



COUNCIL REPORT
Development Services
For the May 14th, 2019 Council Meeting

DATE: May 1, 2019 File: DP 18-40

TO: Jim Zaffino, CAO

FROM: Jaleen Rousseau, Planner

RE: Application: Development Permit with Variance (File No. DP 18-40, McDougall Rd).
Legal: Lot 1, DL 503, ODYD, Plan EPP77570
Address: Phase 13 McDougall Road (1506 Rose Meadow Drive)
Owners: Rose Valley Ventures Ltd. Inc. No. BC0523208
Agent: Pentar Homes Ltd. c/o Nadean Ostrom

RECOMMENDED MOTION

THAT Council authorize the issuance of a Development Permit (DP 18-40) to construct three duplexes and two tiered retaining walls, subject to the conditions outlined in and attached to the Development Permit;

THAT Council authorize a variance to S.3.12.1 of City of West Kelowna Zoning Bylaw No. 0154 to allow the development of a two-tiered retaining wall from a maximum collective height of 2.5 m (8.2 ft) to 4.4 m (14.4 ft), subject to the conditions outlined in and attached to the Development Permit; and

THAT issuance of the Development Permit be withheld pending the receipt of landscape security for the landscape plan attached to DP 18-40 as Schedule 'C' in the amount of \$75,362.81.

RATIONALE

- The proposed Westlake Comprehensive Development CD1(D) Zone aligns with the desired attributes of the Neighbourhood Centre Growth Management Designation and Single Family Residential Land Use Designation.
- Infill development in this location makes more efficient use of community services and reduces development pressures at the urban fringes.
- The subject property is the final undeveloped parcel within the Westlake Concept Development Plan area.
- Council supported the rezoning of the subject property from RU4 to CD1(D) in 2018 (Z 18-03).
- The proposal will result in six new units located adjacent to the Westlake neighbourhood centre and park and open space, including Mar Jok Elementary School, Rose Meadow Park and Mar Fee Park.
- The proposed retaining structures are located at the rear of the subject property, which is adjacent to the City's multi-sport dome facility and will be screened by trees. No resulting negative impacts to neighbouring properties are anticipated.

LEGISLATIVE REQUIREMENTS

Council has the authority under Part 14 (s. 490) of the *Local Government Act* to issue a Development Permit. This Development Permit is specifically for form and character of a multiple family residential development, in addition to hillside considerations. Section 498 of the *Local Government Act* gives Council the authority to issue a development variance permit that varies, in respect of the land covered in the permit, the provisions of the Zoning Bylaw.

BACKGROUND

On July 24, 2018 Council considered and approved an application to rezone to the subject property from RU4 to Westlake Comprehensive Development (CD1) Zone subzone "D" Hillside Housing Cluster Development with site-specific siting regulations to allow for three duplexes (Z 18-03).

Proposal

The applicant is requesting the issuance of a Form and Character and Hillside Development Permit with a Variance to facilitate the construction of three duplexes within a building strata.

Location and Context

The subject property totals 0.218 ha (0.539 acres) and is an odd-shaped parcel located in the West Kelowna Estates / Rose Valley neighbourhood, just south of Mar Jok Elementary School (See Figure 1). The property is accessed from McDougall Rd (urban minor collector), is currently undeveloped and contains mature coniferous trees and native grasses/shrubs. The property slopes away from McDougall Road from west to east (*Attachments 2 and 3*).

North of and adjacent to the subject property is an existing rural parcel. This parcel maintains a single family residence and a small vegetated buffer along the parcel boundary shared between these two properties. Uses to the north and east of the subject property include a sports field and elementary school. Finally, existing townhouse developments are located across the road from the subject property and north along McDougall Rd within less than ¼ of a km. The uses immediately surrounding the subject property include:

- **North**– Rosewood Sports Field and Mar Jok Elementary School (P2)
- **North and East** – Institutional and Assembly Zone (P2)
- **East** – City owned Mar Fee Sports Field (Multi-Use Dome)
- **West** – Rose Meadow Park (P1) and Church (P2)
- **South** – Rural Residential Single Detached Dwelling (RU2)



Figure 1: Subject Property Location

Bylaw and Policy Review

Official Community Plan

Land Use Designation

The subject property maintains a Land Use Designation of *Single Family Residential (SFR)*, which anticipates single detached, duplex and carriage house and compact or clustered single-detached housing, including manufactured homes. The purpose of this designation is to provide traditional single family housing opportunities and encourage more land efficient compact housing forms for families. The proposal is aligned with the SFR designation.

Development Permit Areas (DPAs)

The proposed development is subject to three of the City's DPAs: Hillside; Sensitive Terrestrial Ecosystem; and Form and Character for General and Multiple Family and Intensive Residential development.

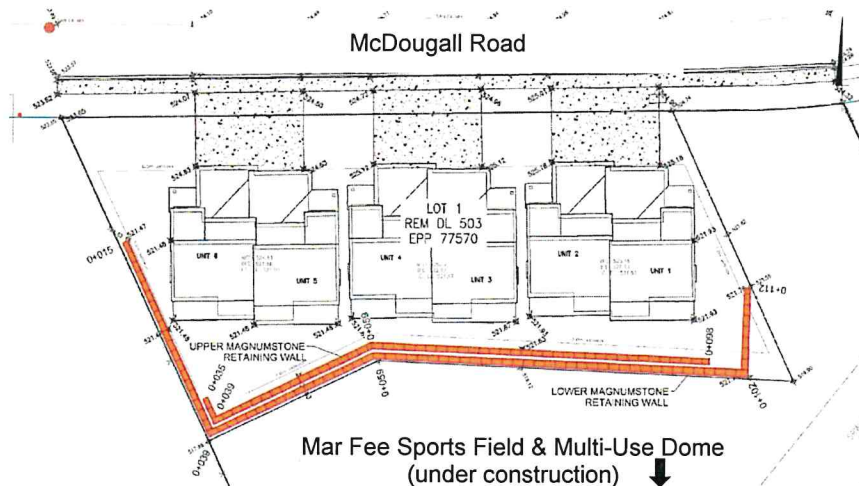
In accordance with S.4.3.4, *DPA 4 – Hillside*, the proposed development is found to be compliant with the guidelines. In accordance with S.4.3.7, *DPA 6 – Exemptions, Item 2* of the OCP, the Sensitive Terrestrial Ecosystem DPAs are considered to be adequately addressed for this application as the Westlake Comprehensive Development Plan included protection of sensitive ecosystems identified within the Plan area.

The Form and Character DPA for General and Intensive Residential development guidelines anticipates that residential infill will be appropriately integrated into the existing neighbourhoods through careful and thoughtful site design, building form and character, and landscaping. The proposal is found to be in general accordance with these guidelines.

Site Design

Building Locations and Parking

The proposal includes three duplex structures fronting McDougall Road with a small rear yard and two-tiered retaining structures primarily located along the eastern parcel boundary abutting the sports field. Each unit will have a double garage setback 6.0 m from the front parcel boundary allowing for two parking stalls in the garage and two within the driveway (See Figure 2).



includes stone and wood finishes. This design is intended to harmonize the architecture of nearby Rose Meadow Townhomes and Mar Jok Elementary School (See Figure 3).



Figure 3: Building Design

Landscaping

The OCP encourages the incorporation of street trees where development occurs adjacent to public roads, in addition to landscape buffering between intensive residential development and adjacent single family residential development and public spaces. The landscape plan includes three street trees within the front setback and a mix of trees, shrubs, grasses and perennials throughout the subject property. The total landscaping security

is \$75,362.81 (at 125% of the cost estimate in accordance with the City's Development Applications Procedure Bylaw No. 0260). Prior to issuance of the Permit, it is recommended that the security be required to be submitted to ensure the installation of the identified landscape plantings and hardscaping.

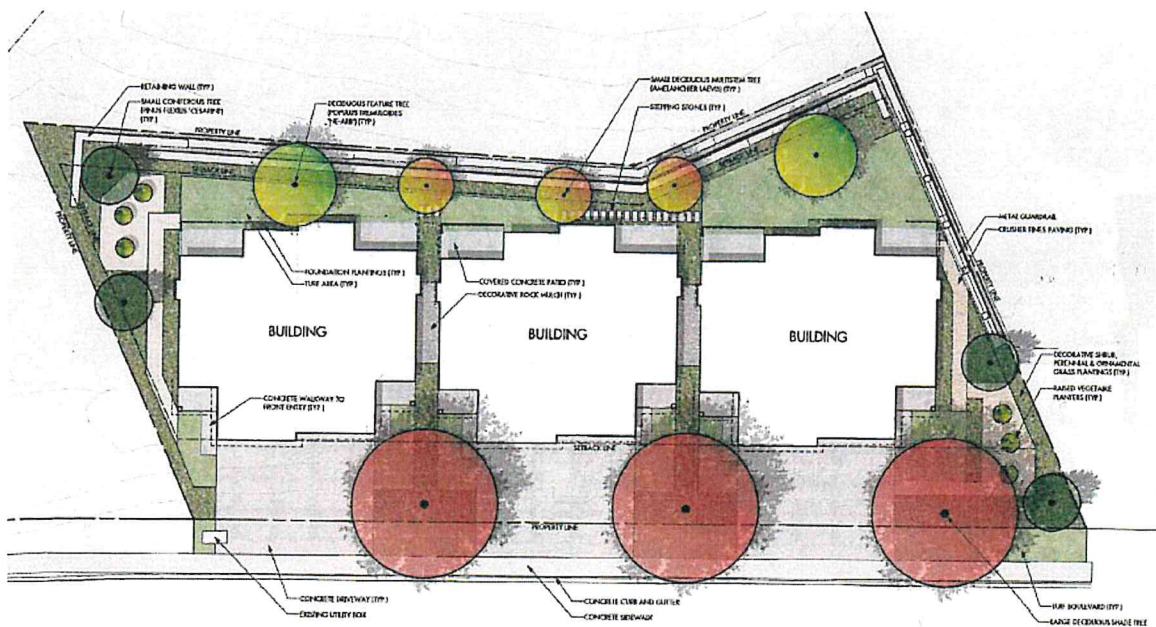


Figure 4: Landscape Plan

Vegetative Buffer on Mar Fee Sports Field

The City is currently engaged in development of the multi-use dome at Mar Fee Sports Field, adjacent to the east parcel boundary of the subject property. As a result of discussions during the acquisition of these lands a band of trees has been retained to separate uses between the Field and the subject property. This band of trees will also serve to screen the proposed retaining structure (See Figure 5).

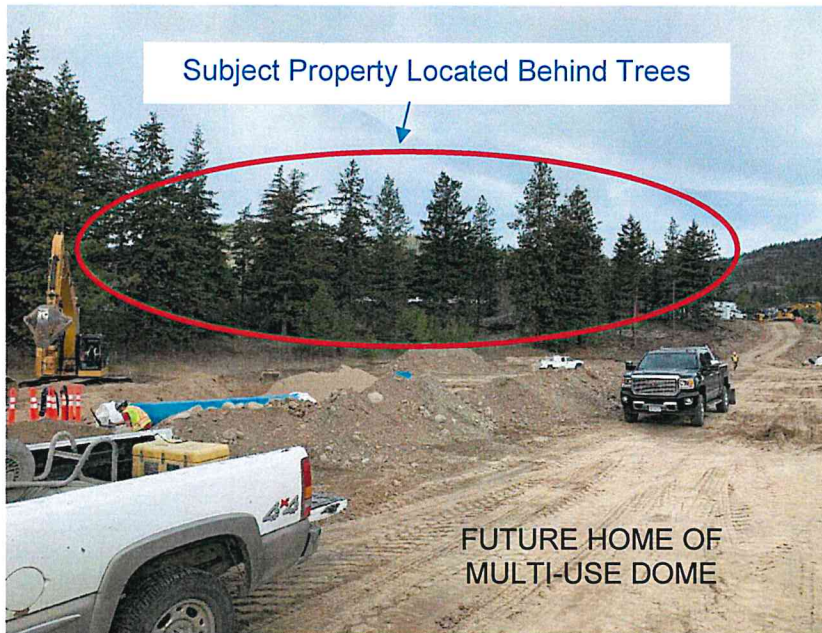


Figure 5: Retention of Trees for Vegetative Buffer

Zoning Bylaw

The proposal conforms to the principal uses and regulations outlined in the Zoning Bylaw for the Hillside Housing Cluster Development Zone (CD1(D)), including density, parcel coverage, frontage and setbacks. The proposed development meets the minimum required parking standards, with the ability to accommodate additional vehicles in the driveway.

Retaining Wall

The two-tiered retaining structure, proposed primarily along the eastern

parcel boundary adjacent to Mar Fee Park, is intended facilitate the establishment of a rear yard. The wall height varies along the length of both wall tiers. The height of the lower tier ranges between 1.2 to 3.0 m (3.9 to 9.8 ft), with the height of the upper tier ranging between 2.1 to 2.8 m (6.8 to 9.2 ft).

The Zoning Bylaw maintains the following retaining wall regulations (S.3.12):

- .1 The maximum height of any individual retaining wall is 2.5 m (8.2 ft).
- .2 Individual retaining walls shall not be closer than 2.0 m (6.6 ft) apart, measured from the outer face of each retaining wall.
- .3 Despite 3.12.2, individual retaining walls may be constructed less than 2.0 m (6.6 ft) apart, measured from the outer face of each retaining wall, but will be collectively considered an individual retaining wall for the purposed of determining height.

Due to the size and shape of the subject property and the desire to accommodate three duplex units, the spacing between the two retaining structures is less than 2.0 m (6.6 ft), measured from the outer face of each wall. In accordance with the regulations, wall height is calculated collectively. The collective wall height varies along the entire length of the wall with the tallest portions along the southern half of the east parcel boundary at 4.4 m (14.4 ft) at its highest.

The applicant is requesting a variance to the maximum allowable collective retaining wall height of 2.5 m (8.2 ft) to 4.4 m (14.4 ft) in order to facilitate the development as proposed.

Geotechnical

Structural design of the two-tiered retaining wall has been completed by Beacon Geotechnical which anticipates the use of magnumstone materials (See Figure 6). Magnumstone is a gravity retaining wall system with a hollow core design that reduces the amount of product required while maintaining a flexible and high quality design. An independent review of the proposed wall design has been carried out as per the requirements of the *Engineers & Geoscientists of BC – Member Advisory: 2018-03*.



Figure 6: Examples of Magnumstone Retaining Walls

In consideration of the wall location, vegetative buffer being retained on the adjacent Mar Fee Park (trees) and the proposed magnumstone materials, staff are recommending support of the requested variance to collective retaining wall height. Should the variance request be approved, a Building Permit for the walls is required.

Technical Considerations

Site Servicing:

The applicant has submitted a Functional Servicing Report (FSR) that indicates the subject property is not currently serviced by sanitary and storm services. However, the site can be serviced with sanitary and storm utilities currently available within existing McDougall Rd Utilities.

Public Notification

In accordance with the *Local Government Act* for the proposed variances, letters were sent to all property owners and their tenants (23 notices) within 100 metres of the subject property (*Attachment 6*). A development notice sign has been placed on the subject property in accordance with the Development Application Procedures Bylaw No. 0260. As of the date of this report, no submissions have been received from the public.

ALTERNATE MOTIONS:

1. Postpone Consideration of Development Permit with Variance DP 18-40

THAT Council postpone consideration of Development Permit (DP 18-40).

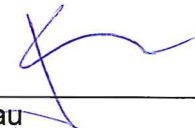
Council may wish to postpone the issuance of the Development Permit and require the applicant to redesign components of the proposal in accordance with the City's Zoning Bylaw or Official Community Plan Development Permit Guidelines.

2. Deny Consideration of Development Permit with Variance DP 18-40

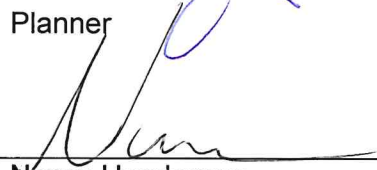
THAT Council deny Development Permit (DP 18-40).

Council may wish to deny the requested variances and require the applicant to redesign the proposal in accordance with the City's Zoning Bylaw and/or Official Community Plan Development Permit guidelines. If the proposal was revised to avoid the proposed variances, the site plan and proposed building siting would have to be redesigned and the Development Permit would require further consideration by Council.

Respectfully submitted,



Jaleen Rousseau
Planner



Nancy Henderson
General Manager of Development Services

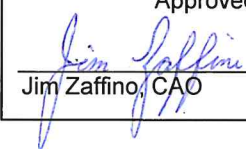
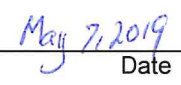


Brent Magnan
Planning Manager

Powerpoint: Yes ☒ No ☐

Attachments:

1. Development Permit DP 18-40
2. Context Map
3. Subject Property Map
4. Site Plan
5. Landscape Plan
6. Public Notification

Approved for Agenda	
 Jim Zaffino, CAO	 May 7, 2019 Date



CITY OF WEST KELOWNA
DEVELOPMENT PERMIT WITH VARIANCE
DP 18-40

To: Rose Valley Ventures Ltd. Inc. No BC0523208
 105 – 2081 McDougall Rd
 West Kelowna, BC, B1Z 4A2

1. This Permit is issued subject to compliance with all of the Bylaws of the City of West Kelowna applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Permit applies to and only to those lands within the City of West Kelowna described below, and any and all buildings, structures and other developments thereon:

LOT 1, DL 503, ODYD, PLAN EPP77570
 (McDougall Road)

3. This Permit allows the construction of three duplexes and a two-tiered retaining walls and in the **Multiple Family and Intensive Residential Development Permit Area (DPA 3) Design Guidelines**, subject to the following conditions and related Schedules:
 - A. The siting, exterior design, and finish of buildings are to be in accordance with the Architectural submission (site plan, renderings, and materials and colour schedule) date stamped November 29, 2018, attached within Schedule "A".
 - B. The landscaping to be provided on the land be in accordance with Landscape Drawings by Outland Design Landscape Architecture, dated October 25, 2018 and attached within Schedule "B"; and
 - C. The dimensions and siting of the retaining structures to be conducted on the land be in general accordance with the Geotechnical design by Beacon Geotechnical, dated April 16, 2019 and attached within Schedule "C".
 - D. The following variance to S.3.12.1 of the Zoning Bylaw No. 0154 is included as part of this Development Permit:
 - i. To the maximum allowable collective retaining wall height of 2.5 m (8.2 ft) to 4.4 m (14.4 ft).
4. As a condition of the issuance of this Permit, the City of West Kelowna is holding a landscape security set out below to ensure that development is carried out in accordance with the terms and conditions of this Permit. Should any interest be earned upon the security, it shall accrue to the Permittee and be paid to the Permittee if the security is returned. The condition of the posting of the security is that should the Permittee fail to carry out the development hereby authorized, according to the terms and conditions of the Permit within the time provided, the City of West Kelowna may use the security to carry out the work by its servants, agents or contractors, and any surplus shall be paid over to the Permittee, or should the Permittee carry out the development permitted by this Permit within the time set out below, the security shall be returned to the Permittee. There is filed

accordingly:

a) An Irrevocable Letter of Credit or Bank Draft in the amount of \$75,362.81

5. The land described herein shall be developed strictly in accordance with the terms and conditions of this Permit and any plans and specifications attached to this Permit, which shall form a part hereof. Should any changes be required to this permit, please ensure that you obtain written approval from City of West Kelowna prior to making any changes.
6. If this Development Permit has not been issued within one year from approval, Development Permit DP 18-40 with Variances shall be deemed to have been refused and the file will be closed.
7. **This Permit is not a Building Permit.**
8. Subject to the terms of the permit, where the holder of a permit issued under the *Local Government Act* does not substantially commence any construction with respect to which the permit was issued within one year after the date it is issued, the permit lapses.

AUTHORIZING RESOLUTION NO. CXXX/19 PASSED BY THE MUNICIPAL COUNCIL ON MAY XX, 2019.

Signed on _____

City Clerk

I hereby confirm that I have read and agree with the conditions of Development Permit DP 18-40 with Variances and will ensure that copies of the Permit will be provided to onsite personnel at time of construction.

Signed on _____

Property Owner or Agent

ISSUED on _____

Attached Schedules:

Schedule "A"

1. Architectural Submission date stamped November 29, 2018.

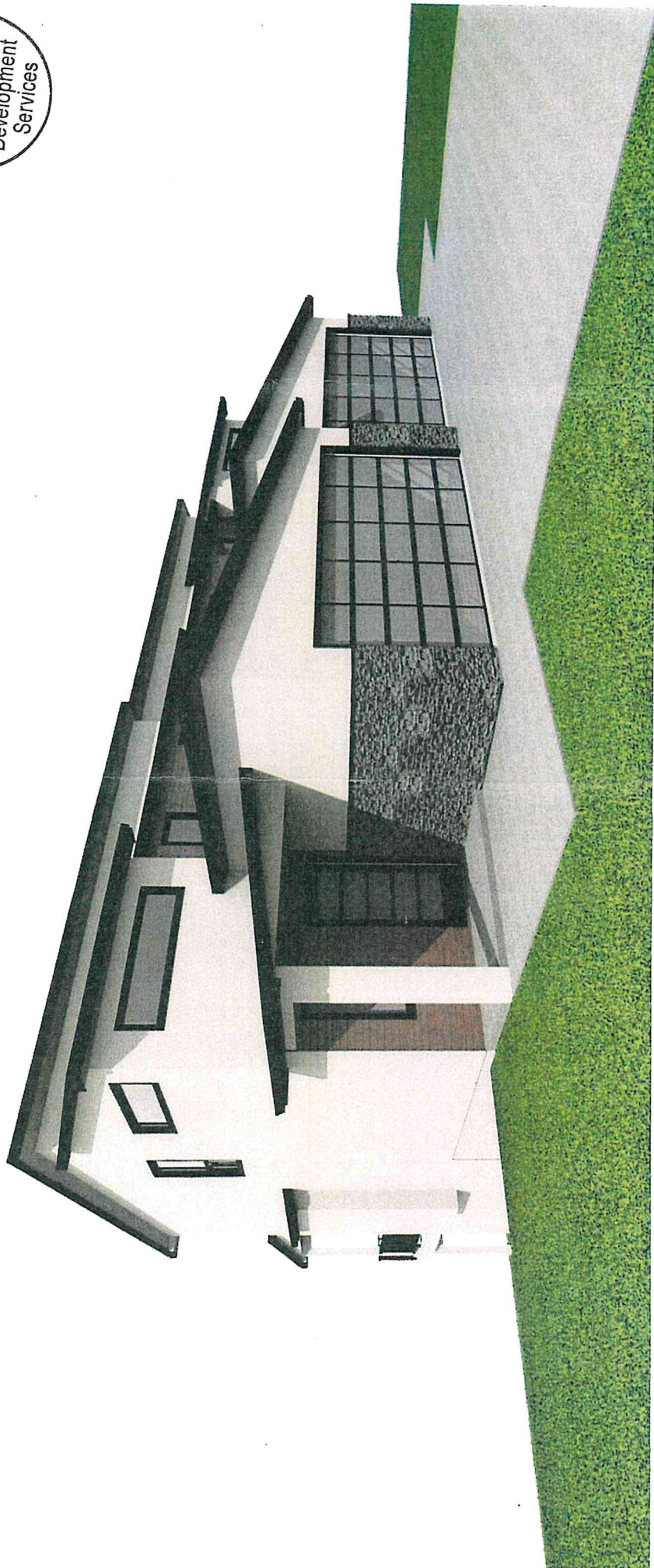
Schedule "B"

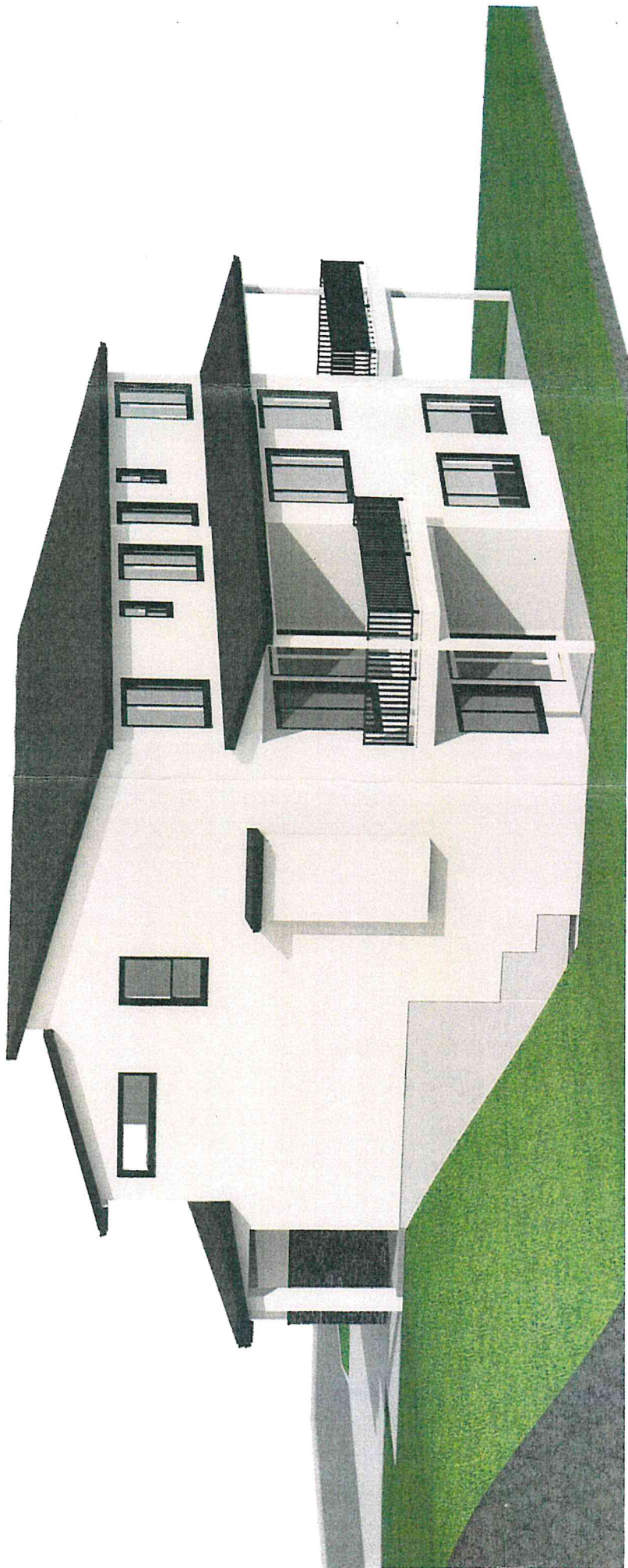
1. Landscape Plan and Preliminary Cost Estimate for Bonding by Outland Design Landscape Architecture, dated October 25, 2018

Schedule "C"

1. Geotechnical Design by Beacon Geotechnical, dated April 16, 2019

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OUTLAND DESIGN
LANDSCAPE ARCHITECTURE



October 25, 2018

McDougall Road Triple Duplex Project
Pentar Homes Limited
#105-2081 McDougall Road
West Kelowna, BC V1Z 4A2
C/o Nadean Ostrom, Development Manager
Via email to: nadean@pentarhomes.com

Re: McDougall Road Triple Duplex Project – Preliminary Cost Estimate for Bonding

Dear Nadean:

Please be advised of the following preliminary cost estimate for bonding of the proposed landscape works shown in the McDougal Road Triple Duplex Project conceptual landscape plan dated 18/10/25;

- 810 square metres (8,719 square feet) of improvements = \$60,290.25

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 West 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,

Fiona Barton, MBCSLA, CSLA
as per
Outland Design Landscape Architecture

2.0 MATERIALS

15. **REINFORCED SOIL.** SHALL BE SITE EXCAVATED SOILS WHEN APPROVED BY THE ON SITE GEOTECHNICAL ENGINEER UNLESS OTHERWISE SPECIFIED IN THE REINFORCED SOIL. DRAWINGS. UNSUITABLE SOILS FOR BACKFILL (WEAK CLAYS OR ORGANIC SOILS) SHALL NOT BE USED IN THE REINFORCED SOIL MASS. FINE GRAINED CONVECTIVE SOILS (S1) MAY BE USED IN WALL CONSTRUCTION, BUT ADDITIONAL BACKFILLING, COMPACTATION AND WATER MANAGEMENT EFFORTS ARE REQUIRED. EXPANSIVE CLAYS AND OR SOILS WITH A PLASTICITY INDEX (PI) > 10 OR A LIQUID LIMIT (LL) > 40 SHOULD NOT BE USED IN WALL CONSTRUCTION. THE REINFORCED SOIL SHOULD MEET OR EXCEED THE DESIGN FRICITION ANGLE AND DESCRIPTION NOTED ON THE DESIGN CROSS SECTIONS, AND MUST BE FREE OF DEBRIS AND CONSIST OF ONE OF ONE OF THE FOLLOWING INORGANIC USCS SOIL TYPES: GP, GW, SP MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D422.

[illegible]

Sieve Size	Percent Passing
4 inch (109 mm)	100 - 75
No. 4 (4.75 mm)	100 - 20
No. 40 (0.425 mm)	0 - 60
No. 200 (0.075 mm)	0 - 35



REV 2 - IFC - REVISED CIVIL DRWGS - Ap16-19
REV 1 - ISSUED FOR CONSTRUCTION - Fe07-19
REV 0 - ISSUED FOR DISCUSSION - Fe05-19

INDEPENDENT REVIEW HAS BEEN CARRIED OUT AS PER
EGBC MEMBER ADVISORY 18-03. RECORD OF REVIEW
IS MAINTAINED ON FILE

2.5.3 WHERE ADDITIONAL FILL IS AND THE ENGINEER MUST C

2.5.4 REINFORCED SOIL SHALL BE MATERIALS. ALL ROCK PAR

THESE CRITERIA SHALL BE

3.0 CONSTRUCTION

- WHERE ADDITIONAL FILL IS REQUIRED, THE CONTRACTOR SHALL SUBMIT SAMPLES AND SPECIFICATIONS TO THE GEOTECHNICAL ENGINEER FOR APPROVAL AND THE ENGINEER MUST CERTIFY THAT THE SOILS PROPOSED FOR USE HAS PROPERTIES MEETING, OR EXCEEDING, THE ORIGINAL DESIGN STANDARDS. REINFORCED SOIL SHALL BE FREE OF EXCESS MOISTURE, ROOTS, MUCK, SOIL, SNOW, FROZEN LUMPS, ORGANIC MATTER OR OTHER DELETERIOUS MATERIALS. ALL ROCK PARTICLES OR HARD EARTH CLUMPS SHALL BE LESS THAN 150mm IN THE LARGEST DIMENSION. BACKFILL WHICH DOES NOT MEET THESE CRITERIA SHALL BE CONSIDERED UNSUITABLE AND SHALL BE REMOVED.

- [illegible]

4.0 DRAINAGE

- THE 100mm DIAMETER PERFORATED PVC DRAIN TO BE INSTALLED IN THE BASE CLOAK OF THE WALL WITH A MINIMUM OF 1% GRADE AND OUTLETS
THE FACE OF THE WALL ON 15th CENTR. DRAIN HOLES TO BE INSTALLED IN THE 3 CLOAK AND 7 CLOAK POSITIONS. ALTERNATELY PIPES TO BE
ROUTED TO STORM DRAINS IF POSSIBLE OR UNDER THE WALL WITH DESIGN LOADINGS TO PROTECT TO ROCK PITS. ROOFING PROTECTION SHALL BE
ALL WALLS WILL BE CONSTRUCTED WITH DRAIN BUCKS INFLUED WALL DESIGN TO ACT AS A CURTAIN DRAIN FOR INCIDENTAL WATER. THE MATERIAL SHALL
USE THE GRADATION SPECIFICATION PRESENTED IN TABLE 1 ON DRAWING 4
- BEACH SHOULD BE CONSTRUCTED IMMEDIATELY IF GROUNDWATER IS ENCOUNTERED IN THE AREA OF THE RETAINING WALL DURING CONSTRUCTION
CONSTRUCTION METHODS ARE REQUIRED TO MANAGE THE SLOPE, AS DIRECTED BY THE GEOTECHNICAL ENGINEER
GRADE BACKFILL TO BE PLACED IMMEDIATELY TO THE FACE OF THE WALL. IRIGATION SYSTEMS MUST BE APPROVED BY AGRICULTURE. IF AN IRRIGATION SYSTEM IS
OR BE TRAPPED IN THE AREA ABOVE OR AT THE TOE OF THE WALL. IRIGATION SYSTEMS MUST BE APPROVED BY AGRICULTURE. IF AN IRRIGATION SYSTEM IS
EMPLOYED, THE DESIGN ENGINEER OR IRRIGATION STRUCTURAL SHALL PROVIDE DETAILS AND SPECIFICATIONS FOR REQUIRED EQUIPMENT TO PROTECT
AGAINST OVER IRRIGATION WHICH COULD DAMAGE THE STRUCTURAL INTEGRITY OF THE RETAINING WALL SYSTEM.
CONCENTRATIONS OF SURFACE WATER RUNOFF SHALL BE MANAGED BY PROVIDING NECESSARY STRUCTURES, SUCH AS PAVED CATCH BASINS, GRASSLAND
ANTICIPATED SHOULD BE ROUTED AWAY FROM THE REINFORCED SAND, WASH, ESTABLISH PLANT GRADE WITH A GRADEWAY AWAY FROM THE WALL.
CONCENTRATIONS OF SURFACE WATER RUNOFF SHALL BE MANAGED BY PROVIDING NECESSARY STRUCTURES, SUCH AS PAVED CATCH BASINS, GRASSLAND
SWALES, CATCH BASINS, ETC. GRADING DESIGN MUST DIVERSE SOURCES OF CONCENTRATED SURFACE DRAINAGE, SUCH AS PARKING LOTS, AWAY FROM THE
SLOPE. TO PREVENT THE WATER, AROUND THE WALL STRUCTURE, MUST BE COLLECTED WITH SURFACE DRAINAGE, SUCH AS DRAINAGE LATERAL IN THE
SLOPE TO THE WATER, AROUND THE WALL STRUCTURE.

5.0 CONSTRUCTION REVIEW

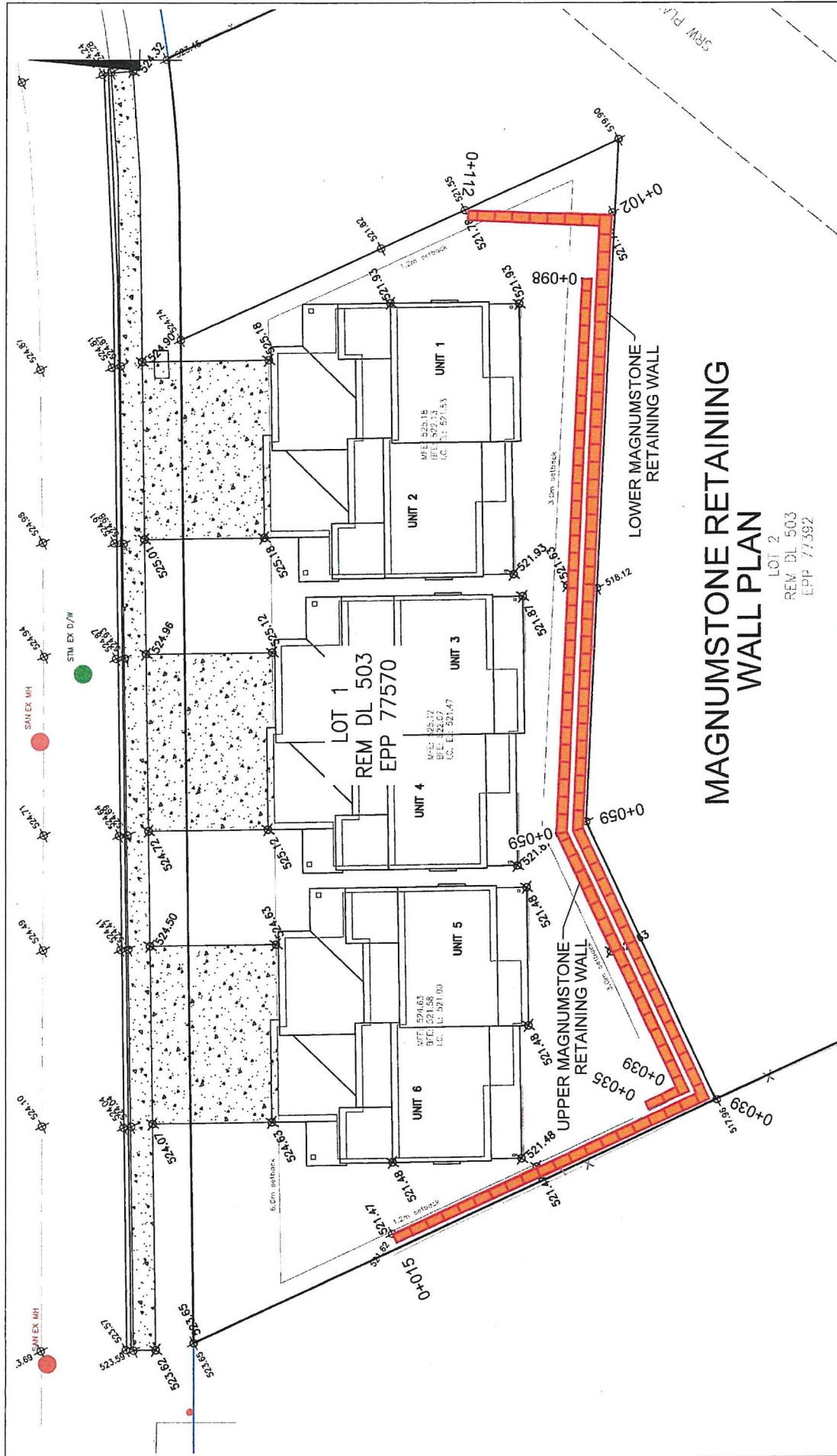
51. SITE REVIEWS OF CONSTRUCTION MATERIALS AND COMPACTION TESTING BY THE GEOTECHNICAL ENGINEER ARE ESSENTIAL TO VERIFY THAT THE SEGMENTAL BLOCK RETAINING WALL SYSTEM PRESENTED IN THESE DRAWINGS ARE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS DESCRIBED ABOVE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND SCHEDULING SUBGRADE REVIEWS AND COMPACTION TESTING BY THE GEOTECHNICAL ENGINEER, WHICH REQUIRE A MINIMUM OF 24 HOUR NOTICE.

MAGNUMSTONE
RETAINING WALL

PENTAR HOMES LTD.
ROSE VALLEY PHASE 13
2101 McDougall Road, West Kelowna, BC

NOTES

DATE:	FEBRUARY 2019	EXAMIN BY:	CCW	FILE NO:	18-12302
SCALE:	NTS	CHECKED BY:	DUK	DRAWING NO:	01

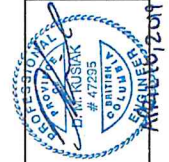


MAGNUMSTONE RETAINING WALL PLAN

LOT 2
REM DL 503
EPP 77592

WALL PLAN			
DATE	FEBRUARY 2019	CON	18-2202
SCALE	1:250	DRAWN BY	DAVID M. OZ

MAGNUMSTONE RETAINING WALL
PENTAR HOMES LTD.
ROSE VALLEY PHASE 13
2101 McDougall Road, West Kelowna, BC

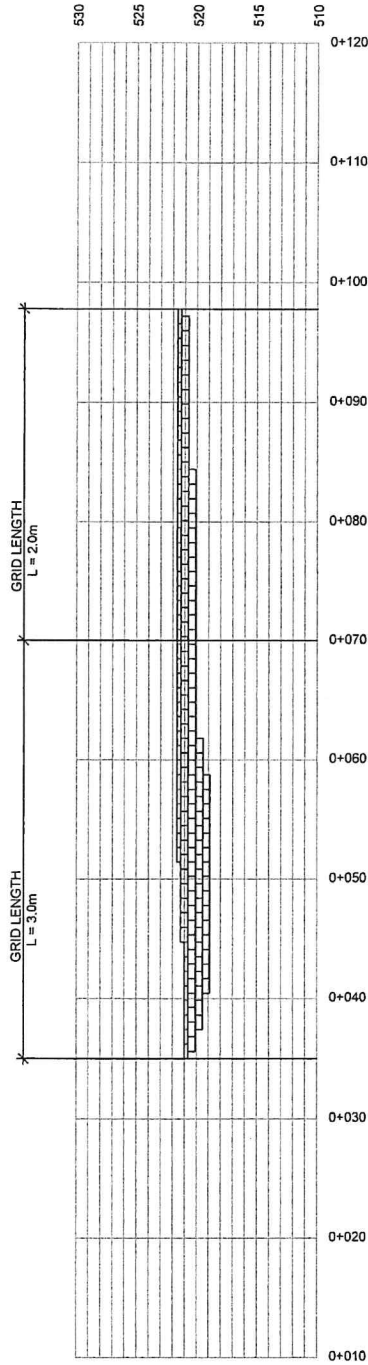


4031 - 1100 Gault Road
Kelowna, B.C. V1Y 4R2
Ph: 250-861-4589
Fax: 250-782-8073
beacongeo@shaw.ca

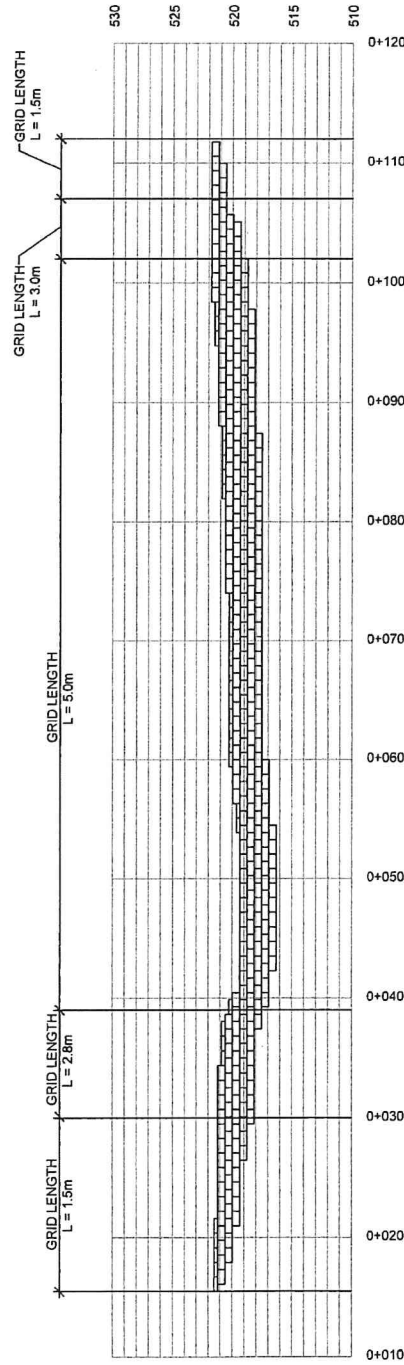


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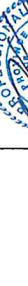


UPPER RETAINING WALL PROFILE

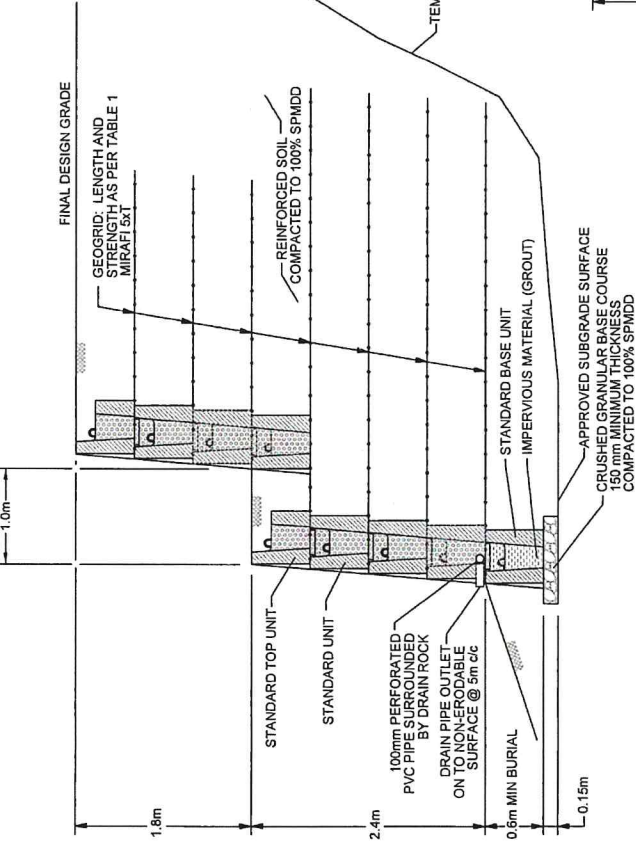


LOWER RETAINING WALL PROFILE

SEE TABLE 1 DRAWING 4 FOR GEOGRID DETAILS

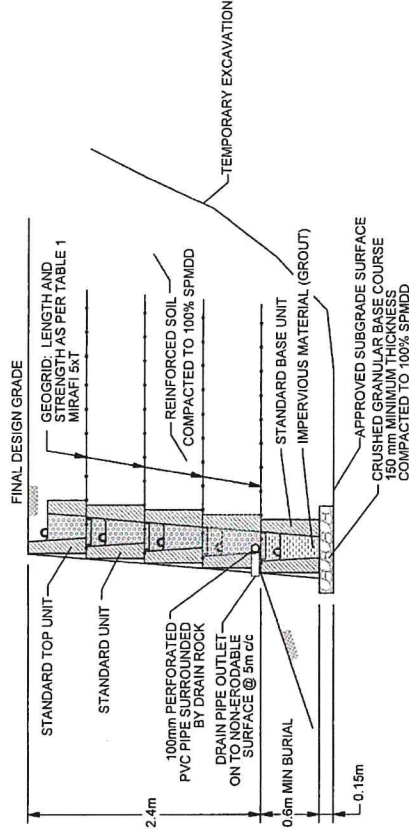
INDEPENDENT REVIEW HAS BEEN CARRIED OUT AS PER EGBC MEMBER ADVISORY 18-03. RECORD OF REVIEW IS MAINTAINED ON FILE.	REV 2 - IFC - REVISED CIVIL DRWS - Ap16-19		 Beacon ENGINEERING	2301 - 1039 Spall Road Kelowna, B.C. V1Y 4E2 Ph: 250-861-6899 Fax: 250-861-6870 business@beacon.ca		PROJECT:	MAGNUMSTONE RETAINING WALL	
	CLIENT:					PENTAR HOMES LTD.		
	LOCATION:					ROSE VALLEY PHASE 13 2101 McDougall Road, West Kelowna, BC		
REV 1 - ISSUED FOR CONSTRUCTION - Fe07-19			DATE: FEBRUARY 2019		DRAWN BY: CCM	FILE NO: 18-2302		
REV 0 - ISSUED FOR DISCUSSION - Fe05-19			SCALE: 1:400		CHECKED BY: DMK	DRAWING NO: 03		

Approved by: [Signature]



TYPICAL TWO TIERED SECTION

STATION: 0+050



TYPICAL ONE TIER SECTION

STATION: 0+032

UPPER WALL			
WALL CHANGE	MAXIMUM HEIGHT OF WALL	MAXIMUM TOTAL NUMBER OF BLOCKS IN WALL	MINIMUM TOTAL NUMBER OF BURIED BLOCKS
0-032 to 0-072	2.4m	4	1
0-072 to 0-092	2.1m	3	1

CRUSHED GRANULAR BASE	PERCENT PASSING
15	100
25	90-100
4.75	60-100
9.5	35-70
1.18	15-35
0.300	5-20
0.075	2-8

DRAIN ROCK CURTAIN DRAIN	PERCENT PASSING
100	100
75	90-100
4.75	0-5
0	0

DESIGN SOIL PARAMETERS	DESIGN SOIL PARAMETERS
SOIL ZONE	DESIGN SOIL PARAMETERS
REINFORCED SOIL SAND & GRAVEL	DESIGN SOIL PARAMETERS
REINFORCED SOIL SAND & GRAVEL	DESIGN SOIL PARAMETERS
FOUNDATION SOIL SAND & GRAVEL	DESIGN SOIL PARAMETERS
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100	100

GEOTECH DESIGN PARAMETERS	GEOTECH DESIGN PARAMETERS
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99	99
100	100

INDEPENDENT REVIEW HAS BEEN CARRIED OUT AS PER EGBC MEMBER ADVISORY 18-03. RECORD OF REVIEW IS MAINTAINED ON FILE.

REV 2 - IFC - REVISED CIVIL DRWS - Ap16-19

REV 1 - ISSUED FOR CONSTRUCTION - Fe07-19

REV 0 - ISSUED FOR DISCUSSION - Fe05-19

Beacon
Geotechnical

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MAGNUMSTONE
RETAINING WALL
PENTAR HOMES LTD.
ROSE VALLEY PHASE 13
2101 McDougall Road, West Kelowna, BC

DATE: FEBRUARY 2019

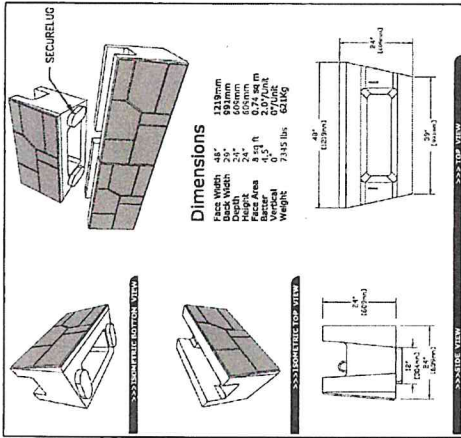
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DATE: 18-JUN-2020

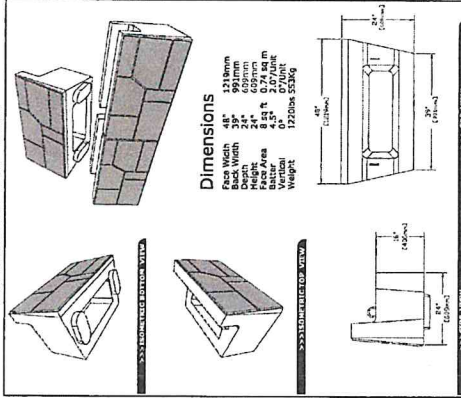
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WALL SECTIONS

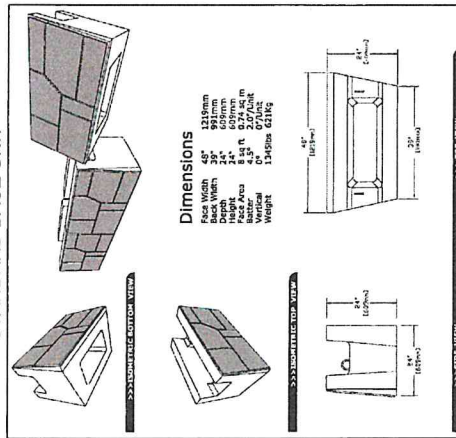
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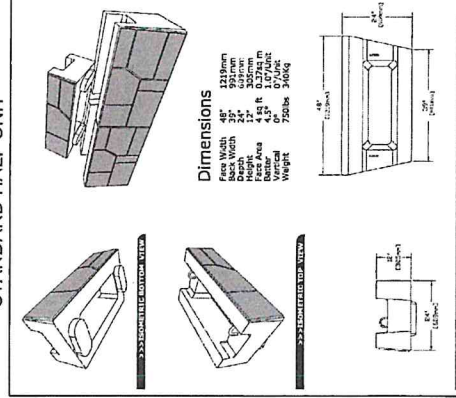
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STANDARD BASE UNIT

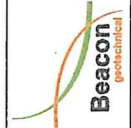


STANDARD HALF UNIT



INDEPENDENT REVIEW HAS BEEN CARRIED OUT AS PER
EGBC MEMBER ADVISORY 18-03. RECORD OF REVIEW
IS MAINTAINED ON FILE.

REV 2 - IFC - REVISED CIVIL DRWS - Ap15-19
REV 1 - ISSUED FOR CONSTRUCTION - F07-19
REV 0 - ISSUED FOR DISCUSSION - F05-19



6291 - 1818 Road Road
Kelowna, B.C. V1Y 6R2
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Fax: 250-762-3073
beacongeo@shaw.ca



**MAGNUMSTONE
RETAINING WALL**
PENTAR HOMES LTD.
ROSE VALLEY PHASE 13
2101 McDougall Road, West Kelowna, BC

WALL DETAILS

DATE	FEBRUARY 2019	SCALE	NTS	DRAWN BY	CCW	CHECKED BY	CCW	FILE NO.	18-42302
DATE		SCALE		DRAWN BY		CHECKED BY		FILE NO.	

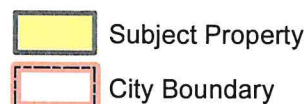


CONTEXT MAP: DP 18-40



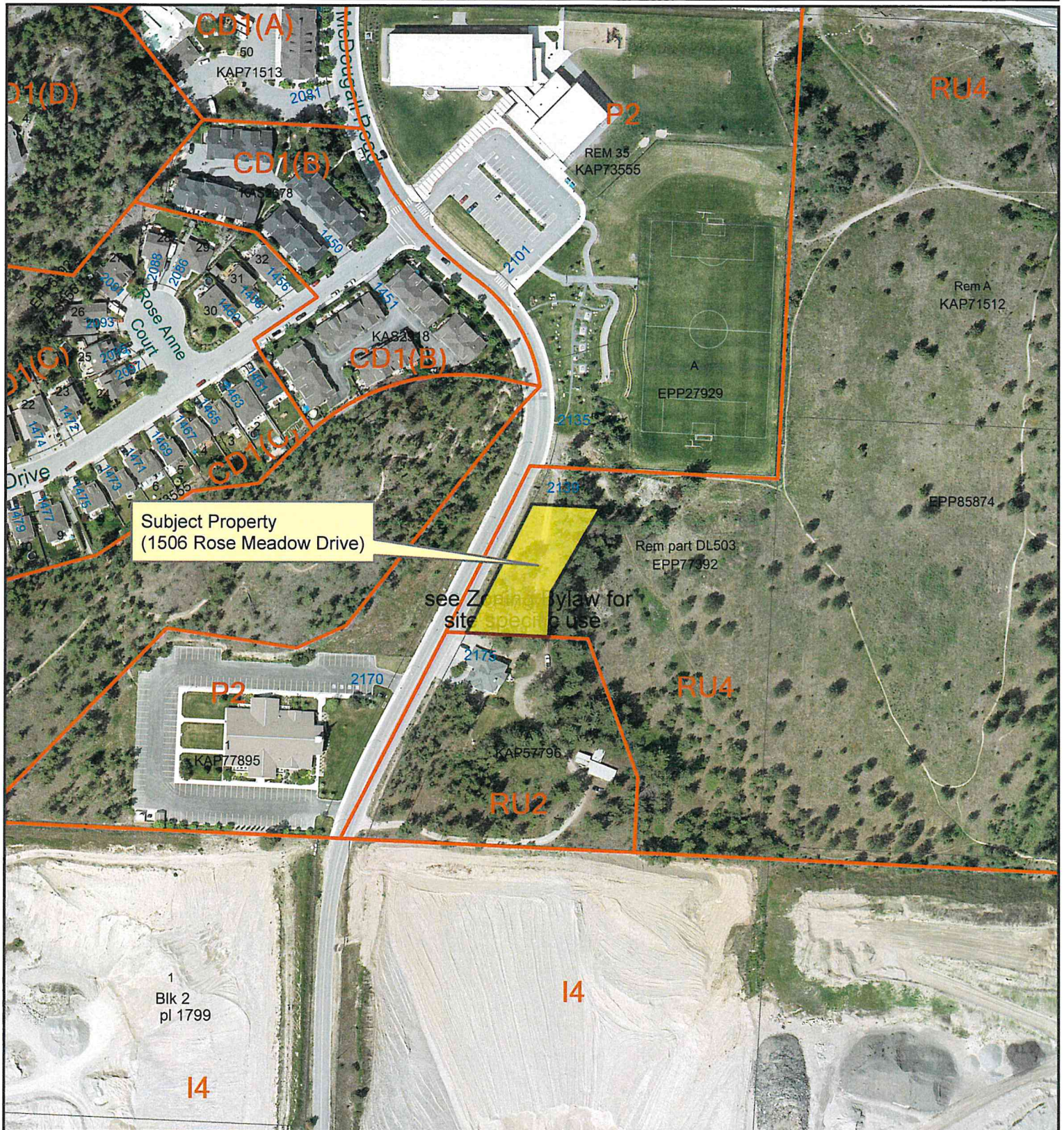
File: DP 18-40

Legal Description: Lot 1, DL 503, ODYD, Plan EPP77570



0 120 240 480 Metres





File: DP 18-40

Legal Description: Lot 1, DL 503, ODYD, Plan EPP77570

LEGEND

-  Subject Property
 Zoning Boundary
 Parcels



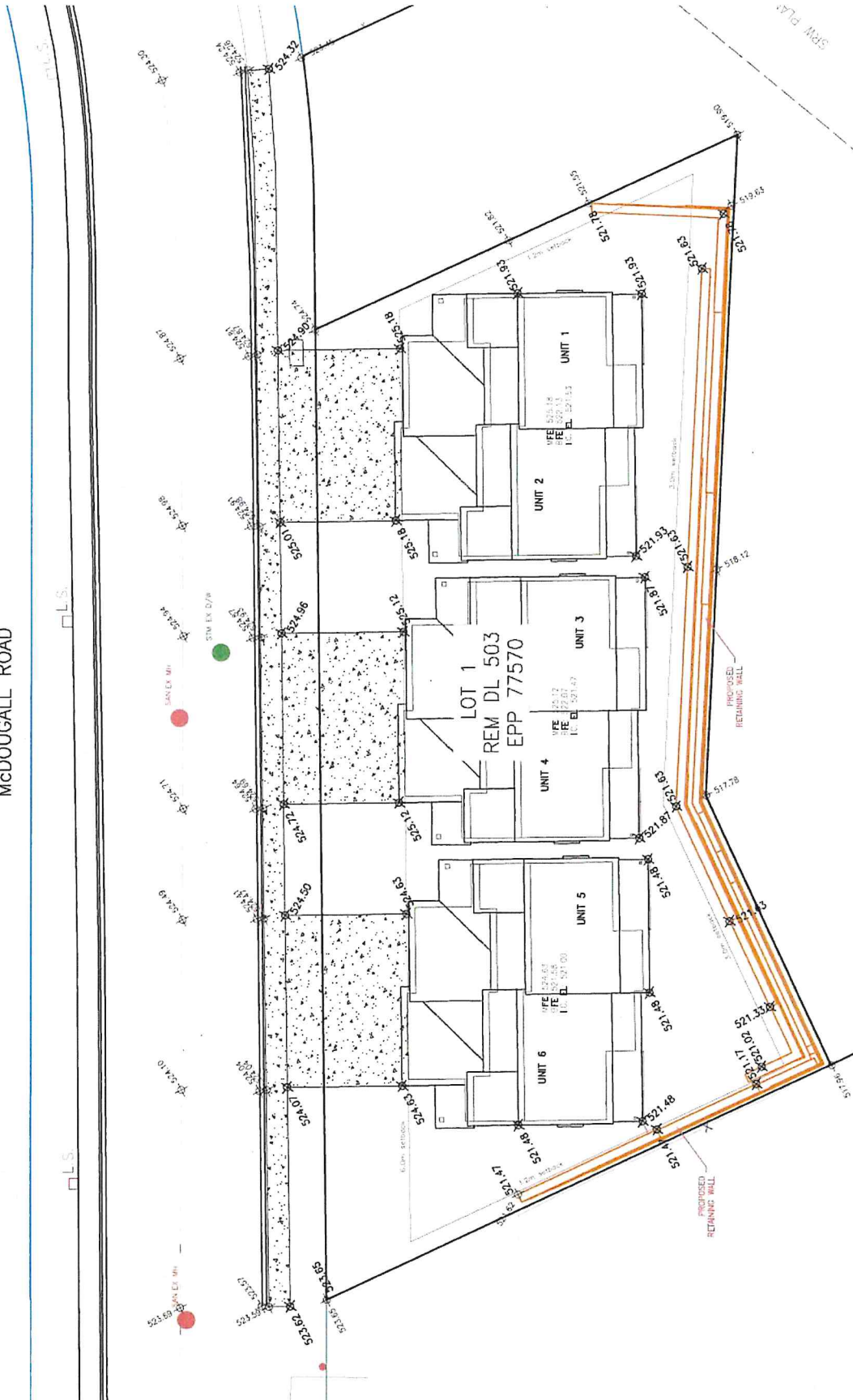
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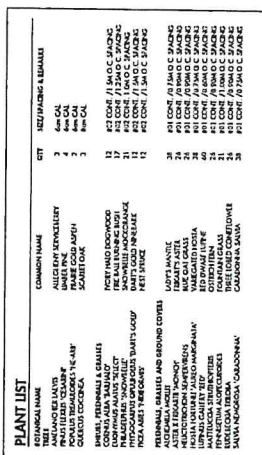


Date: 2018-11-30

SITE PLAN (DP 18-40)

McDOUGALL ROAD





DP 18-40 w/ Variance GIS Mail Notification Map



Legend
Landmarks
 Cemetery
 City Hall
 Community Centre
 Dam
 Fire Hall
 Museum
Basemap Layers
 WK Admin Boundary
 Regional Admin Boundary
 Highway
 River / Stream
 Intermittent Stream
Parcels
 Ownership
 Land Strata
 Building Strata
 Common Property
 Crown Land
 Lease
 Park
 Road Right-Of-Way
 Walkway
 Common Access
 Waterbody
 Lake Access
 Regional Park
 Municipal Park
 Westbank First Nation

Scale 1 : 3,251

Notes



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 Map Produced on: 4/25/2019 9:01:05 AM