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SOLE MULTI-FAMILY RESIDENTIAL PROJECT

1660-1670 Bernard Avenue, Kelowna, B.C V1Y6R9

CLIENT
SOLE BERNARD DEVELOPMENTS LTD



NOTE

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ISSUED DATE
ISSUED FOR DEVELOPMENT PERMIT 09.22.2023

SOLE MULTI-FAMILY RESIDENTIAL PROJECT

DEVELOPMENT PERMIT SUBMISSION - 09.22.2023

Project Team

<p>CLIENT: SOLE BERNARD DEVELOPMENTS LTD / KEVIN EDGEcombe 310-1350 St Paul Street Kelowna, BC V1Y2E1 PHONE: 250 212-1665</p> 	<p>ARCHITECT: S2 ARCHITECTURE / SIMON HO #403, 134 Abbott Street Vancouver, BC V6B2K4 PHONE: 604.661.8806</p> 	<p>LANDSCAPE ARCHITECT: ECORA ENGINEERING & RESOURCE GROUP LTD / FIONA BARTON 2045 Enterprise Way Kelowna, BC V1Y9T5 PHONE: 250.469.9757 x 1125</p> 	<p>CIVIL: APLIN & MARTIN CONSULTANTS LTD / JOSH GRAFF 1258 Ellis Street Kelowna, BC V1Y1Z4 PHONE: 250.448.0157</p> 
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SEALS

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SCALE 1:1
DATE 9/19/2023 10:44:00 AM
DRAWN BY VB, NR
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PROJECT NO. 222088
DRAWING TITLE

COVER SHEET

DRAWING NO.
DPO.00

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DESIGN RATIONALE

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Design Rationale

The Multi-Family Residential project is located at 1660-1670 Bernard Ave, Kelowna. The site is situated within the RU4 (Duplex Housing) zone. The purpose of the zone is to provide a zone for duplex and semi-detachment housing with compatible secondary uses, on larger serviced urban lots.

The zoning is proposed to be changed to MF3 (Apartment Housing with Rental Only). The purpose of this zone is to provide a zone primarily for apartments ranging up to 6 storeys on serviced urban lots with various commercial uses permitted on transit supportive corridors.

The site is located on a Transit Supportive Corridor, which is any road identified to support a higher density and greater mix of uses in the Core Area. Consequently, the max. building height was increased to 22.0m or 6 storeys.

Site Assessment

We conducted an analysis of the site's context and land-use designation to establish opportunities and constraints for the proposed Multi-Family Residential development. These factors, in addition to the client's vision, provided us the necessary information to propose a concept that complements and works with the character of the surrounding context.

Variations

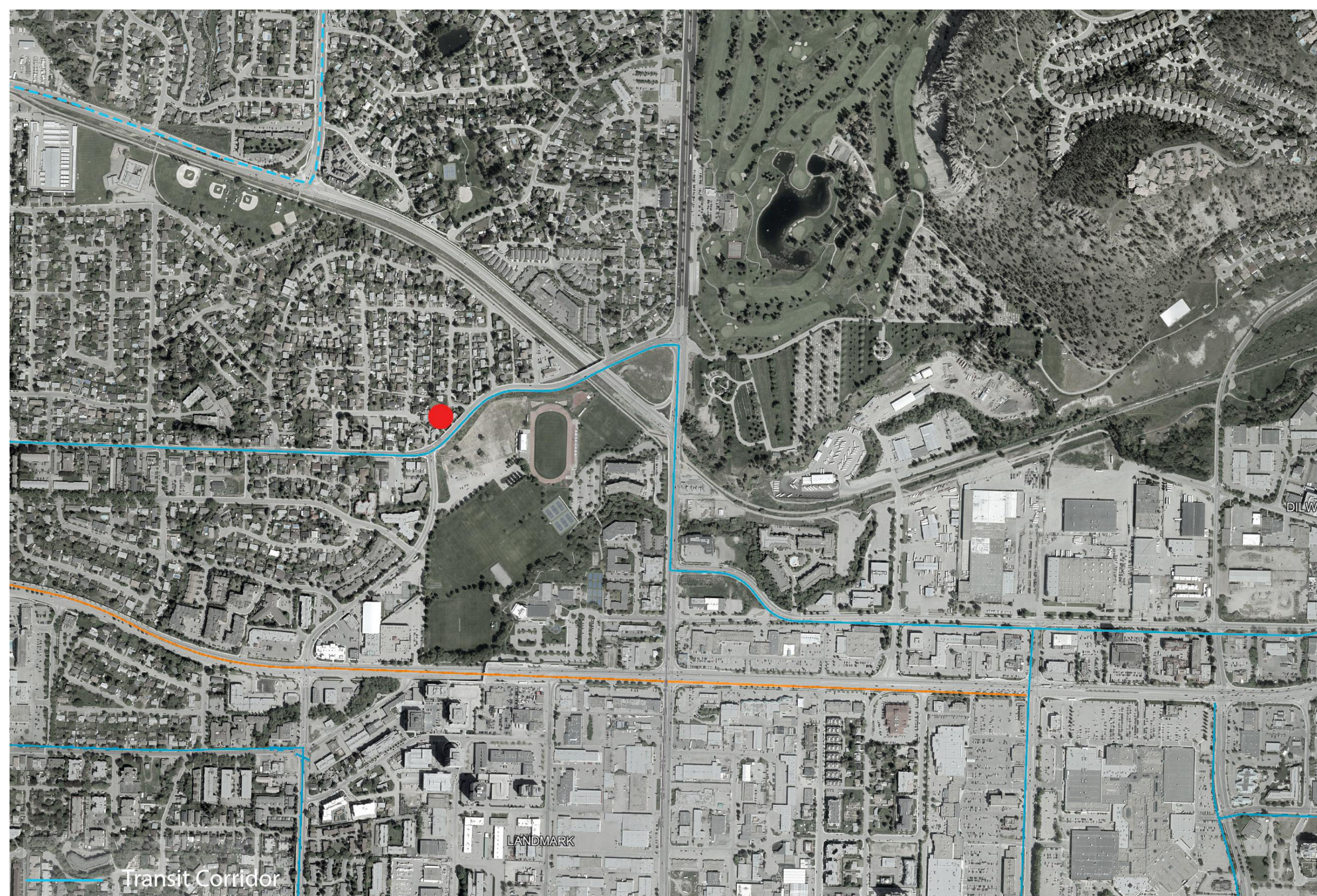
1. Motor Vehicle Parking - Proposing Urban Centre Parking Requirements.
2. Encroachment on new building setback on Bernard Ave due to road dedication.

Conceptual Planning

To ensure that the site and the program are in alignment we carried out a high level planning study to look at alternate scenarios and massing forms that may be acceptable by stakeholder, the City, and the local community.

Massing Principles | Response to context

1. Take advantage of sloping site to providing on grade access to define public, semi-private, and private spaces;
2. Emphasising the corner of Bernard Ave and Cherry Crescent with strong architectural character;
2. Providing building articulation to enhance massing and detail diversity;
3. Use of low maintenance and high quality building cladding reflective of Kelowna context;
4. Use of appropriate scale of building elements to further enhance the residential uses;



Site | Greater Context



Site | Looking South East

Site Context



Municipal Address

1660-1670 Bernard Avenue
Kelowna, B.C V1Y6R9
Canada

Legal Address

PLAN KAP12275 LOT 2 SECTION 20 TOWNSHIP 26 & PLAN KAP12275 LOT 3 SECTION 20 TOWNSHIP 26

Site Summary

Parcel Area
0.324 ha / 3,240 m²

Maximum Site Coverage of all Buildings, Structures, and Impermeable Surfaces
Permitted: 85% (2,754 m²)
Proposed: 66% (2,125 m²)

Maximum Site Coverage of all Buildings
Permitted: 65% (2,106 m²)
Proposed: 39.8% (1,289 m²)

By-Law Zoning

Existing Zoning: Single Family Residential - RU4
Proposed Zoning: Multi-Dwelling Zones - MF3

By-Law Setback

Required Setbacks:
Minimum Front Yard & Flanking Side Yard Setback for Ground Oriented Units = 3.0m
Minimum Front Yard & Flanking Side Yard Setback = 4.5m
Minimum Side Yard Setback = 3.0m
Minimum Rear Yard Setback = 4.5m

Proposed Building Setbacks from Existing Property Line (Before Road Dedication):
Front Yard setback for Ground Oriented Units: 7.13m
Flanking Yard Setback for Ground Oriented Units: 5.57m
Front Yard setback Above Main Level: 5.28m
Flanking Yard Setback Above Main Level: 5.57m
Side Yard Setback = 3.0m
Rear Yard Setback = 4.52m

Proposed Building Setbacks from Property Line (After Road Dedication):
Front Yard setback for Ground Oriented Units: 3.00m
Flanking Yard Setback for Ground Oriented Units: 4.50m
Front Yard setback Above Main Level: 4.50m
Flanking Yard Setback Above Main Level: 4.50m
Side Yard Setback = 3.0m
Rear Yard Setback = 4.50m

Road Dedication

Total Area: 236.5 m²

Building Stepback

Required Stepback:
Minimum building stepback from Front Yard and Flanking Side Yard = 3.0m

Proposed Stepback:
Front Yard:
• 3.0m from Minimum Front Yard Setback @ Main Level & Level 6
Flanking Side Yard:
• 0.0m Flanking Side Yard Stepback Above Main Level Floor

Building Height

Maximum Building Height
22.0m / 6 storeys (Property is fronting onto a Transit Supportive Corridor)

Building Height Proposed
21.88m from Finished Grade

Drawing List

ARCHITECTURE

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- DP 1.01 W&R AND FIRE ACCESS PLAN
- DP 1.02 SITE DETAILS
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- DP 2.04 LEVEL 6 FLOOR PLAN
- DP 2.05 ROOF AMENITY LEVEL PLAN
- DP 2.06 ROOF PLAN
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- DP 4.02 BUILDING ELEVATIONS - 3D VIEWS
- DP 5.00 BUILDING SECTIONS

CIVIL

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- C20 STANDARD NOTES
- C30 SERVICING PLAN
- C40 GRADING PLAN
- C50 STORMWATER MANAGEMENT PLAN
- C60 EROSION & SERDIMENT CONTROL PLAN

LANDSCAPE

- L1 CONCEPTUAL LANDSCAPE PLAN - AT GRADE
- L2 CONCEPTUAL LANDSCAPE PLAN - ROOF TOP
- L3 WATER CONSERVATION / IRRIGATION PLAN - AT GRADE
- L4 WATER CONSERVATION / IRRIGATION PLAN - ROOF TOP

Area Summary

NOTE:
• Gross Floor Area and Net Floor Area are measured from the inside faces of the exterior walls.
• Storage (common), service areas, porches and balconies, exit stairways, common/public corridors, parkades/terraces, common amenity spaces and building mechanical systems are excluded in Net Floor Area Calculations

GROSS FLOOR AREA SUMMARY:			NET FLOOR AREA SUMMARY:		
LEVEL	sq m	sq ft	LEVEL	sq m	sq ft
MAIN LEVEL	1,211	13,035	MAIN LEVEL	679	7309
LEVEL 2	1,265	13,616	LEVEL 2	1087	11,700
LEVEL 3	1,265	13,616	LEVEL 3	1087	11,700
LEVEL 4	1,265	13,616	LEVEL 4	1087	11,700
LEVEL 5	1,265	13,616	LEVEL 5	1087	11,700
LEVEL 6	1,183	12,733	LEVEL 6	1006	10,828
ROOF AMENITY	57	614	ROOF AMENITY	0	0
TOTAL	7,454	80,234	TOTAL	6,043	65,046

Floor Area Ratio

MAXIMUM PERMITTED F.A.R.	PROPOSED F.A.R.
2.05	1.86

Note:
• Total FAR based on MF3 maximum of 1.8 + additional 0.25 for underground parkade.

Dwelling Unit Summary

UNIT NAME	UNIT TYPE	UNIT COUNT						TOTAL	SQ M	SQ FT
		LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6			
A1	STUDIO	0	2	2	2	2	2	10	42	452
B1	1-BED	2	7	7	7	7	0	30	50	538
B2	1-BED	1	1	1	1	1	1	6	54	581
B3	1-BED	0	0	0	0	0	0	1	56	602
B4	1-BED	0	0	0	0	0	0	1	50	538
B5	1-BED	0	0	0	0	0	0	1	52	559
B6	1-BED	0	1	1	1	1	1	5	42	452
C1	JR. 2-BED	1	1	1	1	1	0	5	61	656
C2	JR. 2-BED	1	1	1	1	1	0	5	58	624
C3	JR. 2-BED	0	1	1	1	1	0	4	59	635
C4	JR. 2-BED	0	1	1	1	1	0	4	65	699
D1	2-BED	1	1	1	1	1	1	6	67	721
D2	2-BED	1	1	1	1	1	1	6	73	785
E1a	2-BED + DEN	2	0	0	0	0	2	4	86	925
E1b	2-BED + DEN	0	0	0	0	0	1	1	86	925
E2	2-BED + DEN	0	1	1	1	1	1	5	94	893
F1	3-BED	1	0	0	0	0	1	2	94	1011
F2	3-BED	0	1	1	1	1	1	5	81	871
TOTAL UNIT COUNT		10	19	19	19	19	15		101	

Common and Private Amenity Space

UNIT TYPE	UNIT COUNT	FACTOR	REQUIRED	PROPOSED PRIVATE AMENITY	PROPOSED COMMON AMENITY
STUDIO	10	7.5 m ²	75 m ²	55.6 m ²	1200 m ²
1-BED	44	15 m ²	660 m ²	154.7 m ²	
JR. 2BED	18	25 m ²	450 m ²	158.5 m ²	
2BED	12	25 m ²	300 m ²	158.5 m ²	
2BED + DEN	10	25 m ²	250 m ²	197.4 m ²	
3BED	7	25 m ²	175 m ²	64.736 m ²	
TOTAL			1,910 m²	1992 m²	

Note:
• 4.0 m² per dwelling unit (404 m² for 101 units) of the total required Private and Common Amenity is required to be configured as Common amenity.
• Common Amenity spaces are provided at Main Level and Roof Level.

Motor Vehicle Parking Requirements

NOTE:
• Residential Motor vehicle parking calculations are based on MF3 bylaw requirements.

DESCRIPTION / UNIT TYPE	MOTOR VEHICLE PARKING - RESIDENTIAL			
	UNIT COUNT	FACTOR	REQUIRED	PROVIDED
STUDIO	10	1.0 per unit	10	8
1BED	44	1.2 per unit	52.8	39
JR 2BED	18	1.4 per unit	25.2	19
2BED	12	1.4 per unit	16.8	12
2BED + DEN	10	1.4 per unit	14	10
3 BED	7	1.6 per unit	11.2	10
TOTAL STALLS	101	N/A	130	98

NOTE:
• Residential Motor vehicle parking calculations are based on Urban Centre bylaw requirements.
*It is recognised the site is not on an Urban Centre zone however considering the project site is located along a Transit Oriented Corridor and is surrounded by several public amenities including multi-modal bike path along Bernard Ave, adjacent bus-transit, outdoor recreation facilities, a fitness centre and the Kelowna Farmers and Craft Market to the south-east, with these aspects considered, it was deemed appropriate to base the parking requirements on Urban Centre zone instead of MF3 zone.

DESCRIPTION / UNIT TYPE	MOTOR VEHICLE PARKING - VISITOR			
	UNIT COUNT	FACTOR	REQUIRED	PROVIDED
STUDIO	10	0.8 per unit	8	8
1BED	44	0.9 per unit	40	40
JR 2BED	18	1.0 per unit	18	18
2BED	12	1.0 per unit	12	12
2BED + DEN	10	1.0 per unit	10	10
3 BED	7	1.0 per unit	7	10
TOTAL STALLS	101	N/A	95	98

DESCRIPTION	MOTOR VEHICLE PARKING - ACCESSIBLE			
	UNIT COUNT	FACTOR	REQUIRED	PROVIDED
VISITOR	101	0.14 per unit	14	15

DESCRIPTION	MOTOR VEHICLE PARKING - ACCESSIBLE			
	UNIT COUNT	FACTOR	REQUIRED	PROVIDED
ACCESSIBLE STALLS	101	4/100-150 units	4	3 REG. 1 VAN

NOTE:
• 2 Regular Accessible Stalls provided for Residential Parking
• 1 Regular Accessible Stall and 1 Van Accessible Stall provided for Visitor Parking

TYPE OF STALL	PROPOSED VEHICLE STALL BREAKDOWN				
	LEVEL P2	LEVEL P1	AT GRADE	TOTAL	RATIO
Large Stalls	33	28	4	65	57.52 %
Small Stalls	22	22	0	44	38.94 %
Accessible Stalls	1	2	0	3	2.65 %
Van Accessible Stalls	0	0	1	1	0.88 %
TOTAL	56	52	5	113	100.00 %

Bicycle Parking Requirements

DESCRIPTION / UNIT TYPE	LONG TERM BICYCLE PARKING			
	UNIT COUNT	FACTOR	REQUIRED	PROVIDED
STUDIO	10	0.75 per unit	8	11
1BED	44	0.75 per unit	29	36
JR 2BED	18	0.75 per unit	17	17
2BED	12	0.75 per unit	9	11
2BED + DEN	10	0.75 per unit	8	11
3 BED	7	1.0 per unit	7	15
TOTAL LONG TERM STALLS			78	101

LEVEL	LONG TERM BICYCLE PARKING	
	Floor Mounted	Wall Mounted
Grade	6	0
Main Level	25	20
Parkade Level 1	26	30
Percentage	53%	47%
Total Stalls Required	78	
Total Stalls Provided	107	

DESCRIPTION	SHORT TERM BICYCLE PARKING		
	FACTOR	REQUIRED	PROVIDED
SHORT TERM STALLS	6 stalls per site entrance	6	6

NOTE:
• Long Term Bicycle stalls (101 stalls) are provided in enclosed spaces located on Levels 1 and P1
• Long Term Bicycle Stalls consist of 51 Floor Mounted Stalls & 50 Wall Mounted Stalls

Waste & Recycling Requirements

Waste and Recycling proposed:
• 1 Molok Bin = Waste
• 1 Molok Bin = Organics
• 1 Molok bin = Recycling



1 View looking North from Bernard Ave
DPO.02 SCALE: 1 : 20



2 View looking South from Bernard Ave
DPO.02 SCALE: 1 : 20



3 View looking South from Cherry Crescent W
DPO.02 SCALE: 1 : 20



4 View looking West from Intersection
(Bernard Avenue and Cherry Crescent W)
DPO.02 SCALE: 1 : 20

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1660-1670 Bernard Avenue, Kelowna, B.C V1Y6R9

CLIENT
SOLE BERNARD DEVELOPMENTS LTD



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SEALS

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PROJECT NO. 222088
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PROJECT STATISTICS

DRAWING NO.

DPO.02

THIS DRAWING IS FOR REFERENCE ONLY. S2 ARCHITECTURE TAKES NO RESPONSIBILITY FOR ANY DISCREPANCIES FOUND

**SITE PLAN OF LOT 2 AND LOT 3
SECTION 20 TOWNSHIP 26 OSOYOOS
DIVISION YALE DISTRICT PLAN 12275**

CLIENT: LIVE EDGE OKANAGAN ENTERPRISES, INC
PID: 009-442-146 (LOT 2)
009-442-154 (LOT 3)
CIVIC ADDRESS: 1660 BERNARD AVE (LOT 2)
1670 BERNARD AVE (LOT 3)

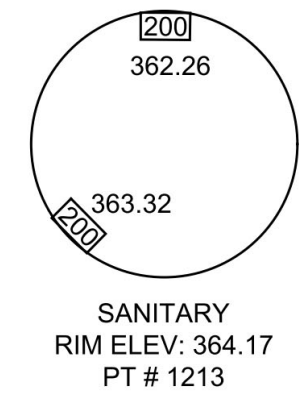
HORIZONTAL COORDINATE SYSTEM: UTM 11 NAD83(CSRS)
VERTICAL DATUM: CGVD28 (DERIVED FROM CANNET STATION BC_KELOWNA)

FIELD SURVEY COMPLETED: NOVEMBER 21, 2022

REFER TO THE CURRENT STATE OF TITLE FOR CHARGES, LIENS, AND INTERESTS AFFECTING THIS LAND.



- LEGEND**
- Subject Property
 - Major Contour (1.0m)
 - Minor Contour (0.2m)
 - Top Slope
 - Bottom Slope
 - Fence
 - Hedge
 - Catch Basin
 - Tree (dia.)
 - Vault
 - Lamp Standard
 - Sign
 - Sanitary Manhole
 - Storm Manhole
 - Retaining Wall
 - Asphalt



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www.vectorgeomatics.com

File: 2201802R0 Date: 2022-11-22
Drafted by: EC Checked by: TF

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PROJECT NO.	222088		
DRAWING TITLE	SITE SURVEY		

DRAWING NO.
DP0.03

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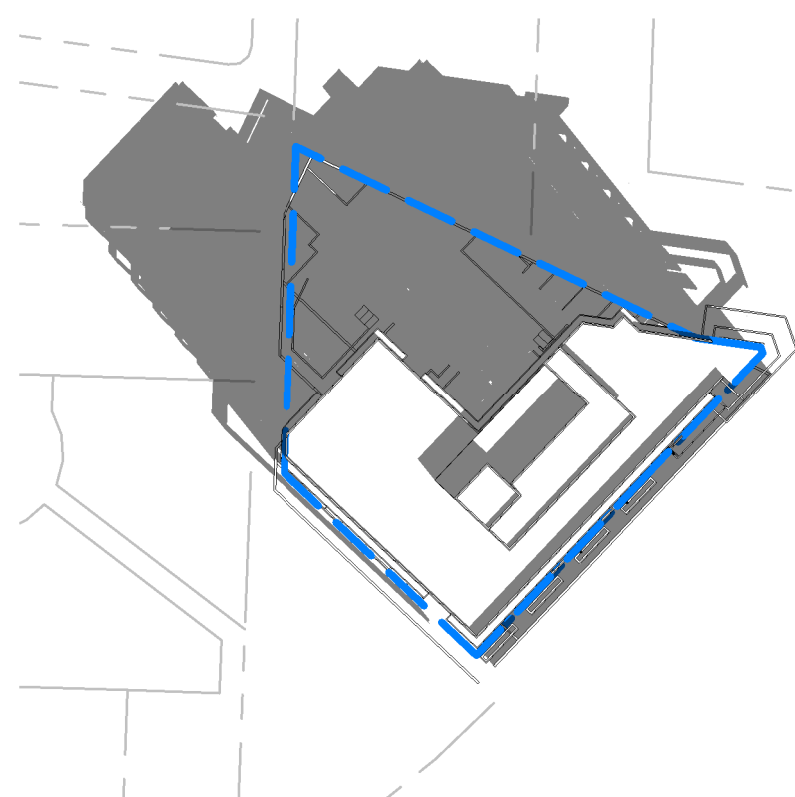
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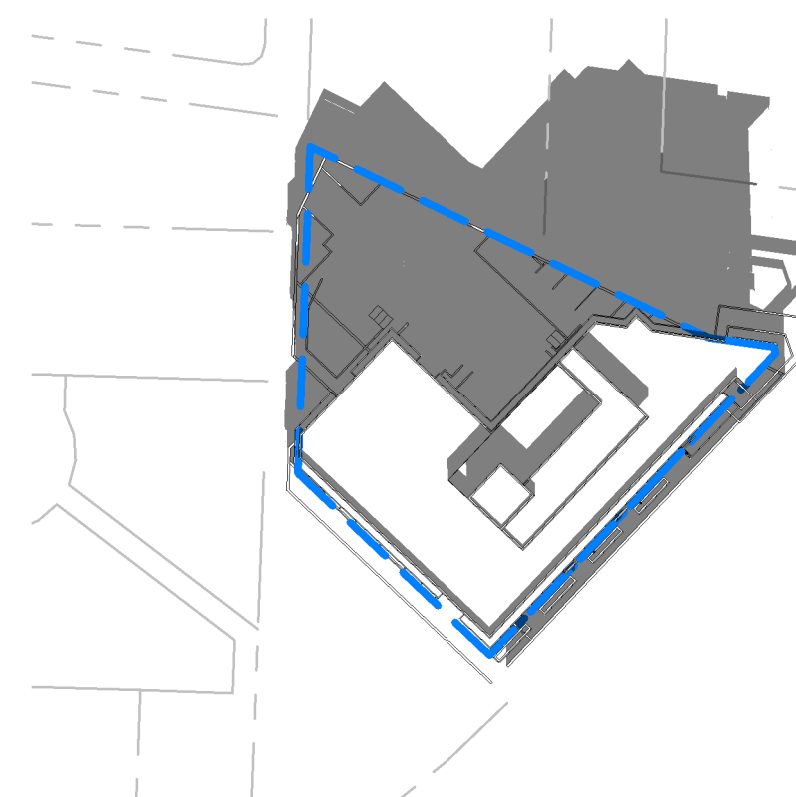
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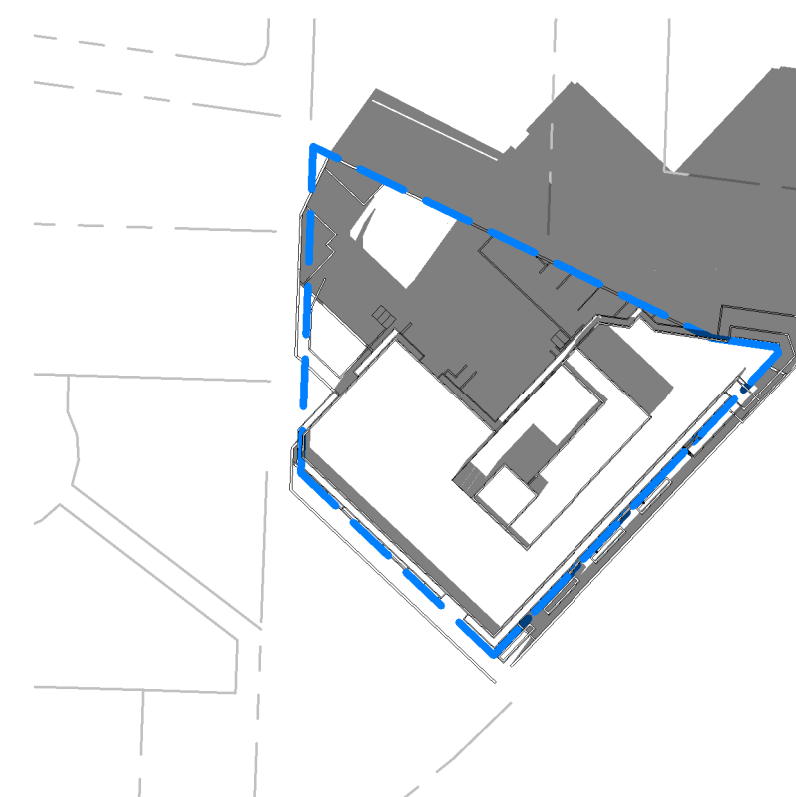
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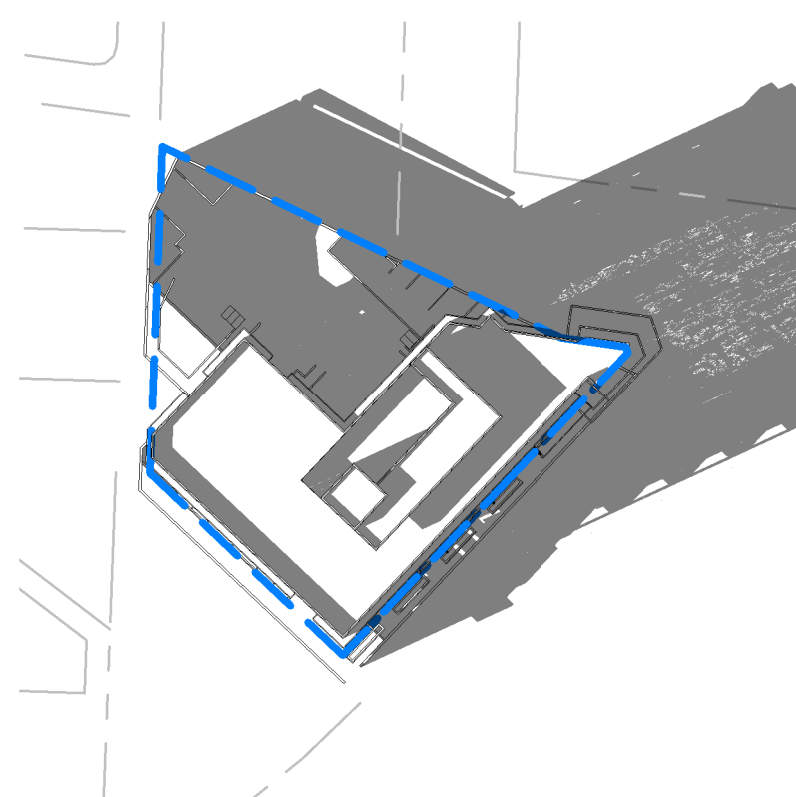
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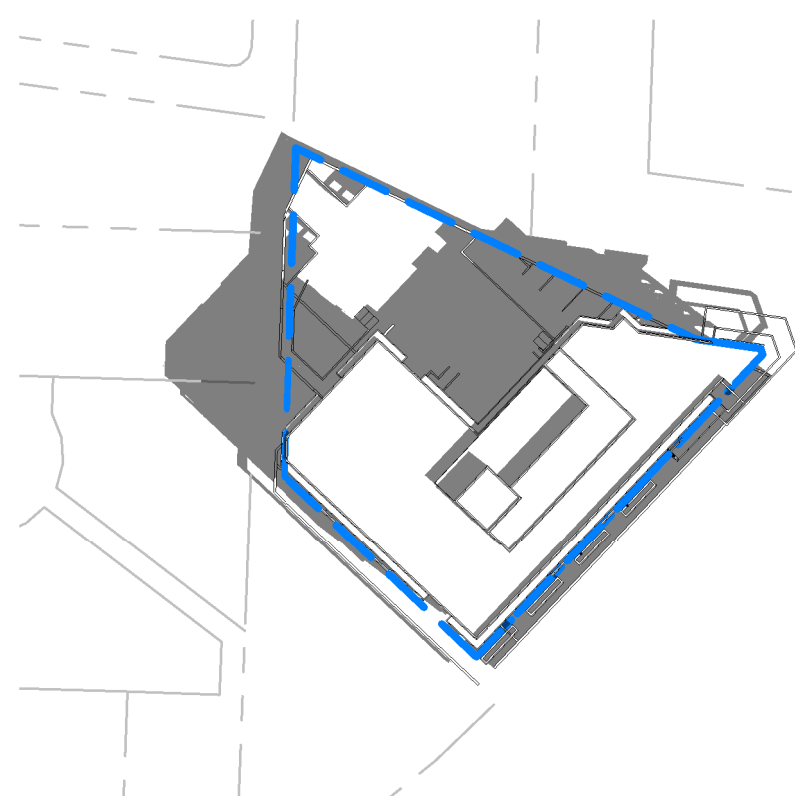
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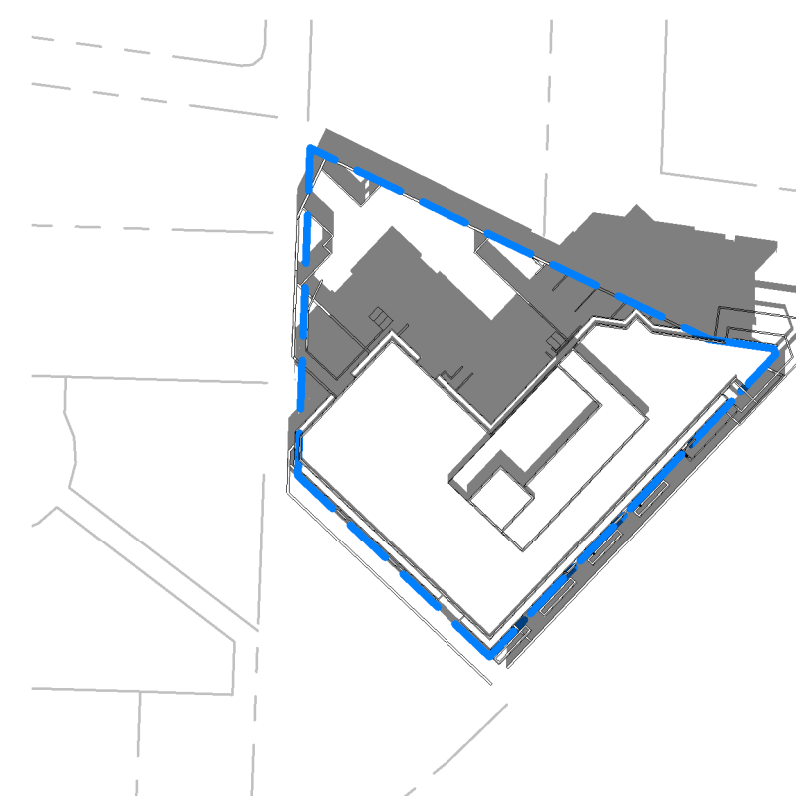
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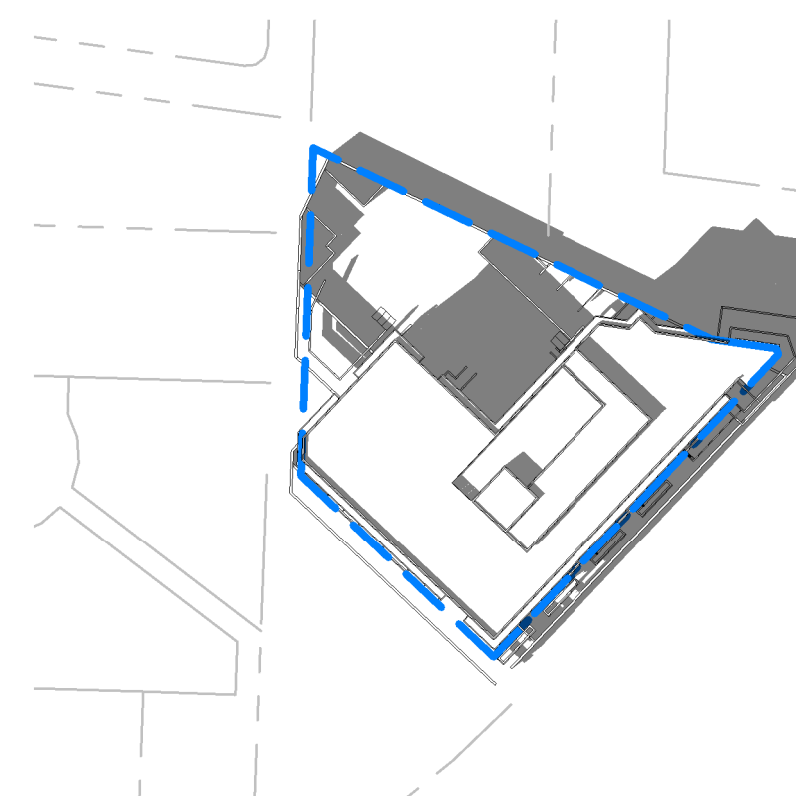
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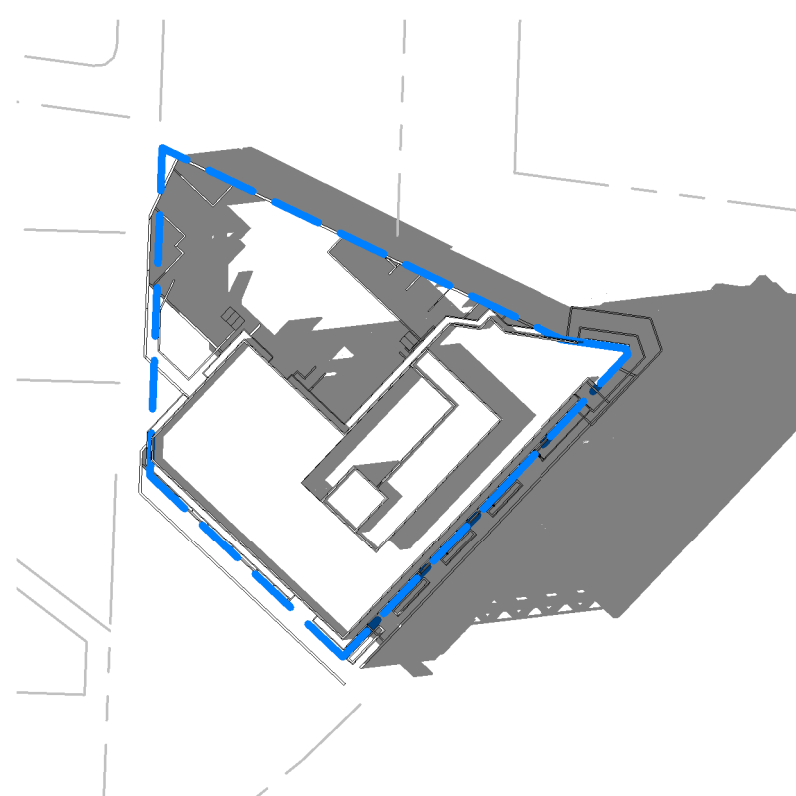
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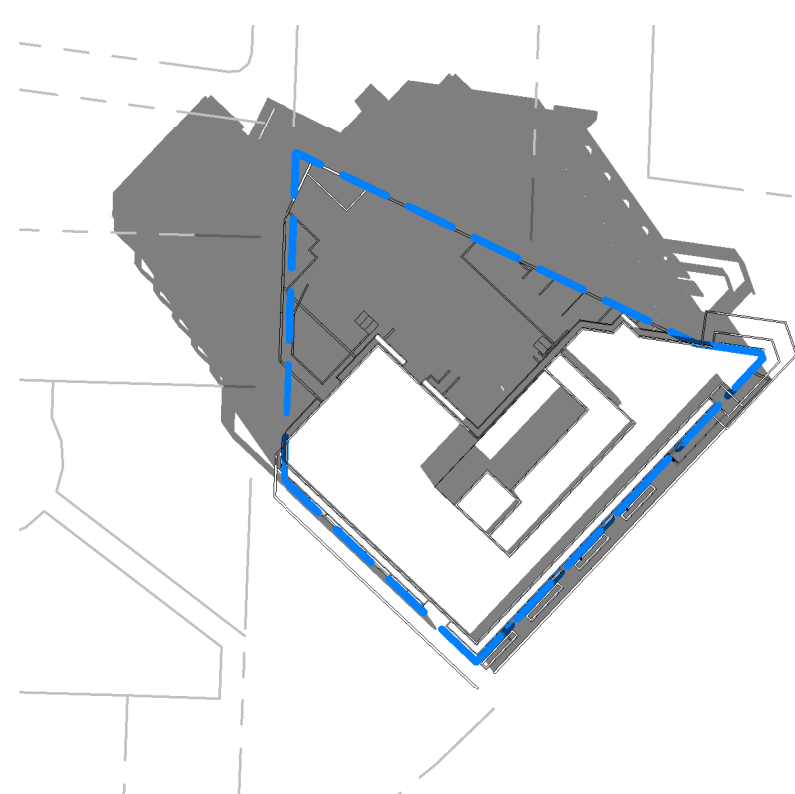
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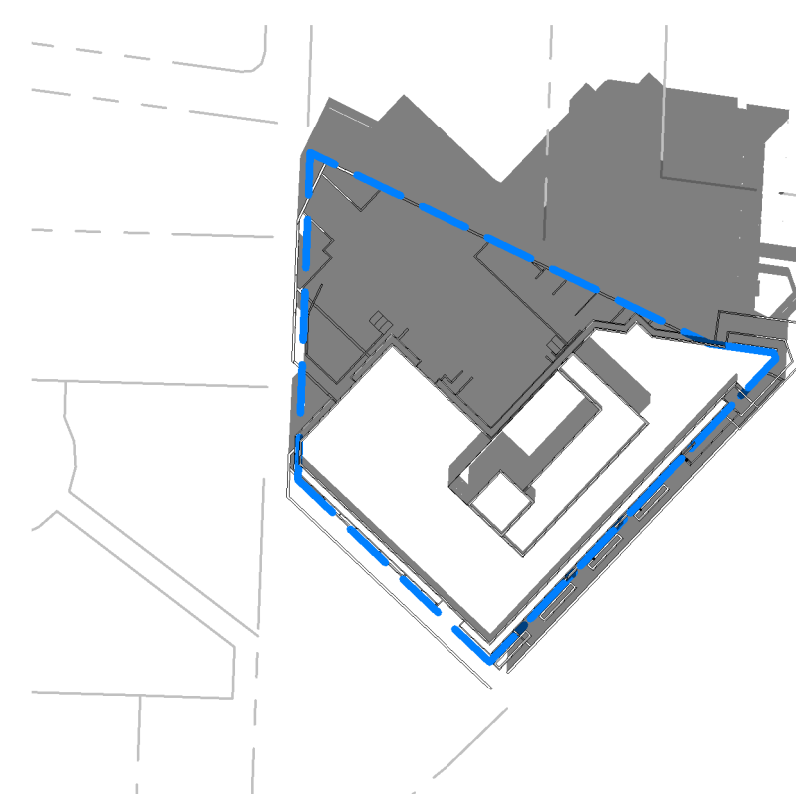
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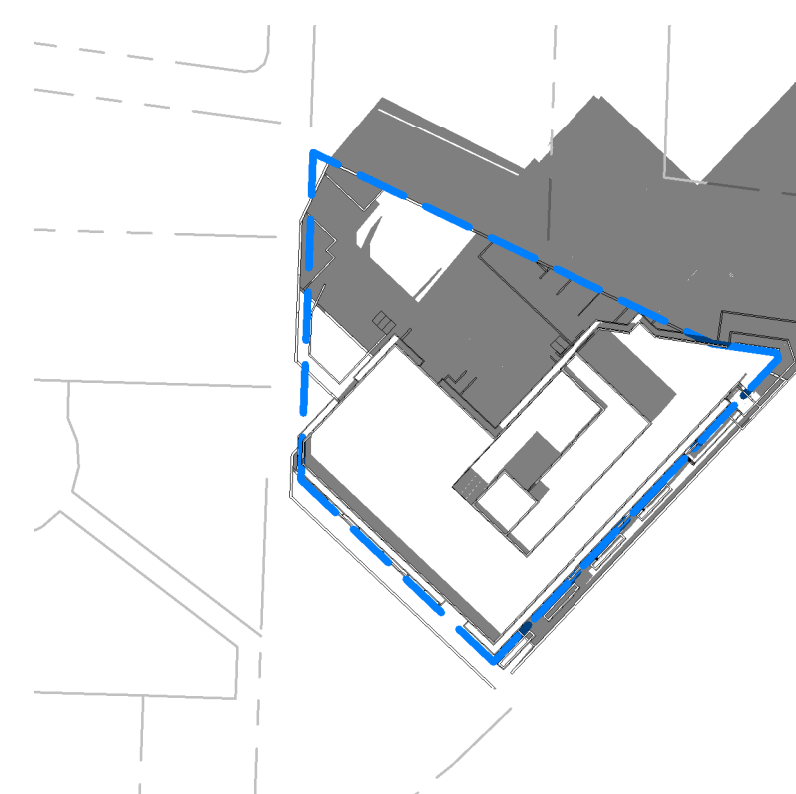
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DPO.04 SCALE: 1:1000



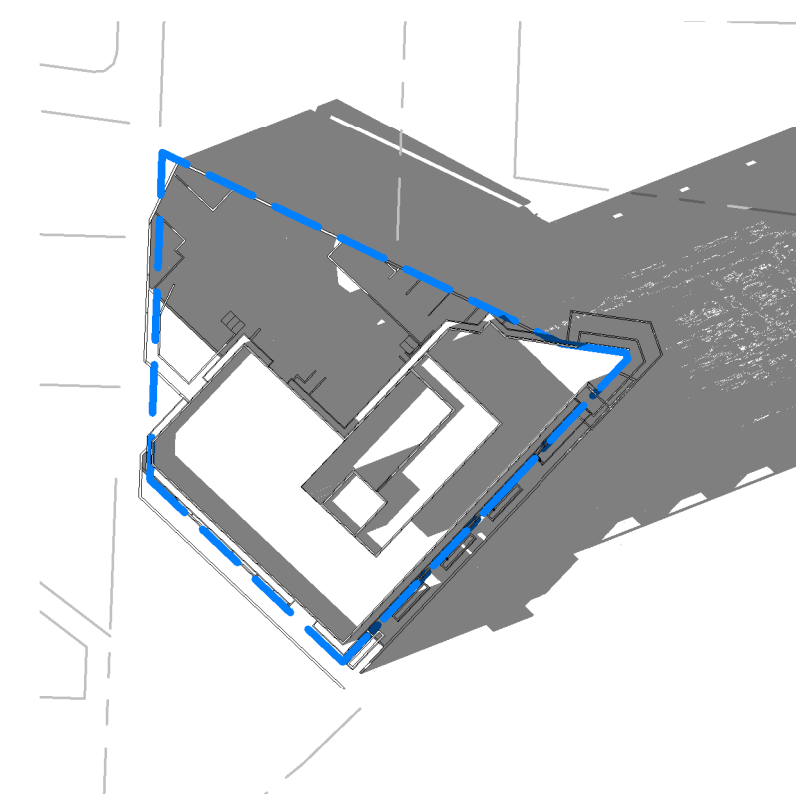
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10 September 21 @ 12:00 pm
DPO.04 SCALE: 1:1000



11 September 21 @ 2:00 pm
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12 September 21 @ 4:00 pm
DPO.04 SCALE: 1:1000



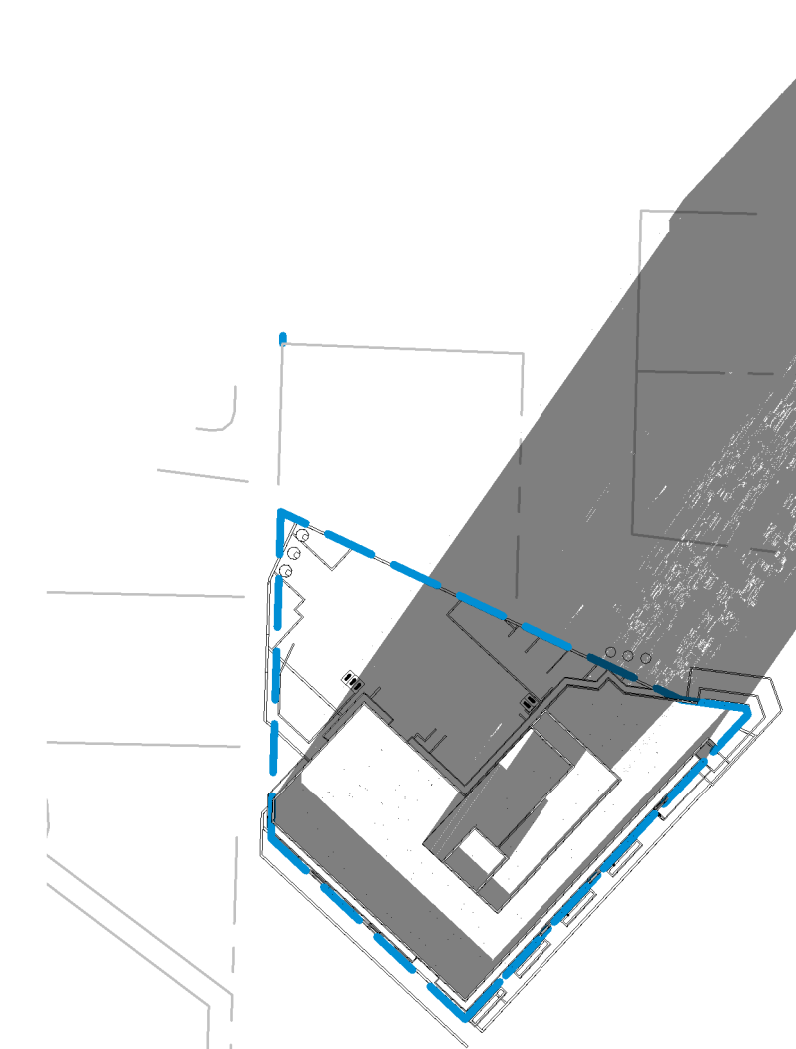
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14 December 21 - 12:00 pm
DPO.04 SCALE: 1:1000



15 December 21 - 2:00 pm
DPO.04 SCALE: 1:1000



21 December 21 - 4:00 pm
DPO.04 SCALE: 1:1000

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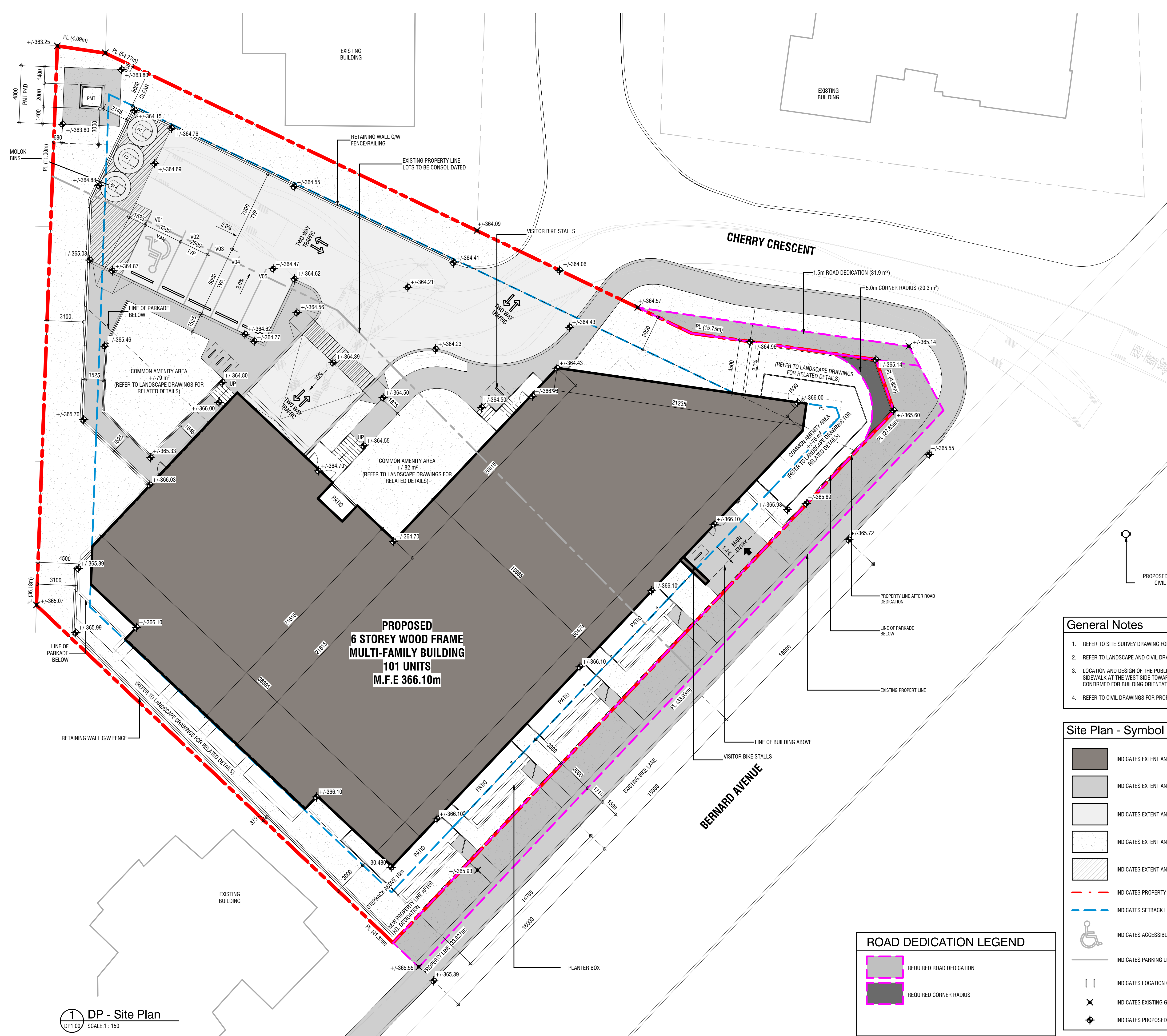
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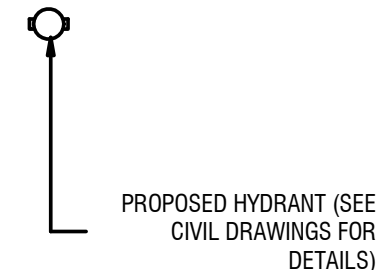
- General Notes**
- REFER TO SITE SURVEY DRAWING FOR EXISTING GEODETIC LEVELS.
 - REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR RELATED DETAILS.
 - LOCATION AND DESIGN OF THE PUBLIC BUS TURNOUT, BIKE LANE AND SIDEWALK AT THE WEST SIDE TOWARDS BERNARD AVENUE TO BE CONFIRMED FOR BUILDING ORIENTATION AND ALIGNMENT.
 - REFER TO CIVIL DRAWINGS FOR PROPOSED FINISHED GRADE LEVELS.

Site Plan - Symbol Legend

	INDICATES EXTENT AND LOCATION OF PROPOSED BUILDING
	INDICATES EXTENT AND LOCATION OF WALKWAY
	INDICATES EXTENT AND LOCATION OF ASPHALT PAVING
	INDICATES EXTENT AND LOCATION OF LANDSCAPING
	INDICATES EXTENT AND LOCATION OF PAINTED LINWORK
	INDICATES PROPERTY LINE (SCALED DOWN FOR CLARITY)
	INDICATES SETBACK LINE (SCALED DOWN FOR CLARITY)
	INDICATES ACCESSIBLE PARKING SYMBOL
	INDICATES PARKING LINE
	INDICATES LOCATION OF BIKE RACK
	INDICATES EXISTING GEODETIC SPOT ELEVATION
	INDICATES PROPOSED GEODETIC SPOT ELEVATION

ROAD DEDICATION LEGEND

	REQUIRED ROAD DEDICATION
	REQUIRED CORNER RADIUS



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SCALE As indicated
DATE 9/19/2023 10:45:36 AM
DRAWN BY VB, NR
CHECKED BY SH
PROJECT NO. 222088
DRAWING TITLE

SITE PLAN

DRAWING NO.

DP1.00

SOLE MULTI-FAMILY RESIDENTIAL PROJECT

1660-1670 Bernard Avenue, Kelowna, B.C V1Y6R9

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- REFER TO CIVIL DRAWINGS FOR PROPOSED FINISHED GRADE LEVELS.
- ALL AREAS NOT INDICATED AS PAVED/HARD SURFACING TO BE GRASSED
- ALL PORTIONS OF WASTE AND RECYCLING COLLECTION ROUTE TO BE HEAVY DUTY ASPHALT OR CONCRETE STRUCTURALLY CAPABLE OF SUPPORTING A MINIMUM OF 25,000kg
- 4.6m VERTICAL CLEARANCE IS PROVIDED AT STAGING COLLECTION AREA
- 5 X 4YD³ BINS RECOMMENDED BY LOCAL WASTE & RECYCLING COMPANY
- 3 X 6.5YD³ + 1 X 3.9YD³ BIN PROVIDED FOR EQUIVALENT VOLUME OF WASTE & RECYCLING

Site Plan - Symbol Legend

- INDICATES EXTENT AND LOCATION OF PROPOSED BUILDING
- INDICATES EXTENT AND LOCATION OF WALKWAY
- INDICATES EXTENT AND LOCATION OF ASPHALT PAVING
- INDICATES EXTENT AND LOCATION OF LANDSCAPING
- INDICATES EXTENT AND LOCATION OF PAINTED LINEWORK
- INDICATES PROPERTY LINE (SCALED DOWN FOR CLARITY)
- INDICATES SETBACK LINE (SCALED DOWN FOR CLARITY)
- INDICATES ACCESSIBLE PARKING SYMBOL
- INDICATES PARKING LINE
- INDICATES LOCATION OF BIKE RACK
- INDICATES EXISTING GEODETTIC SPOT ELEVATION
- INDICATES PROPOSED GEODETTIC SPOT ELEVATION

HSU - General Information

HSU - HEAVY SINGLE UNIT TRUCK	11,500m
OVERALL LENGTH	2,800m
OVERALL WIDTH	3,650m
OVERALL BODY HEIGHT	0,445m
MIN. BODY GROUND CLEARANCE	2,600m
TRACK WIDTH	4,00s
LOCK-TO-LOCK TIME	14,100m
CURB TO CURB TURNING RADIUS	

MOLOK - General Information

MOLOK
North America Ltd.
© 2018 Molok North America Ltd.

Molok	11.70 meters
Width	2.47
Track	2.47
Lock to Lock Time	6.0
Steering Angle	53.0



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DRAWING TITLE

FIRE ACCESS PLAN

DRAWING NO.

DP1.01

SOLE MULTI-FAMILY RESIDENTIAL PROJECT

1660-1670 Bernard Avenue, Kelowna, B.C V1Y6R9

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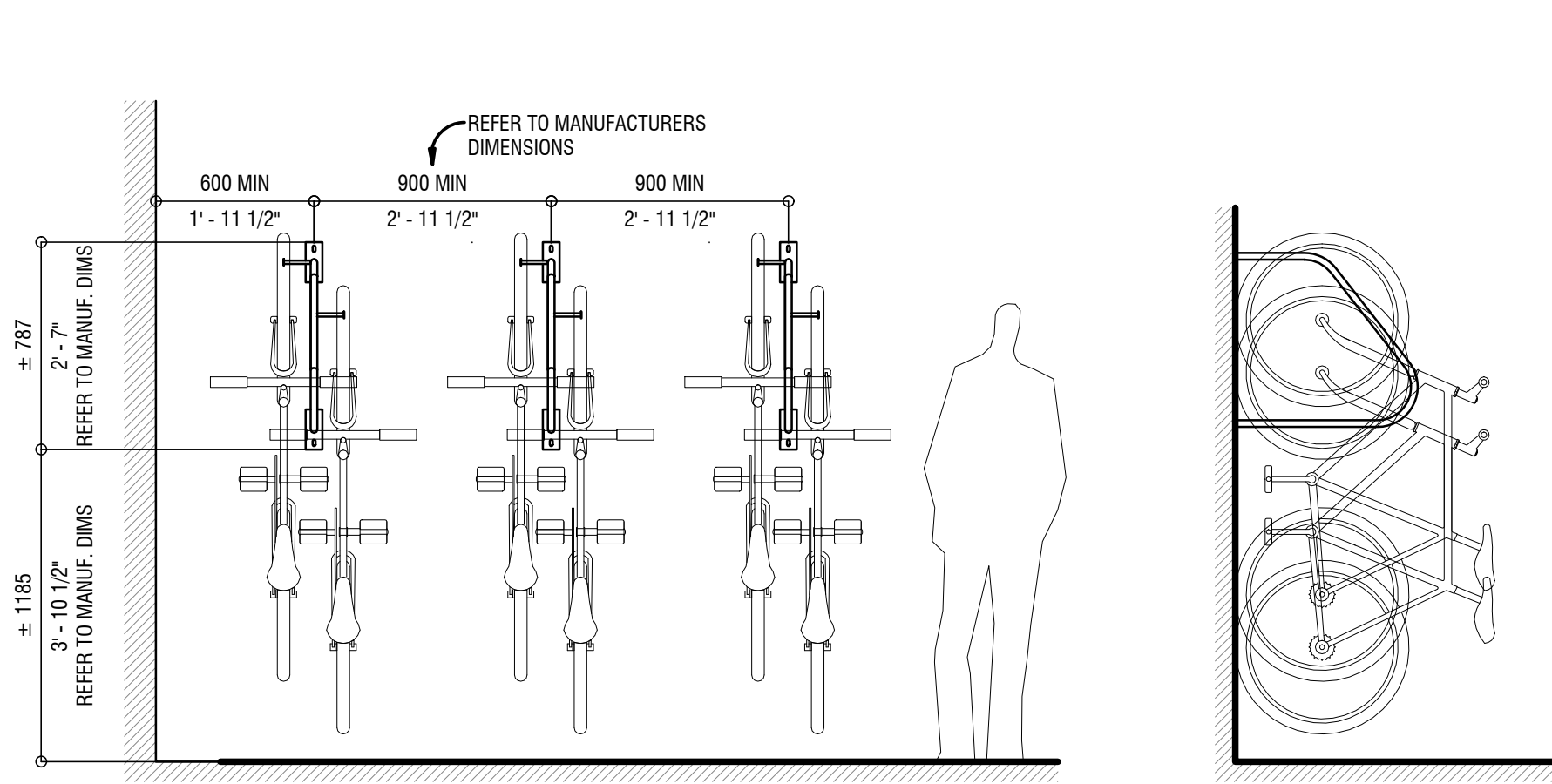
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CHECKED BY SH
PROJECT NO. 222088
DRAWING TITLE

SITE DETAILS

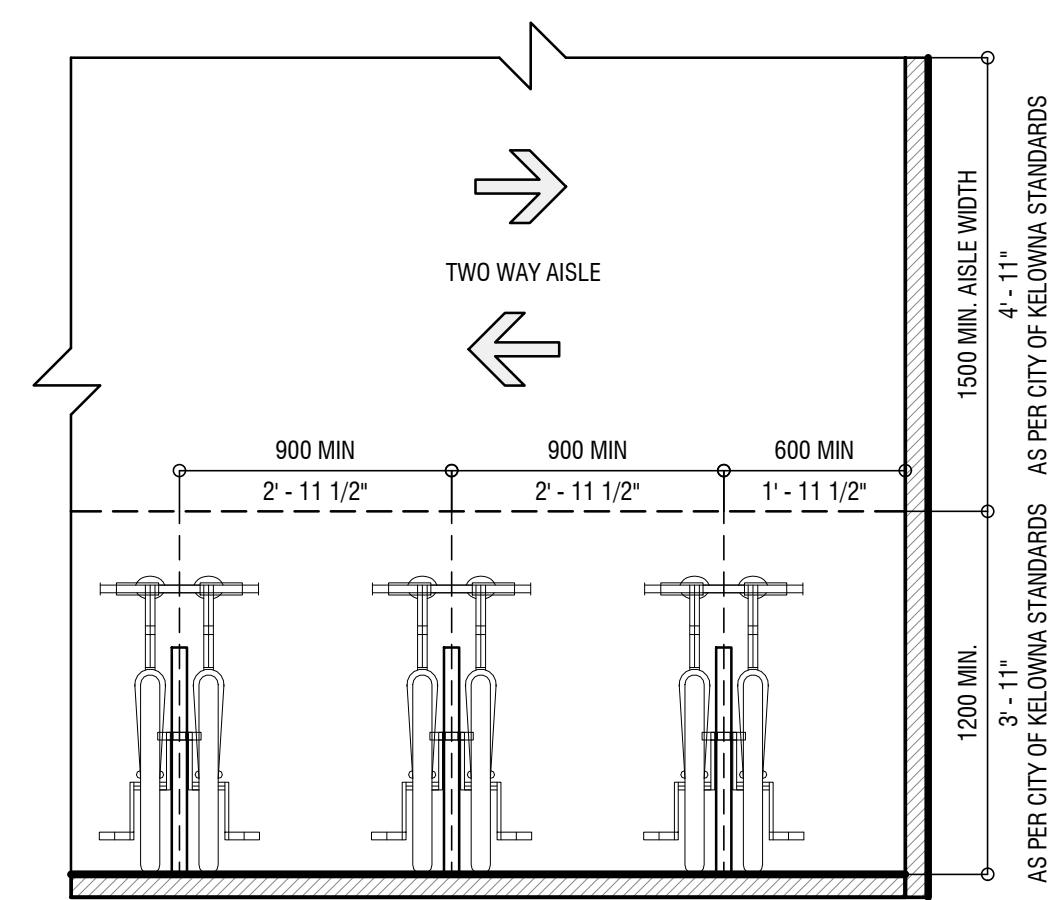
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DP1.02

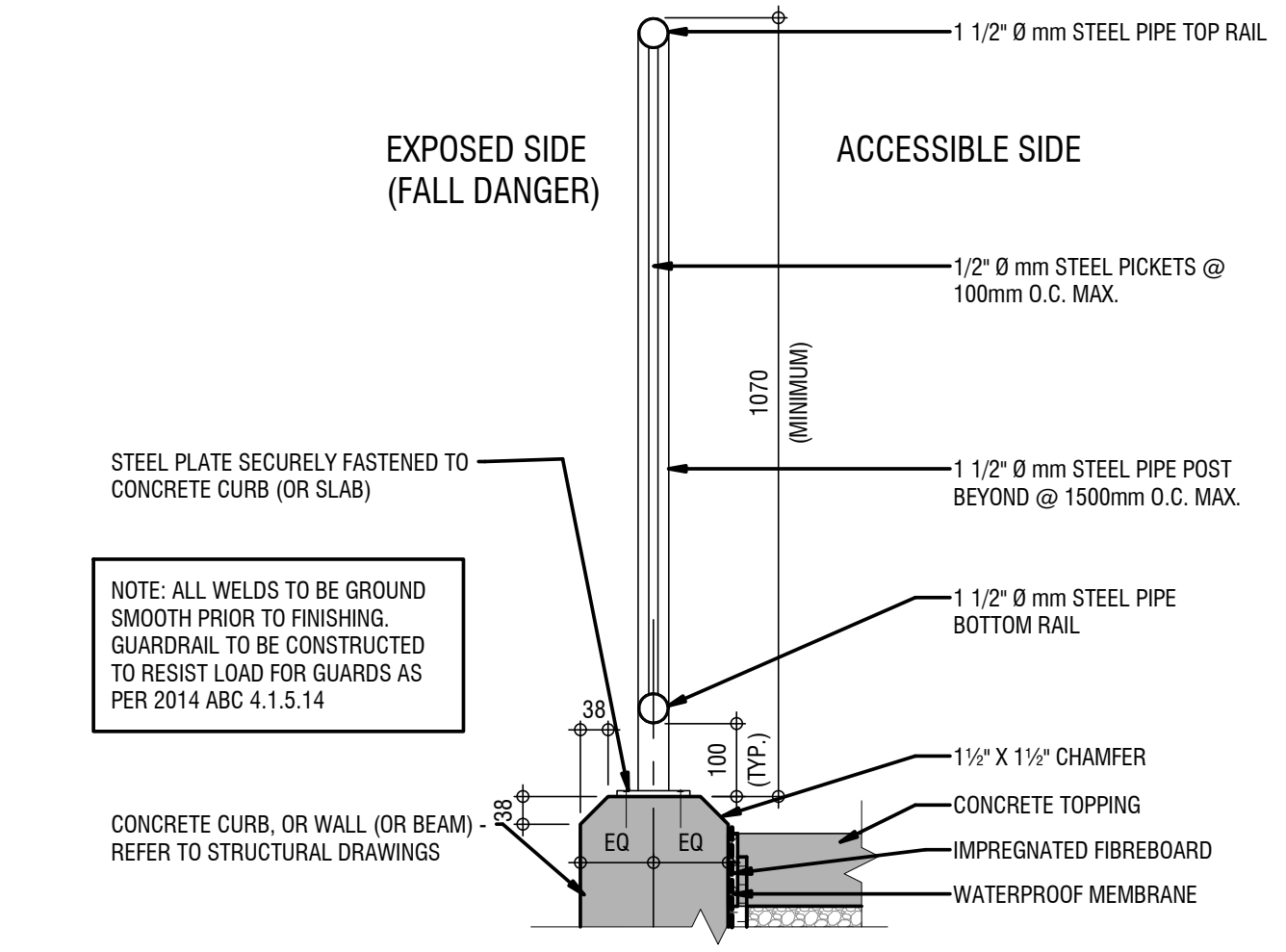


FRONT ELEVATION

SIDE ELEVATION



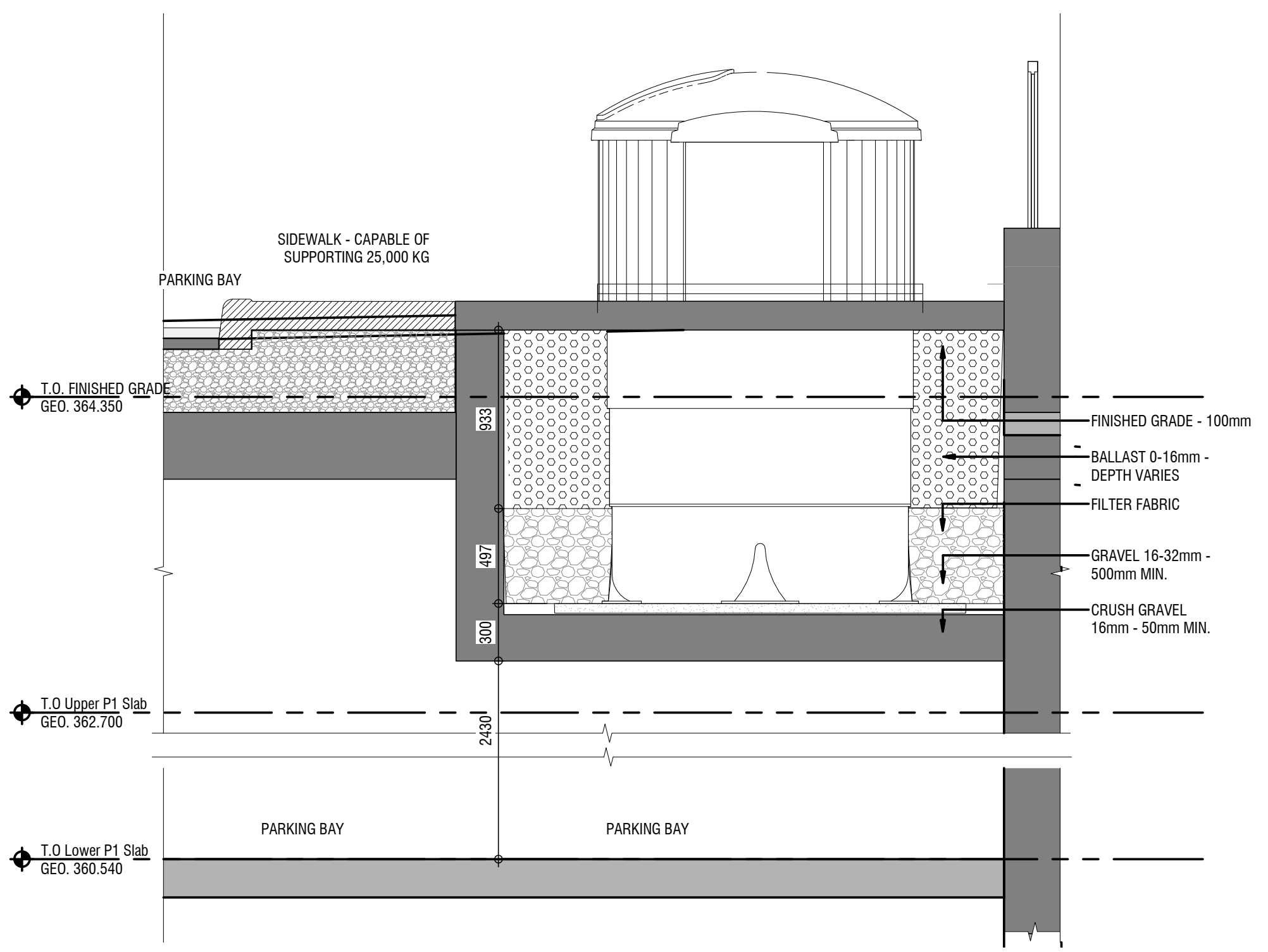
PLAN



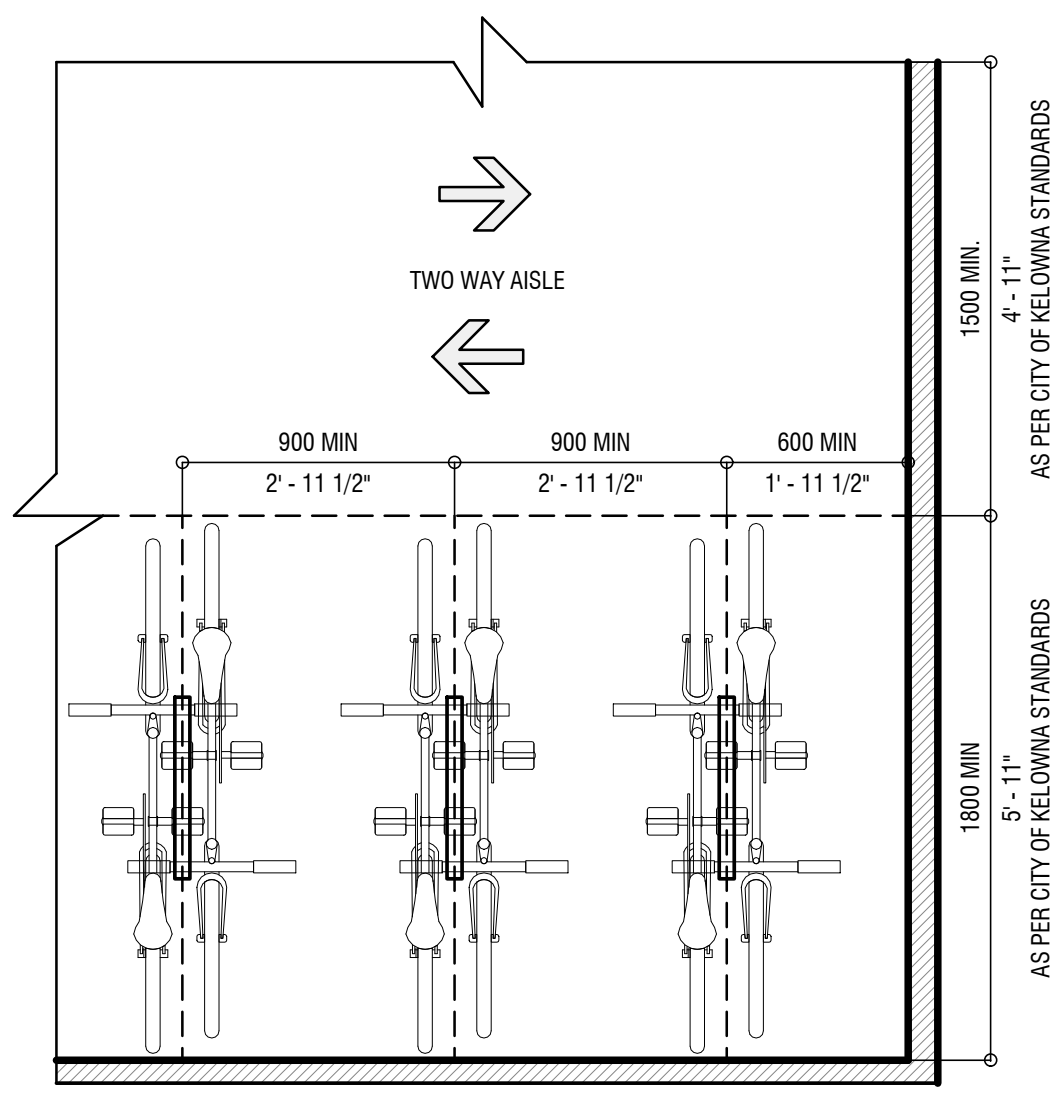
2 Typical Site Guardrail Detail

1 Long Term Bicycle Parking Stalls - Wall
SCALE: 1 : 25

SCALE: 1 : 10

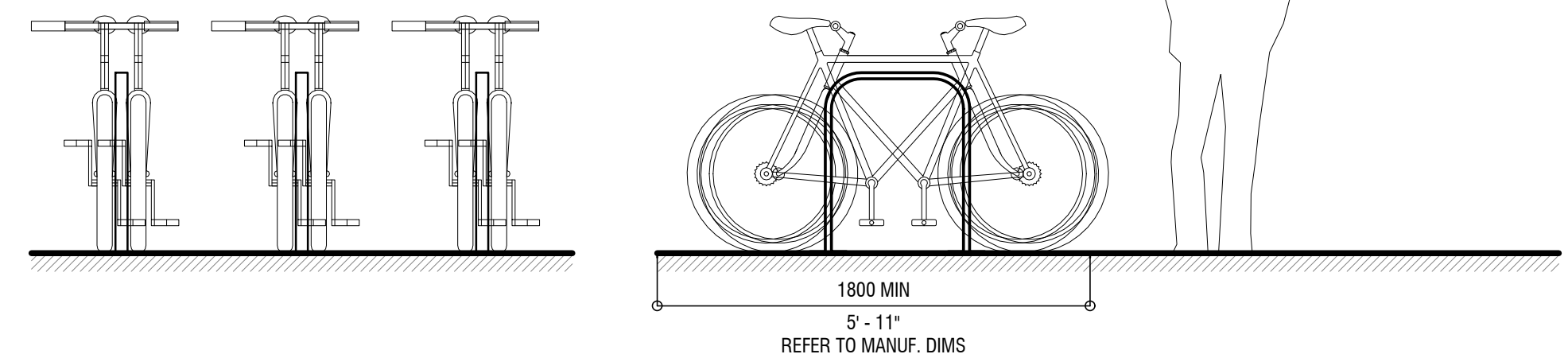


3 Mollok Detail
SCALE: 1 : 25



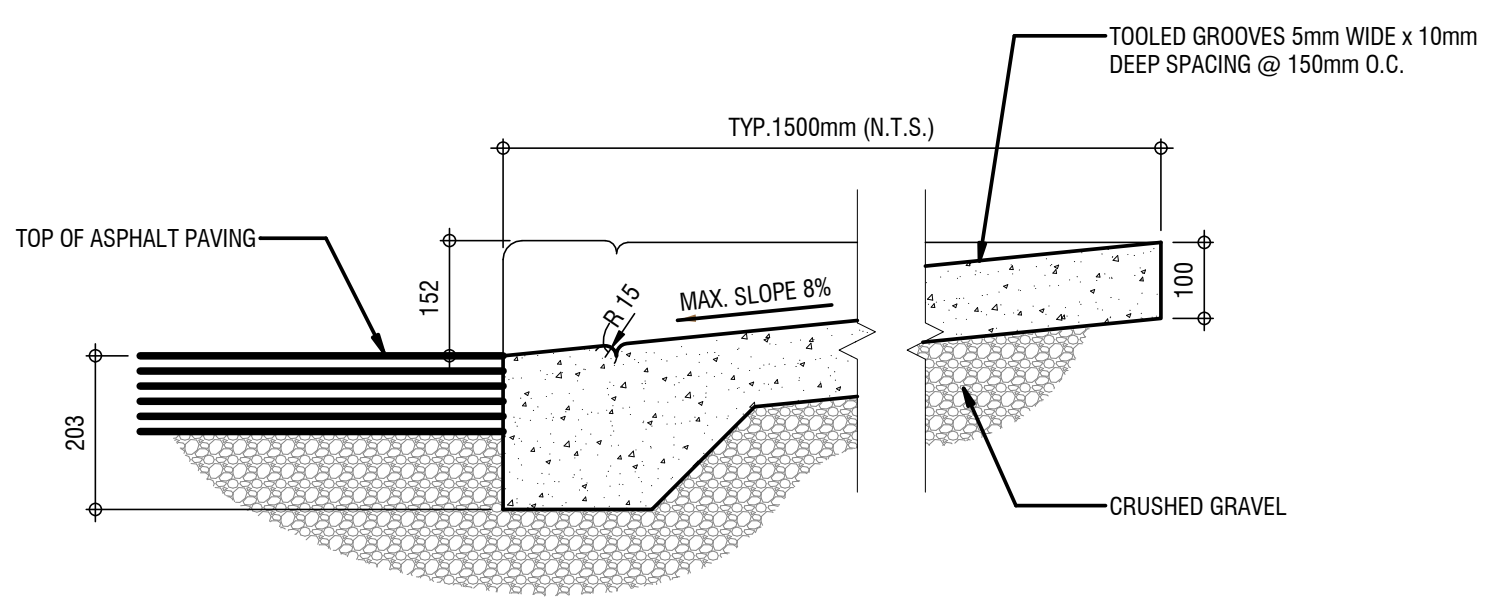
PLAN

4 Long Term Bicycle Parking Stalls - Floor
SCALE: 1 : 25

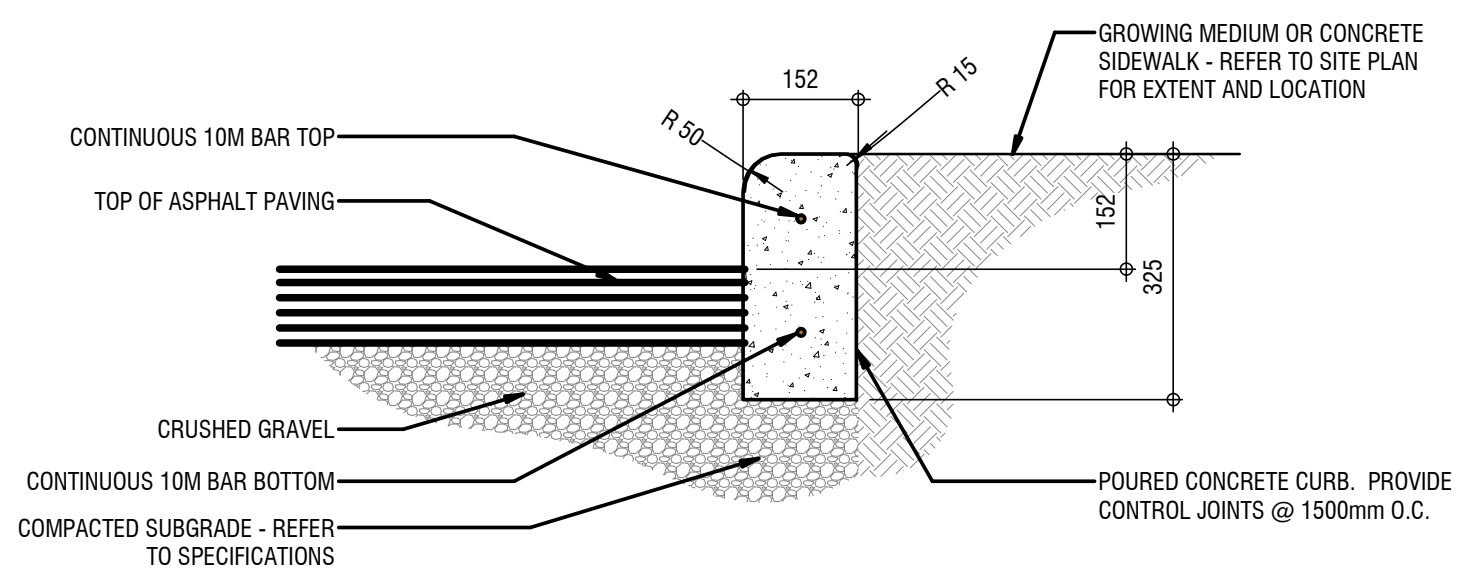


FRONT ELEVATION

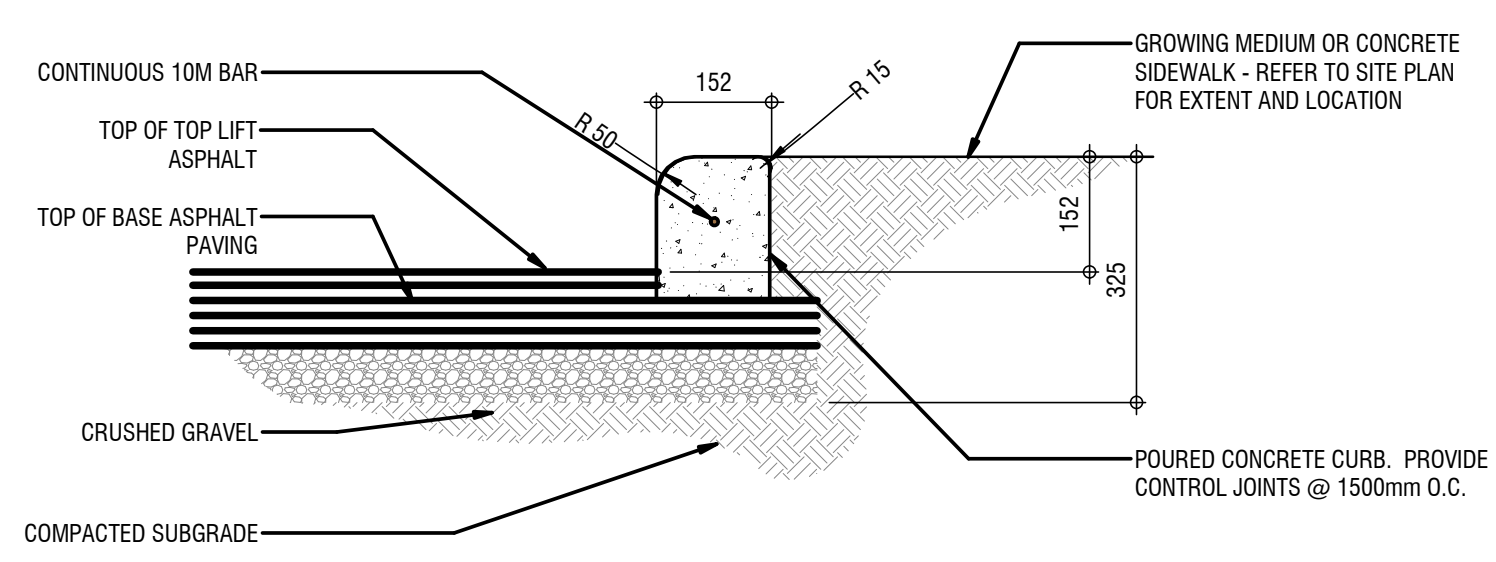
SIDE ELEVATION



5 Typical Curb Cut Details
SCALE: 1 : 10



6 Typical Barrier Curb Details
SCALE: 1 : 10



7 Typical Pin Curb Detail
SCALE: 1 : 10

SOLE MULTI-FAMILY RESIDENTIAL PROJECT

1660-1670 Bernard Avenue, Kelowna, B.C V1Y6R9

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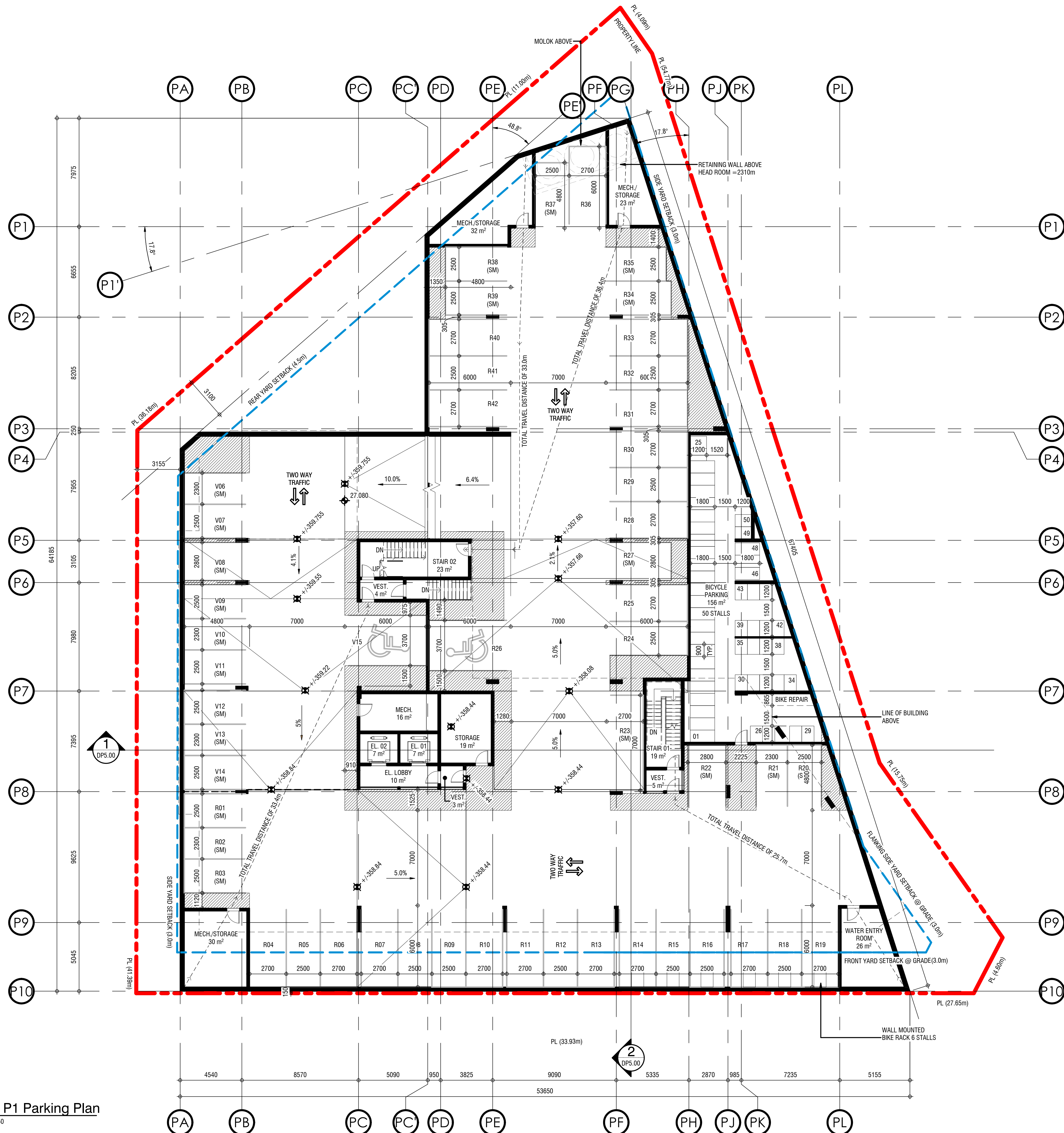
DRAWING TITLE

LEVEL P1 FLOOR PLAN

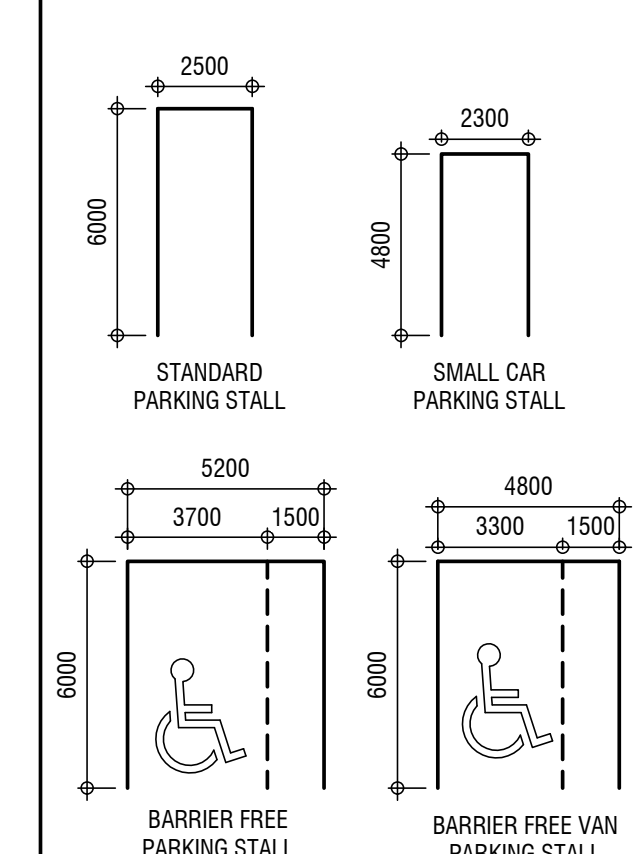
DRAWING NO.

DP2.01

1 Level P1 Parking Plan
DP2.01 SCALE: 1 : 150



Parking Stall Sizes



General Notes

- WHERE A PARKING SPACE ABUTS AN OBSTRUCTION (INCLUDING BUT NOT LIMITED TO COLUMNS, LOT LINES, CURBS, WALLS, PIPES, ROOF FEATURES, FENCES, AND EMERGENCY EXIT PAINTED AREAS) THE PARKING SPACE SHALL FOLLOW THE FOLLOWING REGULATIONS:
- (A) BE AN ADDITIONAL 0.2 METRES WIDER WHERE THE PARKING SPACE ABUTS AN OBSTRUCTION ON ONE SIDE;
 - (B) BE AN ADDITIONAL 0.5 METRES WIDER WHERE THE PARKING SPACE ABUTS AN OBSTRUCTION ON BOTH SIDES; AND
 - (C) BE AN ADDITIONAL 0.8 METRES WIDER WHERE THE PARKING SPACE ABUTS A DOORWAY.

SOLE MULTI-FAMILY RESIDENTIAL PROJECT

1660-1670 Bernard Avenue, Kelowna, B.C V1Y6R9

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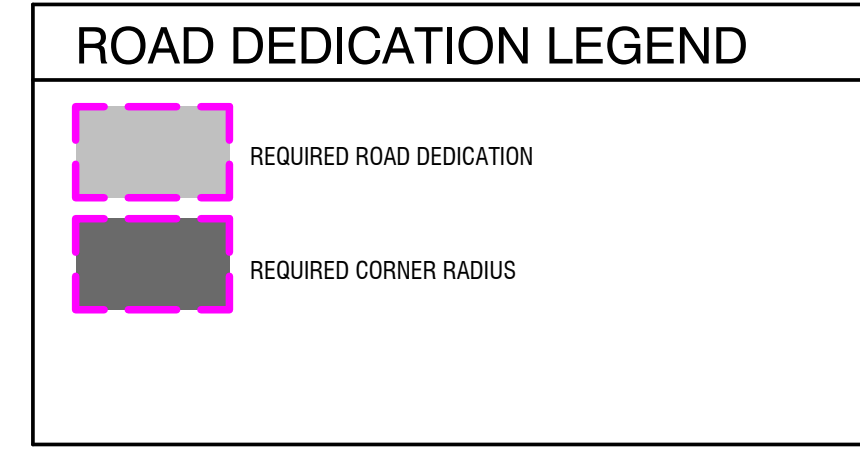
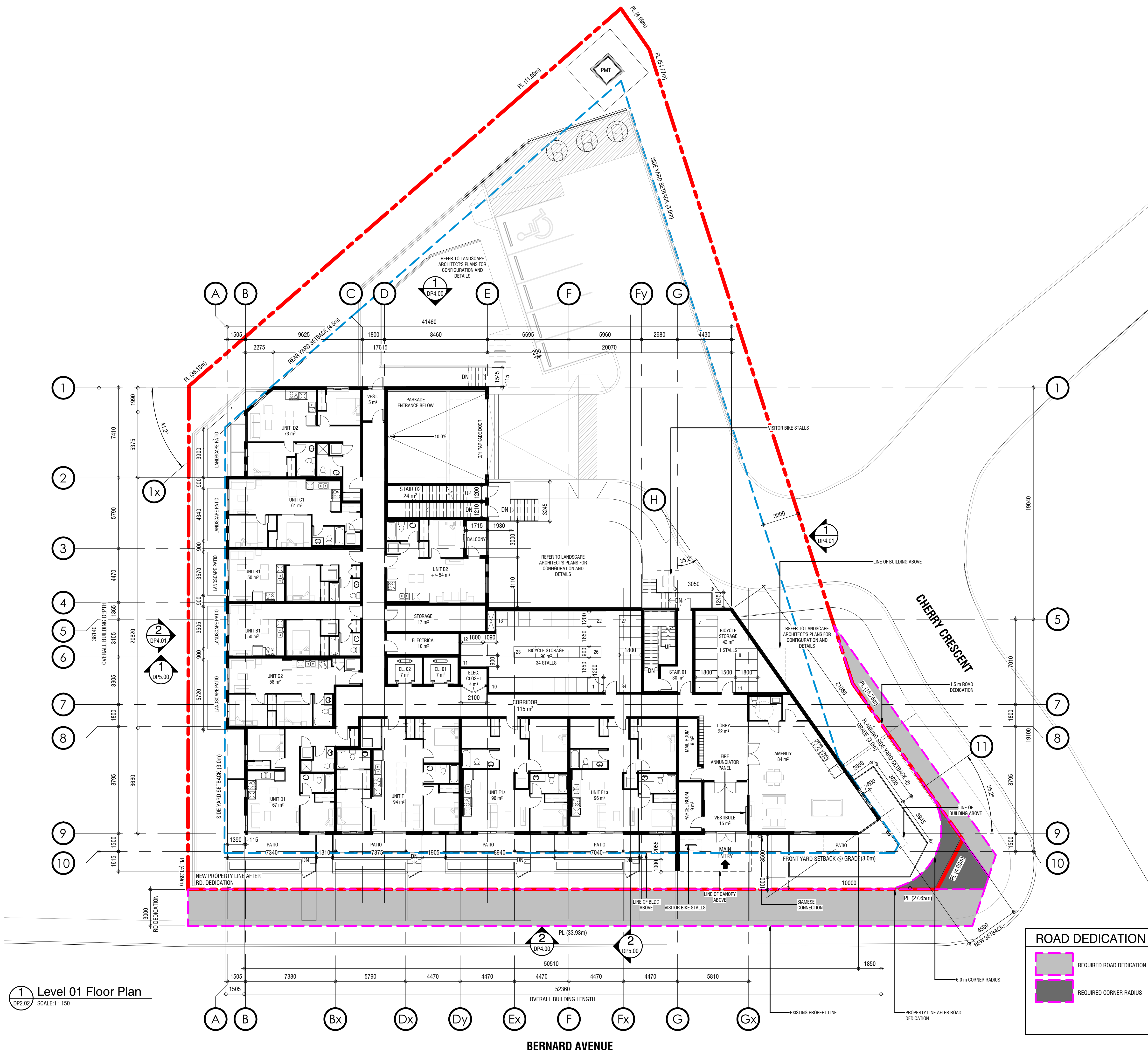
PROJECT NO. 222088

DRAWING TITLE

MAIN LEVEL FLOOR PLAN

DRAWING NO.

DP2.02



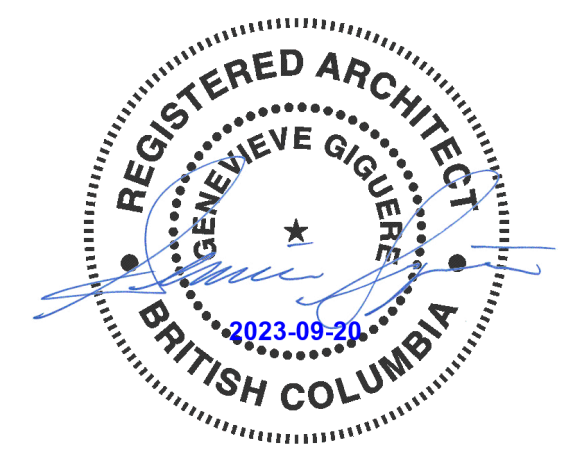
1 Level 01 Floor Plan
DP2.02 SCALE: 1 : 150

BERNARD AVENUE

SOLE MULTI-FAMILY RESIDENTIAL PROJECT

1660-1670 Bernard Avenue, Kelowna, B.C V1Y6R9

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PROJECT NO. 222088

DRAWING TITLE

LEVEL 6 FLOOR PLAN

DRAWING NO.

DP2.04

1 Level 06 Floor Plan
DP2.04 SCALE: 1:150



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DATE 9/19/2023 10:47:03 AM

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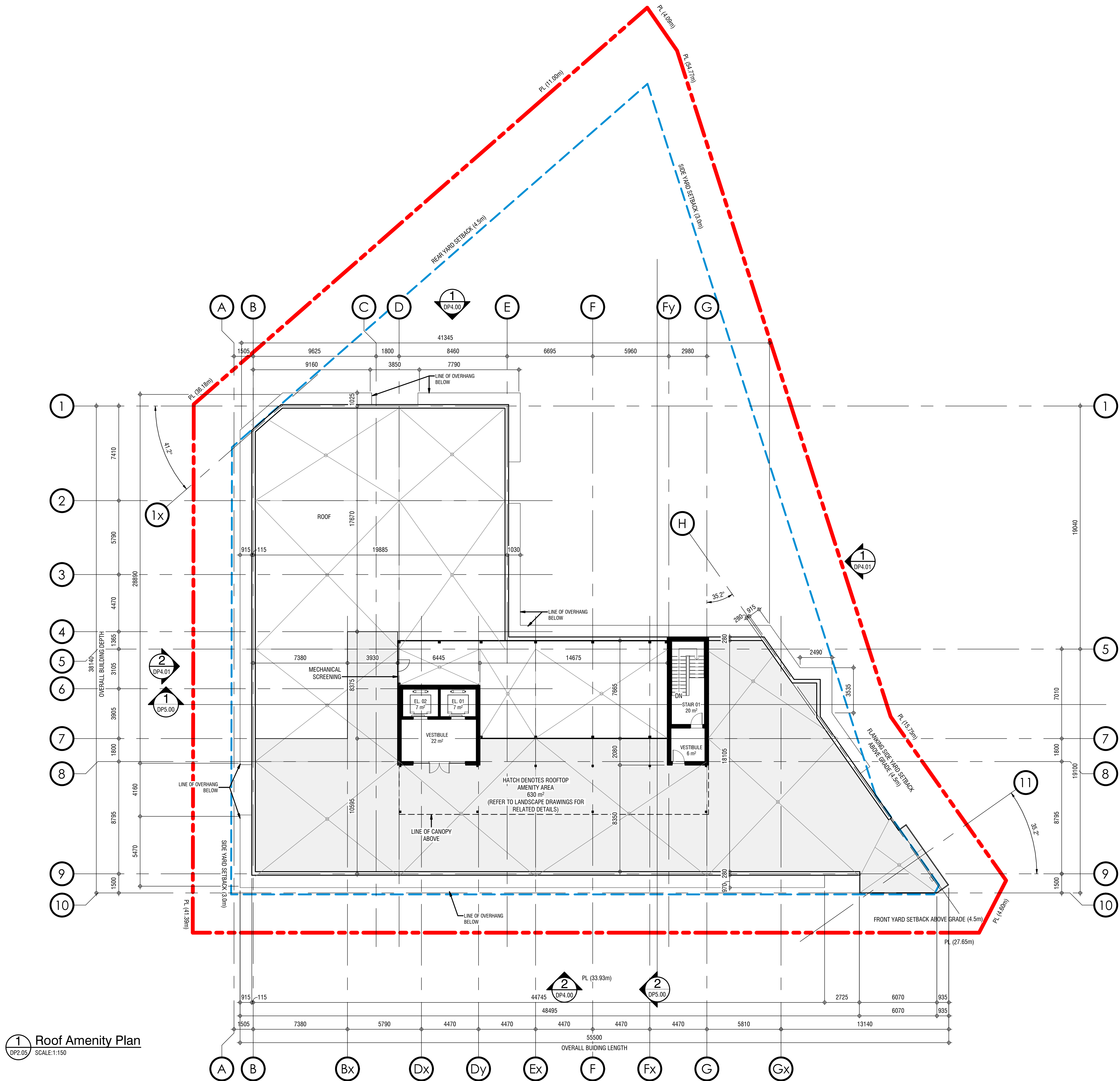
PROJECT NO. 222088

DRAWING TITLE

ROOF AMENITY LEVEL PLAN

DRAWING NO.

DP2.05



1 Roof Amenity Plan
DP2.05 SCALE:1:150

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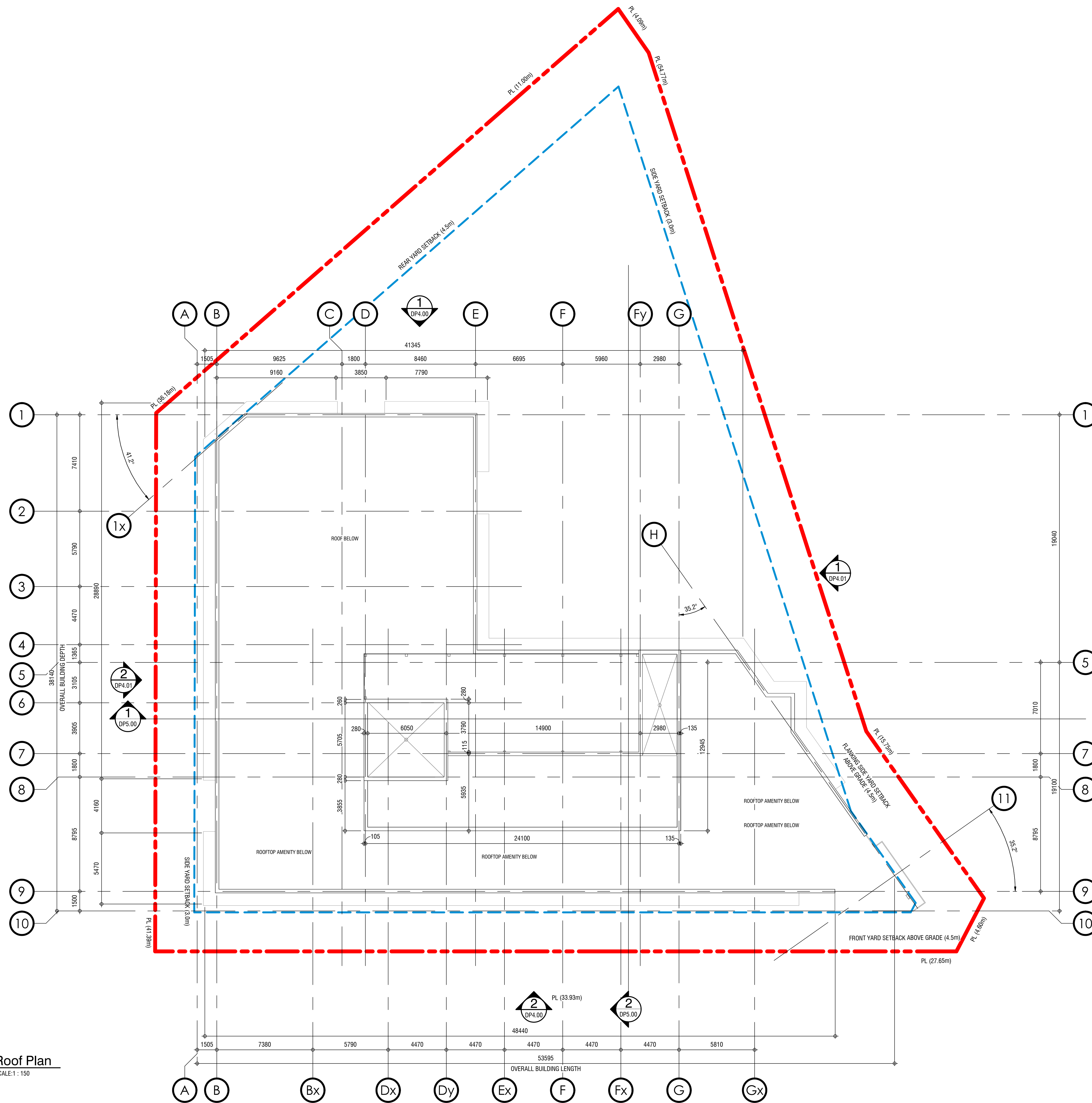
DRAWING TITLE

ROOF PLAN

DRAWING NO.

DP2.06

1 Roof Plan
DP2.06 SCALE: 1:150



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PROJECT NO. 222088 PROJECT NORTH

DRAWING TITLE

BUILDING ELEVATIONS

DRAWING NO.

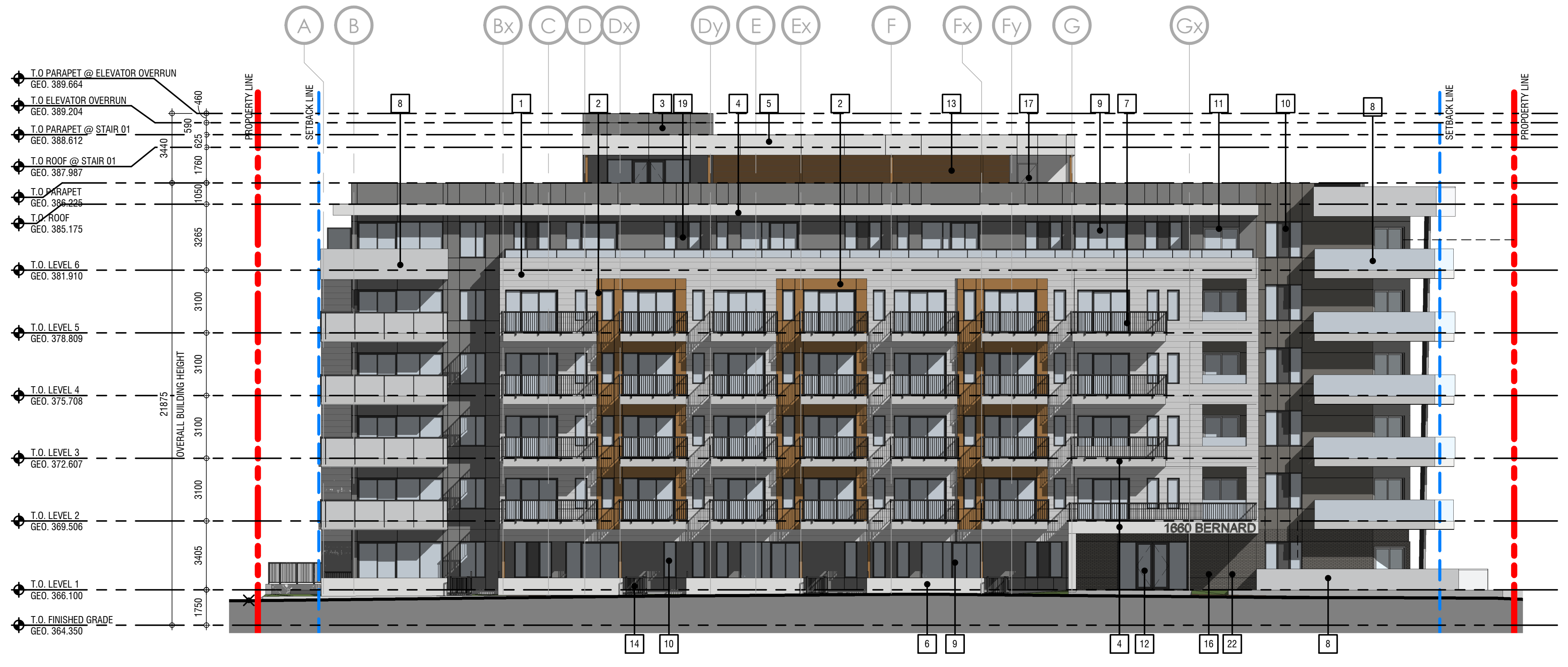
DP4.00

Elevation - Code Legend

- | | |
|----|---|
| 1 | CEMENTITIOUS BOARD - ARCTIC WHITE |
| 2 | PREFINISHED METAL PLATE PANEL (WOOD GRAIN FINISH) - OAK |
| 3 | CEMENTITIOUS BOARD - CHARCOAL |
| 4 | PREFINISHED METAL PLATE FASCIA - ARCTIC WHITE |
| 5 | FIBRE CEMENT PANEL - ARCTIC WHITE |
| 6 | CIP CONCRETE PLANTER - WHITE |
| 7 | ALUMINIUM RAILING PICKET (CHARCOAL) - FACE MOUNTED |
| 8 | GLAZED GUARD (FROSTED) - FACE MOUNTED |
| 9 | PREFINISHED ALUMINIUM SLIDING DOOR C/W VISION GLASS SIDELIGHT |
| 10 | SEALED GLAZING UNIT C/W CHARCOAL MULLIONS |
| 11 | PREFINISHED ALUMINIUM SLIDING DOOR |
| 12 | PREFINISHED ALUMINIUM SWING DOOR(S) C/W SIDELIGHT |
| 13 | FIBRE CEMENT LAP SIDING (WOOD GRAIN FINISH) - OAK |
| 14 | PRE-FINISHED ALUMINIUM GUARD RAIL |
| 15 | PRE-FINISHED STEEL COLUMN |
| 16 | SIAMESE / FIRE DEPARTMENT CONNECTION |
| 17 | PREFINISHED HOLLOW METAL DOOR - COLOUR TO MATCH ADJACENT CLADDING |
| 18 | PREFINISHED ALUMINIUM BALCONY SCREENING - TEMPERED FROSTED GLASS |
| 19 | PREFINISHED METAL SPANDREL- CHARCOAL GREY |
| 20 | PREFINISHED METAL SPANDREL- OAK BROWN |
| 21 | PREFINISHED METAL SPANDREL-ARCTIC WHITE |
| 22 | BRICK |



1 North Elevation
DP4.00 SCALE: 1 : 150



2 South Elevation
DP4.00 SCALE: 1 : 150

**SOLE MULTI-FAMILY
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1660-1670 Bernard Avenue, Kelowna, B.C
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PROJECT NO. 222088 PROJECT NORTH

DRAWING TITLE

BUILDING ELEVATIONS

DRAWING NO.

DP4.01

Elevation - Code Legend	
1	CEMENTITIOUS BOARD - ARCTIC WHITE
2	PREFINISHED METAL PLATE PANEL (WOOD GRAIN FINISH) - OAK
3	CEMENTITIOUS BOARD - CHARCOAL
4	PREFINISHED METAL PLATE FASCIA - ARCTIC WHITE
5	FIBRE CEMENT PANEL - ARCTIC WHITE
6	CIP CONCRETE PLANTER - WHITE
7	ALUMINIUM RAILING PICKET (CHARCOAL) - FACE MOUNTED
8	GLAZED GUARD (FROSTED) - FACE MOUNTED
9	PREFINISHED ALUMINIUM SLIDING DOOR C/W VISION GLASS SIDELIGHT
10	SEALED GLAZING UNIT C/W CHARCOAL MULLIONS
11	PREFINISHED ALUMINIUM SLIDING DOOR
12	PREFINISHED ALUMINIUM SWING DOOR(S) C/W SIDELIGHT
13	FIBRE CEMENT LAP SIDING (WOOD GRAIN FINISH) - OAK
14	PRE-FINISHED ALUMINIUM GUARD RAIL
15	PRE-FINISHED STEEL COLUMN
16	SIAMESE / FIRE DEPARTMENT CONNECTION
17	PREFINISHED HOLLOW METAL DOOR - COLOUR TO MATCH ADJACENT CLADDING
18	PREFINISHED ALUMINIUM BALCONY SCREENING - TEMPERED FROSTED GLASS
19	PREFINISHED METAL SPANDREL- CHARCOAL GREY
20	PREFINISHED METAL SPANDREL- OAK BROWN
21	PREFINISHED METAL SPANDREL-ARCTIC WHITE
22	BRICK



1 East Elevation
DP4.01 SCALE: 1 : 150



2 West Elevation
DP4.01 SCALE: 1 : 150



STREET VIEW FROM BERNARD AVENUE

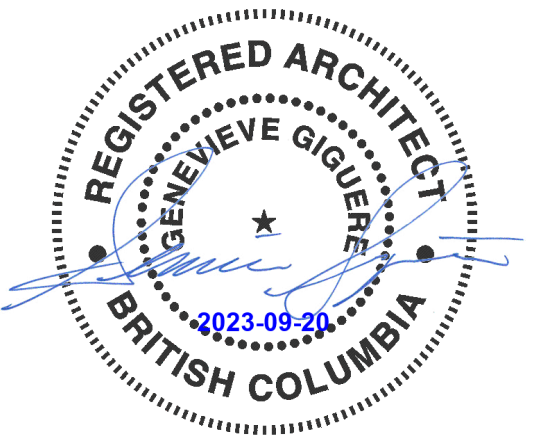


STREET VIEW FROM CHERRY CRESCENT

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RESIDENTIAL PROJECT**

1660-1670 Bernard Avenue, Kelowna, B.C
V1Y6R9

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PROJECT NO. 222088 PROJECT NORTH

DRAWING TITLE

**BUILDING ELEVATIONS - 3D
VIEWS**

DRAWING NO.

DP4.02

SOLE MULTI-FAMILY RESIDENTIAL PROJECT

1660-1670 Bernard Avenue, Kelowna, B.C V1Y6R9

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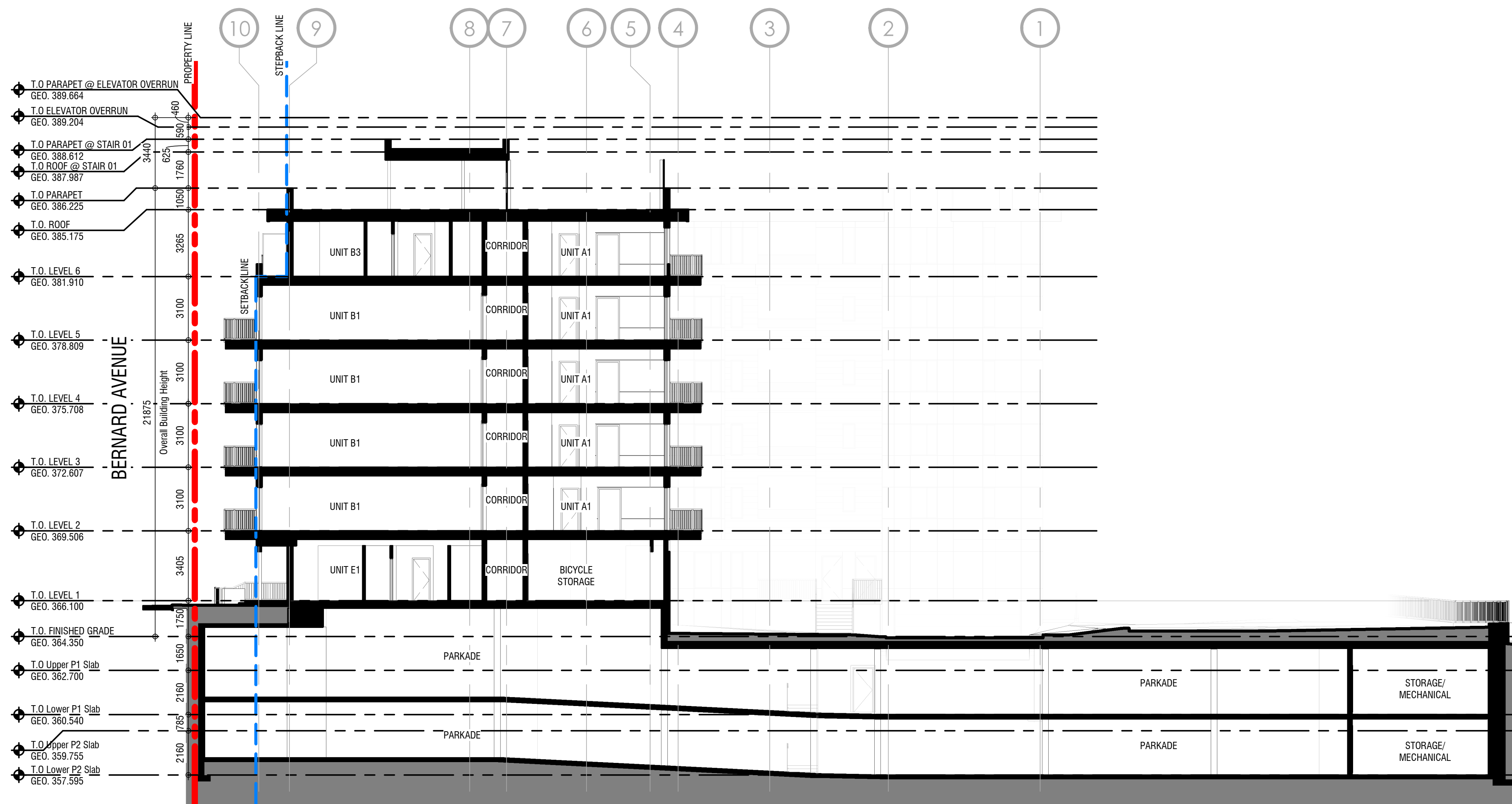
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CHECKED BY	SH PROJECT NORTH
PROJECT NO.	222088
DRAWING TITLE	BUILDING SECTIONS
DRAWING NO.	

DP5.00



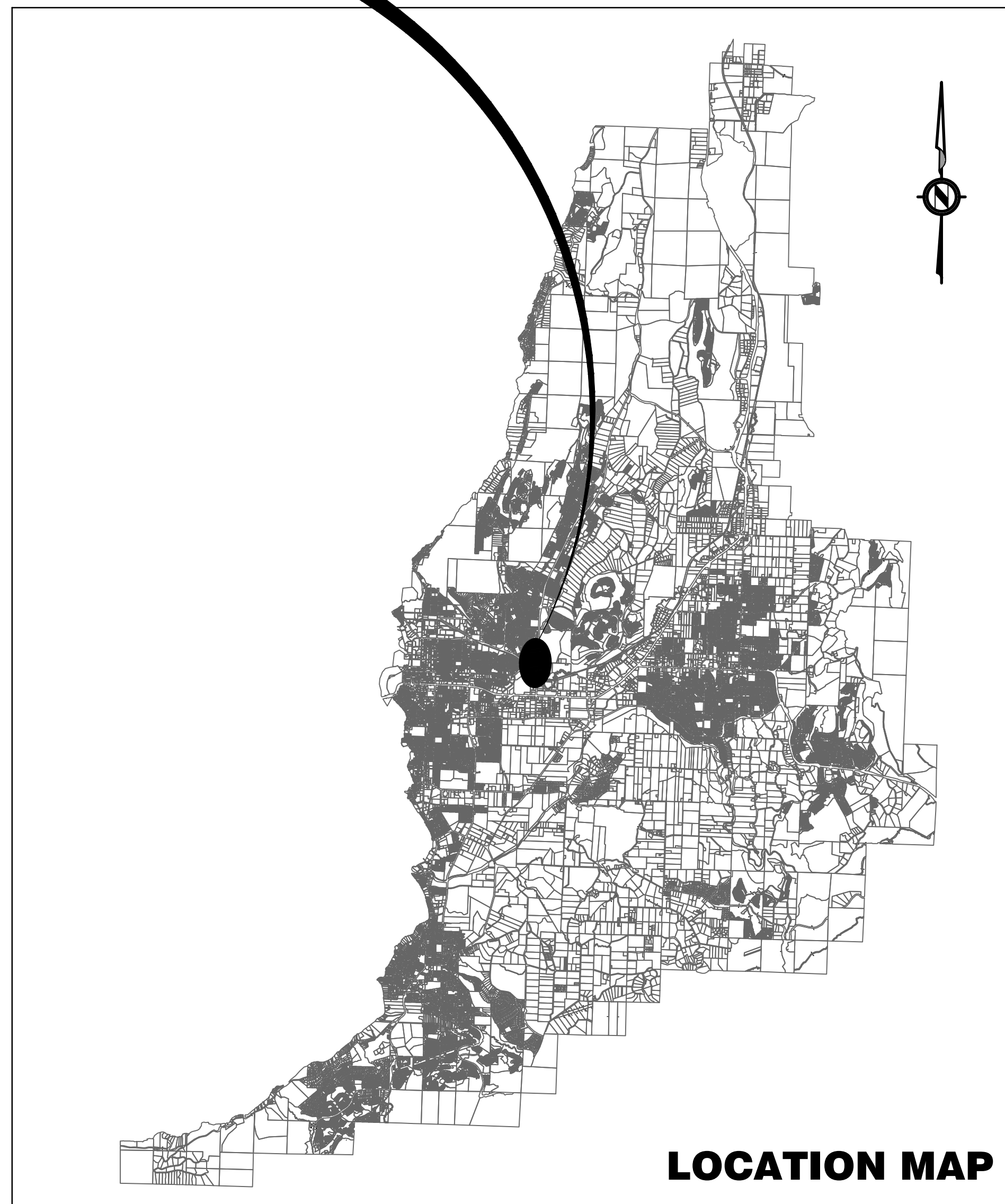
1 Building Section 1
DP5.00 SCALE: 1:150



2 Building Section 2
DP5.00 SCALE: 1:150

DRAWINGS FOR PROPOSED DEVELOPMENT LOT 2 - 3, PLAN KAP12275 BERNARD AVE & CHERRY CRESCENT WEST, KELOWNA, BC

PROJECT LOCATION



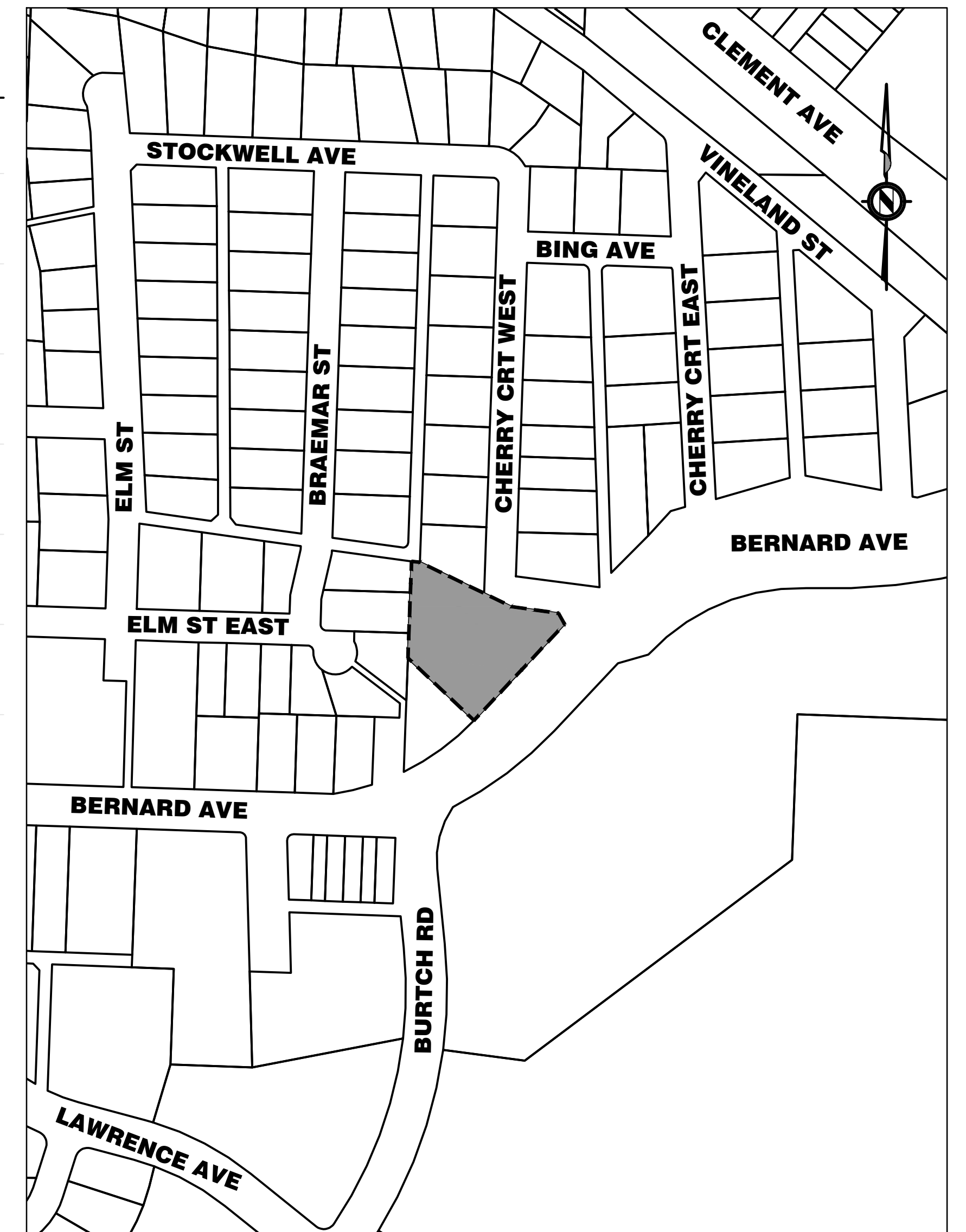
LOCATION MAP

CITY OF KELOWNA

SCALE: NTS

SEPTEMBER 2023 INDEX OF DRAWING SHEETS

SHEET TITLE	DRAWING SHEET NO:
COVER	22-3120-C10
STANDARD NOTES	22-3120-C20
SERVICING PLAN	22-3120-C30
GRADING PLAN	22-3120-C40
STORMWATER MANAGEMENT PLAN	22-3120-C50
EROSION & SEDIMENT CONTROL PLAN	22-3120-C60



INDEX MAP

SCALE: 1:2000

**APLIN & MARTIN PROJECT NO: 22-3120
 ISSUED FOR DEVELOPMENT PERMIT - REV. 0
 2023-09-13**

22-3120-C10

GENERAL NOTES:

- ALL WORKS TO CONFORM TO THE CITY OF KELOWNA BYLAW NO. 7900 AND THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) STANDARDS, SPECIFICATIONS AND STANDARD DETAIL DRAWINGS UNLESS OTHERWISE SPECIFIED.
- ALL MATERIALS SHALL CONFORM TO THE CITY OF KELOWNA'S APPROVED PRODUCTS LIST.
- SCHEDULE 40 PLASTIC PIPE AND/OR SCHEDULE 80 PLASTIC PIPE SHALL NOT BE USED FOR ANY SITE APPLICATION IN THE WORK.
- ANY REVISIONS TO THESE DRAWINGS MUST BE APPROVED BY THE ENGINEER OF RECORD, WHO SHALL REVIEW ANY CHANGES WITH THE CITY OF KELOWNA DEVELOPMENT ENGINEERING MANAGER.
- CONTRACTOR MUST REQUEST A UTILITY LOCATE THROUGH BC ONE CALL BEFORE EXCAVATING WITH POWER EQUIPMENT.
- WORKSAFE BC IS TO BE NOTIFIED PRIOR TO THE START OF CONSTRUCTION AND CONTRACTOR SHALL BE REGISTERED WITH WORK SAFE BC.
- CONTRACTOR TO EXPOSE ALL EX. UTILITIES AT ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION. CONTRACTOR IS TO VERIFY LOCATION AND INVERTS AND REPORT TO ENGINEER ANY CONFLICTS OR DISCREPANCIES.
- FOR TYPICAL TRENCH SECTION DETAILS SEE CITY OF KELOWNA STANDARD DETAILS DRAWING "SS-G4" OR MMCD STANDARD DRAWING "G4"
- EXISTING UNDERGROUND UTILITIES MAY NEED TO BE LOWERED OR RAISED TO SUIT THE FINAL DESIGN GRADES IN ACCORDANCE WITH MINIMUM AND MAXIMUM COVER REQUIREMENTS FOR EACH UTILITY. IN PARTICULAR, THE DEPTH OF COVER ATOP A HIGH PRESSURE GAS MAIN CANNOT BE REDUCED TO LESS THAN 1200mm OR INCREASED TO MORE THAN 1800mm COVER FROM TOP OF PIPELINE TO FINISHED GRADE. IT MAY BE REQUIRED TO EXCAVATE TEST HOLES TO DETERMINE EXACT DEPTHS OF EXISTING UTILITIES. ANY AREAS OF CONCERN MUST BE REPORTED TO THE DESIGN ENGINEER AND THE UTILITY OWNER. NO WORK SHALL PROCEED ON EXISTING UTILITIES WITHOUT THE APPROVAL OF THE UTILITY OWNER.
- RESIDENTS AND BUSINESS OWNERS AFFECTED BY THE PROPOSED CONSTRUCTION ARE TO BE NOTIFIED BY THE CONTRACTOR IN WRITING 48 HOURS PRIOR TO THE START OF CONSTRUCTION AND PROVIDED WITH THE CONTRACTORS PHONE NUMBER AND SCHEDULE.
- THE DEVELOPER AND CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED TO EXISTING STREETS OR SERVICES BY CONSTRUCTION EQUIPMENT AND/OR TRUCKS HAULING MATERIALS TO THE SITE. THIS WILL INCLUDE DAILY CLEANING OR SWEEPING ALL EXISTING ROADS OF DIRT AND DEBRIS CAUSED BY CONSTRUCTION ACTIVITY, AND REPAIR OF ANY PAVEMENT DAMAGE OR DAMAGE TO PRIVATE PROPERTY.
- TRAFFIC CONTROL IS THE RESPONSIBILITY OF THE DEVELOPER'S CONTRACTOR AND SHALL COMPLY WITH THE CITY OF KELOWNA'S TRAFFIC MANAGEMENT GUIDE (DECEMBER 2010). THE DEVELOPER'S CONTRACTOR SHALL COMPLY WITH PART 18 OF THE OCCUPATIONAL HEALTH AND SAFETY REGULATIONS OF WORKSAFE B.C.. THE DEVELOPER IS TO HAVE, ON SITE, A COPY OF THE CURRENT "B.C. TRAFFIC CONTROL MANUAL FOR WORK ON ROADWAYS" AS PUBLISHED BY THE MINISTRY OF TRANSPORTATION (MOT). VEHICULAR AND PEDESTRIAN ACCESS IS TO BE MAINTAINED ALONG EXISTING ROADS DURING CONSTRUCTION.
- A TRAFFIC MANAGEMENT PLAN WITH LANE CLOSURES MUST BE APPROVED BY THE CITY OF KELOWNA AND/OR THE MINISTRY OF TRANSPORTATION (AS APPLICABLE) PRIOR TO CONSTRUCTION.
- LEGAL SURVEY MONUMENTS ARE TO BE PROTECTED. SHOULD THEY REQUIRE RAISING OR RELOCATING, THE CONTRACTOR MUST NOTIFY THE MUNICIPAL INSPECTOR AT LEAST 72 HOURS IN ADVANCE OF SCHEDULING WORK AFFECTING THEM.
- PIPE BEDDING TO BE MMCD TYPE 1 GRANULAR PIPE BEDDING COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
- PIPE BACKFILL TO BE IMPORTED 75mm MINUS PIT RUN GRAVEL COMPACTED TO 95% MODIFIED PROCTOR DENSITY. WHEN NATIVE SITE GRANULAR BACKFILL IS PROPOSED FOR USE IN TRENCHES THE CONTRACTOR SHALL EMPLOY A PROFESSIONAL GEOTECHNICAL ENGINEER WITH EXPERIENCE IN GEOTECHNICAL ENGINEERING FOR PERFORMANCE OF IN PLACE DENSITY AND SIEVE TESTING. THE SITE MATERIAL MUST FALL WITHIN ONE OF THE GRANULAR BACKFILL MATERIAL SPECIFICATIONS AS PER MMCD.
- WHERE INFILLING OF EXISTING DITCHES, ETC., IS REQUIRED OR PROPOSED, AND WHERE SERVICES ARE CONSTRUCTED IN FILL SECTIONS, THE FILL MATERIAL IS TO BE APPROVED GRANULAR MATERIAL PLACED IN LIFTS NOT EXCEEDING 300mm AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
- FIGURED DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS.
- AFTER CONSTRUCTION, CONTRACTOR TO SUBMIT RED-LINE AS-BUILT DRAWINGS TO THE CONTRACT ADMINISTRATOR (OR ENGINEER OF RECORD) TO BE INCORPORATED TO THE RECORD DRAWINGS PRIOR TO BEING SUBMITTED TO THE CITY OF KELOWNA.
- THE DEVELOPER SHALL EMPLOY A PROFESSIONAL ENGINEER TO DESIGN, INSTALL AND MAINTAIN A SEDIMENT AND EROSION CONTROL SYSTEM IN THE DEVELOPMENT IN ORDER TO PREVENT SILT DISCHARGES TO THE STORM DRAINAGE SYSTEM AND WATERCOURSES. CONSTRUCTION IN AND ABOUT A WATERCOURSE MUST RECEIVE PRIOR APPROVAL FROM THE PROVINCIAL MINISTRY OF ENVIRONMENT AND/OR THE FEDERAL DEPARTMENT OF FISHERIES AND OCEANS, WHERE APPLICABLE.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES PRIOR TO THE START OF EXCAVATION.
- AFTER CONSTRUCTION, RESTORE WORK AREAS AND EXISTING FEATURES TO THEIR ORIGINAL CONDITION OR BETTER.
- ADJUST ALL PROPOSED AND EXISTING APPURTENANCES TO MEET FINAL DESIGN GRADES.
- ALL SURPLUS GRANULAR MATERIAL SHALL BE COORDINATED WITH THE OWNER FOR DISPOSAL.

ROADWORKS NOTES:

- THE DEVELOPER SHALL EMPLOY A PROFESSIONAL ENGINEER WITH EXPERIENCE IN GEOTECHNICAL ENGINEERING FOR PERFORMANCE OF IN-PLACE TESTING DURING THE PREPARATION OF THE SUBGRADE AND CONSTRUCTION OF THE ROAD STRUCTURE TO VERIFY THE ADEQUACY OF THE PROPOSED AND EXISTING ROAD STRUCTURE AND SUBGRADE.
- CHANGES OF GRADE ARE TO BE FORMED BY SMOOTH VERTICAL CURVES.
- ALL LOOSE, ORGANIC, OTHERWISE DELETERIOUS MATERIALS OR SOFT SPOT(S) ARE TO BE EXCAVATED AND REMOVED FROM THE ROADWAY AND UTILITY TRENCHES IN THE ROADWAY UNDER DIRECTION OF GEOTECHNICAL ENGINEER.

ROADWORKS NOTES (CONT'D):

- SUB-BASE AND GRANULAR BASE MATERIALS SHALL BE COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT.
- THE ROAD BASE SHALL EXTEND A MINIMUM OF 0.3m BEYOND BACK OF CURB.
- CATCH BASIN RIM ELEVATIONS GIVEN ARE THE ELEVATION OF THE SURFACE INLET (STANDARD 2.5cm DROP).
- THE CONDITIONS FOR PLACING ASPHALT PAVEMENT AND P.C. CONCRETE SHALL BE IN ACCORDANCE WITH CITY OF KELOWNA STANDARD CONSTRUCTION DOCUMENTS AND MMCD SPECIFICATIONS AND STANDARD DETAIL DRAWINGS APPLICABLE AT THE TIME OF CONSTRUCTION. WEATHER CONDITIONS MUST ALSO BE IN CONFORMANCE WITH MMCD SPECIFICATIONS. SHOULD DEVIANCES BE ALLOWED FROM THESE SPECIFICATIONS, THE CONTRACTOR IS TO ASSUME ALL RESPONSIBILITY FOR THESE PRODUCTS.
- ASPHALTIC CONCRETE ≤ 60MM THICK SHALL BE LAID IN A SINGLE LIFT. REQUIRED ASPHALTIC CONCRETE THICKNESS PROVIDED ON TYPICAL CROSS SECTIONS.
- TIE-INS TO EXISTING PAVEMENT SHALL BE MADE BY CUTTING BACK THE EXISTING PAVEMENT TO SOUND MATERIAL AS NECESSARY TO PRODUCE A NEAT, VERTICAL FACE AND PROVIDE A KEYWAY. PRIOR TO PLACING ASPHALTIC CONCRETE, EXPOSED PAVEMENT FACES AND OTHER ABUTTING STRUCTURES SHALL BE TACK COATED WITH ASPHALT EMULSION.
- ALL EXISTING ASPHALT TO BE REMOVED MUST BE DISPOSED OF AT AN APPROVED SITE.
- PAVEMENT STRUCTURE TO BE CONFIRMED BY GEOTECHNICAL ENGINEER
- ALL ACCESS TO CONFORM TO MMCD SPECIFICATIONS & THE CITY OF KELOWNA BYLAW NO. 7900.

WATERWORKS NOTES:

- WATER MAIN AND SERVICE CONNECTION MATERIALS SHALL CONFORM TO THE CITY OF KELOWNA APPROVED PRODUCTS LIST AND MMCD SECTION 33 11 01. 100-900mm DIAMETER WATER MAINS TO BE CLASS 235 TO AWWA C900. ALL FITTINGS AND VALVES TO BE DUCTILE IRON (DI) TYTON JOINT WITH CLOSED LUGS UNLESS OTHERWISE SPECIFIED. ALL CURB STOPS TO BE FITTED WITH MUELLER TELESCOPING SERVICE BOXES OR APPROVED EQUIVALENT.
- TIE-INS OF PROPOSED WATER MAINS TO EXISTING WATER MAINS ARE TO BE WITNESSED BY APLIN MARTIN AND CITY OF KELOWNA FORCES AT THE DEVELOPER'S EXPENSE UNLESS OTHERWISE NOTED. THE DEVELOPER SHALL SUPPLY ALL MATERIALS AND FITTINGS REQUIRED FOR THE TIE-IN OF THE PROPOSED WATER MAINS. AT TIE-IN POINTS, THE CONTRACTOR SHALL CAP ALL PROPOSED WATER MAINS 1.5m FROM THE EXISTING WATER MAIN WITH THE PROPOSED WATER MAIN SET AT THE LINE AND GRADE OF THE EXISTING WATER MAIN. THE CONTRACTOR SHALL PROVIDE MINIMUM 48 HOURS NOTICE TO CITY OF KELOWNA FORCES TO WITNESS THE TIE-IN.
- UNLESS OTHERWISE SPECIFIED, EXISTING SERVICES TO BE DECOMMISSIONED BY EITHER:
 - REMOVAL OF THE CORPORATION STOP AND OR SADDLE. ONCE COMPLETED THEN A REPAIR CLAMP IS TO BE INSTALLED OVER THE SERVICE LOCATION.
 - CAP THE CORPORATION STOP BY INSTALLING A MANUFACTURER RECOMMENDED BLANK BEHIND THE FLARE/COMPRESSION NUT. AFTER INSTALLATION, THE CORPORATION STOP MUST BE OPENED AND CLOSED TO CONFIRM NO LEAKAGE. AN ABANDONMENT SADDLE IS THEN TO BE INSTALLED OVER THE CORPORATION STOP.
 IF THE WATER SERVICE IS CONNECTED TO THE MAIN WITH A FLANGE THEN A BLIND PLATE IS REQUIRED ON THE TEE. THE SERVICE VALVE MUST THEN BE REMOVED.
- CONTRACTOR TO PROVIDE A MINIMUM 1.5m COVER OVER ALL PROPOSED WATER MAINS. WHERE 1.5m COVER CANNOT BE PROVIDED, PIPES SHALL BE INSULATED AS PER ENGINEER'S SPECIFICATIONS AND AS APPROVED BY THE CITY OF KELOWNA.
- MINIMUM GRADE OF WATER MAINS TO BE 0.10%.
- ALL DOMESTIC SERVICE CONNECTIONS TO BE A MINIMUM OF 19mm DIAMETER UNLESS OTHERWISE SPECIFIED.
- DURING CONSTRUCTION AND AT ANY TIME PRIOR TO ACCEPTANCE AND PRESSURIZING OF WATER MAINS BY THE CITY OF KELOWNA, THE CONTRACTOR, ON BEHALF OF THE DEVELOPER, SHALL PLACE A FIRE HYDRANT OUT OF SERVICE BAG TO INDICATE THAT HYDRANT IS NOT IN USE. NOTIFICATION TO BE GIVEN TO THE CITY PRIOR TO ANY HYDRANT BEING TAKEN OUT OF SERVICE FOR ANY PERIOD OF TIME.
- WATER MAINS SHALL BE MARKED BELOW GRADE USING A METALLIC DETECTABLE REINFORCED UNDERGROUND UTILITY MARKING TAPE. THE TAPE SHALL BE MINIMUM 150mm WIDE, METALLIC BLUE IN COLOUR AND SHALL BE MARKED "CAUTION: WATER LINE BURIED BELOW" THE TAPE IS TO BE INSTALLED ON TOP OF THE PIPE CUSHION, A MINIMUM OF 300mm ABOVE THE TOP OF PIPE. MARKING TAPE SHALL BE "THORTEC" OR APPROVED EQUAL.
- A MINIMUM OF 3m HORIZONTAL SEPARATION EDGE-TO-EDGE AND 0.45m VERTICAL SEPARATION EDGE-TO-EDGE SHALL BE MAINTAINED BETWEEN WATER MAINS AND ALL SANITARY AND STORM SEWERS/SERVICES EXCEPT WHERE NOTED. WHERE THE ABOVE-NOTED SEPARATIONS CAN NOT BE ACHIEVED, THE SANITARY/STORM SEWER SHALL BE CONSTRUCTED OF PRESSURE PIPE SUCH AS HDPE OR PVC WITH FUSED JOINTS AND PRESSURE TESTED TO ASSURE IT IS WATERTIGHT. SANITARY SEWER MAINS SHALL NOT CROSS OVER WATER MAINS.
- WHERE A WATER MAIN CROSSES A SANITARY OR STORM SEWER, THE JOINTS OF THE WATER MAIN, OVER A LENGTH EXTENDING 3m EITHER SIDE OF THE SANITARY/STORM SEWER ARE TO BE WRAPPED WITH "AQUAWRAP" COMPOSITE WRAP OR APPROVED NSF CERTIFIED EQUIVALENT IN ACCORDANCE WITH THE LATEST VERSION OF THE AWWA STANDARDS C217, AND C214 OR C209.
- WHERE NEW CATCHBASIN (CB) LEADS CROSS A WATER MAIN AND DO NOT HAVE A 450mm EDGE-TO-EDGE VERTICAL SEPARATION, THE CB LEAD JOINTS ARE TO BE WRAPPED WITH PETROLATUM TAPE.
- A MINIMUM OF 1.5m HORIZONTAL EDGE-TO-EDGE AND 150mm VERTICAL SEPARATION EDGE-TO-EDGE SHALL BE MAINTAINED BETWEEN WATER MAINS AND ELECTRICAL CONDUITS, GAS MAINS AND TELEPHONE CONDUITS EXCEPT WHERE NOTED.
- CONTRACTOR SHALL CONDUCT PRESSURE TEST IN ACCORDANCE WITH THE CITY OF KELOWNA SPECIFICATIONS.
- CONTRACTOR SHALL FLUSH AND DISINFECT WATER MAINS IN ACCORDANCE WITH THE CITY OF KELOWNA STANDARDS AND AS APPROVED BY THE CITY OF KELOWNA.
- CHLORINE SOLUTIONS SHALL BE NEUTRALIZED IN ACCORDANCE WITH MINISTRY OF THE ENVIRONMENT AND DEPARTMENT OF FISHERIES AND OCEANS PRIOR TO DISCHARGE TO ANY DRAINAGE COURSE. CITY PERMIT REQUIRED IF DISCHARGING INTO CITY INFRASTRUCTURE.
- WHERE PRACTICAL, SERVICE LINES AND METER BOXES SHALL BE INSTALLED TO FINISHED GRADE, OUTSIDE OF DRIVEWAYS OR PAVED AREAS.
- WHERE TIE-INS ARE TO EXISTING ASBESTOS CEMENT WATER MAINS, THE CONTRACTOR WILL REPLACE A MINIMUM OF ONE SEGMENT OF ASBESTOS CEMENT PIPE EITHER SIDE OF CONNECTION.
- CATHODIC PROTECTION TO BE INSTALLED AS PER MMCD SPECIFICATIONS IF REQUIRED.

SANITARY AND STORM SEWER NOTES:

- SANITARY SEWER AND STORM SEWER MATERIALS SHALL CONFORM TO THE CITY OF KELOWNA BYLAW 7900, THE APPROVED PRODUCTS LIST, AND MMCD SECTIONS 33 30 01 AND 33 40 01. SANITARY AND STORM SEWER MAINS UNDER 600mm DIAMETER TO BE SDR35 PVC PROFILE PIPE TO ASTM D2412 AND ASTM D3034 UNLESS OTHERWISE NOTED. SANITARY AND STORM SEWER MAINS 600mm DIAMETER AND LARGER TO BE PVC SDR35 TO ASTM D2412 AND ASTM D3034 OR NON-REINFORCED CLASS 3 CONCRETE CIRCULAR (UP TO AND INCLUDING 675mm DIAMETER) TO ASTM C14M OR REINFORCED CLASS III CONCRETE CIRCULAR TO ASTM C76M OR AS NOTED ON THE DRAWINGS.
- CONTRACTOR TO PROVIDE A MINIMUM 1.2m COVER OVER ALL PROPOSED SANITARY MAINS AND 1.2m COVER OVER ALL PROPOSED STORM MAINS. WHERE 1.2m COVER CANNOT BE PROVIDED, PIPES SHALL BE INSULATED AS PER ENGINEER'S SPECIFICATIONS.
- CONTRACTOR IS TO EXPOSE AND CONFIRM LOCATION AND INVERTS OF ALL EXISTING SANITARY AND STORM SERVICE CONNECTIONS PRIOR TO CONSTRUCTION AND REPORT TO ENGINEER ANY CONFLICTS OR DISCREPANCIES. ALL EXISTING SERVICE CONNECTIONS TO BE REPAIRED IF REQUIRED AND TIED IN TO THE PROPOSED SANITARY OR STORM SEWER.
- RESIDENTIAL SANITARY SEWER SERVICE CONNECTIONS ARE TO BE A MINIMUM 100mm DIAMETER, A MINIMUM 2% GRADE, AND TO BE PVC SDR28 TO ASTM D3034, COMMERCIAL AND INDUSTRIAL SEWER SERVICE CONNECTIONS ARE TO BE A MINIMUM 150mm DIAMETER, A MINIMUM 1% GRADE, AND TO BE PVC SDR28 TO ASTM D3034. STORM SERVICE CONNECTIONS ARE TO BE A MINIMUM 150mm DIAMETER, A MINIMUM 2% GRADE, AND TO BE PVC SDR28 TO ASTM D3034. REFER TO MMCD DRAWINGS S7 AND CITY OF KELOWNA DRAWINGS SS-S7 FOR DETAILS.
- ALL EXISTING AND PROPOSED SERVICE CONNECTIONS ARE TO BE PROVIDED WITH AN INSPECTION CHAMBER. SANITARY AND STORM SERVICE CONNECTIONS TO HAVE A 200mm DIAMETER INSPECTION CHAMBER AS PER COK DRAWING SS-S9.
- CONNECTIONS TO NEW SANITARY AND STORM MAINS UNDER 450mm DIAMETER SHALL BE MADE USING STANDARD WYE FITTINGS, AND CONNECTIONS OVER 450mm DIAMETER TO EXISTING MAINS SHALL BE MADE USING WYE SADDLES OR INSERTA-TEES WHERE NOTED.
- CONNECTIONS TO EXISTING SANITARY AND STORM MAINS SHALL BE MADE USING WYE SADDLES OR INSERTA-TEES, UNLESS OTHERWISE NOTED.
- A MINIMUM OF 3m HORIZONTAL EDGE-TO-EDGE SEPARATION SHALL BE MAINTAINED BETWEEN WATER MAINS AND ALL SANITARY AND STORM SEWERS/SERVICES EXCEPT WHERE NOTED.
- WHERE A SANITARY SEWER OR STORM SEWER CROSSES A WATER MAIN, THE SEWER SHALL BE BELOW THE WATER MAIN WITH A MINIMUM VERTICAL SEPARATION EDGE-TO-EDGE OF 0.45m ALL APPURTENANCES AND FITTINGS WITHIN 3.0m OF CROSSINGS, OVER A LENGTH EXTENDING 3.0m EITHER SIDE OF THE SEWER MAIN, ARE TO BE WRAPPED WITH "AQUAWRAP" COMPOSITE WRAP OR APPROVED NSF CERTIFIED EQUIVALENT IN ACCORDANCE WITH THE LATEST VERSION OF THE INTERIOR HEALTH AUTHORITY STANDARDS, AND THE AWWA STANDARDS C217, AND C214 OR C209.
- ALL MANHOLES TO BE A MINIMUM OF 1050mm DIAMETER PRE-CAST REINFORCED CONCRETE TO ASTM C478 OR AS NOTED ON DRAWINGS. REFER TO CITY OF KELOWNA DRAWING SS-S1a AND MMCD DRAWINGS S1-S5 FOR DETAILS. ALL MANHOLES TO BE PRE-BENCHED UNLESS OTHERWISE SPECIFIED. ALL MANHOLES LABELED WITH DW TO BE DRAINAGE DRYWELLS AS PER COK DRAWINGS SS-S51 AND SS-S52.
- ALL MANHOLE FRAMES WITHIN PAVED ROADWAYS TO BE TERMINAL CITY IRONWORKS LTD. C44A ADJUSTABLE MH FRAME WITH SR-SUPPORT RING. IF ROAD GRADE IS GREATER THAN 8%, A TAPERED CONCRETE GRADE RING UNDER THE DI SUPPORT RING IS ALSO REQUIRED. MANHOLE FRAMES OUTSIDE PAVED ROADWAYS TO BE IN ACCORDANCE WITH THE CITY OF KELOWNA APPROVED PRODUCTS LIST.
- ALL MANHOLE COVERS TO BE IN ACCORDANCE WITH CITY OF KELOWNA DWG SS-S1b.
- SANITARY AND STORM PIPE LENGTHS SHOWN IN PROFILE REPRESENT THE LENGTH FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
- TIE-INS OF PROPOSED MAINS TO EXISTING SANITARY AND STORM SEWER SYSTEMS ARE TO BE PERFORMED BY THE CONTRACTOR. ALL CONNECTIONS TO BE INSPECTED BY APLIN MARTIN AND CITY OF KELOWNA FORCES PRIOR TO BACKFILL. NEW SANITARY AND STORM SEWER MAINS TIED INTO EXISTING MAINS MUST BE PLUGGED UNTIL THEY ARE TESTED AND FLUSHED.
- SANITARY SEWER, STORM SEWER, CATCH BASIN LEAD, AND SUB DRAIN TESTING IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL VIDEO INSPECT COMPLETED SANITARY AND STORM SEWERS UNDER 900MM IN DIAMETER FOLLOWING COMPLETION OF INSTALLATION. SHOULD VIDEO INDICATE APPARENT DEFICIENCIES, ADDITIONAL TESTING AND/OR REPLACEMENT WILL BE REQUIRED AT THE DIRECTION OF THE CONTRACT ADMINISTRATOR AND AT THE COST OF THE CONTRACTOR.
- STORM SEWERS ARE TO BE CONSTRUCTED WITH SEALED JOINTS UNLESS OTHERWISE SPECIFIED ON THE DESIGN DRAWINGS.
- ALL CATCH BASINS TO BE DOBNEY FOUNDRY LTD. B-39B SIDE INLET WITH B-39A FRAME, B-39 GRATE AND ALUMINUM TRAPPING HOOD. ALL CATCH BASINS LOCATED WITHIN ASPHALT AREAS TO BE DOBNEY FOUNDRY LTD. B-39 TOP INLET GRATE WITH B-39A FRAME AND ALUMINUM TRAPPING HOOD. CATCH BASIN LEADS TO BE A MINIMUM 200mm DIAMETER PVC DR35 @ 2.0% MINIMUM SLOPE UNLESS OTHERWISE NOTED.
- ALL LAWN BASINS TO BE 600mm DIAMETER WITH CLOSED BOTTOM AND ALUMINUM TRAPPING HOOD AND SHALL CONFORM TO MMCD DWG. S12 (TYPE 2) UNLESS OTHERWISE NOTED. LAWN BASIN LEADS TO BE A MINIMUM 150mm DIAMETER PVC DR35 @ 1.0% MINIMUM SLOPE UNLESS OTHERWISE NOTED.
- WHERE TIE-INS ARE TO EXISTING ASBESTOS CEMENT MAINS, THE CONTRACTOR WILL REPLACE A MINIMUM OF ONE SEGMENT OF ASBESTOS CEMENT PIPE ON EITHER SIDE OF CONNECTION.

PAVEMENT MARKING AND SIGNAGE NOTES:

- ALL PAVEMENT MARKINGS AND SIGNAGE TO BE TO MINISTRY OF TRANSPORTATION AND CITY OF KELOWNA STANDARDS (MANUAL OF STANDARD TRAFFIC SIGNS & PAVEMENT MARKINGS).
- ALL PROPOSED PAVEMENT MARKINGS TO BE DURABLE MARKINGS (I.E. THERMOPLASTIC LINES) UNLESS OTHERWISE NOTED. COLOR TO BE YELLOW 505-308 OR WHITE 513-301 AS PER MMCD.

The location of existing underground utilities are shown in an approximate way only & have not been independently verified by the owner or its representative. The contractor shall determine the exact location of all existing utilities before commencing work and agree to be fully responsible for any and all damages which might be occasioned by the contractor's failure to exactly locate and preserve any and all underground utilities

LEGAL DESCRIPTION:	LOT 2-3, PLAN KAP12275 BERNARD AVE, KELOWNA, BC	
B.M.	MONUMENT NO.	ELEVATION:

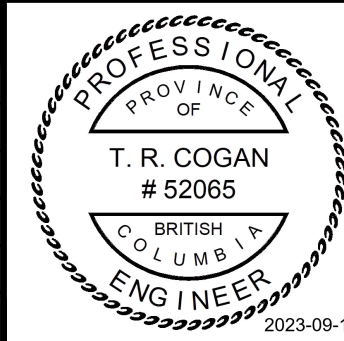
LEGEND	
WATER	----
SAN. SEWER	----
STORM SEWER	----
GAS	----
U/G TELEPHONE	----
U/G ELECTRICAL	----

LEGEND	
	NEW PAVEMENT
	ASPHALT REPLACEMENT
	MILL AND OVERLAY

NAD 83
 INSERSION BASE POINT: 300,000 , 5,500,000
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EGBC Permit to Practice Number #1001018
 1258 Ellis Street, Kelowna, B.C. Canada V1Y 1Z4
 Tel: (250) 448-0157, Fax: (778) 436-2312, Email: general@aplinmartin.com

NO.	YY/MM/DD	BY	REVISION	CH'KD
0	23/09/13	MAP	ISSUED FOR DEVELOPMENT PERMIT	JRG

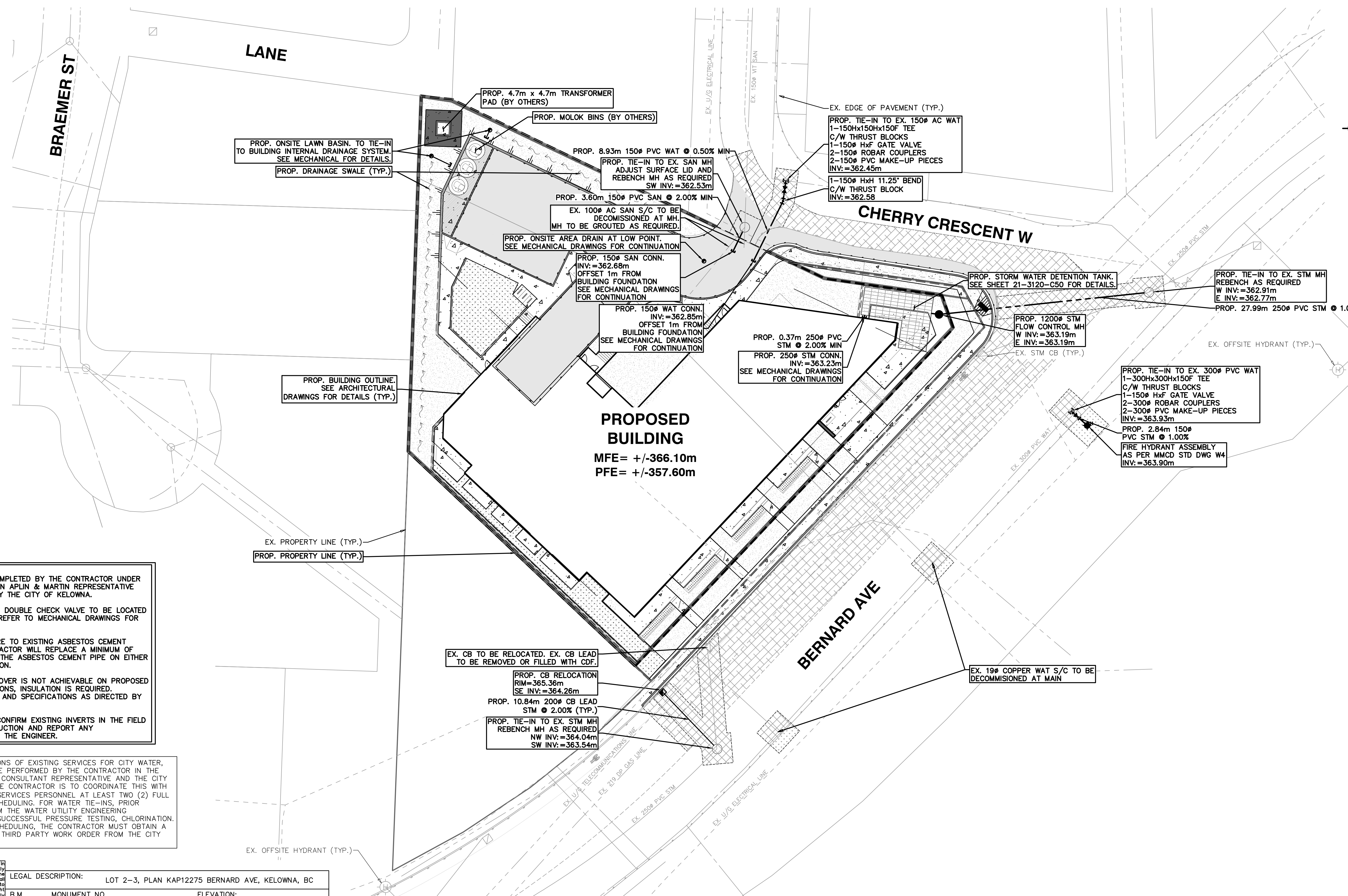


BASE MAP	DESIGN MAP
APPROVED	TRC
DATE	SEPTEMBER 2023
SCALE	HORIZ. N/A VERT. N/A
SCALE NOT ACCURATE OVER LONG DISTANCES	

THE CITY OF KELOWNA
 DESIGN AND CONSTRUCTION
 BERNARD AVE & BURTOCH RD
STANDARD NOTES

DIVISION	
DRAWING NO.	REV. NO.
22-3120-C20	0
CITY DRAWING NO.	

ISSUED FOR DEVELOPMENT PERMIT



UTILITY NOTES:

- TIE-INS TO BE COMPLETED BY THE CONTRACTOR UNDER SUPERVISION OF AN APLIN & MARTIN REPRESENTATIVE AND WITNESSED BY THE CITY OF KELOWNA.
- WATER METER AND DOUBLE CHECK VALVE TO BE LOCATED WITHIN BUILDING. REFER TO MECHANICAL DRAWINGS FOR DETAILS.
- WHERE TIE-INS ARE TO EXISTING ASBESTOS CEMENT MAINS THE CONTRACTOR WILL REPLACE A MINIMUM OF ONE SEGMENT OF THE ASBESTOS CEMENT PIPE ON EITHER SIDE OF CONNECTION.
- WHERE MINIMUM COVER IS NOT ACHIEVABLE ON PROPOSED SERVICE CONNECTIONS, INSULATION IS REQUIRED. INSULATION WIDTH AND SPECIFICATIONS AS DIRECTED BY ENGINEER.
- CONTRACTOR TO CONFIRM EXISTING INVERTS IN THE FIELD PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

* TIE-INS AND DISCONNECTIONS OF EXISTING SERVICES FOR CITY WATER, SANITARY, AND STORM TO BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF APLIN MARTIN CONSULTANT REPRESENTATIVE AND THE CITY OF KELOWNA PERSONNEL. THE CONTRACTOR IS TO COORDINATE THIS WITH THE UTILITY CONSTRUCTION SERVICES PERSONNEL AT LEAST TWO (2) FULL WORKING DAYS PRIOR TO SCHEDULING. FOR WATER TIE-INS, PRIOR APPROVAL IS REQUIRED FROM THE WATER UTILITY ENGINEERING TECHNOLOGIST TO CONFIRM SUCCESSFUL PRESSURE TESTING, CHLORINATION, AND FLUSHING. PRIOR TO SCHEDULING, THE CONTRACTOR MUST OBTAIN A ROAD USAGE PERMIT AND A THIRD PARTY WORK ORDER FROM THE CITY YARD OFFICE.

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LEGAL DESCRIPTION:	LOT 2-3, PLAN KAP12275 BERNARD AVE, KELOWNA, BC
B.M.	MONUMENT NO. ELEVATION:

LEGEND

---	WATER
---	SAN. SEWER
---	STORM SEWER
---	GAS
---	U/G TELEPHONE
---	U/G ELECTRICAL

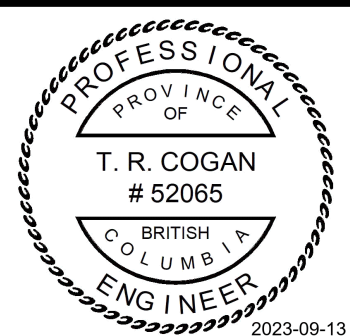
LEGEND

---	NEW PAVEMENT
---	ASPHALT REPLACEMENT
---	MILL AND OVERLAY

NAD 83
 INSERTION BASE POINT: 300,000 x 5,500,000
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NO.	0	23/09/13	MAP	ISSUED FOR DEVELOPMENT PERMIT	JRG
NO.	YY/MM/DD	BY	REVISION		CH'KD

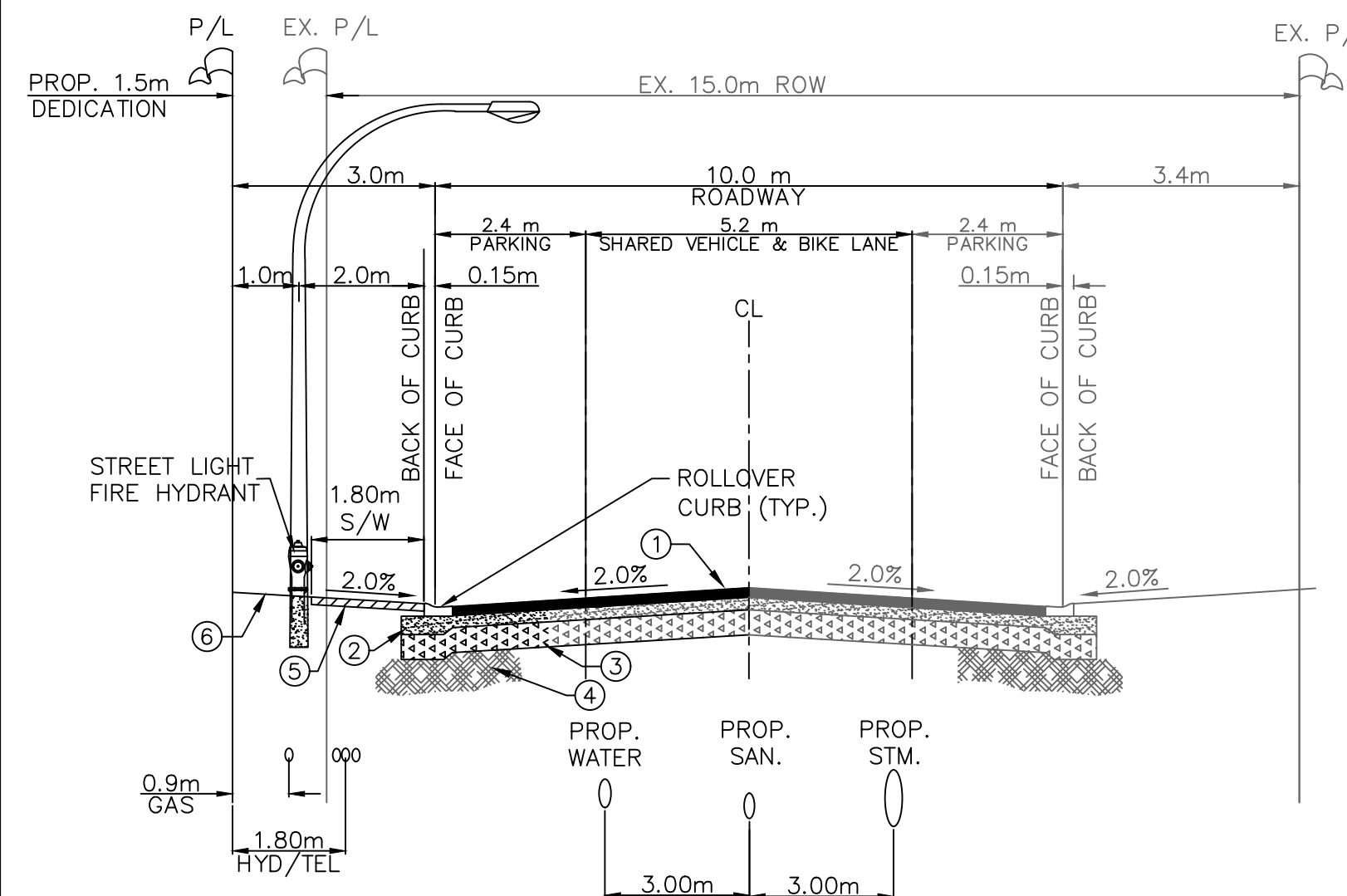


BASE MAP	DESIGN MAP
APPROVED	TRC
DATE	SEPTEMBER 2023
SCALE	HORIZ. 1:250 VERT. N/A
SCALE NOT ACCURATE OVER LONG DISTANCES	

THE CITY OF KELOWNA
 DESIGN AND CONSTRUCTION
 BERNARD AVE & BURICH RD
SERVICING PLAN

DIVISION	
DRAWING NO.	22-3120-C30
REV. NO.	0
CITY DRAWING NO.	

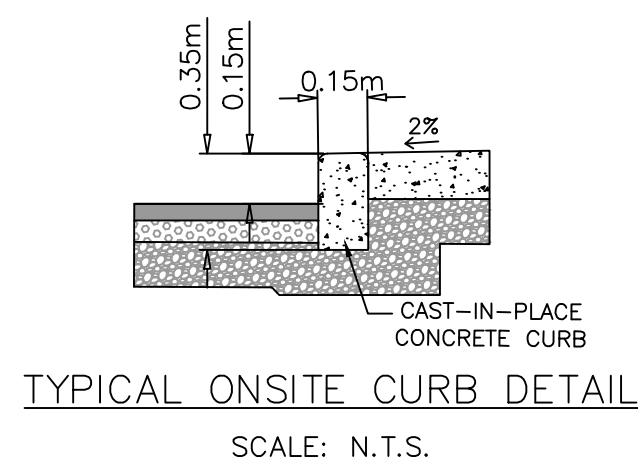
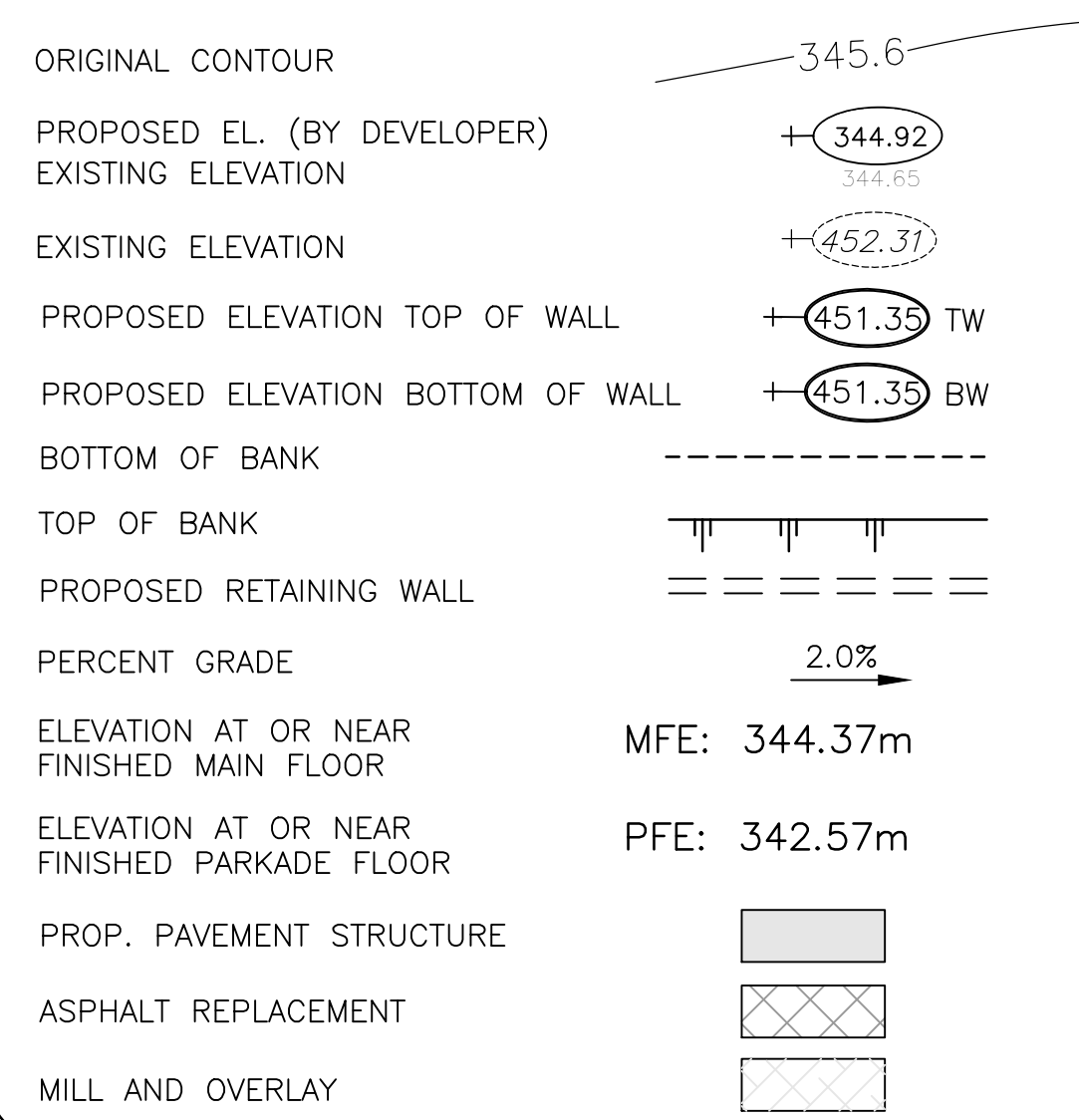
ISSUED FOR DEVELOPMENT PERMIT



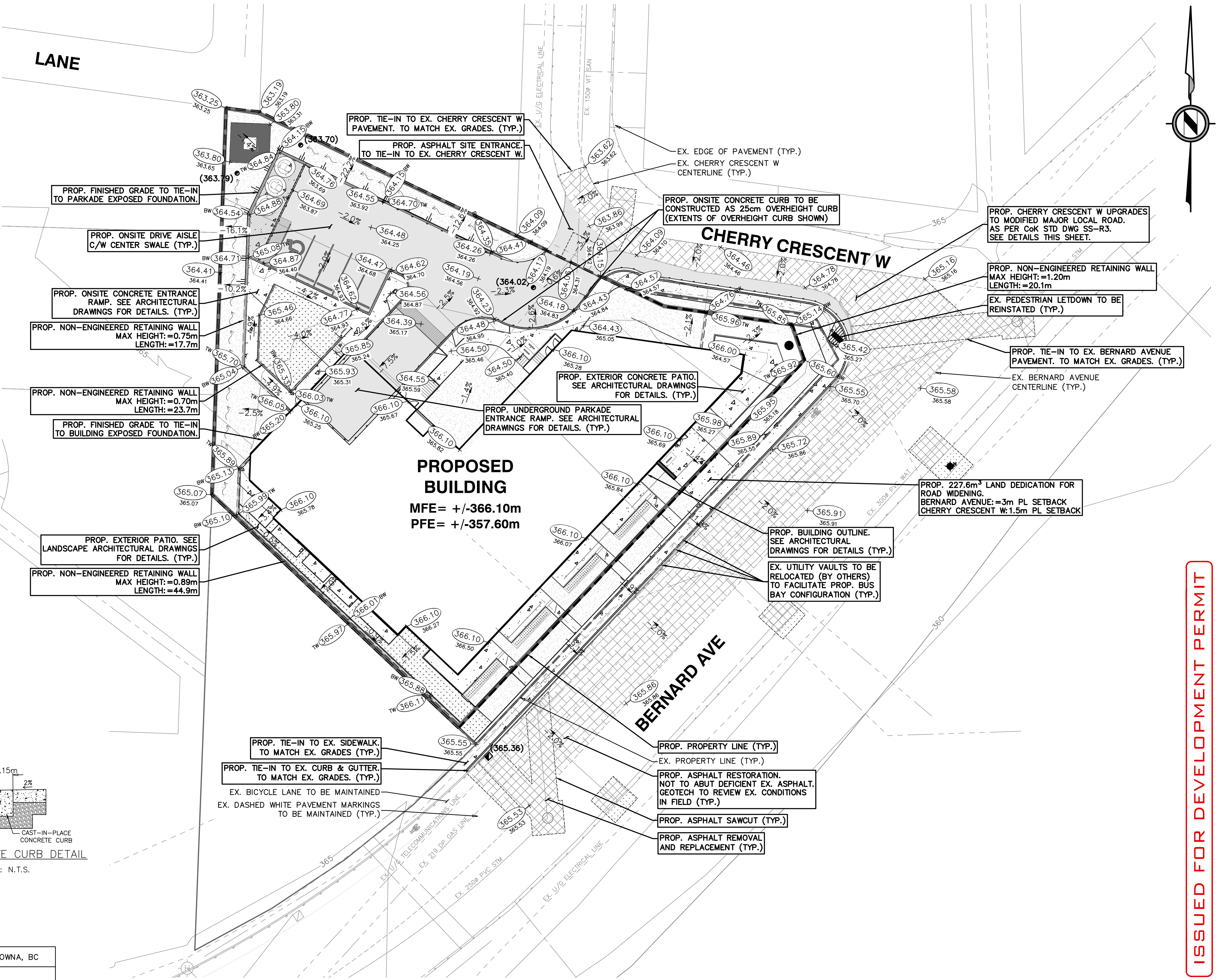
CITY OF KELOWNA ROAD CROSS SECTION
MODIFIED MAJOR LOCAL (18M) SS-R3
SCALE: HOR. 1:100, VER. N.T.S.

- ROAD STRUCTURE:**
- 1 ASPHALT - 50mm
 - 2 MIN. 75mm 20mm MINUS GRANULAR BASE COMPACTED TO 95% MODIFIED PROCTOR DENSITY*
 - 3 MIN. 335mm SELECT GRANULAR SUBBASE COMPACTED TO 95% MODIFIED PROCTOR DENSITY*
 - 4 SUBGRADE - NATIVE MATERIAL COMPACTED TO 95% MODIFIED PROCTOR DENSITY*
 - 5 120mm CONCRETE SIDEWALK WITH MIN. 100mm OF 25mm MINUS GRANULAR BASE COMPACTED TO 95% MODIFIED PROCTOR DENSITY*
 - 6 HARDSCAPING AND/OR LANDSCAPING. SEE LANDSCAPE ARCHITECT DRAWINGS FOR DETAILS.
- *TO BE CONFIRMED BY GEOTECHNICAL ENGINEER IN FIELD

GRADING LEGEND



TYPICAL ONSITE CURB DETAIL
SCALE: N.T.S.



The location of existing underground utilities are shown in an approximate way only & have not been independently verified by the owner or its representative. The contractor shall determine the exact location of all existing utilities before commencing work and agree to be fully responsible for any and all damages which might be occasioned by the contractor's failure to exactly locate and preserve any and all underground utilities.

B.M.	MONUMENT NO.	ELEVATION:
LEGAL DESCRIPTION:	LOT 2-3, PLAN KAP12275 BERNARD AVE, KELOWNA, BC	

LEGEND

WATER	---
SAN. SEWER	---
STORM SEWER	---
GAS	---
U/G TELEPHONE	---
U/G ELECTRICAL	---

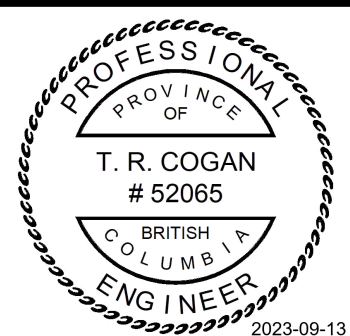
LEGEND

NEW PAVEMENT	▨
ASPHALT REPLACEMENT	▩
MILL AND OVERLAY	▧

NAD 83
INSERTION BASE POINT: 300,000 x 5,500,000
Locations and offsets of existing utilities shown on this plan are not guaranteed to be accurate and must be verified in the field PRIOR TO CONSTRUCTION. The City of Kelowna does not guarantee their accuracy. Concerned persons should not rely on these documents and should verify all information shown by way of site survey and other appropriate methods. The City of Kelowna accepts no liability for use of these files or information.

APLIN MARTIN
EGBC Permit to Practice Number #1001018
1258 Ellis Street, Kelowna, B.C. Canada V1Y 1Z4
Tel: (250) 448-0157, Fax: (778) 436-2312, Email: general@aplinmartin.com

NO.	0	23/09/13	MAP	ISSUED FOR DEVELOPMENT PERMIT	JRG
NO.	YY/MM/DD	BY	REVISION	REVISION	CH'KD



BASE MAP	DESIGN MAP
APPROVED	TRC
DATE	SEPTEMBER 2023
SCALE	HORIZ. 1:250 VERT. N/A
SCALE NOT ACCURATE OVER LONG DISTANCES	

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION
BERNARD AVE & BURTON RD
GRADING PLAN

DIVISION	DRAWING NO.	REV. NO.
	22-3120-C40	0
	CITY DRAWING NO.	

ISSUED FOR DEVELOPMENT PERMIT

100 Year Peak Flow Calculations with 5 Year Release Rate

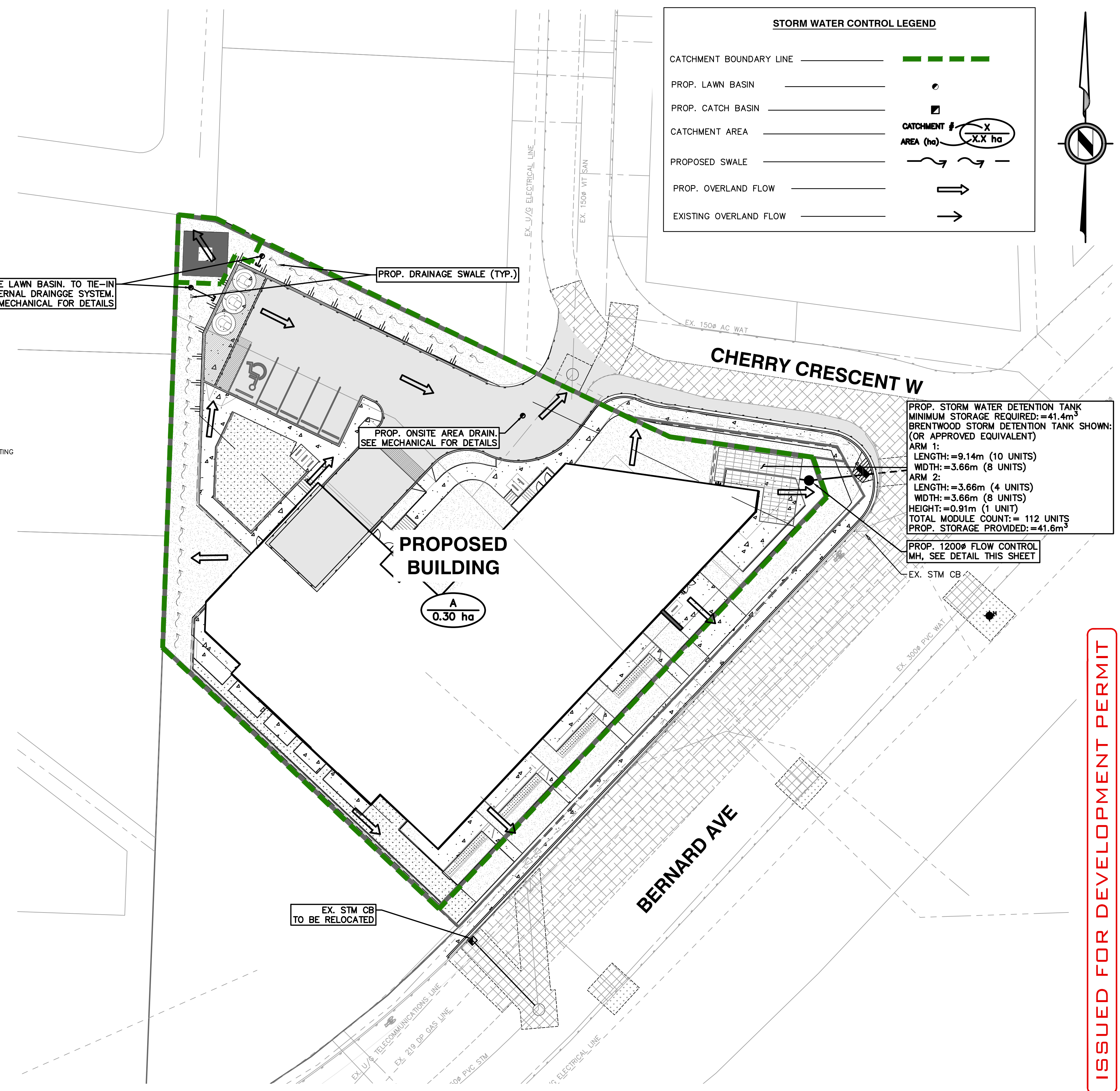
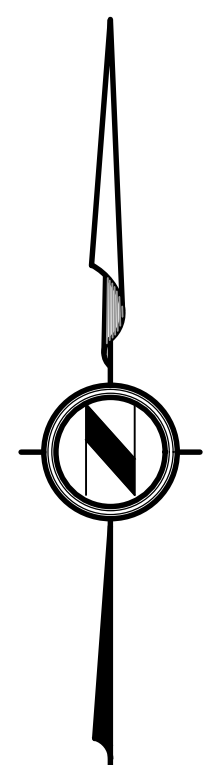
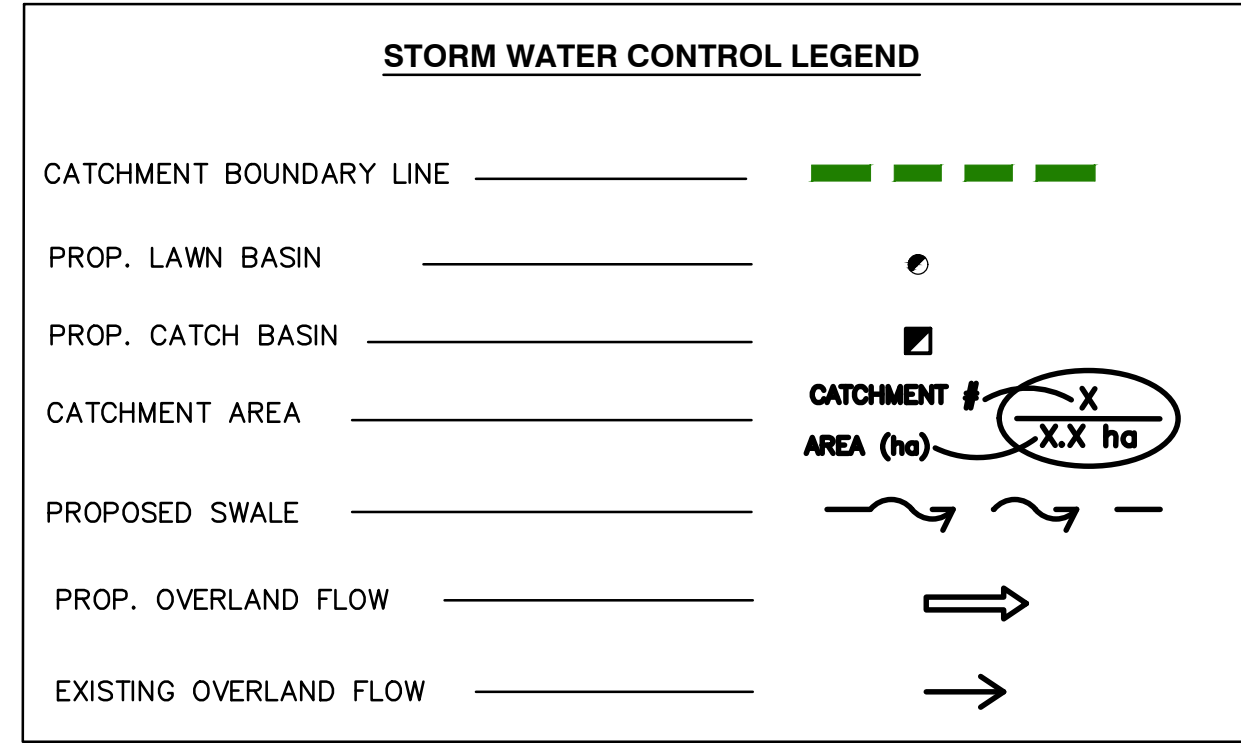
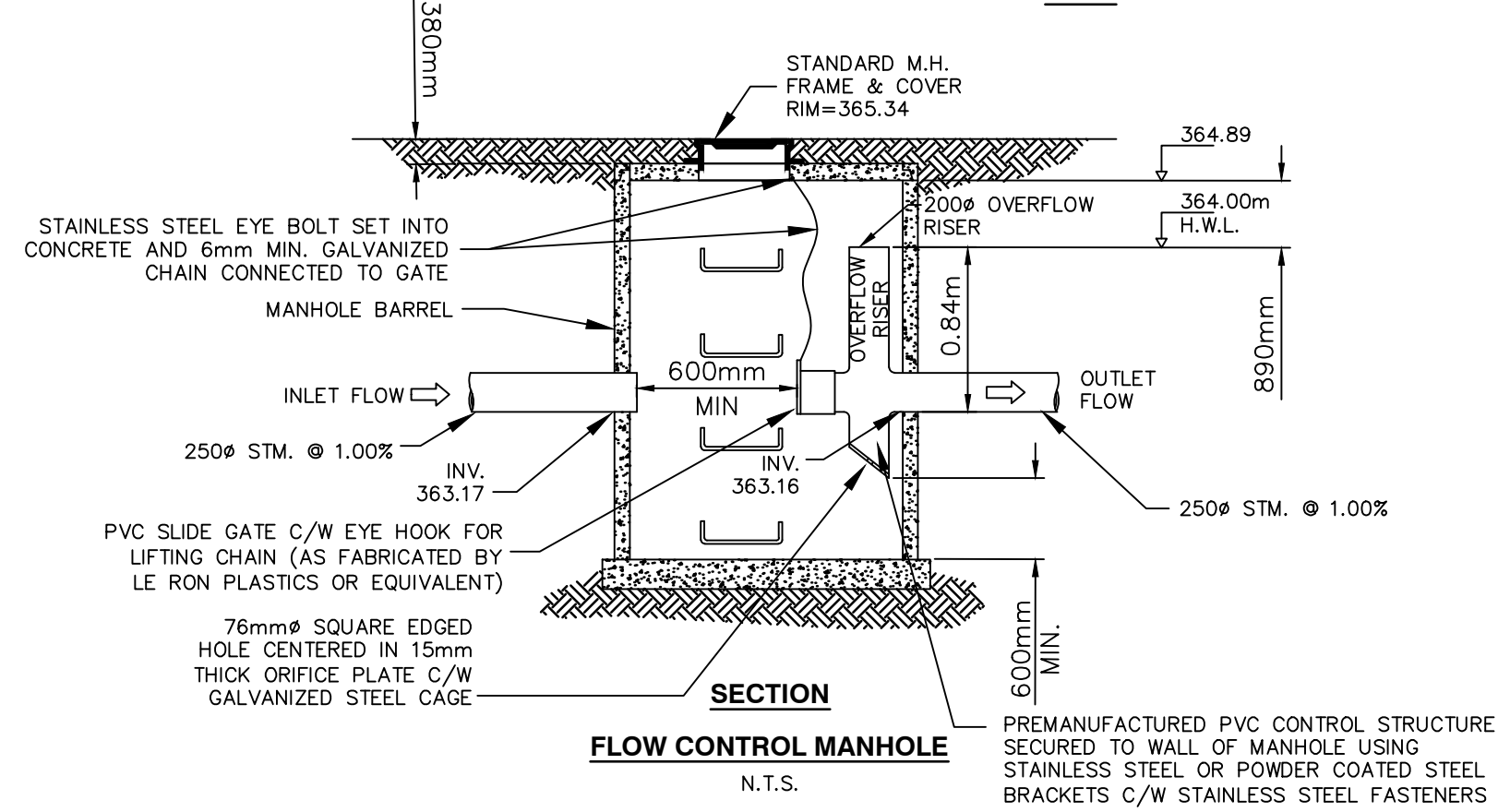
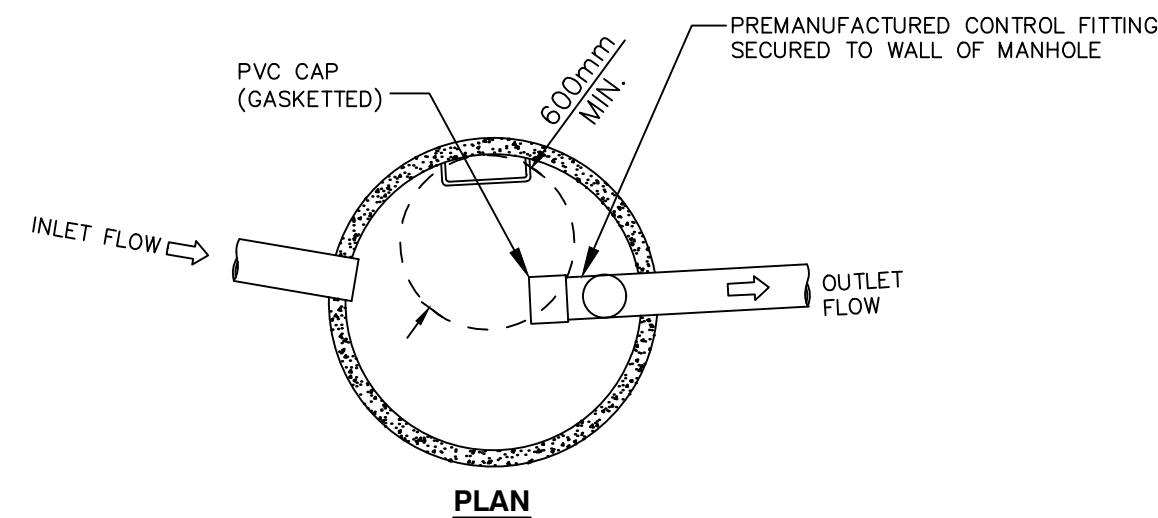
	Tc	Runoff coefficient	Soil Adjustment Factor	Area	Intensity	n	Q
	min			Ha	mm		cms
Q _{pre} (5-YEAR)	10.44	0.20	1.00	0.30	50	0.00278	0.00816
Q _{post} (100 YEAR)	5.50	0.90	1.00	0.30	153	0.00278	0.11315

Storage Volume Required (Modified Rational Method)

$$\text{Storage Volume} = T_r (Q_{p2} - Q_{rel}) + 0.5 \times T_c \times Q_{rel}^2 (1/Q_{p2} - 1/Q_{p1})$$

- T_r = Duration of storm, in seconds
- T_c = Time to concentration, in seconds
- Q_{p1} = Peak flow for storm, T_r = T_c, cms
- Q_{p2} = Peak flow for storm specified, cms
- Q_{rel} = Maximum release rate, cms

Storage Required = 41.1 cu. m				
Rainfall Duration	Rainfall Intensity	Peak Flow	Peak Flow	Required Storage
Tr	I	Q _{p1}	Q _{p2}	
min	mm	cms	cms	cu. m
2	333	0.113	0.246	28.47
5	165	0.113	0.122	34.07
10	97	0.113	0.072	38.09
15	71	0.113	0.052	39.95
20	57	0.113	0.042	40.83
25	48	0.113	0.035	41.12
30	42	0.113	0.031	41.03
45	31	0.113	0.023	39.31
60	24	0.113	0.018	36.31
75	21	0.113	0.015	32.56
90	18	0.113	0.013	28.30
105	16	0.113	0.012	23.68



KELOWNA

Q _{re} (m ³ /s)	Orifice Characteristics			
0.01136	Height (m)	Area (m ²)	Diameter (mm)	(in.)
	0.840	0.00451	76	3.0

Orifice Equation: $Q_{rel} = CA(2gh)^{0.5}$

C = 0.62, g = 9.81
A = Orifice Area, h = head on orifice

LEGAL DESCRIPTION: LOT 2-3, PLAN KAP12275 BERNARD AVE, KELOWNA, BC

B.M. MONUMENT NO. ELEVATION:

LEGEND	LEGEND
WATER	NEW PAVEMENT
SAN, SEWER	ASPHALT REPLACEMENT
STORM SEWER	MILL AND OVERLAY
GAS	
U/G TELEPHONE	
U/G ELECTRICAL	

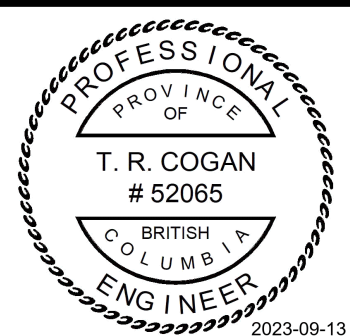
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NO.	YY/MM/DD	BY	REVISION
0	23/09/13	MAP	ISSUED FOR DEVELOPMENT PERMIT



BASE MAP	DESIGN MAP
APPROVED TRC	
DATE	SEPTEMBER 2023
SCALE	HORIZ. 1:250 VERT. N/A
SCALE NOT ACCURATE OVER LONG DISTANCES	

THE CITY OF KELOWNA

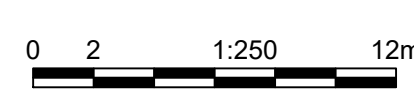
DESIGN AND CONSTRUCTION

BERNARD AVE & BURICH RD

STORMWATER MANAGEMENT PLAN

DRAWING NO.	REV. NO.
22-3120-C50	0
CITY DRAWING NO.	

ISSUED FOR DEVELOPMENT PERMIT



SEDIMENT AND EROSION CONTROL MEASURES:

IT IS IMPERATIVE THAT THE CONSTRUCTION OF THIS SITE COMPLY WITH THE REQUIREMENTS OUTLINED IN THE CITY OF KELOWNA BYLAW NO. 7900 AND THE DEPARTMENT OF FISHERIES AND OCEANS LAND DEVELOPMENT GUIDELINES. SPECIFICALLY, ALL STORMWATER RELEASED FROM THIS SITE MUST BE BELOW 75mg/L TSS. THE FOLLOWING STRATEGIES ARE THE MINIMUM EFFORTS THAT WILL BE THE RESPONSIBILITY OF THE DEVELOPER, THE CONTRACTOR AND THEIR AGENTS. SOME OR ALL OF THESE ACTIONS MAY BE ASSIGNED TO OTHERS THROUGH CONTRACTUAL ARRANGEMENTS.

GENERAL

1. ALL WORK TO BE UNDERTAKEN AND COMPLETED BY CONTRACTOR IN SUCH A MANNER AS TO PREVENT THE RELEASE OF SEDIMENT LADEN WATER INTO ANY ROADSIDE DITCH, STORM SEWER, OR WATERCOURSE. THE CONTRACTOR IS EXPLICITLY RESPONSIBLE FOR THESE WORKS AND NO EXTRAS WILL BE PAID RELATING TO SEDIMENT AND EROSION CONTROL.
2. ALL SEDIMENT CONTROL FACILITIES SHOWN MUST BE INSTALLED AND IN PLACE UNTIL THE PROJECT IS ACCEPTED AS SUBSTANTIALLY COMPLETE BY THE CITY OF KELOWNA AND PLACED ON MAINTENANCE.
3. WHILE SITE CONSTRUCTION IS ONGOING, THE CONTRACTOR IS TO BE RESPONSIBLE FOR ENSURING SEDIMENT CONTROL FACILITIES ARE MAINTAINED AND WORKING ADEQUATELY TO CONTROL ALL DISCHARGES FROM THE SITE. ALL FACILITIES SHALL BE INSPECTED BY A QUALIFIED PROFESSIONAL ON A WEEKLY BASIS AND FOLLOWING ALL RAIN EVENTS TO ENSURE PROPER OPERATION UNTIL REMOVAL. STORMWATER MUST BE MONITORED, AND, WHERE APPLICABLE, TESTED AFTER RAIN EVENTS. TEST RESULTS TO BE SUBMITTED TO THE ENGINEER FOR REVIEW IN A TIMELY MANNER. TURBIDITY TESTING WILL BE CONSIDERED EQUIVALENT WHEREBY IF RUNOFF MEASURES LESS THAN 50mg/L TSS LAB TESTING WILL NOT BE NECESSARY. SHOULD A SITE BE DETERMINED TO BE NON-COMPLIANT, THE PROFESSIONAL MUST PROVIDE A REMEDIATION PLAN TO THE CITY WITHIN TWO DAYS OF THE EVENT.
4. MAINTENANCE SHALL INCLUDE, BUT IS NOT LIMITED TO: REPAIRING OR REPLACING SILT FENCING, REPAIRING CONSTRUCTION ENTRANCE, SPREADING STRAW, HYDROSEEDING, STREET SWEEPING, FLUSHING OF THE STORM SEWERS.
5. SLOPES STEEPER THAN 3:1 TO BE TRACK-WALKED AND HYDROMULCHED WITH FLEXGUARD OR AN APPROVED EQUIVALENT WITH APPLICATION RATE PER MANUFACTURER'S SPECIFICATIONS, BASED ON SLOPE AND SLOPE STABILITY.
6. SLOPES > 3:1 AND WITH A LENGTH >10m TO BE BROKEN UP WITH TERRA TUBES AT 15' TO THE SLOPE.
7. SILT FENCE IS TO BE 'KONTROL SILT FENCE PLUS' OR EQUIVALENT AS APPROVED BY THE ENGINEER. FENCE TO HAVE MIN. CLEAR WATER FLOW RATE OF 0.0305cms/sm (0.10cfs/sf). FENCE TO BE STAPLED @ 150mm O/C TO 100mmØ TREATED POSTS SPACED AT 1.0m O/C. BOTTOM OF SILT FENCE TO BE ANCHORED AS PER DETAIL.
8. ANY IRREGULARITIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

STAGE 1 – SITE CLEARING & GRUBBING PHASE

1. PRIOR TO ANY CLEARING OR EXCAVATION, THE SITE CONTRACTOR SHALL INSTALL SILT FENCE ALONG THE SITE PERIMETER.
2. SITE CLEARING TO BE CONDUCTED ON A SELECTIVE AND AS-NEEDED BASIS WITH EXPOSED SOILS STABILIZED THROUGH REPLANTING OR RESEEDING AND PROTECTED WITH EITHER STRAW OR POLY SHEETING COVER.
3. DURING THE SITE CLEARING OPERATIONS, PROVIDE MECHANICAL SWEEPING (NOT FLUSHING) ACROSS THE FRONTAGE OF THE DEVELOPMENT PROPERTY TO REMOVE ANY ACCUMULATION OF SILT FROM THE SITE ENTRANCES OR AS DIRECTED BY THE ENGINEER OF RECORD.

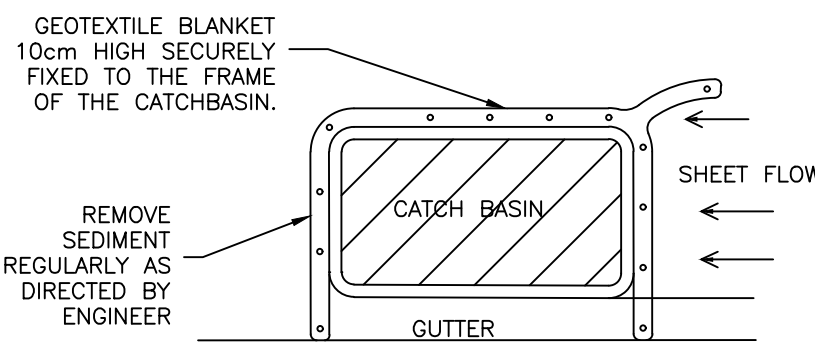
STAGE 2 – CONSTRUCTION OF THE ROADS AND UNDERGROUND UTILITIES PHASE

1. THE PROPOSED STORM WORKS SHALL NOT BE CONNECTED TO THE EXISTING STORM SYSTEM UNTIL THE STORMWATER TREATMENT UNIT IS OPERATIONAL – IF APPLICABLE.
2. STOCKPILES OF EXCAVATED MATERIAL (IF RETAINED ONSITE) WITH A SLOPE GREATER THAN 3:1, OR IF LEFT > 12 HOURS WITH A HEIGHT EXCEEDING 3M VERTICAL, ARE TO BE PROTECTED WITH 6mm-THICK POLYETHYLENE SHEETING (OR SIMILAR) AND SURROUNDED BY SILT FENCE TO MINIMIZE SOIL EROSION DUE TO RAINFALL EVENTS.
3. AFTER INSTALLATION OF THE CB'S, 'FILTREXX INLETSOXX' OR APPROVED EQUIVALENT CB SURROUNDS SHALL BE INSTALLED AROUND THE CB TO PREVENT SILT FROM ENTERING THE STORM SEWER SYSTEM. CLEAN AND REPLACE AS NECESSARY.
4. 'TERRATUBE' COMPOST TUBES MAY BE INSTALLED AS CHECK DAMS.
5. A LAYER OF STRAW MULCH IS TO BE PLACED OVER ALL ERODABLE SOIL AREAS TO MINIMIZE SOIL EROSION IN THE EVENT OF RAINFALL DURING OR AFTER THE ROUGH LOT GRADING OPERATION.
6. DURING THE UNDERGROUNDS CONSTRUCTION, AND/OR ANY OFFSITE HAULING, PROVIDE MECHANICAL SWEEPING (NOT FLUSHING) ACROSS THE FRONTAGE OF THE DEVELOPMENT PROPERTY TO REMOVE ANY ACCUMULATION OF SILT FROM THE SITE ENTRANCES OR AS DIRECTED BY THE ENGINEER OF RECORD.

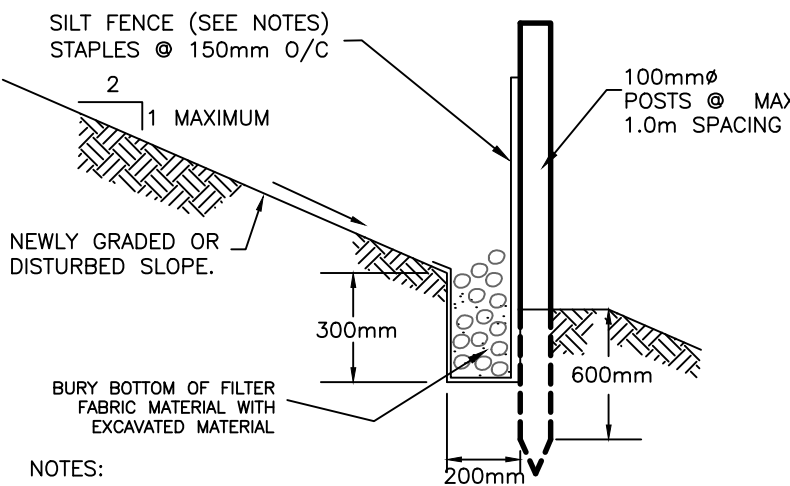
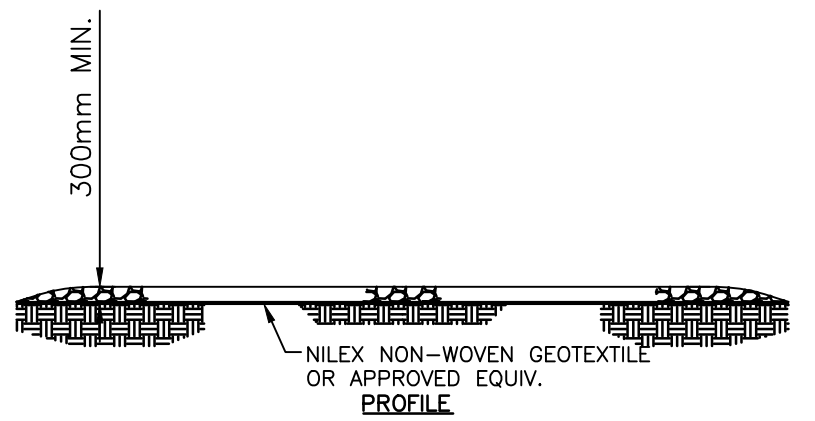
STAGE 3 – BUILDING & COMMISSIONING PHASE

1. ONLY UPON COMPLETION OF ALL GRADING AND LANDSCAPING WITH THE ESTABLISHMENT OF VEGETATION MAY THE SILT CONTROL MEASURES BE DECOMMISSIONED.
2. ALL SEDIMENT SHALL BE REMOVED FROM THE FLOW CONTROL MANHOLE AND ALL STORM SEWERS, LAWN BASINS, AND CATCHBASINS. SUBSEQUENTLY, SEWERS ARE TO BE FLUSHED WITH WASTE WATER AND DISPOSED OF OFFSITE. NO FLUSHED WATER IS TO BE DIRECTED TO THE STORM SYSTEM.
3. ONLY AT THE COMMISSIONING STAGE SHALL THE CONNECTIONS FROM THE CB'S TO THE INFILTRATION TRENCHES BE UNPLUGGED.

THE ENGINEER OF RECORD, OR HIS AGENT, WILL MONITOR THE CONDITIONS AT THE SITE AND PROVIDE ADDITIONAL DIRECTION AS REQUIRED. THIS DIRECTION MAY INCLUDE ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES OR ACTIONS, AS REQUIRED. SHOULD THESE DIRECTIONS NOT BE IMPLEMENTED IN A TIMELY MANNER, WRITTEN NOTICE OF NON-COMFORMANCE WILL BE ISSUED. SHOULD THE SITUATION NOT BE RECTIFIED, THE ENGINEER OF RECORD WILL INITIATE ACTION AT THE COST OF THE CONTRACTOR.



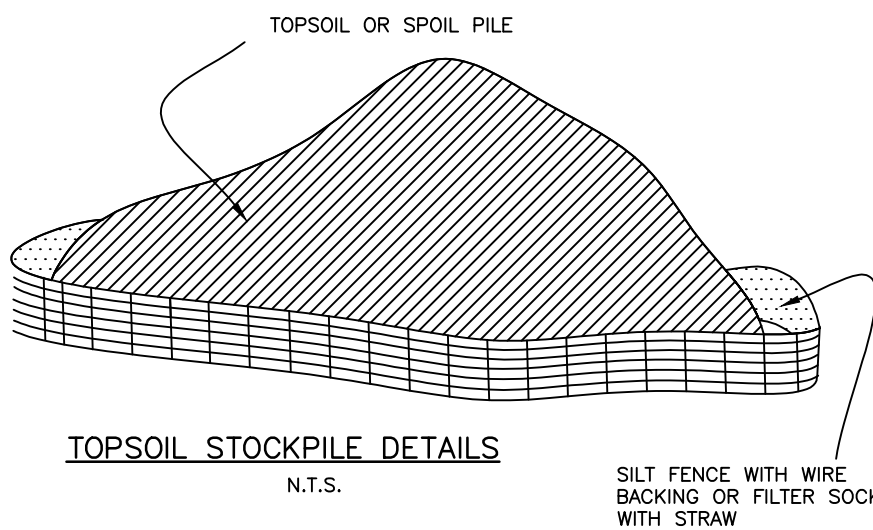
**FILTREXX INLETSOXX
BASIN SURROUND**
N.T.S.



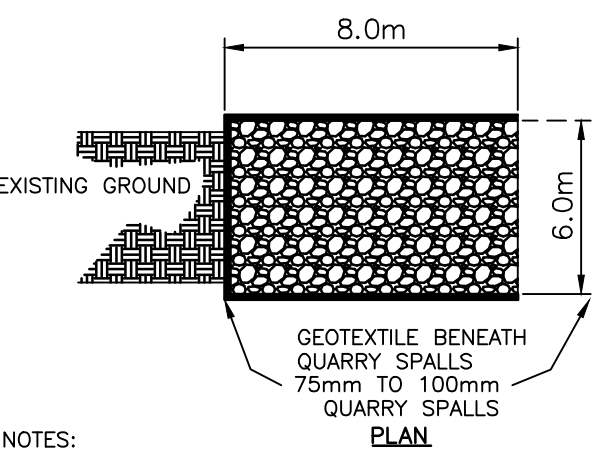
1. FENCE SHALL NOT BE INSTALLED ON SLOPES STEEPER THAN 2:1.
2. JOINTS IN FILTER FABRIC SHALL BE OVERLAPPED 150mm AT POST.
3. REMOVE SEDIMENT WHEN IT REACHES 1/2 FENCE HEIGHT.
4. SILT FENCE IS TO BE 'KONTROL SILT FENCE PLUS' OR EQUIVALENT AS APPROVED BY THE ENGINEER. FENCE TO HAVE MIN. CLEAR WATER FLOW RATE OF 0.0305cms/sm (0.10cfs/sf)

SILT FENCE DETAIL
N.T.S.

- NOTES:
1. PILES CONTAINING MORE THAN 100 CUBIC METRES OF TOPSOIL OR SPOIL SHALL BE LOCATED A MINIMUM OF 15 METRES FROM A ROADWAY, WATERCOURSE OR CHANNEL.
 2. PILES LEFT IN PLACE FOR MORE THAN 14 DAYS SHALL BE STABILIZED WITH A TARP, MULCH, VEGETATIVE COVER OR OTHER ACCEPTABLE MEANS.



TOPSOIL STOCKPILE DETAILS
N.T.S.



1. PAD SHALL BE REMOVED AND REPLACED WHEN SOIL IS EVIDENT ON THE SURFACE OF THE PAD OR AS DIRECTED BY THE ENGINEER
2. PAD THICKNESS SHALL BE INCREASED IF SOIL CONDITIONS DICTATE OR PER THE DIRECTION OF THE ENGINEER
3. MINIMUM DIMENSIONS MAY BE MODIFIED AS REQUIRED BY SITE CONDITIONS UPON APPROVAL OF THE ENGINEER.

TEMPORARY CONSTRUCTION ACCESS
N.T.S.

The location of existing underground utilities are shown in an approximate way only & have not been independently verified by the owner or its representative. The contractor shall determine the exact location of all existing utilities before commencing work and agree to be fully responsible for any and all damages which might be occasioned by the contractor's failure to exactly locate and preserve any and all underground utilities

LEGAL DESCRIPTION: LOT 2-3, PLAN KAP12275 BERNARD AVE, KELOWNA, BC

B.M.	MONUMENT NO.	ELEVATION:

LEGEND

---	WATER
- - - -	SAN, SEWER
- - - -	STORM SEWER
- - - -	GAS
- - - -	U/G TELEPHONE
- - - -	U/G ELECTRICAL

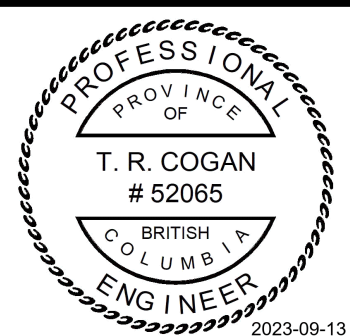
LEGEND

■	NEW PAVEMENT
▨	ASPHALT REPLACEMENT
▩	MILL AND OVERLAY

NAD 83
INSERTION BASE POINT: 300,000 , 5,500,000
Locations and offsets of existing utilities shown on this plan are not guaranteed to be accurate and must be verified in the field PRIOR TO CONSTRUCTION. The City of Kelowna does not guarantee their accuracy. Consent persons should not rely on these documents and should verify all information shown by way of a survey and other appropriate methods. The City of Kelowna accepts no liability for use of these files or information.

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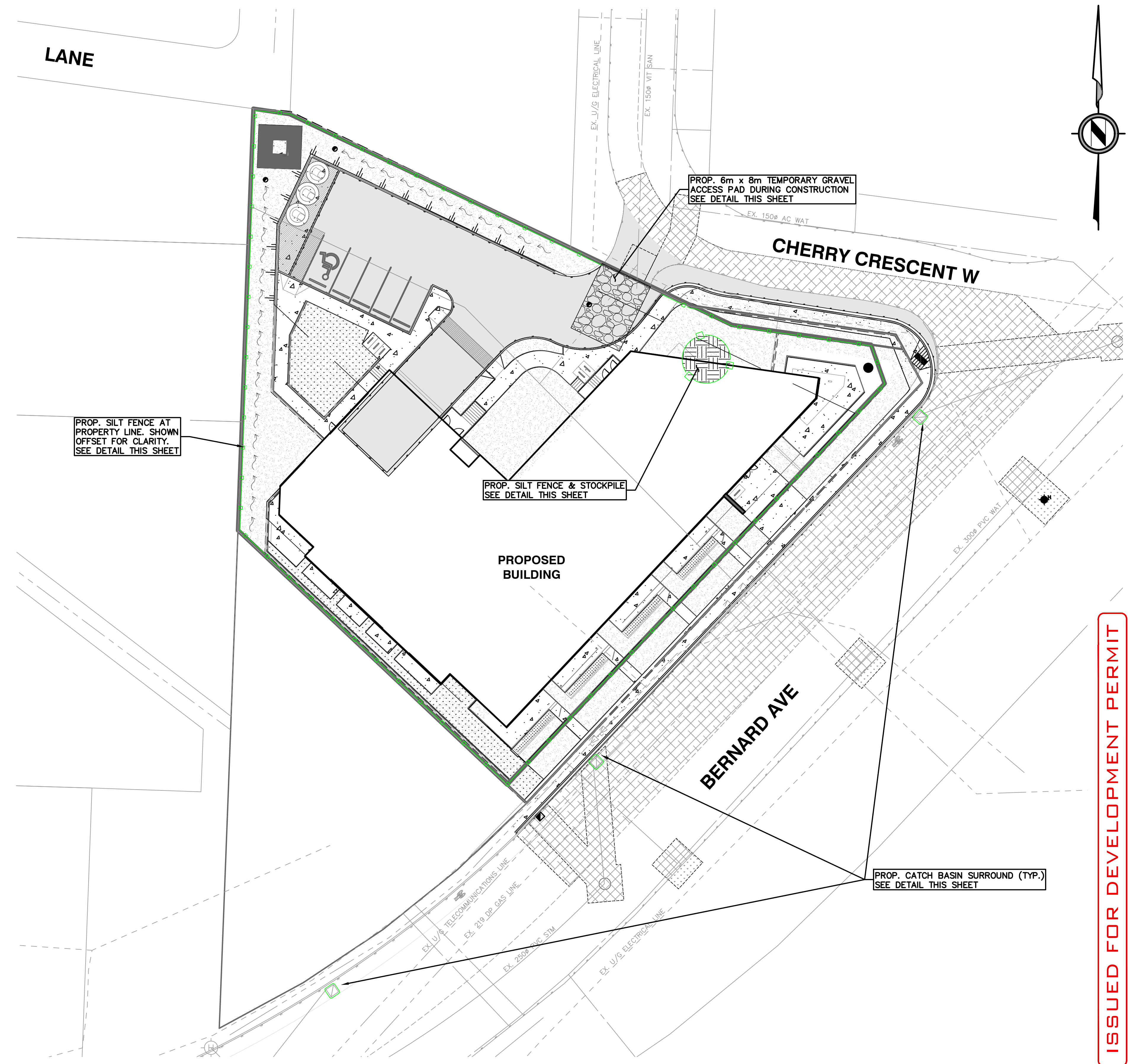
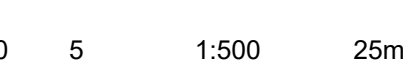
NO.	YY/MM/DD	BY	REVISION
0	23/09/13	MAP	ISSUED FOR DEVELOPMENT PERMIT



BASE MAP	DESIGN MAP
APPROVED	TRC
DATE	SEPTEMBER 2023
SCALE	HORIZ. 1:500 VERT. N/A
SCALE NOT ACCURATE OVER LONG DISTANCES	

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION
BERNARD AVE & BURTON RD
EROSION & SEDIMENT CONTROL PLAN

DIVISION	DRAWING NO.	REV. NO.
	22-3120-C60	0
	CITY DRAWING NO.	



ISSUED FOR DEVELOPMENT PERMIT

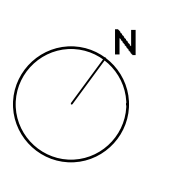


NOTES

1. PLANT MATERIAL AND CONSTRUCTION METHODS SHALL MEET OR EXCEED CANADIAN LANDSCAPE STANDARDS. ALL OFFSITE LANDSCAPE WORKS TO MEET CITY OF KELOWNA BYLAW 12375 STANDARDS.
2. ALL SOFT LANDSCAPE AREAS SHALL BE WATERED BY A FULLY AUTOMATIC TIMED UNDERGROUND IRRIGATION SYSTEM.
3. TREE AND SHRUB BEDS TO BE DRESSED IN A MINIMUM 75mm NATURAL WOOD MULCH AS SHOWN IN PLANS. DO NOT PLACE WEED MAT UNDERNEATH TREE AND SHRUB BEDS.
4. SHRUB BEDS TO RECEIVE A MINIMUM 300mm DEPTH TOPSOIL PLACEMENT. TREE BEDS TO RECEIVE A MINIMUM 1000mm DEPTH TOPSOIL PLACEMENT.
5. TURF AREA 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 150mm DEPTH OF GROWING MEDIUM IS REQUIRED BENEATH TURF AREAS. TURF AREAS SHALL MEET EXISTING GRADES AND HARD SURFACES FLUSH.
6. SITE GRADING AND DRAINAGE WILL ENSURE THAT ALL STRUCTURES HAVE POSITIVE DRAINAGE AND THAT NO WATER OR LOOSE IMPEDIMENTS WILL BE DISCHARGED FROM THE LOT ONTO ADJACENT PUBLIC, COMMON, OR PRIVATE PROPERTIES.

PLANT LIST - G/F

BOTANICAL NAME	COMMON NAME	QTY	SIZE/SPACING & REMARKS
TREES			
ACER X FREEMANII 'JEFFERSRED'	AUTUMN BLAZE MAPLE	1	5m CAL
ACER RUBRUM 'AUTUMN SPIRE'	AUTUMN SPIRE MAPLE	4	4m CAL
ACER RUBRUM 'ARMSTRONG'	ARMSTRONG MAPLE	7	4m CAL
LIRIODENDRON TULIPIFERA 'JFS-OZ'	EMERALD CITY TULIP TREE	6	5m CAL
PRUNUS 'OKAME'	OKAME CHERRY TREE	2	3m CAL
QUERCUS MACROCARPA 'TOP GUN'	TOP GUN BUR OAK	2	5m CAL
QUERCUS ROBUR X BICOLOUR LONG	REGAL PRINCE OAK	4	4m CAL
SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK LILAC TREE	1	3m CAL
TIILIA AMERICANA 'BOULEVARD'	BOULEVARD LINDEN	2	5m CAL
SHRUBS			
BERBERIS THUNBERGII 'GENTRY'	ROYAL BURGUNDY BARBERRY	52	#02 CONT. /1.2M O.C. SPACING
CORNUS ALBA 'BAIHALO'	IVORY HALO DOGWOOD	30	#02 CONT. /1.8M O.C. SPACING
HYDRANGEA MACROPHYLLA 'BLUSHING BRIDE'	BLUSHING BRIDE HYDRANGEA	27	#02 CONT. /1.8M O.C. SPACING
SPRAEA JAPONICA 'GOLDMOUND'	GOLDMOUND SPIREA	93	#02 CONT. /0.9M O.C. SPACING
TAXUS X MEDIA 'HICKSII'	HICK'S YEW	76	#02 CONT. /1.0M O.C. SPACING
PERENNIALS & GRASSES			
ACHILLEA MILLEFOLIUM 'TERRACOTTA'	TERRACOTTA YARROW	62	#01 CONT. /0.75M O.C. SPACING
CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	47	#01 CONT. /0.9M O.C. SPACING
ECHINACEA PURPUREA 'MAGNUS'	MAGNUS CONEFLOWER	63	#01 CONT. /0.75M O.C. SPACING
LAVANDULA ANGUSTIFOLIA 'HIDCOTE SUPERIOR'	HIDCOTE SUPERIOR ENGLISH LAVENDER	62	#01 CONT. /0.75M O.C. SPACING
PENNISETUM ORIENTALE 'KARLEY ROSE'	KARLEY ROSE FOUNTAIN GRASS	39	#01 CONT. /0.9M O.C. SPACING
PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	48	#01 CONT. /0.9M O.C. SPACING
RUDBECKIA FULGIDA 'GOLDSTURM'	GOLDSTURM CONEFLOWER	66	#01 CONT. /0.75M O.C. SPACING
SALVIA NEMOROSA 'SNOWHILL'	SNOWHILL SALVIA	73	#01 CONT. /0.75M O.C. SPACING



PROJECT TITLE

SOLE BERNARD
1660 & 1670 BERNARD AVE.

Kelowna, BC

DRAWING TITLE

CONCEPTUAL LANDSCAPE PLAN - AT GRADE

ISSUED FOR / REVISION

NO.	DATE	REVISION
1	23.03.31	Review
2	23.04.18	Review
3	23.04.24	Review
4	23.09.13	Development Permit
5		

PROJECT NO. 22-1282

DESIGN BY PH

DRAWN BY PH

CHECKED BY FB

DATE SEP. 13, 2023

SCALE 1:175

PAGE SIZE 24x36

SEAL



DRAWING NUMBER

L1/4

NOT FOR CONSTRUCTION

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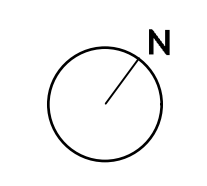


NOTES

1. PLANT MATERIAL AND CONSTRUCTION METHODS SHALL MEET OR EXCEED CANADIAN LANDSCAPE STANDARDS. ALL OFFSITE LANDSCAPE WORKS TO MEET CITY OF KELOWNA BYLAW 12375 STANDARDS.
2. ALL SOFT LANDSCAPE AREAS SHALL BE WATERED BY A FULLY AUTOMATIC TIMED UNDERGROUND IRRIGATION SYSTEM.
3. TREE AND SHRUB BEDS TO BE DRESSED IN A MINIMUM 75mm NATURAL WOOD MULCH AS SHOWN IN PLANS. DO NOT PLACE WEED MAT UNDERNEATH TREE AND SHRUB BEDS.
4. SHRUB BEDS TO RECEIVE A MINIMUM 300mm DEPTH TOPSOIL PLACEMENT. TREE BEDS TO RECEIVE A MINIMUM 1000mm DEPTH TOPSOIL PLACEMENT.
5. TURF AREA 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 150mm DEPTH OF GROWING MEDIUM IS REQUIRED BENEATH TURF AREAS. TURF AREAS SHALL MEET EXISTING GRADES AND HARD SURFACES FLUSH.
6. SITE GRADING AND DRAINAGE WILL ENSURE THAT ALL STRUCTURES HAVE POSITIVE DRAINAGE AND THAT NO WATER OR LOOSE IMPEDIMENTS WILL BE DISCHARGED FROM THE LOT ONTO ADJACENT PUBLIC, COMMON, OR PRIVATE PROPERTIES.

PLANT LIST - ROOF

BOTANICAL NAME	COMMON NAME	QTY	SIZE/SPACING & REMARKS
SHRUBS			
BERBERIS THUNBERGII 'GENTRY'	ROYAL BURGUNDY BARBERRY	20	#02 CONT. /1.2M O.C. SPACING
PICEA ABIES 'LITTLE GEM'	LITTLE GEM NORWAY SPRUCE	30	#02 CONT. /1.0M O.C. SPACING
SPIRAEA JAPONICA 'GOLDMOUND'	GOLDMOUND SPIREA	53	#02 CONT. /0.75M O.C. SPACING
PERENNIALS & GRASSES			
ASTILBE JAPONICA 'PEACH BLOSSOM'	PEACH BLOSSOM ASTILB	12	#01 CONT. /0.9M O.C. SPACING
HOSTA 'STRIPTEASE'	STRIPTEASE HOSTA	12	#01 CONT. /0.9M O.C. SPACING
LAVANDULA ANGUSTIFOLIA 'HIDCOTE'	HIDCOTE ENGLISH LAVENDER	18	#01 CONT. /0.75M O.C. SPACING
PENNISETUM ORIENTALE 'KARLEY ROSE'	KARLEY ROSE FOUNTAIN GRASS	7	#01 CONT. /1.2M O.C. SPACING
RUIDBECKIA FULGIDA 'GOLDSTURM'	GOLDSTURM CONEFLOWER	18	#01 CONT. /0.75M O.C. SPACING
SEDUM SPECTABILE 'AUTUMN FIRE'	AUTUMN FIRE STONECROP	18	#01 CONT. /0.75M O.C. SPACING



PROJECT TITLE
SOLE BERNARD
1660 & 1670 BERNARD AVE.

Kelowna, BC
 DRAWING TITLE
CONCEPTUAL LANDSCAPE PLAN - ROOF TOP

ISSUED FOR / REVISION

NO.	DATE	REVISION
1	23.03.31	Review
2	23.04.18	Review
3	23.04.24	Review
4	23.09.13	Development Permit
5		

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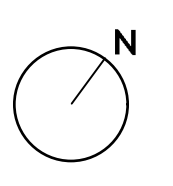
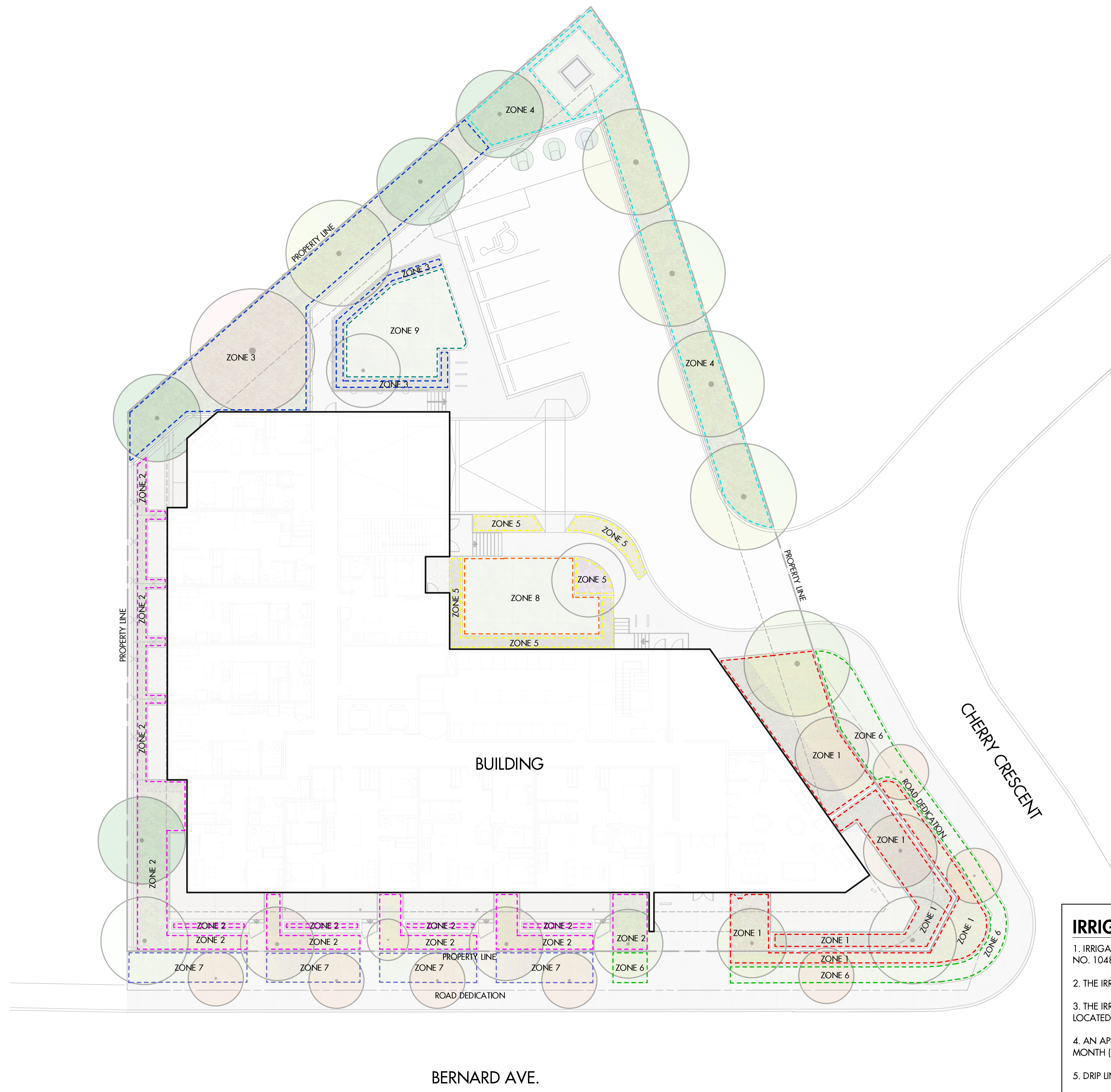
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WATER CONSERVATION CALCULATIONS
 LANDSCAPE MAXIMUM WATER BUDGET (WB) = 611 cu.m. / year
 ESTIMATED LANDSCAPE WATER USE (WU) = 497 cu.m. / year
 WATER BALANCE = 114 cu.m. / year
 *REFER ATTACHED IRRIGATION APPLICATION FOR DETAILED CALCULATIONS

IRRIGATION LEGEND

	ZONE #1: HIGH EFFICIENCY SUBSURFACE DRIP IRRIGATION FOR MODERATE WATER USE PLANTING AREAS TOTAL AREA: 181 sq.m. MICROCLIMATE: NORTH EAST EXPOSURE, PARTIALLY SHADED BY TREES & BUILDING ESTIMATED ANNUAL WATER USE: 60 cu.m.
	ZONE #2: HIGH EFFICIENCY SUBSURFACE DRIP IRRIGATION FOR MODERATE WATER USE PLANTING AREAS TOTAL AREA: 149 sq.m. MICROCLIMATE: SOUTHEAST EXPOSURE, PARTIALLY SHADED BY TREES & BUILDING ESTIMATED ANNUAL WATER USE: 50 cu.m.
	ZONE #3: HIGH EFFICIENCY SUBSURFACE DRIP IRRIGATION FOR MODERATE WATER USE PLANTING AREAS TOTAL AREA: 167 sq.m. MICROCLIMATE: WEST EXPOSURE, PARTIALLY SHADED BY TREES & BUILDING ESTIMATED ANNUAL WATER USE: 56 cu.m.
	ZONE #4: HIGH EFFICIENCY SUBSURFACE DRIP IRRIGATION FOR MODERATE WATER USE PLANTING AREAS TOTAL AREA: 146 sq.m. MICROCLIMATE: NORTHWEST EXPOSURE, PARTIALLY SHADED BY TREES ESTIMATED ANNUAL WATER USE: 49 cu.m.
	ZONE #5: HIGH EFFICIENCY SUBSURFACE DRIP IRRIGATION FOR MODERATE WATER USE PLANTING AREAS TOTAL AREA: 51 sq.m. MICROCLIMATE: NORTHWEST EXPOSURE, PARTIALLY SHADED BY BUILDING ESTIMATED ANNUAL WATER USE: 17 cu.m.
	ZONE #6: LOW VOLUME POP-UP SPRAYHEADS FOR TURF AREAS TOTAL AREA: 94 sq.m. MICROCLIMATE: NORTHEAST EXPOSURE, SHADED BY TREES ESTIMATED ANNUAL WATER USE: 81 cu.m.
	ZONE #7: LOW VOLUME POP-UP SPRAYHEADS FOR TURF AREAS TOTAL AREA: 82 sq.m. MICROCLIMATE: NORTHWEST EXPOSURE, PARTIALLY SHADED BY TREES ESTIMATED ANNUAL WATER USE: 70 cu.m.
	ZONE #8: LOW VOLUME POP-UP SPRAYHEADS FOR TURF AREAS TOTAL AREA: 59 sq.m. MICROCLIMATE: NORTHWEST EXPOSURE, PARTIALLY SHADED BY TREES ESTIMATED ANNUAL WATER USE: 51 cu.m.
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	ZONE #10: HIGH EFFICIENCY SUBSURFACE DRIP IRRIGATION FOR MODERATE WATER USE PLANTING AREAS TOTAL AREA: 81 sq.m. MICROCLIMATE: SOUTHWEST EXPOSURE, PARTIALLY SHADED BY BUILDING ESTIMATED ANNUAL WATER USE: 27 cu.m.



PROJECT TITLE
SOLE BERNARD
1660 & 1670 BERNARD AVE.

Kelowna, BC
 DRAWING TITLE

**WATER CONSERVATION /
 IRRIGATION PLAN -
 AT GRADE**

ISSUED FOR / REVISION

1	23.03.31	Review
2	23.04.18	Review
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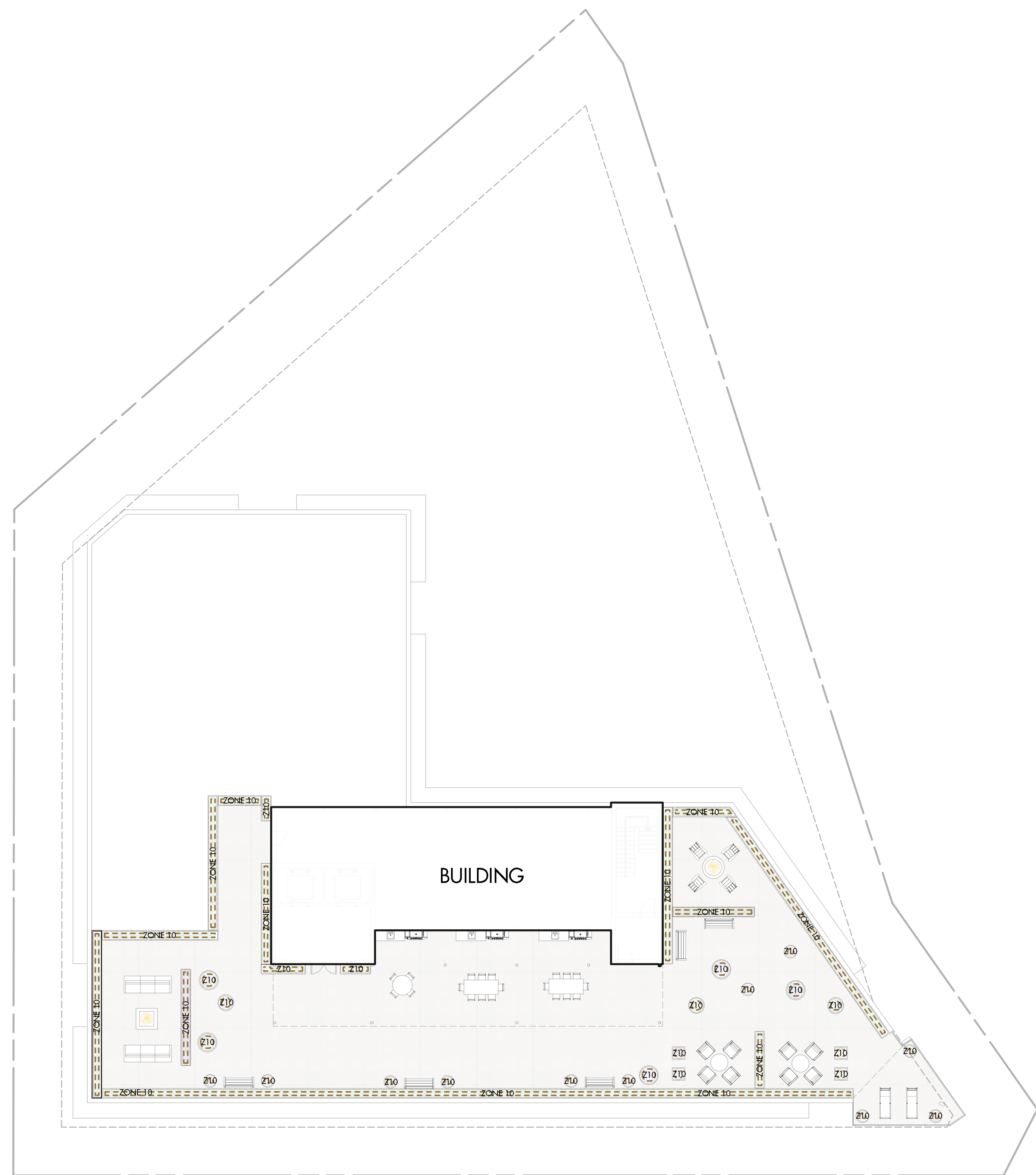


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- IRRIGATION NOTES**
1. IRRIGATION PRODUCTS AND INSTALLATION METHODS SHALL MEET OR EXCEED THE REQUIREMENTS OF THE WATER USE REGULATION BYLAW NO. 10480 AND THE SUPPLEMENTARY SPECIFICATIONS IN THE CITY OF KELOWNA BYLAW 7900 (PART 6, SCHEDULE 5).
 2. THE IRRIGATION SYSTEM SHALL MEET THE REQUIREMENTS, REGULATIONS, AND BYLAWS OF THE WATER PURVEYOR.
 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.
 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.



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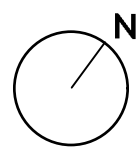
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Kelowna, BC

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**WATER CONSERVATION /
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 ROOF TOP**

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