelowna.

We believe that this project is consistent with the objectives of the Official Community Plan and can provide a building which meets the client's focus for smart, sustainable and attainable housing. The urban location combined with family sized suites and sustainable features provides a residential product which can meet the needs of the community enabling people to live and work in the urban centre. The sustainable design approach for this building combined with the rental market in Kelowna, City of Kelowna Developer Incentives program support make this a purpose built rental project which is both desirable and needed for the City of Kelowna to meet current housing demands.

Regards,

Roger Green

Architect AIBC

CC: Reg Hamilton – Anagram PROPERTIES Inc.

Vicki Topping - MQN Architects



May 11, 2018

Alec Warrender, Planner City of Kelowna Planning Department 1435 Water Street Kelowna, BC V1Y 1J4

Re: Rezoning, and Development Application Development Rationale

**Anagram PROPERTIES Inc. - Pacific Avenue RENTALS** 

**Parking Variance** 

Address: 1145 Pacific Avenue

Dear Alec,

Following our conference call yesterday, we have put together the following commentary on the approach to the parking for 1145 Pacific Avenue.

Pacific Avenue RENTALS is seeking a variance on parking for this project to reduce the number of parking stalls from the zoning bylaw requirements to a 1 stall per unit plus 1 stall per 7 units for visitors. The request for this reduction in parking has been based on several factors for the project ranging from demographics to location. The following rationale outlines the zoning baseline and the proposed parking approach.

The parking requirements by the zoning bylaw define parking for apartments as requiring parking based on the following ratios:

1.25 stalls per 1-bedroom unit / 1.5 per 2-bedroom unit / 2.0 per 3-bedroom unit

Based on these ratios the parking counts for the facility would be as follows:

Unit Type	Count	Parking Ratio	Parking Required
Bachelor	0	1.00	0
1 Bedroom	5	1.25	6.25
2 Bedroom	21	1.50	31.50
3 Bedroom	5	2.00	10.00
Visitor	31	1 per 7 units	4.43
			53

Based on the market evaluation and location the proposed variance for this project would be to reduce the parking requirements to a 1 stall per unit ratio plus visitor parking. This approach would provide the parking as follows:



Unit Type	Count	Parking Ratio	Parking Required
Bachelor	0	1.00	0
1 Bedroom	5	1.00	5
2 Bedroom	21	1.00	21
3 Bedroom	5	1.00	5
Visitor	31	1 per 7 units	4.43
			36

# Parking Approach

Prior to starting this project Anagram PROPERTIES Inc. conducted a demographic and market study to determine their target audience for this project. The study completed in 2017 found that there has been a strong demand for rental housing in the Kelowna market with vacancy rates as low as 0.2%. In addition to a low rental vacancy rate, the demographics of incoming individuals to the area includes a large percentage of young working adults 15-34 years and retirees 65+ years. Based on these groups entering the Kelowna market, Anagram PROPERTIES Inc. is targeting the following five renter profiles:

#### Millennials: 40%

- Late 20's to 30's.
- Partnered and creating families.
- Seeking work in the Health or Tech industry.
- May have relocated from areas such as Vancouver, Toronto or Calgary because of the high cost of living.
- Often one partner may be self-employed (associated with tech sector activities) and the other has a more traditional career.
- Priced out of the single-family market and subject to high purchase sensitivity.
- Highly impacted by financing and unable to secure a down payment to purchase.
- Value experiences over material items.
- Like the flexibility and the maintenance-free lifestyle that renting provides.
- Interested in being walking distance to the urban core.
- Want to be able to live, work and play in a high density environment surrounded by nightlife, restaurants, and entertainment.

#### Students: 10%

- 17 to 25 years of age. Couples or single individuals.
- Studying at UBCO or Okanagan College.
- Tend not to have vehicles, but rather use public transportation, bikes and carpools.
- Inclined to reduce their cost of living by sharing housing with friends/family.
- Some may be working part/full time while attending school.
- Students from out of town have parents helping them with their living expenses.
- Cost of living off campus is comparable to the cost of living in campus residence,



thus students prefer offsite living.

• The idea of living downtown is appealing to a young individual.

#### Restarts: 35%

- 40 to 60's. Divorced and may have financial equity available from the sale of a martial home.
- Likely have their children part-time and are more likely to be female than male.
- Some may be on fixed-incomes and typically continue to rent until they remarry or receive an inheritance.
- May have moved from Vancouver or Calgary for a slower pace of life and more relaxed lifestyle.
- Have guests that frequently visit and stay with them.
- Looking to live in a community close to amenities and activities.
- Enjoy dining out, socializing and recreational activities with friends.
- May currently be renting in the area with an eye out to purchase, but unsatisfied with re-sale options on the market.
- Interior design tastes and preferences are clean and contemporary.

## Downsizers: 10%

- 45 to 60 years of age, active married couples looking to sell their single-family home in Kelowna for a less maintenance intensive home in the immediate area.
- Approximately 40% will come from out of town, such as Vancouver, Alberta, and other BC communities looking for a change in lifestyle.
- May be looking to spend a portion of their year in another location and therefore value the option of "locking and leaving" their primary home in a secure community while they are away.
- Tend to be more interested in single level living with main floor master bedroom.
- They are looking ahead to aging in place.
- Proximity to Downtown Kelowna and access to natural amenities like the Knox mountain trail system is a primary consideration to these buyers.
- Proximity to the workplace is important to those buyers who are still working.
- Even though they are downsizing they have concerns about having enough space.
- Interior design tastes and preferences oriented to clean contemporary designs.

## Retirees: 5%

- 60+, either a couple or widow/widower.
- They have friends and family that like to stay occasionally.
- Interested in low maintenance and cost. Little need for amenities. Security and affordability is a concern because of fixed incomes.
- Very social and prefer high walkability to keep their mind and body active.
- They may be in a temporary transition from their larger single family home.

  Renting in the interim and planning to purchase a condo and age in place.
- May be past the need for home ownership.



Based on these groups and their lifestyles, there is an expectation that there will be a lower dependence on personal vehicles than with traditional renters. Many studies have been completed on the millennial market finding that they are less likely to drive than previous age groups which fits well with a 1 car per unit ratio like students. The Restarts also are likely to only have a single vehicle based on the marital status. Retirees are also less likely to have a dependence on a multiple vehicle lifestyle due to not having to work. Based on the demographics of the intended rental pool it is possible that there will be units in the building which will not require parking. To address this possibility the parking for this project will not be provided based on a fixed stall per unit approach but rather will be a managed pool providing flexibility to the parking.

Based on an intent to provide the rental units for the above groups, Anagram PROPERTIES Inc. sought a property which is situated in a rising urban core of Kelowna. The Pacific Ave location was selected for this project based on the central location and the planned amenities nearby. The Capri/Landmark area of Kelowna is targeted in the OCP to experience a growth of 1250 multi unit housing, this growth is focused around the redevelopment of the Capri Mall location at the core. Pacific Avenue is one block away from the Capri Mall location and is well situated to provide a walkable lifestyle with nearby amenity space. As a defined urban centre within Kelowna, the Capri is currently serviced with public transit and will see this increasing as the urban network evolves further reducing car reliance. The combination of target renters having a lower than typical vehicular reliance with a central location and public transit provides the first portion of the rationale for a parking reduction, this project also includes amenities designed to further reinforce this approach.

Within the parameters of this project, Anagram PROPERTIES Inc. has approached the design from their ethos of Smart + Sustainable + Attainable. From the start of work on this project, there has been an intent to provide rental housing with amenities which enhance a reduced car lifestyle. Central to this approach has been the inclusion of a car share program with two dedicated parking stalls. Anagram PROPERTIES Inc. has been in discussion with local car share program operators to integrate their stalls into the existing car share program. The City of Kelowna has informed the design team that the City of Kelowna is working on a car share parking reduction which would allow a 5 to 1 ratio of stall reduction for every car share included in a project. This project is seeking a reduction towards the variance based on this approach. To further meet the intent of being Smart + Sustainable + Attainable, this project is integrating a solar array to the building roof. As part of the intent of this roof top solar system which will be used to reduce the costs for electricity for this building, Anagram is looking to make part of the car share an electric vehicle.

To increase this project's goals of promoting a sustainable lifestyle, the project is including a bike share program. This program would be open to the building residents and includes 3 bike share parking stalls within the building parkade. The intent of this bicycle program is to provide residents with an alternative to single vehicle transit to get around the city. This additional



bicycle program goes beyond the minimum parking requirements of the zoning bylaw providing a convenient service which should help to reduce vehicle reliance.

To summarize, the intent of this project to seek a parking variance of one stall per unit. Based on the demographics of the target audience, and urban location this project is well suited to promoting a lifestyle with reduced car dependence. The inclusion of amenities such as the car share and bicycle share programs at this project will work to further reinforce the one car lifestyle. Based on this approach the sought reduction of parking to 36 stalls we believe that this project aligns with the City of Kelowna's Community Vision to create urban communities that are compact and walkable with housing that is affordable.

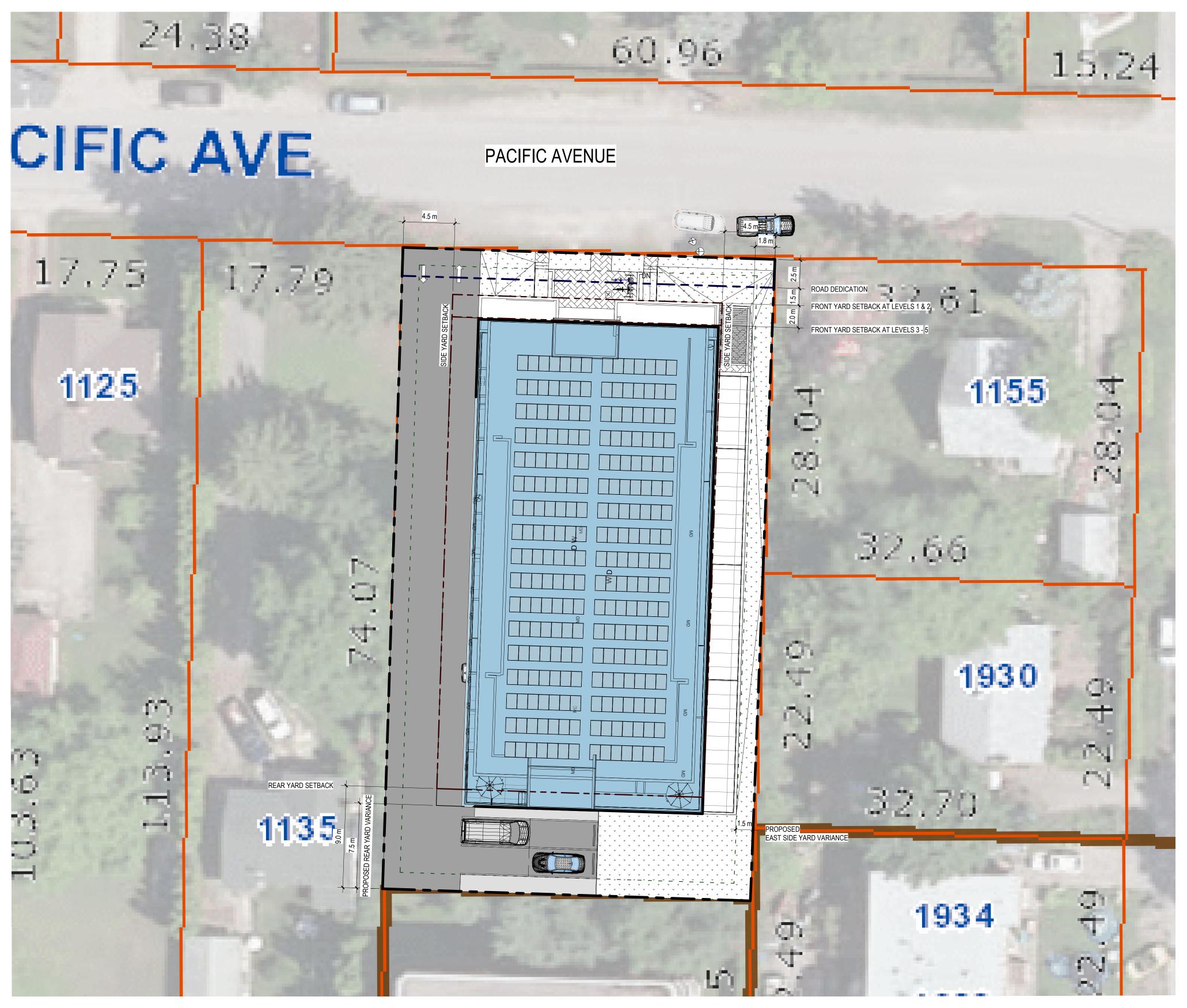
Regards,

Roger Green

Architect AIBC

CC: Reg Hamilton – Anagram PROPERTIES Inc.

Vicki Topping - MQN Architects



# PACIFIC AVENUE PROPERTY - ANAGRAM

This project is planned for 1145 Pacific Avenue in Kelowna. The proposed project is a 31 unit apartment building consisting of a ground floor of parking and building entrance and four floors of residential units. The following is a summary of the proposed zoning for this site:

EXISTING ZONING: RU6 - TWO DWELLING HOUSING

PROPOSED ZONING: RM5 - MEDIUM DENSITY MULTIPLE HOUSING

# **ZONING REQUIREMENTS**

RM5PROPOSEDMINIMUM LOT30m X 35m32.4m X 74.0mMINIMUM AREA1700m²1849.7m²MAX FAR1.1 + 0.1 Parking + 0.2 Urban Center1.4BUILDING COVER--57%SITE COVER50%81%SETBACKS

 FRONT
 6.0m
 1.5m NORTH

 SIDE
 4.5m (6.0m FLANKING STREET)
 1.5m WEST

 4.5m EAST
 7.5m SOUTH

PRIVATE OPEN SPACE

1 BEDROOM 15.0m²
2+ BEDROOM 25.0m²
BUILDING HEIGHT 18.0m

17.4m PRIMARY ROOF, 18.3m ENTRY PARAPET

# PROPOSED BUILDING CONFIGURATION

PRIVATE OPEN SPACE 721.7 m<sup>2</sup>

UNITS 31 TOTAL (5 x 1BR, 21 x 2BR, 5 x 3BR)

PARKING 17 REGULAR (50%), 18 MEDIUM (50%), 0 SMALL (2%) + 1 HC = 36 STALLS

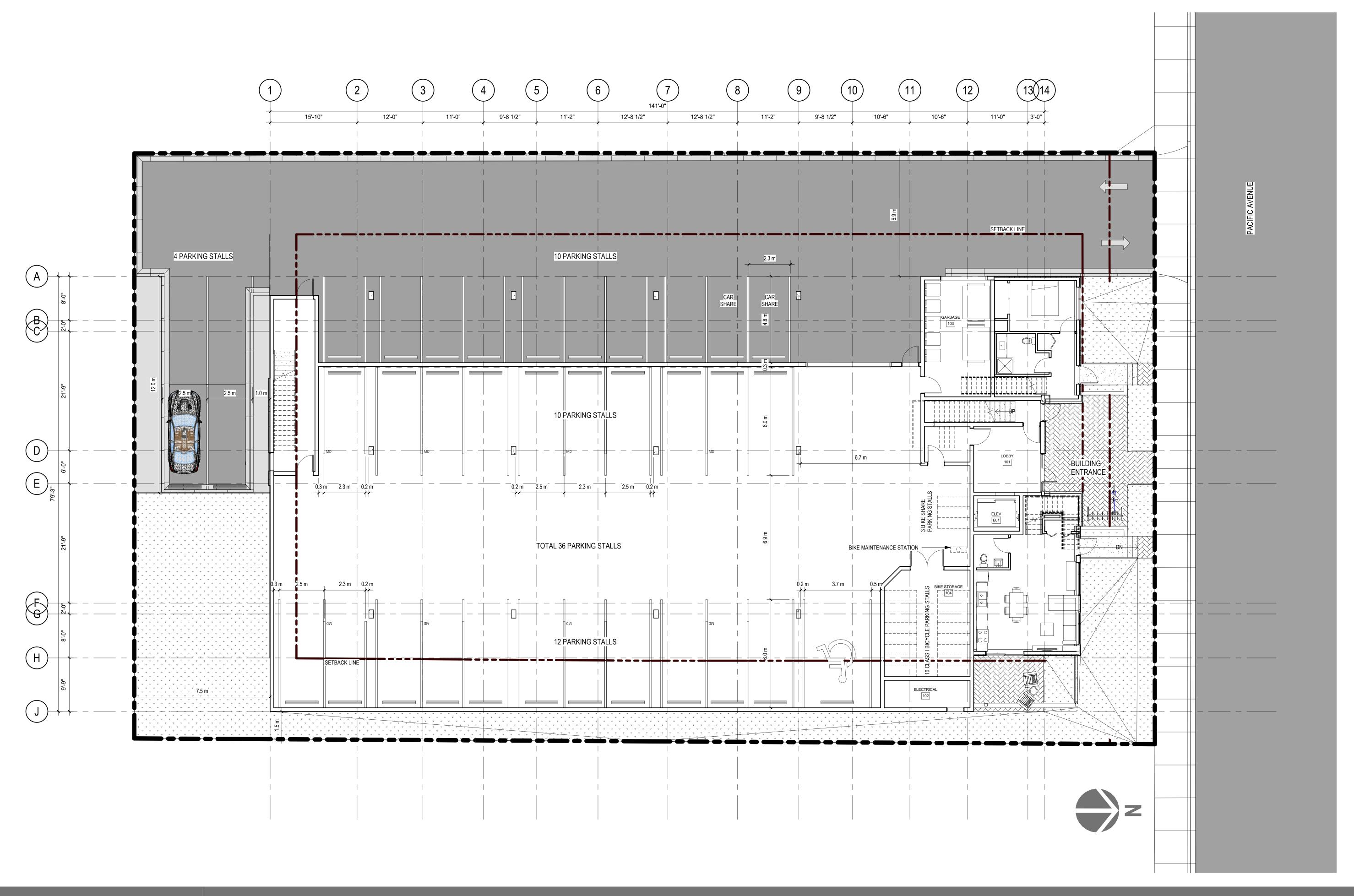
BICYCLE PARKING 18 CLASS I 6 CLASS II





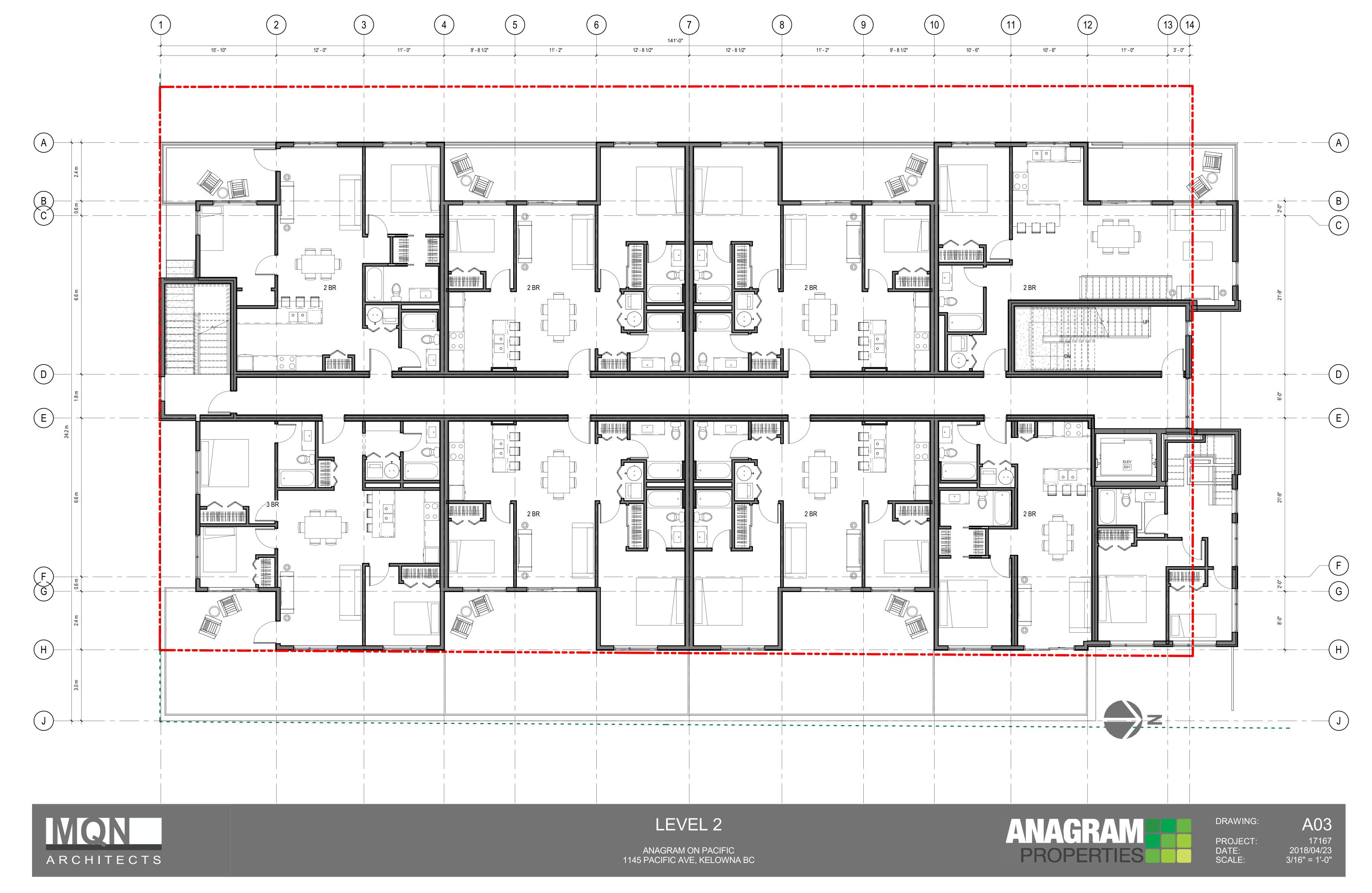




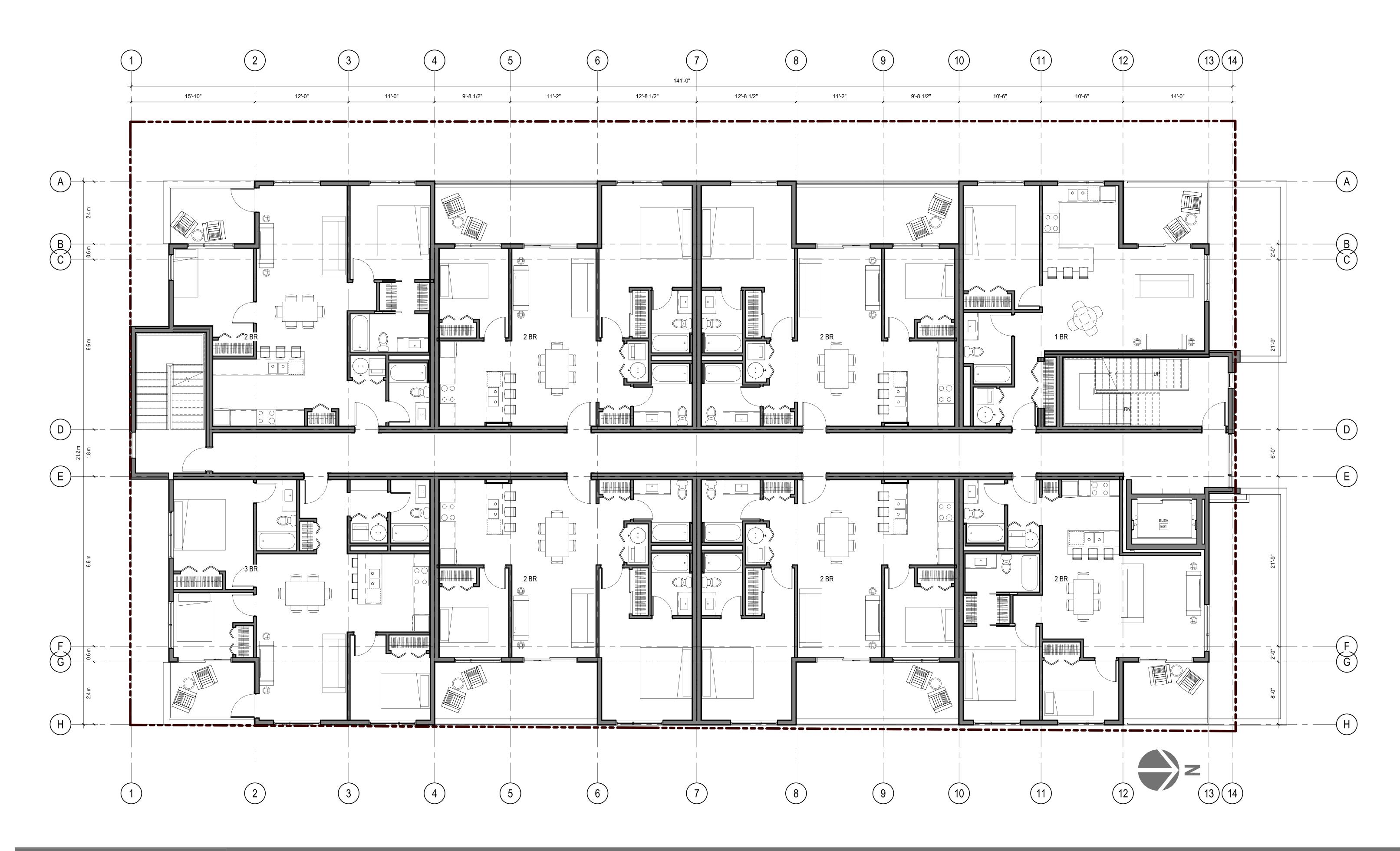








c:UsersIRGreen!Documents/17167 - ANAGRAM PACIFIC.CENTRAL2\_green@mqn.ca.rvt DRAWN BY: Author - CHECKED BY: Checker



























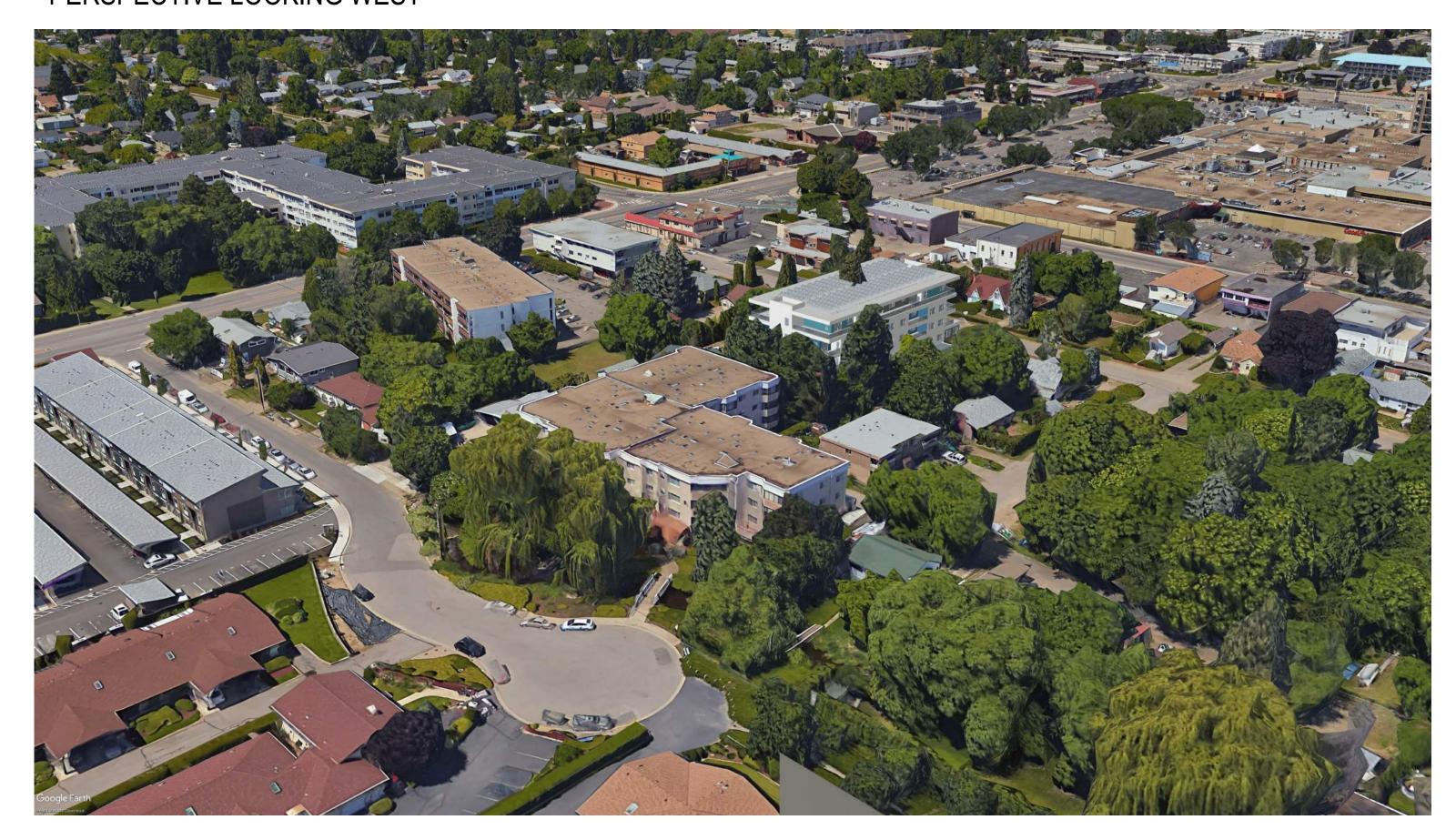








PERSPECTIVE LOOKING WEST

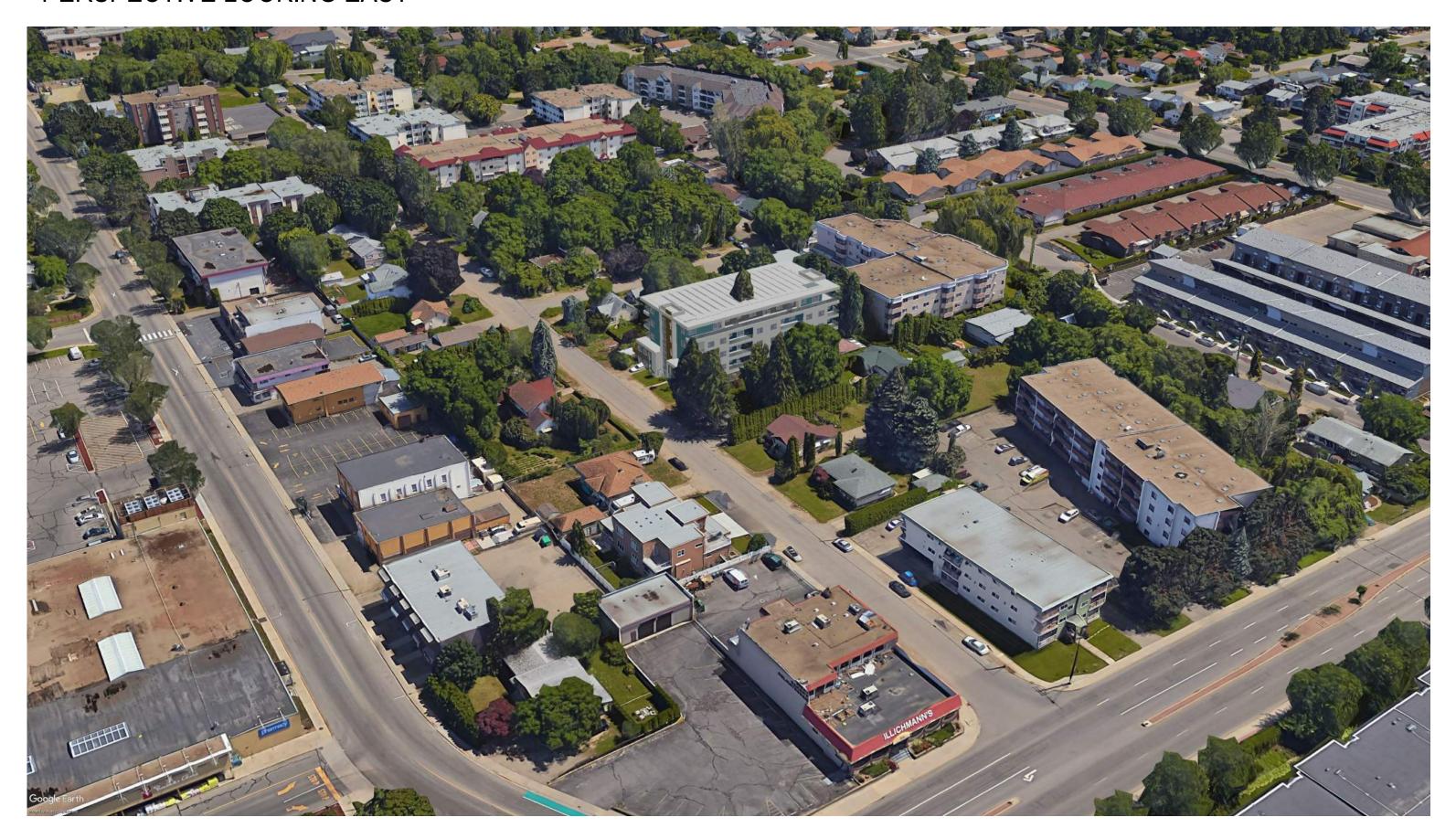


AERIAL LOOKING NORTHWEST



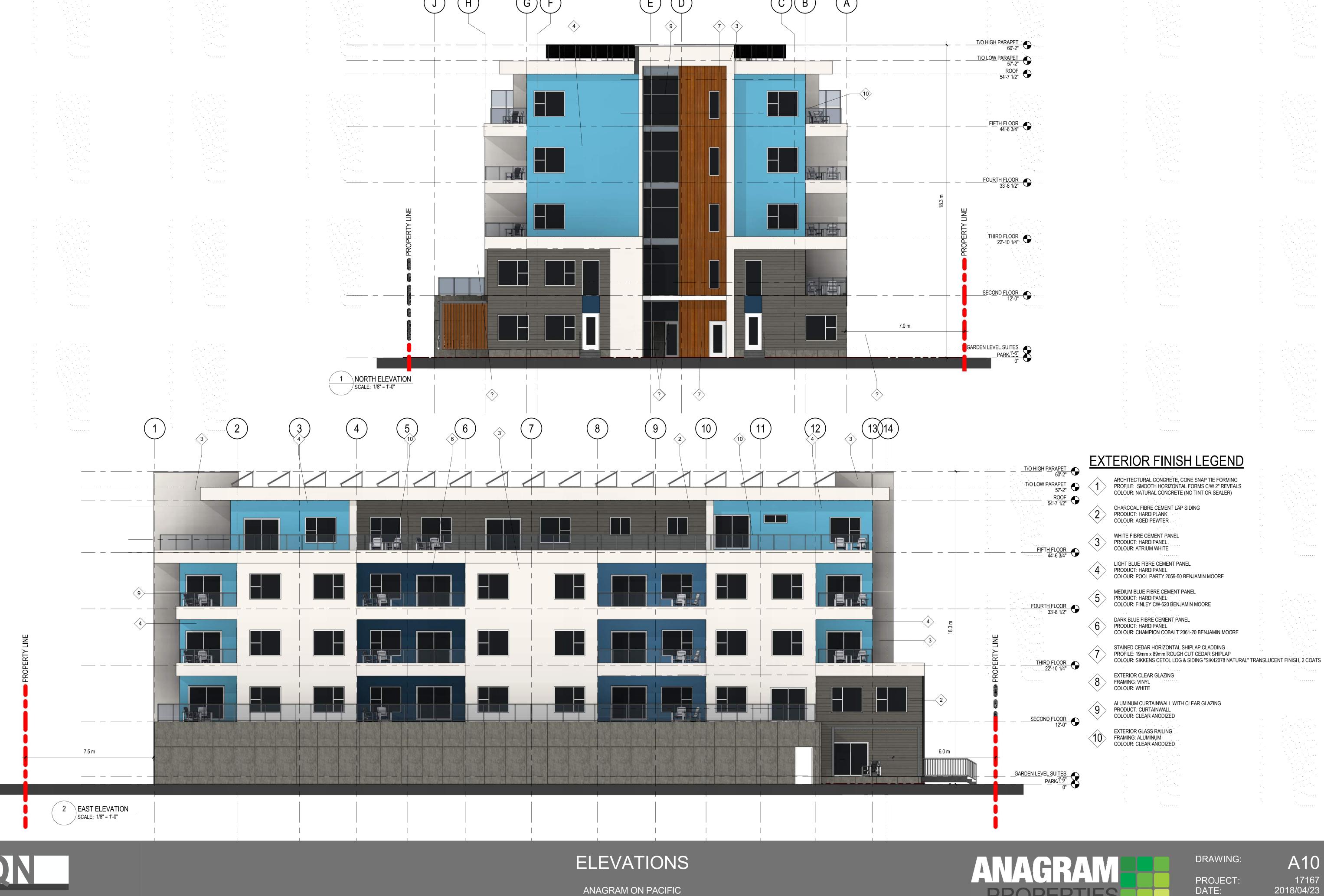


PERSPECTIVE LOOKING EAST



AERIAL LOOKING SOUTHEAST





ARCHITECTS

ANAGRAM ON PACIFIC 1145 PACIFIC AVE, KELOWNA BC



17167 2018/04/23 1/8" = 1'-0"

SCALE:



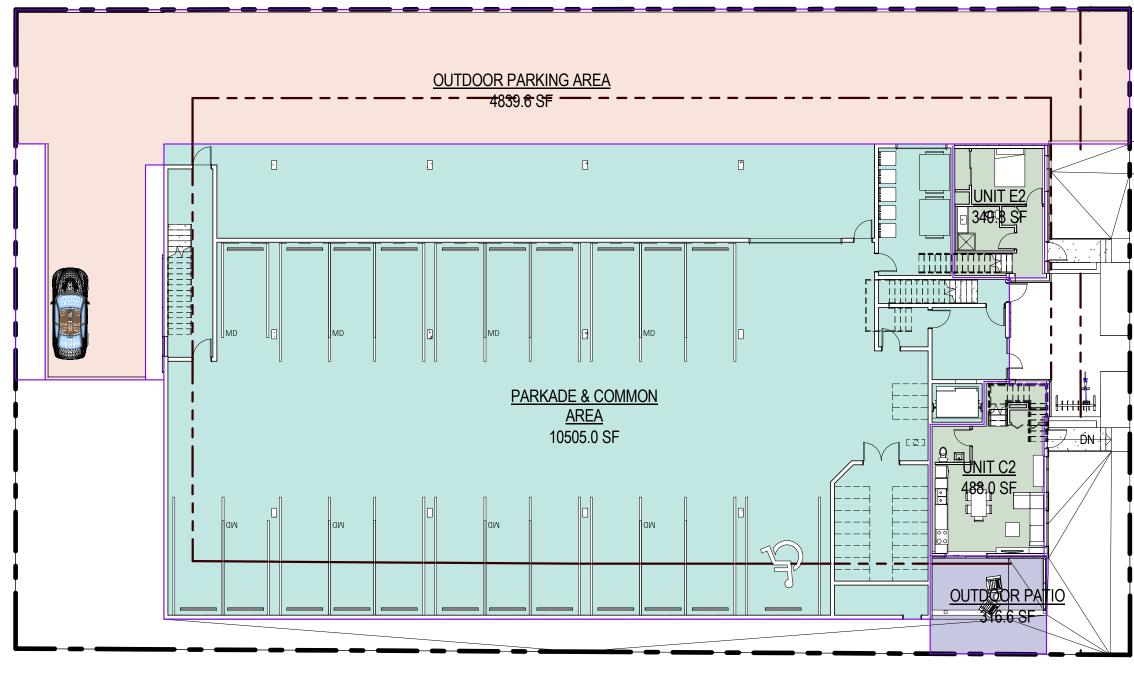


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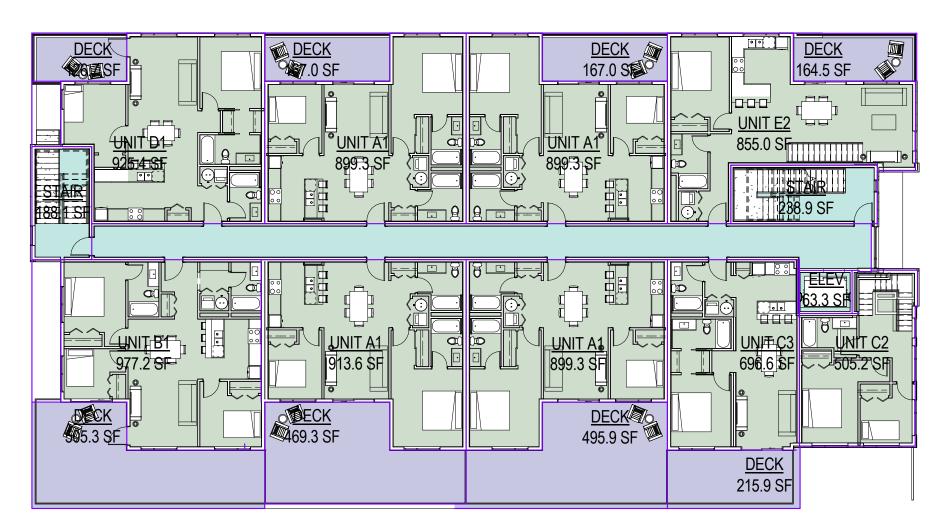
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2018/04/23

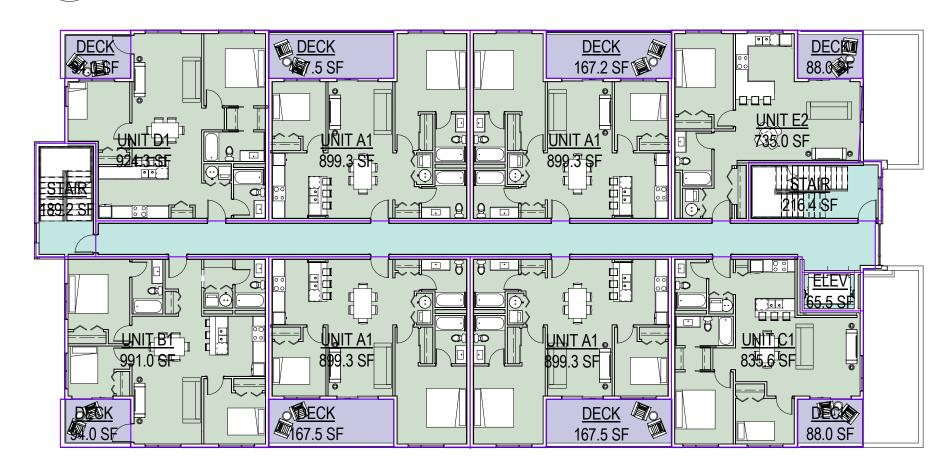
1/8" = 1'-0"



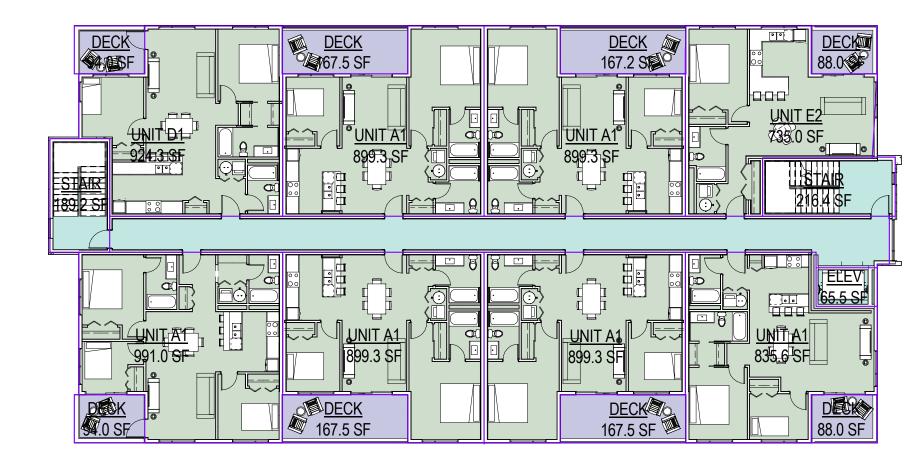




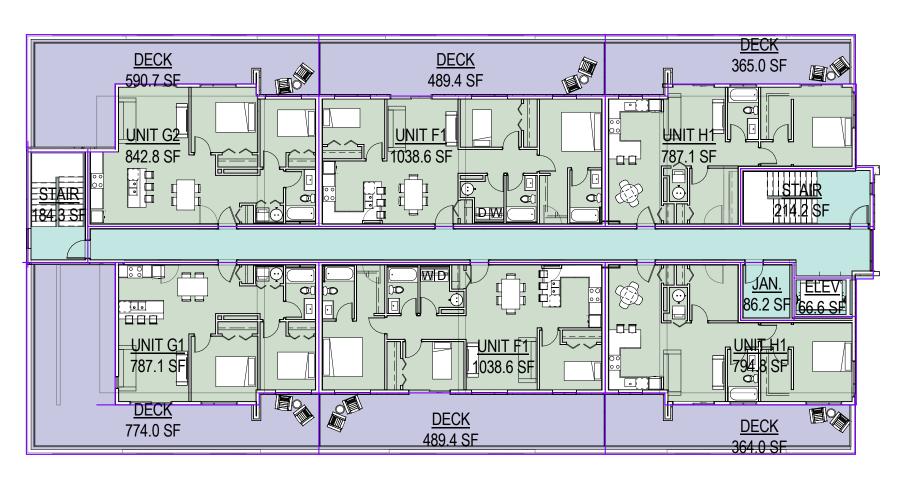














SITE COVERAGE CALCULATION	
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TOTAL SITE AREA 1849.7 m<sup>2</sup> TOTAL SITE AREA 1849.7 m<sup>2</sup> **BUILDING AREA** 1052.9 m<sup>2</sup> **EXCLUDED AREA** 1461.6 m<sup>2</sup> PARKING AREA 449.6 m<sup>2</sup> **INCLUDED AREA** 2587.8 m<sup>2</sup> PARKING AREA 449.6 m<sup>2</sup> **BUILDING COVERAGE** 0.57 PRIVATE OPEN SPACE 721.7 m<sup>2</sup> PARKING COVERAGE **TOTAL SITE COVERAGE:** FLOOR AREA RATIO: 1.40 (BUILDINGS, DRIVEWAYS, & PARKING)

FAR AREAS

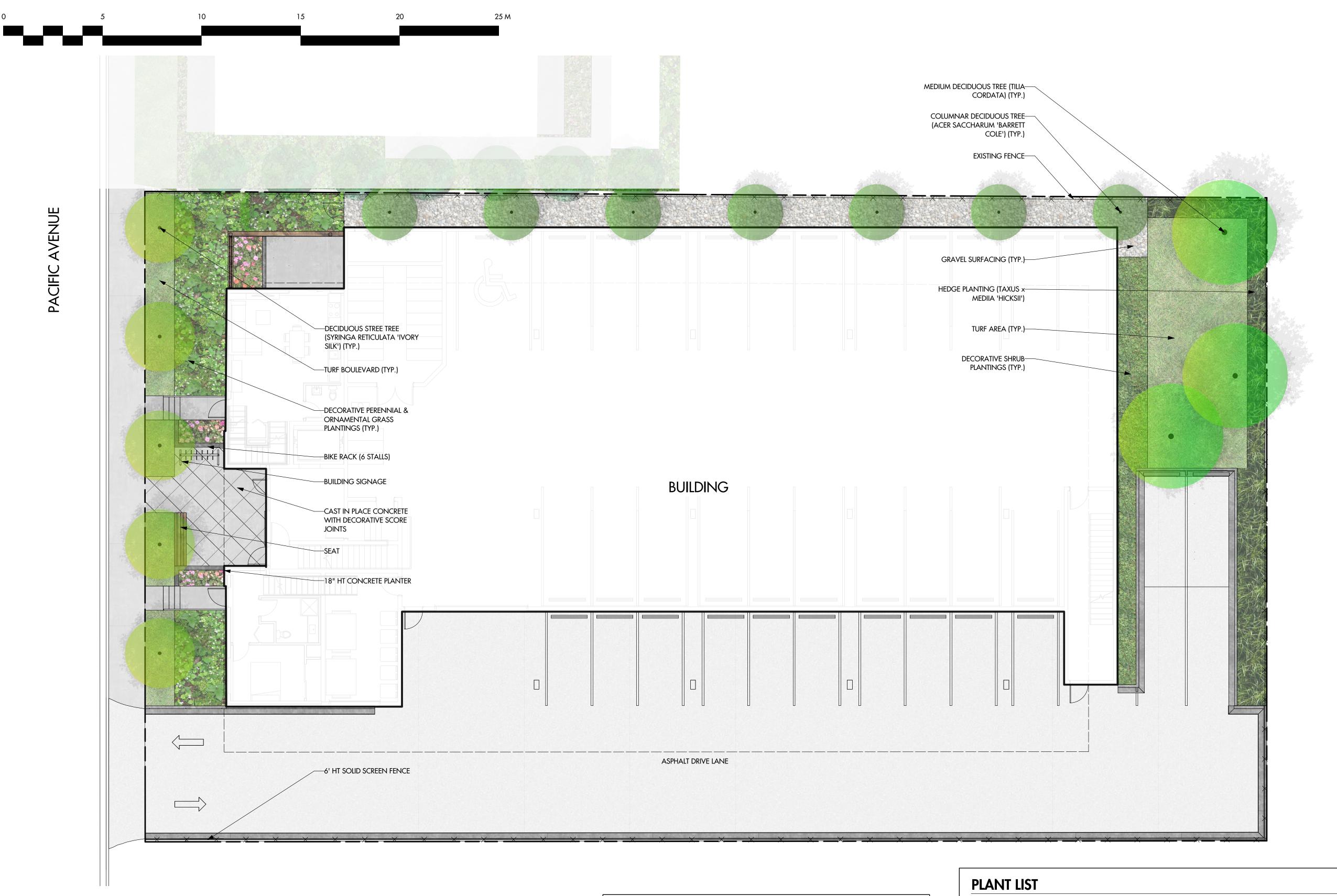
INCLUDED AREA **EXCLUDED AREA** 

PRIVATE OPEN SPACE





FAR CALCULATION



1. PLANT MATERIAL AND CONSTRUCTION METHODS SHALL MEET OR EXCEED C.N.L.A. STANDARDS.

2. ALL SOFT LANDSCAPE AREAS SHALL BE WATERED BY A FULLY AUTOMATIC TIMED UNDERGROUND IRRIGATION SYSTEM.

**NOTES** 

3. TREE AND SHRUB BEDS TO BE DRESSED IN A MINIMUM 50mm WOOD MULCH. DO NOT PLACE WEED MAT UNDERNEATH TREE AND SHRUB BEDS.

4. TREE AND SHRUB BEDS TO RECEIVE A MINIMUM 300mm DEPTH TOPSOIL PLACEMENT.

5. TURF AREAS FROM SOD SHALL BE NO. 1 GRADE GROWN FROM CERTIFIED SEED OF IMPROVED CULTIVARS REGISTERED FOR SALE IN B.C. AND SHALL BE TOLERANT OF DROUGHT CONDITIONS. A MINIMUM OF 100mm DEPTH OF GROWING MEDIUM IS REQUIRED BENEATH TURF AREAS. TURF AREAS SHALL MEET EXISTING GRADES AND HARD SURFACES FLUSH.

PLANT LIST			
BOTANICAL NAME	COMMON NAME	QTY	SIZE / SPACING & REMARKS

APOLLO MAPLE

IVORY SILK TREE LILAC

ACER SACCHARUM 'BARRETT COLE' SYRINGA RETICULATA 'IVORY SILK' TILIA CORDATA

**SHRUBS** 

BUXUS 'GREEN GEM' CORNUS STOLONIFERA 'FARROW' HYDRANGEA PANICULATA 'JANE' PHILADELPHUS 'SNOWBELLE' SYRINGA MEYERII 'PALIBIN' TAXUS X MEDIA 'HICKSII'

PERENNIALS & GRASSES ASTILBE JAPONICA 'PEACH BLOSSOM' ECHINACEA PURPUREA 'MAGNUS'

GREEN GEM BOXWOOD ARCTIC FIRE RED TWIG DOGWOOD LITTLE LIME HYDRANGEA SNOWBELLE MOCKORANGE DWARF KOREAN LILAC HICK'S YEW

PEACH BLOSSOM FALSE SPIREA CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' KARL FOERSTER FEATHER REED GRASS PURPLE CONEFLOWER SALVIA NEMOROSA 'MAY NIGHT' MAY NIGHT MEADOW SAGE

6cm CAL. LITTLE LEAF LINDEN #01 CONT. /0.75M O.C. SPACING #01 CONT. /1.0M O.C. SPACING #01 CONT. /1.2M O.C. SPACING

#01 CONT. /1.0M O.C. SPACING #01 CONT. /1.2M O.C. SPACING #01 CONT. /0.75M O.C. SPACING

6cm CAL.

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PROJECT TITLE

# 1145 PACIFIC AVENUE

Kelowna, BC

ISSUED FOR / REVISION

DRAWING TITLE

# CONCEPTUAL LANDSCAPE PLAN

1	18.04.26	Review
2		
3		
4		
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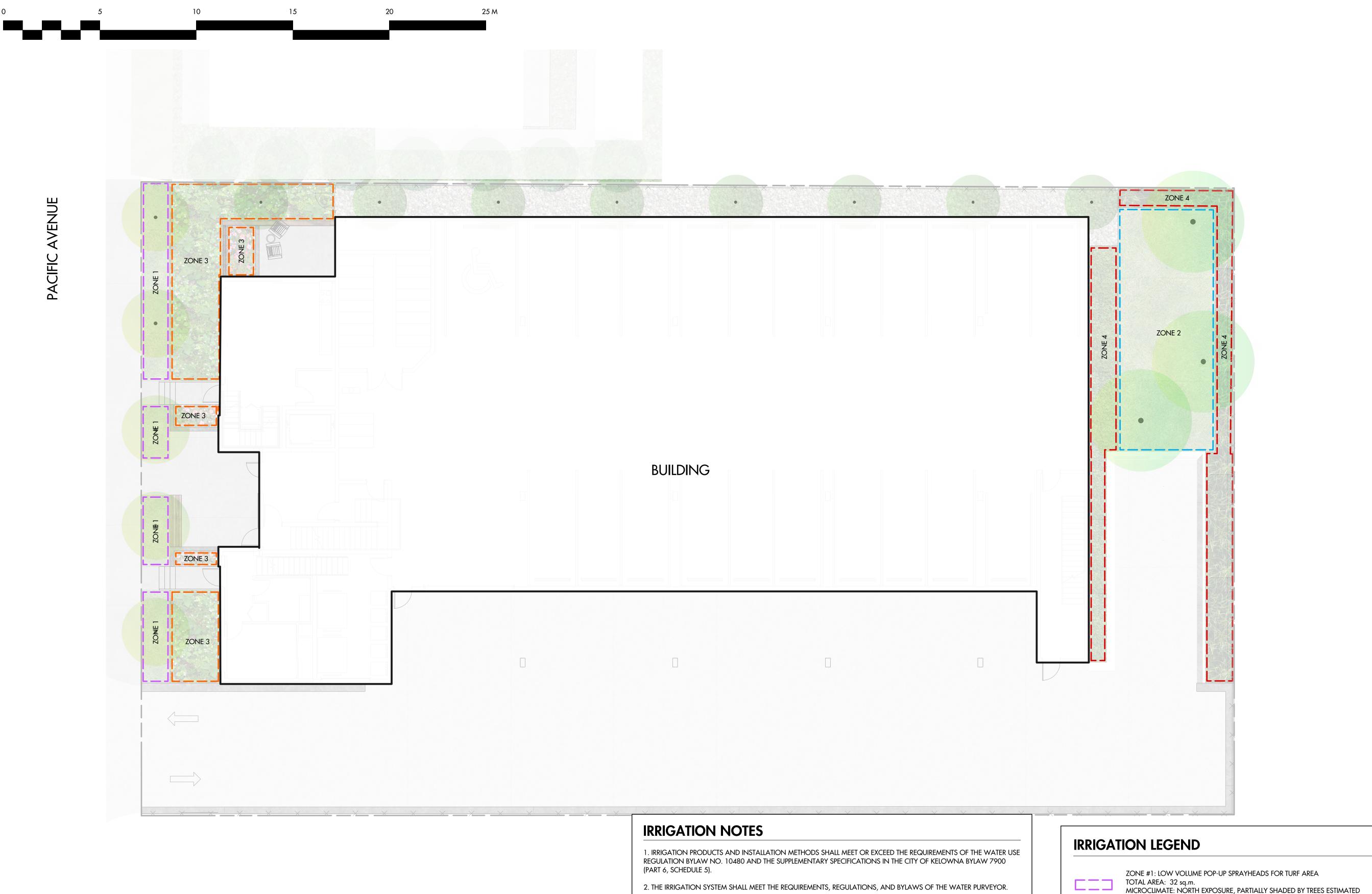
PROJECT NO	17-141	
DESIGN BY	FB	
DRAVVN BY	NG	
CHECKED BY	FB	
DATE	APR. 26, 2018	
SCALE	1:100	



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- 3. THE IRRIGATION SYSTEM SHALL BE EQUIPPED WITH AN APPROVED BACKFLOW PREVENTION DEVICE, WATER METER, AND SHUT OFF VALVE LOCATED OUTSIDE THE BUILDING ACCESSIBLE TO THE CITY.
- 4. AN APPROVED SMART CONTROLLER SHALL BE INSTALLED. THE IRRIGATION SCHEDULING TIMES SHALL UTILIZE A MAXIMUM ET VALUE OF 7" / MONTH (KELOWNA JULY ET), TAKING INTO CONSIDERATION SOIL TYPE, SLOPE, AND MICROCLIMATE.
- 5. DRIP LINE AND EMITTERS SHALL INCORPORATE TECHNOLOGY TO LIMIT ROOT INTRUSION.
- 6. IRRIGATION SLEEVES SHALL BE INSTALLED TO ROUTE IRRIGATION LINES UNDER HARD SURFACES AND FEATURES.
- 7. IRRIGATION PIPE SHALL BE SIZED TO ALLOW FOR A MAXIMUM FLOW OF 1.5m /SEC.

WATER CONSERVATION CALCULATIONS

\*REFER ATTACHED IRRIGATION APPLICATION FOR DETAILED CALCULATIONS

LANDSCAPE MAXIMUM WATER BUDGET (WB) = 289 cu.m. / year

ESTIMATED LANDSCAPE WATER USE (WU) = 206 cu.m. / year

WATER BALANCE = 83 cu.m. / year

8. A FLOW SENSOR AND MASTER VALVE SHALL BE CONNECTED TO THE CONTROLLER AND PROGRAMMED TO STOP FLOW TO THE SYSTEM IN CASE OF AN IRRIGATION WATER LEAK.

ANNUAL WATER USE: 74 cu.m. ZONE #2: LOW VOLUME POP-UP SPRAYHEADS FOR TURF AREA

TOTAL AREA: 64 sq.m. MICROCLIMATE: SOUTH EXPOSURE, PARTIALLY SHADED BY TREES ESTIMATED ANNUAL WATER USE: 91 cu.m.

ZONE #3: HIGH EFFICIENCY SUBSURFACE DRIP IRRIGATION FOR MODERATE WATER USE PLANTING AREAS TOTAL AREA: 60 sq.m.

MICROCLIMATE: NORTH EXPOSURE, PARTIALLY SHADED BY TREES ESTIMATED ANNUAL WATER USE: 25 cu.m. ZONE #4: HIGH EFFICIENCY SUBSURFACE DRIP IRRIGATION FOR MODERATE

WATER USE PLANTING AREAS TOTAL AREA: 64 sq.m.

MICROCLIMATE: SOUTH EXPOSURE, PARTIALLY SHADED BY TREES ESTIMATED ANNUAL WATER USE: 19 cu.m.



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PROJECT TITLE

# 1145 PACIFIC AVENUE

Kelowna, BC

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# WATER CONSERVATION **PLAN**

1	18.04.26	Review	
2			
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PROJECT NO	17-141
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