CORPORATION OF THE TOWNSHIP OF ESQUIMALT

DESIGN REVIEW COMMITTEE
REVISED AGENDA

WEDNESDAY, FEBRUARY 14, 2018
3:00 P.M.
ESQUIMALT COUNCIL CHAMBERS

MEMBERS:	Roger Wheelock (Chair)	Wendy Kay
	Ally Dewji	Graeme Verhulst
	Bev Windjack	Jill Singleton
	Robert Schindelka	

RESOURCE MEMBER: Cst. Rae Robirtis [Non-Voting]

COUNCIL LIAISON: Councillor Beth Burton-Krahn
Councillor Tim Morrison

STAFF LIAISON: Bill Brown, Director of Development Services

SECRETARY: Pearl Barnard

I. CALL TO ORDER

II. ELECTION OF CHAIR

III. ELECTION OF VICE CHAIR

IV. LATE ITEMS

V. ADOPTION OF AGENDA

VI. ADOPTION OF MINUTES – December 13, 2017

VII. STAFF REPORT

1) OFFICIAL COMMUNITY PLAN AMENDMENT and REZONING APPLICATION
833 Dunsmuir Road
[PID 005-388-899 Lot 3, Section 11, Esquimalt District, Plan 9759]
and 835 Dunsmuir Road
[PID 005-388-881 Lot 2, Section 11, Esquimalt District, Plan 9759]

PURPOSE OF APPLICATION:

The applicant is requesting a change in Official Community Plan Land Use Designation and Zoning from the current designation of "Multi-Unit, Low-Rise Residential" to "Multi-Unit, High-Rise Residential" and a change in zoning from the current mix of RD-3 [Two Family/ Single Family Residential] zone and RM-4 [Multiple Family Residential] to a Comprehensive Development District zone [CD]. This change is required to accommodate the proposed 5 storey, 34 unit, multiple family residential building including a 35 space parking garage.

This site is located within Development Permit Area No. 1 – Multi-Unit Residential. Should the rezoning application be approved, the applicant would need to obtain a Development Permit respecting the character of the development, including landscaping, and the siting, form, exterior design and finish of the proposed 5 storey, 34 unit, multiple family residential building which would be considered by both the DRC and Council in the future.

Staff request the Design Review Committee review this proposal with regards to the proposed siting, height, mass, density, lot coverage, usable open space and parking and provide comments for staff and the applicant to consider as well as a recommendation to Council.

RECOMMENDATION:

The Esquimalt Design Review Committee [DRC] recommends that the application for Official Community Plan Amendment and Rezoning, authorizing a 18 metre [5 storeys], 34 unit, multiple family residential building sited in accordance with the BCLS Site Plan provided by J.E. Anderson and Associates Surveyors-Engineers, stamped "Received January 18, 2018, and incorporating height and massing consistent with the architectural plans provided by Praxis Architects Inc., stamped "Received February 7, 2018", detailing the development proposed to be located at PID 005-388-899 Lot 3, Section 11, Esquimalt District, Plan 9759 [833 Dunsmuir Road] and PID 005-388-881 Lot 2, Section 11, Esquimalt District, Plan 9759 [835 Dunsmuir Road] be forwarded to Council with a recommendation **to either approve, approve with conditions, or deny the application including reasons for the chosen recommendation.**

2) OFFICIAL COMMUNITY PLAN AMENDMENT and REZONING APPLICATION
838 Admirals Road
[PID 005-074-011 Lot 17, Block 7, Section 10, Esquimalt District, Plan 2546 Except Plan 86845]
and 842 Admirals Road
[PID 006-324-118 Lot 16, Block 7, Section 10, Esquimalt District, Plan 2546]

PURPOSE OF APPLICATION:

The applicant is requesting a change in Official Community Plan Land Use Designation and Zoning from the current designation of "Townhouse Residential" to "Multi-Unit, Low-Rise Residential" and a change in zoning from the current mix of CD-75 [Comprehensive Development District] zone and RD-3 [Two Family/ Single Family Residential] to a Comprehensive Development District zone [CD]. This change is required to accommodate the proposed 4 storey, 30 unit, multiple family residential building including a 28 space parking garage.

This site is located within Development Permit Area No. 1 – Multi-Unit Residential. Should the rezoning application be approved, the applicant would need to obtain a Development Permit respecting the character of the development, including landscaping, and the siting, form, exterior design and finish of the proposed 4 storey, 30 unit, multiple family residential building which would be considered by both the DRC and Council in the future.

Staff request the Design Review Committee review this proposal with regard to the proposed siting, height, mass, density, lot coverage, usable open space and parking and provide comments for staff and the applicant to consider as well as a recommendation to Council.

RECOMMENDATION:

The Esquimalt Design Review Committee [DRC] recommends that the application for Official Community Plan Amendment and Rezoning, authorizing a 15.4 metre [4 storeys], 30 unit, multiple family residential building sited in accordance with the BCLS Site Plan provided by J.E. Anderson and Associates Surveyors-Engineers, stamped "Received January 18, 2018, and incorporating height and massing consistent with the architectural plans provided by Praxis Architects Inc., stamped "Received February 8, 2018", detailing

the development proposed to be located at PID 005-074-011 Lot 17, Block 7, Section 10, Esquimalt District, Plan 2546 Except Plan 86845 [838 Admirals Road] and PID 006-324-118 Lot 16, Block 7, Section 10, Esquimalt District, Plan 2546 [842 Admirals Road] be forwarded to Council with a recommendation **to either approve, approve with conditions, or deny the application including reasons for the chosen recommendation.**

3) DEVELOPMENT PERMIT APPLICATION
"REVIEW OF DESIGN REVISIONS FOR THE CORE AREA WASTEWATER TREATMENT PLANT AT MCLOUGHLIN POINT"
337 Victoria View Road
Lot 1; Section 11; Plan EPP36468

PURPOSE OF APPLICATION:

The purpose of this application is to review the proposed amendments to DP000077 to ensure that the proposed changes will enhance the existing approved development.

RECOMMENDATION:

The Esquimalt Design Review Committee recommends that the application to amend development permit DP000077 for the Core Area Waste Water Treatment Plant be forwarded to Council with a recommendation to **approve, approve with conditions, or deny the application including reasons for the chosen recommendation.**

4) DEVELOPMENT PERMIT APPLICATION
"PROPOSED MACAULAY POINT PUMP STATION"
330 View Point Road
Lot A; Section 11 Victoria Harbour Esquimalt District
Plan EPP70531

PURPOSE OF APPLICATION:

The application is for a sewage pump station at Macaulay Point. The proposed pump station would replace the facility that currently exists on the site. The new pump station would pump the sewage that is currently pumped into the ocean from the site to the new waste water treatment plant at Mcloughlin Point

RECOMMENDATION:

The Esquimalt Design Review Committee recommends that the application for a development permit for the Macaulay Point Pump Station be forwarded to Council with a recommendation to **approve, approve with conditions, or deny the application including reasons for the chosen recommendation**

VIII. STAFF LIAISON STATUS REPORT

IX. NEW BUSINESS

X. NEXT REGULAR MEETING
March 14, 2018

XI. ADJOURNMENT

CORPORATION OF THE TOWNSHIP OF ESQUIMALT

ADVISORY DESIGN REVIEW COMMITTEE
MEETING MINUTES
HELD
DECEMBER 13, 2017
ESQUIMALT COUNCIL CHAMBERS

MEMBERS PRESENT:	Roger Wheelock (Chair)	Ally Dewji (Vice Chair)
	Graeme Verhulst	Jill Singleton
	Bev Windjack	Wendy Kay
REGRETS:	Robert Schindelka Cst. Franco Bruschetta (non-voting)	
STAFF LIAISON:	Karen Hay, Planner	
SECRETARY:	Pearl Barnard	

I. CALL TO ORDER

The Chair called the meeting to order at 3:05 p.m.

II. LATE ITEM

No late items

III. ADOPTION OF AGENDA

Moved by Jill Singleton and seconded by Bev Windjack that the agenda be adopted as amended. **The Motion Carried Unanimously.**

IV. ADOPTION OF MINUTES –

October 17, 2017

Moved by Jill Singleton, seconded by Bev Windjack that the minutes of November 8, 2017 be adopted as distributed. **The Motion Carried Unanimously**

V. STAFF REPORT

REZONING APPLICATION
669 Constance Avenue
[PID 004-574-451 Lot 1, Suburban Lots 43 and 44, Esquimalt District, Plan 13563]
658 Admirals Road
[PID 023-768-410 Lot A of Suburban Lots 43 and 44,Esquimalt District, Plan VIP65333]
662 Admirals Road
[PID 017-827-540 Lot 1, Suburban Lot 43, Esquimalt District, Plan VIP54521]

PURPOSE OF APPLICATION:

The applicant is requesting a change in zoning from the current mix of Medium Density Multiple Family Residential [RM-4] and Low Density Townhouse Multiple Family Residential [RM-1] zones to a Comprehensive Development District zone [CD]. This change is required to accommodate the proposed 12 storey, 83 unit, multiple family, prefabricated, residential building.

Oliver Lang, Architect LWPAC, Troy Grant and Casey O'Byrne, Standing Stone Developments and Jim Partlow, Lombard North Group Inc. presented the application.

Oliver Lang thanked the Committee Members for their great comments made at the Design Review Committee meeting held on November 8, 2017. Mr. Lang then gave a PowerPoint presentation detailing the site plan and an overview of the building design, elevations and materials for the project. Mr. Lang explained that the proposal would provide 83 market affordable homes and the building would be Passive House Certified.

Jim Partlow gave an overview of the landscape features for the project.

Committee Members comments and questions: (*Response in italics*)

- The changes that were made since the last meeting are great and have improved the project significantly. However, the project is still a tall, large mass building with minimal setbacks.
- The smart building technology and green building initiatives are really great.
- Members expressed concerns that the design does not comply with the Official Community Plan policy that buildings with shallow setbacks must step down to no more than three storeys at street level in order to provide an appropriate human scale along the sidewalk.
- Members raised concerns about the fit of the development for the current community. The proposal is not responding to the character of the existing neighbourhood.
- Concerns were raised regarding the building wall on Admirals Road. The building turns its back on the community. A member suggested the building be reoriented to face the other way to embrace the community. If the building was reoriented it would change the height profile by having the highest component at the low end of the slope and the shorter component at the high end of the slope.
- A member stated that the design is appropriate as the building was designed as a gateway element and it does exactly that.
- A member asked for clarification on the future ownership. *Mr. O'Byrne advised it would be strata titled.*
- A concern was raised about the future strata maintenance costs. At what point would the residence no longer be affordable based on these costs?
- The building seems adult oriented and the courtyard isn't age friendly; there is nothing for small children.
- A member expressed concerns about the size of the parking spaces, they are either small or medium and don't appear to be disability friendly. *Mr. Lang clarified that there will be disability parking; as it is required, in addition to a mix of small and large parking spaces.*
- A member asked about the community amenities for the site and commented that if it is a community amenity space, then it has to be for all the community and not just the people living there*. Mr. Lang advised that the spaces will be designed so that a future strata could empower itself to create its own community.*
- There are no community benefits that you would find in other tower type buildings such as washrooms or a coffee shop. *Mr. Lang advised that there would be washrooms, meeting rooms and multi purpose spaces for various activities. A coffee shop would be great; however the zoning bylaw doesn't allow for any commercial activity on the subject property.*
- A member commented that 'market affordability' is an oxymoron, as there is no such thing as market affordable housing; rather, this is market housing for Esquimalt. The member then stated that the City of Victoria is not allowing proponents to use the word affordable unless they attach an income dollar value to it. Another member asked what income dollar amount was used to determine market affordability with this project. *Mr. Grant advised they looked at the pay rates for various military personnel and the pay*

grade that they are targeting are the people who earn $68,000.00 to $72,000.00 per year. These people will be able to afford a home in this project.

- A concern was expressed with the south elevation, the large staircase and the exposed walkways. A 12 storey building will look extremely hard and uncomforting in terms of its fit and design esthetics. *Mr. Lang mentioned that they had considered hiding the exposed stairways. This would be cleaner visually; however, this would also result in residents riding in the elevators*. The member then asked for further details about the materials used. *Mr. Lang gave a brief overview of the materials. The railings would be a perforated metal mesh and the stair itself would be made out of galvanized metal.* A member then expressed concerns that there is not enough information provided regarding the materials and its transparency.
- A member inquired about the floor area ratio of the stairways. *Mr. Lang responded that stairways and hallways are not counted as part of the floor area ratio calculations in Esquimalt.*
- A member commented that the downtown core is under construction and the tallest building would be 6 or 7 storeys; a 12 storey building is going to set a precedent for the Township of Esquimalt. Members asked if the project would be feasible as a 6 storey building instead of the proposed 12 storey building. *Mr. Lang advised that to achieve the same unit count the building would have more mass and maybe a couple of floors less. He then advised that he is not the right person to address the economic feasibility of the project.*
- A member commented that the landscape plan presented is different than the landscape plan provided in the DRC agenda package. *Mr. Grant clarified that an updated landscape plan was submitted to staff late; therefore, it was not included in the DRC agenda package.*
- Members commented on the landscape treatment on the north property line. *Mr. Lang clarified that the green space shown on the drawings is actually DND property.* A member outlined that one of the drawings shows private decks on that side and there are no railings, barriers or fences on the outside edge of the northern property line. Another member asked if there was access in and out of the units on that side. *Mr. Lang advised that the homes on the ground floor level do have access in and out of their homes; however beyond the subject property lot line he is not in a position to suggest that people can use that area as their own backyard*. *Mr. Partlow clarified that all the plantings shown are on DND land except for the vines on the wall.*

RECOMMENDATION:

Moved by Ally Dewji seconded by Bev Windjack: That the Esquimalt Design Review Committee [DRC] recommends to Council that the application for rezoning to facilitate consolidation of three properties located between the northernmost end of Constance Avenue and Admirals Road, and authorizing a 36 metre [12 storey], 83 unit, multiple family residential building sited in accordance with, and incorporating height and massing consistent with the architectural plans provided by Lang Wilson Practice in Architecture Culture, stamped “Received December 7, 2017”, **be forwarded to Council for approval** with the condition that the project comply with the Official Community Plan step back guidelines. **The Motion was defeated unanimously.** (Note: A member had indicated that this recommendation as proposed rejected the project.)

RECOMMENDATION:

Moved by Bev Windjack seconded by Ally Dewji: That the Esquimalt Design Review Committee [DRC] recommends to Council that the application for rezoning to facilitate consolidation of three properties located between the northernmost end of Constance Avenue and Admirals Road, and authorizing a 36 metre [12 storey], 83 unit, multiple family residential building sited in accordance with, and incorporating height and massing consistent with the architectural plans

provided by Lang Wilson Practice in Architecture Culture, stamped "Received December 7, 2017", **be forwarded to Council for consideration** with the understanding that the Design Review Committee wants to bring to Council's attention that the project does not comply with the Official Community Plan step back guidelines. The Reason: The design as presented has a street wall on Admirals Road that is too high. **The Motion Carried** (1 opposed).

VI. STAFF LIASON STATUS REPORT

- Karen Hay on behalf of Staff thanked the Committee Members for their work on the committee this year.
- Cst. Franco Bruschetta will be leaving the Design Review Committee; his replacement will be Cst. Rae Robirtis.

VII. NEW BUSINESS

VIII. NEXT REGULAR MEETING

Wednesday, January 10, 2017

IX. ADJOURNMENT

On motion the meeting adjourned at 5:05 p.m.

CERTIFIED CORRECT

CHAIR, DESIGN REVIEW COMMITTEE
THIS 10th DAY OF JANUARY 2018

ANJA NURVO,
CORPORATE OFFICER

CORPORATION OF THE TOWNSHIP OF ESQUIMALT

Municipal Hall, 1229 Esquimalt Road, Esquimalt, B.C. V9A 3P1
Telephone (250) 414-7100 Fax (250) 414-7111

DRC Meeting: February 14, 2018

STAFF REPORT

DATE: February 9, 2018

TO: Chair and Members of the Design Review Committee

FROM: Alex Tang, Planner 1
Bill Brown, Director of Development Services

SUBJECT: **OFFICIAL COMMUNITY PLAN AMENDMENT and REZONING APPLICATION**
833 Dunsmuir Road
[PID 005-388-899 Lot 3, Section 11, Esquimalt District, Plan 9759]
and 835 Dunsmuir Road
[PID 005-388-881 Lot 2, Section 11, Esquimalt District, Plan 9759]

RECOMMENDATION:

The Esquimalt Design Review Committee [DRC] recommends that the application for Official Community Plan Amendment and Rezoning, authorizing a 18 metre [5 storeys], 34 unit, multiple family residential building sited in accordance with the BCLS Site Plan provided by J.E. Anderson and Associates Surveyors-Engineers, stamped "Received January 18, 2018, and incorporating height and massing consistent with the architectural plans provided by Praxis Architects Inc., stamped "Received February 7, 2018", detailing the development proposed to be located at PID 005-388-899 Lot 3, Section 11, Esquimalt District, Plan 9759 [833 Dunsmuir Road] and PID 005-388-881 Lot 2, Section 11, Esquimalt District, Plan 9759 [835 Dunsmuir Road] be forwarded to Council with a recommendation **to either approve, approve with conditions, or deny the application including reasons for the chosen recommendation.**

BACKGROUND:

Purpose of the Application:

The applicant is requesting a change in Official Community Plan Land Use Designation and Zoning from the current designation of "Multi-Unit, Low-Rise Residential" to "Multi-Unit, High-Rise Residential" and a change in zoning from the current mix of RD-3 [Two Family/ Single Family Residential] zone and RM-4 [Multiple Family Residential] to a Comprehensive Development District zone [CD]. This change is required to accommodate the proposed 5 storey, 34 unit, multiple family residential building including a 35 space parking garage.

This site is located within Development Permit Area No. 1 – Multi-Unit Residential. Should the rezoning application be approved, the applicant would need to obtain a Development Permit respecting the character of the development, including landscaping, and the siting, form, exterior design and finish of the proposed 5 storey, 34 unit, multiple family residential building which would be considered by both the DRC and Council in the future.

Staff request the Design Review Committee review this proposal with regards to the proposed siting, height, mass, density, lot coverage, usable open space and parking and provide comments for staff and the applicant to consider as well as a recommendation to Council.

Context

Applicant: Praxis Architects Inc. [Heather Spinney]

Owner: D.E. Mann Properties Ltd., Inc. No. BC1125695

Property Size: Metric: 1526 m^2 Imperial: 16427 ft^2

Existing Land Use: Single Family Residential

Surrounding Land Uses:
North: Single Family Residential
South: Multiple Family Residential [4 storeys]
West: Multiple Family Residential [3 storeys]
East: Multiple Family Residential [4 storeys]

Existing OCP Designation: Multi-Unit, Low-Rise Residential

Proposed OCP Designation: Multi-Unit, High-Rise Residential

Existing Zoning: RD-3 [Two Family/Single Family Residential] – Lot 2
RM-4 [Multiple Family Residential] – Lot 3

Proposed Zoning: CD [Comprehensive Development District]

Zoning

Density, Lot Coverage, Height and Setbacks: The following chart compares the floor area ratios, lot coverage, setbacks, height and usable open space of this proposal with the requirements of the RM-5 [Multiple Family Residential Zone]:

	Proposed Comprehensive Development Zone [Apartment with 34 Residential Units]	**RM-5** [Multiple Residential – High Density]
Floor Area Ratio	1.48	1.5
Lot Coverage	44%	30%/ 25% [above 2nd]
Setbacks • **Front** • **Rear** • **Exterior Side [North]** • **Interior Side [South]**	 3.5 m 4.0 m 5.5 m 7.5 m	 7.5 m 7.5 m 7.5 m 7.5 m
Building Height	18.03 m [5 storeys]	20 m
Off Street Parking	35 spaces [1.03/unit]	45 spaces [1.3/unit]

Usable Open Space	159 m^2 [10.4%]	114 m^2 [7.5%]
Bicycle Parking	51 resident + 6 visitor	51 resident + 6 visitor

The Floor Area Ratio of this proposal is 1.48, which is less than the maximum allowable amount of 1.5 in the RM-5 [Multiple Family Residential]. The Lot Coverage measures 86% at grade to accommodate the parking structure while the residential portion of the building covers 44% of the site. By the definition of the Zoning Bylaw, the Front Lot Line is the lot line that abuts Garrett Place despite the fact that the proposed entrance faces Dunsmuir Road. Hence, the reduced front and rear setback is actually a reduction in the setback on Garrett Place and the setback abutting the eastern most lot line. The proposed height of the building is 18.03 metres, which is less than the allowed 20.0 metres in a RM-5 zone. The usable open space is 159 m^2, which amounts to 10.4% of the total lot area.

Parking Bylaw, 1992, No. 2011 requires 1.3 parking spaces per unit to be provided for multiple family developments. This proposal incorporates 35 residential parking spaces within the structure which is about 1.03 parking spaces per unit. The subject property is well served by transit as Route 25 passes by the site along Dunsmuir Road and Route 15 goes along Esquimalt Road which is about 150 metres to the north. This site has a Walk Score of 72, which is considered very walkable as most errands can be accomplished on foot.

Official Community Plan

Although the density of 1.48 FAR commensurates with the property's current Land Use Designation of "Multi-Unit, Low-Rise Residential", the number of storeys in the proposed building does not as it proposes five storeys. The Land Use Designation of "Multi-Unit, Low-Rise Residential" accepts buildings up to four storeys with a Floor Area Ratio of up to 1.5. Rather, the Land Use Designation of "Multi-Unit, High-Rise Residential would allow for up to 12 storeys. Hence, an amendment to the Official Community Plan Land Use Designation from "Multi-Unit, Low-Rise Residential" to "Multi-Unit, High-Rise Residential" is required for this application in order to allow for the proposed development.

OCP Section 2 - Managed Growth – Land Use and Development states that the objectives and policies in this section are designed to promote sustainable land use and development in the community.

> OCP 2.0.1(a) states the Township should encourage high quality development that enhances and benefits the community as a whole.
>
> OCP 2.0.1(e) states the Township should support increased residential density and higher buildings along the Esquimalt Road corridor, particularly in the areas within walking distance of Esquimalt Village and the Vic West border.
>
> OCP 2.0.2(a) states Esquimalt's future new development, infill and redevelopment will be in accordance with the land use designations shown on OCP Schedule A, together with the guidelines set out in Development Permit Areas (OCP Section 9).

OCP Section 2.2 - Residential Land Use of the Official Community Plan recognizes that modest growth is likely to occur through the infilling of vacant or under-utilized parcels, redevelopment of existing residential properties to higher densities (such as townhouses, apartment buildings and mixed commercial-residential uses) and the replacement of existing buildings.

Section 2.2.1(a) states the Township should work toward a more complete community by maintaining a healthy mixture of housing types, accommodating people with a wide range of income levels.

Section 2.2.1(b) states the Township should encourage new residential development with high design standards for building and landscaping and which enhance existing and new neighbourhoods.

OCP Section 2.2.4.1 Multi-Unit Residential Policies [attached] are intended to provide more predictability for residents and give direction to design teams preparing development proposals. This proposal for a 34 unit residential building is consistent with many policies contained in this section while it is unclear at this time whether it is consistent with the following policy as no units are explicitly proposed to be constructed to accessibility standards:

Section 2.2.4.1(f) states that wherever desirable and achievable consideration will be given to special needs and assisted housing including seniors, disabled persons and families.

OCP Section 2.2.4.4 Multi-Unit, High-Rise Residential states that in areas designated Multi-Unit, High-Rise Residential on Schedule A, building heights of up to 12 storeys are acceptable with a Floor Area Ratio of up to 3.0. Buildings with shallow setbacks must step down to no more than three storeys at street level in order to provide appropriate human scale along the sidewalk. The requirements and guidelines of Development Permit Area No. 1 apply. This proposed building sets back at the fifth storey and is inconsistent with this policy.

OCP Section 3.3.1(a) Affordable Housing Objectives states that the Township should encourage a range of housing by type, tenure, and price to ensure that people of all ages, household types, abilities and incomes have a diversity of housing choice in Esquimalt.

OCP Section 9.3 Development Permit Area No. 1 - Multi-Unit Residential [attached] contains Development Permit Guidelines for land designated Multi-Unit Residential. As the Development Permit is not being considered at this time it would be inappropriate to address many of these guidelines with the following exceptions that are relevant to the discussion of zoning and parking issues:

Section 9.3.5(b) states, in part, that new buildings should be designed and sited to minimize visual intrusion onto the privacy of surrounding homes and minimize the casting of shadows onto the private outdoor space of adjacent residential units. The proposed building has a proposed height of 18.03 metres which is less than the allowed height in a RM-5 zone but is one storey higher than allowed under the current Official Community Plan Land Use Designation. The recessed fifth storey aids to minimize the casting of shadows as its shadow is quite similar to that of a four storey building mass.

Section 9.3.5(c) states that high density multi-unit residential buildings should be designed so that the upper storeys are stepped back from the building footprint with lower building heights along the street front. The massing of the proposed building steps back at the 5th storey.

Section 9.3.5(f) states that underground parking will be provided for any multi-unit residential building exceeding four storeys. This proposal works with the natural topology to provide one level of parking that is underground at the northwest corner and at grade at the southeast corner.

Green Building Features

The applicant has completed the Esquimalt Green Building Checklist [attached].

Comments From Other Departments

The plans for this proposal were circulated to other departments and the following comments were received:

Building Inspection: Building to be constructed to requirements of BC Building Code 2012 and Municipal Building Code Bylaw, 2002, No. 2538. Applicant must address all issues contained within the Township Development Protocol should application be approved. Plans will be reviewed for compliance with BC Building Code upon submission of a Building Permit application.

Engineering Services: Engineering staff has completed a preliminary evaluation of Works and Services that would be required for the 34 unit multiple family residential building proposed to be located at 833 and 835 Dunsmuir Road. Staff confirms that the design appears achievable on the site and that appropriate works and services are available in the immediate area. If approved, the development must be serviced in accordance with bylaw requirements including, but not limited to, new sewer and drain connections, underground hydro, telephone and cable services and new road works may be required up to the centre line of Dunsmuir Road and Garrett Place. Should the application be approved, additional comments will be provided when detailed civil engineering drawings are submitted as part of a Building Permit application.

Parks Services: Parks staff has completed a preliminary review of the proposed on-site and off-site landscaping and commented that the landscape plan was adequate.

Fire Services: Fire Services staff has completed a preliminary review of the proposed plans and have no concerns at this time.

Public Notification

As this is an Official Community Plan Amendment and Rezoning application, should it proceed to a Public Hearing, notice would be mailed to tenants and owners of properties within 100m (328ft) of the subject property. In order to satisfy the requirements of the *Local Government Act,* staff is also required to provide additional notice to relevant government and institutional stakeholders within the Capital Region. Two signs indicating that the property is under consideration for a change in Official Community Plan Land Use Designation and Zoning has been installed on the Dunsmuir Road frontage while one sign has been installed on the Garrett Place frontage. This sign would be updated to include the date, time and location of the Public Hearing.

ALTERNATIVES:

1. Forward the application for OCP Amendment and Rezoning to Council with a **recommendation of approval including reasons for the recommendation**.

2. Forward the application for OCP Amendment and Rezoning to Council with a **recommendation of approval including specific conditions and including reasons for the recommendation**.

3. Forward the application for OCP Amendment and Rezoning to Council with a **recommendation of denial including reasons for the recommendation**.


N
Wollaston St
733
Sea Terr
820
815
821
819
827
734
730
836
Dunsmuir Rd
833
844
835
Garrett Pl
831
Subject Property Map:
833 and 835 Dunsmuir Rd


SEA TERR
820
815
823
825
821
817
734
2-730
836
DUNSMUIR RD
833
835
GARRETT PL
831
554

g) The Township is not supportive of new applications for infill housing, including rezoning and subdivision for panhandle lots in the 1100 and 1200 blocks of Old Esquimalt Road and the 600 block of Fernhill Road.

2.2.4 Multi-Unit Residential

Over the years, townhouses and apartment buildings have tended to be developed in clusters throughout the neighbourhoods of Esquimalt. They are generally located in the following areas:

- On both sides of Esquimalt Road from Grafton Street to Dunsmuir Road;
- The area around Craigflower Road and Selkirk Avenue;
- Admirals Road, Astle and Nelson Streets;
- West Bay south of Dunsmuir Road; and
- West Parklands.

Smaller clusters of multi-unit development are also found along Lampson Street between Devonshire and Old Esquimalt Roads, Lampson Street south of Lyall Street, and Ellery Street south of Esquimalt High School. This scattered pattern of development has contributed to residents' concerns related to the proliferation of multi-unit developments in neighbourhoods where single-unit and two-unit homes have been the predominant land use.

2.2.4.1 Multi-Unit Residential Policies

The following policies provide more predictability for residents in mixed residential use neighbourhoods and give direction to design teams involved in the preparation of development proposals.

a) Multi-Unit Residential refers to three or more dwelling units on a parcel. Multi-unit Residential does not refer to a single-unit home with a secondary suite.

b) The Township encourages the concentration of multi-unit residential development where such development is in keeping with the overall goals of this Plan.

c) Wherever practical, multi-unit residential housing will be located near a Major Road as shown on "Schedule B". This supports transit service and also helps maintain the integrity of single-unit and two-unit housing neighbourhoods;

d) Wherever feasible, major multi-unit residential projects will be located within reasonable distance of one of Esquimalt's commercial areas in order to encourage walking and cycling;

e) A mix of housing types will be provided in multi-unit residential areas in order to provide visual interest and to meet the varying housing needs of Esquimalt's current and future residents;

f) Wherever desirable and achievable, consideration will be given for special needs and assisted housing, including seniors, disabled persons and families.

g) Within the areas designated on "Schedule A" as Townhouse Residential, Multi-Unit, Low-Rise Residential and Multi-Unit, High-Rise Residential, the following criteria

will be used to evaluate development proposals requiring an application for rezoning:

- The massing and height of the project will respond sensitively to the prevailing character of the immediate neighbourhood. This will vary by location;
- The project will relate to the street. Its exterior finishes, scale, treatment of parking areas, and landscaping, will enhance the appearance of the neighbourhood and contribute positively to the streetscape;
- The proponent will demonstrate that the neighbourhood has been consulted in a fair and meaningful way, and that residents' concerns have been appropriately responded to in the proposal; and
- Where new multi-unit residential projects are proposed, they should not "land-lock", otherwise isolate, or negatively affect the development potential of adjacent parcels. Projects must either consolidate the isolated parcels or leave a sufficient area available to allow for the eventual redevelopment of the adjacent land.

h) Development proposals with heights and /or densities greater than those set out in policies 2.2.4.2 to 2.2.4.4. may be considered, where appropriate, through variances to zoning and/or parking regulations and density bonusing of floor-space where new affordable, accessible or special needs housing units or amenities are provided for the benefit of the community.

i) For the purposes of density bonuses, "amenities" may include, but not be limited to:

- Privately-owned, publicly-accessible open space;
- Public art;
- Contributions towards the enhancement of public recreation facilities;
- Contributions towards street and boulevard enhancements, including street furniture and decorative lighting;
- Daycare facilities; and
- Preservation of heritage structures or features.

j) In new multi-unit residential developments, secure bicycle storage for residents should be provided in the ratio of 1.5 storage spaces per dwelling unit. In addition to the residents' parking, each multi-unit building should have six (6) bicycle lock-up spaces for the use of visitors.

A bicycle storage requirement may be waived or varied in a Development Permit where, in the opinion of Council, there is no demonstrated need, such as in a congregate care facility.

Development Permit Area No. 1 — Multi-Unit Residential

9.3.1 Scope

All land designated Multi-Unit Residential on Schedule "C" are part of DPA No. 1.

9.3.2 Category

Section 919(1)(f) of the *Local Government Act* — form and character, multi-family residential.

9.3.3 Justification

This Plan emphasizes the importance of protecting residential neighbourhoods and encouraging a high quality of construction for new development. It is essential that new multi-unit residential development not have a negative impact on, or be out of character with, existing residential neighbourhoods. The primary objective of Development Permit Area No. 1 is to ensure that the development of multi-unit residential sites is compatible with surrounding uses.

9.3.4 Requirements of Owners of Land within the Development Permit Area

a) Owners of land within Development Permit Area No. 1 must not do any of the following without first obtaining a development Permit in accordance with the guidelines for this Development Permit Area:

i) subdivide lands; or

ii) construct or alter a building or structure;

without first obtaining a Development Permit in accordance with the guidelines of this Development Permit Area.

b) Exemptions:

The following do not require a development permit:

i) construction of buildings or structures less than 10 square metres in area;

ii) minor additions to existing dwellings where the floor area of the addition does not exceed 10 percent of the ground floor area of the dwelling;

iii) emergency repairs to existing structures and public walkways where a potential safety hazard exists;

iv) fences;

v) the cutting of trees as permitted upon application under the municipal tree protection bylaw; and

vi) placement of signs less than 1.5 sq. metres in area.

9.3.5 Guidelines for Owners of Land within the Development Permit Area

a) The size and siting of buildings that abut existing single- and two-unit and townhouse dwellings should reflect the size and scale of adjacent development and complement the surrounding uses. To achieve this, height and setback restrictions may be imposed as a condition of the development permit.

b) New buildings should be designed and sited to minimize visual intrusion onto the privacy of surrounding homes and minimize the casting of shadows onto the private outdoor space of adjacent residential units.

c) High-density multi-unit residential buildings or mixed commercial/residential buildings in commercial areas with a zero front setback should be designed so that the upper storeys are stepped back from the building footprint, with lower building heights along the street front.

d) Landscaping of multi-unit residential sites should emphasize the creation of an attractive streetscape, as well as provide privacy between individual buildings and dwellings, screen parking areas and break up large expanses of paving.

e) Surface parking areas in multi-unit residential developments less than five storeys in height, will be situated away from the street and screened by berms, landscaping or solid fencing or a combination of these three.

f) Underground parking will be provided for any multi-unit residential buildings exceeding four storeys.

g) The retention of public view corridors particularly views to the water should be encouraged wherever possible.

h) To preserve view corridors and complement natural topography, stepped-down building designs are encouraged for sloping sites.

i) Retention and protection of trees and the natural habitat is encouraged wherever possible.

j) Townhouses will be designed such that the habitable space of one dwelling unit abuts the habitable space of another unit and the common wall overlap between adjoining dwellings shall be at least 50 percent.

k) Site lighting in multi-unit residential developments should provide personal safety for residents and visitors and be of the type that reduces glare and does not cause the spill over of light onto adjacent residential sites.

l) Garbage receptacle areas and utility kiosks should be screened by solid fencing or landscaping or a combination of the two.

m) For waterfront sites, retention of natural features and existing trees should be a priority in site planning considerations.

n) When any existing single-unit residence or duplex residence is being redeveloped to a multi-unit residential use by adding on of one or more dwelling units, such addition will be designed so that all of the units form a cohesive whole. In order to achieve cohesiveness:

   i) both, the existing and proposed structures will be in the same architectural style;

   ii) variations between the roofline of the existing building and any proposed addition(s) will be no greater than 1.5 metres;

iii) roof styles and pitches must be complementary;

iv) architectural features such as sloping roofs and dormers should be incorporated into the design to unite the various parts of the structure; and

v) the existing and proposed structure will be constructed using the same or complimentary exterior finishes including roofing materials, window treatments, door styles and other finishing details.

o) Within the area bounded by Tillicum, Craigflower, Lampson and Transfer Streets, redevelopment to multi-unit residential use will require that vehicular access to these sites be off Lampson Street rather than Tillicum, in recognition of the high levels of traffic currently using Tillicum Road.

p) To create a more aesthetic and functional design that links each multi-unit residential project with the streetscape, the following guidelines are recommend:

i) Avoid long, narrow parcels with minimal road frontage (consolidate one or more parcels where necessary);

ii) Place parking areas away from the street; and

iii) Design porches and windows overlooking the street to increase personal interaction and safety.

P R A X I S
architects inc.

833 + 835 Dunsmuir Redevelopment
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Township of Esquimalt
1229 Esquimalt Road
Esquimalt, BC V9A 3P1

December 12, 2017

RE: 833 + 835 DUNSMUIR ROAD

Dear Mayor and Council,

The proposed project at 833 and 835 Dunsmuir Road will be a new market multiple residential building, with potentially up to 5 storeys of wood-frame construction. According to the current Official Community Plan, Schedule A - Land Use Designation, these properties are identified as Multi-Unit, Low-Rise Residential (MULRR) which means up to 4 storeys are permitted and a maximum floor area ratio (FAR) of 1.5 is permitted. An amendment to the OCP would be required to permit more than 4 storeys. We understand from informal conversations with Esquimalt Planning Department, that staff may be recommending to council that MULRR designated properties be considered for up to 6 storeys in height in most cases.

We would like to acknowledge that we have reviewed the West Bay Neighbourhood Design Guidelines and note that this particular property has been identified as having 4 storeys. This proposal does include 2 units on level 5 which are set back from the north, east and western edges. As such, the shadows cast compared to a 4 storey building will be insignificant, if noticable at all. From a visual and massing perspective, we consider the additional storey to be complimentary to the overall appearance of the proposed building.

This proposal was presented at a neighbourhood meeting which was held November 27, 2017. The meeting was quite well attended and our impression from the feedback was that the proposal for a 5 storey building was generally well received. Attached with this letter please find a copy of the notification for the neighbourhood meeting, sign-in sheets as well as a summary flyer of the meeting which was shared with the West Bay Residents Association president, Carole Witter.

833 Dunsmuir is currently zoned RM-4 (Multi-Unit Family) and 835 Dunsmuir is currently zoned RD-3 (Two Family / Single Family Residential). We understand from informal conversations with Esquimalt Planning Department that rezoning to a Comprehensive Development would be the appropriate approach for the redevelopment of these properties.

Trusting this is sufficient for submission requirements,

Sincerely,

Heather Spinney, Architect AIBC
Praxis Architects Inc.

WATT Consulting Group

833 + 835 Dunsmuir Road

Parking Study

Prepared for:	**GT Mann Contracting**
Prepared by:	**Watt Consulting Group**
Our File:	**2258**
Date:	**December 6, 2017**

TABLE OF CONTENTS

1.0 INTRODUCTION

Watt Consulting Group was retained by GT Mann Contracting to conduct a parking study for the proposed development at 833-835 Dunsmuir Road in the Township of Esquimalt. The purpose of this study is to assess the adequacy of the proposed parking supply by considering parking demand at representative sites and to identify transportation demand management (TDM) options.

1.1 SUBJECT SITE

The proposed redevelopment site is 833-835 Dunsmuir Road in the Township of Esquimalt. See **Figure 1**. The site is zoned RD-3 | Two Family/Single Family Residential and RM-4 | Multiple Family Residential.

FIGURE 1. **SUBJECT SITE**

1.2 SITE CHARACTERISTICS

The following provides information regarding services and transportation options in close proximity to the subject site. See **Figure 2**.

SERVICES

The site is located 400m from the intersection of Esquimalt Road and Head Street that has various retail stores including anchor Shoppers Drug Mart, small scale restaurants, and medical services. The area is identified in the Official Community Plan (OCP)[1] as a "commercial node" where commercial services and concentrations of medium- and high-density residential will be focused. Esquimalt Village and Downtown Victoria are located over 1-km from the site and have the majority of services site residents may need.

TRANSIT

The closest bus stop to the site is located less than 100m away on Dunsmuir Road and serves Route 25 | Maplewood/Admirals Walk. This route is classified as a local route that has a service frequency between 20 and 120 minutes. Route 15 | Esquimalt/Uvic stops 150m from the site on Esquimalt Road and is a regional route with a service frequency of 15 to 60 minutes with limited stops. This route provides direct service between the DND Esquimalt base and the University of Victoria, via downtown Victoria.

BC Transit's Transit Future Plan identifies Esquimalt Road as a "Frequent Transit Corridor"[2] that will provide frequent service (15 minutes or better between 7am and 10pm, 7 days per week) with improved transit travel times achieved by fewer stops, transit priority measures and enhanced bus stop infrastructure. The subject site will benefit from frequent, reliable and convenient transit service.

WALKING

There are sidewalks on both sides of Dunsmuir Road, providing connection to Esquimalt Road. Esquimalt Road provides for a relatively pleasant pedestrian environment, the result of a streetscape revitalization initiative in approximately 2010. Sidewalks are provided on both sides of Esquimalt Road with crosswalks at major intersections and various mid-block crosswalks. The site has a Walkscore[3] of 72, which suggests most errands can be accomplished on foot.

[1] Corporation of the Township of Esquimalt Official Community Plan, 2006, Bylaw No. 2646. Available online at: https://www.esquimalt.ca/sites/default/files/docs/municipal-hall/bylaws/bylaw_no._2646_2006_official_community_plan_consolidated_march_2017_complete_document.pdf

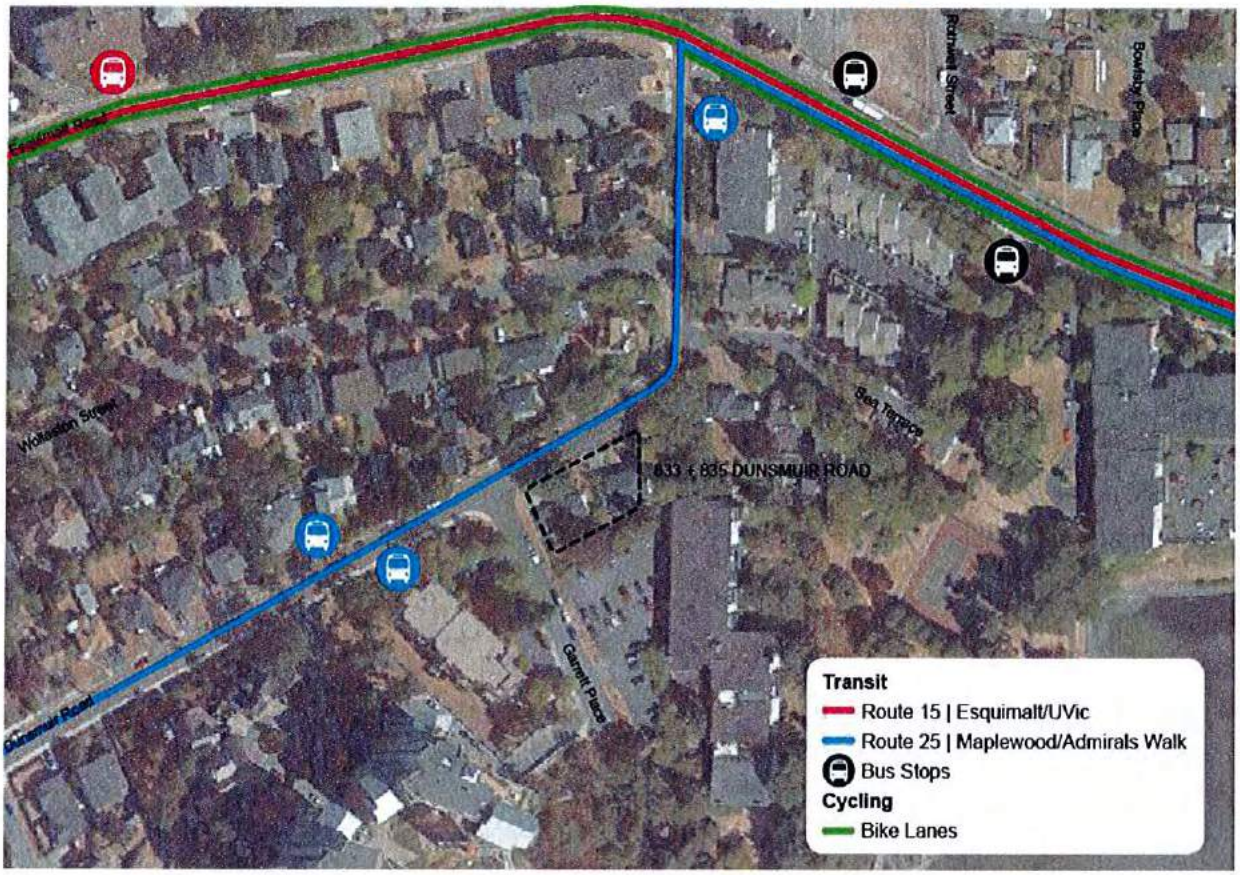
[2] More information on the Victoria Transit Future Plan is available online at: http://bctransit.com/victoria/transit-future/victoria-transit-future-plan

[3] Walkscore. For more information see: https://www.walkscore.com/score/833-dunsmuir-rd-victoria-bc-canada

CYCLING

Bike lanes are provided on Esquimalt Road with direct connection to downtown Victoria and the Galloping Goose Regional Trail. The site is approximately 400m from the Esquimalt + Nanaimo (E+N) Rail Trail, which provides a direct off-road cycling route to View Royal and the Western Communities.

FIGURE 2. **TRANSPORTATION OPTIONS SURROUNDING THE SITE**



2.0 PROPOSED DEVELOPMENT

The proposal is for 34 Multi-family Residential units. The site will be a condominium subject to strata ownership and will consist of a combination of one and two bedroom units. See **Table 1**.

TABLE 1. **PROPOSED UNIT COMPOSITION**[4]

Number of Bedrooms	Quantity
One-Bedroom	21
Two-Bedroom	13
Total	**34**

2.1 PROPOSED PARKING SUPPLY

The proposed parking supply is 37 spaces - a parking supply rate of 1.09 spaces per unit.

The proposal also includes the provision of 51 long-term bike parking spaces (1.5 bike parking spaces per unit) and a six-space bike rack at the building entrance.

3.0 PARKING REQUIREMENT

The Township of Esquimalt Parking Bylaw No. 2011[5] identifies a minimum parking supply rate of 1.3 spaces per unit for Medium and High Density Apartment uses (assumes RM-4 zoning). Applied to the subject site, this results in a requirement for 44 parking spaces. The Bylaw also requires that 11 of the required spaces are reserved for visitors, and one space is designed and designated as Disabled Persons' parking.

4.0 EXPECTED PARKING DEMAND

Expected parking demand is estimated in the following sections based on vehicle ownership information from the Insurance Corporation of British Columbia ("ICBC"), observations of representative study site, research and surveys.

4.1 RESIDENT PARKING, VEHICLE OWNERSHIP

Vehicle ownership information was obtained from ICBC for representative sites. See **Table 2**. Sites selected exhibit similar characteristics to the subject site - all sites are condominium (i.e., strata ownership) and in a similar location / context. The average vehicle ownership rate is 0.98 vehicles per unit and ranges from 0.78 to 1.2 vehicles per unit.

Research suggests that parking demand varies based on the size of unit - the higher the number of bedrooms, the higher the parking demand. For each study site the total parking demand has been redistributed based on number of bedrooms.

[4] Unit composition information per email correspondence from Praxis Architects, received September 18 2017

[5] The Township's Zoning Bylaw is available online at: www.esquimalt.ca/sites/default/files/docs/municipal-hall/bylaws/parking_bylaw_2011_july.pdf

Overall vehicle ownership at each study site has been factored to account for unit configuration (i.e., number of bedrooms) as follows:

1. Overall vehicle ownership data for each site;
2. The breakdown of unit type (i.e., number of bedrooms) at each site; and
3. The assumed "ratio differences" between each unit type based on the King County Metro[6] study which recommends one-bedroom units have a 20% higher parking demand than bachelor units, two-bedroom units have a 60% higher parking demand than one-bedroom units, and three-bedroom units have a 15% higher parking demand than two-bedroom units.

Results suggest that average parking demand when factored for unit configuration is as follows:

- One-Bedroom Units (21) = 0.68 vehicles per unit, 14 vehicles
- Two-Bedroom Units (13) = 1.06 vehicles per unit, 14 vehicles

The subject site has more one-bedroom units and less two-bedroom units than is typical of the study sites, which explains why the expected parking demand is reduced when factored for unit configuration (i.e., number of bedrooms).

TABLE 2. **VEHICLE OWNERSHIP AT REPRESENTATIVE SITES**

Location	Number of Units	Vehicle Ownership based on ICBC Data		Assumed Vehicle Ownership Distribution (vehicles per unit)	
		Total	Rate (vehicles per unit)	1-Bedroom	2-Bedroom
885 Ellery St	20	24	1.2	0.81	1.30
830 Esquimalt Rd	21	17	0.81	0.56	0.90
848 Esquimalt Rd	51	40	0.78	0.60	0.96
924 Esquimalt Rd*	58	53	0.91	0.62	0.99
929 Esquimalt Rd	31	31	1.00	--	1.00
1000 Esquimalt Rd	30	32	1.07	0.7	1.12
1315 Esquimalt Rd*	78	79	1.01	0.68	1.09
614 Fernhill Pl	21	19	0.90	--	0.90
331 Robert St	10	11	1.10	0.79	1.26
Average			**0.98**	**0.68**	**1.06**

* Unit breakdown information was unavailable for these sites, and so an average of unit breakdown at other representative sites was applied to these sites.

[6] King County Metro. (2013). Right Size Parking Model Code. Table 2, page 21.
Available online at: http://metro.kingcounty.gov/programs-projects/right-size-parking/pdf/140110-rsp-model-code.pdf

4.2 RESIDENT PARKING, OBSERVATIONS

Observations of parked vehicles were conducted at select sites assessed above in 2015 as part of a previous study[7] and were updated for this study to determine if the ICBC vehicle ownership information from 2015 (see above) is reflective of current demand at the representative sites. Results of observations from 2015 and 2017 - shown in **Table 3** – demonstrate that parking conditions are virtually identical to 2015, suggesting that the vehicle ownership information from 2015 (presented in Section 4.1) is an accurate measure of current parking demand.

TABLE 3. **SUMMARY OF OBSERVATIONS AT REPRESENTATIVE SITES**

Location	Number of Units	Parking Supply	Thurs, Dec 02 2015 @ 10:30pm		Tues, Sept 19 2017 @ 9:30pm	
			Vehicles	Rate	Vehicles	Rate
885 Ellery St	20	26	16	0.80	16	0.80
830 Esquimalt Rd	21	30	17	0.81	16	0.76
614 Fernhill Pl	21	24	20	0.95	20	0.95
Average				**0.85**		**0.84**

4.3 PRECEDENT SITES

A recent development (924 Esquimalt Road) was assessed, as it is deemed representative to the subject site and reflects parking demand characteristics of newer developments. The site has a vehicle ownership rate of 0.91 vehicles per unit over 24% one- and 76% two-bedroom units. Considered by number of bedrooms, this assumes ownership rates of 0.63 vehicles per one-bedroom unit and 1.0 vehicles per two-bedroom unit. Applied to the subject site, the anticipated resident parking demand is 26 vehicles.

4.4 VISITOR PARKING

Observations were conducted as part of a study by Metro Vancouver[8] that concluded typical visitor parking demand is less than 0.1 vehicles per unit. This is similar to observations that were conducted for parking studies in the City of Langford and the City of Victoria, and suggests that visitor parking demand is not strongly influenced by location.

As such, it is estimated that visitor parking demand will be no more than 0.1 vehicles per unit.

[7] 826 Esquimalt Road Parking Study. Available online at: https://esquimalt.ca.legistar.com/LegislationDetail.aspx?ID=3663&GUID=B883D3FE-6D24-4C02-9550-0339E2D847A4

[8] Metro Vancouver Apartment Parking Study, Technical Report, 2012. Available online at: http://www.metrovancouver.org/services/regional-planning/PlanningPublications/Apartment_Parking_Study_TechnicalReport.pdf

4.5 SUMMARY OF EXPECTED PARKING DEMAND

Expected parking demand is approximately 31 vehicles, 6 less than is proposed. See **Table 4**.

TABLE 4. **SUMMARY OF EXPECTED PARKING DEMAND**

		Units	Expected Parking Demand	
			Rate	Total
Resident	One Bedroom	21	0.68 / unit	14
	Two Bedroom	13	1.06 / unit	14
Visitor		34	0.1 / unit	3
		Total Expected Parking Demand		**31**

5.0 ON-STREET PARKING

On-street parking conditions were observed surrounding the site on Dunsmuir Road (from West Bay Terrace to Wollaston Street) and Garrett Place (from Dunsmuir Road to the cul-de-sac). Parking restrictions on these road segments are either unrestricted or there is no parking available. See **Table 4** and **Figure 3**.

Observations were completed during a weekday afternoon and evening to reflect the anticipated "peak" periods. Observations were conducted during the following time periods:

- Tuesday September 19, 2017 at 9:30pm
- Friday September 22, 2017 at 2:45pm

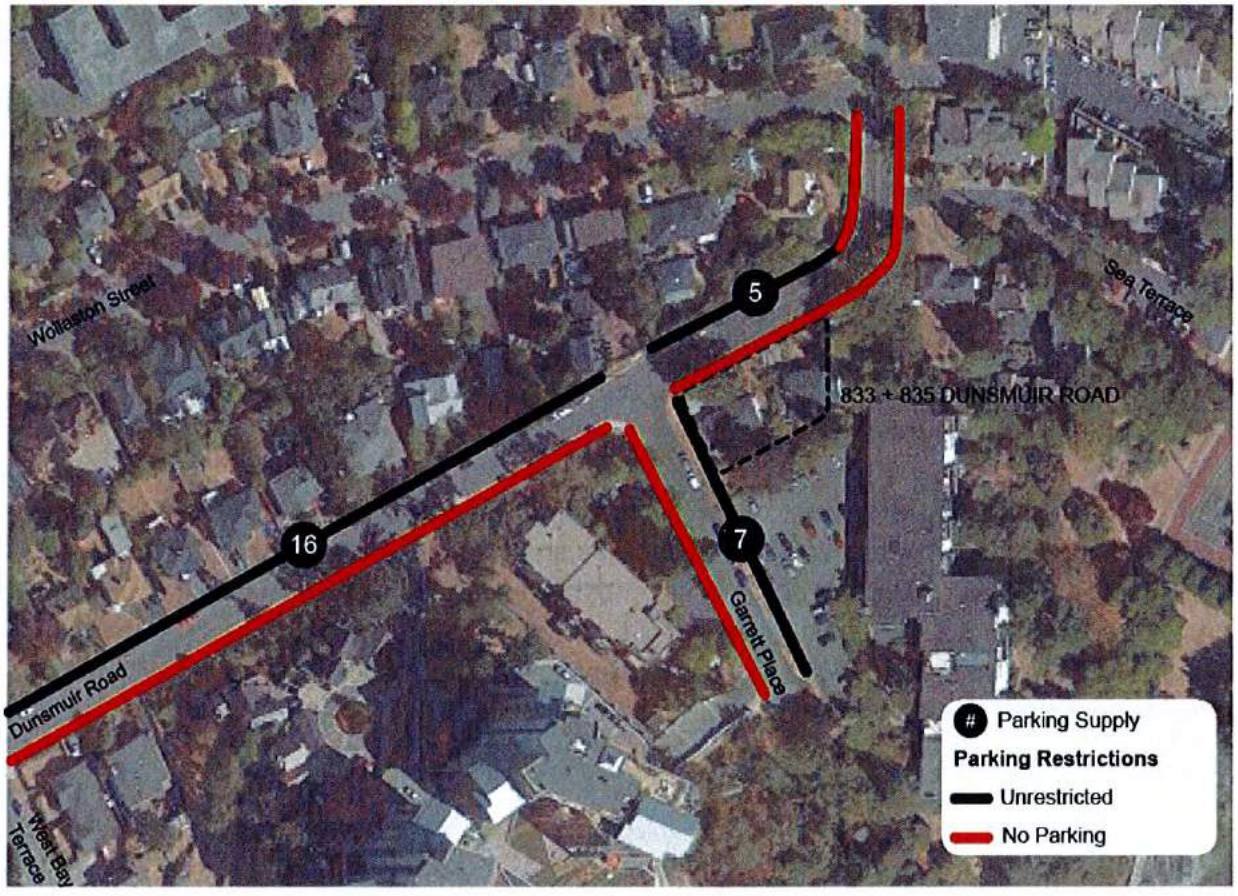
Peak occupancy was observed during the weekday afternoon observation (Friday at 2:45pm) when available parking was 75% occupied, with seven parking spaces still available. This demonstrates reasonable utilization of nearby on-street parking supply but sufficient availability of parking in case of spillover.

High parking occupancy rates were observed on Garrett Place and many of the same vehicles observed during both observations. These vehicles are assumed to be attributed to the Multi-Family Residential building immediately adjacent. It is anticipated that any resident or visitor parking spillover associated with the subject site would seek parking on Dunsmuir Road due to proximity to the front entry, and are unlikely to displace vehicles parking on Garrett Place nor be inconvenienced by the high occupancy rate.

TABLE 4. SUMMARY OF ON-STREET PARKING CONDITIONS

Street		Side	Restrictions	Parking Supply (spaces)	Vehicles Observed	
					Tues. 09/19/17 @ 9:30pm	Fri. 09/22/17@ 2:45pm
Dunsmuir Road	West Bay Terr – Garrett Pl	N	Unrestricted	16	11	10
		S	No Parking	-	-	-
	Garret Pl – Wollaston St	N	Unrestricted	5	2	4
		S	No Parking	-	-	-
Garret Place	Dunsmuir Rd – cul-de-sac	W	No Parking	-	-	-
		E	Unrestricted	7	7	7
				28	**20** 71%	**21** 75%

FIGURE 3. ON-STREET PARKING SUPPLY AND RESTRICTIONS



6.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) is the application of strategies and policies to influence individual travel choice, most commonly to reduce single-occupant vehicle travel. TDM measures can be pursued to encourage sustainable travel, enhance travel options and decrease parking demand. The following summarizes TDM options for the applicant's consideration.

6.1 BIKE PARKING

Bike parking is not currently required in the Township's Parking Bylaw. However, the Township of Esquimalt Official Community Plan includes policy that states:

> *In new multi-unit residential developments, secure bicycle storage for residents should be provided in the ratio of 1.5 storage spaces per dwelling unit. In addition to the residents' parking, each multi-unit building should have six (6) bicycle lock-up spaces for the use of visitors.*

The applicant is providing bike parking as per the policy in the OCP, which is higher than typical bike parking requirements in other communities.

6.2 CARSHARE

Modo Carshare is the carshare organization most wide spread in the Capital Region. Monthly Modo members pay $5 per month, a $10 registration fee, $8 per hour (including gas, insurance, and maintenance) and receive the first 200 kilometers of their trip for free. Member-owner memberships are $500 (refundable share purchase).

There is currently one Modo vehicle located in the Skyline Residences at 924 Carlton Terrace (Esquimalt Road/Head Street) and a second vehicle will be included in the Multi-Family Residential development under construction at 826 Esquimalt Road within the next year[9]. This vehicle will be approximately 250m from the subject site and may be accessed within a 3-4 minute walk. To facilitate carshare use among site residents, the applicant may consider purchasing carshare memberships for each unit that would allow residents to access the carshare vehicle without paying the up-front membership cost (the resident would only pay for usage). The cost to the applicant would be approximately $17,000 (34 units X $500 non-refundable membership).

[9] Staff report can be found online at: https://esquimalt.ca.legistar.com/LegislationDetail.aspx?ID=3663&GUID=B883D3FE-6D24-4C02-9550-0339E2D847A4. Staff Report-DEV-16-002.

7.0 SUMMARY

The proposed development is for 34 units and 37 off-street parking spaces - a parking supply rate of 1.09 spaces per unit. The Township's Parking Bylaw identifies a required minimum parking supply of 44 parking spaces; seven more than is proposed.

Parking demand was estimated for the site based vehicle ownership data and observations of representative study sites. Results suggest an expected parking demand of 28 resident vehicles and 3 visitor vehicles – a total site parking demand of 31 vehicles. Site parking demand is expected to be accommodated within the proposed off-street parking supply and without impacting the surrounding neighbourhood.

Long- and short-term bicycle parking will be provided, consistent with the policy in the Township's OCP (1.5 long-term bike parking spaces per unit and a six-space rack at the building entrance).

7.1 RECOMMENDATIONS

1. It is recommended that the Township grant the requested variance to the minimum parking supply to allow for provision of 37 parking spaces (1.09 space per unit); and

WATT Consulting Group

833 / 835 DUNSMUIR ROAD DEVELOPMENT

Traffic Impact Assessment

Prepared for:	GT Mann Contracting
Prepared by:	**Watt Consulting Group**
Our File:	2258.B01
Date:	December 11, 2017

Dec 11, 2017

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APPENDICES

Appendix A: Synchro Background
Appendix B: 2017 Existing Conditions
Appendix C: 2017 Post Development Conditions

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1.0 INTRODUCTION

Watt Consulting Group was retained by GT Mann Contracting to conduct a traffic impact assessment for the proposed residential development at 833 / 835 Dunsmuir Road in the Township of Esquimalt, BC. An analysis of post-development conditions was undertaken in order to provide a clear view of the impacts at two key intersections on Dunsmuir Road. The proposed site access location (underground parkade ramp) was also reviewed to establish the functionality and safety of the access. Study recommendations and conclusions are to provide safe and efficient movement of vehicular traffic for the proposed development while minimizing the impact to non-site trips.

1.1 STUDY AREA

The development site is located at the south-east corner of Dunsmuir Road / Garrett Place. The study area includes Dunsmuir Road, Esquimalt Road, Head Street, Garrett Place and the site access. There are two key intersections in the study area: Esquimalt Road / Dunsmuir Road and Head Street / Dunsmuir Road. See **Figure 1** for the study area and site location.

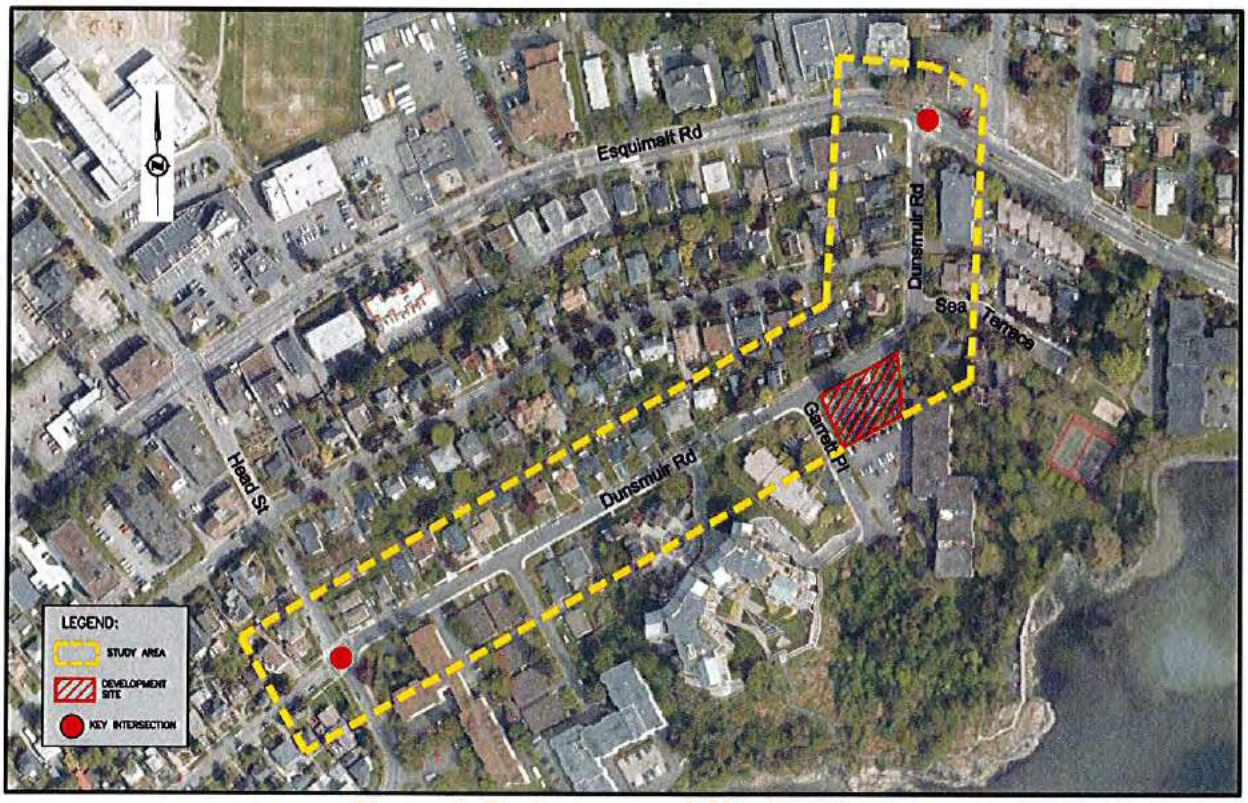


Figure 1: Study Area and Site Location

2.0 EXISTING CONDITIONS

2.1 LAND USE

There are two single family houses on the existing site (two residential lots). The surrounding land use is a mix of single-family and multi-family residential along Dunsmuir Road. To the north is a commercial area along Esquimalt Road.

2.2 ROAD NETWORK

Dunsmuir Road is a residential east-west local road with on-street parking along the north side in the study area. It connects to Esquimalt Road east of the development site. Esquimalt Road is an east-west major road with a three-lane cross section (centre medians or two-way left turn lane) through the town. There are bike lanes on Esquimalt Road for both sides. Head Street is a two-lane collector road running north-south.

At the intersection of Esquimalt Road / Dunsmuir Road, the northbound turn movement is stop control with channelization (right out only). There is a dedicated left turn lane on Esquimalt Road at Dunsmuir Road. A 30 km/h speed limit sign is posted on Esquimalt Road at Dunsmuir Road. Head Street / Dunsmuir Road is stop controlled for Dunsmuir Rd with a zebra crosswalk across each leg of Head Street. On Dunsmuir Road adjacent to the development site, traffic calming measures have been implemented including a speed hump and a crosswalk with curb extensions.

2.3 TRAFFIC COUNT

Turning movement counts were undertaken at the two key intersections (Esquimalt Road / Dunsmuir Road and Head Street / Dunsmuir Road) in the PM peak hour on September 14, 2017. See **Figure 2** for the 2017 existing peak hour traffic volumes. At the two study intersections, 2017 traffic volumes did not increase compared with previous counts (measured in the early 2000s).

2.4 TRAFFIC MODELLING – BACKGROUND INFORMATION

Analysis of the traffic conditions at the intersections within the study area were undertaken using Synchro software (for signalized and stop-controlled intersections).

Synchro / SimTraffic is a two-part traffic modelling software that provides analysis of traffic conditions based on traffic control, geometry, volumes and traffic operations. Synchro software (Synchro 8) is used because of its ability to provide analysis using the Highway Capacity Manual (2010) methodology, while SimTraffic integrates established driver behaviours and characteristics to simulate actual conditions by randomly "seeding" or positioning vehicles travelling throughout the network. These measures of effectiveness include level of service (LOS), delay and 95th percentile queue length.

The type of traffic control are analyzed to determine the level of service and delays. The level of services are broken down into six letter grades with LOS A being excellent operations and LOS F being unstable/failure operations. Level of service C is generally considered to be an acceptable

LOS by most municipalities. Level of service D is generally considered to be on the threshold between acceptable and unacceptable operations. A description of level of service and Synchro is provided in **Appendix A**.

2.5 EXISTING TRAFFIC – RESULTS

Existing traffic conditions were analyzed at the two key intersections within the study. All movements operate a LOS A/B except the northbound right turn movement (stop control: LOS C) from Dunsmuir onto Esquimalt Road in the PM peak hour. See **Figure 2** for the 2017 existing peak hour volumes and levels of service.

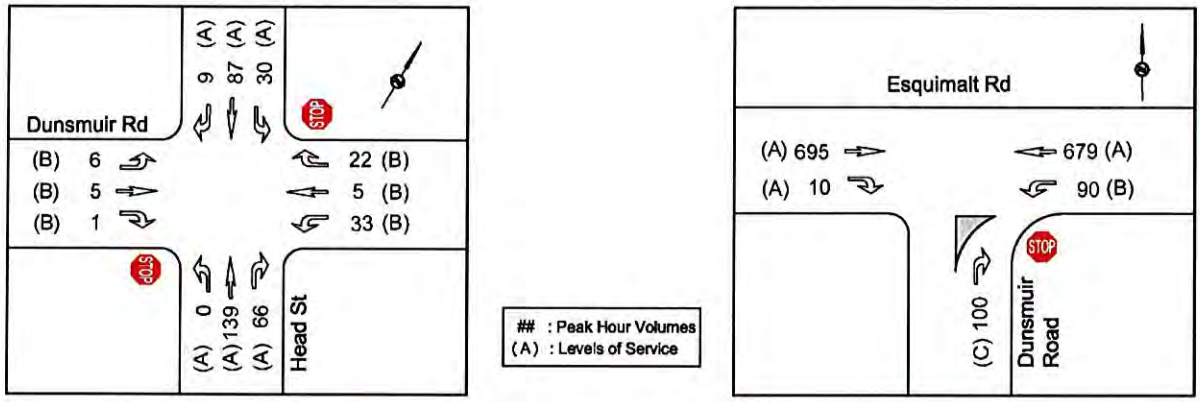


Figure 2: Existing PM Volumes and Levels of Service

3.0 POST DEVELOPMENT CONDITIONS

3.1 PROPOSED LAND USE

The proposed development is a multi-family residential building with a total of 34 multi-family units as of December 11, 2017. At the time of this study commencement 36 units were proposed, and this is the number assessed in this report. Therefore this analysis is a slightly conservative assessment.

3.2 SITE ACCESS

A site access (ramp to underground parkade) is proposed on Dunsmuir Road at a middle point of the development frontage. The proposed access is located just east of the existing speed hump on Dunsmuir Road. See **Figure 3** for the proposed site plan and accesses.

Figure 3: Proposed Site Plan and Access

3.3 TRIP GENERATION

Site trips were estimated using the *ITE Trip Generation Manual (9th Edition)*. The *Trip Generation Manual* provides trip rates for a wide variety of land uses gathered from actual sites across North America over the past 35 years. The site trips were estimated for the PM peak hour which reflects a recurring worst case time period of weekdays.

Table 1 summarizes trip generation for the proposed land use. The proposed land use (multi-family residential) is assumed an apartment building since trip generation (ITE rates) by rental apartments is slightly greater than ownership condominiums. The development will generate 20 new trips in the PM peak hour after the existing trip deduction. A residential development does not generate pass-by trips. The generated site trips are considered all primary trips within the study area.

TABLE 1: PM PEAK HOUR TRIP GENERATION

ITE Code	Land Use	Size	Trip Rate	Total Trips	Trips In	Trips Out
220	Multi-family Residential (Apartment Building)	36 units	0.62 trips/unit	22	14	8
210	Existing Trip Deduction (Single-family)	2 units	1.00 trip/unit	(-2)	(-1)	(-1)
			Net Trips Total	20	13	7

3.4 TRIP ASSIGNMENT

The site trip assignment is based on the existing trip distributions at the study intersections and commuter traffic patterns. The following summarizes directional split percentages of the site trips at the two key intersections within the study area.

Trips In (PM Peak Hour : 13 Vehicles)

- 70% of site trips are from Esquimalt Rd westbound (9 Veh)
- 10% of site trips are from Esquimalt Rd eastbound (1 Veh)
- 10% of site trips are from Head St southbound (1 Veh)
- 10% of site trips are from Head St northbound (2 Veh)

Trips Out (PM Peak Hour : 7 Vehicles)

- 60% of site trips are to Esquimalt Rd eastbound (4 Veh)
- 25% of site trips are to Head St northbound (2 Veh)
- 15% of site trips are to Head St southbound (1 Veh)

See **Figure 4** for the site trip assignment at the access roads.

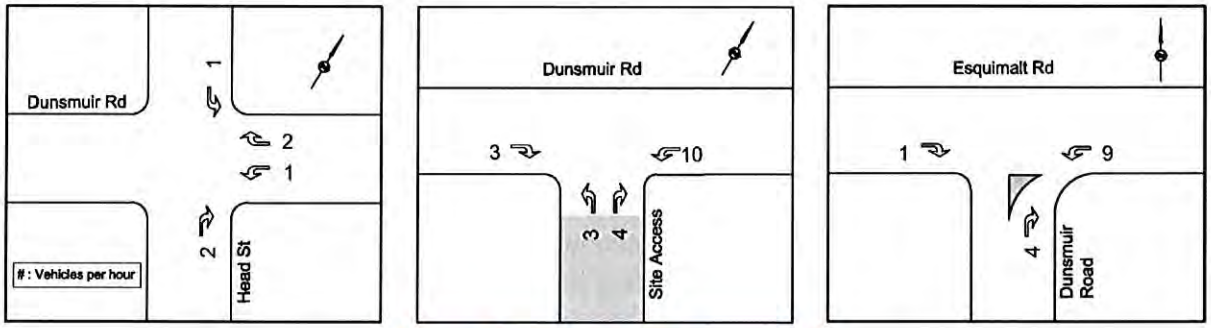


Figure 4: Site Trip Assignment

3.5 POST DEVELOPMENT TRAFFIC ANALYSIS RESULTS - FULL BUILD OUT

Based on the post-development analysis, all movements at the two key study area intersections will operate at the same levels of service as existing with the development and operate at a good LOS (C or better), and the additional average delay will be less than one second in the PM peak hour for all intersection movements.

No queuing issues were found with the development. At the intersection of Esquimalt Road / Dunsmuir Road, the westbound left 95th queue length (18.5m) will be accommodated within the existing storage length (20m). At the proposed site access on Dunsmuir Road, all movements will operate at a LOS A.

Based on the analysis results, the development will not trigger any mitigations measures at any of the study intersections.

Table 2 and **3** summarize delays and queues for 2017 existing and post development at the two study intersections. **Figure 5** summarize post-development volumes and levels of service at the key intersections.

TABLE 2: 2017 PM PEAK CONDITIONS AT ESQUIMALT RD/DUNSMUIR RD

Movement	Existing			Post Development		
	LOS	Delay (s)	95th Queue (m)	LOS	Delay (s)	95th Queue (m)
EBTR	A	0	4.7	A	0	4.8
WBL	B	10.0	17.2 (20)	B	10.1	18.5 (20)
WBT	A	0	11.8	A	0	23.2
NBR	C	17.9	21.1	C	18.1	23.5

*Notes: EB & WB = Esquimalt Rd, NB = Dunsmuir Rd; 95th Queues based on SimTraffic results, (##) = existing turn lane length

TABLE 3: 2017 PM PEAK CONDITIONS AT HEAD ST/ DUNSMUIR RD

Movement	Existing			Post Development		
	LOS	Delay (s)	95th Queue (m)	LOS	Delay (s)	95th Queue (m)
EB	B	12.7	13.0	B	12.8	12.5
WB	B	13.0	18.9	B	13.0	18.6
NB	A	0	3.1	A	0	3.3
SBL	A	8	11.3	A	8	13.3

*Notes: EB & WB = Dunsmuir Rd, NB & SB = Head St; 95th Queues based on SimTraffic results, (##) = existing turn lane length

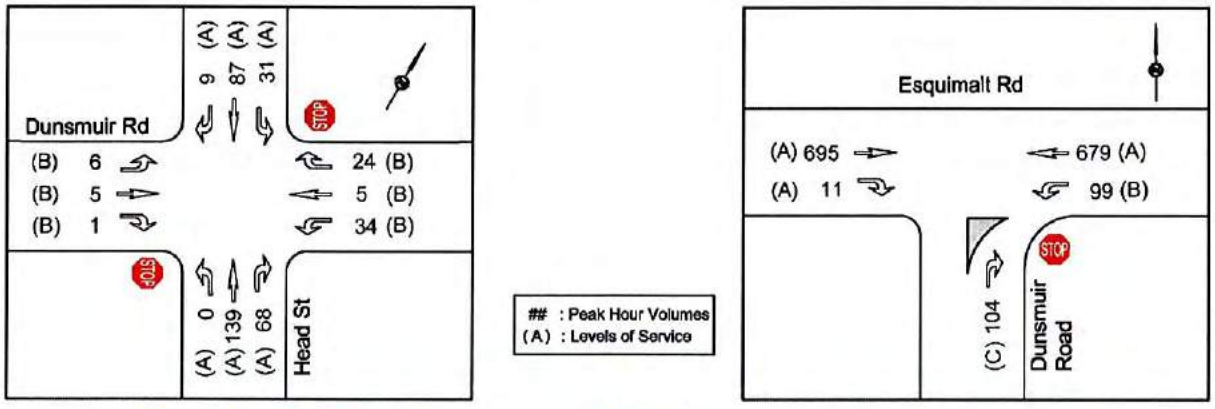


Figure 5: 2017 Post Development PM Volumes and Levels of Service

4.0 SAFETY AND GEOMETRICS

The site access is proposed to intersect Dunsmuir Road. A safety review was undertaken for the proposed site access ramp to the underground parkade based on the Transportation Association of Canada (TAC)'s Geometric Design Guide for Canadian Roads and municipal design standards.

4.1 ACCESS SPACING AND GRADES

The proposed access is located the Dunsmuir Road 20m east of Garrett Place and 25m west from the adjacent driveway (at 831 Dunsmuir Road). The proposed access location exceeds the TAC's suggested minimum corner clearance for multi-family residential driveways of 5m to minor intersections and of 3m between driveways.

The proposed access and ramp design should conform to the municipal engineering specifications. According to the Township's Design and Construction Specifications (R-8: Driveway Grades), the maximum grade of driveway is 15%. Also, the driveway and finished boulevard grade must be at the same elevation at the center of the existing road surface and the minimum level distance is 7.5m for residential roads.

4.2 SIGHT DISTANCE

The provision of adequate sight distance for the exit maneuver from the driveway is one of the most critical elements for safety. The required sight distance is determined in consideration of the design speed of the intersecting roadway and the sight line requirements for approach and departure vehicles.

4.2.1 DESIGN SPEED

Dunsmuir Road is designed with to a lower speed than a typical 50 km/h road based on the existing geometrics of the road. There is a curve section on Dunsmuir Road 40m east of the proposed site access location. The design speed of the road at the curve (curve radius of 16m) was calculated at 26 km/h based on the TAC's design guide (Chapter 3: Table 3.2.2 and Equation 3.2.3). There is a 30km/m speed warning sign before the curve for southbound-to-westbound traffic. To the west of the site access, there is a speed hump and a crosswalk with curb extensions which also serve to reduce vehicle speeds on Dunsmuir Road. Therefore, the design speed of Dunsmuir Rd is taken to be 40 km/h to the west of the site and 26km/h to the east (due to the sharp curve).

4.2.2 SIGHT DISTANCES

At the proposed site access location on Dunsmuir Road, in-field sight distances were measured. **Table 4** is a summary of sight distances at the proposed site access on Dunsmuir Road. Sight distance looking to left (west) exceeds the minimum required turning sight distance (75m). However, sight lines looking to the right (east) are limited due to the road curvature and existing vegetation (boxwood hedge). At the access location, the available sight distance to the east is

54m under existing conditions (over the sidewalk line). This is less than recommended turning sight distance at 30 km/h (of 65m) but meets the minimum turning sight distance for 26 km/h (which is 54m)[1], which is the design speed of the curve. On Dunsmuir Road, sight distances for approaching vehicles also exceed minimum stopping sight distance (50m) for 40 km/h from the west or 35m from the east. Therefore, the proposed site location meets the minimum turning sight distance requirements and exceeds stopping sight distance minimums. The curve warning advisory speed signage, however, is currently posted for higher than the design speed; reducing this advisory speed to 20 km/h would more accurately reflect the condition of the curve and better match sight line conditions for the site access.

TABLE 4: SIGHT DISTANCES AT SITE ACCESS ON DUNSMUIR RD

Sight Line Direction	Required Sight Distance	Measured at Site Access	Sight Distance Met?
Looking Left from Access	75m at 40 km/h	92m	Yes
Looking Right from Access	54m at 26 km/h	54m	Yes
Looking Forward along Dunsmuir – from West	50m (SSD)	90m	Yes
Looking Forward on Dunsmuir – from East	35m (SSD)	54m	Yes

5.0 OTHER MODES

5.1 PEDESTRIANS AND CYCLISTS

There is concrete sidewalk along the north side of Dunsmuir Road and asphalt sidewalk along the development frontage. Concrete sidewalk will be required along the development frontage of Dunsmuir Road.

There are bike lanes along both sides on Esquimalt Road and no bike lanes on Dunsmuir Road. On Dunsmuir Road, it is appropriate for cyclists to share the road with motorists given it is a local road with traffic calming. On site pedestrian/bicycle facilities should adhere to the Township specifications.

5.2 TRANSIT

There are two transit bus routes adjacent to or near the site; one (#25) is on Dunsmuir Road and the other (#15) is on Esquimalt Road. These bus routes connect the Esquimalt town centre to Downtown Victoria or UVic several times per hour on weekdays. The closest bus stop (#25) is on Dunsmuir Road 80m west of the proposed site and a bus stop for the route #15 is on Esquimalt Road within a walking distance (250m) from the development.

[1] Eq. 9.9.1, Pg 67, Chapter 9 – Intersections, TAC Geometric Design Guide for Canadian Roads

6.0 CONCLUSIONS

The following conclusions are made regarding the traffic impact assessment for the proposed 34-unit development at 833/855 Dunsmuir Road. In terms of operational impacts, the proposed development will not impact the two intersections the study area. Esquimalt Road / Dunsmuir Road and Head Street / Dunsmuir Road will operate with the same levels of service and without adverse queues in the post development period. The development does not trigger any traffic capacity mitigation requirements.

The proposed access location meets TAC's access spacing requirements and the access (ramp) should be designed based on the municipal standards. The Dunsmuir Road horizontal curve to the east of the site is constructed with a design speed of 26 km/h, and this represents the design speed to the east of the access location. Turning sight distance is just met looking east, and exceeds minimum requirements looking west. The existing southbound-to-westbound curve warning sign has an advisory speed of 30 km/h. This is higher than the design speed and therefore a consideration is to reduce this advisory speed to 20 km/h to better reflect as-built conditions.

There are sidewalks on both sides of Dunsmuir Road, and a concrete sidewalk will be required along the development frontage on Dunsmuir Road. Cyclists are accommodated on-street, with traffic calming serving to limit vehicle speeds. The area is well served by two BC Transit routes.

7.0 RECOMMENDATIONS

The following measures are recommended:

- The proposed site access (ramp to underground parking) should be designed based on the municipal standards.
- Provide a concrete sidewalk along the development frontage of Dunsmuir Road to municipal standards
- Modify the existing curve warning sign advisory speed for southbound-to-westbound drivers from 30 km/h to 20 km/h to better match the curve design.

APPENDIX A: SYNCHRO BACKGROUND

SYNCHRO MODELLING SOFTWARE DESCRIPTION

The traffic analysis was completed using Synchro and SimTraffic traffic modeling software. Results were measured in delay, level of service (LOS) and 95th percentile queue length. Synchro is based on the Highway Capacity Manual (HCM) methodology. SimTraffic integrates established driver behaviours and characteristics to simulate actual conditions by randomly "seeding" or positioning vehicles travelling throughout the network. The simulation is run five times (five different random seedings of vehicle types, behaviours and arrivals) to obtain statistical significance of the results.

Levels of Service

Traffic operations are typically described in terms of levels of service, which rates the amount of delay per vehicle for each movement and the entire intersection. Levels of service range from LOS A (representing best operations) to LOS E/F (LOS E being poor operations and LOS F being unpredictable/disruptive operations). LOS E/F are generally unacceptable levels of service under normal everyday conditions.

The hierarchy of criteria for grading an intersection or movement not only includes delay times, but also takes into account traffic control type (stop signs or traffic signal). For example, if a vehicle is delayed for 19 seconds at an unsignalized intersection, it is considered to have an average operation, and would therefore be graded as an LOS C. However, at a signalized intersection, a 19 second delay would be considered a good operation and therefore it would be given an LOS B. The table below indicates the range of delay for LOS for signalized and unsignalized intersections.

Table A1: LOS Criteria, by Intersection Traffic Control

Level of Service	Unsignalized Intersection Average Vehicle Delay (sec/veh)	Signalized Intersection Average Vehicle Delay (sec/veh)
A	Less than 10	Less than 10
B	10 to 15	11 to 20
C	15 to 25	20 to 35
D	25 to 35	35 to 55
E	35 to 50	55 to 80
F	More than 50	More than 80

APPENDIX B: 2017 EXISTING CONDITIONS

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	695	10	90	679	0	100
Future Vol, veh/h	695	10	90	679	0	100
Conflicting Peds, #/hr	0	21	21	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	200	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	63	78	83	92	93
Heavy Vehicles, %	5	0	2	5	0	3
Mvmt Flow	747	16	115	818	0	108

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	784	0	-	778
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.327
Pot Cap-1 Maneuver	-	-	834	-	0	395
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	832	-	-	386
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	17.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	386	-	-	832	-
HCM Lane V/C Ratio	0.279	-	-	0.139	-
HCM Control Delay (s)	17.9	-	-	10	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.1	-	-	0.5	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	5	1	33	5	22	0	139	66	30	87	9
Future Vol, veh/h	6	5	1	33	5	22	0	139	66	30	87	9
Conflicting Peds, #/hr	3	0	5	5	0	3	12	0	32	32	0	12
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	42	25	75	63	92	92	77	83	75	81	56
Heavy Vehicles, %	0	0	0	6	0	0	0	12	3	3	20	0
Mvmt Flow	12	12	4	44	8	24	0	181	80	40	107	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	446	499	132	460	467	255	135	0	0	292	0	0
Stage 1	207	207	-	252	252	-	-	-	-	-	-	-
Stage 2	239	292	-	208	215	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.16	6.5	6.2	4.1	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.16	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.16	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.554	4	3.3	2.2	-	-	2.227	-	-
Pot Cap-1 Maneuver	526	476	923	505	496	789	1462	-	-	1264	-	-
Stage 1	800	734	-	743	702	-	-	-	-	-	-	-
Stage 2	769	675	-	785	729	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	483	440	908	463	459	762	1455	-	-	1260	-	-
Mov Cap-2 Maneuver	483	440	-	463	459	-	-	-	-	-	-	-
Stage 1	791	701	-	720	680	-	-	-	-	-	-	-
Stage 2	734	654	-	739	696	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	13	0	1.9
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1455	-	-	496	528	1260	-	-
HCM Lane V/C Ratio	-	-	-	0.056	0.144	0.032	-	-
HCM Control Delay (s)	0	-	-	12.7	13	8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0.1	-	-

Intersection: 1: Dunsmuir Rd & Esquimalt Rd

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	R
Maximum Queue (m)	9.1	20.3	22.8	26.3
Average Queue (m)	0.5	10.7	1.5	12.5
95th Queue (m)	4.7	17.2	11.8	21.1
Link Distance (m)	243.6		215.2	74.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)		20.0		
Storage Blk Time (%)		0	0	
Queuing Penalty (veh)		3	0	

Intersection: 2: Head St & Dunsmuir Rd

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	10.5	24.5	6.4	15.6
Average Queue (m)	5.9	10.8	0.3	3.1
95th Queue (m)	13.0	18.9	3.1	11.3
Link Distance (m)	124.6	307.5	107.1	117.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Zone Summary

Zone wide Queuing Penalty: 3

APPENDIX C: 2017 POST DEVELOPMENT CONDITIONS

Intersection						
Int Delay, s/veh	1.8					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↦		↰	↑		↱
Traffic Vol, veh/h	695	11	99	679	0	104
Future Vol, veh/h	695	11	99	679	0	104
Conflicting Peds, #/hr	0	21	21	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	200	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	63	78	83	92	93
Heavy Vehicles, %	5	0	2	5	0	3
Mvmt Flow	747	17	127	818	0	112

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	786	0	-	779
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.327
Pot Cap-1 Maneuver	-	-	833	-	0	394
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	831	-	-	385
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	18.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	385	-	-	831	-
HCM Lane V/C Ratio	0.29	-	-	0.153	-
HCM Control Delay (s)	18.1	-	-	10.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.2	-	-	0.5	-

Intersection													
Int Delay, s/veh	3.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕			↕			↕		
Traffic Vol, veh/h	6	5	1	34	5	24	0	139	68	31	87	9	
Future Vol, veh/h	6	5	1	34	5	24	0	139	68	31	87	9	
Conflicting Peds, #/hr	3	0	5	5	0	3	12	0	32	32	0	12	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	50	42	25	75	63	92	92	77	83	75	81	56	
Heavy Vehicles, %	0	0	0	6	0	0	0	12	3	3	20	0	
Mvmt Flow	12	12	4	45	8	26	0	181	82	41	107	16	

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	451	504	132	464	471	256	135	0	0	294	0	0
Stage 1	210	210	-	253	253	-	-	-	-	-	-	-
Stage 2	241	294	-	211	218	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.16	6.5	6.2	4.1	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.16	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.16	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.554	4	3.3	2.2	-	-	2.227	-	-
Pot Cap-1 Maneuver	522	473	923	502	494	788	1462	-	-	1262	-	-
Stage 1	797	732	-	742	701	-	-	-	-	-	-	-
Stage 2	767	673	-	782	726	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	477	437	908	459	457	761	1455	-	-	1258	-	-
Mov Cap-2 Maneuver	477	437	-	459	457	-	-	-	-	-	-	-
Stage 1	788	698	-	719	679	-	-	-	-	-	-	-
Stage 2	730	652	-	735	692	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	13	0	2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1455	-	-	491	528	1258	-	-
HCM Lane V/C Ratio	-	-	-	0.057	0.15	0.033	-	-
HCM Control Delay (s)	0	-	-	12.8	13	8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0.1	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	100	3	10	100	3	4
Future Vol, veh/h	100	3	10	100	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	80	85	92	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	109	4	12	109	4	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	112	0	243	111
Stage 1	-	-	-	-	111	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1478	-	745	942
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	894	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1478	-	738	942
Mov Cap-2 Maneuver	-	-	-	-	738	-
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	842	-	-	1478	-
HCM Lane V/C Ratio	0.01	-	-	0.008	-
HCM Control Delay (s)	9.3	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection: 1: Dunsmuir Rd & Esquimalt Rd

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	R
Maximum Queue (m)	10.6	22.2	45.2	28.9
Average Queue (m)	0.5	11.1	2.4	13.3
95th Queue (m)	4.8	18.5	23.2	23.5
Link Distance (m)	243.6		254.8	74.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)		20.0		
Storage Blk Time (%)		1	0	
Queuing Penalty (veh)		8	0	

Intersection: 2: Head St & Dunsmuir Rd

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	9.2	26.1	5.5	18.3
Average Queue (m)	5.2	9.8	0.4	4.1
95th Queue (m)	12.5	18.6	3.3	13.3
Link Distance (m)	124.6	305.6	107.1	117.2
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: Site Access & Dunsmuir Rd

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	7.4	9.2
Average Queue (m)	0.4	2.4
95th Queue (m)	3.3	9.0
Link Distance (m)	67.5	72.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 8

Township of
ESQUIMALT

GREEN BUILDING CHECKLIST

The purpose of this Checklist is to make property owners and developers aware of specific green features that can be included in new developments to reduce their carbon footprints to help create a more sustainable community.

Creating walkable neighbourhoods, fostering green building technologies, making better use of our limited land base and ensuring that new development is located close to services, shops and transit are some of the means of achieving sustainability.

The Checklist which follows focuses on the use of **Green Technologies** in new buildings and major renovations. The Checklist is not a report card, it is a tool to help identify how your project can become 'greener' and to demonstrate to Council how your project will help the Township of Esquimalt meet its sustainability goals. It is not expected that each development will include all of the ideas set out in this list but Council is looking for a strong commitment to green development.

There are numerous green design standards, for example, Built Green BC; LEED ND; Living Building Challenge; Green Shores; Sustainable Sites Initiative. Esquimalt is not directing you to follow any particular standard, however, you are strongly encouraged to incorporate as many green features as possible into the design of your project .

As you review this checklist, if you have any questions please contact **Development Services at 250.414.7108** for clarification.

New development is essential to Esquimalt. We look forward to working with you to ensure that development is as green and sustainable as possible.

Other documents containing references to building and site design and sustainability, which you are advised to review, include:

- Esquimalt's Official Community Plan
- Development Protocol Policy
- Esquimalt's Pedestrian Charter
- Tree Protection Bylaw No. 2664
- A Sustainable Development Strategic Plan for the Township of Esquimalt

Adopted on January 10th, 2011

"One-third of Canada's energy use goes to running our homes, offices and other buildings. The federal government's Office of Energy Efficiency (Natural Resources Canada) reports that a corresponding one-third of our current greenhouse gas (GHG) emissions come from the built environment."
[Green Building and Development as a Public Good, Michael Buzzelli, CPRN Research Report June 2009]

Please answer the following questions and describe the green and innovative features of your proposed development. Depending on the size and scope of your project, some of the following points may not be applicable.

Green Building Standards

Both energy use and emissions can be reduced by changing or modifying the way we build and equip our buildings.

1	Are you building to a recognized green building standard? If yes, to what program and level? BUILT GREEN	Yes ✓	No
2	If not, have you consulted a Green Building or LEED consultant to discuss the inclusion of green features?	Yes	No
3	Will you be using high-performance building envelope materials, rainscreen siding, durable interior finish materials or safe to re-use materials in this project? If so, please describe them. TO MEET NECB 2011	Yes ✓	No
4	What percentage of the existing building[s], if any, will be incorporated into the new building?	N/A %	
5	Are you using any locally manufactured wood or stone products to reduce energy used in the transportation of construction materials? Please list any that are being used in this project. TBD DURING FURTHER DETAILED DESIGN		
6	Have you considered advanced framing techniques to help reduce construction costs and increase energy savings?	Yes ✓	No
7	Will any wood used in this project be eco-certified or produced from sustainably managed forests? If so, by which organization? FOREST STEWARDSHIP COUNCIL (FSC) OR SUSTAINABLE FORESTRY INITIATIVE For which parts of the building (e.g. framing, roof, sheathing etc.)? SHEATHING		
8	Can alternatives to Chlorofluorocarbon's and Hydro-chlorofluorocarbons which are often used in air conditioning, packaging, insulation, or solvents] be used in this project? If so, please describe these. THE GOAL WILL BE TO MINIMIZE USE OF CFC AND HCFC - TBD DURING FURTHER DETAILED DESIGN	Yes ✓	No
9	List any products you are proposing that are produced using lower energy levels in manufacturing. TBD DURING FURTHER DETAILED DESIGN		
10	Are you using materials which have a recycled content [e.g. roofing materials, interior doors, ceramic tiles or carpets]?	Yes ✓	No
11	Will any interior products [e.g. cabinets, insulation or floor sheathing] contain formaldehyde?	Yes	No ✗

Water Management

The intent of the following features is to promote water conservation, re-use water on site, and reduce storm water run-off.

Indoor Water Fixtures

12	Does your project exceed the BC Building Code requirements for public lavatory faucets and have automatic shut offs? N/A	Yes	No
13	For commercial buildings, do flushes for urinals exceed BC Building Code requirements? N/A	Yes	No
14	Does your project use dual flush toilets and do these exceed the BC Building Code requirements? TBD DURING FURTHER DETAILED DESIGN	Yes	No
15	Does your project exceed the BC Building Code requirements for maximum flow rates for private showers? TBD DURING FURTHER DETAILED DESIGN	Yes	No
16	Does your project exceed the BC Building Code requirements for flow rates for kitchen and bathroom faucets? TBD DURING FURTHER DETAILED DESIGN	Yes	No

Storm Water

17	If your property has water frontage, are you planning to protect trees and vegetation within 60 metres of the high water mark? [Note: For properties located on the Gorge Waterway, please consult Sections 7.1.2.1 and 9.6 of the Esquimalt Official Community Plan.]	Yes	No	N/A ✓
18	Will this project eliminate or reduce inflow and infiltration between storm water and sewer pipes from this property?	Yes	No	N/A ✓
19	Will storm water run-off be collected and managed on site (rain gardens, wetlands, or ponds) or used for irrigation or re-circulating outdoor water features? If so, please describe. _IMPERVIOUS SURFACES WILL BE MINIMIZED.	Yes	No ✓	N/A
20	Have you considered storing rain water on site (rain barrels or cisterns) for future irrigation uses? IT HAS BEEN CONSIDERED, BUT IS NOT APPROPRIATE FOR THIS SITE	Yes ✓	No	N/A
21	Will surface pollution into storm drains will be mitigated (oil interceptors, bio-swales)? If so, please describe. OIL INTERCEPTORS	Yes ✓	No	N/A
22	Will this project have an engineered green roof system or has the structure been designed for a future green roof installation?	Yes	No ✓	N/A
23	What percentage of the site will be maintained as naturally permeable surfaces? IMPERVIOUS SURFACES WILL BE MINIMIZED - TBC DURING FURTHER DETAILED DESIGN	_____ %		

Waste water

24	For larger projects, has Integrated Resource Management (IRM) been considered (e.g. heat recovery from waste water or onsite waste water treatment)? If so, please describe these.	Yes	No	N/A ✓

Natural Features/Landscaping

The way we manage the landscape can reduce water use, protect our urban forest, restore natural vegetation and help to protect the watershed and receiving bodies of water.

25	Are any healthy trees being removed? If so, how many and what species? REFER TO REPORT PREPARED BY TALBOT MACKENZIE & ASSOCIATES Could your site design be altered to save these trees? NO Have you consulted with our Parks Department regarding their removal? YES	Yes ✓	No	N/A

26	Will this project add new trees to the site and increase our urban forest? If so, how many and what species? REFER TO LANDSCAPE PLAN	Yes ✓	No	N/A
27	Are trees [existing or new] being used to provide shade in summer or to buffer winds?	Yes ✓	No	N/A
28	Will any existing native vegetation on this site be protected? If so, please describe where and how. _____	Yes	No	N/A ✓
29	Will new landscaped areas incorporate any plant species native to southern Vancouver Island?	Yes ✓	No	N/A
30	Will xeriscaping (i.e. the use of drought tolerant plants) be utilized in dry areas?	Yes ✓	No	N/A
31	Will high efficiency irrigation systems be installed (e.g. drip irrigation; 'smart' controls)?	Yes ✓	No	N/A
32	Have you planned to control invasive species such as Scotch broom, English ivy, Himalayan and evergreen blackberry growing on the property?	Yes	No	N/A ✓
33	Will topsoil will be protected and reused on the site?	Yes ✓	No	N/A
Energy Efficiency *Improvements in building technology will reduce energy consumption and in turn lower greenhouse gas [GHG] emissions. These improvements will also reduce future operating costs for building occupants.*				
34	Will the building design be certified by an independent energy auditor/analyst? If so, what will the rating be? TBD DURING FURTHER DETAILED DESIGN	Yes ✓	No	N/A
35	Have you considered passive solar design principles for space heating and cooling or planned for natural day lighting?	Yes ✓	No	N/A
36	Does the design and siting of buildings maximize exposure to natural light? What percentage of interior spaces will be illuminated by sunlight? 55 - 60% +/- %	Yes ✓	No	N/A
37	Will heating and cooling systems be of enhanced energy efficiency (ie. geothermal, air source heat pump, solar hot water, solar air exchange, etc.). If so, please describe. TBD DURING FURTHER DETAILED DESIGN If you are considering a heat pump, what measures will you take to mitigate any noise associated with the pump? _____	Yes	No	N/A
38	Has the building been designed to be solar ready?	Yes ✓	No	N/A
39	Have you considered using roof mounted photovoltaic panels to convert solar energy to electricity?	Yes	No	N/A ✓
40	Do windows exceed the BC Building Code heat transfer coefficient standards?	Yes ✓	No	N/A
41	Are energy efficient appliances being installed in this project? If so, please describe. ENERGY STAR	✓		
42	Will high efficiency light fixtures be used in this project? If so, please describe. LED	Yes ✓	No	N/A
43	Will building occupants have control over thermal, ventilation and light levels?	Yes ✓	No	N/A
44	Will outdoor areas have automatic lighting [i.e. motion sensors or time set]?	Yes ✓	No	N/A
45	Will underground parking areas have automatic lighting?	Yes ✓	No	N/A

Air Quality

The following items are intended to ensure optimal air quality for building occupants by reducing the use of products which give off gases and odours and allowing occupants control over ventilation.

46	Will ventilation systems be protected from contamination during construction and certified clean post construction?	✓ Yes	No	N/A
47	Are you using any natural, non-toxic, water soluble or low-VOC [volatile organic compound] paints, finishes or other products? If so, please describe. TBD DURING FURTHER DETAILED DESIGN	✓ Yes	No	N/A
48	Will the building have windows that occupants can open?	✓ Yes	No	N/A
49	Will hard floor surface materials cover more than 75% of the liveable floor area?	✓ Yes	No	N/A
50	Will fresh air intakes be located away from air pollution sources?	✓ Yes	No	N/A

Solid Waste

Reuse and recycling of material reduces the impact on our landfills, lowers transportation costs, extends the life-cycle of products, and reduces the amount of natural resources used to manufacture new products.

51	Will materials be recycled during demolition of existing buildings and structures? If so, please describe. EXPLORING OPTIONS REGARDING MOVING EXISTING HOUSES	✓ Yes	No	N/A
52	Will materials be recycled during the construction phase? If so, please describe. WASTE WOOD	✓ Yes	No	N/A
53	Does your project provide enhanced waste diversion facilities i.e. on-site recycling for cardboard, bottles, cans and or recyclables or on-site composting?	✓ Yes	No	N/A
54	For new commercial development, are you providing waste and recycling receptacles for customers?	✓ Yes	No	N/A

Green Mobility

The intent is to encourage the use of sustainable transportation modes and walking to reduce our reliance on personal vehicles that burn fossil fuels which contributes to poor air quality.

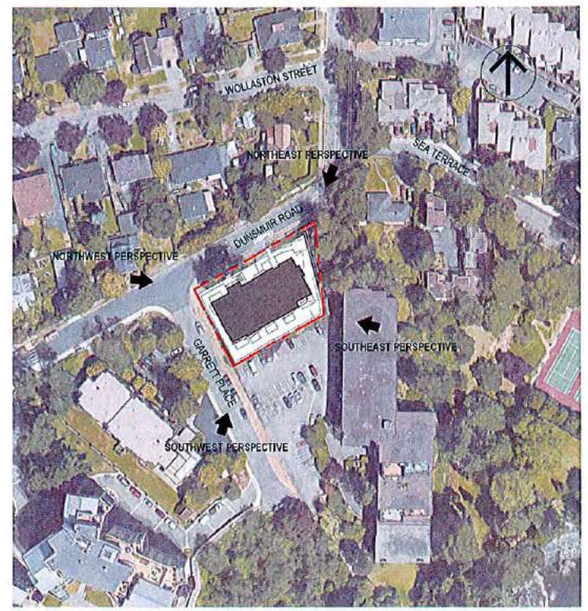
55	Is pedestrian lighting provided in the pathways through parking and landscaped areas and at the entrances to your building[s]?	✓ Yes	No	N/A
56	For commercial developments, are pedestrians provided with a safe path[s] through the parking areas and across vehicles accesses?	✓ Yes	No	N/A
57	Is access provided for those with assisted mobility devices?	✓ Yes	No	N/A
58	Are accessible bike racks provided for visitors?	✓ Yes	No	N/A
59	Are secure covered bicycle parking and dedicated lockers provided for residents or employees?	✓ Yes	No	N/A
60	Does your development provide residents or employees with any of the following features to reduce personal automobile use [check all that apply]: ☐ transit passes ☑ car share memberships ☐ shared bicycles for short term use ☐ weather protected bus shelters ☑ plug-ins for electric vehicles			

Is there something unique or innovative about your project that has not been addressed by this Checklist? If so, please add extra pages to describe it.

DUNSMUIR 833 + 835

ISSUED FOR REZONING - 2017.12.12

VIEW FROM DUNSMUIR AT GARRETT



CONTEXT PLAN

PROPOSED PROJECT INFORMATION

EXISTING ZONING	835 = RD-3 (2 FAMILY / 1 FAMILY) 833 = RM-4 (MULTI-FAMILY)		
REZONE TO	NEW COMPREHENSIVE ZONE		
SITE AREA	0.15 Ha / 0.37 Ac / 1,528 m² / 16,447 ft²		
NO. UNITS	34 (5 STOREYS)		
PARKING PROVIDED	35		
BIKE PARKING	51 + RACK FOR 6 AT ENTRANCE		
UNIT AREA (+/-)	50m² (538 ft²) - 113 m² (1,216 ft²)		
TOTAL UNIT AREA	2,176 m² (23,422 ft²)		
BUILDING AREA	628 m² (6,760 ft²)		
FLOOR AREA RATIO	1.4 : 1		
COVERAGE	41%		
SETBACKS (PER RM-4)	*FRONT*	7.5m (24.6)	*VARIANCE REQ'D: +2m @ ENTRY*
	REAR	7.5m (24.6)	
	INTERIOR SIDE	6.0m (19.7')	*VARIANCE REQ'D: + 1.9m @ S/E CORNER*
	EXTERIOR SIDE	3.6m (11.8)	

DRAWING LIST

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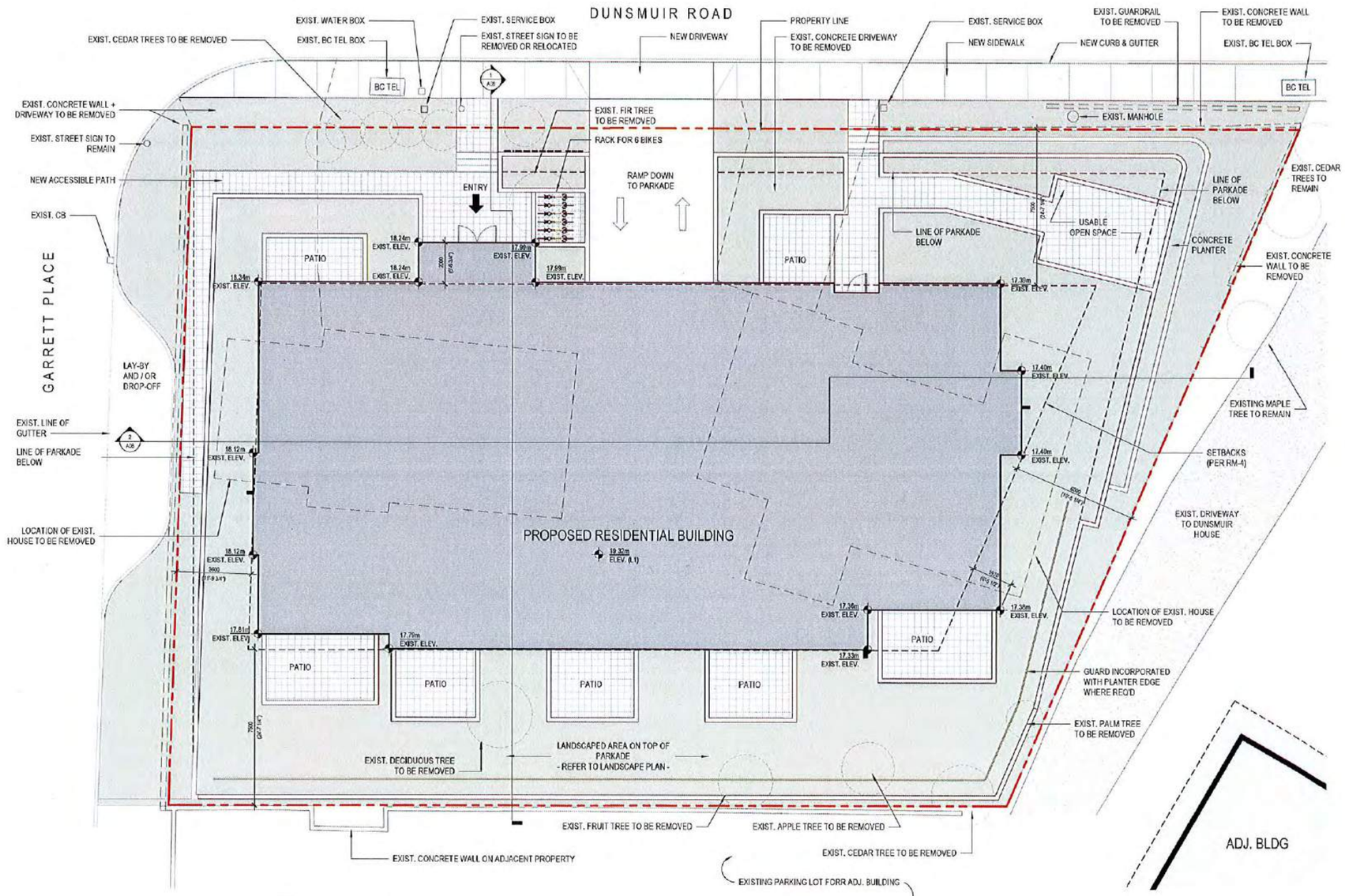
DUNSMUIR 833 + 835

833/835 DUNSMUIR ROAD PROJECT NO. 17-012

COVER PAGE

2018.01.30 - REVISED PER PLANNING

A0.0



1 SITE PLAN
1 : 100

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FEB 07 2018
CORP. OF TOWNSHIP OF ESQUIMALT
DEVELOPMENT SERVICES

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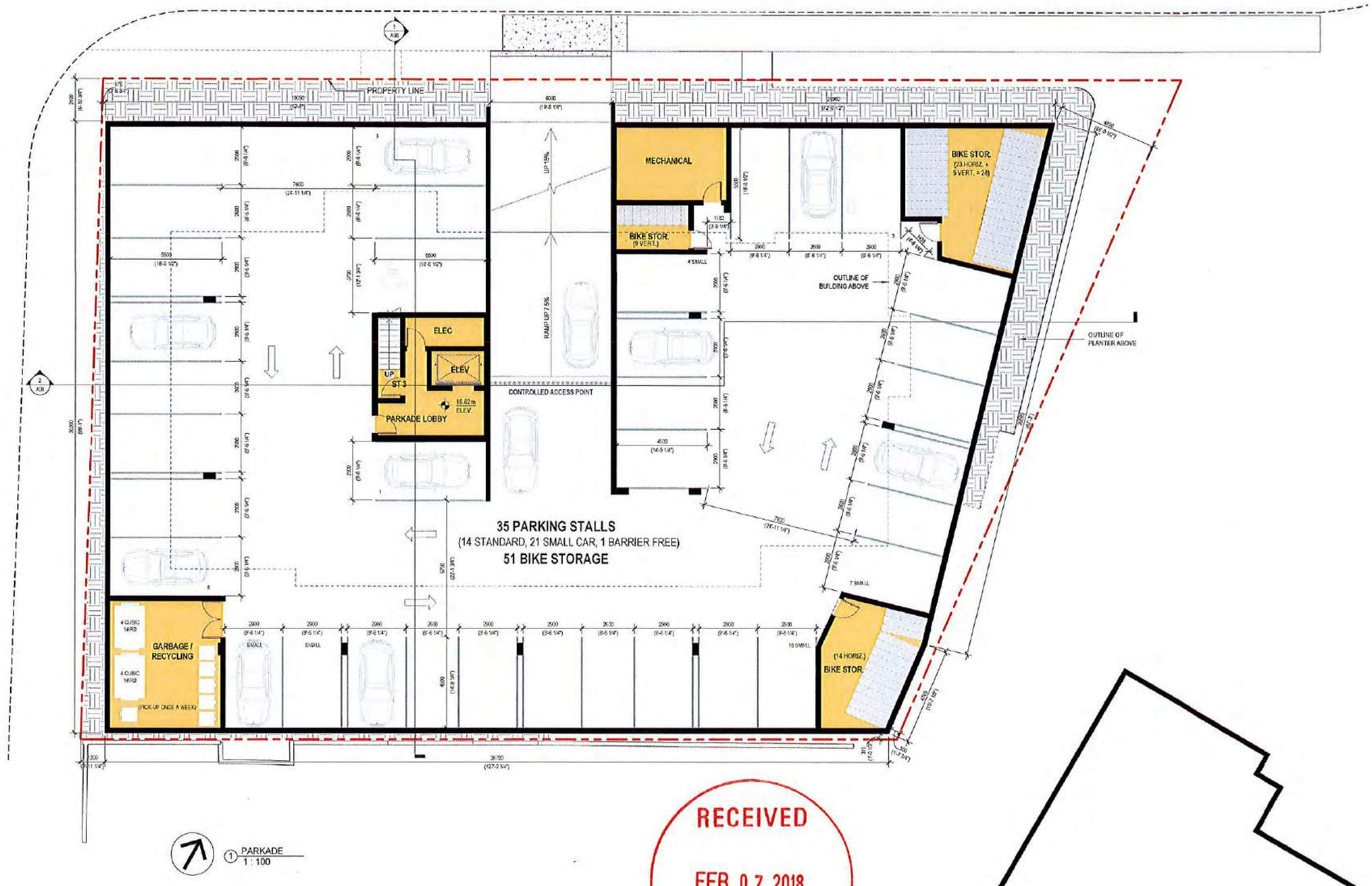
SITE PLAN

2018.01.30 - REVISED PER PLANNING

A01



1 PARKADE
1 : 100

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PARKADE

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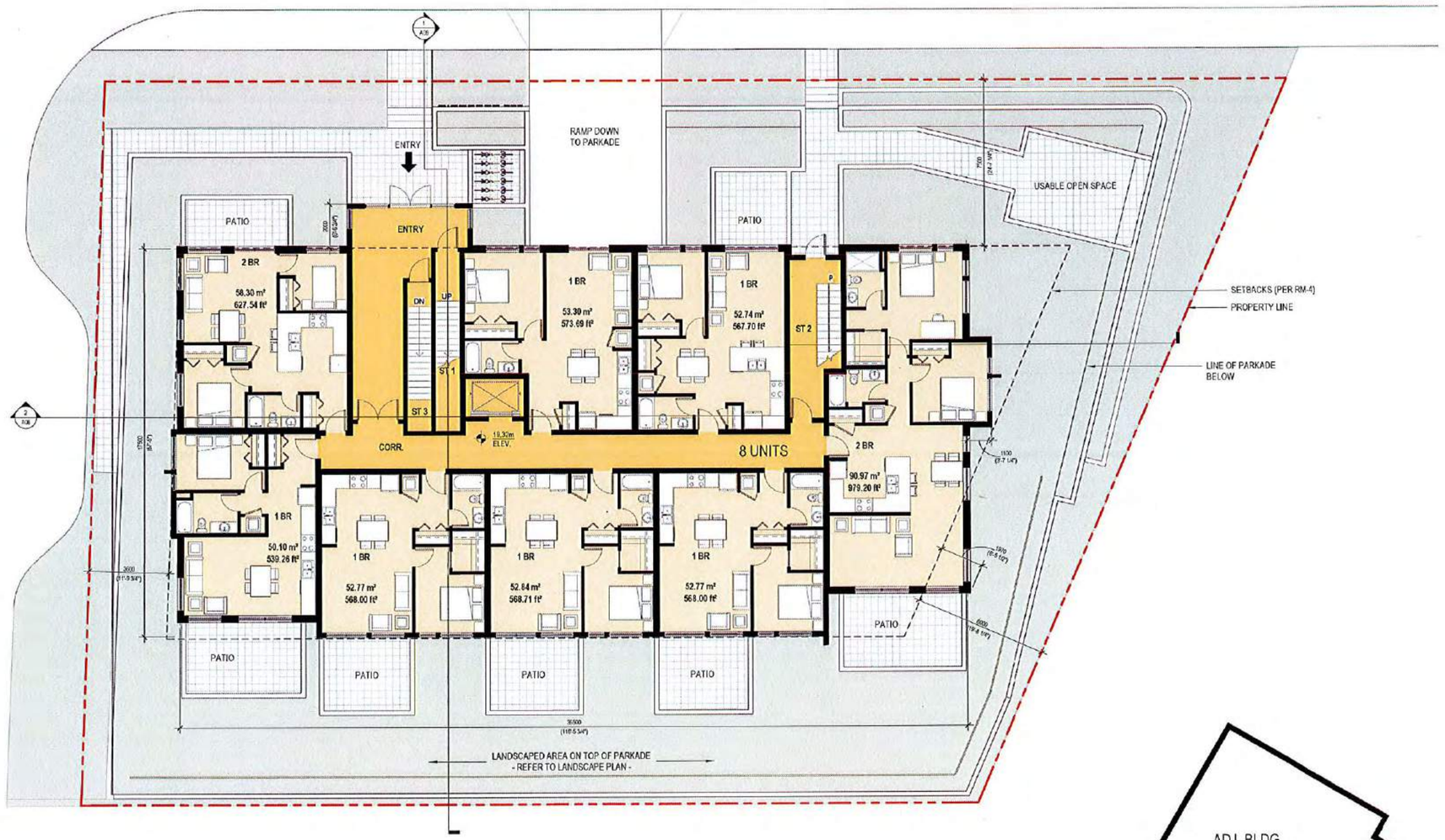
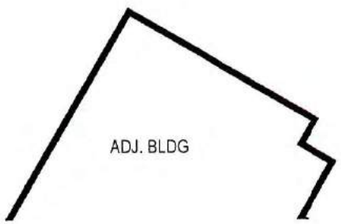
A02

DUNSMUIR ROAD

GARRETT PLACE





1 LEVEL 1
1 : 100

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LEVEL 1

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A03

1 LEVEL 2
1 : 100

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LEVEL 2

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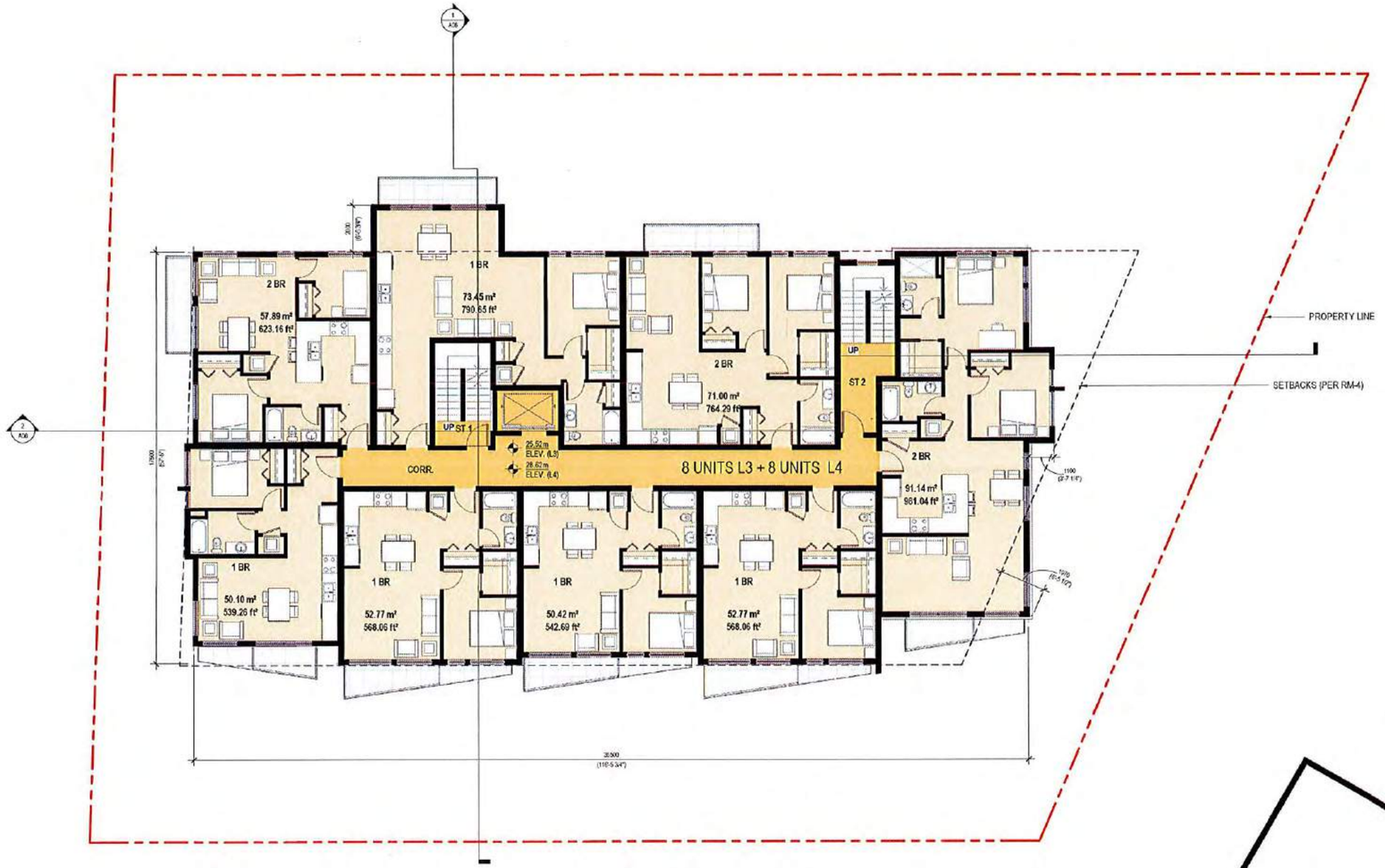
A04



① LEVEL 3-4
1 : 100

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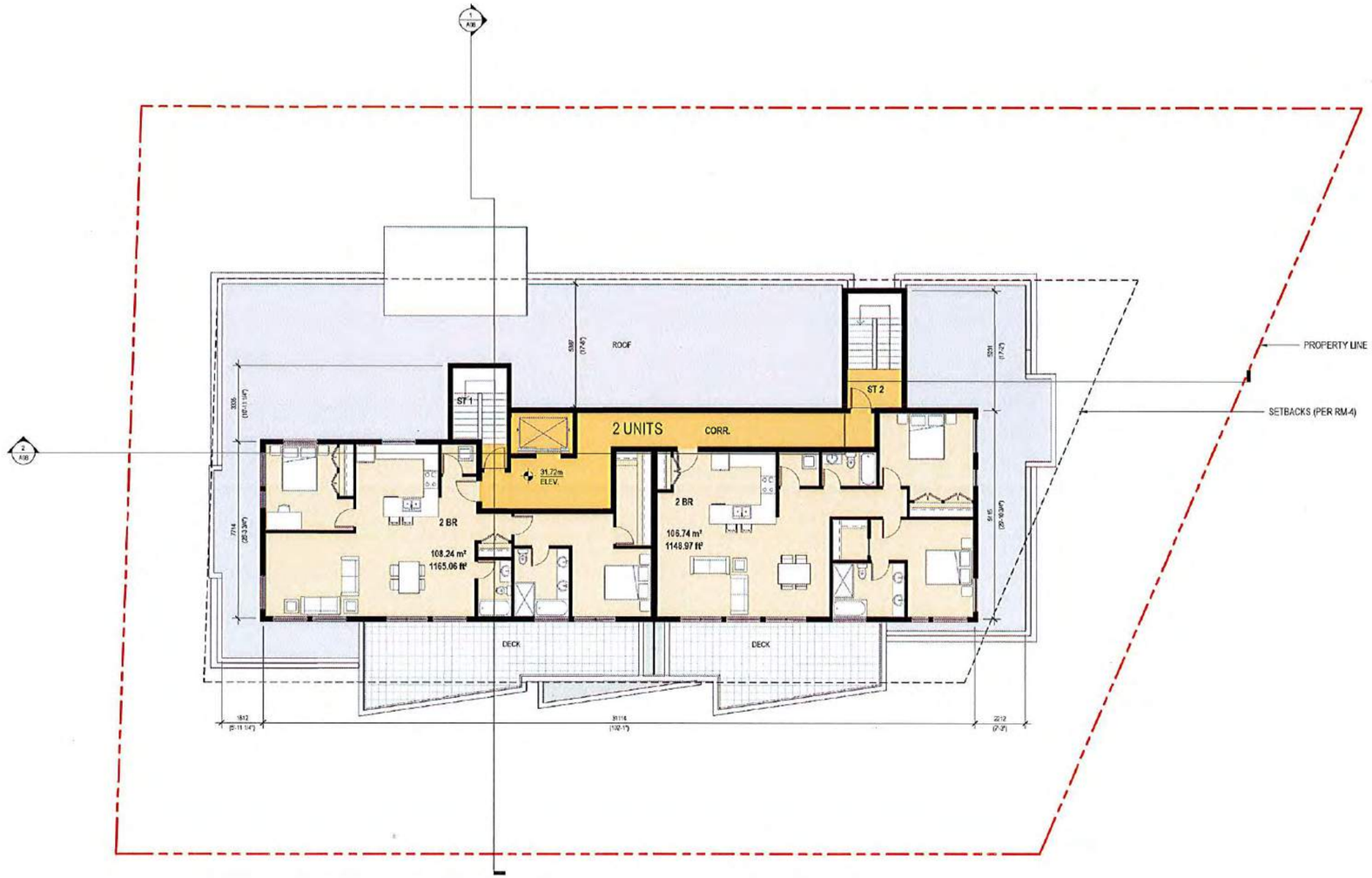
LEVEL 3-4

2018.01.30 - REVISED PER PLANNING

A05



① LEVEL 5
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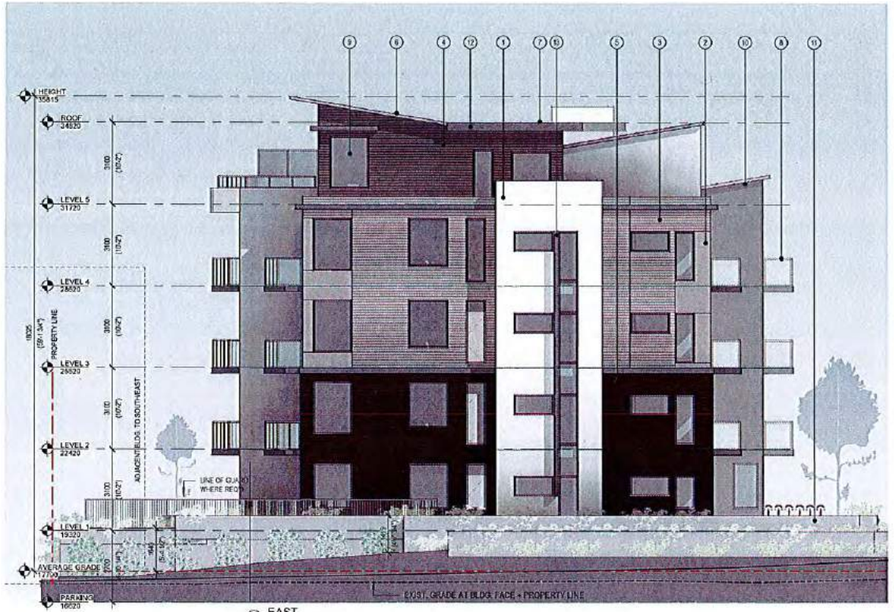
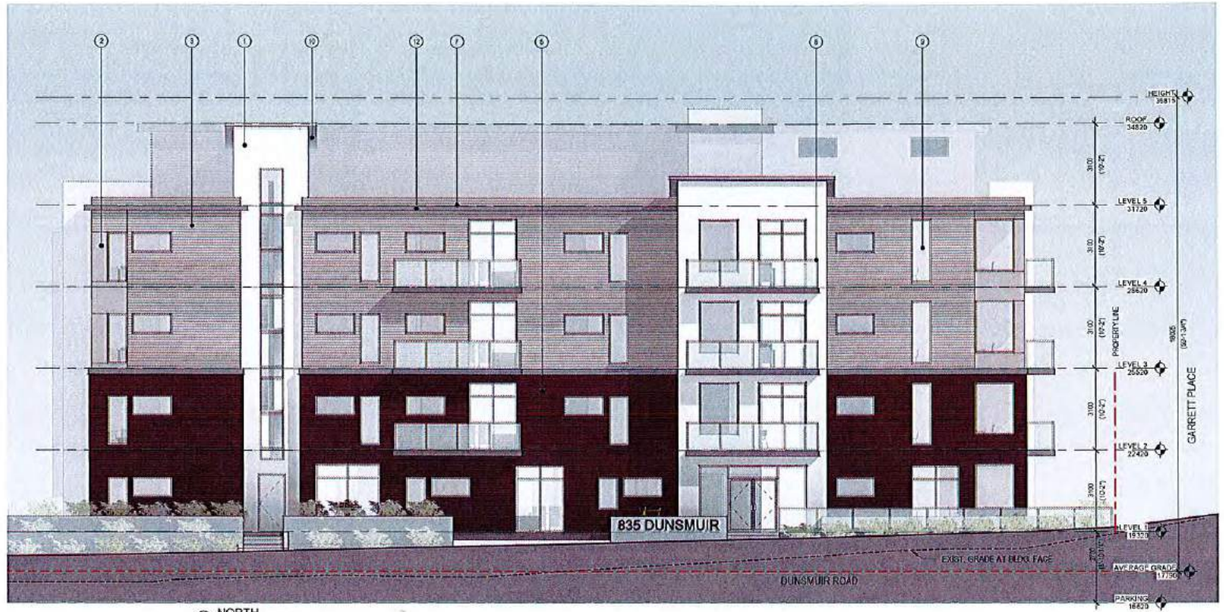
LEVEL 5

2018.01.30 - REVISED PER PLANNING

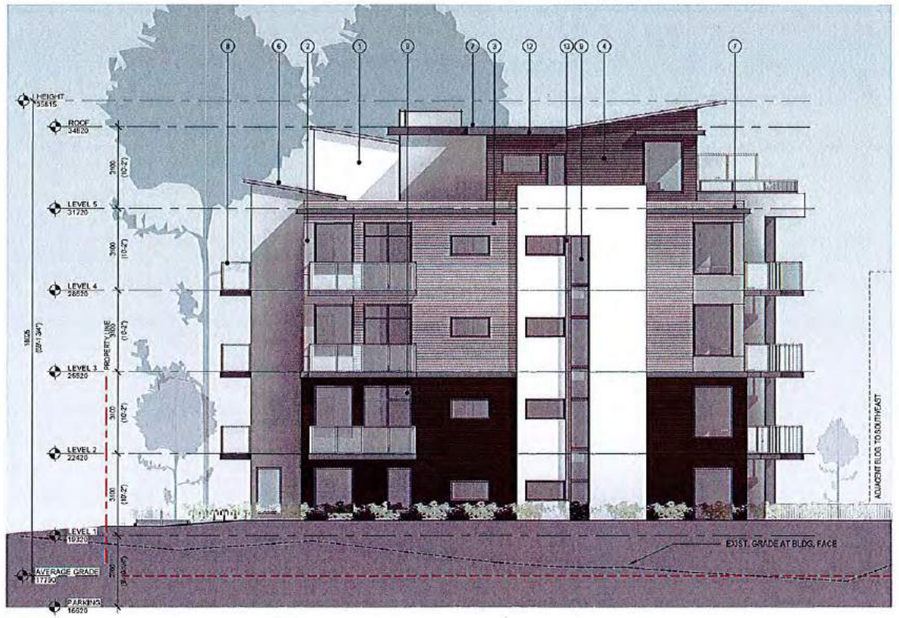
A06



① EAST
1 : 100



② NORTH
1 : 100



④ WEST
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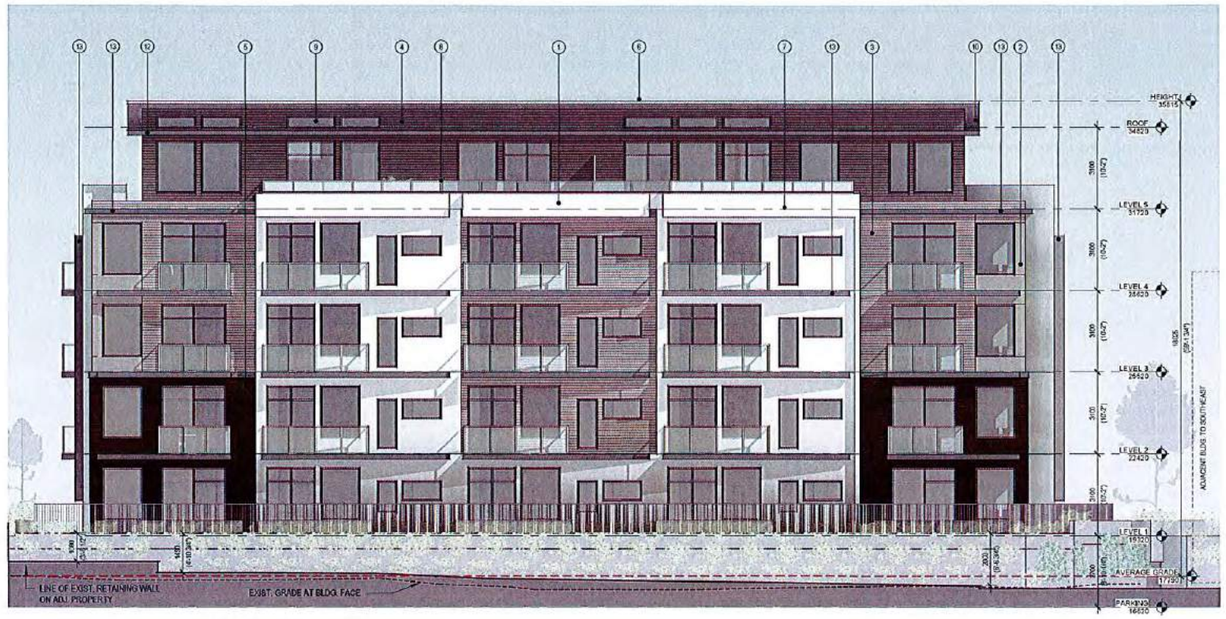

③ SOUTH
1 : 100

MATERIAL FINISH LEGEND

1. FIBRE CEMENT PANEL - ARCTIC WHITE
2. FIBRE CEMENT PANEL - PEARL GRAY
3. HORIZONTAL SIDING - FIBRE CEMENT - PEARL GRAY
4. HORIZONTAL SIDING - FIBRE CEMENT - AGED PEWTER
5. BRICK - ENDICOTT - MANGANESE IRONSPOT VELOUR MODULAR
6. METAL STANDING SEAM ROOF (CHARCOAL)
7. 'SS' MEMBRANE ROOF
8. GLASS AND ALUMINUM RAILING
9. ALUMINUM-CLAD VINYL WINDOWS
10. SOFFIT
11. CONC. PLANTER
12. FASCIA
13. SUNSHADE (FREFIN METAL)

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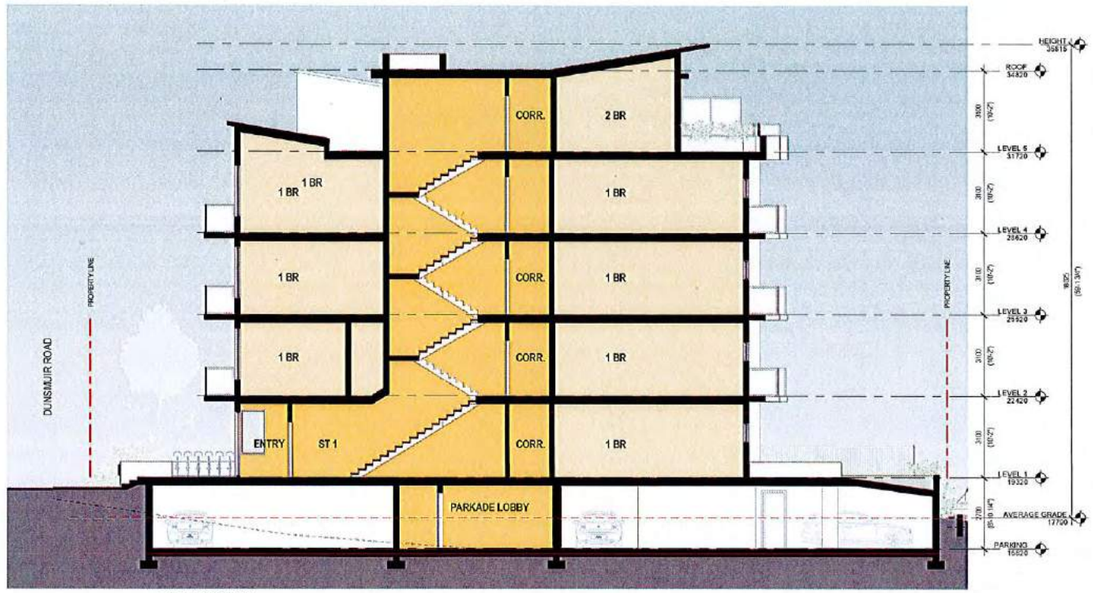
833/835 DUNSMUIR ROAD PROJECT NO. 17-012

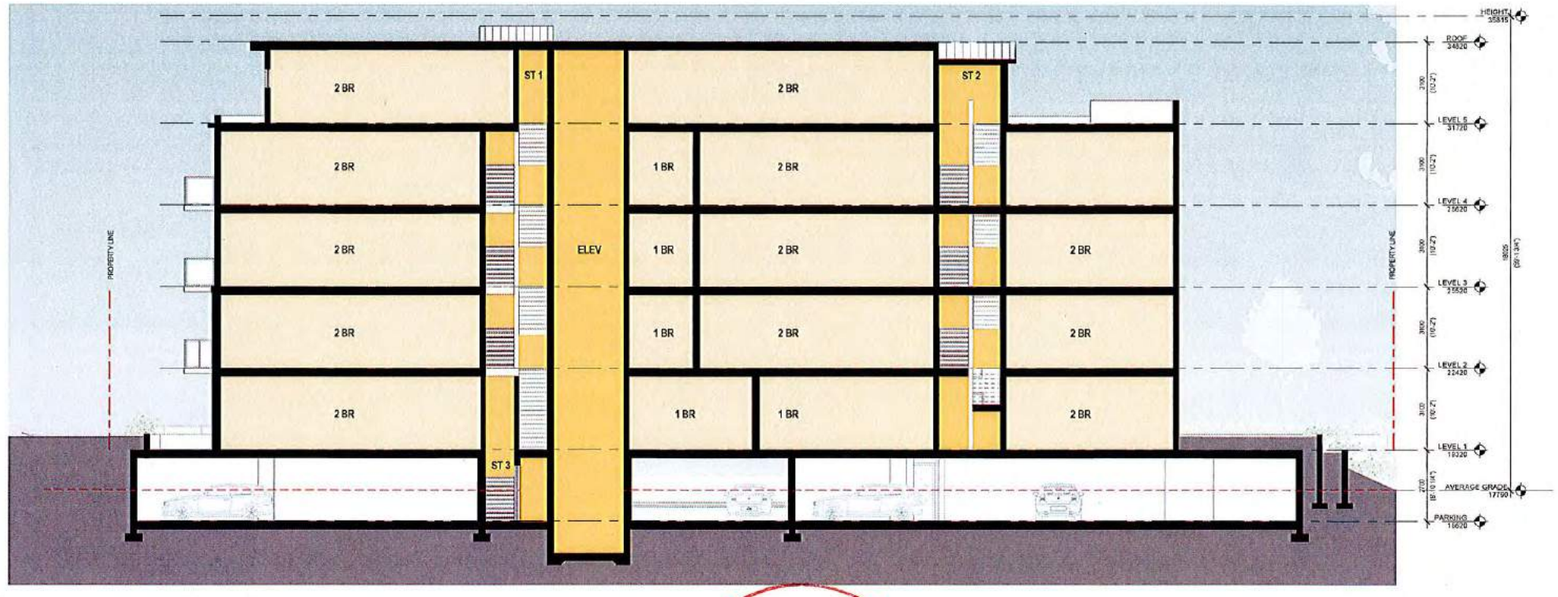
ELEVATIONS

2018.01.30 - REVISED PER PLANNING

A07



① SHORT SECTION
1 : 100



② LONG SECTION
1 : 100

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833/835 DUNSMUIR ROAD PROJECT NO. 17-012

SECTIONS

2018.01.30 - REVISED PER PLANNING

A08

1 NORTHWEST PERSPECTIVE (FROM DUNSMUIR ROAD)

2 NORTHEAST PERSPECTIVE (FROM DUNSMUIR ROAD)

3 SOUTHWEST PERSPECTIVE (FROM GARRETT PLACE)

4 SOUTHEAST PERSPECTIVE (FROM APARTMENT PARKING LOT)

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833/835 DUNSMUIR ROAD PROJECT NO. 17-012

STREET VIEWS

2018.01.30 - REVISED PER PLANNING

A09

① SUMMER 10AM
1 : 1200

② SUMMER 12PM
1 : 1200

③ SUMMER 3PM
1 : 1200

④ SUMMER 5PM
1 : 1200

SUMMER SOLSTICE - JUNE 21

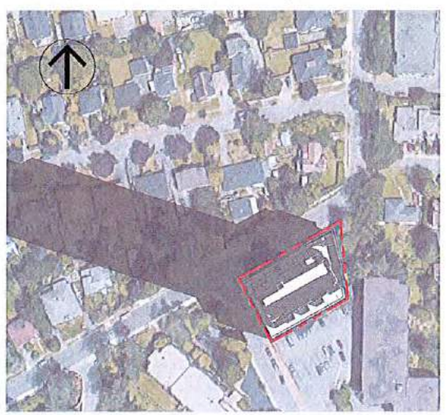
⑤ SPRING / FALL 10AM
1 : 1200

⑥ SPRING / FALL 12PM
1 : 1200

⑦ SPRING / FALL 3PM
1 : 1200

⑧ SPRING / FALL 5PM
1 : 1200

SPRING / FALL EQUINOX - MARCH 21 / SEPTEMBER 21



⑨ WINTER 10AM
1 : 1200

⑩ WINTER 12PM
1 : 1200

⑪ WINTER 3PM
1 : 1200

⑫ WINTER 5PM
1 : 1200

WINTER SOLSTICE - DECEMBER 21

PRAXIS
architects inc.

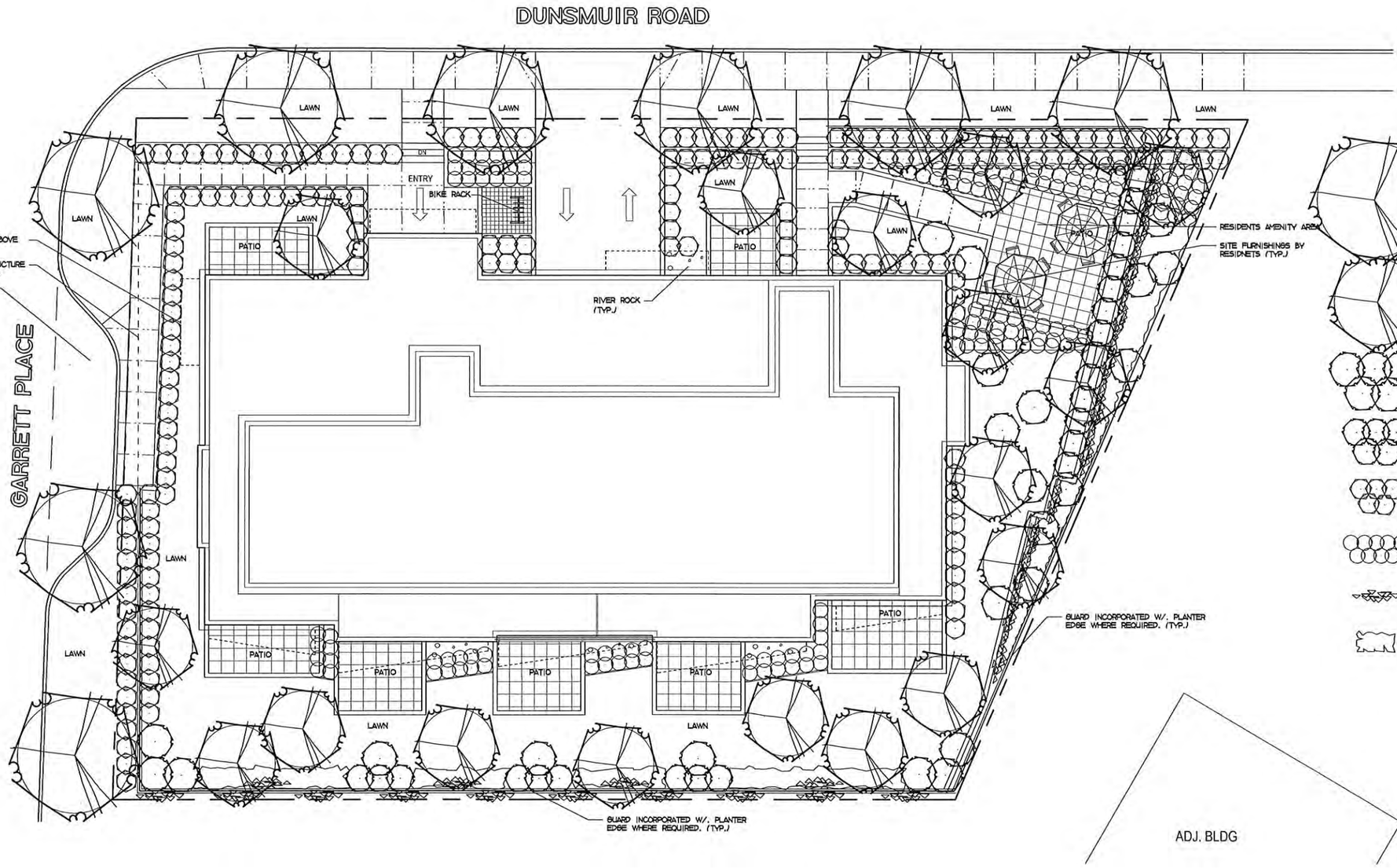
DUNSMUIR 833 + 835

833/835 DUNSMUIR ROAD PROJECT NO. 17-012

SHADOW STUDIES

2017.12.12 - REZONING APPLICATION

A10



LEGEND

MEDIUM DECIDUOUS TREE TO BE A SELECTION OF: RED MAPLE, KATSURA TREE, HEDGE MAPLE, HONEY LOCUST, LITTLE LEAF LINDEN, TREMBLING ASPEN, SIZE 6.0 CM CAL., APPROXIMATE NO. 8

SMALL DECIDUOUS TREE TO BE A SELECTION OF: KOUSA DOGWOOD, RED DOGWOOD, JAPANESE MAPLE, PINK DOGWOOD, SIZE 2.0 - 2.5 M HT., APPROXIMATE NO. - 17

SPECIMEN SHRUB TO BE A SELECTION OF: RHODODENDRON (BJ), VIBURNUM (BJ), DECIDUOUS AZALEA (DEC), WILLOWLEAF COTONEASTER (BJ), PORTUGESE LAUREL (BJ), RUBRA ESCALLONIA (BJ), SIZE 27 CM POT, APPROXIMATE NO. - 23

LARGE SHRUB TO BE A SELECTION OF: GLOSSY ABELIA (BJ), PIERIS (BJ), RHODODENDRON (BJ), MEXICAN ORANGE (BJ), DECIDUOUS AZALEA (DEC), COTONEASTER (BJ), PORTUGESE LAUREL (BJ), FIRETHORN (BJ), HYDRANGEA (DEC), SIZE 27 CM POT, APPROXIMATE NO. - 23

MEDIUM SHRUB TO BE A SELECTION OF: MAHONIA (BJ), RHODODENDRON (BJ), JAPANESE AZALEA (BJ), PINK ESCALLONIA (BJ), BARBERRY (BJ), SUDUS (BJ) FERNS (BJ), SIZE 27 CM POT, APPROXIMATE NO. - 193

SMALL SHRUB TO BE A SELECTION OF: DWARF RHODODENDRON (BJ), EDWARD GOUCHER ABELIA (BJ), LAVENDER (BJ), GOLDFLAME SPIREA (DEC), DWARF JAPANESE AZALEA (BJ), NEWPORT DWARF ESCALLONIA (BJ), LOW LEAF MAHONIA (BJ), FERNS (BJ), SIZE 21 CM POT, APPROXIMATE NO. - 145

VINES TO BE A SELECTION OF: HONEYSUCKLE (DEC), ENGELMANN IVY (DEC), CLEMATIS (DEC), SIZE 21 CM POT, APPROXIMATE NO. - 26

GROUNDCOVER TO BE A SELECTION OF: PERIWINKLE (BJ), KINNIKINNICK (BJ), WINTERGREEN (BJ), BARBERRY (BJ), SIZE 15 CM POT, PLANT 45 CM O.C.

NOTES

- LANDSCAPE AREAS ARE TO BE IRRIGATED WITH A FULLY AUTOMATIC UNDERGROUND IRRIGATION SYSTEM.
- THIS DRAWING IS CONCEPTUAL ONLY AND NOT INTENDED FOR CONSTRUCTION PURPOSES.
- THIS DRAWING IS FOR SOFT LANDSCAPE ONLY.

NO.	DATE	BY	REVISION
1.	FEB.07.18	S.P.	GENERAL

DRAWN: S.P.
CHECKED: J.P.
DATE: DECEMBER 12, 2017
DRAWING: 833 DR - PIR3
FILE: 253 17 01

1 : 100

Lombard North Group
LOMBARD NORTH GROUP (BC) INC.
845 CORMORANT STREET,
VICTORIA, BRITISH COLUMBIA V8W 1R1
TELEPHONE: (250) 385-5336
FAX: (250) 385-4128
EMAIL: lombard@shaw.ca

JOB NAME

833+835 DUNSMUIR
VICTORIA, B.C.

CONSULTANT

LANDSCAPE PLAN

PROJECT NO. P1

DUNSMUIR ROAD

ASPHALT

SIDEWALK

GUTTER LINE

MC

NMC

CONCRETE DRIVEWAY

DRIVEWAY

Utility Pole

Water Valve

MH

CB

Old Spike

GAS VALVE

BCTEL

Concrete Curb

CEDAR / 700

CEDAR 2X500

MAPLE 700

PALMTREE 200

APPL 300

FRUIT 300

DECID 800

CEDAR 2X100

CEDAR 200

CEDAR 350

CEDAR 300

CEDAR 2X300

FIR 900

MAG Spike

Water Box

Street Sign

Service Box

Iron Pin found Top=19.01

Toe Wall 17.66

Toe Wall 17.51

Toe Wall 17.50

Toe Wall 17.77

Toe Wall 18.24

Toe Wall 18.21

Toe Wall 18.08

TOE 17.85

End 0.2 Concrete Wall

0.2 Wide Guard Rail

Concrete Wall

0.17 Wide

Wood Fence Line

CONCRETE WALL

0.2 WIDE

Tenure Line

Edge of Roof

SPEED HUMP

26.67

33.48

32.85

20.20

35.51

28.62

28.61

9757

PLAN

3

AREA = 764 Sq. M.

EXISTING RESIDENCE

2

AREA = 764 Sq. M.

EXISTING RESIDENCE

4

PLAN 9757

MULTI-STOREY

RESIDENTIAL BUILDING

PARKING LOT

GARRETT PLACE

1

PLAN 9757

RECEIVED

JAN 18 2018

CORP. OF TOWNSHIP OF ESQUIMALT

DEVELOPMENT SERVICES

J.E. Anderson and Associates

SURVEYORS ENGINEERS

VICTORIA NANAIMO

SITE PLAN

PIDS 005-388-881 005-388-899

AT 833/835 DUNSMUIR ROAD

LEGAL : LOTS 2 AND 3. SECTION 11, ESQUIMALT DISTRICT, PLAN 9757

DRAWN BY : DBL	PROJECT SURVEYOR : D.R. CARRIER
SCALE : 1 : 150	DATE : JUNE 15, 2017.

CLIENT : GT MANN CONTRACTING

OUR FILE : 30536 REVISION :

Scale 1:150

0 1.5 3 6 9 12 15

NOTE : ELEVATIONS ARE TO GEODETIC DATUM

THE DECIMAL POINT OF THE ELEVATION DENOTES THE LOCATION OF THE SHOT TAKEN UNLESS OTHERWISE NOTED

BUILDING SETBACKS ARE CALCULATED TO THE EXTERIOR OF SIDING

TREE INFORMATION MUST BE CONFIRMED BY AN ARBORIST

TREE DIAMETERS ARE SHOWN IN mm

PROPERTY BOUNDARIES HAVE BEEN CALCULATED FROM CURRENT SURVEY AND EXISTING SURVEY RECORDS

DUE TO A LACK OF SURVEY EVIDENCE – IF MINIMUM SETBACKS ARE CONTEMPLATED, A REPOSTING SURVEY WILL BE REQUIRED

ROOF 30.57

V:\DAN_L_ACAD2000_SERVER\30536_SITE.DWG DBL

CORPORATION OF THE TOWNSHIP OF ESQUIMALT

Municipal Hall, 1229 Esquimalt Road, Esquimalt, B.C. V9A 3P1
Telephone (250) 414-7100 Fax (250) 414-7111

DRC Meeting: February 14, 2018

STAFF REPORT

DATE: February 9, 2018

TO: Chair and Members of the Design Review Committee

FROM: Alex Tang, Planner 1
Bill Brown, Director of Development Services

SUBJECT: **OFFICIAL COMMUNITY PLAN AMENDMENT and REZONING APPLICATION**
838 Admirals Road
[PID 005-074-011 Lot 17, Block 7, Section 10, Esquimalt District, Plan 2546 Except Plan 86845]
and 842 Admirals Road
[PID 006-324-118 Lot 16, Block 7, Section 10, Esquimalt District, Plan 2546]

RECOMMENDATION:

The Esquimalt Design Review Committee [DRC] recommends that the application for Official Community Plan Amendment and Rezoning, authorizing a 15.4 metre [4 storeys], 30 unit, multiple family residential building sited in accordance with the BCLS Site Plan provided by J.E. Anderson and Associates Surveyors-Engineers, stamped "Received January 18, 2018, and incorporating height and massing consistent with the architectural plans provided by Praxis Architects Inc., stamped "Received February 8, 2018", detailing the development proposed to be located at PID 005-074-011 Lot 17, Block 7, Section 10, Esquimalt District, Plan 2546 Except Plan 86845 [838 Admirals Road] and PID 006-324-118 Lot 16, Block 7, Section 10, Esquimalt District, Plan 2546 [842 Admirals Road] be forwarded to Council with a recommendation **to either approve, approve with conditions, or deny the application including reasons for the chosen recommendation.**

BACKGROUND:

Purpose of the Application:

The applicant is requesting a change in Official Community Plan Land Use Designation and Zoning from the current designation of "Townhouse Residential" to "Multi-Unit, Low-Rise Residential" and a change in zoning from the current mix of CD-75 [Comprehensive Development District] zone and RD-3 [Two Family/ Single Family Residential] to a Comprehensive Development District zone [CD]. This change is required to accommodate the proposed 4 storey, 30 unit, multiple family residential building including a 28 space parking garage.

This site is located within Development Permit Area No. 1 – Multi-Unit Residential. Should the rezoning application be approved, the applicant would need to obtain a Development Permit respecting the character of the development, including landscaping, and the siting, form, exterior design and finish of the proposed 4 storey, 30 unit, multiple family residential building which would be considered by both the DRC and Council in the future.

Staff request the Design Review Committee review this proposal with regard to the proposed siting, height, mass, density, lot coverage, usable open space and parking and provide comments for staff and the applicant to consider as well as a recommendation to Council.

Context

Applicant: Praxis Architects Inc. [Heather Spinney]

Owner: Admiral Apartments Ltd., Inc. No. BC1128252

Property Size: Metric: 1416 m^2 Imperial: 15242 ft^2

Existing Land Use: Single Family Residential

Surrounding Land Uses:
North: Multiple Family Residential [3 storeys]
South: DND Federal Land
West: Multiple Family Residential [3 storeys]
East: DND Federal Land

Existing OCP Designation: Townhouse Residential

Proposed OCP Designation: Multi-Unit, Low-Rise Residential

Existing Zoning: RD-3 [Two Family/Single Family Residential] – Lot 16
CD-75 [Comprehensive Development District] – Lot 17

Proposed Zoning: CD [Comprehensive Development District]

Zoning

Density, Lot Coverage, Height and Setbacks: The following chart compares the floor area ratios, lot coverage, setbacks, height and usable open space of this proposal with the requirements of the RM-5 [Multiple Family Residential Zone]:

	Proposed Comprehensive Development Zone [Apartment with 30 Residential Units]	**RM-5** [Multiple Residential – High Density]
Floor Area Ratio	1.32	1.5
Lot Coverage	46%	30%/ 25% [above 2nd]

Setbacks • **Front** • **Rear** • **Exterior Side [East]** • **Interior Side [West]**	 3.8 m 7.5 m 3.6 m 6.0 m	 7.5 m 7.5 m 7.5 m 7.5 m
Building Height	15.4 m [4 storeys]	20 m
Off Street Parking	28 spaces [0.93/unit]	45 spaces [1.3/unit]
Usable Open Space	132 m^2 [9.3%]	106 m^2 [7.5%]
Bicycle Parking	51 resident + 6 visitor	45 resident + 6 visitor

The Floor Area Ratio of this proposal is 1.32, which is less than the maximum allowable amount of 1.5 in the RM-5 [Multiple Family Residential]. The Lot Coverage measures 80% at grade to accommodate the parking structure while the residential portion of the building covers 44% of the site. Moreover, the bicycle storage building accounts for another 2% for a total of 46% overall lot coverage. The majority of the principal building is set back 7.5 metres off the front lot line while the lobby is the feature that protrudes out, reducing the front setback to 3.8 metres. The proposed height of the building is 15.4 metres, which is less than the allowed 20.0m in a RM-5 zone. The usable open space is 132 m^2, which amounts to 9.3% of the total lot area.

Parking Bylaw, 1992, No. 2011 requires 1.3 parking spaces per unit to be provided for multiple family developments. This proposal incorporates 28 residential parking spaces within the structure which is about 0.93 parking spaces per unit. The subject property is served by transit Route 24 and 46 along Admirals Road. As this development is planned to be a purpose-built rental residential building, the demand for parking is decreased to 27 parking spaces according to Watt Consulting Group in their parking study.

Official Community Plan

This proposed development is not consistent with the current Land Use Designation of "Townhouse Residential". The proposal for a four storey, 30 unit apartment building requires the Official Community Plan Land Use Designation to be amended to "Multi-Unit, Low-Rise Residential", which accepts buildings up to four storeys with a Floor Area Ratio of up to 1.5.

OCP Section 2 - Managed Growth – Land Use and Development states that the objectives and policies in this section are designed to promote sustainable land use and development in the community.

> OCP 2.0.1(a) states the Township should encourage high quality development that enhances and benefits the community as a whole.
>
> OCP 2.0.2(a) states Esquimalt's future new development, infill and redevelopment will be in accordance with the land use designations shown on OCP Schedule A, together with the guidelines set out in Development Permit Areas (OCP Section 9).

OCP Section 2.2 - Residential Land Use of the Official Community Plan recognizes that modest growth is likely to occur through the infilling of vacant or under-utilized parcels, redevelopment of existing residential properties to higher densities (such as townhouses, apartment buildings and mixed commercial-residential uses) and the replacement of existing buildings.

> Section 2.2.1(a) states the Township should work toward a more complete community by maintaining a healthy mixture of housing types, accommodating people with a wide range of income levels.
>
> Section 2.2.1(b) states the Township should encourage new residential development with high design standards for building and landscaping and which enhance existing and new neighbourhoods.

OCP Section 2.2.4.1 Multi-Unit Residential Policies [attached] are intended to provide more predictability for residents and give direction to design teams preparing development proposals. This proposal for a 30 unit residential building is consistent with many policies contained in this section while it is unclear at this time whether it is consistent with the following policy as no units are explicitly proposed to be constructed to accessibility standards:

> Section 2.2.4.1(f) states that wherever desirable and achievable consideration will be given to special needs and assisted housing including seniors, disabled persons and families.

OCP Section 2.2.4.3 Multi-Unit, Low-Rise Residential states that in areas designated Multi-Unit, Low-Rise Residential on Schedule A, building heights of up to four storeys are acceptable with a Floor Area Ratio of up to 1.5.

OCP Section 3.3.1(a) Affordable Housing Objectives states that the Township should encourage a range of housing by type, tenure, and price to ensure that people of all ages, household types, abilities and incomes have a diversity of housing choice in Esquimalt.

OCP Section 9.3 Development Permit Area No. 1 - Multi-Unit Residential [attached] contains Development Permit Guidelines for land designated Multi-Unit Residential. As the Development Permit is not being considered at this time it would be inappropriate to address many of these guidelines with the following exceptions that are relevant to the discussion of zoning and parking issues:

> Section 9.3.5(b) states, in part, that new buildings should be designed and sited to minimize visual intrusion onto the privacy of surrounding homes and minimize the casting of shadows onto the private outdoor space of adjacent residential units. The majority of the areas with shadows casted by this development onto adjacent properties is parking areas of adjacent apartment buildings.

Green Building Features

The applicant has completed the Esquimalt Green Building Checklist [attached].

Comments From Other Departments

The plans for this proposal were circulated to other departments and the following comments were received:

Building Inspection: Building to be constructed to requirements of BC Building Code 2012 and Municipal Building Code Bylaw, 2002, No. 2538. Applicant must address all issues contained within the Township Development Protocol should application be approved. Plans will be reviewed for compliance with BC Building Code upon submission of a Building Permit application.

Engineering Services: Engineering staff have completed a preliminary evaluation of Works and Services that would be required for the 30 unit multiple family residential building proposed to be located at 838 and 842 Admirals Road. Staff confirms that the design appears achievable on the site and that appropriate works and services are available in the immediate area. If approved, the development must be serviced in accordance with bylaw requirements including, but not limited to, new sewer and drain connections, underground hydro, telephone and cable services and new road works may be required up to the centre line of Admirals Road and Naden Street. Should the application be approved, additional comments will be provided when detailed civil engineering drawings are submitted as part of a Building Permit application.

Parks Services: Parks staff has completed a preliminary review of the proposed on-site and off-site landscaping and commented that the landscape plan looks appropriate.

Fire Services: Fire Services staff has completed a preliminary review of the proposed plans and recommended a new fire hydrant to be installed on the corner of Admirals Road and Naden Street that ties into a 350mm wDI Water Main. This installation would facilitate future developments into the area. Furthermore, sprinklers should be installed in the building.

Public Notification

As this is an Official Community Plan Amendment and Rezoning application, should it proceed to a Public Hearing, notice would be mailed to tenants and owners of properties within 100m (328ft) of the subject property. In order to satisfy the requirements of the *Local Government Act,* staff is also required to provide additional notice to relevant government and institutional stakeholders within the Capital Region. One sign indicating that the property is under consideration for a change in Official Community Plan Land Use Designation and Zoning has been installed on the Admirals Road frontage while one sign has been installed on the Naden Street frontage. This sign would be updated to include the date, time and location of the Public Hearing.

ALTERNATIVES:

1. Forward the application for OCP Amendment and Rezoning to Council with a **recommendation of approval including reasons for the recommendation**.

2. Forward the application for OCP Amendment and Rezoning to Council with a **recommendation of approval including specific conditions and including reasons for the recommendation**.

3. Forward the application for OCP Amendment and Rezoning to Council with a **recommendation of denial including reasons for the recommendation**.


N
861
Kindersley Rd
855
849
854
841
Naden St
850
842
838
Admirals Rd
Colville Rd
1267
Subject Property Map:
838 and 842 Admirals Rd


861
KINDERSLEY ST
855
849
860
862
854
841
850
842
NADEN ST
838
829
ADMIRALS RD
COLVILLE RD
1267

g) The Township is not supportive of new applications for infill housing, including rezoning and subdivision for panhandle lots in the 1100 and 1200 blocks of Old Esquimalt Road and the 600 block of Fernhill Road.

2.2.4 Multi-Unit Residential

Over the years, townhouses and apartment buildings have tended to be developed in clusters throughout the neighbourhoods of Esquimalt. They are generally located in the following areas:

- On both sides of Esquimalt Road from Grafton Street to Dunsmuir Road;
- The area around Craigflower Road and Selkirk Avenue;
- Admirals Road, Astle and Nelson Streets;
- West Bay south of Dunsmuir Road; and
- West Parklands.

Smaller clusters of multi-unit development are also found along Lampson Street between Devonshire and Old Esquimalt Roads, Lampson Street south of Lyall Street, and Ellery Street south of Esquimalt High School. This scattered pattern of development has contributed to residents' concerns related to the proliferation of multi-unit developments in neighbourhoods where single-unit and two-unit homes have been the predominant land use.

2.2.4.1 Multi-Unit Residential Policies

The following policies provide more predictability for residents in mixed residential use neighbourhoods and give direction to design teams involved in the preparation of development proposals.

a) Multi-Unit Residential refers to three or more dwelling units on a parcel. Multi-unit Residential does not refer to a single-unit home with a secondary suite.

b) The Township encourages the concentration of multi-unit residential development where such development is in keeping with the overall goals of this Plan.

c) Wherever practical, multi-unit residential housing will be located near a Major Road as shown on "Schedule B". This supports transit service and also helps maintain the integrity of single-unit and two-unit housing neighbourhoods;

d) Wherever feasible, major multi-unit residential projects will be located within reasonable distance of one of Esquimalt's commercial areas in order to encourage walking and cycling;

e) A mix of housing types will be provided in multi-unit residential areas in order to provide visual interest and to meet the varying housing needs of Esquimalt's current and future residents;

f) Wherever desirable and achievable, consideration will be given for special needs and assisted housing, including seniors, disabled persons and families.

g) Within the areas designated on "Schedule A" as Townhouse Residential, Multi-Unit, Low-Rise Residential and Multi-Unit, High-Rise Residential, the following criteria

will be used to evaluate development proposals requiring an application for rezoning:

- The massing and height of the project will respond sensitively to the prevailing character of the immediate neighbourhood. This will vary by location;
- The project will relate to the street. Its exterior finishes, scale, treatment of parking areas, and landscaping, will enhance the appearance of the neighbourhood and contribute positively to the streetscape;
- The proponent will demonstrate that the neighbourhood has been consulted in a fair and meaningful way, and that residents' concerns have been appropriately responded to in the proposal; and
- Where new multi-unit residential projects are proposed, they should not "land-lock", otherwise isolate, or negatively affect the development potential of adjacent parcels. Projects must either consolidate the isolated parcels or leave a sufficient area available to allow for the eventual redevelopment of the adjacent land.

h) Development proposals with heights and /or densities greater than those set out in policies 2.2.4.2 to 2.2.4.4. may be considered, where appropriate, through variances to zoning and/or parking regulations and density bonusing of floor-space where new affordable, accessible or special needs housing units or amenities are provided for the benefit of the community.

i) For the purposes of density bonuses, "amenities" may include, but not be limited to:

- Privately-owned, publicly-accessible open space;
- Public art;
- Contributions towards the enhancement of public recreation facilities;
- Contributions towards street and boulevard enhancements, including street furniture and decorative lighting;
- Daycare facilities; and
- Preservation of heritage structures or features.

j) In new multi-unit residential developments, secure bicycle storage for residents should be provided in the ratio of 1.5 storage spaces per dwelling unit. In addition to the residents' parking, each multi-unit building should have six (6) bicycle lock-up spaces for the use of visitors.

A bicycle storage requirement may be waived or varied in a Development Permit where, in the opinion of Council, there is no demonstrated need, such as in a congregate care facility.

Development Permit Area No. 1 — Multi-Unit Residential

9.3.1 Scope

All land designated Multi-Unit Residential on Schedule "C" are part of DPA No. 1.

9.3.2 Category

Section 919(1)(f) of the *Local Government Act* — form and character, multi-family residential.

9.3.3 Justification

This Plan emphasizes the importance of protecting residential neighbourhoods and encouraging a high quality of construction for new development. It is essential that new multi-unit residential development not have a negative impact on, or be out of character with, existing residential neighbourhoods. The primary objective of Development Permit Area No. 1 is to ensure that the development of multi-unit residential sites is compatible with surrounding uses.

9.3.4 Requirements of Owners of Land within the Development Permit Area

a) Owners of land within Development Permit Area No. 1 must not do any of the following without first obtaining a development Permit in accordance with the guidelines for this Development Permit Area:

i) subdivide lands; or

ii) construct or alter a building or structure;

without first obtaining a Development Permit in accordance with the guidelines of this Development Permit Area.

b) Exemptions:

The following do not require a development permit:

i) construction of buildings or structures less than 10 square metres in area;

ii) minor additions to existing dwellings where the floor area of the addition does not exceed 10 percent of the ground floor area of the dwelling;

iii) emergency repairs to existing structures and public walkways where a potential safety hazard exists;

iv) fences;

v) the cutting of trees as permitted upon application under the municipal tree protection bylaw; and

vi) placement of signs less than 1.5 sq. metres in area.

9.3.5 Guidelines for Owners of Land within the Development Permit Area

a) The size and siting of buildings that abut existing single- and two-unit and townhouse dwellings should reflect the size and scale of adjacent development and complement the surrounding uses. To achieve this, height and setback restrictions may be imposed as a condition of the development permit.

b) New buildings should be designed and sited to minimize visual intrusion onto the privacy of surrounding homes and minimize the casting of shadows onto the private outdoor space of adjacent residential units.

c) High-density multi-unit residential buildings or mixed commercial/residential buildings in commercial areas with a zero front setback should be designed so that the upper storeys are stepped back from the building footprint, with lower building heights along the street front.

d) Landscaping of multi-unit residential sites should emphasize the creation of an attractive streetscape, as well as provide privacy between individual buildings and dwellings, screen parking areas and break up large expanses of paving.

e) Surface parking areas in multi-unit residential developments less than five storeys in height, will be situated away from the street and screened by berms, landscaping or solid fencing or a combination of these three.

f) Underground parking will be provided for any multi-unit residential buildings exceeding four storeys.

g) The retention of public view corridors particularly views to the water should be encouraged wherever possible.

h) To preserve view corridors and complement natural topography, stepped-down building designs are encouraged for sloping sites.

i) Retention and protection of trees and the natural habitat is encouraged wherever possible.

j) Townhouses will be designed such that the habitable space of one dwelling unit abuts the habitable space of another unit and the common wall overlap between adjoining dwellings shall be at least 50 percent.

k) Site lighting in multi-unit residential developments should provide personal safety for residents and visitors and be of the type that reduces glare and does not cause the spill over of light onto adjacent residential sites.

l) Garbage receptacle areas and utility kiosks should be screened by solid fencing or landscaping or a combination of the two.

m) For waterfront sites, retention of natural features and existing trees should be a priority in site planning considerations.

n) When any existing single-unit residence or duplex residence is being redeveloped to a multi-unit residential use by adding on of one or more dwelling units, such addition will be designed so that all of the units form a cohesive whole. In order to achieve cohesiveness:

   i) both, the existing and proposed structures will be in the same architectural style;

   ii) variations between the roofline of the existing building and any proposed addition(s) will be no greater than 1.5 metres;

iii) roof styles and pitches must be complementary;

iv) architectural features such as sloping roofs and dormers should be incorporated into the design to unite the various parts of the structure; and

v) the existing and proposed structure will be constructed using the same or complimentary exterior finishes including roofing materials, window treatments, door styles and other finishing details.

o) Within the area bounded by Tillicum, Craigflower, Lampson and Transfer Streets, redevelopment to multi-unit residential use will require that vehicular access to these sites be off Lampson Street rather than Tillicum, in recognition of the high levels of traffic currently using Tillicum Road.

p) To create a more aesthetic and functional design that links each multi-unit residential project with the streetscape, the following guidelines are recommend:

i) Avoid long, narrow parcels with minimal road frontage (consolidate one or more parcels where necessary);

ii) Place parking areas away from the street; and

iii) Design porches and windows overlooking the street to increase personal interaction and safety.

PRAXIS
architects inc.

838 – 842 Admirals Redevelopment

401–1245 Esquimalt Road, Victoria, B.C. V9A 3P2
Ph. (250) 475-2702
Fax (250) 475-2701

Township of Esquimalt
1229 Esquimalt Road
Esquimalt, BC V9A 3P1

December 15, 2017

RE: 838 – 842 ADMIRALS ROAD

Dear Mayor and Council,

The proposed project at 838 – 842 Admirals Road will be a new purpose-built rental multiple residential building, with 4 storeys of wood-frame construction. According to the current Official Community Plan, Schedule A - Land Use Designation, these properties are identified as Townhouse Residential which means up to 3 storeys are permitted and a maximum floor area ratio (FAR) of up to 0.70 is permitted. An amendment to the OCP would be required to permit 4 storeys and allow for increased density. We understand from informal conversations with Esquimalt Planning Department that the new OCP may change the land use designation for these sites to Multi-Unit Low-Rise Residential (MULRR). Staff may also be recommending to council that MULRR designated properties be considered for up to 6 storeys in height in most cases.

838 / 839 Admirals is currently zoned CD-75 (Comprehensive Development) and 842 Admirals is currently zoned RD-3 (Two Family / Single Family Residential). We understand from informal conversations with Esquimalt Planning Department that rezoning to a Comprehensive Development would be the appropriate approach for the redevelopment of these properties.

This proposal was presented at a neighbourhood meeting which was held December 4, 2017. Our impression from those who attended was that the proposal was generally well received. Attached with this letter please find a copy of the notification for the neighbourhood meeting as well as sign-in sheets from the meeting.

A parking study prepared by Watt Consulting Group provides supporting information for requested parking variance, and is included with this package.

Talbot Mackenzie and Associates Consulting Arborists have also been retained to provide a tree protection plan, which will be submitted separately.

Trusting this is sufficient for submission requirements,

Sincerely,

H Spinney

Heather Spinney, Architect AIBC
Praxis Architects Inc.

Talbot Mackenzie & Associates

Consulting Arborists

838-842 Admirals Road, Esquimalt

Construction Impact Assessment &

Tree Preservation Plan

PREPARED FOR: GT Mann Contracting Ltd.
1551 Broadmead Avenue
Victoria, BC
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DATE OF ISSUANCE: January 23, 2018

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Talbot Mackenzie & Associates

Consulting Arborists

Jobsite Property: 838-842 Admirals Road, Esquimalt

Date of Site Visit: December 21, 2017

Site Conditions: Two residential properties. No construction activity present.

Summary: Oaks #986 and 990, and Plum #128 will require removal. We recommend that the five municipal Horsechestnut trees growing underneath the power lines be removed due to their poor structural condition and the potential impacts from the underground parkade and sidewalk. Garry Oak #984 will likely be significantly impacted by the excavations for the underground parkade and pathway. If tree retention is desired in the long-term, we recommend restricting the extent of excavation to within the footprint of the existing house's foundation and eliminating the below-grade pathway adjacent to this tree.

Scope of Assignment: To inventory the existing bylaw protected trees and any trees on neighbouring properties that could be potentially impacted by construction or that are within 3 meters of the property line. Review the proposal to demolish the two existing houses and construct a four-storey 30 unit residential building and comment on how construction activity may impact existing trees. Prepare a tree retention and construction damage mitigation plan for those trees deemed suitable to retain given the proposed impacts.

Methodology: We visually examined the trees on the property and prepared an inventory in the attached Tree Resource Spreadsheet. Each by-law protected tree was identified using a numeric metal tag attached to its lower trunk. Municipal trees and neighbours' trees were not tagged. Information such as tree species, DBH (1.4m), crown spread, critical root zone (CRZ), health, structure, and relative tolerance to construction impacts were included in the inventory. The by-law protected trees with their identification numbers were labelled on the attached Site Plan. The conclusions reached were based on the information provided within the attached Site Plan from Praxis Architects Inc. (dated 2017.12.15).

Summary of Tree Resource: 14 trees and shrubs were inventoried. No nearby trees were identified on neighbouring properties. NT 01-09 are municipal trees, most of which are Horsechestnut trees that have been severely pruned for the primary hydro lines above them. There are three large Garry Oak trees on the subject property (#984, 986, 990).

Private Trees to be Removed:

- **Garry Oaks #986 and 990** (78 and 87cm DBH respectively): Located within the proposed building footprint.

- **Purple Leaf Plum #128** (multiple stems): Located less than 1.5 metres from the underground parking excavation and will require multiple large diameter stems be removed for building clearance.

- **English Holly #92** (two stems, 26 and 18cm in DBH): Located within the underground parking footprint.

- **Municipal Horsechestnut Trees NT 04-08**

  In our opinion, these five municipal Horsechestnut trees are not suitable for retention. They are in poor structural condition due to being topped for the three primary hydro lines above them. NT 08 will be 1.5m from the underground parking and will likely require removal as a result. NT 06 will require removal for the proposed water service. This water service excavation may have an impact on NT 05 and NT 07 as well. The underground parkade will be approximately 4m away from the remaining trees; even with shoring techniques restricting the excavation to 4m, there will likely be some root loss.

  It is our understanding that a sidewalk is proposed on Naden Street directly adjacent to the trees, which will have additional impacts. If the trees are to be retained, the roots will need to be preserved underneath the sidewalk, which will require raising the sidewalk and building on organic materials. Considering the poor structural condition of these trees and their location underneath the primary hydro lines, in our opinion it would be more suitable to remove these trees and replant with smaller growing trees more suitable to the location.

Trees with Retention Status To Be Determined

- **Garry Oak #984** (79cm DBH)

  There is a 1.8m tall retaining wall that runs 1.5m south and a 3.5m west of the tree (along the sidewalk and along the neighbouring driveway. The rooting area of the oak has thus been confined mostly to the north and east, so we expect to find a significantly higher density of roots in this area compared to if the roots had not been confined on two sides.

  The proposed underground parkade is located 5m north of this tree. Even if sheet piling or other shoring techniques are used to restrict the extent of excavation to approximately 5m, we expect that a significant amount of root loss will occur. Additionally, the pathway that runs from the sidewalk to the doorway of the underground parkade will require significant excavation (approximately 1.5m in depth) to match the height of the underground parking floor height. Working room will also be required to construct a retaining wall adjacent to this pathway which will likely result in significant root loss.

As a result of these excavations, we anticipate that the health of the tree will be significantly impacted and may decline as a result. If tree retention is desired in the long-term, we recommend restricting the extent of excavation to within the footprint of the existing house foundation (approximately 2m from where the underground parking is currently proposed) and eliminating the below-grade pathway which requires excavation.

Additionally, the grading plans (A06, South side) show the finished grade as below the existing grade around the tree. If this occurs, the tree will likely have to be removed immediately. If the tree is to be retained, we would recommend no significant grade change in this area.

Despite these impacts, it is our understanding that tree retention is desired and thus have included mitigation measures. We recommend that the retaining wall adjacent to the sidewalk and neighbour's driveway be left in place to prevent further damage to roots that could be growing against it. To minimize additional root loss, we recommend that the existing sewer and drain services east of Garry Oak #984 be capped and abandoned instead of being excavated and removed. This will minimize the amount of excavation required.

Trees to be Retained

- **NT 9 English Hawthorn:** This municipal tree will not be impacted.

- **English Holly Trees NT 1-3**
  These three English Holly trees on municipal property can be retained if desired. The new driveway is approximately in the same footprint as the old driveway, in the area adjacent to these trees.

Other Mitigation Measures

- **Barrier fencing:** The areas surrounding the trees to be retained should be isolated from the construction activity by erecting protective barrier fencing. Where possible, the fencing should be erected at the perimeter of the critical root zones. The barrier fencing must be a minimum of 4 feet in height, of solid frame construction that is attached to wooden or metal posts. A solid board or rail must run between the posts at the top and the bottom of the fencing. This solid frame can then be covered with plywood, or flexible snow fencing. The fencing must be erected prior to the start of any construction activity on site (i.e. demolition, excavation, construction), and remain in place through completion of the project. Signs should be posted around the protection zone to declare it off limits to all construction related activity. The project arborist must be consulted before this fencing is removed or moved for any purpose.

- **Arborist Supervision**: All excavation occurring within the critical root zones of protected trees should be completed under supervision by the project arborist. Any roots encountered must be pruned back to sound tissue to reduce wound surface area and encourage rapid compartmentalization of the wound. In particular, the following activities should be completed under the direction of the project arborist:

    - Excavation for the underground parking and pathway within the CRZ of Garry Oak #984
    - Excavation of any underground services within the CRZ of Garry Oak #984
    - If trees NT 4-7 are retained, excavation within their CRZs associated with the underground parking and sidewalk

- **Methods to avoid soil compaction:** In areas where construction traffic must encroach into the critical root zones of trees to be retained, efforts must be made to reduce soil compaction where possible by displacing the weight of machinery and foot traffic. This can be achieved by one of the following methods:

    - Installing a layer of hog fuel or coarse wood chips at least 20 cm in depth and maintaining it in good condition until construction is complete.
    - Placing medium weight geotextile cloth over the area to be used and installing a layer of crushed rock to a depth of 15 cm over top.
    - Placing two layers of 19mm plywood.
    - Placing steel plates.

- **Demolition of the existing building:** The demolition of the existing house and any services that must be removed or abandoned, must take the critical root zone of the trees to be retained into account. If any excavation or machine access is required within the critical root zones of trees to be retained, it must be completed under the supervision and direction of the project arborist. If temporarily removed for demolition, barrier fencing must be erected immediately after the supervised demolition.

- **Mulching**: Mulching is an important proactive step to maintaining the health of the trees to be retained and mitigating construction related impacts and overall stress. Mulch should be made from a natural material such as wood chips or bark pieces and be 5-8cm deep. As much of the area within two times the dripline of the tree should be mulched, both inside and outside of the critical root zone. No mulch should be touching the trunk of the tree. See "methods to avoid soil compaction" if the area is to have heavy traffic.

- **Blasting:** Care must be taken to ensure that the area of blasting does not extend beyond the necessary footprints and into the critical root zones of surrounding trees. The use of small low-concussion charges and multiple small charges designed to pre-shear the rock face will reduce fracturing, ground vibration, and overall impact on the surrounding environment. Only explosives of low phytotoxicity and techniques that minimize tree damage should be used. Provisions must be made to ensure that blasted rock and debris are stored away from the critical root zones of trees.

- **Irrigation Systems:** The installation of any in-ground irrigation system must take into account the critical root zones of the trees to be retained. Prior to installation, we recommend the irrigation technician consult with the project arborist about the most suitable locations for the irrigation lines and how best to mitigate the impacts on the trees to be retained. This may require the project arborist supervise the excavations associated with installing the irrigation system. Excessive frequent irrigation and irrigation which wets the trunks of trees can have a detrimental impact on tree health and can lead to root and trunk decay.

- **Arborist Role:** It is the responsibility of the client or his/her representative to contact the project arborist for the purpose of:
  - Locating the barrier fencing
  - Reviewing the report with the project foreman or site supervisor
  - Locating work zones, where required
  - Supervising any excavation within the critical root zones of trees to be retained
  - Reviewing and advising of any pruning requirements for machine clearances

- **Review and site meeting**: Once the project receives approval, it is important that the project arborist meet with the principals involved in the project to review the information contained herein. It is also important that the arborist meet with the site foreman or supervisor before any demolition, site clearing or other construction activity occurs.

Please do not hesitate to call us at (250) 479-8733 should you have any further questions. Thank you.

Yours truly,
Talbot Mackenzie & Associates
ISA Certified Consulting Arborists

Encl. 1-page tree resource spreadsheet, 1-page site plan with barrier fencing locations and tree labels, 1-page preliminary servicing, 1-page original survey

Disclosure Statement

Arborists are professionals who examine trees and use their training, knowledge and experience to recommend techniques and procedures that will improve their health and structure or to mitigate associated risks.

Trees are living organisms, whose health and structure change, and are influenced by age, continued growth, climate, weather conditions, and insect and disease pathogens. Indicators of structural weakness and disease are often hidden within the tree structure or beneath the ground. It is not possible for an Arborist to identify every flaw or condition that could result in failure or can he/she guarantee that the tree will remain healthy and free of risk.

Remedial care and mitigation measures recommended are based on the visible and detectable indicators present at the time of the examination and cannot be guaranteed to alleviate all symptoms or to mitigate all risk posed.

838-842 Admirals Rd, Esquimalt
Tree Resource Spreadsheet

Tree ID	Common Name	Latin Name	DBH (cm)	Crown Spread (m)	CRZ (m)	Relative Tolerance	Health	Structure	Remarks and Recommendations	Retention Status X = Removal TBD = To be Determined
92	English Holly	*Ilex aquifolium*	26, 18	6.0	3.5	Good	Good	Fair		X
128	Purple Leaf Plum	*Prunus cerisifera*	48, 46, 41, 41, 32	14.0	10.0	Moderate	Fair	Fair/poor	Codominant union at base with included bark	X
984	Garry Oak	*Quercus garryana*	79.0	16.0	8.0	Good	Good	Fair	1.8m tall retaining walls 1.5m south and 3.5m west of tree, confining root growth	TBD-Significant Health Impacts
986	Garry Oak	*Quercus garryana*	78.0	12.0	8.0	Good	Good	Fair	Asymmetric crown	X
990	Garry Oak	*Quercus garryana*	87.0	15.0	8.5	Good	Good	Fair	Asymmetric crown , slight lean	X
NT 01	English Holly	*Ilex aquifolium*	26, 21, 18	5.0	4.0	Good	Good	Fair	Municipal	Retain
NT 02	English Holly	*Ilex aquifolium*	Multistem	3.0	2.5	Good	Good	Fair	Municipal	Retain
NT 03	English Holly	*Ilex aquifolium*	Multistem	3.0	2.5	Good	Good	Fair	Municipal	Retain
NT 04	Horsechestnut	*Aesculus hippocastanum*	34.0	7.0	4.0	Moderate	Fair	Poor	Municipal. Topped severely for three primary hydro lines above. Slight lean and asymmetric	X
NT 05	Horsechestnut	*Aesculus hippocastanum*	51.0	11.0	6.0	Moderate	Fair	Poor	Municipal. Topped severely for three primary hydro lines above	X
NT 06	Horsechestnut	*Aesculus hippocastanum*	57.0	13.0	7.0	Moderate	Fair	Poor	Municipal. Topped severely for three primary hydro lines above	X
NT 07	Horsechestnut	*Aesculus hippocastanum*	53, 39	14.0	9.0	Moderate	Fair	Poor	Municipal. Topped severely for three primary hydro lines above. Codominant union at DBH level with reaction wood	X
NT 08	Horsechestnut	*Aesculus hippocastanum*	23.0	5.0	3.0	Moderate	Fair	Fair/poor	Municipal. Leaning away from hydro lines. 1.5m from property line.	X
NT 09	English Hawthorn	*Crataegus laevigata*	25.0	5.0	2.5	Good	Good	Fair	Municipal. 2m from property line trajectory	Retain

Prepared by:
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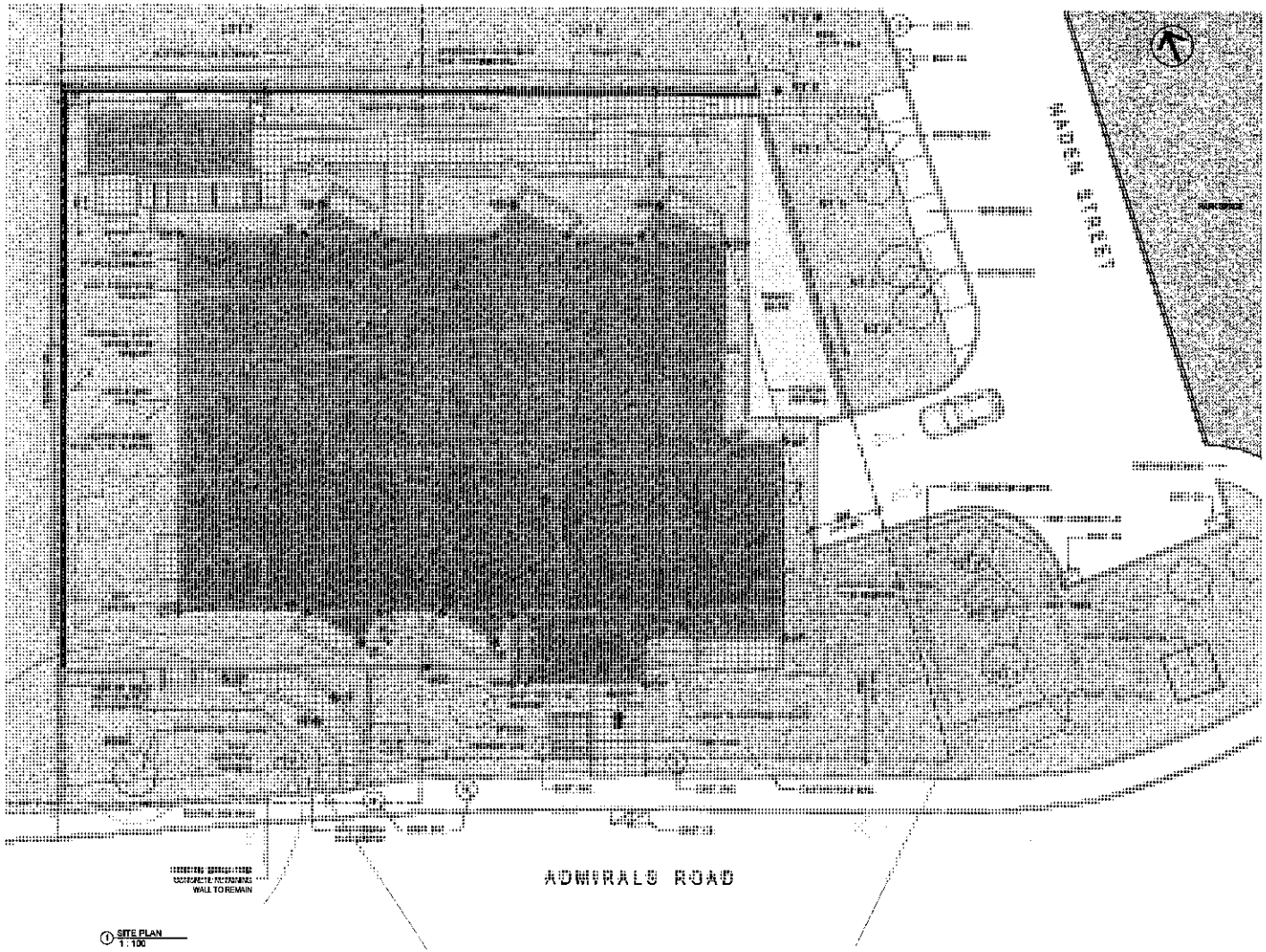


① SITE PLAN
1 : 100

TREE PROTECTION BARRIER FENCING LOCATIONS

PRAXIS
architects inc.

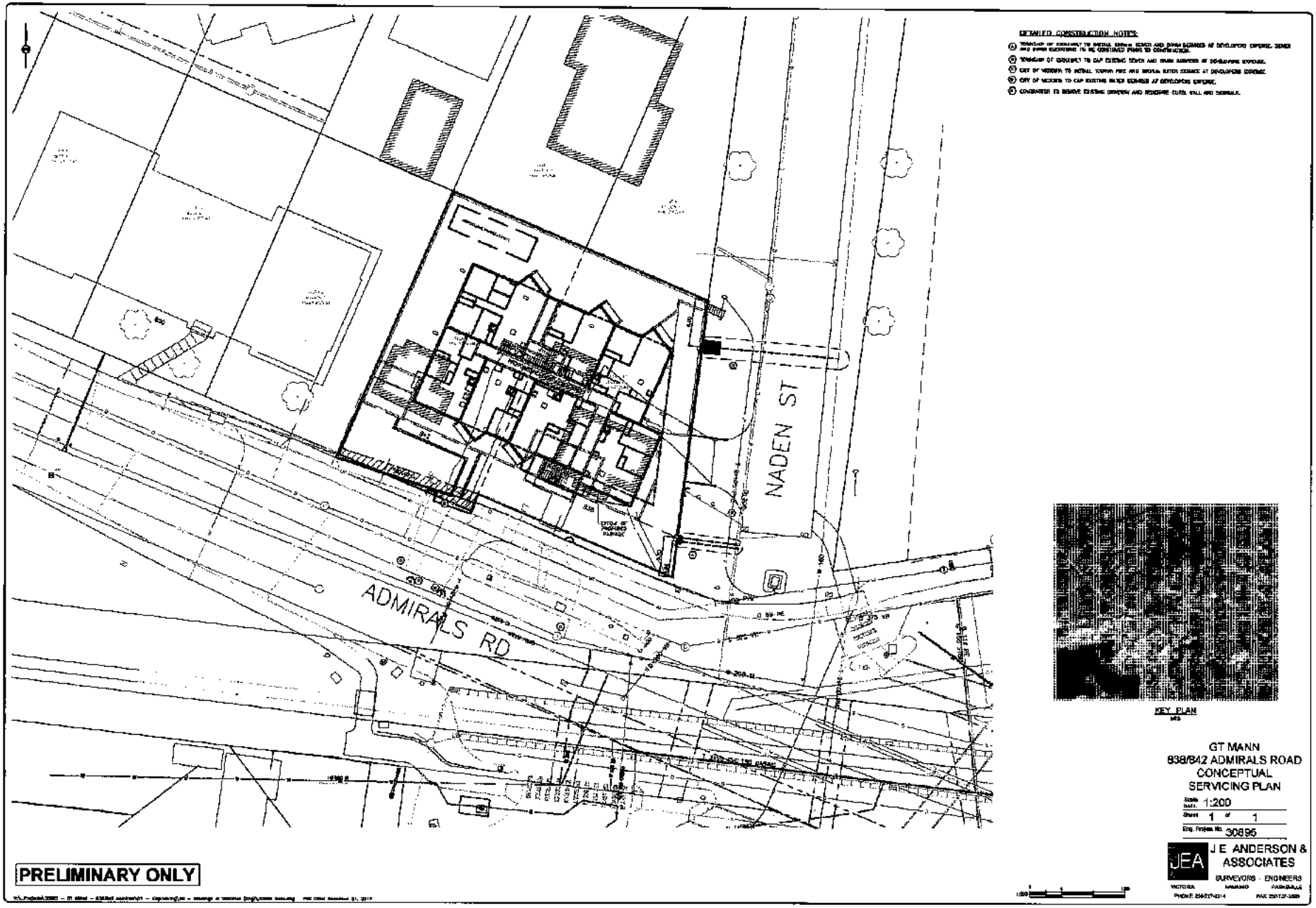
838-842 ADMIRALS ROAD

838-842 ADMIRALS ROAD PROJECT NO. 17-013

SITE PLAN

2017.12.15 - REZONING APPLICATION

A01



DETAILED CONSTRUCTION NOTES:

A) TEMPORARY OF CONNECT TO INSTALL 200mm SEWER AND 200mm SEWERS AT DEVELOPERS EXPENSE. SEWER AND STORM MANHOLES TO BE CONSTRUCTED PRIOR TO CONSTRUCTION.

B) TEMPORARY OF CONNECT TO CAP EXISTING SEWER AND DRAIN MANHOLE AT DEVELOPERS EXPENSE.

C) CITY OF VICTORIA TO INSTALL 150mm FIRE AND DOMESTIC WATER SERVICE AT DEVELOPERS EXPENSE.

D) CITY OF VICTORIA TO CAP EXISTING WATER SERVICE AT DEVELOPERS EXPENSE.

E) CONTRACTOR TO REMOVE EXISTING DRIVEWAY AND RESTORE CURB, WALL AND SIDEWALK.

KEY PLAN

GT MANN
838/842 ADMIRALS ROAD
CONCEPTUAL
SERVICING PLAN

Scale hor. 1:200
Sheet 1 of 1
Eng. Project No. 30695

JEA J E ANDERSON & ASSOCIATES
SURVEYORS · ENGINEERS
VICTORIA NANAIMO PARKSVILLE
PHONE: 250-727-2214 FAX: 250-727-2232

PRELIMINARY ONLY

SITE PLAN OF LOT 16 and LOT 17, EXCEPT PART IN PLAN VIP86845, BOTH IN BLOCK 7, SECTION 10, ESQUIMALT DISTRICT, PLAN 2546

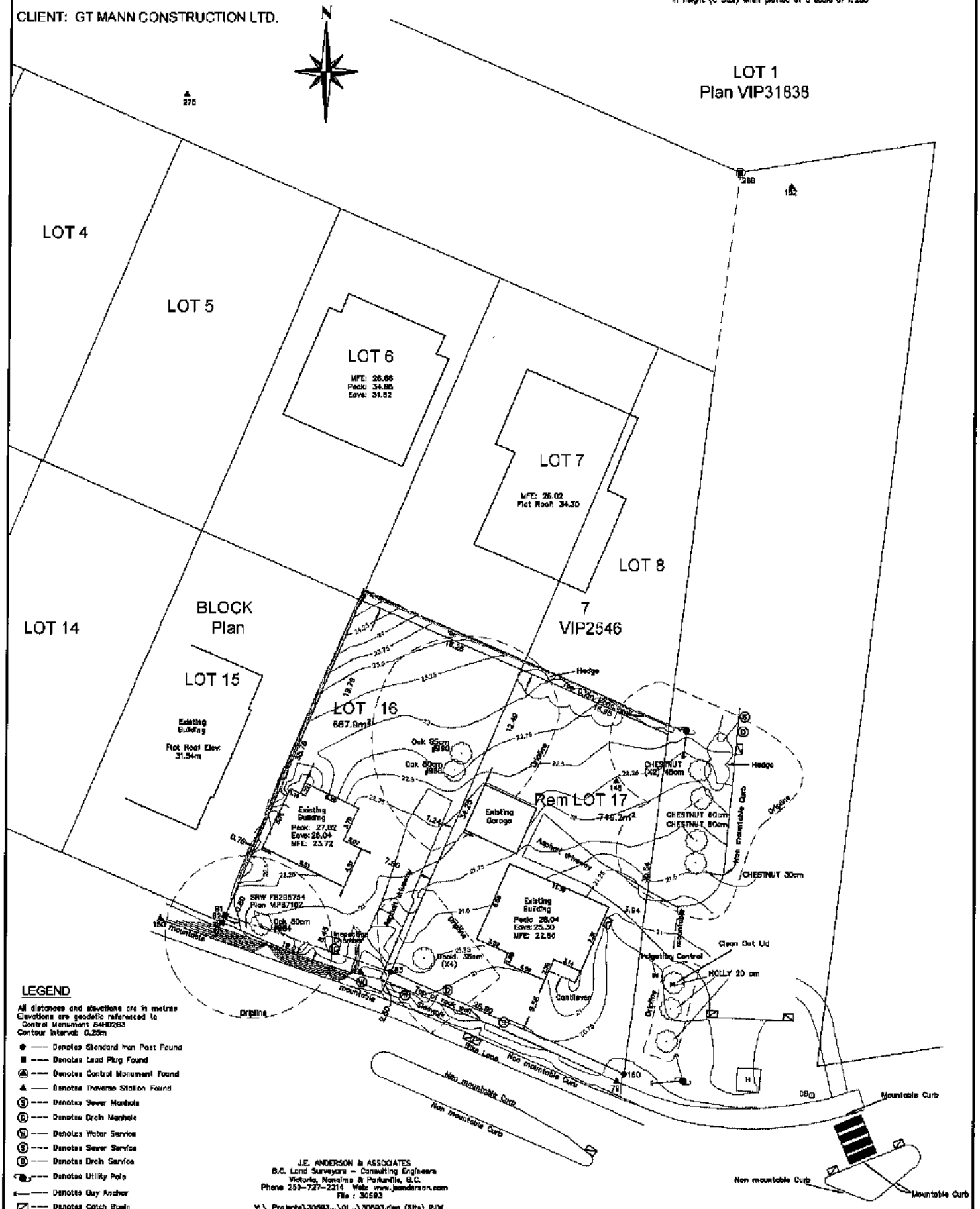
Address: 838-842 Admirals Road, Esquimalt
Date: August 3, 2017

CLIENT: GT MANN CONSTRUCTION LTD.

Scale 1:250

0 2.5 5 10 15 20 25

The intended plot size of this plan is 432mm in width by 560mm in height (C Size) when plotted at a scale of 1:250



LEGEND

All distances and elevations are in metres
Elevations are geodetic referenced to Control Monument 84H0263
Contour Interval: 0.25m

- Denotes Standard Iron Post Found
- Denotes Lead Plug Found
- Denotes Control Monument Found
- Denotes Traverse Station Found
- Denotes Sewer Manhole
- Denotes Drain Manhole
- Denotes Water Service
- Denotes Sewer Service
- Denotes Drain Service
- Denotes Utility Pole
- Denotes Guy Anchor
- Denotes Catch Basin

J.E. ANDERSON & ASSOCIATES
B.C. Land Surveyors – Consulting Engineers
Victoria, Nanaimo & Parksville, B.C.
Phone 250-727-2214 Web: www.jeanderson.com
File : 30593
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WATT Consulting Group

838 / 839 – 842 Admirals Road

Parking Study

Prepared for:	**GT Mann Contracting**
Prepared by:	**Watt Consulting Group**
Our File:	**2258**
Date:	**December 6, 2017**

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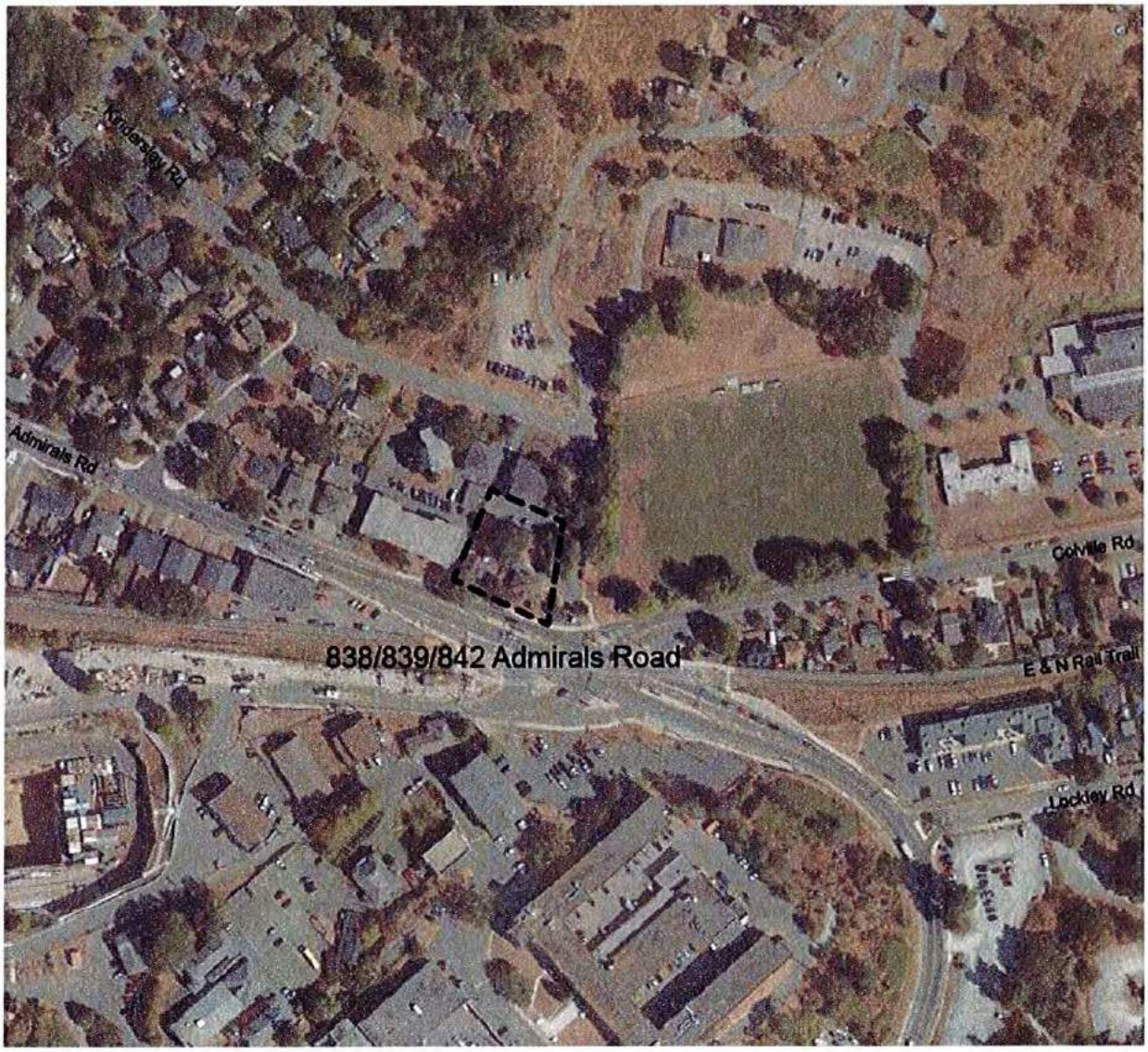
1.0 INTRODUCTION

Watt Consulting Group was retained by GT Mann Contracting to conduct a parking study for the proposed development at 638/640 Constance Avenue and 637 Nelson Street in the Township of Esquimalt. The purpose of this study is to assess the adequacy of the proposed parking supply by considering parking demand at representative sites and to identify transportation demand management (TDM) options.

1.1 SUBJECT SITE

The proposed redevelopment site is 638/640 Constance Avenue and 637 Nelson Street in the Township of Esquimalt. The site is zoned RD-3 | Two Family/Single Family Residential + CD-75 | Comprehensive Development District No.75 . See **Figure 1.**

FIGURE 1. **SUBJECT SITE**



1.2 SITE CHARACTERISTICS

The following provides information regarding services and transportation options in close proximity to the subject site.

SERVICES

The site is located just over 1km from Admirals Walk that has various retail, restaurant, office and medical services. Esquimat Village is located 2km from the site and has similar services as Admirals Walk.

TRANSIT

The closest bus stop is 100m from the site on Colville Road and serves Route 24 | Cedar Hill/Admirals Walk. The closest bus stop on Admirals Road is 120m from the site and serves Route 25 | Maplewood/Admirals Walk. These routes are classified as local routes with a service frequency of 20 to 120 minutes, depending on the time of day and day of week.

BC Transit's Victoria Transit Future Plan[1] identifies Admirals Road as a "Frequent Transit Corridor"[2] that will provide frequent service (15 minutes or better between 7am and 10pm, 7 days per week) with improved transit travel times achieved by fewer stops, transit priority measures and enhanced bus stop infrastructure. The subject site will benefit from frequent, reliable and convenient transit service.

WALKING

There are sidewalks on both sides of Admirals Road, and adequate crosswalks at major intersections. Admirals Road underwent an extensive street improvement project in 2015 that included installing two-way left-turns, median islands, street lighting upgrades, and sidewalk improvements. .

CYCLING

There are bike lanes on both sides of Admirals Road between Lyall Street and Maplebank Road, which was a part of the improvement project in 2015. The site is directly adjacent the Esquimalt and Nanaimo (E+N) Rail Trail, which provides a direct off-road cycling route to View Royal and the Western Communities.

[1] Transit Future Plan, Victoria Region, May 2011. Available online at: https://bctransit.com/servlet/documents/1403641054473

[2] More information on the Victoria Transit Future Plan is available online at: http://bctransit.com/victoria/transit-future/victoria-transit-future-plan

2.0 PROPOSED DEVELOPMENT

The proposal is for 30 Multi-family Residential units. This will be a rental apartment building with units offered at market rates (i.e., no subsidy) consisting of a combination of one- and two-bedroom units. See **Table 1**.

TABLE 1. **PROPOSED UNIT COMPOSITION**[3]

Number of Bedrooms	Quantity
One-Bedroom	12
One-Bedroom + Den	6
Two-Bedroom	10
Two-Bedroom + Den	2
Total	**30**

2.1 PROPOSED PARKING SUPPLY

The proposed parking supply is 30 spaces - a parking supply rate of 1.0 spaces per unit.

The proposal also includes provision of 45 long-term bike parking spaces (1.5 bike parking spaces per unit) and a six-space bike rack at the building entrance.

3.0 PARKING REQUIREMENT

The Township of Esquimalt Parking Bylaw No. 2011[4] identifies a minimum parking supply rate of 1.3 spaces per unit for Medium and High Density Apartment uses (assumes RM-4 zoning). Applied to the subject site, this results in a requirement for 39 parking spaces. The Bylaw requires that 10 of the required spaces are reserved for visitors, and one space is designed and designated as Disabled Persons' parking (28 resident, 10 visitor, 1 disabled).

4.0 EXPECTED PARKING DEMAND

Expected parking demand is estimated in the following sections based on observations and research.

4.1 RESIDENT PARKING, OBSERVATIONS

Observations of parked vehicles were completed for eight representative sites within Esquimalt to determine an appropriate parking demand rate for the subject site. Study sites are generally located in the western portion of the Township with similar access to public transit and cycling routes as the proposed site. All study sites are market rental apartment buildings.

[3] Unit composition information per email correspondence from Praxis Architects, received September 18 2017

[4] The Township's Zoning Bylaw is available online at:
www.esquimalt.ca/sites/default/files/docs/municipal-hall/bylaws/parking_bylaw_2011_july.pdf

Observations were conducted on Thursday October 5 and Wednesday October 11 between 9:00pm and 10:00pm (representing peak period for residential land uses). All representative sites have surface parking, which allowed access to complete counts of parked vehicles.

Results suggest an average peak parking demand of 0.61 vehicles per unit and an 85th percentile of 0.72 vehicles per unit, with rates ranging from 0.45 to 0.72 vehicles per unit. See **Table 2**. The 85th percentile parking demand rate applied to the subject site suggests a total parking demand of 22 vehicles.

Study sites that are in close proximity to the subject site were assessed in more detail to calculate an accurate representation of parking demand at the subject site. Average peak demand of those sites (850 Admirals Road and 841 Kindersley Road) is 0.69 vehicles per unit; higher than the average among all sites. This is likely a result of these sites being located farther from services and transportation options. The majority of these sites are in close proximity to CFB Esquimalt and it is assumed that a portion of residents are CFB employees and do not require a vehicle.

TABLE 2. **SUMMARY OF OBSERVATIONS AT REPRESENTATIVE SITES**

Location	Number of Units	Thursday October 5, 9:00pm		Wednesday October 11, 9:00pm	
		Vehicles Observed	Demand Rate (vehicles per unit)	Vehicles Observed	Demand Rate (vehicles per unit)
850 Admirals Rd	20	13	0.65	13	0.65
841 Kindersley Rd	11	8	0.73	7	0.64
625 Constance Ave	29	15	0.52	13	0.45
639 Constance Ave	19	8	0.42	10	0.53
1337 Saunders St	28	16	0.57	15	0.54
1340 Sussex St	39	21	0.54	24	0.62
1357 Esquimalt Rd	50	32	0.64	36	0.72
611 Admirals Rd	25	16	0.64	18	0.72
Average			**0.59**		**0.61**
85th Percentile			**0.65**		**0.72**

Research suggests that parking demand varies based on the size of unit - the higher the number of bedrooms, the higher the parking demand. For the two sites closest to the subject site, the total parking demand has been redistributed based on number of bedrooms.

Overall vehicle ownership at the study sites closest to the subject site have been factored to account for unit configuration (i.e., number of bedrooms) as follows (see **Table 3**):

1. Overall adjusted peak vehicle ownership data for each site[5];
2. The breakdown of unit type (i.e., number of bedrooms) at each site[6]; and
3. The assumed "ratio differences" between each unit type based on the King County Metro[7] study which recommends one-bedroom units have a 20% higher parking demand than bachelor units, two-bedroom units have a 60% higher parking demand than one-bedroom units, and three-bedroom units have a 15% higher parking demand than two-bedroom units.

Results suggest that average parking demand when factored for unit configuration is as follows:

- One-Bedroom Units (18) = 0.65 vehicles per unit, 12 vehicles
- Two-Bedroom Units (12) = 1.04 vehicles per unit, 12 vehicles
- Total Vehicles = 24 vehicles

TABLE 3. **PARKING DEMAND BY UNIT TYPE AT SELECT REPRESENTATIVE SITES**

Location	Adjusted Demand Rate	Assumed Vehicle Ownership Distribution (vehicles per unit)	
		1-Bedroom	2-Bedroom
850 Admirals Rd	0.72	0.62	0.99
841 Kindersley Rd	0.80	0.68	1.09
Average	**0.76**	**0.65**	**1.04**

4.2 VISITOR PARKING

Observations were conducted as part of a study by Metro Vancouver[8] that concluded typical visitor parking demand is less than 0.1 vehicles per unit. This is similar to observations that were conducted for parking studies in the City of Langford and the City of Victoria, and suggests that visitor parking demand is not strongly influenced by location.
As such, it is estimated that visitor parking demand will be no more than 0.1 vehicles per unit.

[5] The peak parking demand rates were also factored up to account for any residents that may not have been home during observations. A conservative factor of 10% is applied to each site (this is based on known ratio differences between results from observations and vehicle ownership information at similar sites)

[6] Actual breakdown by unit type was unknown at each site, and thus an assumed breakdown was used for each site of 10% bachelor, 60% one-bedroom, 30% two-bedroom (based on averages of multiple representative sites)

[7] King County Metro. (2013). Right Size Parking Model Code. Table 2, page 21.
Available online at: http://metro.kingcounty.gov/programs-projects/right-size-parking/pdf/140110-rsp-model-code.pdf

[8] Metro Vancouver Apartment Parking Study, Technical Report, 2012.
Available online at: www.metrovancouver.org/services/regional-planning/PlanningPublications/Apartment_Parking_Study_TechnicalReport.pdf

4.3 SUMMARY OF EXPECTED PARKING DEMAND

Expected parking demand is approximately 27 vehicles, 3 less than the proposed parking supply. See **Table 5**.

TABLE 5. **SUMMARY OF EXPECTED PARKING DEMAND**

		Units	Expected Parking Demand	
			Rate	Total
Resident	One Bedroom	18	0.65 / unit	12
	Two Bedroom	12	1.04 / unit	12
Visitor		30	0.1 / unit	3
		Total Expected Parking Demand		**27**

5.0 ON-STREET PARKING CONDITIONS

On-street parking conditions were observed surrounding the site on Naden Street (from Kindersley Road to the cul-de-sac), Kindersley Road (from Naden Street to Coles Street), and Colville Road (from Admirals Road to Harman Avenue). Parking restrictions on these road segments are unrestricted, 3 Hour, Residential Only, or there is no parking available. See **Table 6** and **Figure 2**.

Observations were completed during a weekday afternoon and evening to reflect the anticipated "peak" periods. Observations were conducted during the following time periods:

- Tuesday September 19 at 10:30pm
- Friday September 22 at 2:30pm

Results from both observation periods were fairly consistent; weekday evening was observed at 29% occupied (with 34 spaces unoccupied) and weekday afternoon was observed at 31% occupied (with 33 spaces unoccupied). This suggests there is sufficient availability of on-street parking resources in case of spillover.

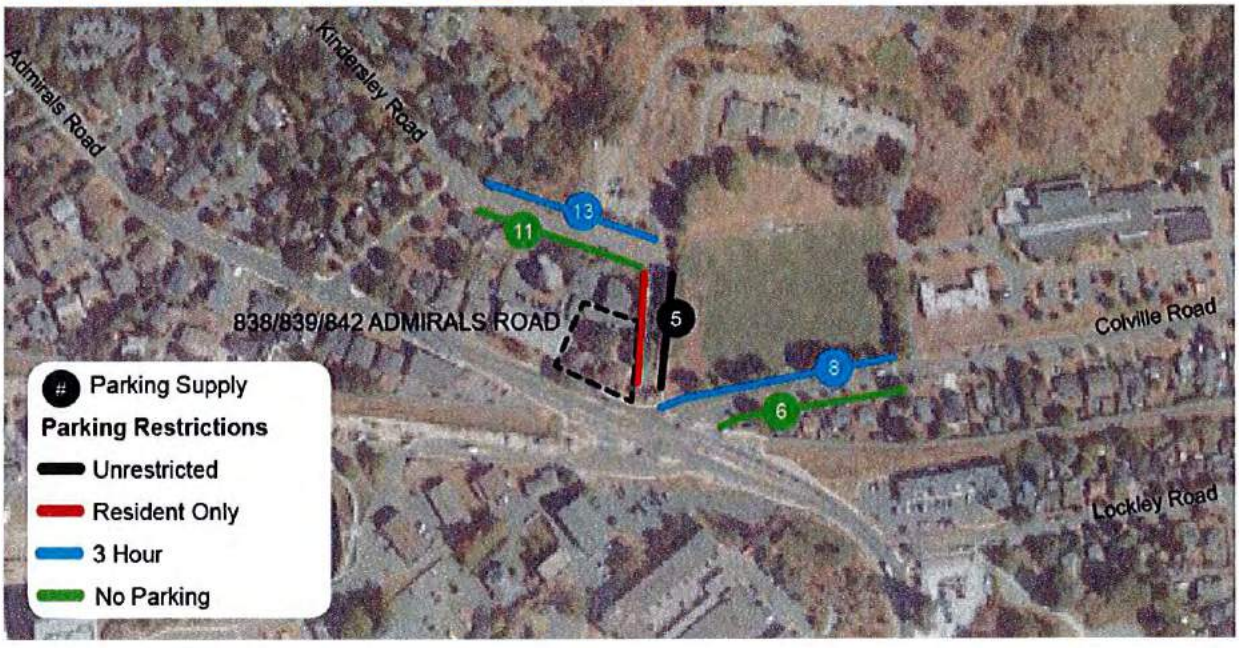
When considering on-street parking conditions by restrictions, the following is noted:

- Unrestricted parking was 80% occupied during the weekday afternoon observations with only two spaces available. This is likely attributed to activity at the DND;
- Resident only parking was 65% occupied during the weekday evening observation with six spaces available. This suggests this parking is well utilized, with sufficient space available to accommodate additional vehicles;
- The 3 hour parking is not well utilized with a peak total occupancy of 14%.

TABLE 6. **SUMMARY OF ON-STREET PARKING CONDITIONS**

Street		Side	Restrictions	Parking Supply (spaces)	Vehicles Observed	
					Tues. 09/19/17 @ 10:30pm	Fri. 09/22/17@ 2:30pm
Naden Street	Kindersley Rd – cul de sac	W	No Parking	-	-	-
		E	--	10	0	8
Kindersley Rd	Naden St – Coles St	N	3 Hour	13	2	0
		S	Resident Only	11	7	2
Colville Rd	Admirals Rd – Harman Ave	N	3 Hour	8	1	2
		S	Resident Only	6	4	3
				48	**14 29%**	**15 31%**

FIGURE 2. **SUMMARY OF ON-STREET PARKING RESTRICTIONS**



6.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) is the application of strategies and policies to influence individual travel choice, most commonly to reduce single-occupant vehicle travel. TDM measures can be pursued to encourage sustainable travel, enhance travel options and decrease parking demand. The following are identified for the applicant's consideration.

6.1 BIKE PARKING

Bike parking is not currently required in the Township's Parking Bylaw. However, the Township of Esquimalt Official Community Plan includes policy that states:

> *In new multi-unit residential developments, secure bicycle storage for residents should be provided in the ratio of 1.5 storage spaces per dwelling unit. In addition to the residents' parking, each multi-unit building should have six (6) bicycle lock-up spaces for the use of visitors.*

The applicant is providing bike parking as per the policy in the OCP, which is higher than typical bike parking requirements in other communities.

7.0 SUMMARY

The proposed development is for 30 units and 30 off-street parking spaces – a parking supply rate of 1.0 spaces per unit. The Township's Parking Bylaw identifies a required minimum parking supply of 39 parking spaces; nine more than is proposed.

Expected parking demand was calculated for the site based on vehicle ownership data and observations of representative study sites. Results suggest an expected parking demand of 24 resident vehicles and 3 visitor vehicles – a total site parking demand of 27 vehicles. Site parking demand is expected to be accommodated within the proposed off-street parking supply and without impacting the surrounding neighbourhood.

Long- and short-term bicycle parking will be provided, consistent with the policy in the Township's OCP (1.5 long-term bike parking spaces per unit and a six-space rack at the building entrance).

7.1 RECOMMENDATION

1. It is recommended that the Township grant the requested variance to allow for provision of 30 parking spaces (1.0 spaces per unit)

Township of
ESQUIMALT

GREEN BUILDING CHECKLIST

The purpose of this Checklist is to make property owners and developers aware of specific green features that can be included in new developments to reduce their carbon footprints to help create a more sustainable community.

Creating walkable neighbourhoods, fostering green building technologies, making better use of our limited land base and ensuring that new development is located close to services, shops and transit are some of the means of achieving sustainability.

The Checklist which follows focuses on the use of **Green Technologies** in new buildings and major renovations. The Checklist is not a report card, it is a tool to help identify how your project can become 'greener' and to demonstrate to Council how your project will help the Township of Esquimalt meet its sustainability goals. It is not expected that each development will include all of the ideas set out in this list but Council is looking for a strong commitment to green development.

There are numerous green design standards, for example, Built Green BC; LEED ND; Living Building Challenge; Green Shores; Sustainable Sites Initiative. Esquimalt is not directing you to follow any particular standard, however, you are strongly encouraged to incorporate as many green features as possible into the design of your project .

As you review this checklist, if you have any questions please contact **Development Services at 250.414.7108** for clarification.

New development is essential to Esquimalt. We look forward to working with you to ensure that development is as green and sustainable as possible.

Other documents containing references to building and site design and sustainability, which you are advised to review, include:

- Esquimalt's Official Community Plan
- Development Protocol Policy
- Esquimalt's Pedestrian Charter
- Tree Protection Bylaw No. 2664
- A Sustainable Development Strategic Plan for the Township of Esquimalt

Adopted on January 10th, 2011

"One-third of Canada's energy use goes to running our homes, offices and other buildings. The federal government's Office of Energy Efficiency (Natural Resources Canada) reports that a corresponding one-third of our current greenhouse gas (GHG) emissions come from the built environment."
[Green Building and Development as a Public Good, Michael Buzzelli, CPRN Research Report June 2009]

Please answer the following questions and describe the green and innovative features of your proposed development. Depending on the size and scope of your project, some of the following points may not be applicable.

Green Building Standards

Both energy use and emissions can be reduced by changing or modifying the way we build and equip our buildings.

1	Are you building to a recognized green building standard? If yes, to what program and level?	Yes	No ✓
2	If not, have you consulted a Green Building or LEED consultant to discuss the inclusion of green features?	Yes ✓	No
3	Will you be using high-performance building envelope materials, rainscreen siding, durable interior finish materials or safe to re-use materials in this project? If so, please describe them. TO MEET NECB 2011	Yes ✓	No
4	What percentage of the existing building[s], if any, will be incorporated into the new building?	N/A %	
5	Are you using any locally manufactured wood or stone products to reduce energy used in the transportation of construction materials? Please list any that are being used in this project. TBD DURING FURTHER DETAILED DESIGN		
6	Have you considered advanced framing techniques to help reduce construction costs and increase energy savings?	Yes ✓	No
7	Will any wood used in this project be eco-certified or produced from sustainably managed forests? If so, by which organization? TBD DURING FURTHER DETAILED DESIGN For which parts of the building (e.g. framing, roof, sheathing etc.)? SHEATHING		
8	Can alternatives to Chlorofluorocarbon's and Hydro-chlorofluorocarbons which are often used in air conditioning, packaging, insulation, or solvents] be used in this project? If so, please describe these. THE GOAL WILL BE TO MINIMIZE USE OF CFC AND HCFC - TBD DURING FURTHER DETAILED DESIGN	Yes ✓	No
9	List any products you are proposing that are produced using lower energy levels in manufacturing. TBD DURING FURTHER DETAILED DESIGN		
10	Are you using materials which have a recycled content [e.g. roofing materials, interior doors, ceramic tiles or carpets]?	Yes ✓	No
11	Will any interior products [e.g. cabinets, insulation or floor sheathing] contain formaldehyde?	Yes	No ✗

Water Management

The intent of the following features is to promote water conservation, re-use water on site, and reduce storm water run-off.

Indoor Water Fixtures

12	Does your project exceed the BC Building Code requirements for public lavatory faucets and have automatic shut offs? N/A	Yes	No
13	For commercial buildings, do flushes for urinals exceed BC Building Code requirements? N/A	Yes	No
14	Does your project use dual flush toilets and do these exceed the BC Building Code requirements? TBD DURING FURTHER DETAILED DESIGN	Yes	No
15	Does your project exceed the BC Building Code requirements for maximum flow rates for private showers?	Yes	No ✓
16	Does your project exceed the BC Building Code requirements for flow rates for kitchen and bathroom faucets?	Yes	No ✓

Storm Water

17	If your property has water frontage, are you planning to protect trees and vegetation within 60 metres of the high water mark? [Note: For properties located on the Gorge Waterway, please consult Sections 7.1.2.1 and 9.6 of the Esquimalt Official Community Plan.]	Yes	No	N/A ✓
18	Will this project eliminate or reduce inflow and infiltration between storm water and sewer pipes from this property?	Yes	No	N/A ✓
19	Will storm water run-off be collected and managed on site (rain gardens, wetlands, or ponds) or used for irrigation or re-circulating outdoor water features? If so, please describe. THERE WILL BE VERY LITTLE STORM WATER RUN-OFF	Yes	No ✓	N/A
20	Have you considered storing rain water on site (rain barrels or cisterns) for future irrigation uses? IT HAS BEEN CONSIDERED, BUT IS NOT APPROPRIATE FOR THIS SITE	Yes ✓	No	N/A
21	Will surface pollution into storm drains will be mitigated (oil interceptors, bio-swales)? If so, please describe. OIL INTERCEPTORS	Yes ✓	No	N/A
22	Will this project have an engineered green roof system or has the structure been designed for a future green roof installation?	Yes	No ✓	N/A
23	What percentage of the site will be maintained as naturally permeable surfaces?	_____ %		

Waste water

24	For larger projects, has Integrated Resource Management (IRM) been considered (e.g. heat recovery from waste water or onsite waste water treatment)? If so, please describe these.	Yes	No	N/A ✓

Natural Features/Landscaping

The way we manage the landscape can reduce water use, protect our urban forest, restore natural vegetation and help to protect the watershed and receiving bodies of water.

25	Are any healthy trees being removed? If so, how many and what species? REFER TO REPORT PREPARED BY TALBOT MACKENZIE & ASSOCIATES Could your site design be altered to save these trees? NO Have you consulted with our Parks Department regarding their removal? YES	Yes ✓	No	N/A

26	Will this project add new trees to the site and increase our urban forest? If so, how many and what species? REFER TO LANDSCAPE PLAN	Yes ✓	No	N/A
27	Are trees [existing or new] being used to provide shade in summer or to buffer winds?	Yes ✓	No	N/A
28	Will any existing native vegetation on this site be protected? If so, please describe where and how.	Yes	No	N/A ✓
29	Will new landscaped areas incorporate any plant species native to southern Vancouver Island?	Yes ✓	No	N/A
30	Will xeriscaping (i.e. the use of drought tolerant plants) be utilized in dry areas?	Yes ✓	No	N/A
31	Will high efficiency irrigation systems be installed (e.g. drip irrigation; 'smart' controls)?	Yes ✓	No	N/A
32	Have you planned to control invasive species such as Scotch broom, English ivy, Himalayan and evergreen blackberry growing on the property?	Yes	No	N/A ✓
33	Will topsoil will be protected and reused on the site?	Yes ✓	No	N/A

Energy Efficiency

Improvements in building technology will reduce energy consumption and in turn lower greenhouse gas [GHG] emissions. These improvements will also reduce future operating costs for building occupants.

34	Will the building design be certified by an independent energy auditor/analyst? If so, what will the rating be? TBD DURING FURTHER DETAILED DESIGN	Yes ✓	No	N/A
35	Have you considered passive solar design principles for space heating and cooling or planned for natural day lighting?	Yes ✓	No	N/A
36	Does the design and siting of buildings maximize exposure to natural light? What percentage of interior spaces will be illuminated by sunlight? _TBC_%	Yes ✓	No	N/A
37	Will heating and cooling systems be of enhanced energy efficiency (ie. geothermal, air source heat pump, solar hot water, solar air exchange, etc.). If so, please describe. TBD DURING FURTHER DETAILED DESIGN If you are considering a heat pump, what measures will you take to mitigate any noise associated with the pump?	Yes	No	N/A
38	Has the building been designed to be solar ready?	Yes ✓	No	N/A
39	Have you considered using roof mounted photovoltaic panels to convert solar energy to electricity?	Yes	No	N/A ✓
40	Do windows exceed the BC Building Code heat transfer coefficient standards? TO MEET NECB 2011	Yes	No	N/A
41	Are energy efficient appliances being installed in this project? If so, please describe. ENERGY STAR	✓		
42	Will high efficiency light fixtures be used in this project? If so, please describe. LED	Yes ✓	No	N/A
43	Will building occupants have control over thermal, ventilation and light levels?	Yes ✓	No	N/A
44	Will outdoor areas have automatic lighting [i.e. motion sensors or time set]?	Yes ✓	No	N/A
45	Will underground parking areas have automatic lighting?	Yes ✓	No	N/A

Air Quality

The following items are intended to ensure optimal air quality for building occupants by reducing the use of products which give off gases and odours and allowing occupants control over ventilation.

46	Will ventilation systems be protected from contamination during construction and certified clean post construction?	✓ Yes	No	N/A
47	Are you using any natural, non-toxic, water soluble or low-VOC [volatile organic compound] paints, finishes or other products? If so, please describe. TBD DURING FURTHER DETAILED DESIGN	✓ Yes	No	N/A
48	Will the building have windows that occupants can open?	✓ Yes	No	N/A
49	Will hard floor surface materials cover more than 75% of the liveable floor area?	✓ Yes	No	N/A
50	Will fresh air intakes be located away from air pollution sources?	✓ Yes	No	N/A

Solid Waste

Reuse and recycling of material reduces the impact on our landfills, lowers transportation costs, extends the life-cycle of products, and reduces the amount of natural resources used to manufacture new products.

51	Will materials be recycled during demolition of existing buildings and structures? If so, please describe. EXPLORING OPTIONS REGARDING MOVING EXISTING HOUSES	✓ Yes	No	N/A
52	Will materials be recycled during the construction phase? If so, please describe. WASTE WOOD	✓ Yes	No	N/A
53	Does your project provide enhanced waste diversion facilities i.e. on-site recycling for cardboard, bottles, cans and or recyclables or on-site composting?	✓ Yes	No	N/A
54	For new commercial development, are you providing waste and recycling receptacles for customers?	✓ Yes	No	N/A

Green Mobility

The intent is to encourage the use of sustainable transportation modes and walking to reduce our reliance on personal vehicles that burn fossil fuels which contributes to poor air quality.

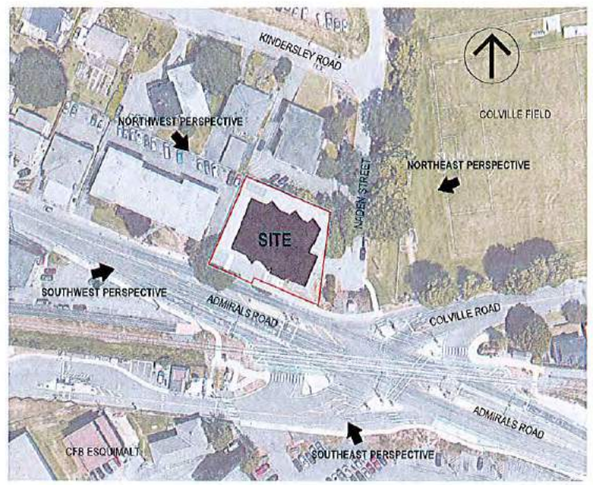
55	Is pedestrian lighting provided in the pathways through parking and landscaped areas and at the entrances to your building[s]?	✓ Yes	No	N/A
56	For commercial developments, are pedestrians provided with a safe path[s] through the parking areas and across vehicles accesses?	Yes	No	✓ N/A
57	Is access provided for those with assisted mobility devices?	✓ Yes	No	N/A
58	Are accessible bike racks provided for visitors?	✓ Yes	No	N/A
59	Are secure covered bicycle parking and dedicated lockers provided for residents or employees?	✓ Yes	No	N/A
60	Does your development provide residents or employees with any of the following features to reduce personal automobile use [check all that apply]: ☐ transit passes ☑ car share memberships ☐ shared bicycles for short term use ☐ weather protected bus shelters ☑ plug-ins for electric vehicles			

Is there something unique or innovative about your project that has not been addressed by this Checklist? If so, please add extra pages to describe it.

838-842 ADMIRALS ROAD

ISSUED FOR REZONING - 2017.12.15

VIEW FROM ADMIRALS AT COLLVILLE



CONTEXT PLAN

DRAWING LIST

PROPOSED PROJECT INFORMATION

EXISTING ZONING	842 = RD-3 (2 FAMILY / 1 FAMILY) 838 = CD-75 (COMPREHENSIVE DEVELOPMENT)		
REZONE TO	NEW COMPREHENSIVE ZONE		
SITE AREA	0.14 Ha / 0.35 Ac / 1,417 m² / 15,252 ft²		
NO. UNITS	30 (4 STOREYS)		
PARKING PROVIDED	30		
BIKE PARKING	45 + RACK FOR 6 AT ENTRANCE		
UNIT AREA (+/-)	49m² (527 ft²) - 88 m² (947 ft²)		
TOTAL FLOOR AREA	1,781 m² (19,171 ft²)		
BUILDING AREA	594 m² (6,394 ft²)		
FLOOR AREA RATIO	1.3 : 1		
COVERAGE	42%		
SETBACKS (PER RM-4)	*FRONT*	7.5m (24.6')	VARIANCE REQ'D
	REAR	7.5m (24.6')	VARIANCE REQ'D
	INTERIOR SIDE	6.0m (19.7')	
	EXTERIOR SIDE	3.6m (11.8')	

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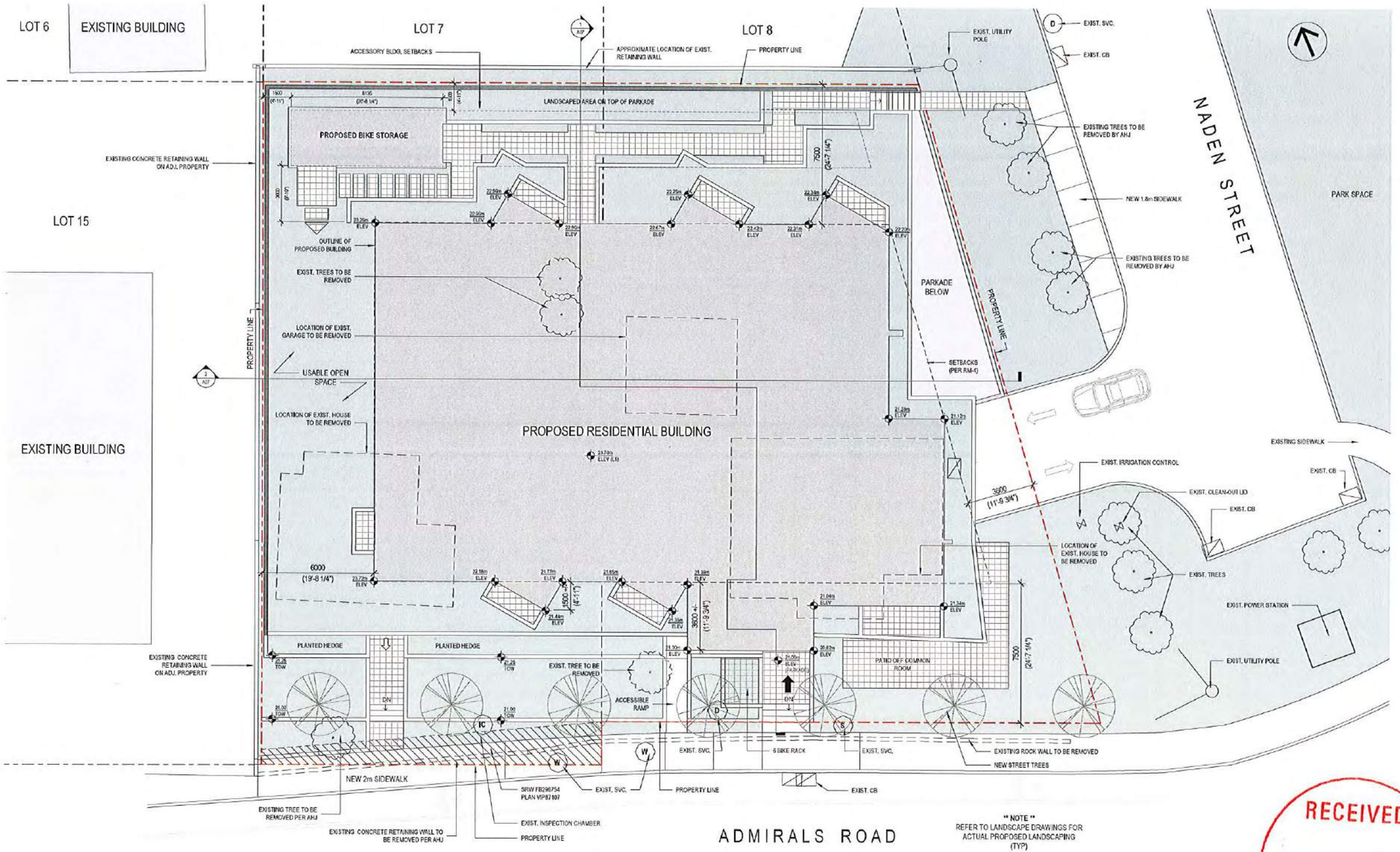
838-842 ADMIRALS ROAD

838-842 ADMIRALS ROAD PROJECT NO. 17-013

COVER SHEET

2018.02.05 - REVISED PER PLANNING

A00



1 SITE PLAN
1 : 100

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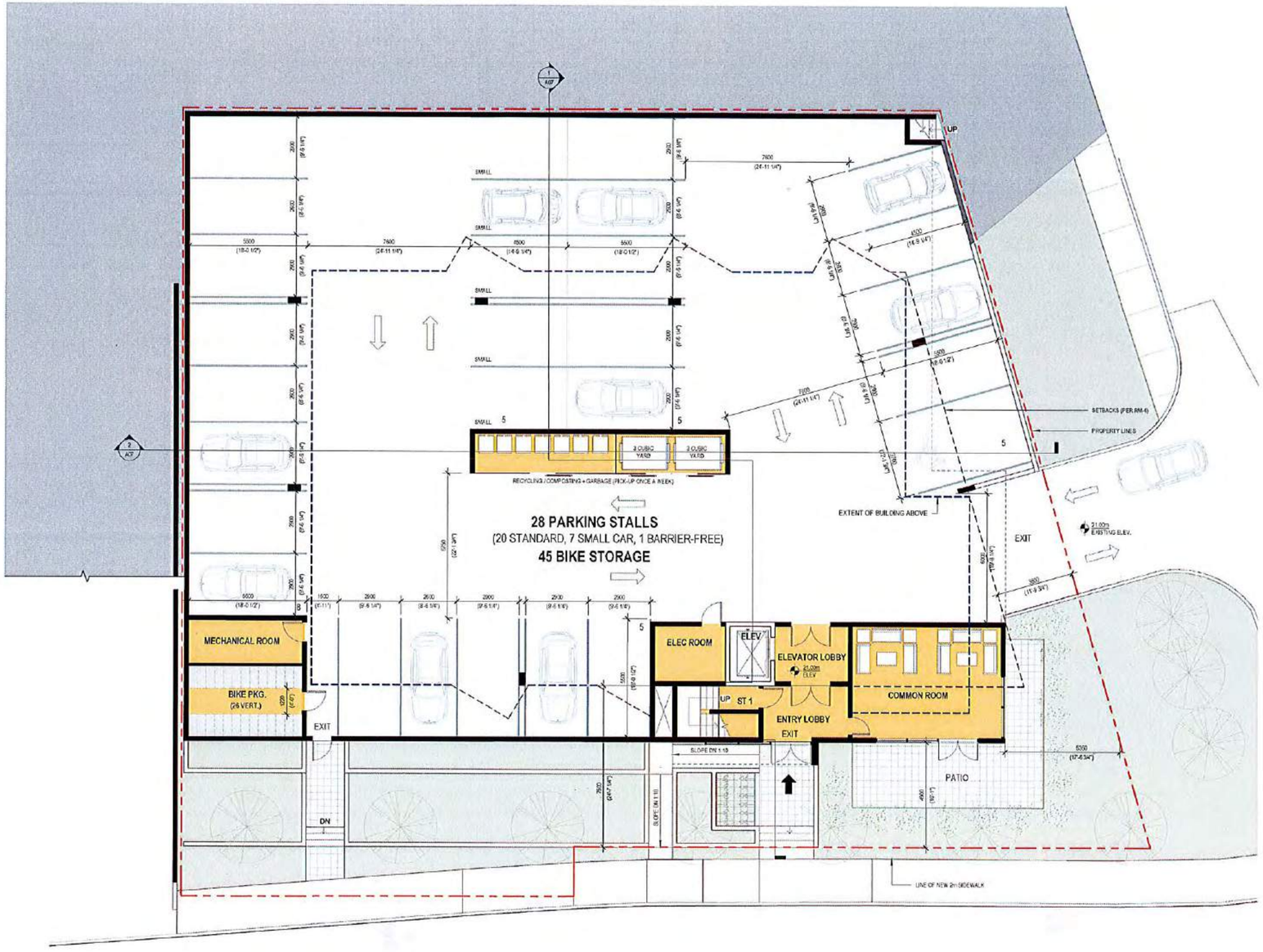
SITE PLAN

2018.02.05 - REVISED PER PLANNING

A01



① PARKADE
1 : 100

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PARKADE PLAN

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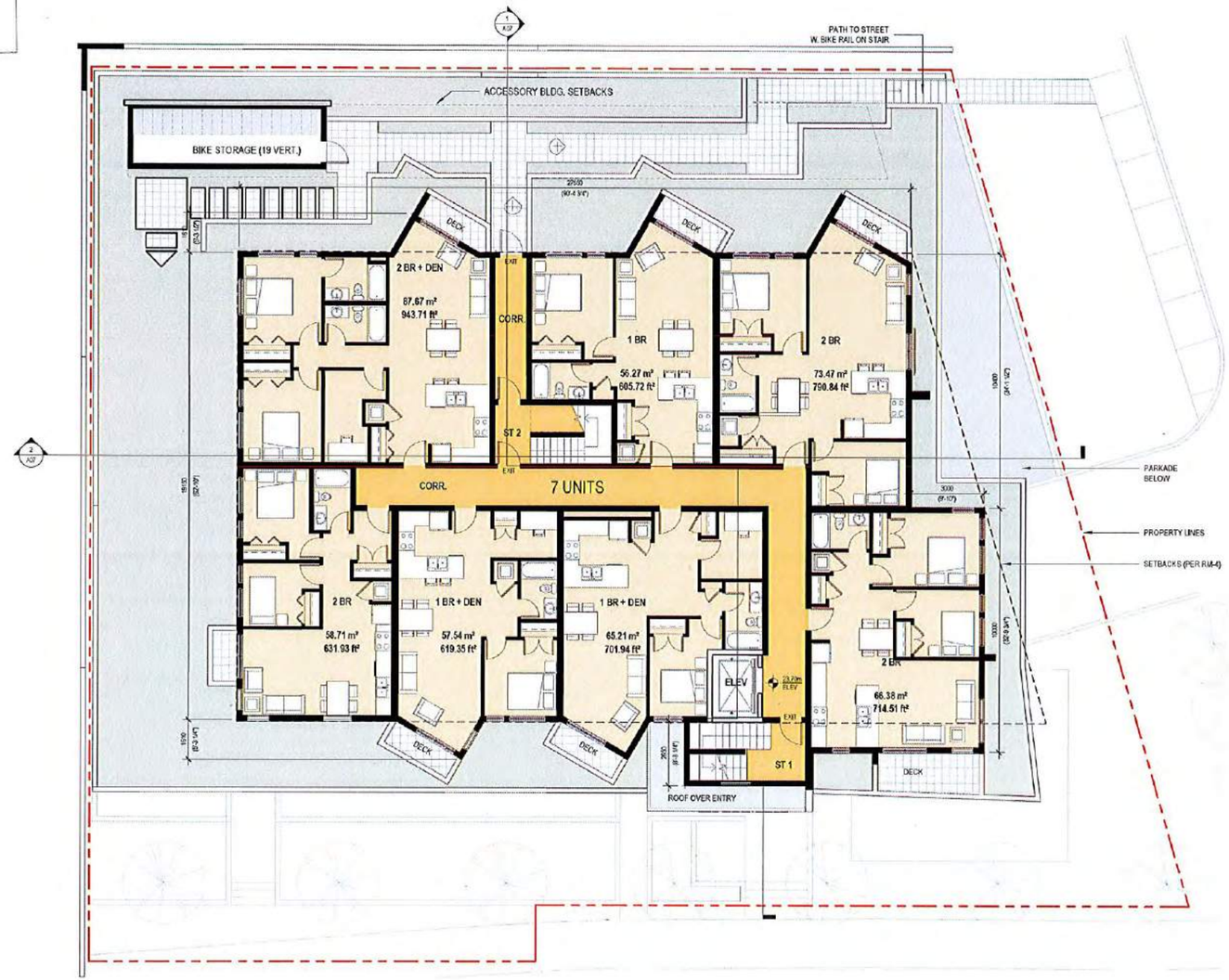
A02



① LEVEL 1
1 : 100

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LEVEL 1

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A03

① LEVEL 2
1 : 100

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LEVEL 2-3

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A04

① LEVEL 4
1 : 100

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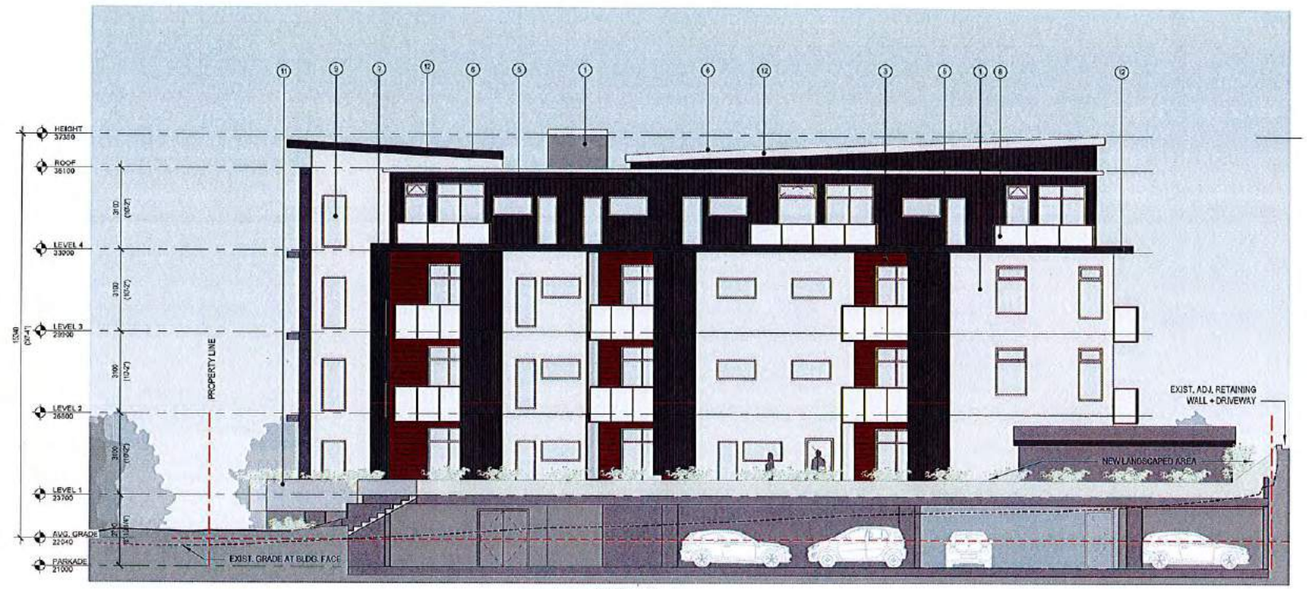
LEVEL 4

2017.12.15 - REZONING APPLICATION

A05



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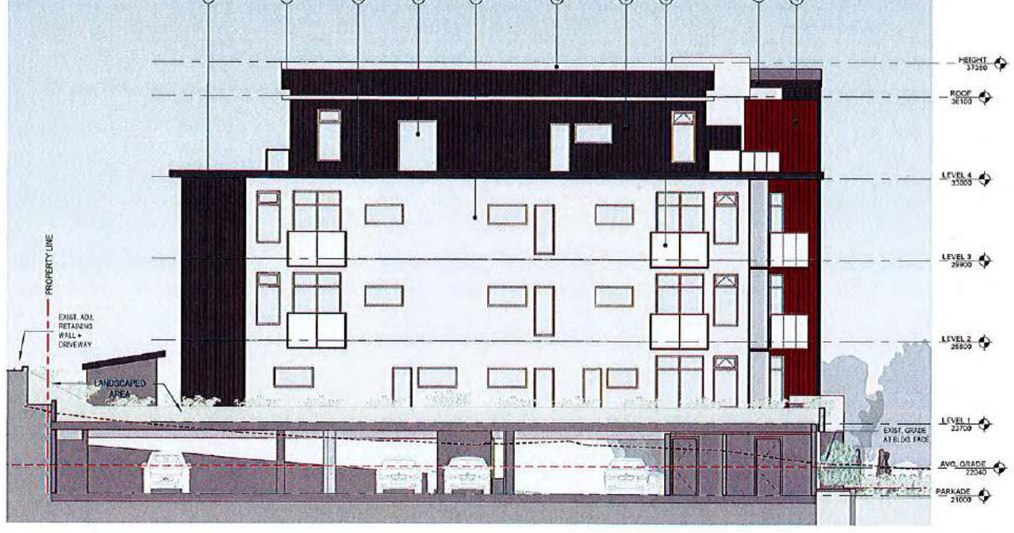
1 NORTH
1 : 100

2 EAST
1 : 100



4 WEST
1 : 100

MATERIAL FINISH LEGEND

1	FIBRE CEMENT PANEL - ARCTIC WHITE	8	GLASS AND ALUMINUM RAILING
2	FIBRE CEMENT PANEL - TRADITIONAL RED	9	ALUMINUM-CLAD VINYL WINDOWS
3	HORIZONTAL SIDING - FIBRE CEMENT - TRADITIONAL RED	10	SOFFIT
4	VERTICAL SIDING - FIBRE CEMENT - TRADITIONAL RED	11	CONCRETE - SMOOTH FINISH
5	VERTICAL SIDING - FIBRE CEMENT - IRON GRAY	12	FASCIA - PREFIN. METAL TO MATCH IRON GRAY
6	METAL STANDING SEAM ROOF - CHARCOAL	13	SUN SHADE (PREFIN. METAL)
7	SBS MEMBRANE ROOF		

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ELEVATIONS

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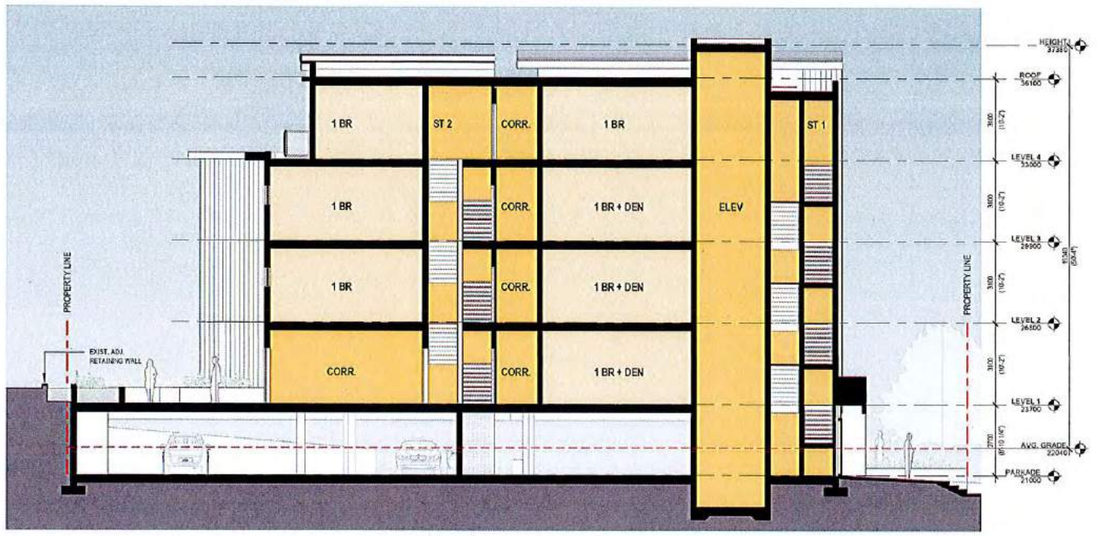
A06



1 SHORT SECTION
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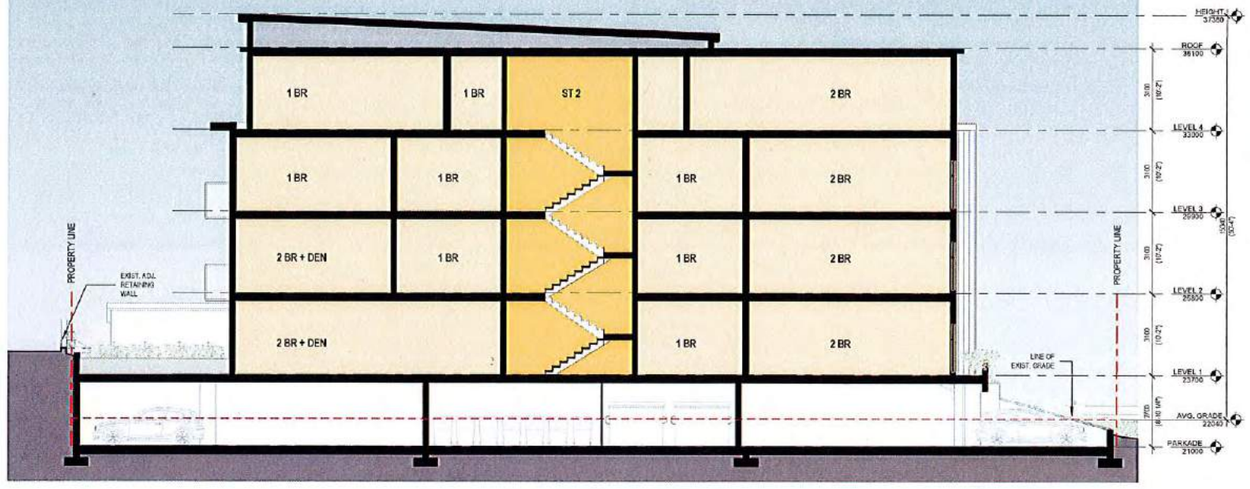

2 LONG SECTION
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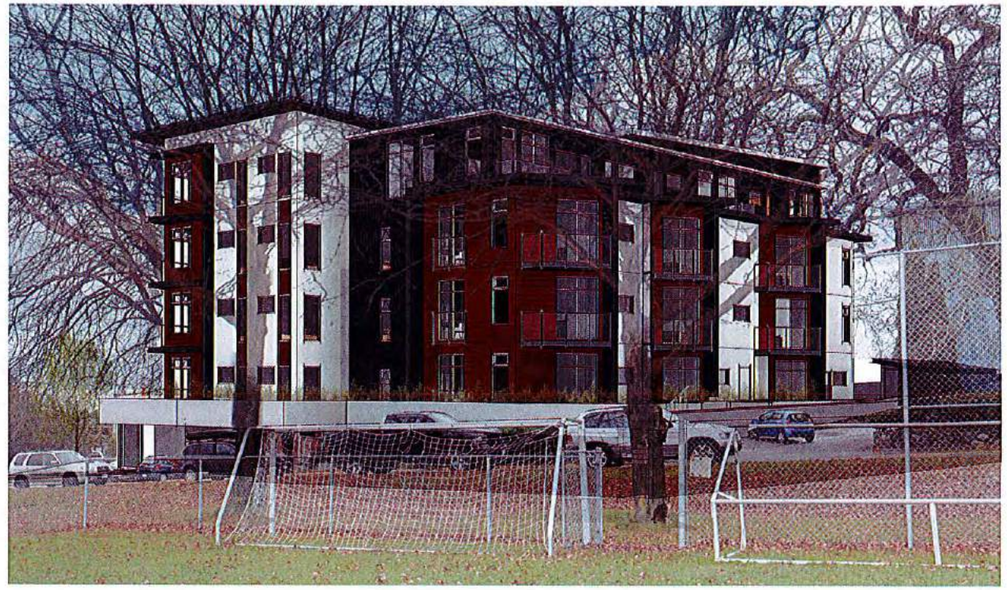
SECTIONS

2018.02.05 - REVISED PER PLANNING

A07

1 SOUTHEAST PERSPECTIVE



2 NORTHEAST PERSPECTIVE

3 SOUTHWEST PERSPECTIVE

4 NORTHWEST PERSPECTIVE

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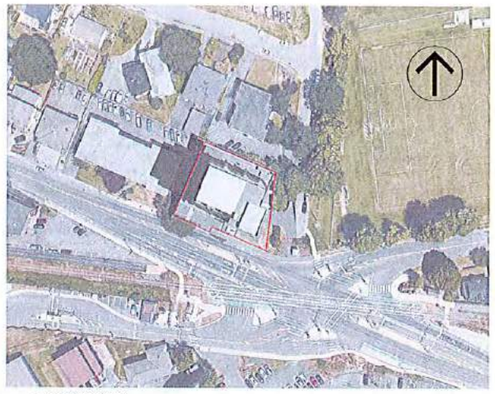
STREET VIEWS

2018.02.05 - REVISED PER PLANNING

A08



① SUMMER 9AM
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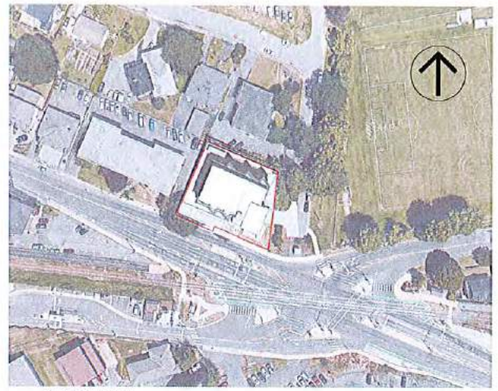

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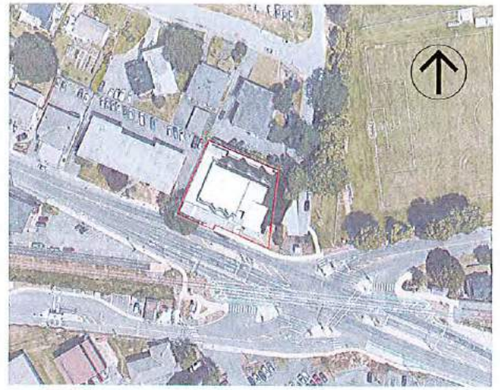

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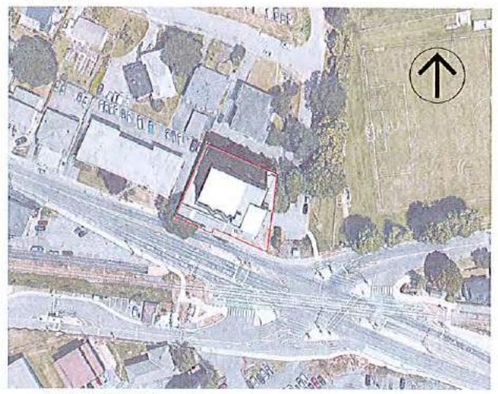
④ SUMMER 6PM
1 : 1200

SUMMER SOLSTICE - JUNE 21

⑤ SPRING / FALL 9AM
1 : 1200



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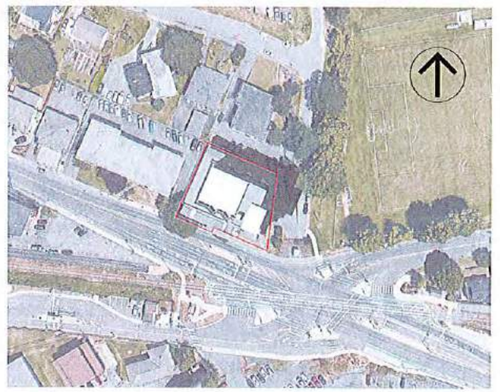

⑦ SPRING / FALL 3PM
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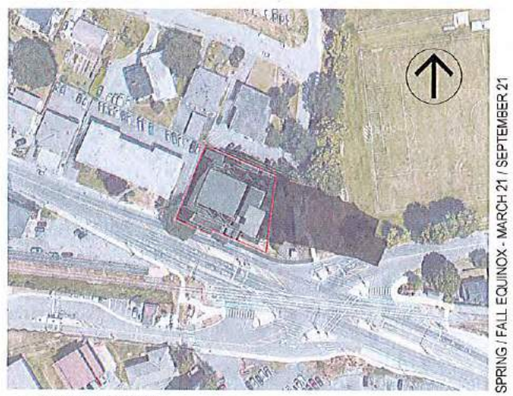
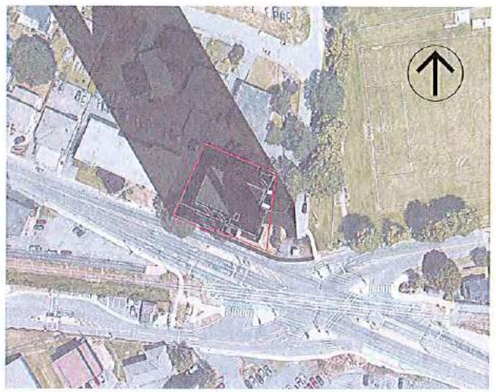


⑧ SPRING / FALL 6PM
1 : 1200

SPRING / FALL EQUINOX - MARCH 21 / SEPTEMBER 21



⑨ WINTER 9AM
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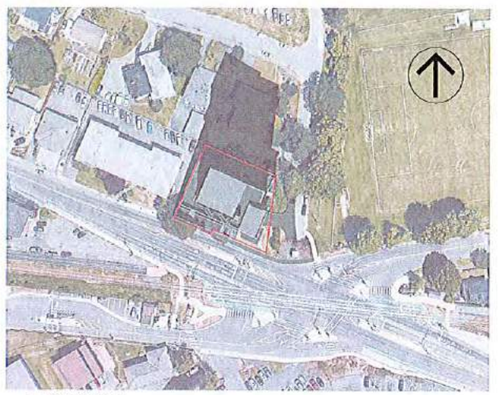

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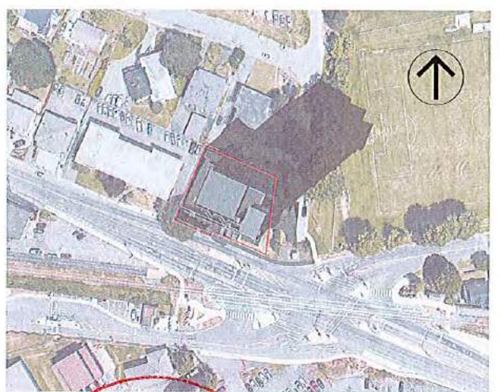

⑪ WINTER 3PM
1 : 1200

⑫ WINTER 8PM
1 : 1200

WINTER SOLSTICE - DECEMBER 21

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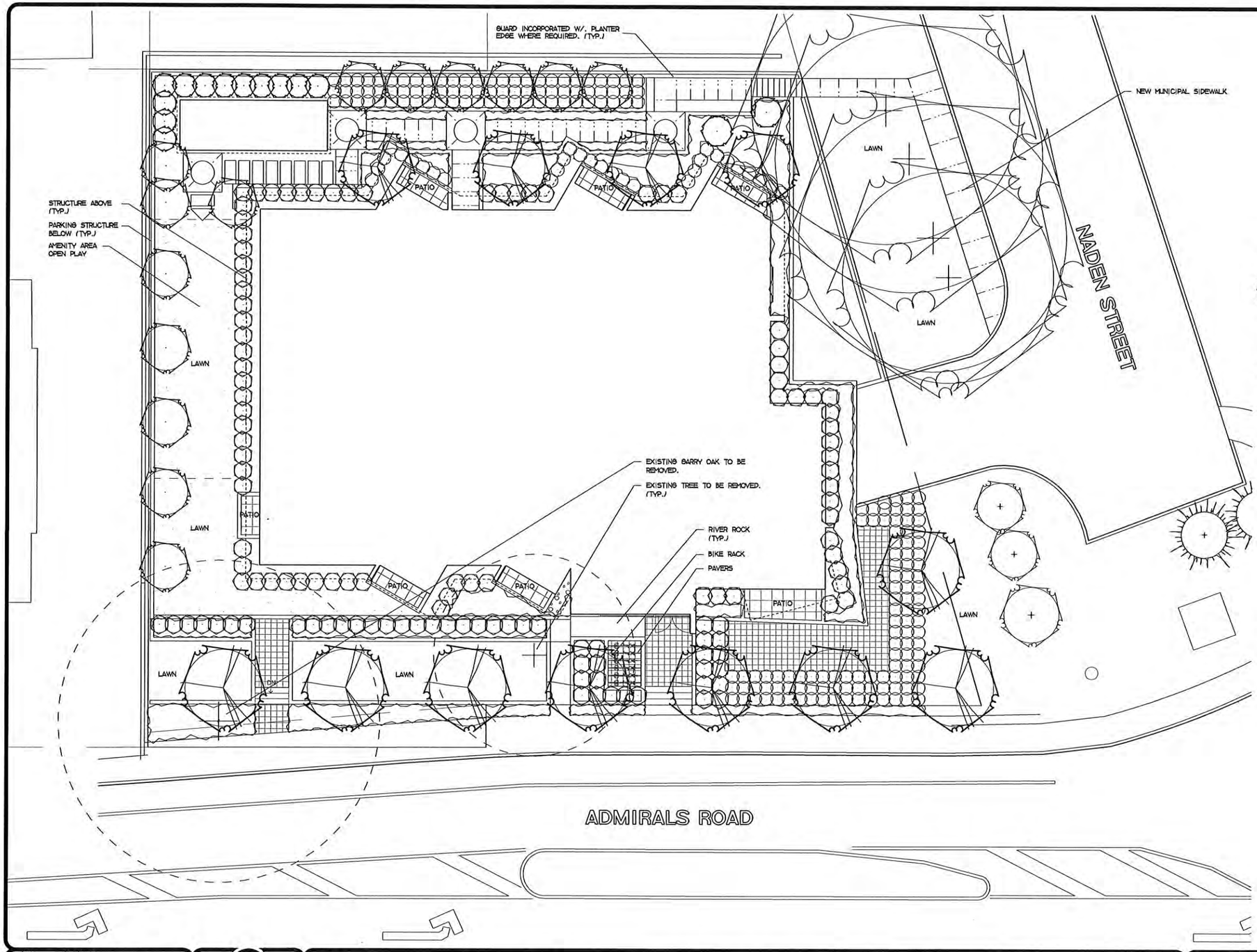
SHADOW STUDIES

2017.12.15 - REZONING APPLICATION

A09



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LEGEND

COLUMNAR DECIDUOUS TREE TO BE A SELECTION OF: COLUMNAR RED MAPLE, AUTUMN BLAZE MAPLE, ARMSTRONG 'GOLD' MAPLE, SIZE 7.0 CM CAL.; APPROXIMATE NO. - 05

SMALL DECIDUOUS TREE TO BE A SELECTION OF: KOUSA DOGWOOD, RED DOGWOOD, JAPANESE MAPLE, PINK DOGWOOD, SIZE 2.0 - 2.5 M HT.; APPROXIMATE NO. - 04

MULTISTEM TO BE A SELECTION OF: STAR MAGNOLIA (DEC), STAGHORN SUMAC (DEC), HOLLY (BL), CAMELIA (BL), JAPANESE ARALIA (BL), LILAC (DEC); SIZE 1.2 M HT.; APPROXIMATE NO. - 14

SPECIMEN SHRUB TO BE A SELECTION OF: RHODODENDRON (BL), VIBURNUM (BL), DECIDUOUS AZALEA (DEC), WILLOWLEAF COTONEASTER (BL), SIZE 27 CM POT; APPROXIMATE NO. - 02

LARGE SHRUB TO BE A SELECTION OF: GLOSSY ABELIA (BL), PIERIS (BL), HANSA ROSE (DEC), MEXICAN ORANGE (BL), DECIDUOUS AZALEA (DEC), SIZE 27 CM POT; APPROXIMATE NO. 12

MEDIUM SHRUB TO BE A SELECTION OF: MAHONIA (BL), RHODODENDRON (BL), JAPANESE AZALEA (BL), PINK ESCALLONIA (BL), BARBERRY (BL), BUXUS (BL), FERNS (BL); SIZE 27 CM POT; APPROXIMATE NO. - 123

SMALL SHRUB TO BE A SELECTION OF: DWARF RHODODENDRON (BL), EDWARD BOUCHER ABELIA (BL), LAVENDER (BL), BOULEVARD SPIREA (DEC), DWARF JAPANESE AZALEA (BL), NEWPORT DWARF ESCALLONIA (BL), LONG LEAF MAHONIA (BL), FERNS (BL); SIZE 21 CM POT; APPROXIMATE NO. - 214

VINES TO BE A SELECTION OF: HONEYSUCKLE (DEC), ENGELMANN IVY (DEC), CLEMATIS (DEC), SIZE 21 CM POT; APPROXIMATE NO. - 18

GROUNDCOVER TO BE A SELECTION OF: PERIWINKLE (BL), KINNIKINNICK (BL), WINTERGREEN (BL), BEARBERRY (BL), SIZE 15 CM POT; PLANT 45 CM O.C.

NOTES

- LANDSCAPE AREAS ARE TO BE IRRIGATED WITH A FULLY AUTOMATIC UNDERGROUND IRRIGATION SYSTEM.
- THIS DRAWING IS CONCEPTUAL ONLY AND NOT INTENDED FOR CONSTRUCTION PURPOSES.
- THIS DRAWING IS FOR SOFT LANDSCAPE ONLY.

NO.	DATE	BY	REVISION
1.	FEB.09.18.	S.P.	STREET FRONTAGE

DRAWN: S.P.
CHECKED: J.P.
DATE: DECEMBER 19, 2017
DRAWING: 838 AR-PIR6.DWG
FILE:
1 : 100

Lombard North Group
LOMBARD NORTH GROUP (BC) INC.
#1 - 1070 DOUGLAS STREET
VICTORIA, BRITISH COLUMBIA, V8W 1B1
TELEPHONE: (250) 386-2338
FAX: (250) 386-4138
EMAIL: lombard@shaw.ca

JOB NAME

838-842 ADMIRALS ROAD
VICTORIA, B.C.

CONSULTANTS

LANDSCAPE PLAN

SHEET NO. P1

SITE PLAN OF LOT 16 and LOT 17, EXCEPT PART IN PLAN VIP86845, BOTH IN BLOCK 7, SECTION 10, ESQUIMALT DISTRICT, PLAN 2546

Address: 838–842 Admirals Road, Esquimalt
Date: August 3, 2017

CLIENT: GT MANN CONSTRUCTION LTD.

Scale 1:250

0 2.5 5 10 15 20 25

The intended plot size of this plan is 432mm in width by 560mm in height (C Size) when plotted at a scale of 1:250

LEGEND

All distances and elevations are in metres
Elevations are geodetic referenced to Control Monument 84H0263
Contour interval: 0.25m

- ● --- Denotes Standard Iron Post Found
- ■ --- Denotes Lead Plug Found
- Ⓐ --- Denotes Control Monument Found
- ▲ --- Denotes Traverse Station Found
- Ⓢ --- Denotes Sewer Manhole
- Ⓓ --- Denotes Drain Manhole
- Ⓦ --- Denotes Water Service
- Ⓢ --- Denotes Sewer Service
- Ⓓ --- Denotes Drain Service
- --- Denotes Utility Pole
- --- Denotes Guy Anchor
- --- Denotes Catch Basin

J.E. ANDERSON & ASSOCIATES
B.C. Land Surveyors – Consulting Engineers
Victoria, Nanaimo & Parksville, B.C.
Phone 250–727–2214 Web: www.jeanderson.com
File : 30593
V:_Projects\30593...\01...\30593.dwg (Site) PJW

CORPORATION OF THE TOWNSHIP OF ESQUIMALT

Municipal Hall, 1229 Esquimalt Road, Esquimalt, B.C. V9A 3P1
Telephone (250) 414-7100 Fax (250) 414-7111

DRC Meeting: February 14, 2018

STAFF REPORT

DATE: February 8, 2018

TO: Chair and Members of the Design Review Committee

FROM: Bill Brown, Director of Development Services

SUBJECT: **DEVELOPMENT PERMIT APPLICATION "REVIEW OF DESIGN REVISIONS FOR THE CORE AREA WASTEWATER TREATMENT PLANT AT MCLOUGHLIN POINT" 337 Victoria View Road Lot 1; Section 11; Plan EPP36468**

RECOMMENDATION:

The Esquimalt Design Review Committee recommends that the application to amend development permit DP000077 for the Core Area Waste Water Treatment Plant be forwarded to Council with a recommendation to **approve, approve with conditions, or deny the application including reasons for the chosen recommendation.**

BACKGROUND:

Purpose of the Application

The purpose of this application is to review a proposed amendments to DP000077 to ensure that the proposed changes to enhance the existing approved development.

Context

The McLoughlin Point site is a 14,213 m^2 parcel situated on the west side of the entrance to Victoria Harbour. Because of its prominent location, it is imperative that the plant exhibit exemplary design.

Applicant/Owner: Capital Regional District

Architect: HDR|CEI Architecture

Property Size: Metric: 14,213 m^2

Existing Land Uses: Vacant

Surrounding Land Uses:
North: CFB Esquimalt.
South: Strait of Juan de Fuca.
West: CFB Esquimalt (low density residential)
East: Entrance to Victoria Harbour

Existing Zoning: McLoughlin Point Special Use [I-3]

Existing OCP Designation: Industrial

Existing Development Permit Area: No. 3 Industrial

Design Overview

The Design Review Committee reviewed the application for the original development permit on January 11, 2017 and subsequently on February 9, 2017 and February 16, 2017. The development permit was approved by Council on February 27, 2017. Since that time more detailed engineering design has been completed which has resulted in the need for a few minor modifications to the form and character of the building. The changes include:

1) Removing the DAF (Dissolved Air Floatation) unit from the building resulting in a reduced building mass.
2) Raising the second floor of the Operations and Maintenance building by 1.24 m in order to accommodate more clearance in the drive aisle. In addition to benefiting the day to day operations of the plant it also allows more clearance for fire trucks and helps mask more of the treatment plant portion of the building.
3) The translucent panels on the upper east elevation have been removed in order to comply with the British Columbia Building Code.
4) Translucent panels have been added to the odour control room to allow for additional natural light.
5) The cladding on the top stairwell at the tertiary treatment plant has been revised to a dark metal cladding to create a clear visual rhythm.
6) The green roof has been extended at the north end to compensate for losses in other areas. The green roof still remains compliant with the Zoning Bylaw.
7) Landscape area under the extended green roof has been converted to bicycle parking and a protected shelter for access to the workshop.

Details of the proposed changes are found in the January 16, 2018 letter from the

Architect (Schedule "A") and the drawings showing bubbles around the proposed changes (Schedule "B"). The complete drawing package is attached as Schedule "C".

Staff have reviewed the revised drawings and feel that the proposed changes represent an enhancement to the currently approved design, particularly as it relates to the reduce massing on the upper south end of the building. Staff would appreciate any comments that the Design Review Committee may have.

Alternatives

1. Forward the application for Rezoning to Council with a **recommendation of approval including reasons for the recommendation**.

2. Forward the application for Rezoning to Council with a **recommendation of approval including specific conditions and including reasons for the recommendation.**

3. Forward the application for Rezoning to Council with a **recommendation of denial including reasons for the recommendation**.

Bill Brown
Director of Development Services

SCHEDULE A

January 16, 2018

Mr. Bill Brown

Director of Development Services
Township of Esquimalt
1229 Esquimalt Road
Esquimalt, BC, V9A 3P1

Re: 337 Victoria View Road
Mclouglin Point Wastewater Treatment Plant

Dear Mr. Brown,

As previously discussed some months ago, the development of the engineering design and ongoing consultation with the CRD on the Mcloughlin Point Wastewater Treatment Plant has resulted in some deviations from the approved Development Permit.

This letter is to be read in conjunction with the application submitted for an Amendment to the Development Permit. The deviations from the approved Development Permit and their rationale is outlined below for your review and consideration.

1) The DAF structure at the south west of the secondary treatment plant has been deleted.

   Rationale and result:
   Through engineering refinements, the DAF was replaced with a different technology utilizing two MBBR (Moving Bed Biofilm Reactor) cells in place of two BAF (Biological Aerated Filters) cells directly following the primary treatment functions.

   The result is the deletion of the highly visible DAF structure at the southwest, and shifting of the main electrical room southward by one BAF cell to allow the required vertical clearance above the MBBRs. Also, since the DAF structure has been deleted, the associated translucent panel in the structure's east side is deleted.

   The electrical room is now clad in the lighter metal panels rather than the darker panels as previously.

   Overall, the actual and visual mass of the plant has been significantly reduced.

2) The 2nd floor of the Operations and Maintenance (O&M) building has been raised 1.24m.

   Rationale and result:
   The required clearance under the drive aisle was confirmed to be higher than what was anticipated during schematic design. In addition, refinement of the Post-Disaster structural design resulted in a deeper structure above the drive aisle.

   The resulting small increase in the roof elevations still falls well within the zoning requirements. The raised second floor and roof results in the O&M building effectively masking more of the view of the Treatment plant beyond.

203–655 Tyee Road, Victoria, BC V9A 6X5
T 250-388-5588 F 250-361-9418 | www.hdrcei.com

3) The translucent panels have been deleted from the east side of the highest enclosures along the east edge of the treatment plant.

Rationale and result:
The Treatment plant and the O&M building need to be separate 'buildings' in order to meet the zoning requirement for LEED Gold certification for the Operations and Maintenance building. To achieve this separation, the east wall of the plant is required to be a firewall between the plant and the O&M building. A firewall cannot have unprotected openings such as glazing panels.

The result is the deletion of the translucent panels along the east face of the treatment plant. This is mitigated by planting on the adjacent upper green roof of the O & M building.

4) Translucent panels have been added to the odour control room at the NE of the treatment plant.

Rationale and result:
Additional natural daylight is desired to illuminate the working space.

The result is a more interesting façade.

5) The cladding on the top of the stairwell at the tertiary treatment has been revised to dark metal cladding from light metal cladding.

Rationale and result:
This was changed to follow the rhythm of contrasting the tones of the metal cladding against the next adjacent building volume.

The result is a clear visual rhythm from east to west and north to south.

6) The green roof at the north end of the O&M building has been extended to fill in the open concrete trellis in the Development Permit.

Rationale and result:
Additional green roof area was required to offset losses to rooftop mechanical equipment and rooftop 'light-pipes' to provide daylight to occupied spaces on Level 1. The green roof remains in conformance to the zoning bylaw of 1,600 square metres minimum area of green roof and minimum 80% of the O&M building roof covered by the green roof.

The result is the green roof has been extended further to the north providing the visual perception of more planted roof area on the O&M building.

7) The area under the expanded green roof at the north end of the O&M building has been removed from the landscaped buffer area between the building and the high water mark.

Rationale and result:
The shelter of the roof above means planting below would not survive without irrigation which impacts LEED.

The result of this roof is shelter for bicycle parking and protected access to the adjacent workshop.

The area of the landscape buffer around the shore remains in conformance to the requirements of the zoning bylaw of 1,250 square metres minimum area of landscape buffer between the building and the high water mark.

8) The size and scope of the required electrical equipment on the west side of the plant has increased.

   Rationale and result:
   The refinement of the engineering calculations and design requires larger emergency generators and other electrical switchgear mounted at grade. Also required are access vaults to underground valves. The zoning allows these items to be located in the front setback.

   The result is revisions to the design and scope of the landscape on the west side of the plant.

We assert the deviations from the approved Development Permit do not depart materially from the approved Development Permit. We believe the result is a reduction of the visual impact of the plant building and a more cohesive architectural expression while conforming to the requirements of the zoning bylaw.

Thank you for your consideration of this application to amend the Development Permit for this project.

Sincerely,

Jim Mann

HDR | CEI Architecture

SCHEDULE B

O&M BUILDING LEVEL 1:
FLOOR AREA: 1345 m2

FormeLandscaped area revised to suite bicycle parking and loading to workshop

EXISTING RETAINING WALL TO BE DEMOLISHED
LANDSCAPE PLANTER
EXTENT OF ROOF ABOVE
PRESENT NATURAL BOUNDARY ACCORDING TO PLAN 36468 (HIGH WATER MARK)
PROPOSED LOCATIONS (5 TOTAL) OF HERITAGE INTERPRETIVE SIGNAGE
1.8M SECURITY FENCE ON TOP OF WALL
TSUNAMI WALL (T.O.W. @ 6.50)
LANDSCAPE PLANTER
EX. RETAINING WALL / PLANTER WALL
1.1m GUARDRAIL
TSUNAMI WALL (T.O.W. @ 8.10)
PLANTER WALL
SIDEWALK
LAYDOWN AREA
10.0 METER SETBACK
20.0 METER SETBACK
PROPERTY LINE
LANDSCAPED BUFFER ON R.O.W.
DROP OFF ZONE
LANDSCAPED BUFFER
TSUNAMI WALL (T.O.W. @ 7.50)
ONE WAY
SITE ENTRANCE
SITE EXIT
SLIDING SECURITY GATE
LANDSCAPED BUFFER
GAS METER
LOADING A
LOADING B
SWITCH GEAR
EMERGENCY GENERATOR
TRANSFORMERS
VICTORIA VIEW ROAD

Gas meter added

revisions to location and scope of electrical equipment at grade

equipment access

Scale 1: 250

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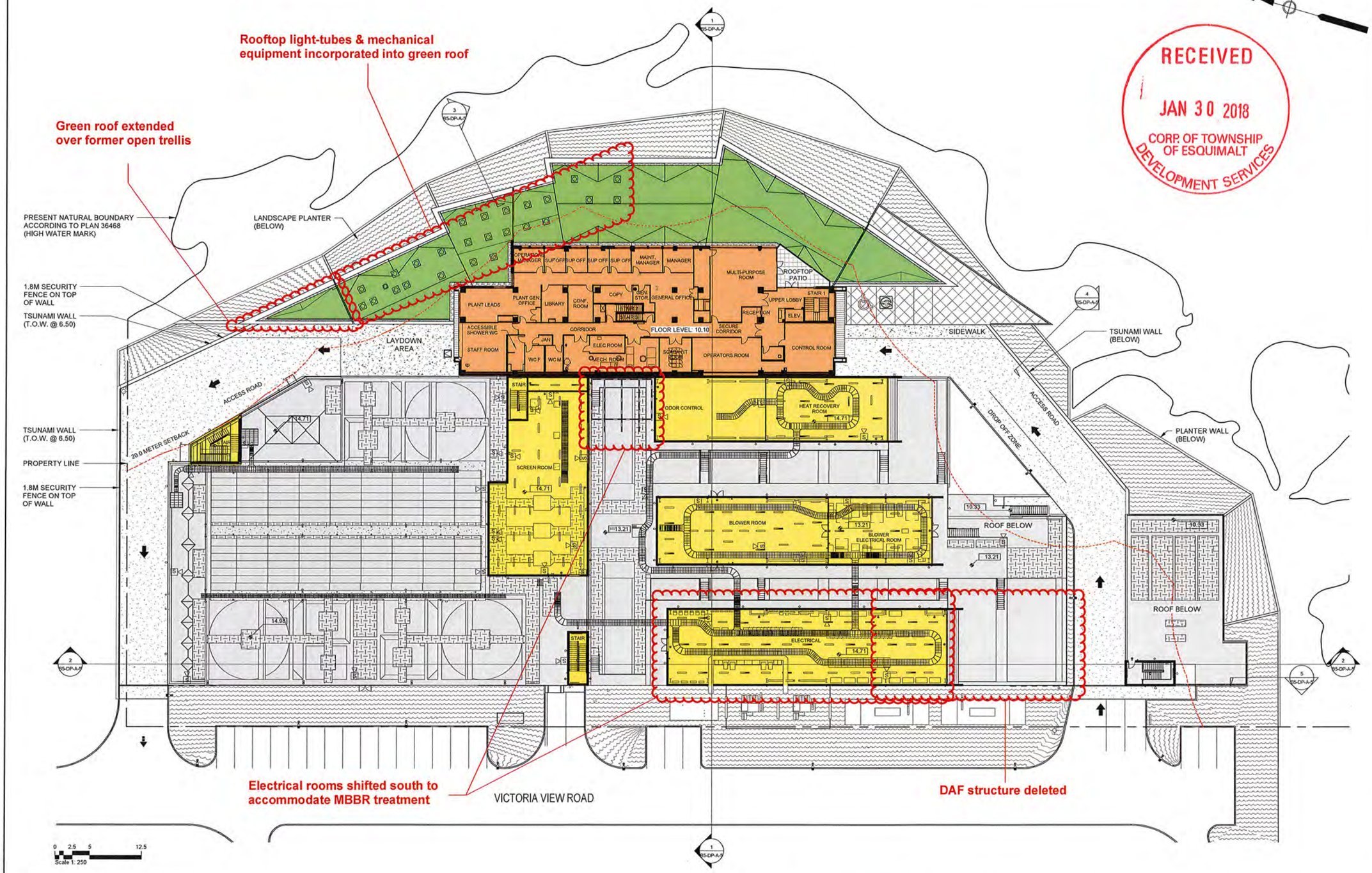
Capital Region District	Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT	
DESIGNED Designer	SURVEYED —		
DRAWN BY Author	DATE 10/25/17	LEVEL 1	
SCALE HORIZONTAL 1 : 250	CHECKED Checker		
SCALE VERTICAL 1 : 250	APPROVED PG	CONTRACT NUMBER CAWTP-17-006	DRAWING NUMBER ML- B5-DP-A-3 ISSUE SHT. No. OF --



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BY	DATE	No.	REVISION	ENG.

NO.	DATE	ISSUE

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Capital Region District	Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT	
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DRAWN BY Author	DATE 10/25/17		
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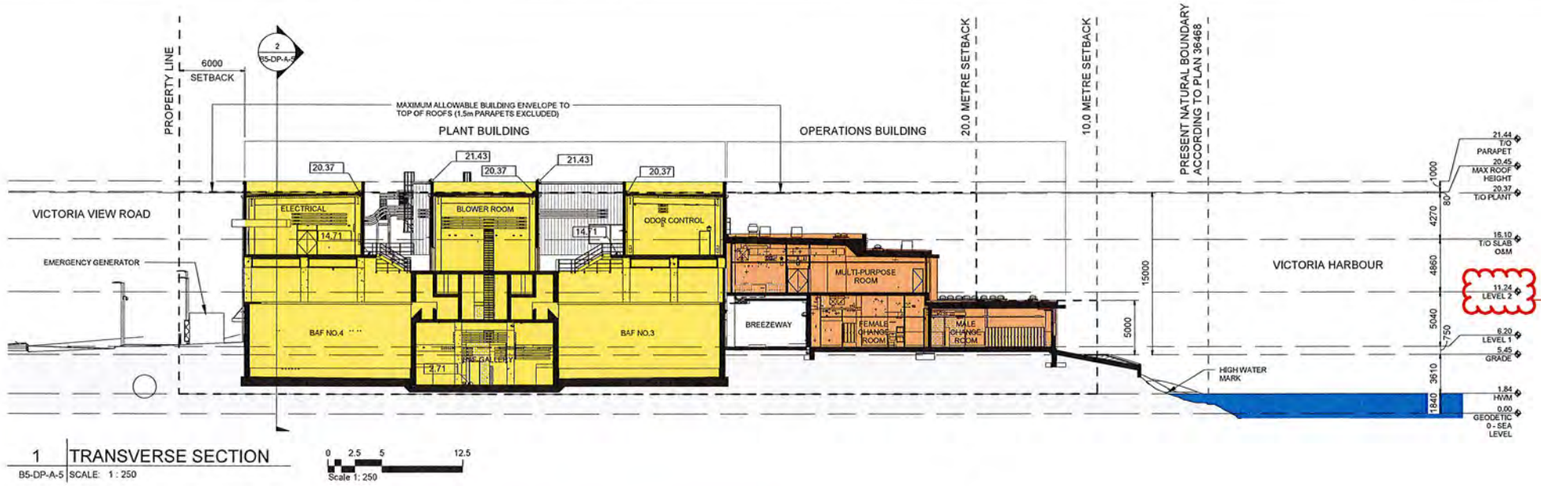

1 TRANSVERSE SECTION
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Scale 1: 250

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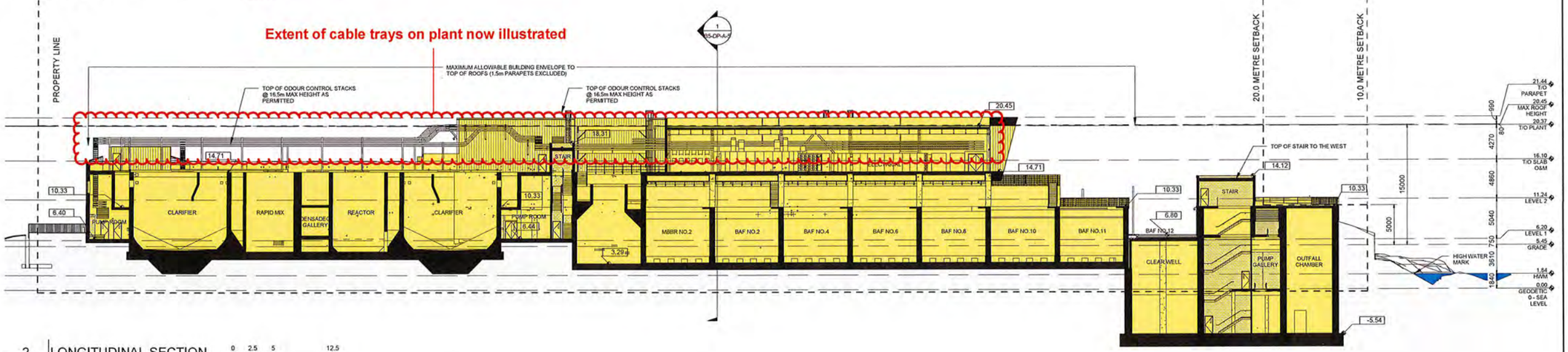
Level 2 floor elevation raised 1.24m



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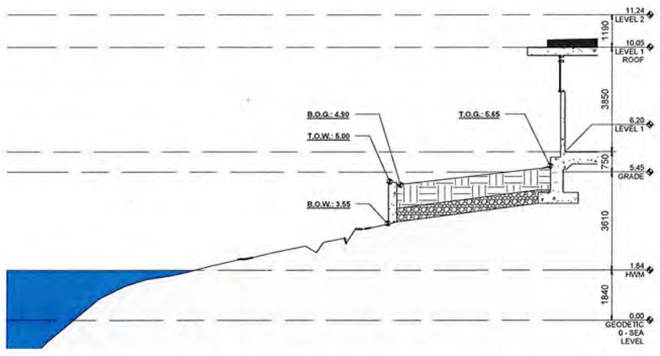

3 RETAINING WALL SECTION 1
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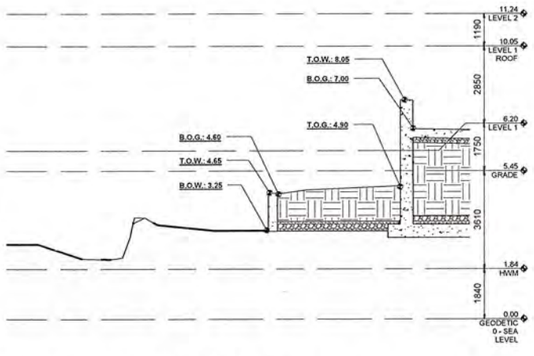
Scale 1: 100



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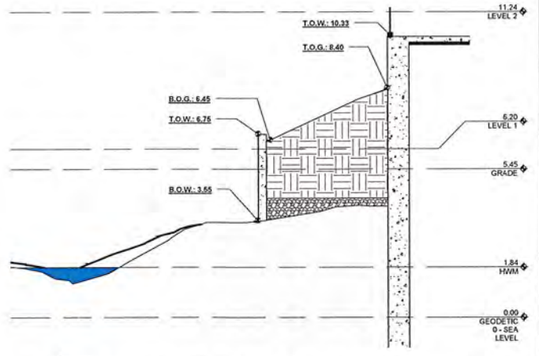
Scale 1: 100



5 RETAINING WALL SECTION 3
B5-DP-A-5 SCALE: 1 : 100

Scale 1: 100

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Capital Region District		Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT
DESIGNED Designer		SURVEYED —	
DRAWN BY Author		DATE 10/25/17	BUILDING & SITE SECTIONS
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SCALE VERTICAL As indicated		APPROVED PG	
CONTRACT NUMBER CAWTP-17-006	DRAWING NUMBER ML- B5-DP-A-5	ISSUE	SHT. No. OF --

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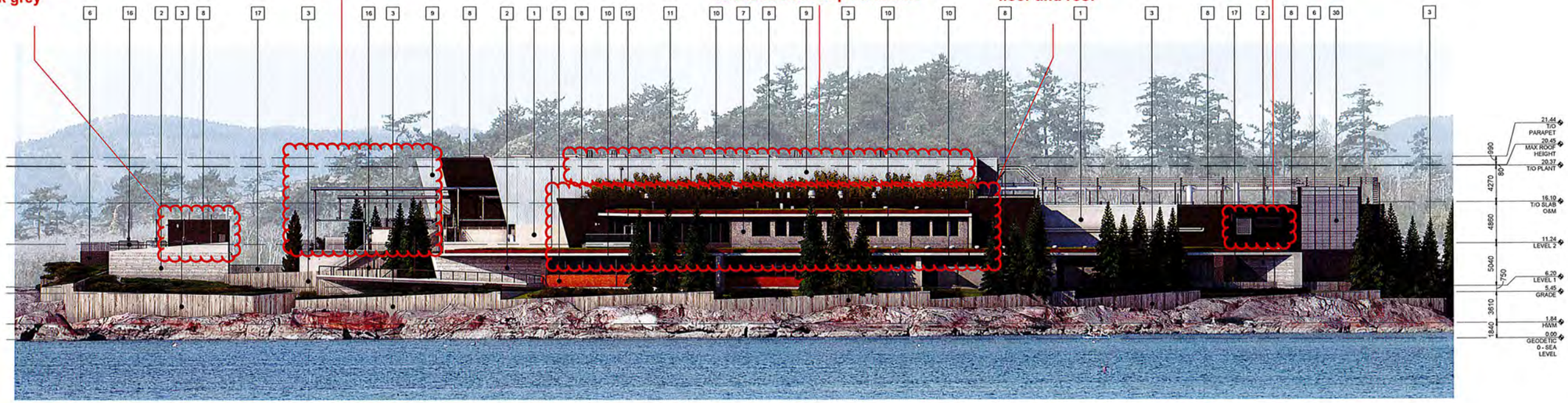

1 BUILDING ELEVATION - EAST
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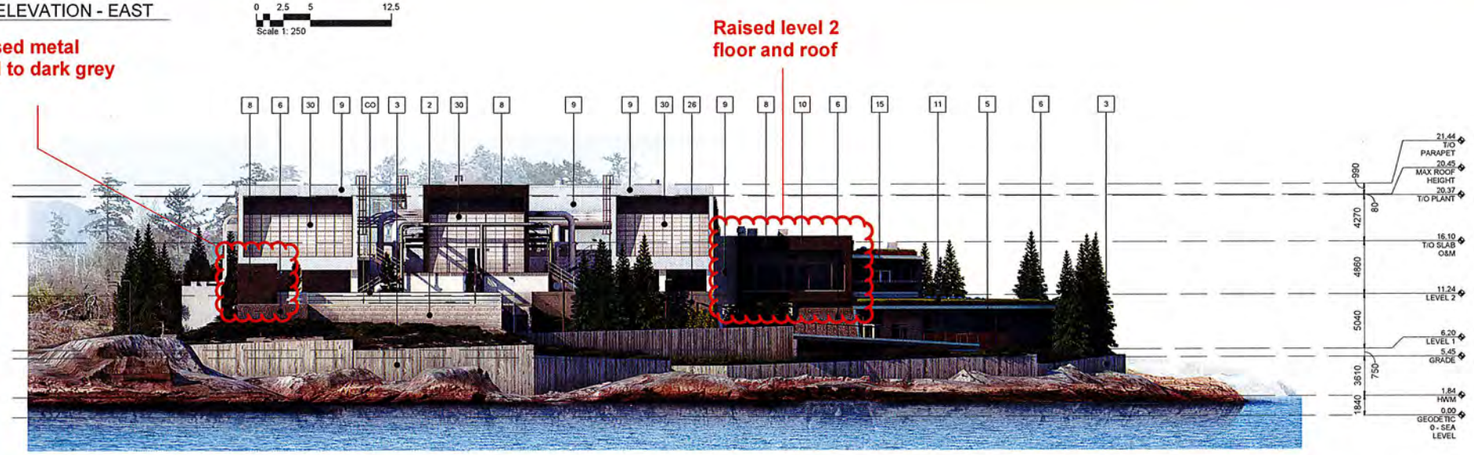
Scale 1: 250



2 BUILDING ELEVATION - SOUTH
B5-DP-A-6 SCALE: 1 : 250

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Scale 1: 250

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EXTERIOR ELEVATION KEY NOTES

GENERAL NOTES

1. ALL RETAINING WALLS TO RECIEVE A LIGHT SANDBLAST FINISH

1	CONCRETE - ARCHITECTURAL FINISH (SMOOTH) - EC1	6	MASONRY CLADDING - DARK - CL3	11	SEDUM MAT GREEN ROOF	16	PIPE RAIL GUARD	21	OVERHEAD COILING DOOR	26	CLIMBING VEGITATION ON SCREEN ELEMENT	*	PANEL RETURNS AROUND CORNER TO FACE OF WALL BEHIND. REVEALS CONTINUOUS AROUND CORNER. REFER TO PLANS FOR EXTENT
2	CONCRETE - HORIZ. BOARDFORM - EC2	7	MASONRY CLADDING - LIGHT - CL4	12	LANDSCAPE ELEMENTS	17	SECURITY FENCE	22	SWING DOOR	27	METAL BAR GRATE SCREEN		
3	CONCRETE - VERT. BOARDFORM - EC3	8	METAL PANEL CLADDING - DARK - CL5	13	RAIN WATER LEADER	18	INTERPRETIVE SIGNAGE	23	BOLLARD	28	ODOUR CONTROL STACKS - GREY METAL		
4	CONCRETE - PRECAST CONCRETE PANEL - CLEAR - CL1	9	METAL PANEL CLADDING - LIGHT - CL6	14	STEEL ANGLE	19	BIKE RACK	24	SCUPPER W/ DOWNSPOUT	29	PRE-PAINTED GENERATOR ENCLOSURE		
5	CONCRETE - PRECAST CONCRETE PANEL - STAINED - CL2	10	GLAZING - GW1	15	GLASS GUARD	20	MECHANICAL LOUVER	25	EXTERIOR LIGHT	30	TRANSLUCENT PANEL		

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Capital Region District	Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT	
DESIGNED JM	SURVEYED —		
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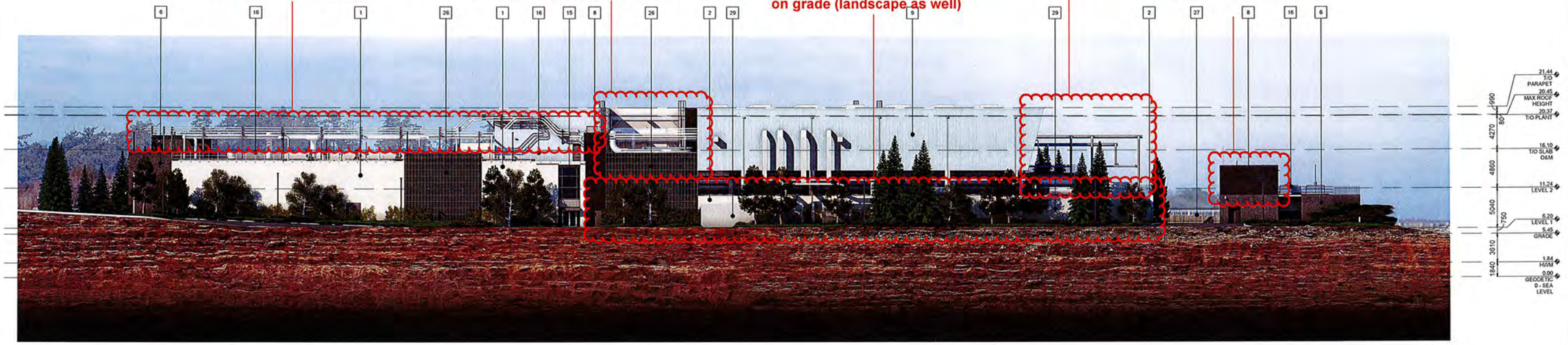
Extent of cable trays on plant now illustrated

Electrical room shifted south to accommodate overhead access to MBBR

Revisions to location and scope of electrical equipment on grade (landscape as well)

Deleted DAF structure

Revised metal panel to dark grey



1 BUILDING ELEVATION - WEST
B5-DP-A-7 SCALE: 1 : 250

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Scale 1: 250

Raised Level 2 floor and roof

Extent of cable trays on plant now illustrated

Small landscape area revised to bicycle parking & service access

2 BUILDING ELEVATION - NORTH
B5-DP-A-7 SCALE: 1 : 250

0 2.5 5 12.5
Scale 1: 250

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EXTERIOR ELEVATION KEY NOTES

GENERAL NOTES

1. ALL RETAINING WALLS TO RECIEVE A LIGHT SANDBLAST FINISH

1	CONCRETE - ARCHITECTURAL FINISH (SMOOTH) - EC1	6	MASONRY CLADDING - DARK - CL3	11	SEDUM MAT GREEN ROOF	16	PIPE RAIL GUARD	21	OVERHEAD COILING DOOR	26	CLIMBING VEGITATION ON SCREEN ELEMENT	*	PANEL RETURNS AROUND CORNER TO FACE OF WALL BEHIND. REVEALS CONTINUOUS AROUND CORNER. REFER TO PLANS FOR EXTENT
2	CONCRETE - HORIZ. BOARDFORM - EC2	7	MASONRY CLADDING - LIGHT - CL4	12	LANDSCAPE ELEMENTS	17	SECURITY FENCE	22	SWING DOOR	27	METAL BAR GRATE SCREEN		
3	CONCRETE - VERT. BOARDFORM - EC3	8	METAL PANEL CLADDING - DARK - CL5	13	RAIN WATER LEADER	18	INTERPRETIVE SIGNAGE	23	BOLLARD	28	ODOUR CONTROL STACKS - GREY METAL		
4	CONCRETE - PRECAST CONCRETE PANEL - CLEAR - CL1	9	METAL PANEL CLADDING - LIGHT - CL6	14	STEEL ANGLE	19	BIKE RACK	24	SCUPPER W/ DOWNSPOUT	29	PRE-PAINTED GENERATOR ENCLOSURE		
5	CONCRETE - PRECAST CONCRETE PANEL - STAINED - CL2	10	GLAZING - GW1	15	GLASS GUARD	20	MECHANICAL LOUVER	25	EXTERIOR LIGHT	30	TRANSLUCENT PANEL		

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DESIGNED Designer		SURVEYED --	
DRAWN BY Author		DATE 10/23/17	BUILDING ELEVATIONS 2
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SCALE VERTICAL As indicated		APPROVED PG	
CONTRACT NUMBER CAWTP-17-006	DRAWING NUMBER ML- B5-DP-A-7	ISSUE	SHT. No. OF --

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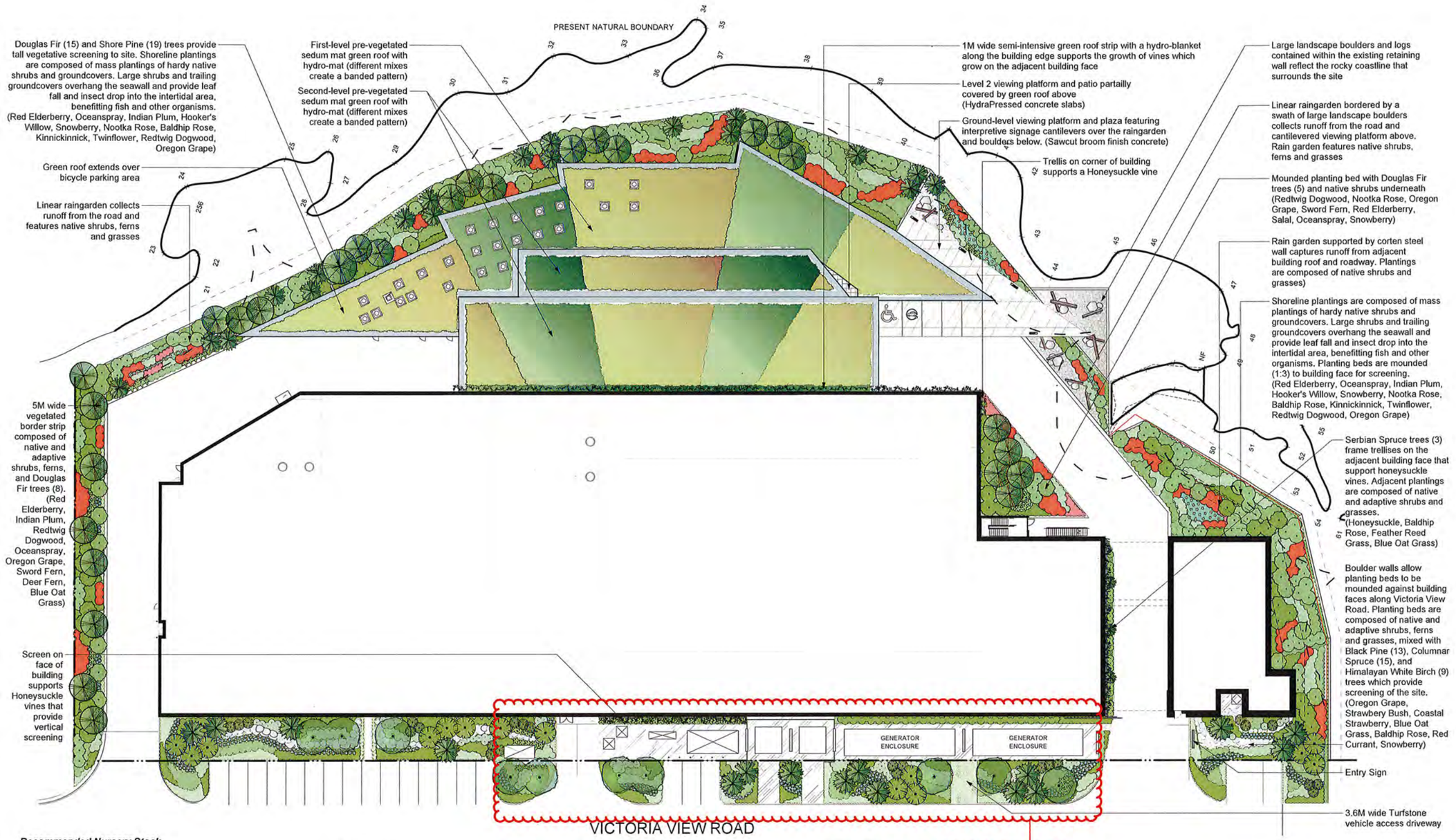


Recommended Nursery Stock

Trees Total: 90

Botanical Name	Common Name	Size
Picea omorika	Serbian Spruce	2m ht.
Picea pungens 'Iseli Fastigiate'	Columnar Blue Spruce	2m ht.
Pinus contorta	Shore Pine	2m ht.
Pinus nigra 'Fastigiata'	Columnar Black Pine	2m ht.
Populus tremuloides	Trembling Aspen	5cm cal
Pseudotsuga menziesii	Douglas Fir	2m ht.
Pseudotsuga menziesii LG	Douglas Fir (Large)	3.5m ht.

Large Shrubs Total: 254

Botanical Name	Common Name	Size
Arbutus unedo 'Compacta'	Compact Strawberry Bush	#10 pot
Holodiscus discolor	Oceanspray	#5 pot
Oemleria cerasiformis	Indian Plum	#5 pot
Ribes sanguineum	Red Flowering Currant	#2 pot
Salix hookeriana	Hooker's Willow	#5 pot
Sambucus racemosa	Red Elderberry	#5 pot

Medium Shrubs Total: 1754

Botanical Name	Common Name	Size
Cornus stolonifera	Redtwig Dogwood	#3 pot
Mahonia aquifolium	Tall Oregon Grape	#3 pot
Rosa gymnocarpa	Baldhip Rose	#1 pot
Rosa nutkana	Nootka Rose	#1 pot
Symphoricarpos albus	Snowberry	#3 pot

Small Shrubs Total: 740

Botanical Name	Common Name	Size
Fragaria chiloensis	Coastal Strawberry	#1 pot
Gaultheria shallon	Salal	#1 pot
Mahonia repens	Creeping Oregon Grape	#1 pot

Perennials, Annuals and Ferns Total: 945

Botanical Name	Common Name	Size
Blechnum spicant	Deer Fern	#1 pot
Helictotrichon sempervirens	Blue Oat Grass	#1 pot
Juncus effusus	Common Rush	#1 pot
Mahonia repens	Creeping Oregon Grape	#1 pot
Polystichum munitum	Sword Fern	#1 pot

Groundcovers Total: 1355

Botanical Name	Common Name	Size
Arctostaphylos uva ursi 'Vancouver Jade'	Vancouver Jade Kinnickinnick	#1 pot
Fragaria chiloensis	Coastal Strawberry	#1 pot
Linnaea borealis	Twinflower	#1 pot

Vines Total: 26

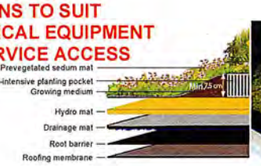
Botanical Name	Common Name	Size
Lonicera periclymenum 'Belgica'	Early Dutch Honeysuckle	#1 pot
Parthenocissus tricuspidata 'Veitchii'	Veitchii Boston Ivy	#1 pot

Green Roof

Prevegetated Sedum Mat

Notes:
1. All work to be completed to current BCSLA Landscape Standards
2. All soft landscape to be irrigated with an automatic irrigation system

REVISIONS TO SUIT ELECTRICAL EQUIPMENT AND SERVICE ACCESS



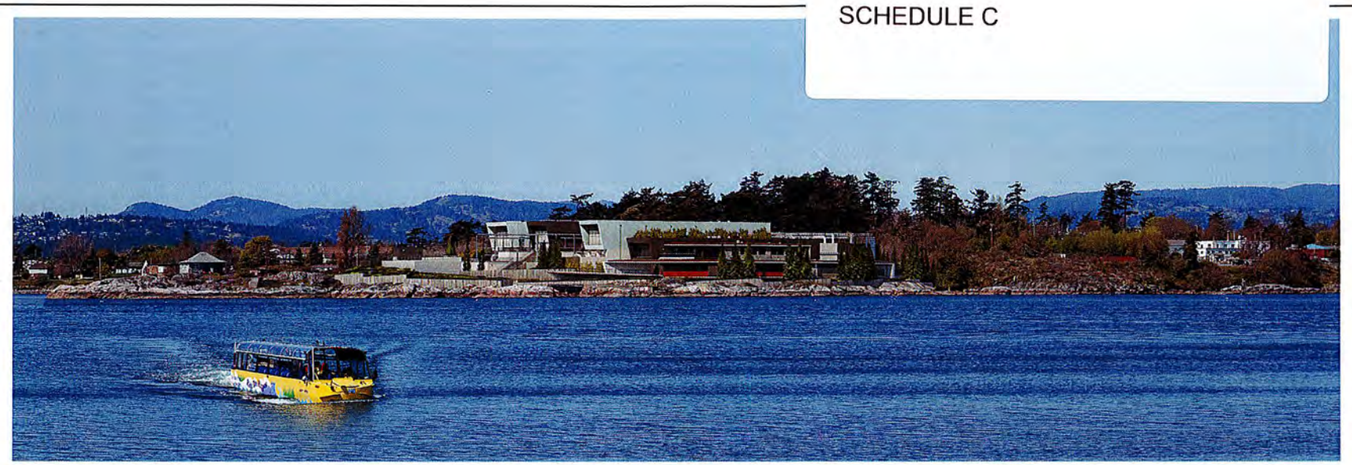
Semi-Intensive Green Roof System

LADR LANDSCAPE ARCHITECTS
2B-495 Dupplin Rd. Victoria B.C. V8Z 1B8
Phone: (250) 598-0105 Fax: (250) 412-0696

McLOUGHLIN POINT WWTP

LANDSCAPE PLAN

SCHEDULE C



McLoughlin Point Wastewater Treatment Plant

HARBOUR RESOURSE PARTNERS PROJECT TEAM

AECOM ENGINEERING - 3292 PRODUCTION WAY, BURNABY, BC V5Z 4R4 - ERNIE MASCHNER

GRAHAM CONSTRUCTION - 10840 27 STREET SE, CALGARY, AB T2Z 3R6 - MARK LIVINGSTON

HDR|CEI - 203-655 TYEE ROAD, VICTORIA, BC V9A 6X5 - JIM MANN

LADR LANDSCAPE DESIGN - 3 - 864 QUEENS AVENUE, VICTORIA, BC V8T 1M5 - BEV WINDJACK

DRAWING LIST - ARCHITECTURAL	
Sheet Number	Sheet Name
B5-DP-A-0	COVER SHEET
B5-DP-A-1	ARCHITECTURE ROOF PLAN
B5-DP-A-2	RETAINING WALL PLAN
B5-DP-A-3	LEVEL 1
B5-DP-A-4	LEVEL 2
B5-DP-A-5	BUILDING & SITE SECTIONS
B5-DP-A-6	BUILDING ELEVATIONS 1
B5-DP-A-7	BUILDING ELEVATIONS 2
B5-DP-A-8	RENDERED VIEWS 1
B5-DP-A-9	RENDERED VIEWS 2
B5-DP-A-10	RENDERED VIEWS 3
B5-DP-A-11	RENDERED VIEWS 4

DRAWING LIST - CONSULTANTS	
Sheet Number	Sheet Name
010057954-CNSK01-R04	PROPOSED BUILDINGS AVERAGE GRADES
L1	LANDSCAPE PLAN
L2	PLANT IMAGES
ML-B1-C-015	TRUCK TURNING PLAN
ML-B1-C-202	SITE EXCAVATION PLAN
ML-B1-E-004	SITE LIGHTING

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PROJECT DATA

SITE	LEGAL DESCRIPTION	CIVIC ADDRESS	NOTES
PROJECT LOT	LOT 1 , SECTION 11, AND PART OF THE BED OF VICTORIA HARBOUR, ESQUIMALT DISTRICT, PLAN 36468		SECTION 11 ESQUIMALT DISTRICT
LOT AREA	14 213 m²		
BUILDING AREA	(PER BCBC 2012 DEFINITION)		
SITE COVERAGE	8,545 m2		
BUILDING HEIGHT	MAXIMUM: 15m (20.45 GEODETIC)	CALCULATED FROM 5.45 GEODETIC	
	PROVIDED: 14.98m (20.43 GEODETIC)		
	LVL 1 ROOF MAXIMUM: 5m (10.45m GEODETIC)		
	LVL 1 ROOF PROVIDED: 5m (10.45m GEODETIC)		

DIAGRAM OF BUILDING AREA
PER BCBC 2012 DEFINITION

ZONING ANALYSIS - McLOUGHLIN POINT SPECIAL USE [I-1]

BONUS DENSITY LEVEL 3	PERMITTED	PROPOSED
FLOOR AREA	4500 m²	2150 m²
DENSITY (FAR)	0.35	0.151
LOT COVERAGE	75%	8,545 m2 (60%)
MAX HEIGHT	15m (20.45 GEODETIC)	14.98m (20.43 GEODETIC)

PARKING

PARKING REQUIREMENTS INCLUDE

SPACES AS DETERMINDED BY ZONING BY-LAW

	TOTAL SPACES PROVIDED	# OF SPACES REQUIRED
STANDARD SPACE MIN. SIZE: 2.6m x 5.5m	2	2
SMALL SPACE MIN. SIZE: N/A	N/A	N/A
DISABLED SPACE MIN. SIZE: 3.7m x 5.5m	1	1
ELECTRIC CAR CHARGING STATION STALLS MIN. SIZE: 2.6m x 5.5m	1	0
SUBTOTAL	4	2
LOADING SPACE MIN. SIZE: 3m X 7.5m X 4.25h	2	2

NOTES:

BICYCLE PARKING SPACES

REFERENCE

PROGRAM COMPONENTS	GFA	SPACES REQUIRED	SPACES PROVIDED
		0	12
TOTAL			12

NOTES: Bicycle racks are covered and located within the secured perimeter of the plant site.

BUILDING DATA

FLOOR	GROSS BUILDING AREA (m²) NOTE: Wastewater plant building(s) excluded under zoning bylaw
O&M MAIN LEVEL	1,270 m²
O&M UPPER LEVEL	880 m²
TOTAL	2,150 m²

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Capital Region District	Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT	
DESIGNED JM	SURVEYED _	COVER SHEET	
DRAWN BY RC	DATE 01/15/2018		
SCALE HORIZONTAL 1 : 50	CHECKED JM		
SCALE VERTICAL 1 : 50	APPROVED PG	CONTRACT NUMBER CAWTP-17-006	DRAWING NUMBER ML- B5-DP-A-0 ISSUE SHT, No. OF --

TOTAL SITE AREA = 14,213 m2
LOT COVERAGE = 8,545 m2

N

PRESENT NATURAL BOUNDARY ACCORDING TO PLAN 36468 (HIGH WATER MARK)
PLANTER WALL
TSUNAMI WALL
PROPERTY LINE
TSUNAMI WALL
1.8M SECURITY FENCE ON TOP OF WALL
LANDSCAPED BUFFER ON R.O.W.

LANDSCAPED BUFFER
LEVEL 1 ROOF @ 10.45 (5.0m HIGH)
LEVEL 2 LOWER ROOF @ 15.12 (9.67m HIGH)
ROOFTOP PATIO
LEVEL 2 UPPER ROOF @ 16.37 (10.91m HIGH)
DRIVE AISLE BELOW
OPERATIONS & MAINTENANCE BUILDING:
LOT COVERAGE: 2,215 m2
LAYDOWN AREA
SIDEWALK
10.0 METER SETBACK
20.0 METER SETBACK
ACCESS ROAD
TOP OF STACKS @ 18.40 (12.95m HIGH)
TOP OF STACKS @ 21.91 (16.46m HIGH)
ROOF @ 17.71 (12.26m HIGH)
TOP OF TANKS @ 14.71 (9.25m HIGH)
ROOF @ 20.35 (14.91m HIGH)
TOP OF TANKS @ 13.21 (7.76m HIGH)
WASTEWATER TREATMENT PLANT:
LOT COVERAGE: 5,930 m2
ROOF @ 17.70 (12.25m HIGH)
ROOF @ 20.35 (14.91m HIGH)
WALK WAY @ 14.71 (9.26m HIGH)
TOP OF TANKS @ 10.33 (4.88m HIGH)
ROOF @ 20.35 (14.91m HIGH)
WALK WAY @ 14.71 (9.26m HIGH)
ROOF @ 20.43 (14.98m HIGH)
TOP OF TANKS @ 10.33 (4.88m HIGH)
SLIDING SECURITY GATE
LANDSCAPED BUFFER
SITE EXIT
GAS METER
LOADING A
SWITCH GEAR
EMERGENCY GENERATOR
EMERGENCY GENERATOR
TRANSFORMERS
LANDSCAPED BUFFER
SLIDING SECURITY GATE
SITE ENTRANCE
LOADING B
ONE WAY
DROP OFF ZONE
ACCESS ROAD
EX. RETAINING WALL / PLANTER WALL
GUARDRAIL
PLANTER WALL
TSUNAMI WALL
LANDSCAPED BUFFER
TOP OF TANKS @ 10.33 (4.88m HIGH)
PLANTER WALL
ROOF @ 13.87 (8.42m HIGH)
LANDSCAPED BUFFER
VICTORIA VIEW ROAD

PARTIAL PLAN OF SOUTHERN TIP

TERTIARY TREATMENT
LOT COVERAGE: 400 m2

0 2.5 5 12.5
Scale 1: 250

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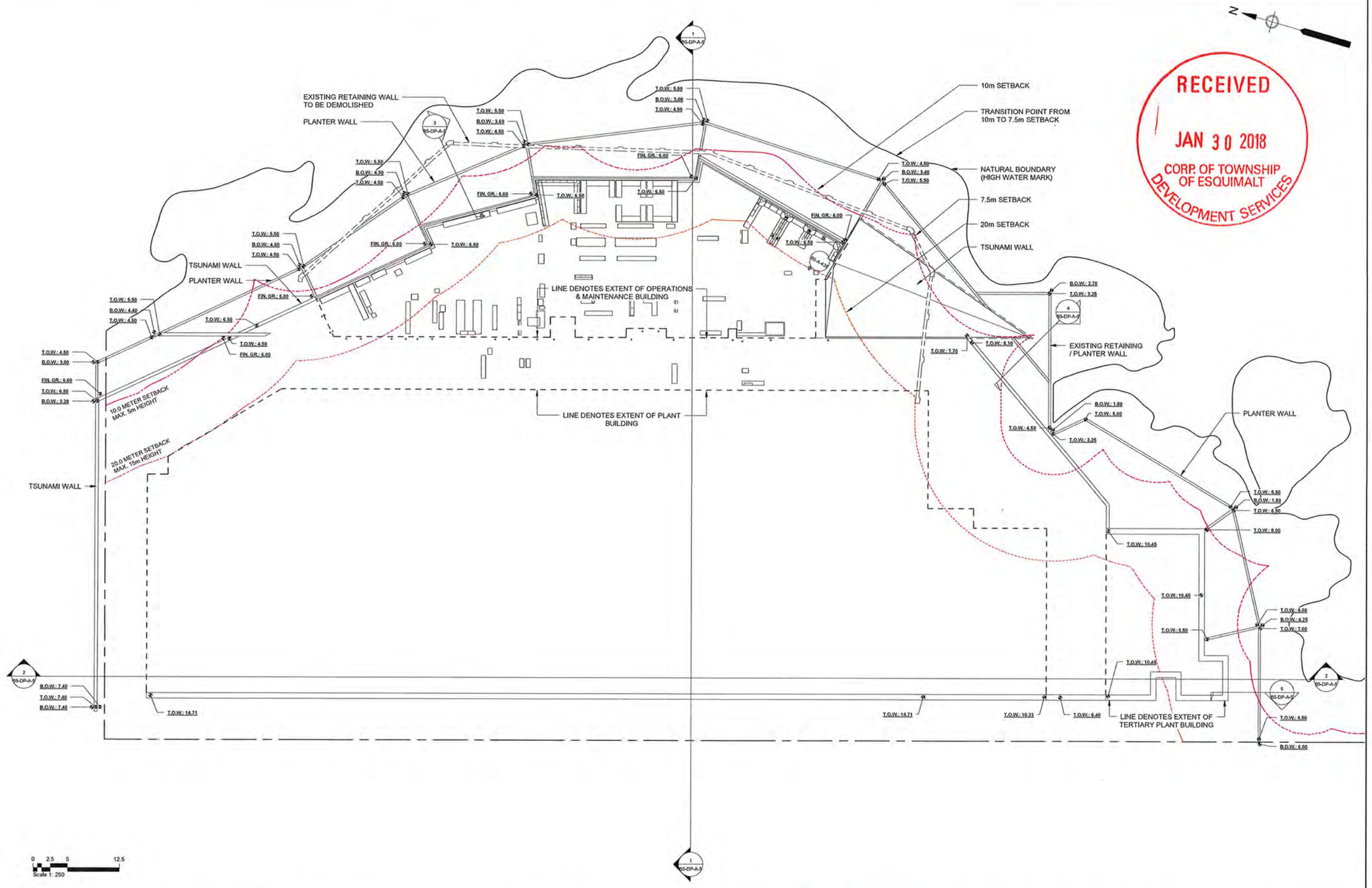
Capital Region District	Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT	
DESIGNED JM	SURVEYED —		
DRAWN BY RC	DATE 01/15/2018	ARCHITECTURE ROOF PLAN	
SCALE HORIZONTAL 1 : 250	CHECKED JM		
SCALE VERTICAL 1 : 250	APPROVED PG	CONTRACT NUMBER CAWTP-17-006	DRAWING NUMBER ML- B5-DP-A-1 ISSUE -- SHT. No. OF --



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Capital Region District		Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT
DESIGNED	JM	SURVEYED	—
DRAWN BY	RC	DATE	01/15/2018
SCALE HORIZONTAL	1 : 250	CHECKED	JM
SCALE VERTICAL	1 : 250	APPROVED	PG
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ISSUE		SHT. No. OF	--

RETAINING WALL PLAN

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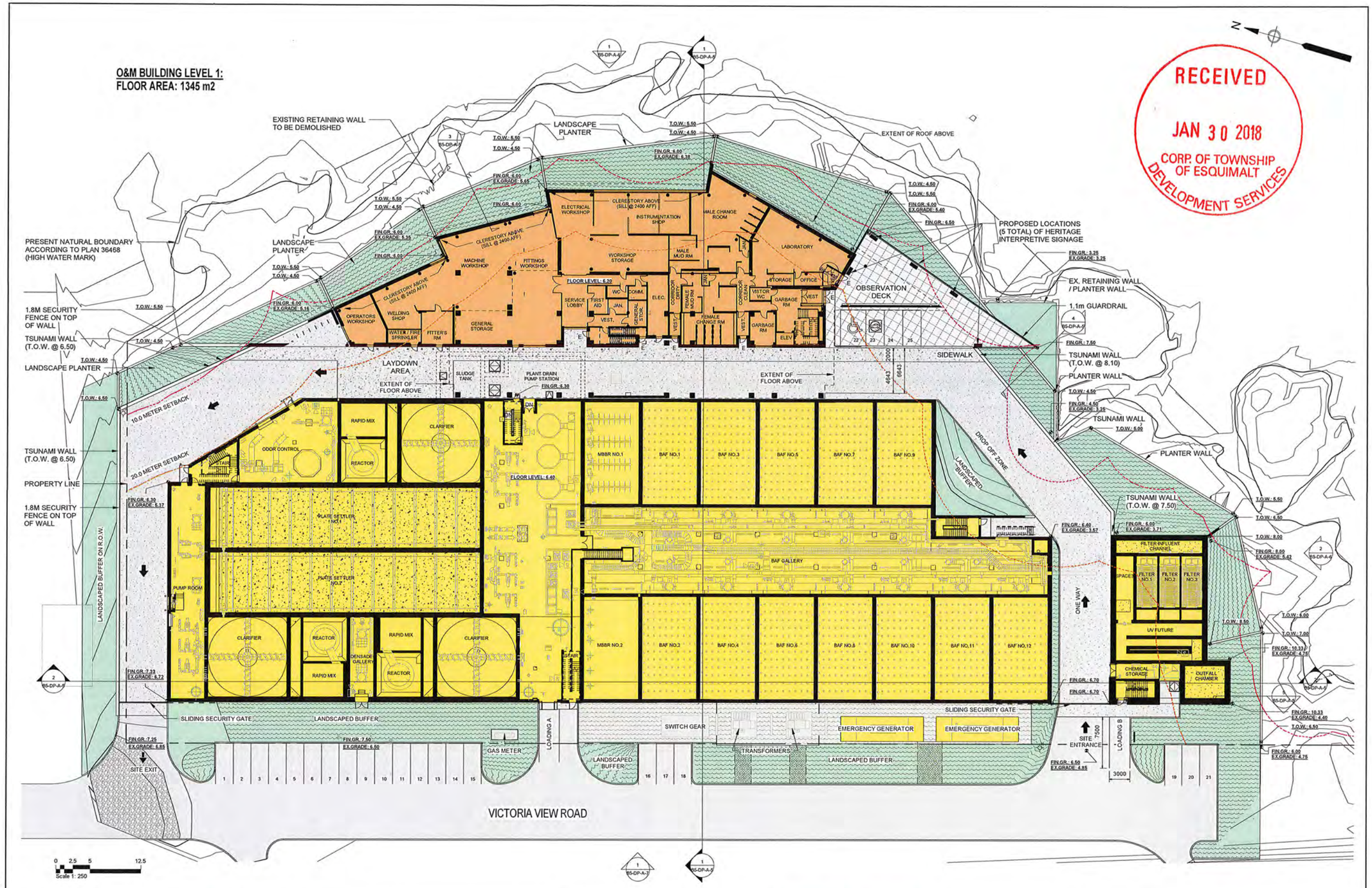

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Capital Region District		Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT
DESIGNED JM		SURVEYED —	
DRAWN BY RC		DATE 01/15/2018	LEVEL 1
SCALE HORIZONTAL 1 : 250		CHECKED JM	
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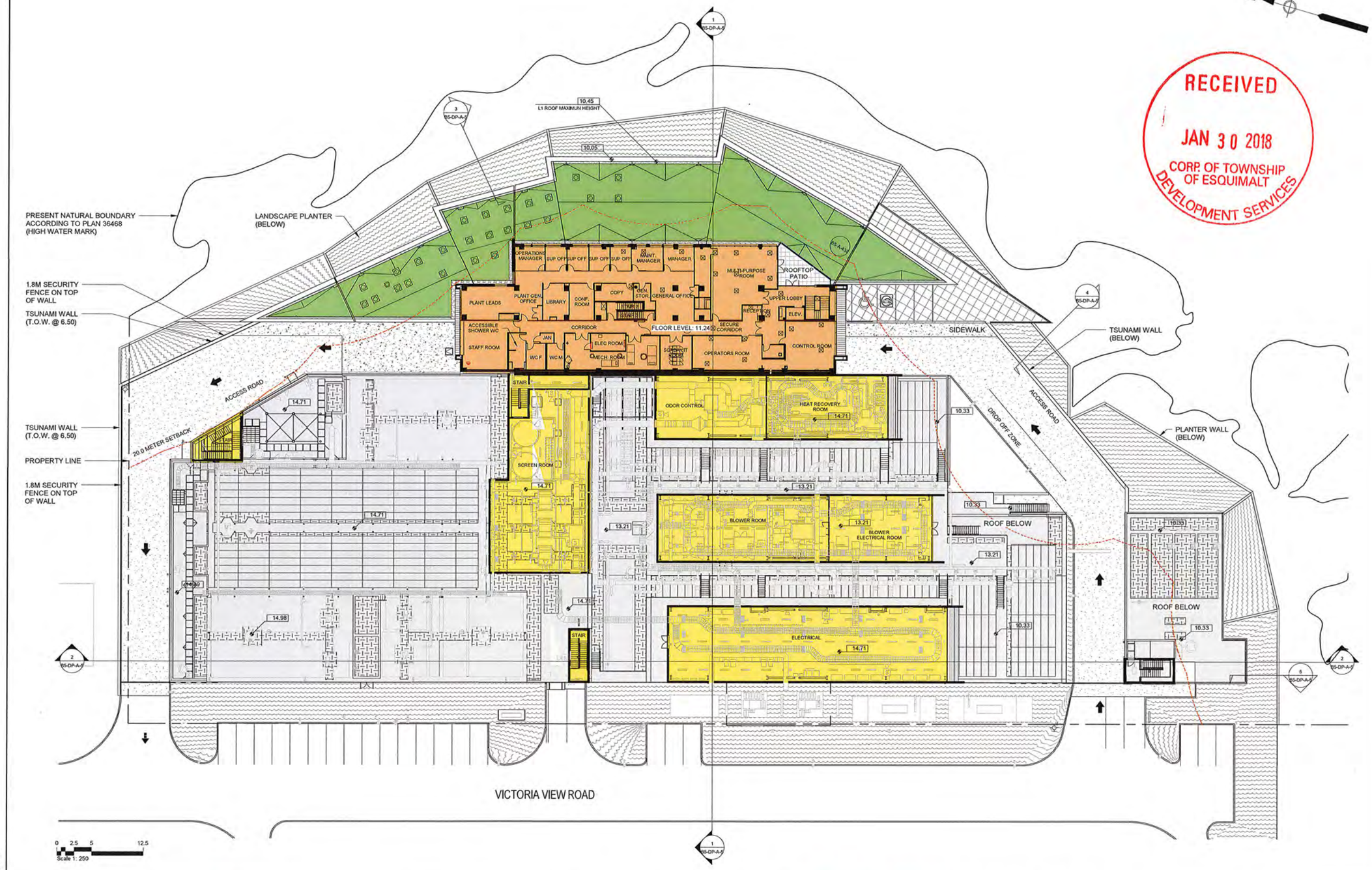

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DESIGNED JM	SURVEYED —		
DRAWN BY RC	DATE 01/15/2018	LEVEL 2	
SCALE HORIZONTAL 1 : 250	CHECKED JM		
SCALE VERTICAL 1 : 250	APPROVED PG	CONTRACT NUMBER CAWTP-17-006	DRAWING NUMBER ML- B5-DP-A-4

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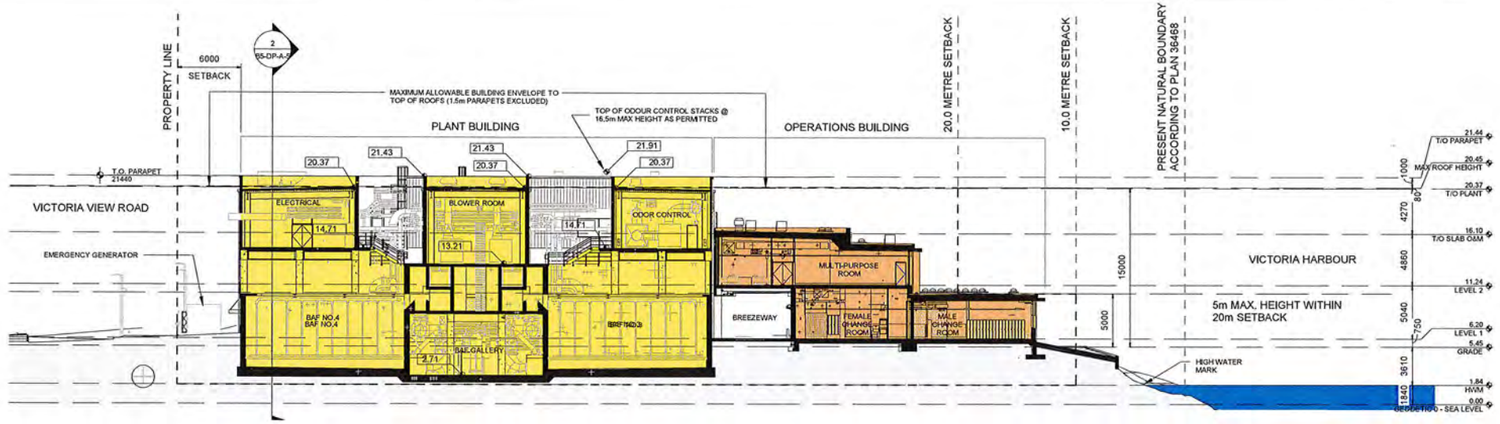
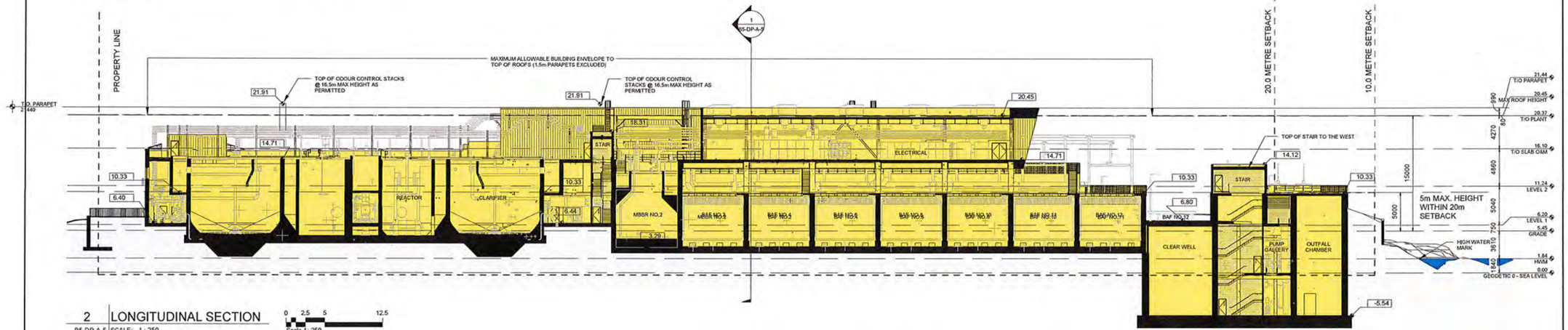


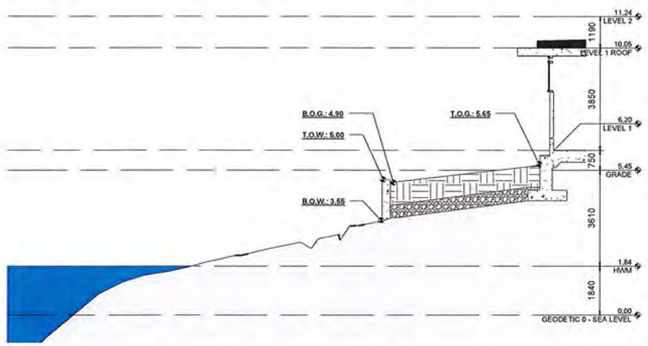
1 TRANSVERSE SECTION
B5-DP-A-5 SCALE: 1 : 250

Scale 1: 250



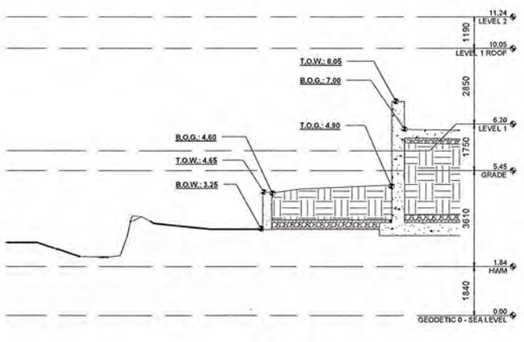
2 LONGITUDINAL SECTION
B5-DP-A-5 SCALE: 1 : 250

Scale 1: 250



3 RETAINING WALL SECTION 1
B5-DP-A-5 SCALE: 1 : 100

Scale 1: 100



4 RETAINING WALL SECTION 2
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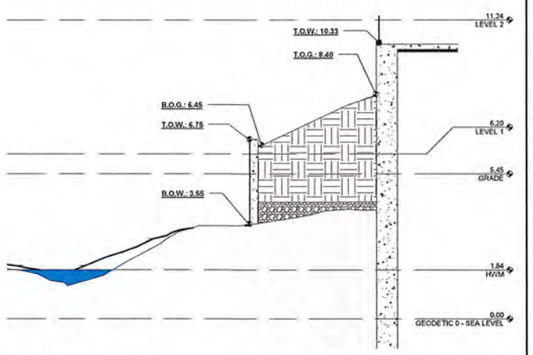
Scale 1: 100



5 RETAINING WALL SECTION 3
B5-DP-A-5 SCALE: 1 : 100

Scale 1: 100

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Capital Region District		Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT
DESIGNED JM		SURVEYED —	
DRAWN BY RC		DATE 01/15/2018	BUILDING & SITE SECTIONS
SCALE HORIZONTAL	As indicated	CHECKED JM	
SCALE VERTICAL	As indicated	APPROVED PG	

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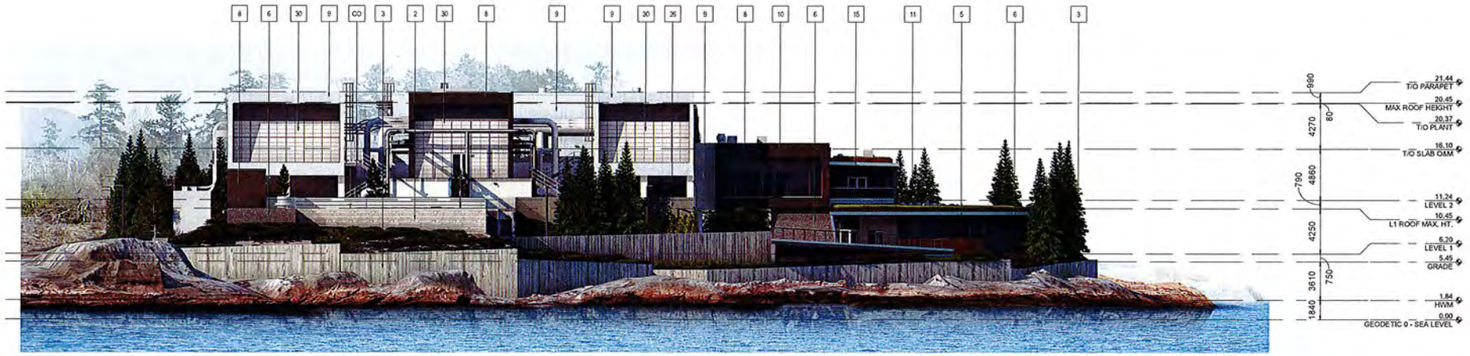
1 BUILDING ELEVATION - EAST
B5-DP-A-6 SCALE: 1 : 250

0 2.5 5 12.5
Scale 1: 250



2 BUILDING ELEVATION - SOUTH
B5-DP-A-6 SCALE: 1 : 250

0 2.5 5 12.5
Scale 1: 250

EXTERIOR ELEVATION KEY NOTES

GENERAL NOTES

1. ALL RETAINING WALLS TO RECIEVE A LIGHT SANDBLAST FINISH

1	CONCRETE - ARCHITECTURAL FINISH (SMOOTH) - EC1	6	MASONRY CLADDING - DARK - CL3	11	SEDUM MAT GREEN ROOF	16	PIPE RAIL GUARD	21	OVERHEAD COILING DOOR	26	CLIMBING VEGITATION ON SCREEN ELEMENT	*	PANEL RETURNS AROUND CORNER TO FACE OF WALL BEHIND. REVEALS CONTINUOUS AROUND CORNER. REFER TO PLANS FOR EXTENT
2	CONCRETE - HORIZ. BOARDFORM - EC2	7	MASONRY CLADDING - LIGHT - CL4	12	LANDSCAPE ELEMENTS	17	SECURITY FENCE	22	SWING DOOR	27	METAL BAR GRATE SCREEN		
3	CONCRETE - VERT. BOARDFORM - EC3	8	METAL PANEL CLADDING - DARK - CL5	13	RAIN WATER LEADER	18	INTERPRETIVE SIGNAGE	23	BOLLARD	28	ODOUR CONTROL STACKS - GREY METAL		
4	CONCRETE - PRECAST CONCRETE PANEL - CLEAR - CL1	9	METAL PANEL CLADDING - LIGHT - CL6	14	STEEL ANGLE	19	BIKE RACK	24	SCUPPER W/ DOWNSPOUT	29	PRE-PAINTED GENERATOR ENCLOSURE		
5	CONCRETE - PRECAST CONCRETE PANEL - STAINED - CL2	10	GLAZING - CW1	15	GLASS GUARD	20	MECHANICAL LOUVER	25	EXTERIOR LIGHT	30	TRANSLUCENT PANEL		

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DESIGNED JM	SURVEYED _		
DRAWN BY RC	DATE 01/15/2018	BUILDING ELEVATIONS 1	
SCALE HORIZONTAL As indicated	CHECKED JM		
SCALE VERTICAL As indicated	APPROVED PG	CONTRACT NUMBER CAWTP-17-006	DRAWING NUMBER ML- B5-DP-A-6 ISSUE -- SHT. No. OF --

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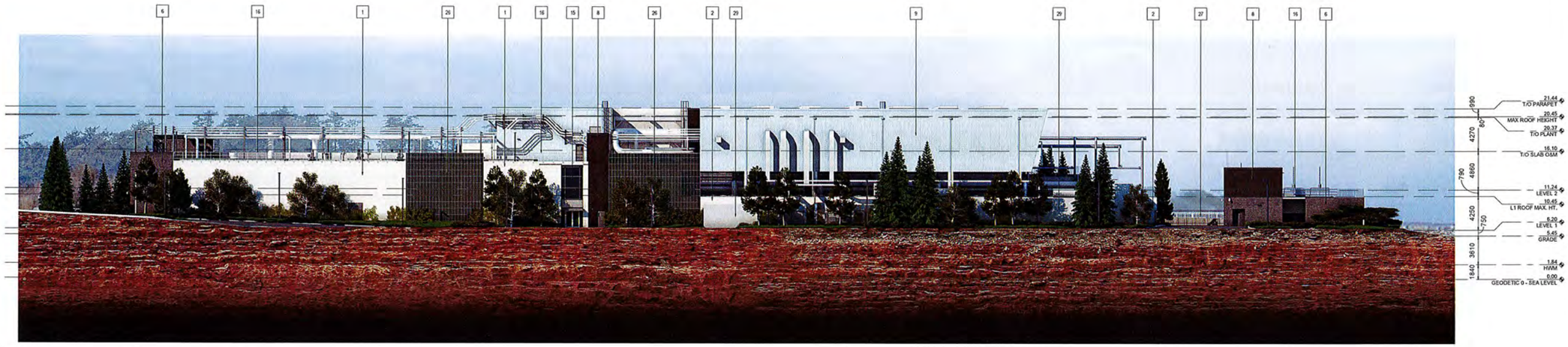
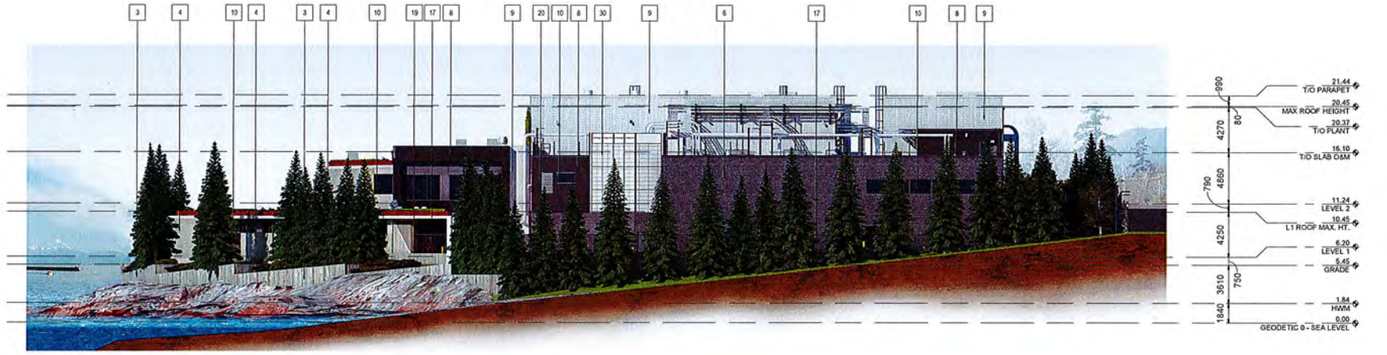


1 BUILDING ELEVATION - WEST
B5-DP-A-7 SCALE: 1 : 250



2 BUILDING ELEVATION - NORTH
B5-DP-A-7 SCALE: 1 : 250

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EXTERIOR ELEVATION KEY NOTES

GENERAL NOTES

1. ALL RETAINING WALLS TO RECIEVE A LIGHT SANDBLAST FINISH

1	CONCRETE - ARCHITECTURAL FINISH (SMOOTH) - EC1	6	MASONRY CLADDING - DARK - CL3	11	SEDUM MAT GREEN ROOF	16	PIPE RAIL GUARD	21	OVERHEAD COILING DOOR	26	CLIMBING VEGITATION ON SCREEN ELEMENT	-	PANEL RETURNS AROUND CORNER TO FACE OF WALL BEHIND. REVEALS CONTINUOUS AROUND CORNER. REFER TO PLANS FOR EXTENT
2	CONCRETE - HORIZ. BOARDFORM - EC2	7	MASONRY CLADDING - LIGHT - CL4	12	LANDSCAPE ELEMENTS	17	SECURITY FENCE	22	SWING DOOR	27	METAL BAR GRATE SCREEN		
3	CONCRETE - VERT. BOARDFORM - EC3	8	METAL PANEL CLADDING - DARK - CL5	13	RAIN WATER LEADER	18	INTERPRETIVE SIGNAGE	23	BOLLARD	28	ODOUR CONTROL STACKS - GREY METAL		
4	CONCRETE - PRECAST CONCRETE PANEL - CLEAR - CL1	9	METAL PANEL CLADDING - LIGHT - CL6	14	STEEL ANGLE	19	BIKE RACK	24	SCUPPER W/ DOWNSPOUT	29	PRE-PAINTED GENERATOR ENCLOSURE		
5	CONCRETE - PRECAST CONCRETE PANEL - STAINED - CL2	10	GLAZING - CW1	15	GLASS GUARD	20	MECHANICAL LOUVER	25	EXTERIOR LIGHT	30	TRANSLUCENT PANEL		

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DESIGNED JM	SURVEYED —		
DRAWN BY RC	DATE 01/15/2018	BUILDING ELEVATIONS 2	
SCALE HORIZONTAL As indicated	CHECKED JM		
SCALE VERTICAL As indicated	APPROVED PG	CONTRACT NUMBER CAWTP-17-006	DRAWING NUMBER ML- B5-DP-A-7 ISSUE SHT. No. OF --

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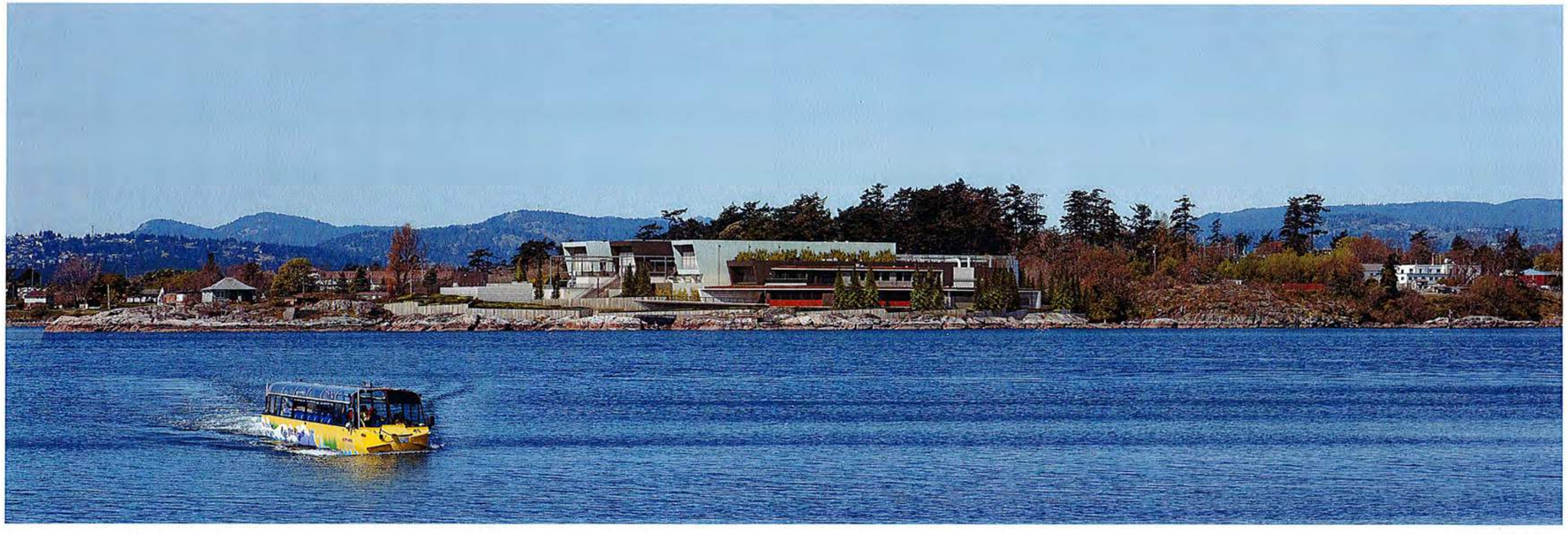
PLOT DATE: 1/30/2018 1:46:16 PM

AERIAL VIEW FROM SOUTH EAST



VIEW FROM OGDEN POINT

HRP Harbour Resource Partners on AECOM / Graham Joint Venture | HDR | CEI

SEAL

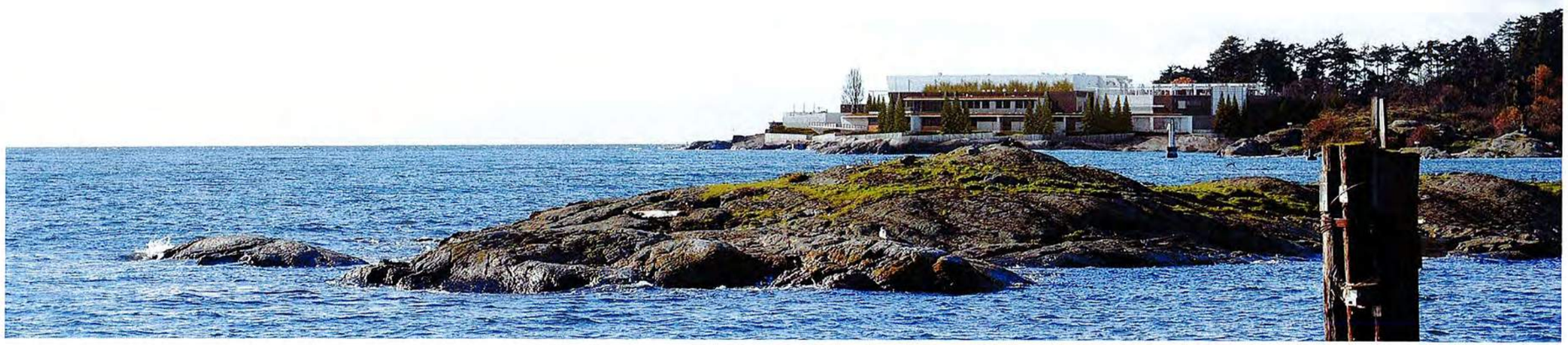
BY	DATE	No.	REVISION	ENG.

NO.	DATE	ISSUE
	01/15/2018	AMENDMENT TO DEVELOPMENT PERMIT

CRD Making a difference...together

Capital Region District	Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT	
DESIGNED JM	SURVEYED --		
DRAWN BY RC	DATE 01/15/2018	RENDERED VIEWS 1	
SCALE HORIZONTAL	CHECKED JM		
SCALE VERTICAL	APPROVED PG	CONTRACT NUMBER CAWTP-17-006 / DRAWING NUMBER ML- B5-DP-A-8 / ISSUE / SHT. No. OF --	

VIEW FROM SHOAL POINT



VIEW FROM SONGHEES WALKWAY

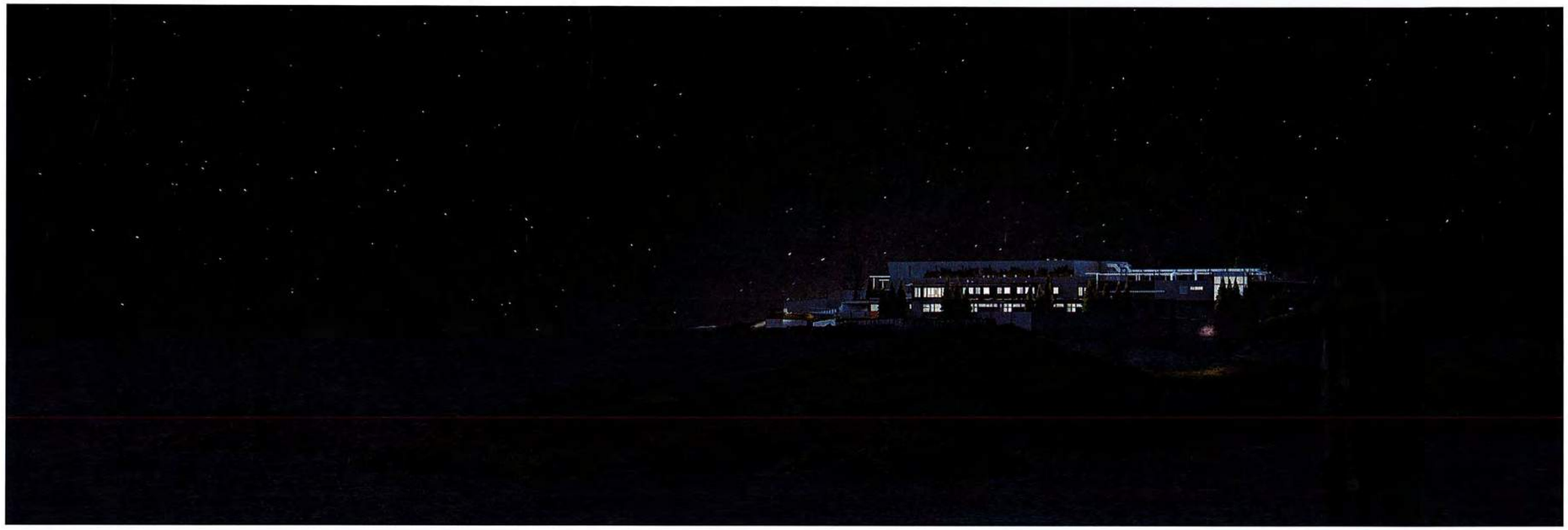
HRP Harbour Resource Partners on AECOM / Graham Joint Venture | HDR | CEI

SEAL

BY	DATE	No.	REVISION	ENG.	NO.	DATE	ISSUE
						01/15/2018	AMENDMENT TO DEVELOPMENT PERMIT

Making a difference...together

Capital Region District	Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT	
DESIGNED JM	SURVEYED —		
DRAWN BY RC	DATE 01/15/2018	RENDERED VIEWS 2	
SCALE HORIZONTAL	CHECKED JM		
SCALE VERTICAL	APPROVED PG	CONTRACT NUMBER CAWTP-17-006	DRAWING NUMBER ML- B5-DP-A-9 ISSUE SHT. No. OF --



VIEW FROM SONGHEES WALKWAY - NIGHT

VIEW FROM OGDEN POINT - NIGHT

PATH/FILENAME: C:\rvt2016\CRD-WWTP-H-10-AN_JAMANN.rvt
PLOT DATE: 1/30/2018 1:46:19 PM

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SEAL

BY	DATE	No.	REVISION	ENG.	NO.	DATE	ISSUE
						01/15/2018	AMENDMENT TO DEVELOPMENT PERMIT

CRD Making a difference...together

Capital Region District	Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT	
DESIGNED JM	SURVEYED —	RENDERED VIEWS 3	
DRAWN BY RC	DATE 01/15/2018		
SCALE HORIZONTAL	CHECKED JM		
SCALE VERTICAL	APPROVED PG	CONTRACT NUMBER CAWTP-17-006	DRAWING NUMBER ML- B5-DP-A-10 ISSUE — SHT. No. OF --

VIEW FROM WATER SOUTH OF SITE

PATH/FILENAME: C:\vt2016\CRD-WWTP-H-10-AN_JAMANN.rvt
PLOT DATE: 1/29/2018 1:46:20 PM

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NO.	DATE	AMENDMENT TO DEVELOPMENT PERMIT ISSUE
	01/15/2018	

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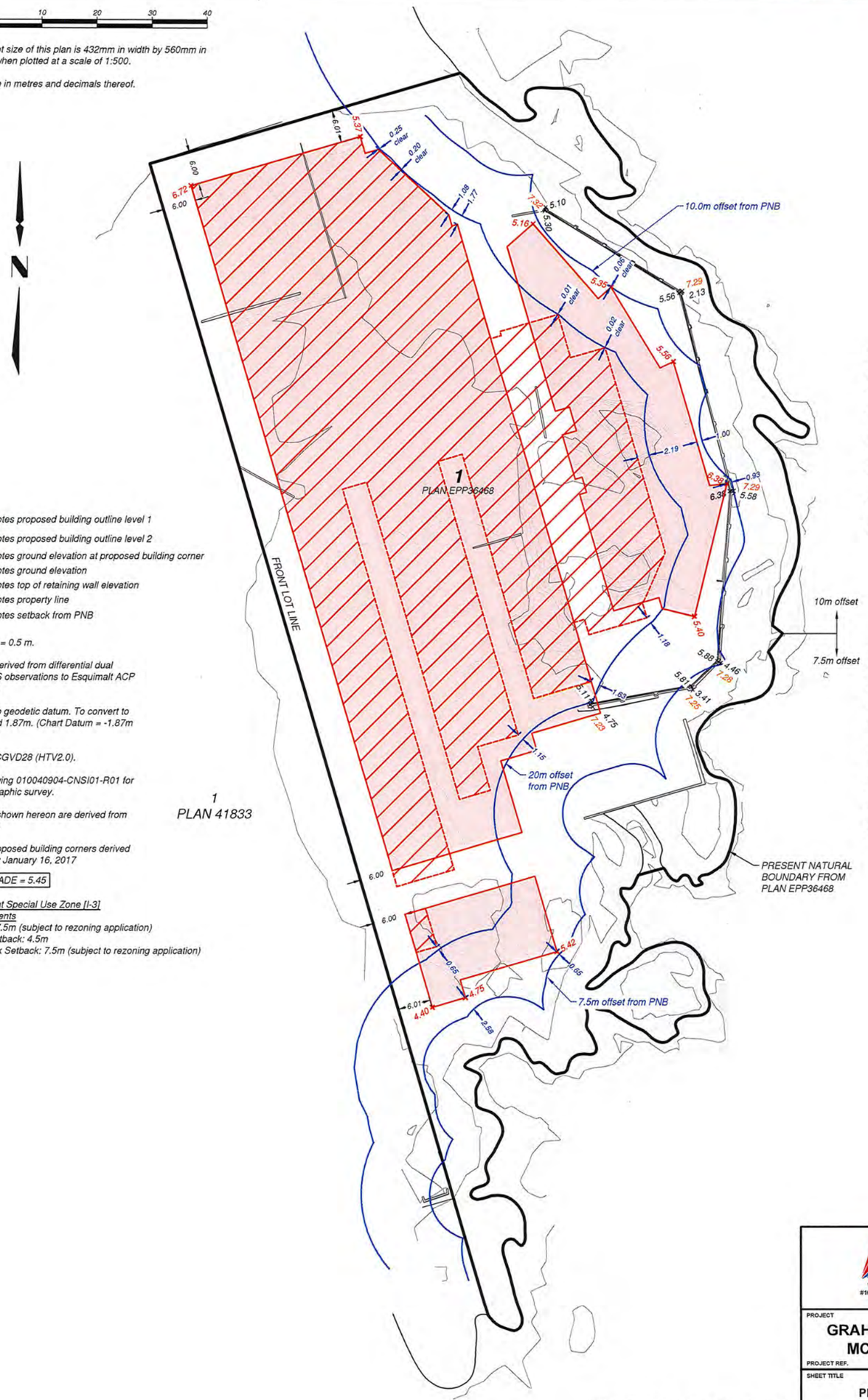
Capital Region District	Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT	
DESIGNED JM	SURVEYED --		
DRAWN BY RC	DATE 01/15/2018	RENDERED VIEWS 4	
SCALE HORIZONTAL	CHECKED JM		
SCALE VERTICAL	APPROVED PG	CONTRACT NUMBER CAWTP-17-006	DRAWING NUMBER ML- B5-DP-A-11 ISSUE

SHT. No. OF --

10 5 0 10 20 30 40

The intended plot size of this plan is 432mm in width by 560mm in height (C size) when plotted at a scale of 1:500.

All distances are in metres and decimals thereof.



LEGEND

- denotes proposed building outline level 1
- denotes proposed building outline level 2
- x 5.21 denotes ground elevation at proposed building corner
- x 5.21 denotes ground elevation
- x 5.21 denotes top of retaining wall elevation
- denotes property line
- denotes setback from PNB

Contour interval = 0.5 m.

Elevations are derived from differential dual frequency GNSS observations to Esquimalt ACP (GCM #600411)

Elevations are to geodetic datum. To convert to chart datum, add 1.87m. (Chart Datum = -1.87m on this plan)

Vertical Datum CGVD28 (HTV2.0).

See Focus Drawing 010040904-CNSI01-R01 for complete topographic survey.

Lot boundaries shown hereon are derived from Plan EPP36468.

Elevations at proposed building corners derived from field survey January 16, 2017

AVERAGE GRADE = 5.45

McLoughlin Point Special Use Zone [I-3]
Siting Requirements
Front Setback: 7.5m (subject to rezoning application)
Exterior Side Setback: 4.5m
High Water Mark Setback: 7.5m (subject to rezoning application)

Certified correct this 23rd day of February, 2017

David J. Kaczowka, BCLS 957

WSP
WSP Surveys (BC) Limited Partnership
#101-3795 Carey Road, Victoria, BC V8Z 1T3
t: 250-474-1151 www.wspgroup.com

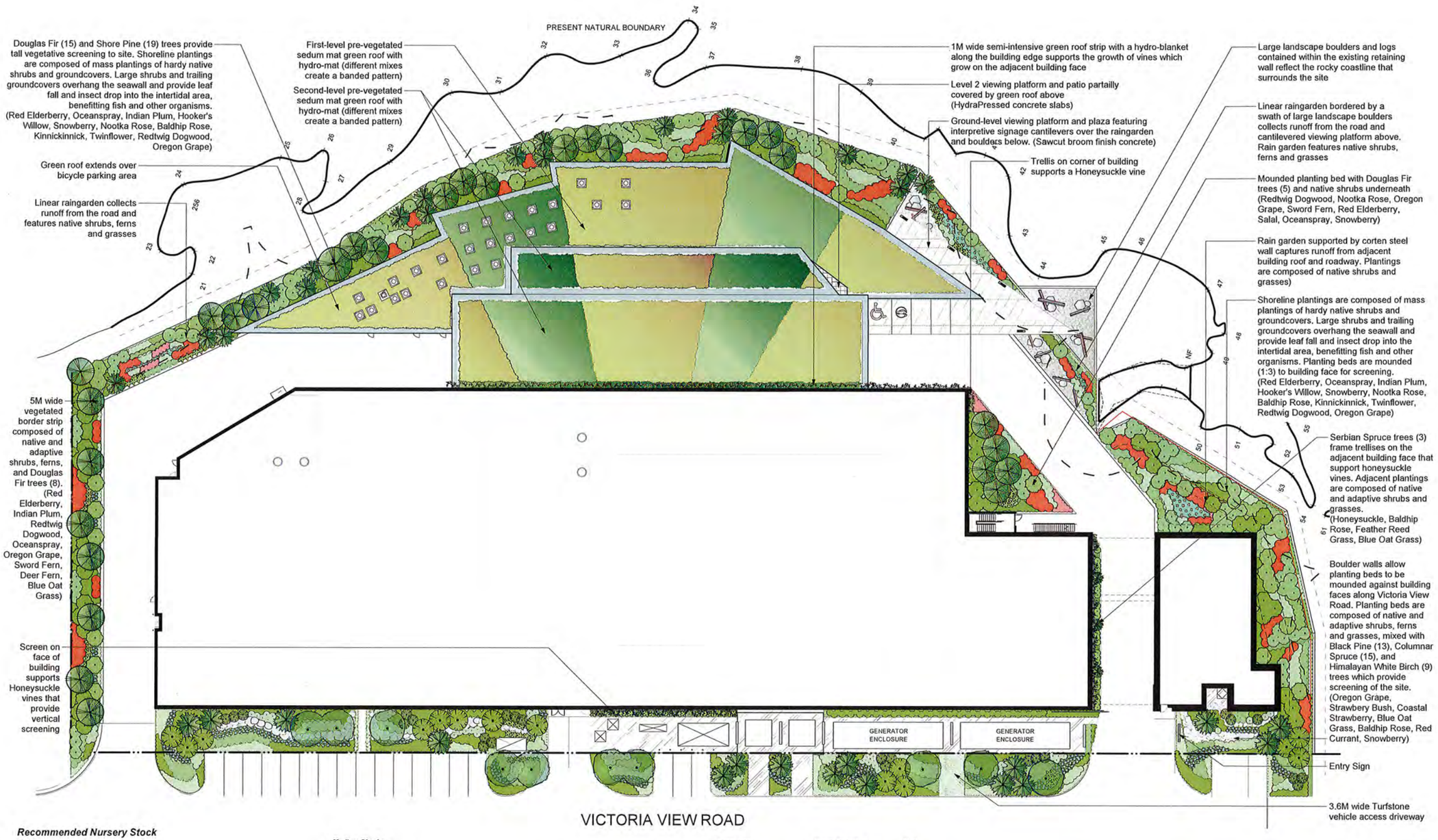
PROJECT
GRAHAM CONSTRUCTION MCLOUGHLIN POINT

PROJECT REF.

SHEET TITLE
PROPOSED BUILDINGS AVERAGE GRADES

DRAWN	DATE	CHECKED	SCALE
ME/TG	2017-02-23	DK	1:500

SHEET No. **010057954-CNSK01-R04**



Recommended Nursery Stock

Trees
Total 90

Botanical Name	Common Name	Size
Picea omorika	Serbian Spruce	2m ht.
Picea pungens 'Iseli Fastigiate'	Columnar Blue Spruce	2m ht.
Pinus contorta	Shore Pine	2m ht.
Pinus nigra 'Fastigiata'	Columnar Black Pine	2m ht.
Populus tremuloides	Trembling Aspen	5cm cal.
Pseudotsuga menziesii	Douglas Fir	2m ht.
Pseudotsuga menziesii LG	Douglas Fir (Large)	3.5m ht.

Large Shrubs
Total 254

Botanical Name	Common Name	Size
Arbutus unedo 'Compacta'	Compact Strawberry Bush	#10 pot
Holodiscus discolor	Oceanspray	#5 pot
Oemleria cerasiformis	Indian Plum	#5 pot
Ribes sanguineum	Red Flowering Currant	#2 pot
Salix hookeriana	Hooker's Willow	#5 pot
Sambucus racemosa	Red Elderberry	#5 pot

Medium Shrubs
Total 1754

Botanical Name	Common Name	Size
Cornus stolonifera	Redtwig Dogwood	#3 pot
Mahonia aquifolium	Tall Oregon Grape	#3 pot
Rosa gymnocarpa	Baldhip Rose	#1 pot
Rosa nutkana	Nootka Rose	#1 pot
Symphoricarpos albus	Snowberry	#3 pot

Small Shrubs
Total 740

Botanical Name	Common Name	Size
Fragaria chiloensis	Coastal Strawberry	#1 pot
Gaultheria shallon	Salal	#1 pot
Mahonia repens	Creeping Oregon Grape	#1 pot

Perennials, Annuals and Ferns
Total 945

Botanical Name	Common Name	Size
Blechnum spicant	Deer Fern	#1 pot
Helictotrichon sempervirens	Blue Oat Grass	#1 pot
Juncus effusus	Common Rush	#1 pot
Mahonia repens	Creeping Oregon Grape	#1 pot
Polystichum munitum	Sword Fern	#1 pot

Groundcovers
Total 1365

Botanical Name	Common Name	Size
Arctostaphylos uva ursi 'Vancouver Jade'	Vancouver Jade Kinnickinnick	#1 pot
Fragaria chiloensis	Coastal Strawberry	#1 pot
Linnaea borealis	Twinflower	#1 pot

Vines
Total 26

Botanical Name	Common Name	Size
Lonicera periclymenum 'Belgica'	Early Dutch Honeysuckle	#1 pot
Parthenocissus tricuspidata 'Veitchii'	Veitchii Boston Ivy	#1 pot

Green Roof
Prevegetated Sedum Mat

Notes:
1. All work to be completed to current BCSLA Landscape Standards
2. All soft landscape to be irrigated with an automatic irrigation system

Semi-Intensive Green Roof System

LADR LANDSCAPE ARCHITECTS
28-495 Dupplin Rd. Victoria B.C. V8Z 1B8
Phone: (250) 598-0105 Fax: (250) 412-0696

McLOUGHLIN POINT WWTP

LANDSCAPE PLAN



Oceanspray (*Holodiscus discolor*)


Mahonia nervosa (*Low Oregon Grape*)


Mahonia repens (*Creeping Oregon Grape*)


Shore Pine (*Pinus contorta*)


Columnar Black Pine (*Pinus nigra 'Fastigiata'*)


Red Elderberry (*Sambucus racemosa*)


Hooker's Willow (*Salix hookeriana*)


Redtwig Dogwood *(Cornus stolonifera)*


Common Rush (*Juncus effusus*)


Blue Oat Grass (*Helictotrichon sempervirens*)

Coastal Strawberry *(Fragaria chiloensis)*


Douglas Fir (*Pseudotsuga menziesii*)


Trembling Aspen (*Populus tremuloides*)


Boston Ivy (*Parthenocissus tricuspidata 'Veitchii'*)


Indian Plum (*Oemleria cerasiformis*)



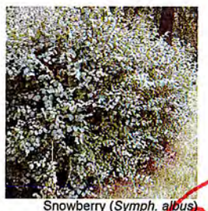
Rugosa Rose *(Rosa rugosa)*



Nootka Rose *(Rosa nootkatensis)*


Strawberry Tree (*Arbutus unedo*)


Serbian Spruce (*Picea omorika*)


Snowberry (*Symph. albus*)


Sword Fern (*Poly. munitum*)


Twinflower (*Linnaea borealis*)

Nov 7-17

BY	DATE	No.	REVISION
	2018-12-08	1	AMENDMENT TO DEVELOPMENT PERMIT

SEAL

ENG.

LADR LANDSCAPE ARCHITECTS
2B-495 Dupplin Rd. Victoria B.C. V9Z 1B8
Phone: (250) 598-0105 Fax: (250) 412-0696

Capital Regional District

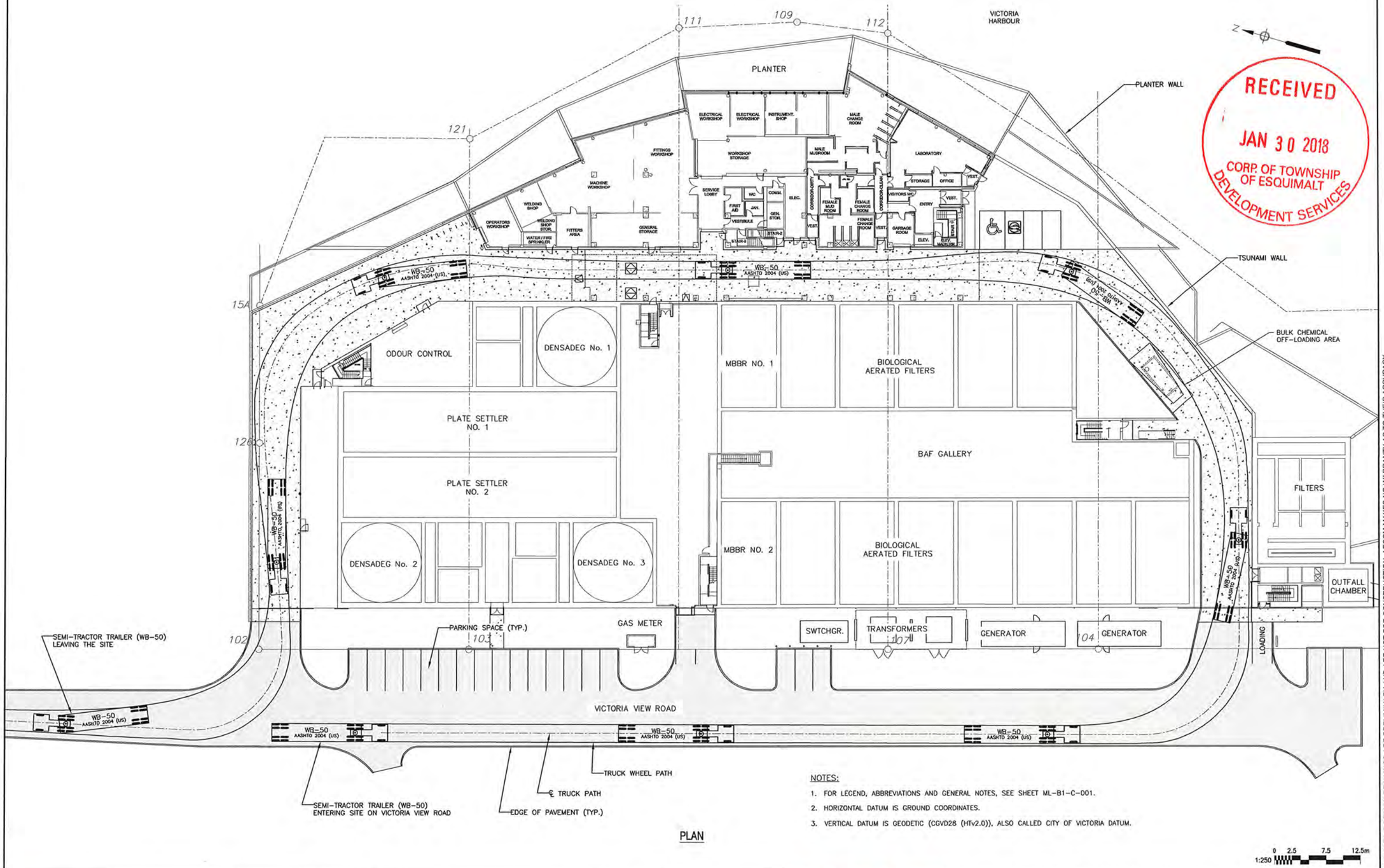
McLOUGHLIN POINT WWTP

PLANT IMAGES

DESIGNED	CW	SURVEYED	
DRAWN	CW	DATE	2018-12-08
SCALE HORIZONTAL	1:250	CHECKED	BW
SCALE VERTICAL	1:250	APPROVED	

CONTRACT NUMBER 1661 | DRAWING NUMBER | ISSUE 1 | L2 | SHT. No. OF 2

PATH/FILENAME: P:\60526603 - MCLOUGHLIN POINT WWTP CRD\AUTOCAD\60526603 - MCLOUGLIN POINT WWTP CRDSTANDARDS\BORDERS\G-BD-CRD-ISO-A1.DWG
LAST UPDATE: Tuesday, February 28, 2017 10:47:01 AM
PLOT DATE: Monday, December 19, 2016 3:32:14 PM



PLAN

NOTES:

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET ML-B1-C-001.
2. HORIZONTAL DATUM IS GROUND COORDINATES.
3. VERTICAL DATUM IS GEODETIC (CGVD28 (HTv2.0)), ALSO CALLED CITY OF VICTORIA DATUM.

RECEIVED
JAN 30 2018
CORP. OF TOWNSHIP OF ESQUIMALT
DEVELOPMENT SERVICES

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HRP Harbour Resource Partners an AECOM / Graham Joint Venture

SEAL

BY	DATE	No.	REVISION	ENG.	No.	DATE	ISSUE
					B	12/14/17	50% SUBMITTAL
					A	6/30/17	30% SUBMITTAL

CRD Making a difference...together

Capital Regional District	Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT	
DESIGNED CB	SURVEYED WSP	TRUCK TURNING PLAN	
DRAWN BY CB	DATE DEC. 2017		
SCALE HORIZONTAL 1:250	CHECKED BD		
SCALE VERTICAL NONE	APPROVED PG	CONTRACT NUMBER CAWTP-17-006 / DRAWING NUMBER ML-B1-C-015 / ISSUE B / SHT. No. -- OF --	

RETAINING WALL NOTES:

TSUNAMI WALL NOTE:

EXCAVATION WIDTH FOR TSUNAMI WALL WILL DEPEND ON FINAL FOUNDATION WIDTHS. DESIGN DETAILS FOR TSUNAMI WALL FOUNDATION WILL BE PROVIDED PRIOR TO FOUNDATION EXCAVATION. TSUNAMI WALL FOUNDATION WILL DEPEND ON THE EXISTING ROCK ELEVATION AND WILL HAVE AN AVERAGE WIDTH OF 4.5 METRES WITH A 1:1 CUT SLOPE ON EACH SIDE OF THE EXCAVATION IF REQUIRED.

PLANTER WALL NOTE:

EXCAVATION WIDTH FOR PLANTER WALLS REQUIRES 1.0 METRE CLEAR ON EACH SIDE OF THE PLANTER WALLS WITH A 1:1 CUT SLOPE ON EACH SIDE OF THE EXCAVATION IF REQUIRED.

EXCAVATE SOIL TO TOP OF ROCK. IF ROCK IS ENCOUNTERED ABOVE EL. 4.80, BLAST ROCK TO EL. 4.80.

BLAST ROCK TO EL. 4.80. IF SOIL IS ENCOUNTERED, EXCAVATE SOIL TO TOP OF ROCK.

EXCAVATE THIS AREA TO EXPOSE BEDROCK SURFACE ABOVE EL. +5.7. BLAST AND/OR EXCAVATE ALL EXPOSED ROCK TO EL. +5.7.

EXCAVATE SOIL TO TOP OF ROCK. IF ROCK IS ENCOUNTERED ABOVE EL. 4.80, BLAST ROCK TO EL. 4.80.

REFER TO SHEET C-303 FOR ISOMETRIC VIEW OF WWTP EXCAVATION FACING NORTHWEST

SLOPES BETWEEN EXCAVATED LEVELS (OR ORIGINAL GRADE) WITHIN DASHED BOUNDARY SHALL BE 3/4H:1V

EL 4.80

EL 5.70

PROVIDE TEMPORARY ROCK SUPPORT (SEE NOTE 1)

EL 4.70

EL -1.20 (300mm)

EL 1.83

EL 3.76 (300mm)

EL 5.20 (300mm)

EL -2.60 (600mm)

EXCAVATION INVERT GRADES (SEE NOTE 2)

EL 2.24 (300mm)

REQUIRED FILL THICKNESS (SEE NOTE 2)

EL 1.71 (300mm)

EL -0.85

SLOPES IN THIS AREA MAY CHANGE TO 3/4:1 BASED ON FIELD INSPECTIONS AND APPROVAL BY THE GEOTECHNICAL ENGINEER

CONTRACTOR TO PROVIDE ENGINEERED EARTH SUPPORT SYSTEM

PROVIDE TEMPORARY ROCK SUPPORT ALL SIDES (SEE NOTE 1)

MICROTUNNEL LAUNCH SHAFT (SEE SHEET C-304 FOR DETAILS)

EL -7.59

EL -12.762

EL 1.83 (300mm)

EL 3.76 (300mm)

EL 1.83 (300mm)

EL 2.24 (300mm)

ALL SLOPES BETWEEN EXCAVATED LEVELS (OR ORIGINAL GRADE) SHALL BE 1H:1V UNLESS OTHERWISE INDICATED

VICTORIA VIEW ROAD

BM 8.02

BM 5.18

BM 4.91

PLAN
SCALE: 1:250

NOTES:

1. SEE SHEETS C-306 AND C-307 FOR REQUIREMENTS REGARDING TEMPORARY EARTH AND ROCK SUPPORT.
2. EXCAVATION INVERT GRADES INDICATED ABOVE ARE FOR FOUNDATION AND SLAB CONSTRUCTION. CONTRACTOR SHALL PLACE BACKFILL TO INDICATED THICKNESS FOR FOUNDATION CONSTRUCTION AS REQUIRED BY GEOPIER DESIGN. DETAILS TO BE PROVIDED WHEN AVAILABLE.
3. CONTRACTOR SHALL PROVIDE SUITABLE SAFETY BARRIERS AROUND ENTIRE PERIMETER OF WWTP EXCAVATION.
4. HORIZONTAL DATUM IS GROUND COORDINATES.
5. VERTICAL DATUM IS GEODETIC (CGVD28 (HTv2.0)), ALSO CALLED CITY OF VICTORIA DATUM.

1:250 0 2.5 7.5 12.5m

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DEVELOPMENT SERVICES

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05/26/2017
SEAL

BY	DATE	No.	REVISION	ENG.
D	5/25/17		ISSUED FOR CONSTRUCTION	
No.	DATE		ISSUE	

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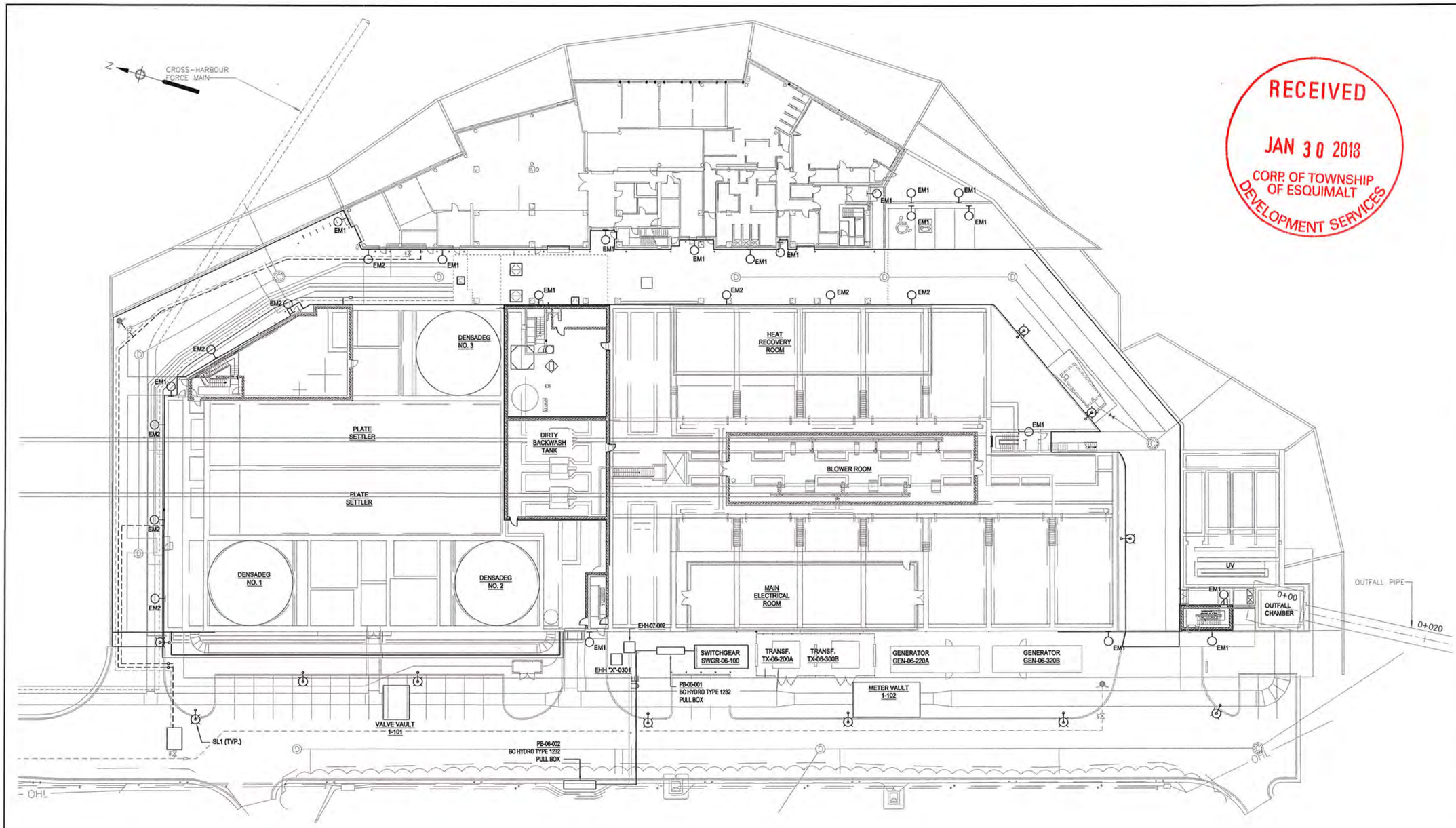
Capital Regional District

DESIGNED RD SURVEYED WSP
DRAWN BY ZB DATE MAY 2017
SCALE HORIZONTAL 1:250 CHECKED TI
SCALE VERTICAL NONE APPROVED BD

McLOUGHLIN POINT WWTP

WWTP SITE EXCAVATION PLAN

CONTRACT NUMBER MC-300 | DRAWING NUMBER ML-B1-C-202 | ISSUE D | SHT. No. 4 OF 13



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PATH\FILENAME: P:\60529503 - MCLOUGHLIN POINT WWTP CRD\AUTOCAD\60529503 - MCLOUGHLIN POINT WWTP DRDN\SHEETS\ENAL-BR-E-004.DWG
PLOT DATE: 12/8/2017 1:23:22 PM

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SEAL

BY	DATE	No.	REVISION	ENG.

No.	DATE	ISSUE
B	11/30/17	50% SUBMITTAL
A	6/30/17	30% SUBMITTAL

Making a difference...together

Capital Regional District	Wastewater Treatment Project	McLOUGHLIN POINT WASTEWATER TREATMENT PLANT	
DESIGNED M.S.	SURVEYED VALUE	SITE LIGHTING	
DRAWN BY M.S.	DATE DEC. 2017		
SCALE HORIZONTAL 1:250	CHECKED Y.R.		
SCALE VERTICAL NONE	APPROVED PG	CONTRACT NUMBER CAWTP-17-006 / DRAWING NUMBER ML-B1-E-004 / ISSUE B / SHT. No. -- OF --	

CORPORATION OF THE TOWNSHIP OF ESQUIMALT

Municipal Hall, 1229 Esquimalt Road, Esquimalt, B.C. V9A 3P1
Telephone (250) 414-7100 Fax (250) 414-7111

DRC Meeting: February 14, 2018

STAFF REPORT

DATE: February 8, 2018

TO: Chair and Members of the Design Review Committee

FROM: Bill Brown, Director of Development Services

SUBJECT: **DEVELOPMENT PERMIT APPLICATION**
"PROPOSED MACAULAY POINT PUMP STATION"
330 View Point Road
Lot A; Section 11 Victoria Harbour Esquimalt District
Plan EPP70531

RECOMMENDATION:

The Esquimalt Design Review Committee recommends that the application for a development permit for the Macaulay Point Pump Station be forwarded to Council with a recommendation to **approve, approve with conditions, or deny the application including reasons for the chosen recommendation.**

BACKGROUND:

Purpose of the Application

The application is for a sewage pump station at Macaulay Point. The proposed pump station would replace the facility that currently exists on the site. The new pump station would pump the sewage that is currently pumped into the ocean from the site to the new waste water treatment plant at Mcloughlin Point.

Context

Applicant: Derek Steinke, Kenaidan Contracting Ltd

Owner: Capital Regional District

Architect: Stephane Laroye Architect Inc. | SLA inc.

Property Size: Metric: 4,280 m^2

Existing Land Uses: Sewage Pump Station

Surrounding Land Uses:
North: CFB Esquimalt
South: Strait of Juan de Fuca
West: CFB Esquimalt (park land)
East: CFB Esquimalt (detached dwelling)

Existing Zoning: Sewage Handling Facilities [I-5]

Existing OCP Designation: Industrial

Existing Development Permit Area: No. 3 Industrial

Design Overview

The proposed design is based on the sustainable design principles as illustrated in the drawing package (Schedule "A") and described in the "Design Rationale" (Schedule "B"). A number of Green building features are proposed (Schedule "C").

The site is located in Development Permit Area No. 3 – Industrial, which is designated for the purpose of "form and character". A goal of the designation is "to encourage revitalization and enhancement of the existing industrial areas". The development permit area contains the following guidelines:

1) "Buildings should be designed to minimize the intrusion into the privacy of existing surrounding homes."

   It should be noted that there is a detached house directly to the east of the site. The east elevation of the proposed pump station does not contain any windows.

2) "Buildings should be located to avoid casting shadows onto adjacent residential properties."

   The architect will provide a shadow analysis at the meeting.

3) "Outdoor storage and parking areas will be screened by berms, fences, landscaping or solid noise-absorbing barriers or a combination of these methods. Landscaping should also be incorporated within the parking areas to "break up" large expanses of pavement."

   The landscape plan illustrates that the parking area is screened by landscaping or by the building itself. There are no large areas of pavement proposed.

4) "The style and finish of new buildings should enhance the appearance of the industrial area, which is surrounded by urban residential development."

   There is a single detached dwelling located east of the pump station. Its exterior is wood siding.

5) "Buildings should be designed to avoid doors and openings that would tend to direct noise in the direction of immediately adjacent residentially-zoned lands."

   Although there is a detached dwelling located to the east of the pump station, none of the surrounding lands are residentially-zoned. Although there are no doors on the east side of the pump station, there are acoustic louvers which may be a source of noise.

6) "Retention and protection of trees and the natural habitat is encouraged wherever possible."

   The proposed landscape is designed based on the premise of naturalizing as much of the site as possible including the roof.

Staff would appreciate the Design Review Committee's comments on each of the guidelines stated above and whether or not they believe that the proposed development complies with the guidelines.

Alternatives

1. Forward the application for Rezoning to Council with a **recommendation of approval including reasons for the recommendation**.

2. Forward the application for Rezoning to Council with a **recommendation of approval including specific conditions and including reasons for the recommendation.**

3. Forward the application for Rezoning to Council with a **recommendation of denial including reasons for the recommendation**.

_____

Bill Brown
Director of Development Services

SCHEDULE A

GENERAL NOTES:

1. HYDRO SERVICE SUBJECT TO BC HYDRO APPROVAL
2. STORM WATER RUN-OFF TO RAIN GARDEN, REFER TO LANDSCAPE. NO CONNECTION TO STORM SYSTEM PROPOSED.
3. NO SANITARY SEWER CONNECTION REQUIRED.
4. NO GAS SERVICE PROPOSED.

1600 Ø SANITARY FORCEMAIN RIGHT-OF-WAY
PROPOSED ELECTRICAL FEED
PROPOSED POTABLE WATER & FIRE WATER SERVICE CONNECTIONS
INTERCEPT EXISTING HYDRO DUCT BANK AND RE-ROUTE AS SHOWN
ASPHALT DRIVEWAY TO PL
12 x 5 m U/G FORCEMAIN FLOW METER CHAMBER & FORCEMAIN PIGGING STATION
PROPERTY LINE (TYP)
3 x 3 m U/G WATER METER CHAMBER AS PER CITY OF ESQUIMALT STANDARDS
1350 Ø HDPE DR21 SANITARY FORCEMAIN REFER TO DWG C-101 & C-102
1 - 45° LR BEND
2 - 90° VERT. BENDS
1200 Ø STD SCH STEEL FORCEMAIN
STEEL TO HDPE
1 - 45° LR HDPE BEND
FIRE HYDRANT
LEVEL 1.8 EXTERIOR WALL
EXISTING STRUCTURE (TYP)
APPROXIMATE EXISTING CONTOUR LINES
CONCRETE RETAINING WALL
STEEL TO HDPE TRANSITION COUPLING
HYDRO PULL-BOX (3 TYP) STANDARD SIZE (1800 x 800)
EX EASEMENT LINE (TYP)
EX HOUSE
5 x 2 m CONCRETE PADS FOR ±5000 L GENERATOR FUEL TANKS WITHIN CONCRETE UP-STAND SPILL CONTAINMENT CURB
4 x 4 m CONCRETE PAD FOR TRANSFORMER
CONCRETE UP-STAND CURB
HATCH (TYP)
CONCRETE RETAINING WALL
2 - 900 Ø SANITARY FORCEMAINS
600 Ø DR 35 PVC VENTILATION DUCT
EX PIGGING CHAMBER
POND
BERM
5% GRADE DOWN TO EXISTING PATH
MAX 3H:1V SLOPE
TOE OF 3:1 FILL SLOPE (TYP)
SEE LANDSCAPE PLAN
EXISTING PATH
VIEW POINT ST
VAUGHAN ST
ANSON ST
ANSON CRES
1205
1207
1212
1318
D 300 VIT
D 300 PVC
S 900 PVC CRD
ABD S CRD
D 300 PVC
S 150 VC

PLAN
Scale 1:200

RECEIVED
JAN 25 2018
CORP. OF TOWNSHIP OF ESQUIMALT
DEVELOPMENT SERVICES

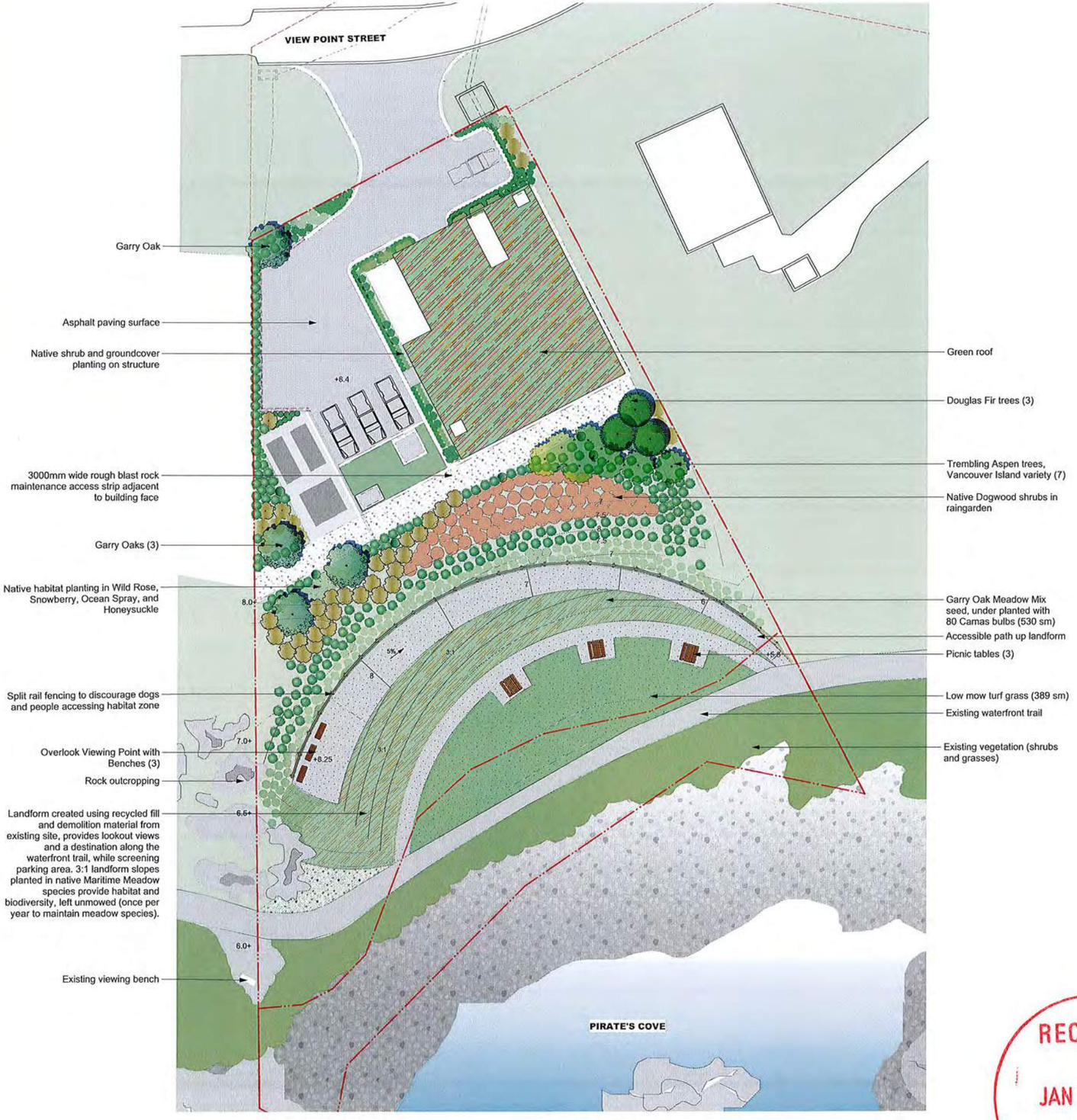
KERR WOOD LEIDAL
consulting engineers
KENAIDAN

Seal

Rev	Date	Des	Dwn	Chk	Description of Revision
A	2017-10-27	RP	MRM	KM	30% DESIGN REVIEW
B	2017-11-15	RP	MRM	KM	REVISED 30% DESIGN REIVEW

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION
CIVIL
SITE SERVICING PLAN

Project No. 3317-004 | Drawing No. C-100 | Rev. B
Group CIVIL



1 **Landscape Concept Plan**

0 5 10 15 20 m 1:250

Recommended Nursery Stock

Trees

ID	Quantity	Botanical Name	Common Name	Size
PoTr	7	Populus tremuloides var. vancouveriana	Quaking Aspen	#15 pot, 4cm cal.
PsMe	3	Pseudotsuga menziesii	Douglas Fir	#15 pot, 4 cm cal.
QuGa	4	Quercus garryana	Garry Oak	#15 pot

Large Shrubs

ID	Quantity	Botanical Name	Common Name	Size
CoSe	65	Cornus sericea	Red Twig Dogwood	#3 pot
HoDi	40	Holodiscus discolor	Oceanspray	#3 pot
LoCi	9	Lonicera ciliosa	Western Trumpet Honeysuckle	#2 pot

Medium Shrubs

ID	Quantity	Botanical Name	Common Name	Size
MaAq	26	Mahonia aquifolium	Tall Oregon Grape	#3 pot
RoNu	216	Rosa nutkana	Nootka Rose	#3 pot
SyAl	160	Symphoricarpos albus	Snowberry	#2 pot
	0			

Small Shrubs

ID	Quantity	Botanical Name	Common Name	Size
GaSh	18	Gaultheria shallon	Salal	#3 pot
MaNe	89	Mahonia nervosa	Low Oregon Grape	#2 pot
RiSa	12	Ribes sanguineum 'King Edward VII'	King Edward VII Flowering Currant	# 3pot

Notes:

1. All work to be completed to current BCSLA Landscape Standards
2. All soft landscape to be irrigated with an automatic irrigation system

Character Precedent Images

Maritime meadow

Vancouver Island Aspens at Macaulay Point Park

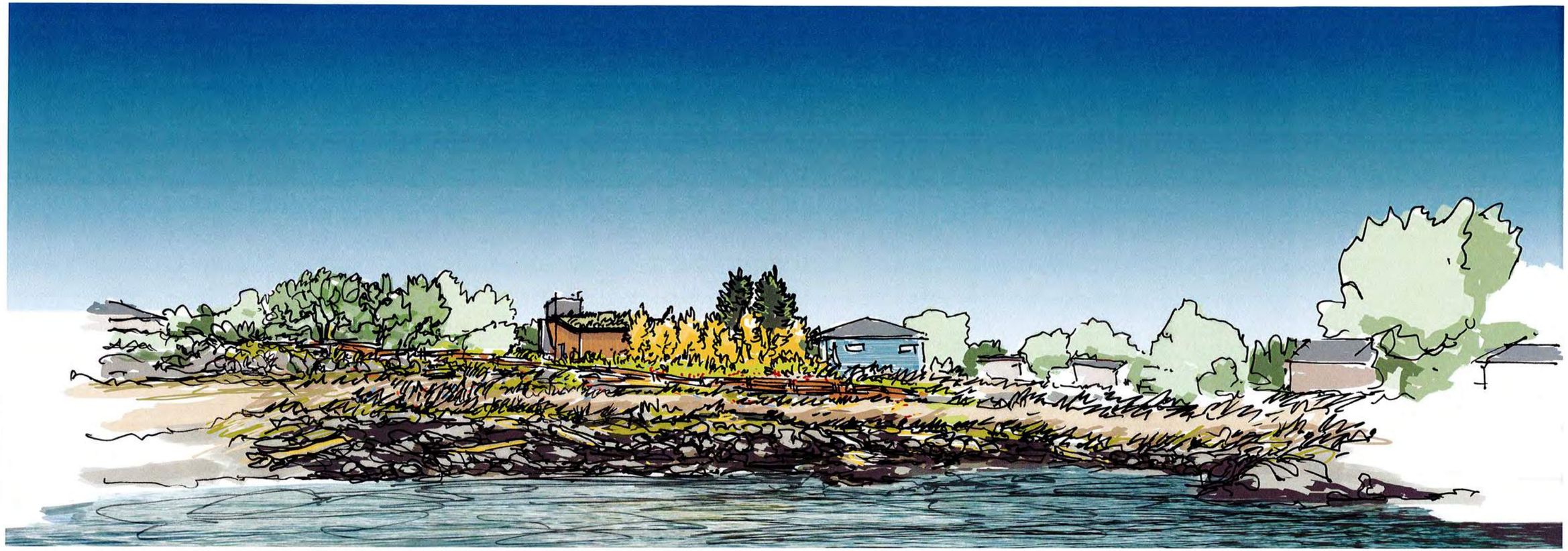
Picnic tables

Green roof

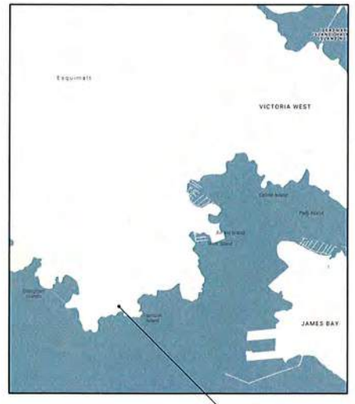
Spilt rail protective fencing & gravel trail at Macaulay Point Park

View from overlook area

LADR LANDSCAPE



1 View from the water of the proposed Macaulay Pump Station



ZONING BYLAW SUMMARY

CURRENT ZONING:	I-5
ADJACENT PROPERTIES:	P-1
MIN. SETBACK TO FRONT PL:	7.5 M
EXT. SIDE SETBACK TO PL:	4.5 M
MAX. BUILDING HEIGHT:	7.0 M
PROPOSED FLOOR AREA:	485 Sq.M.
LOT AREA:	3355 Sq.M.
PROPOSED FAR:	0.14
LOT COVERAGE:	525 Sq.M. or 15.6%
REQUIRED PARKING:	4 STALLS
PROPOSED PARKING:	4 STALLS

CODE SUMMARY

BRITISH COLUMBIA BUILDING CODE 2012, PART 3
CLASSIFICATION: F3 (LOW HAZARD INDUSTRIAL)
ARTICLE 3.2.2.81
1-STOREY
BUILDING AREA LESS THAN 1200 SQ.M.
NON-COMBUSTIBLE CONSTRUCTION
NON-SPRINKLERED
EMERGENCY LIGHTING PROVIDED

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KERR WOOD LEIDAL consulting engineers
SLA
LADR LANDSCAPE ARCHITECTS

SEAL:

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION
1	10 Jan. '18	SL/DS	SL/DS	SL	Issued for Pre-DP meeting
2	25 Jan. '18				Issued for Development Permit

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION
ARCHITECTURE
Cover

1721
ARCHITECTURE

DP01 REV

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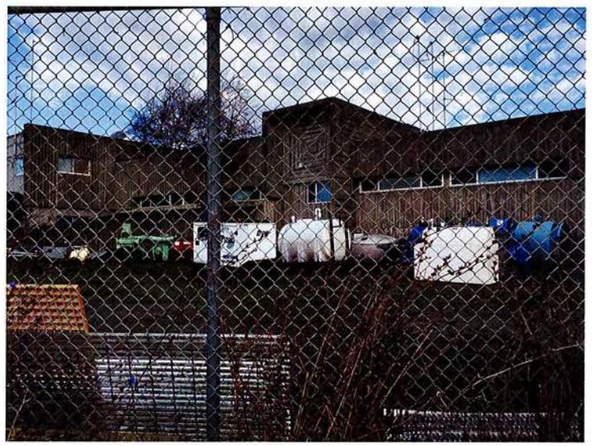

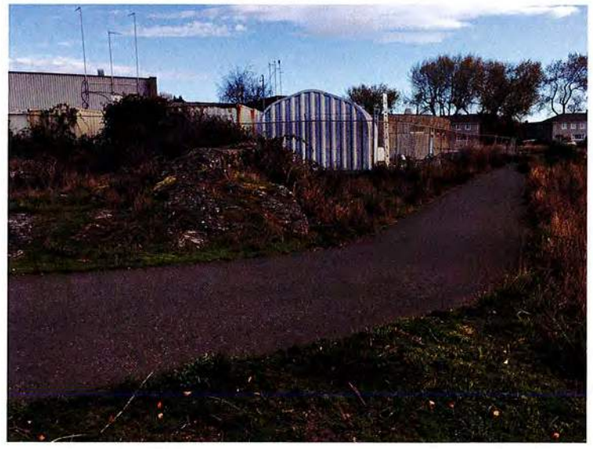

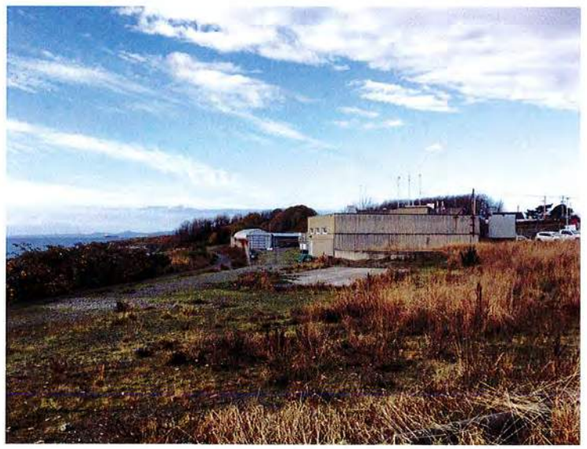

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LADR LANDSCAPE ARCHITECTS

SEAL:

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION
1	10 Jan. '18	SL/DS	SL/DS	SL	Issued for Pre-DP meeting

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION

ARCHITECTURE
Site Photos

1721
ARCHITECTURE

DP02

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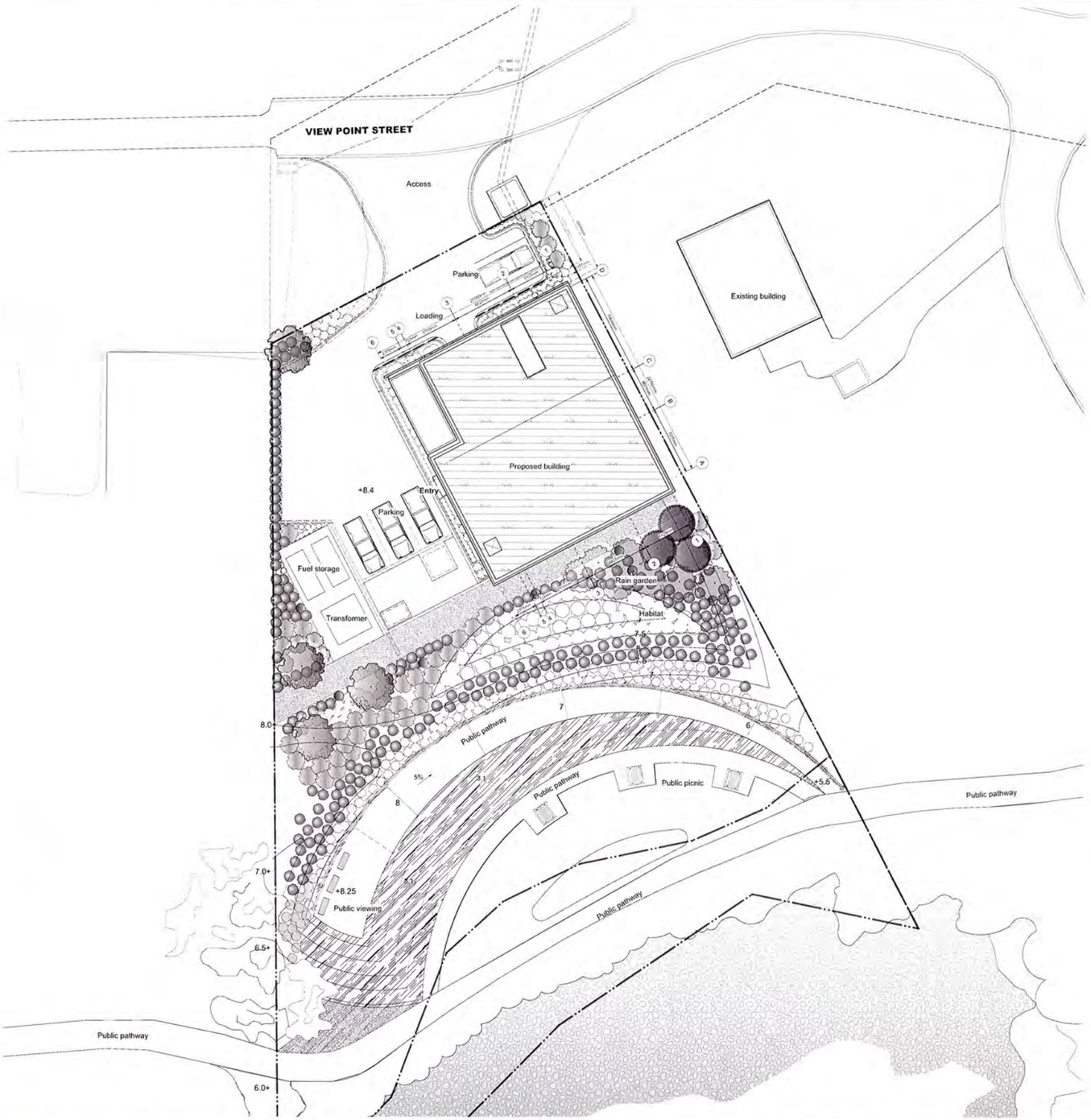
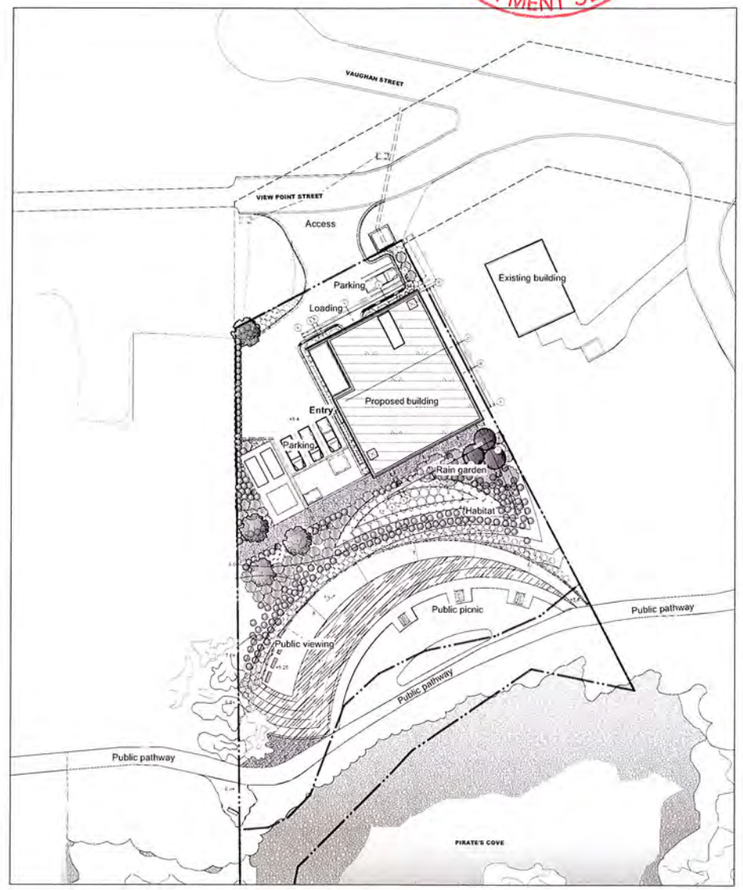


1 Site Plan
Scale: 1:500



2 Site Plan
Scale: 1:250

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SEAL:

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION
1	10 Jan. '18	SL/DS	SL/DS	SL	Issued for Pre-DP meeting
2	25 Jan. '18				Issued for Development Permit

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION
ARCHITECTURE
Site Plan

1721
ARCHITECTURE
DP03
REV

18-1-24 9:25:46 AM

Existing Building

7500mm setback
8900mm
1300mm
5125mm
Parking
20550mm
6625mm
Loading
10650mm
5700mm
725mm
2375mm
Service access
22750mm
4825mm
7275mm
005 Electrical Rm
004 Headworks Rm
006 Office
003 Stair 2
UP
DN
001 Acoustic vestibule
007 Mechanical Rm
008 Odour Control Rm
002 Stair 1
Parking
+8.4
ENTRY
N
7
7.5

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1	10 Jan. '18	SL/DS	SL/DS	SL	Issued for Pre-DP meeting

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION
ARCHITECTURE
Ground Floor Plan EL 8.2

1721
ARCHITECTURE

DP04

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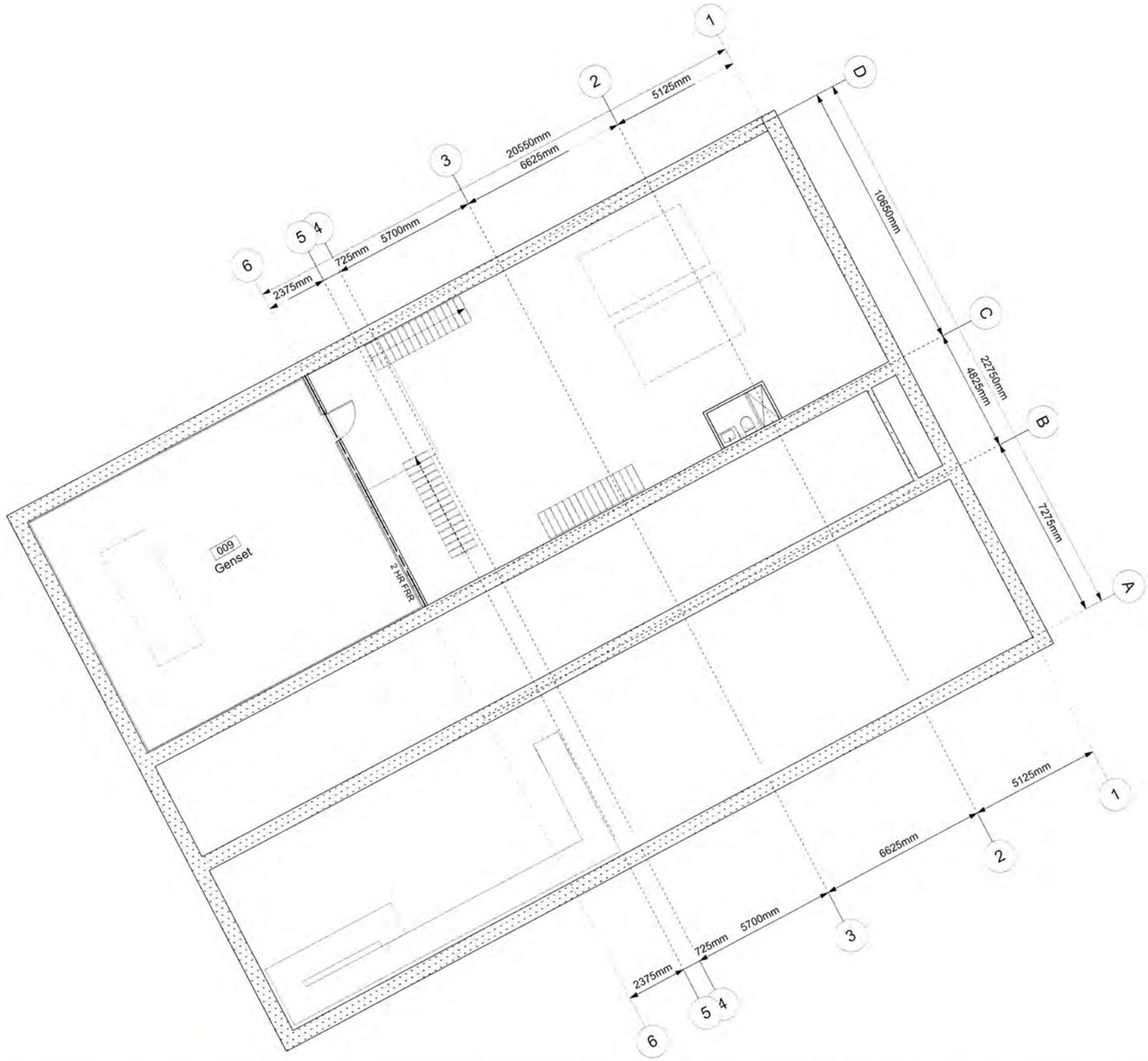

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2	25 Jan. '18				Issued for Preliminary Review
1	10 Jan. '18	SL/DS	SL/DS	SL	Issued for Pre-DP meeting

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION
ARCHITECTURE
Lower Mezzanine Plan EL 5.3

1721
ARCHITECTURE

DP05 REV

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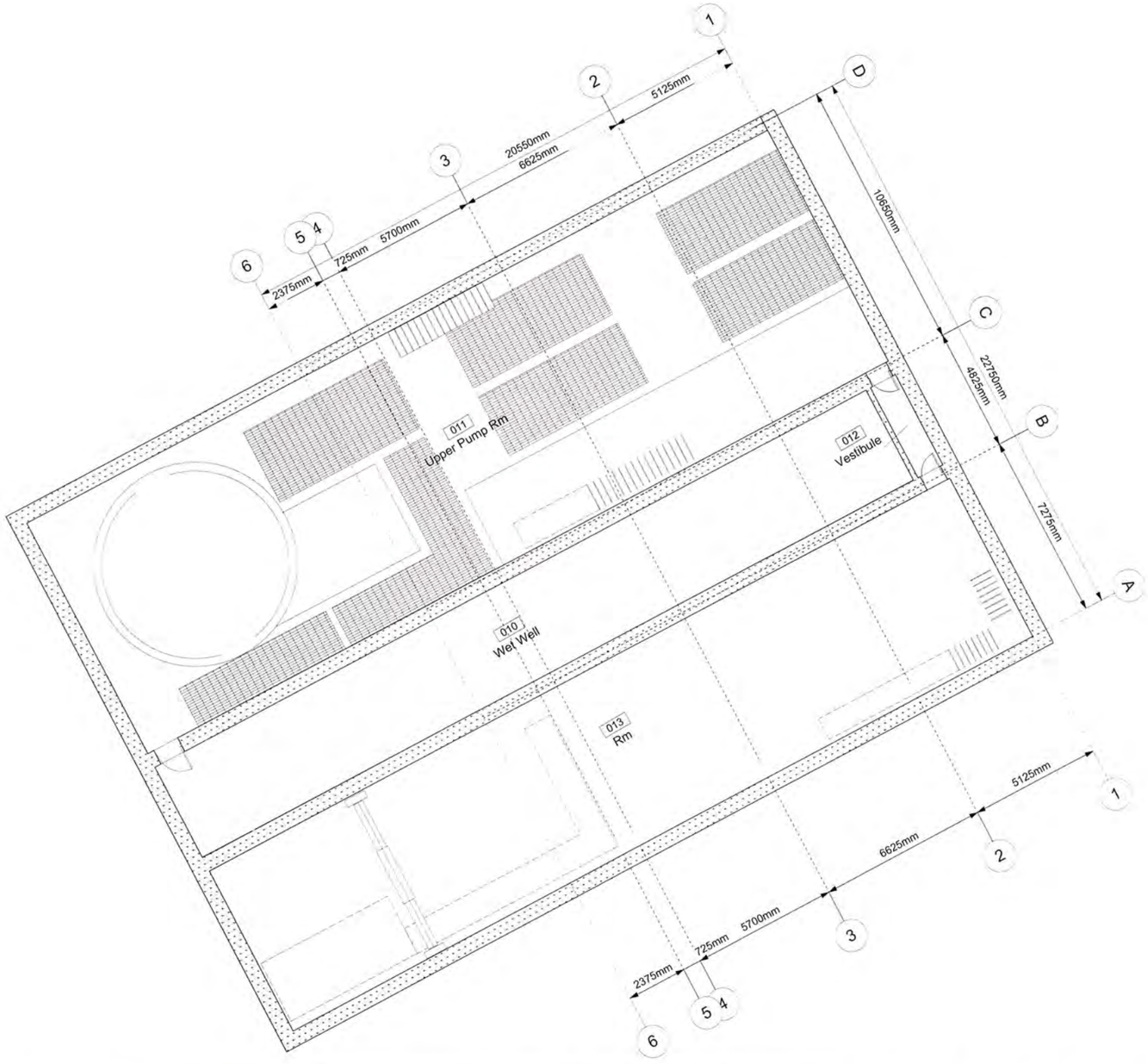

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REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION
1	10 Jan. '18	SL/DS	SL/DS	SL	Issued for Pre-DP meeting

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION

ARCHITECTURE
Lower Level 2.8

1721
ARCHITECTURE

DP06 REV

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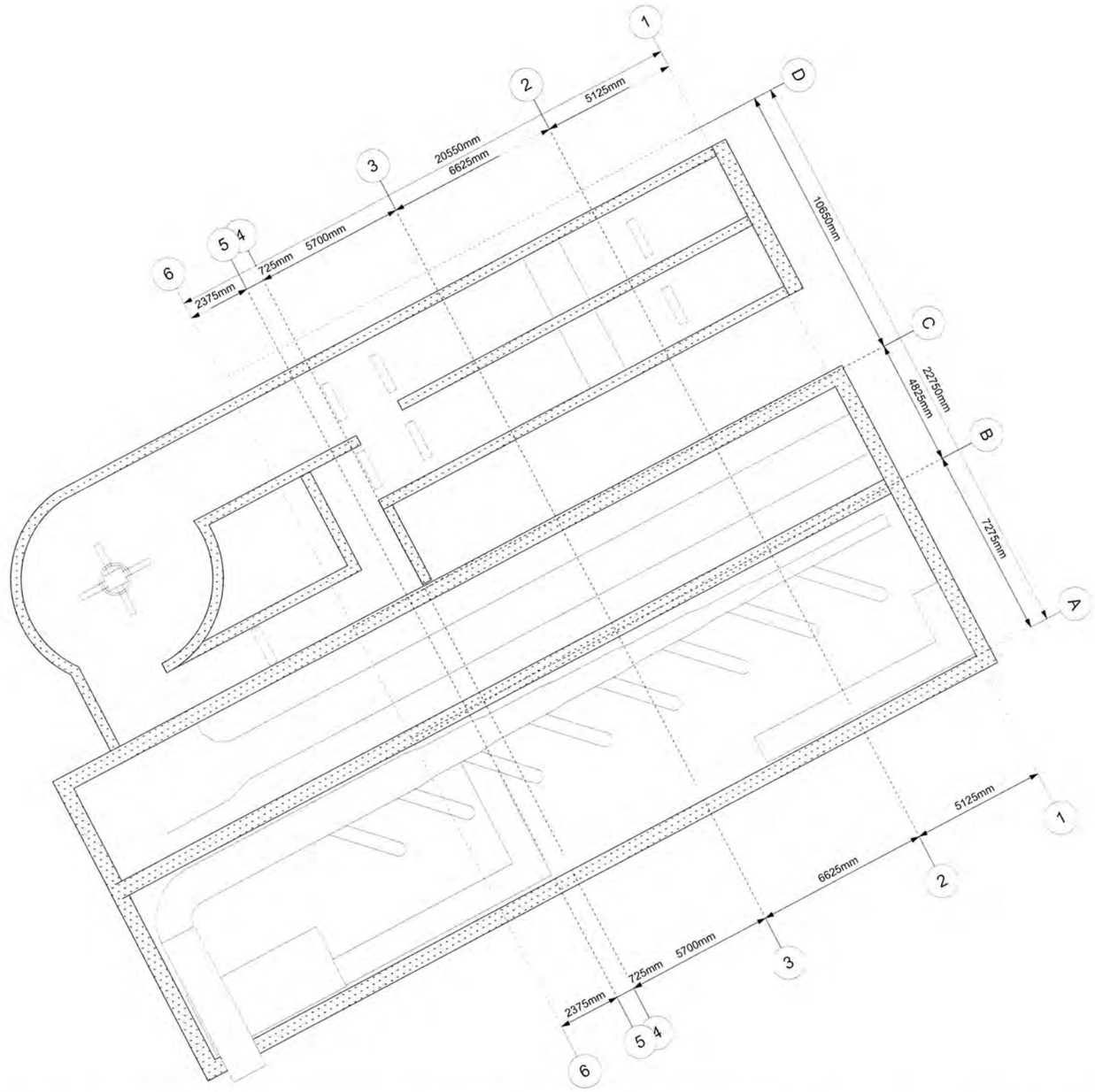

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SEAL:

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION
2	25 Jan. '18				Issued for Investigation Permit
1	10 Jan. '18	SL/DS	SL/DS	SL	Issued for Pre-DP meeting

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION
ARCHITECTURE
Lower Level -1.0

1721
ARCHITECTURE

DP07 REV

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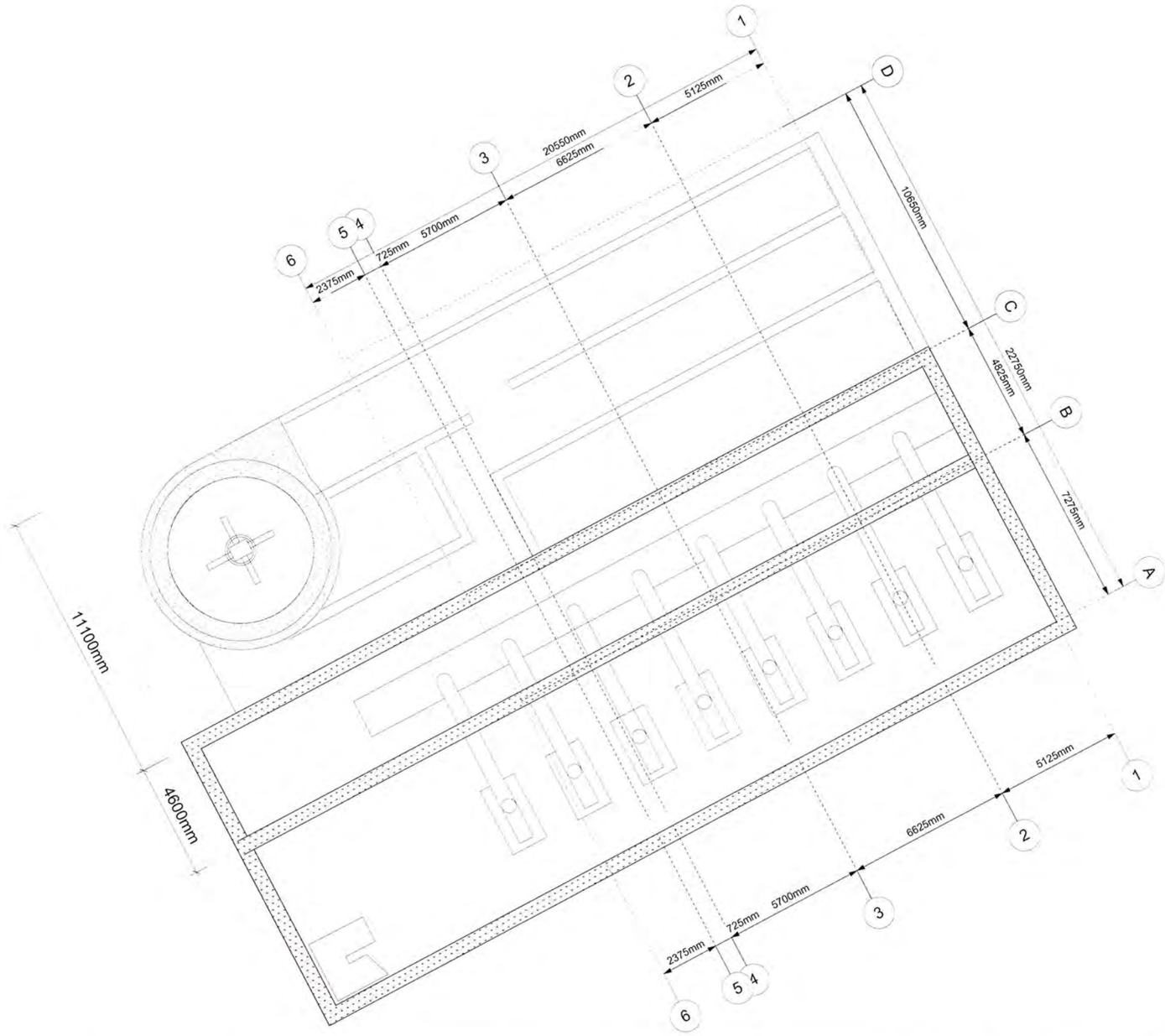

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REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION
2	24 Jan. '18				Issued for Pre-DP meeting
1	10 Jan. '18	SL/DS	SL/DS	SL	Issued for Pre-DP meeting

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION
ARCHITECTURE
Lower Level -3.3

1721
ARCHITECTURE

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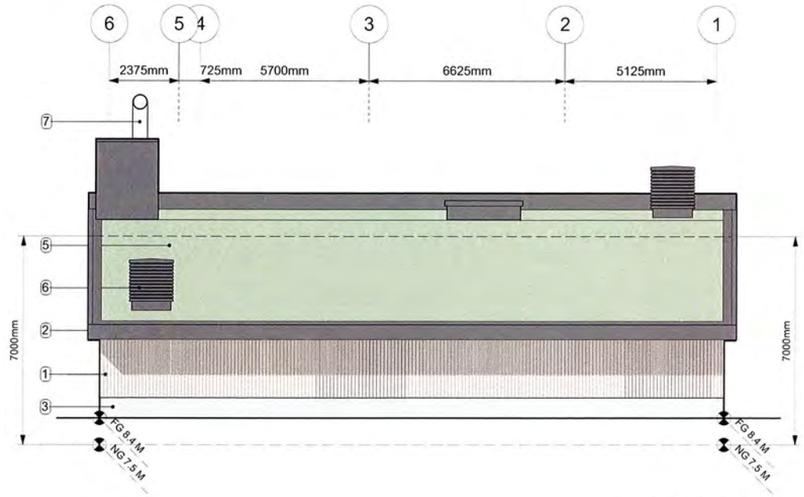
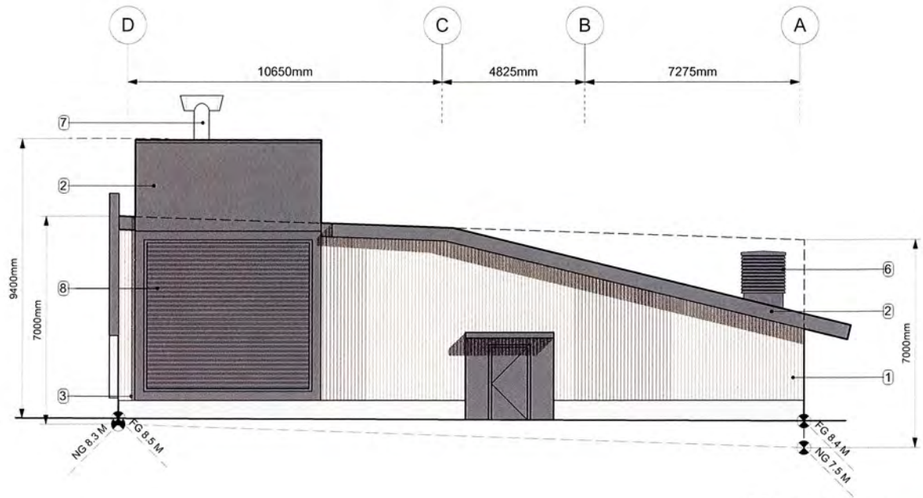
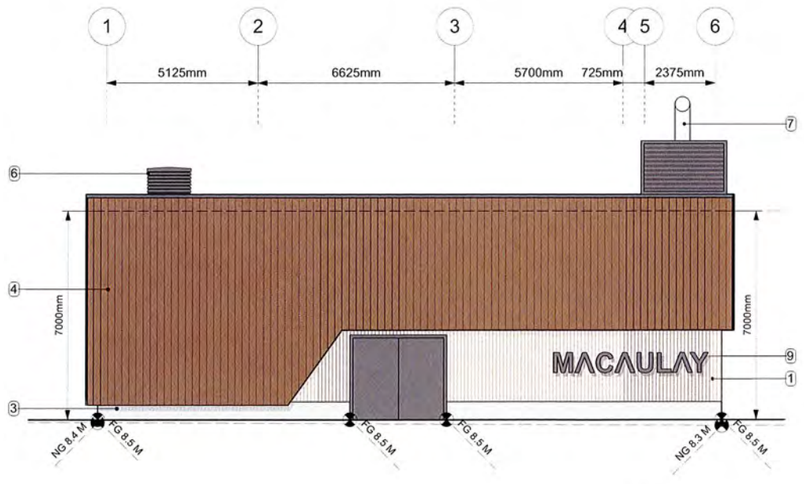


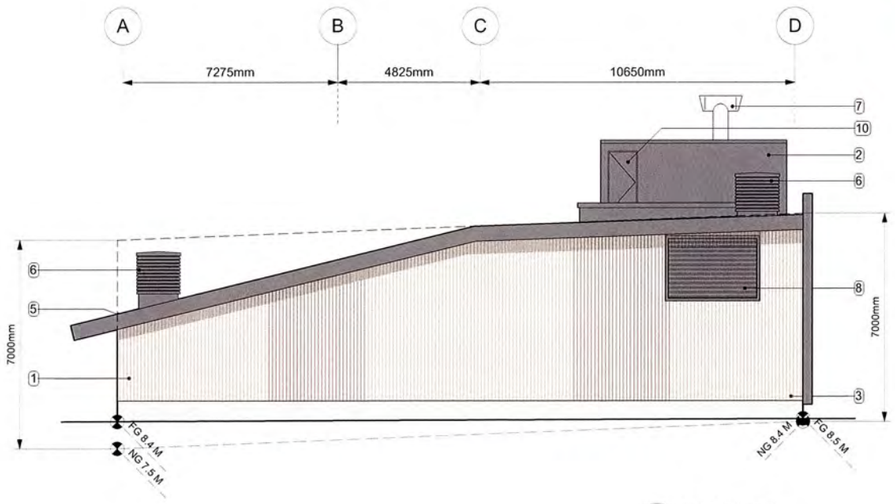
1 South Elevation
Scale: 1:100



2 West Elevation
Scale: 1:100



3 North Elevation
Scale: 1:100



4 East Elevation
Scale: 1:100

Legend
1. Wood Cladding (natural)
2. Aluminium Composite Panel (grey)
3. Insulated Concrete Upstand
4. Wood Cladding (Shou Sugi Ban)
5. Green Roof
6. Exhaust Penthouse
7. Genset Exhaust
8. Acoustic louvers
9. Painted Stainless Steel Plate Lettering on Offsets
10. Roof Access Door

N

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SEAL:

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION
1	10 Jan. '18	SL/DS	SL/DS	SL	Issued for Pre-DP meeting

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION
ARCHITECTURE
Elevations

1721
ARCHITECTURE

DP09 REV 1

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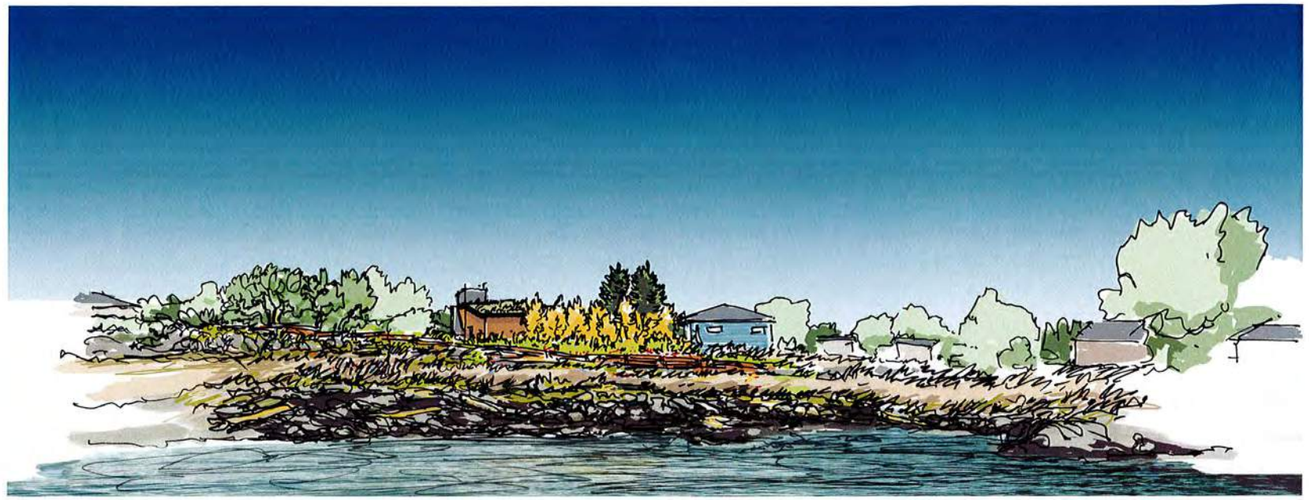
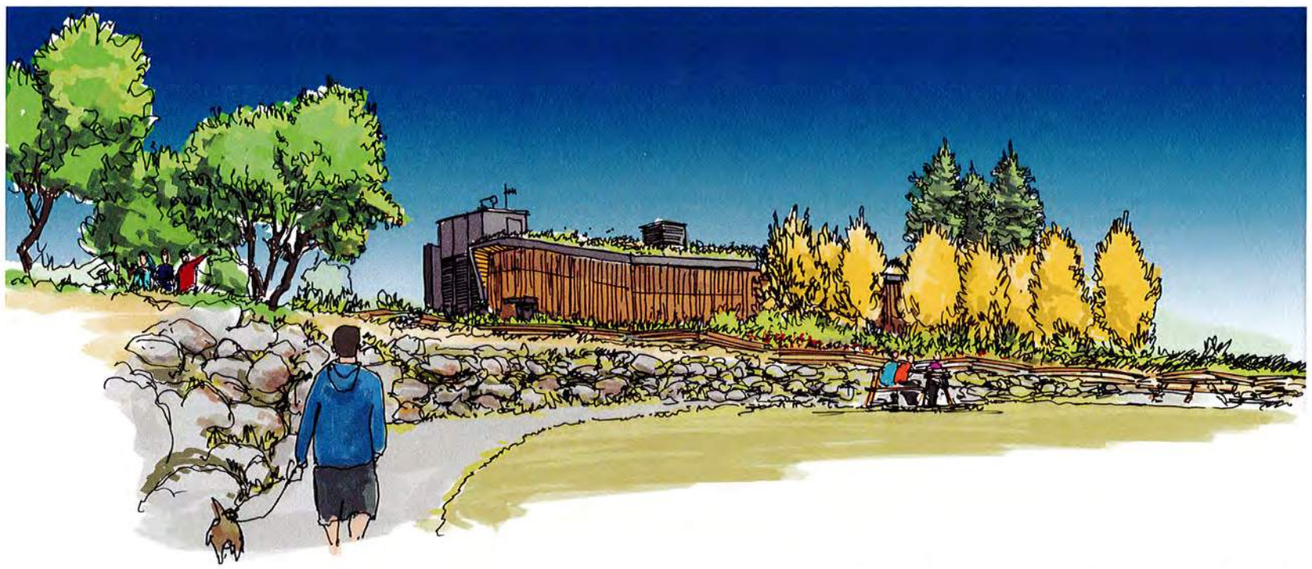
2 View from the public pathway of the picnic area and foreshore habitat



1 View from the water of the proposed Macaulay Pump Station



4 View from the public pathway of the public viewpoint and picnic area

3 View of the north and west elevations

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LADR LANDSCAPE ARCHITECTS

SEAL:

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION
1	10 Jan. '18	SL/DS	SL/DS	SL	Issued for Pre-DP meeting

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION

ARCHITECTURE
Artist Renderings

1721
ARCHITECTURE

DP10

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1 View along the public pathway facing west towards Macaulay Point Park

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SEAL:

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION
2	25 Jan. '18				Issued for Development Permit
1	10 Jan. '18	SL/DS	SL/DS	SL	Issued for Pre-DP meeting

REV	DATE	DES	DWN	CHK	DESCRIPTION OF REVISION

CAPITAL REGIONAL DISTRICT
MACAULAY POINT PUMP STATION
ARCHITECTURE
Artist Renderings

1721
ARCHITECTURE

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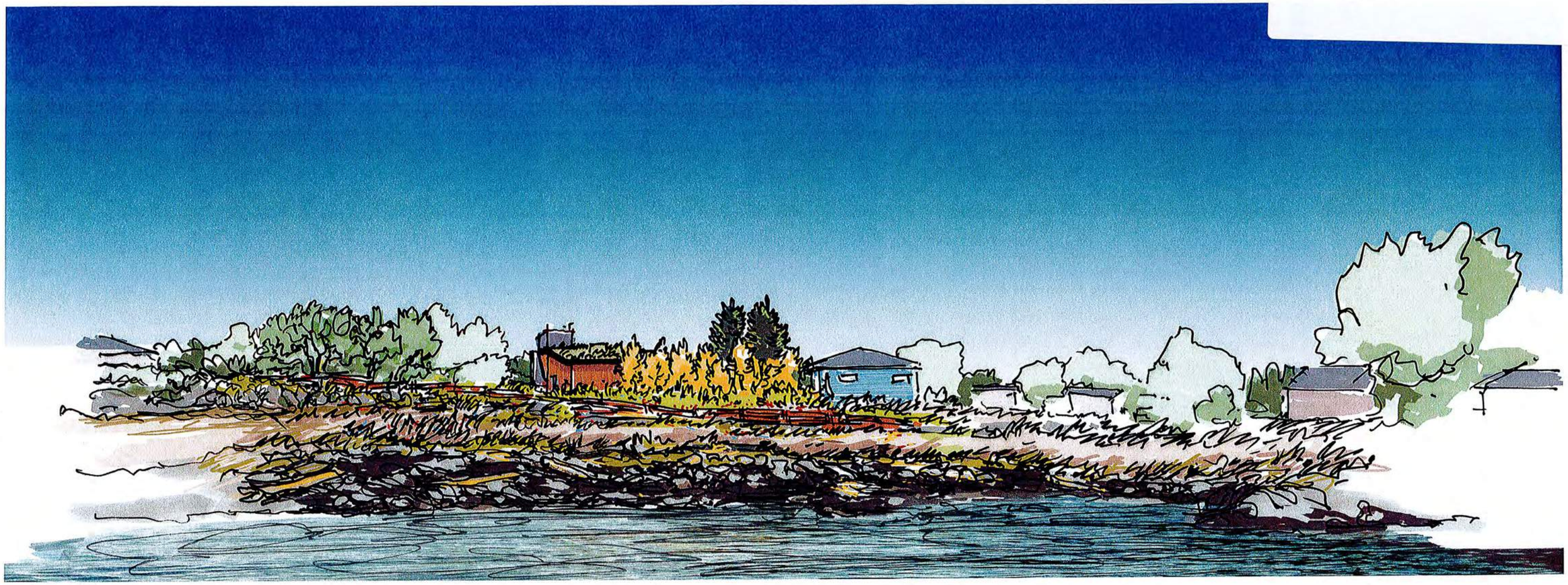


Macaulay Point Pump Station
Esquimalt, BC

Design Rationale

Esquimalt Bylaw:
55. 2.B.5 - Macaulay Point Pump Station, Upgraded to standards of design, materials and quality of construction consistent with recent Craigflower Pump Station project, with odour mitigation measures to be installed in Macaulay Pump station, and Lang Cove Pump station, Providing for an odour detection level no greater than five (5) odour units measured at the property lines (or fence lines where applicable)

Submitted by:
Stephane Laroye Architect Inc. | SLA inc.
LADR Landscape Architects Inc.

Owner:
Capital Regional District (CRD)

The Design-Build team
Kenaidan Contracting Ltd.
Kerr Wood Leidal Consulting Engineers
Stephane Laroye Architect Inc. | SLA inc.
LADR Landscape Architects

25 January 2018

Introduction

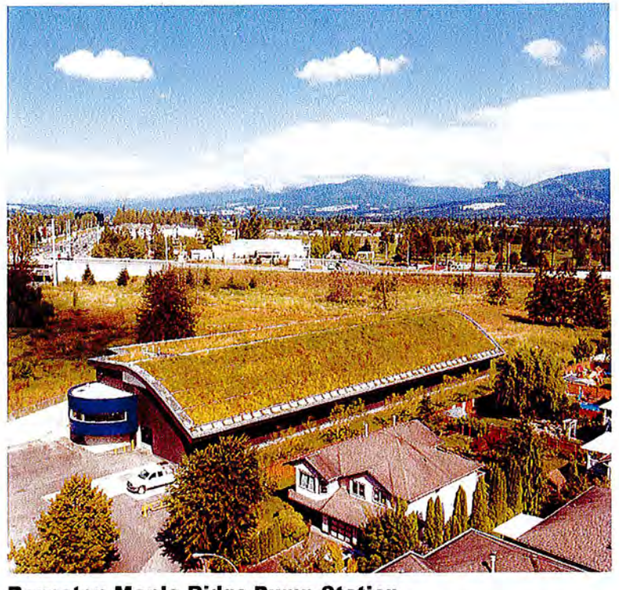
At SLA, we are proud of our work and are thrilled to be part of this exciting project.

Our vision is that our projects are neighbourly, contextual and sustainable while being robust, durable and easy to maintain. We work collaboratively within the design team, with owners and stakeholders to deliver outstanding results that make the community proud.

We pay close attention to massing, siting, exterior materials, views, habitat and maximizing the public interest.

Burnaby Mountain Booster Pump Station
Respect for SFU's architect, Arthur Erickson, with the use of board-form concrete which will form a patina consistent with the campus buildings, it was built into the slope and buried in a green roof.

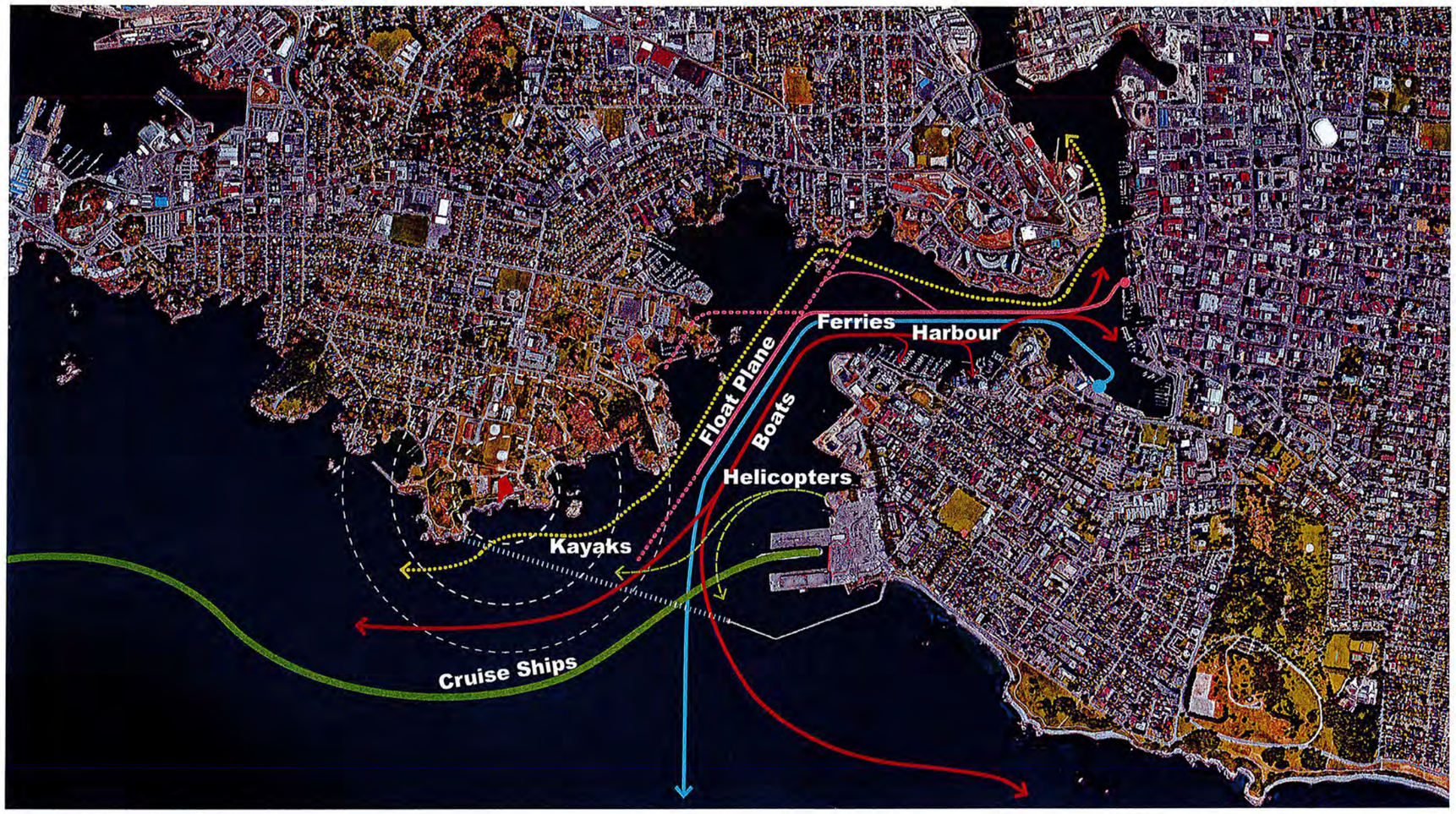
Aldrin Booster Pump Station
Nestled in the heart of a neighbourhood community park, the massing and materials are warm and welcoming. The neighbours are so proud that one mows the lawn regularly.



Barnston Maple Ridge Pump Station
The largest green roof owned by Metro Vancouver, the design intent was to provide a rolling green landscape for the neighbours to look out on to, consistent with the nearby golf course.

Context Aerial

From a great distance, it is apparent that this site is highly visible from the water and from the air, and from a wide variety of transportation modes.

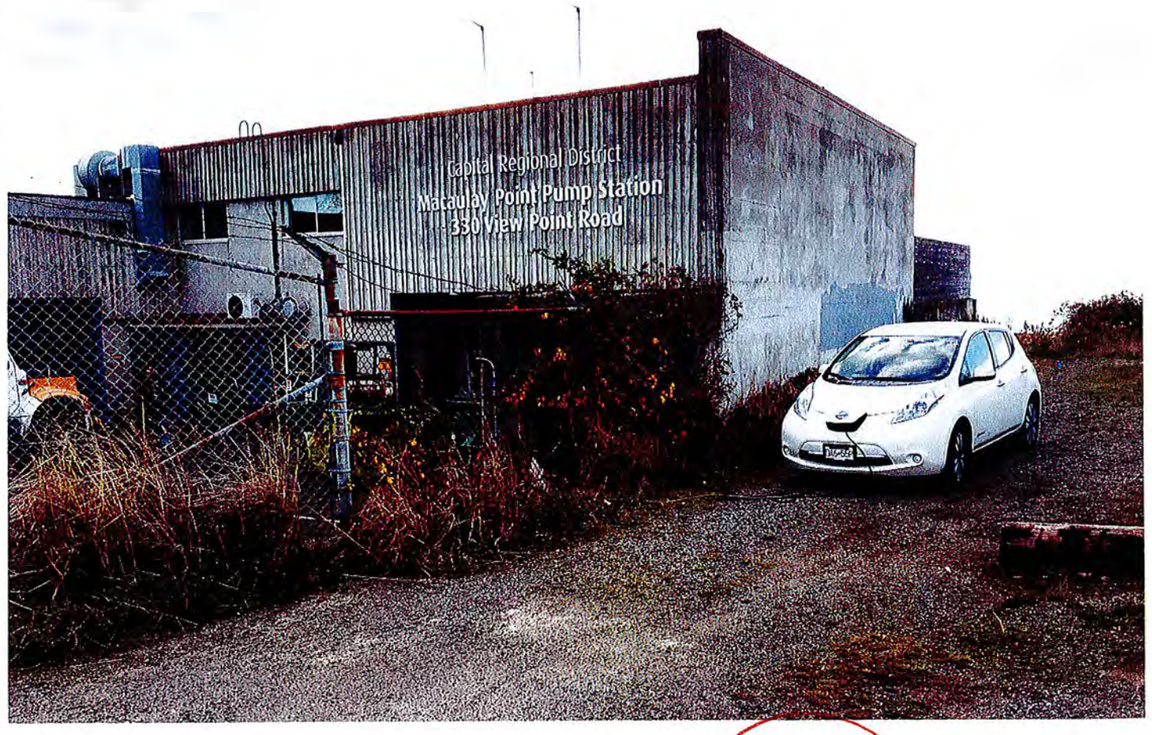


Context Aerial

As we get closer, important site features appear. The openness and exposure of being located on the ocean foreshore; the proximity to Fort Macaulay and Macaulay Point Park; being adjacent to the extensive public path network; and, being between open rolling meadows, all heavily influence the siting, form and massing of the project.

Existing Buildings

The existing Macaulay Pump Station is comprised of several generations of concrete buildings of varying massings enclosed in a tall barbed-wire fence and is surrounded by discarded equipment and outdoor storage, as one would expect in a workyard.



Existing Buildings

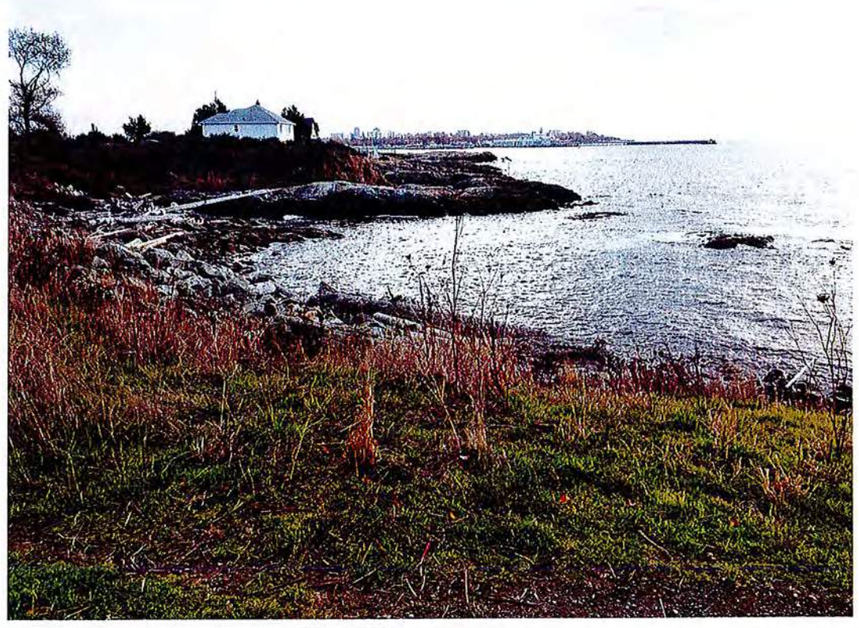
A single family home, part of the DND base, is located to the east of the existing pump station. Many antennae project above the roof and many vehicles frequent the site, and it appears that flood lighting is used. The existing buildings are in poor condition and clearly ready to be replaced.

Existing Site Features

The site has some interesting natural features including rock outcrops at the southwest corner and adjacent to the site, a rolling meadow on the east but otherwise, the existing site has no environmental integrity.

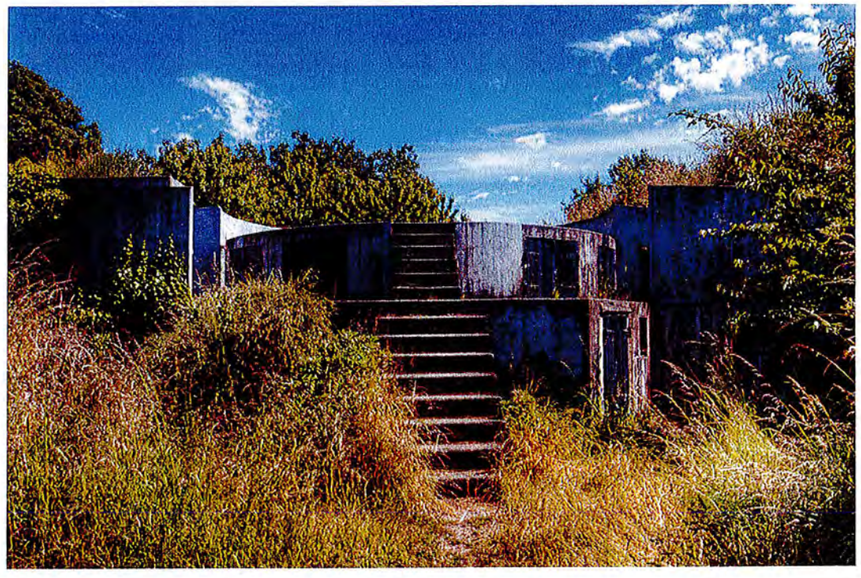
Existing Site Features

An existing public pathway follows the foreshore along the south providing stunning views of the Olympic Mountains. The existing plant life includes grassy meadows, shoreline shrubs and blackberries, ideal for animal habitat.



Macaulay Point Park

Fort Macaulay in Macaulay Point Park features rolling landscapes, grassy meadows and broad vistas of the Olympic Mountains and the ocean life below. Bunkers, blockhouses, trenches and concrete bases for coastal artillery are dotted throughout the park and remain mostly invisible when viewed from the water but for small projections that peek above small hilltops.



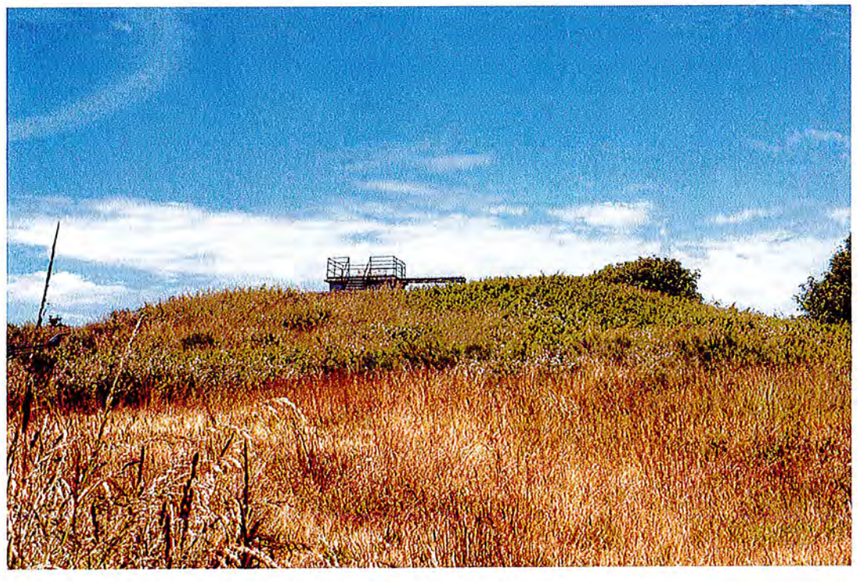
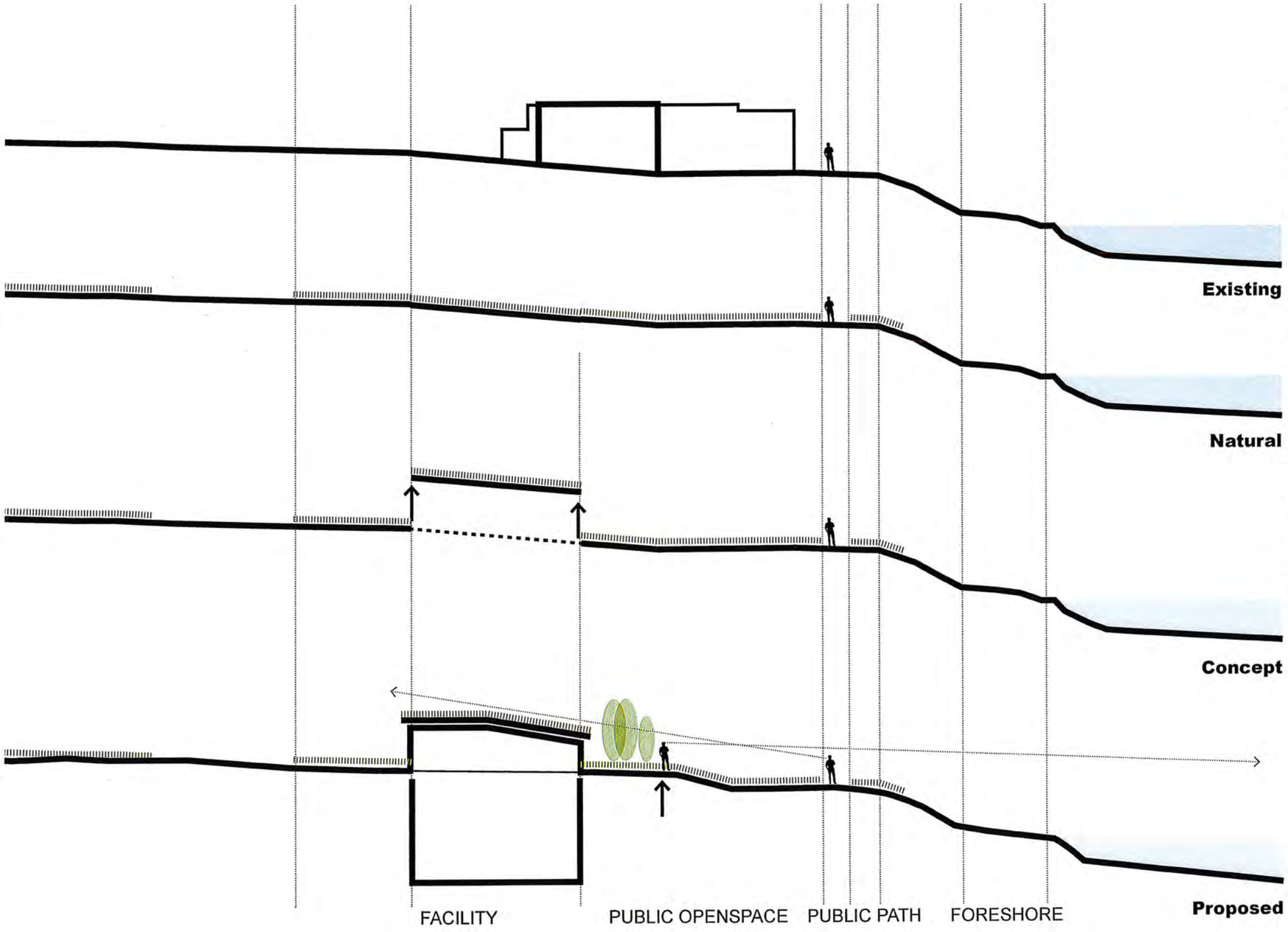


Photo Credit: Toad Hollow Photography

Section Concept

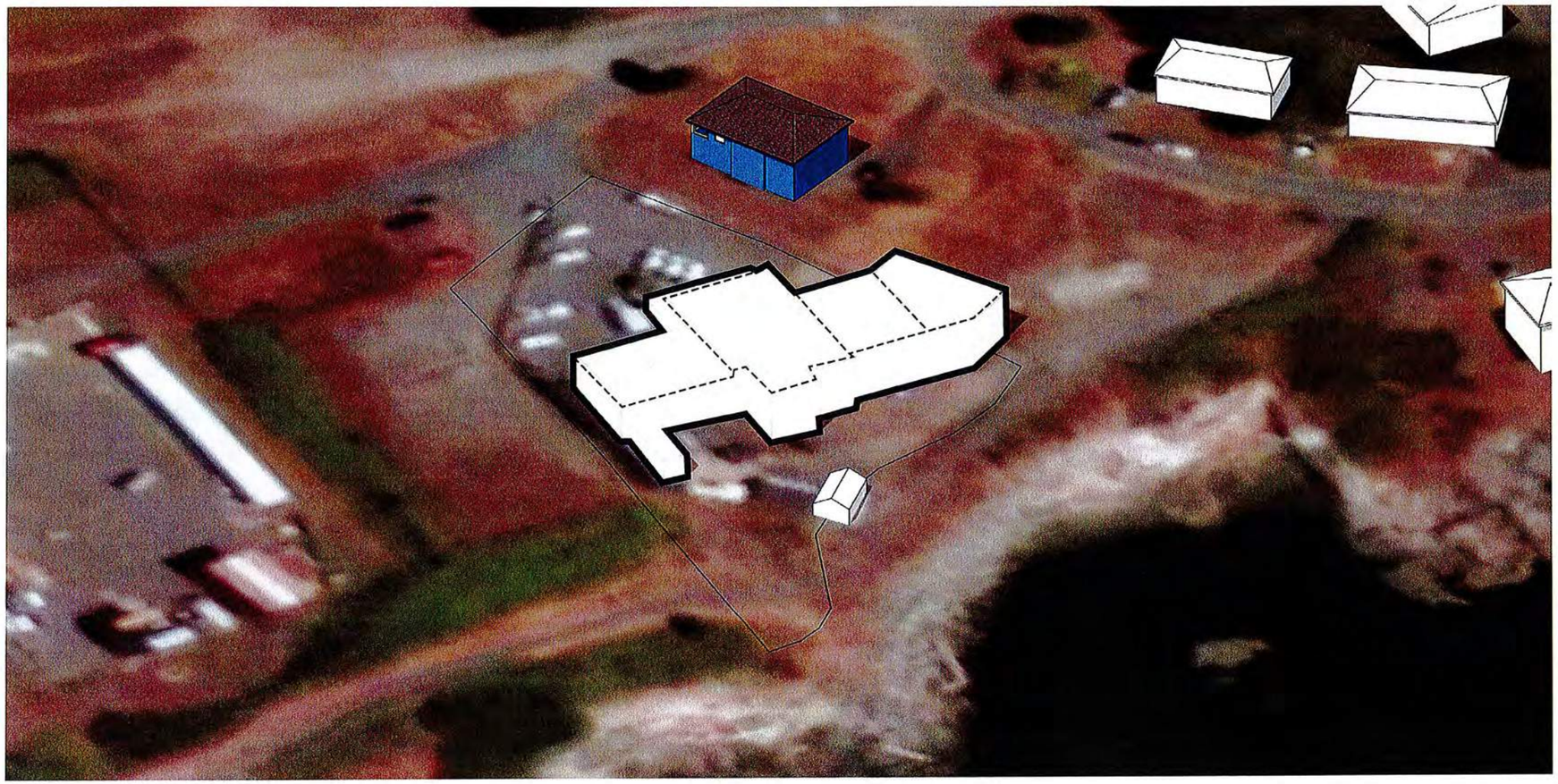


When considering the existing pump station, it clearly ignores its site. If we consider the site in its natural state, one could conceptually raise a piece, landscape and all, and tuck a building below.

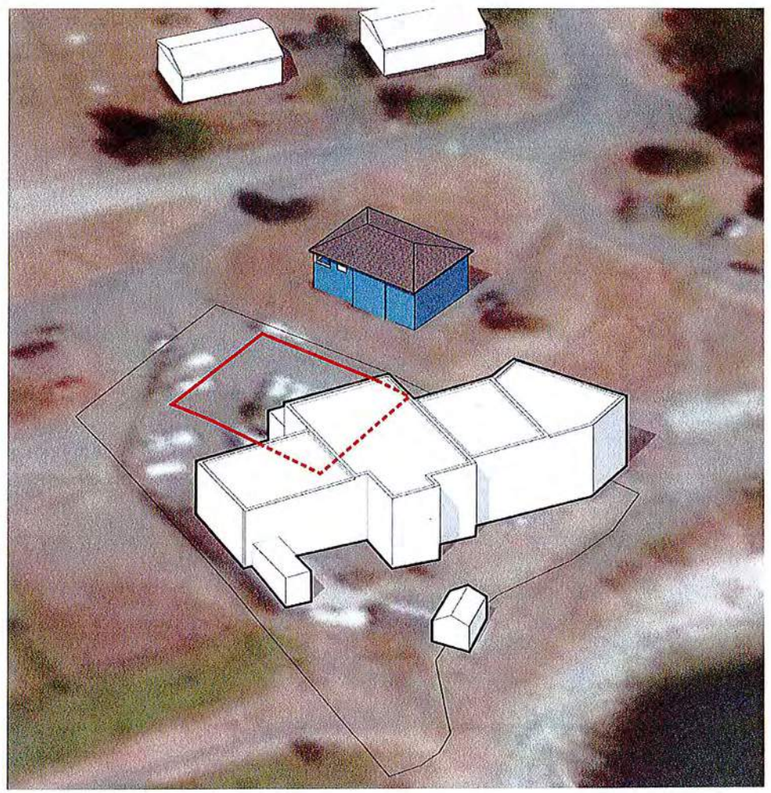
This strategy is very much like a bunker or blockhouse seen at Fort Macaulay where the goal was to keep the structures almost invisible from the water and the air.

Great effort was made to locate as much of the proposed pump station below-grade with only the minimum projecting above to:
- keep the mass as small as possible
- increase the acoustic performance by burying the noisy bits
- locate the rooms that require height at the rear with the low rooms on the front, facing the public pathway, which enhances the site profile
- cover the building in a green roof planted with the same sedum found throughout the site
- screening the building from the public pathway with planting
- drain the green roof to a rain garden and into the stormwater management system
- reuse excavated material to create a public viewing opportunity

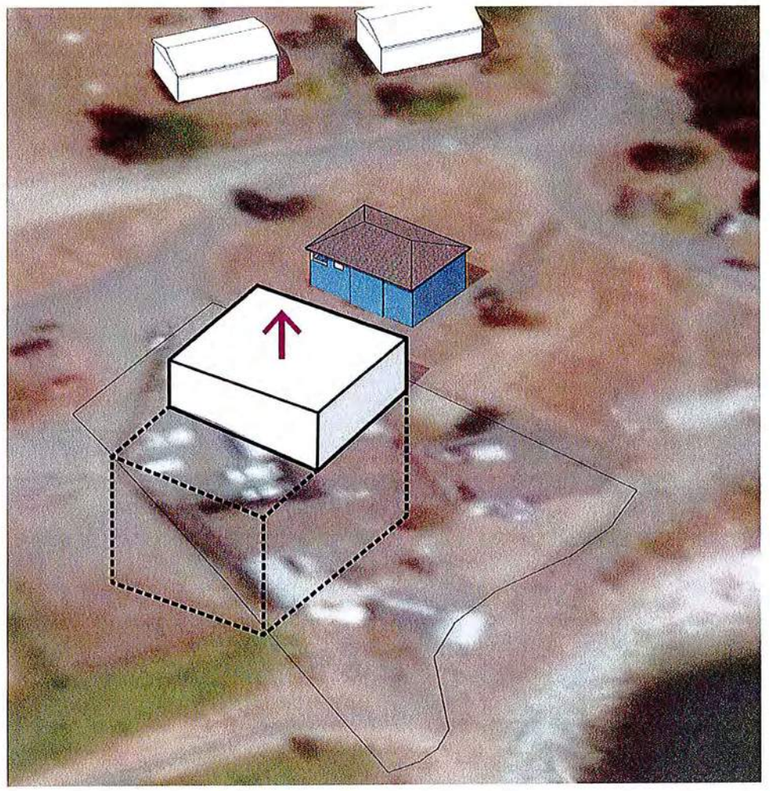
Existing Massing



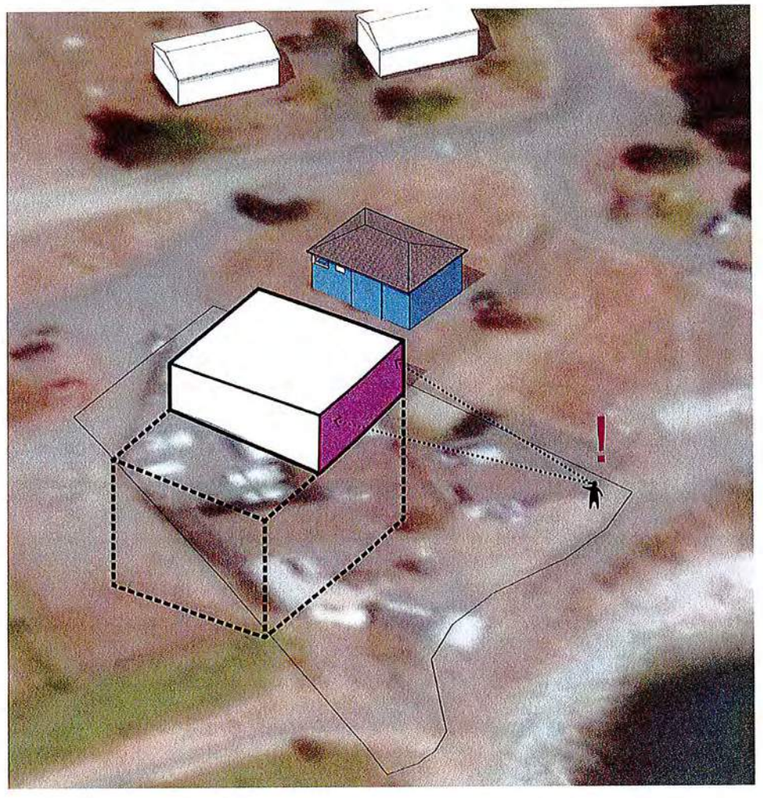
When seen from above, the existing pump station and workyard spans the width of the site and sits close to the public pathway. There are many generations of additions of varying heights, masses and materials, from board-form concrete to a pre-manufactured steel shed.



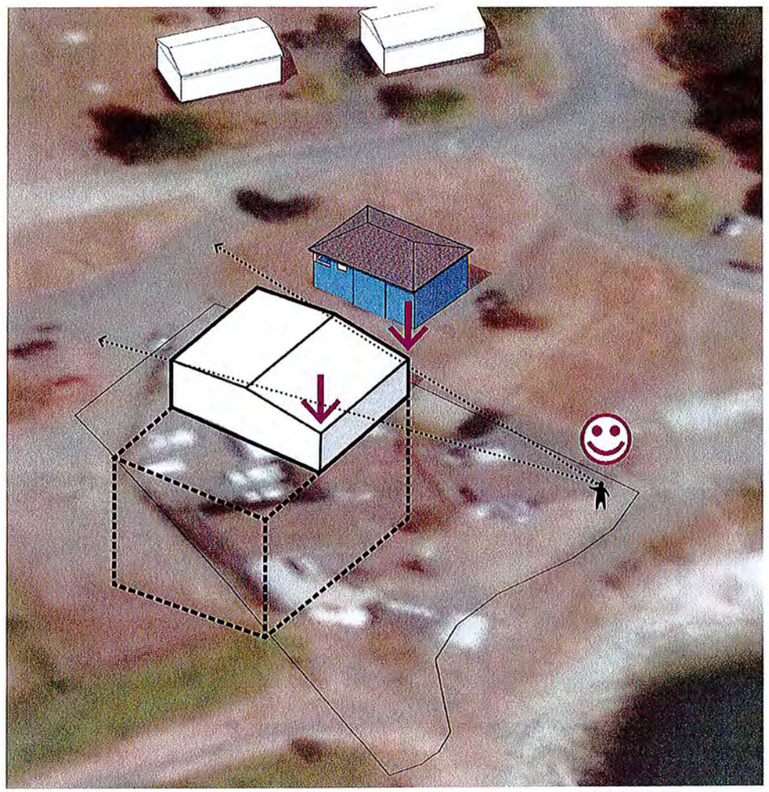
The Selected site for the new pump station is shown in red. This location was choosen for a number of reasons.
1. Its set far back from the path and shore, providing more open space and natural habitat.
2. It allows the existing station to remain operation during the contstruction. Which eliminates the need for distruptive temporary solutions (above grade portable pumps on flatbed trucks)
3. It aligns with the adjacent building creating a street edge.



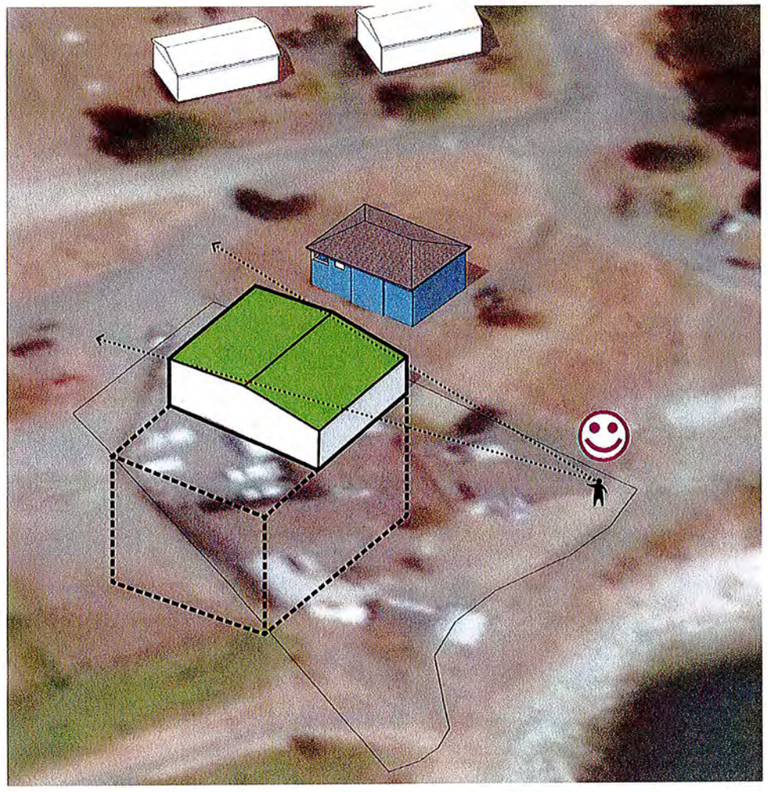
The the above grade equipment requires a clear span space with 6m of interior height. This diagram shows the required footprint extruded to 7m (1m for structure, green roof and services).



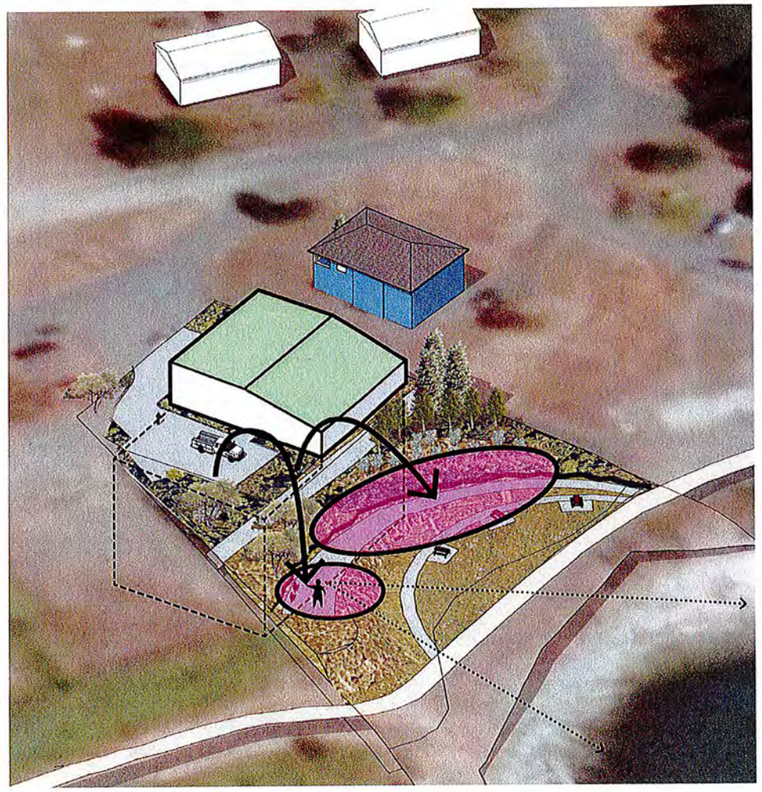
This simple box felt imposing from the path and out of scale.



By working with all the consultants equipment with lower height clearances were located along the path side of the building. This enabled a large part of the roof to be lowered. providing the oppourtunity to create a sculptural roof and a much lower building facing the path.



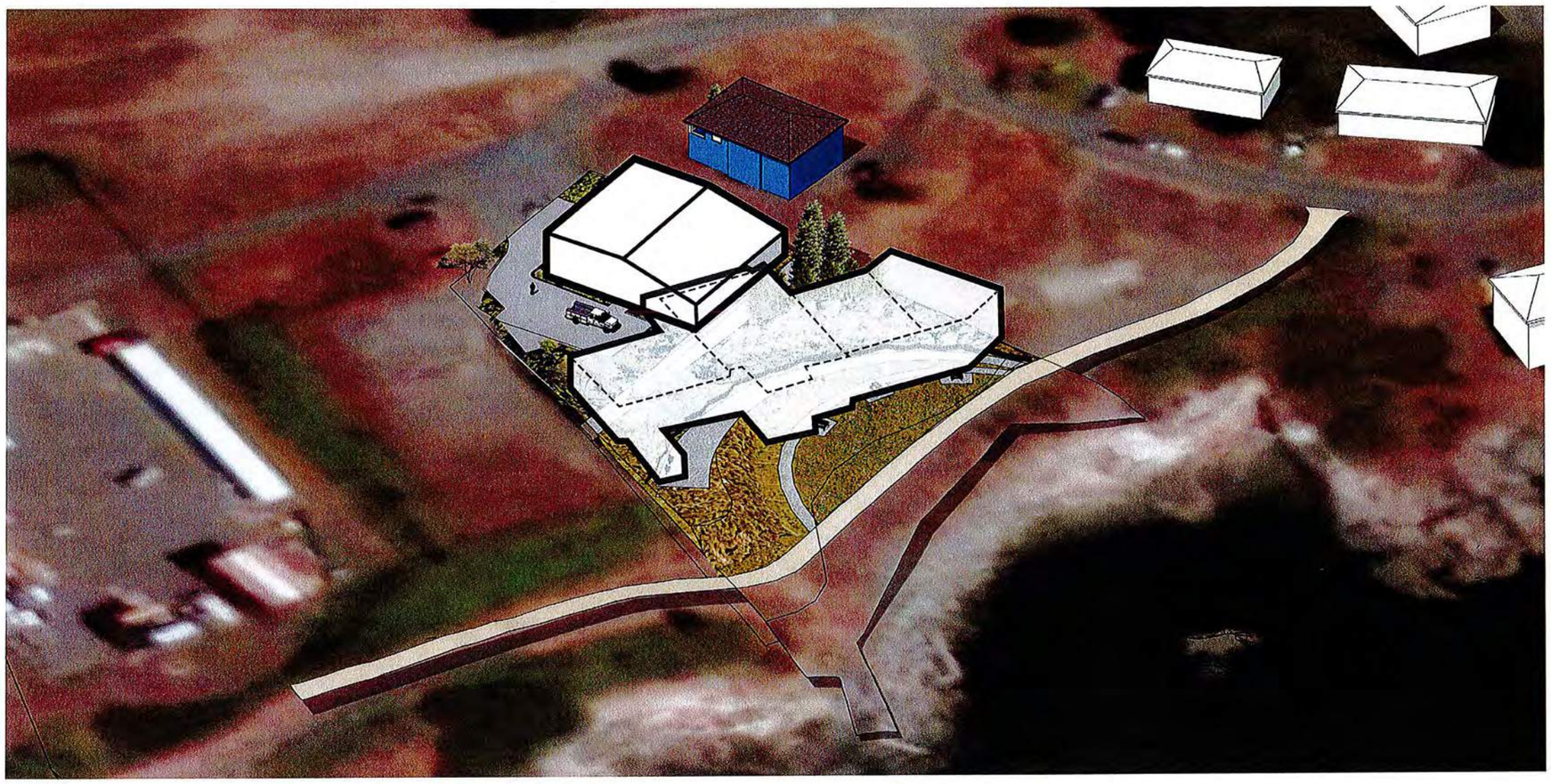
A green roof provides bird and insect habitat, protects the building envelope from weather and bird droppings, is pleasent to look at from the path as well as from from the air. It also recuduces heat island effect and helps accoustically insulated the building.



Proposed Pump station design minimizes the impact to the community and remains focused on sustainability.

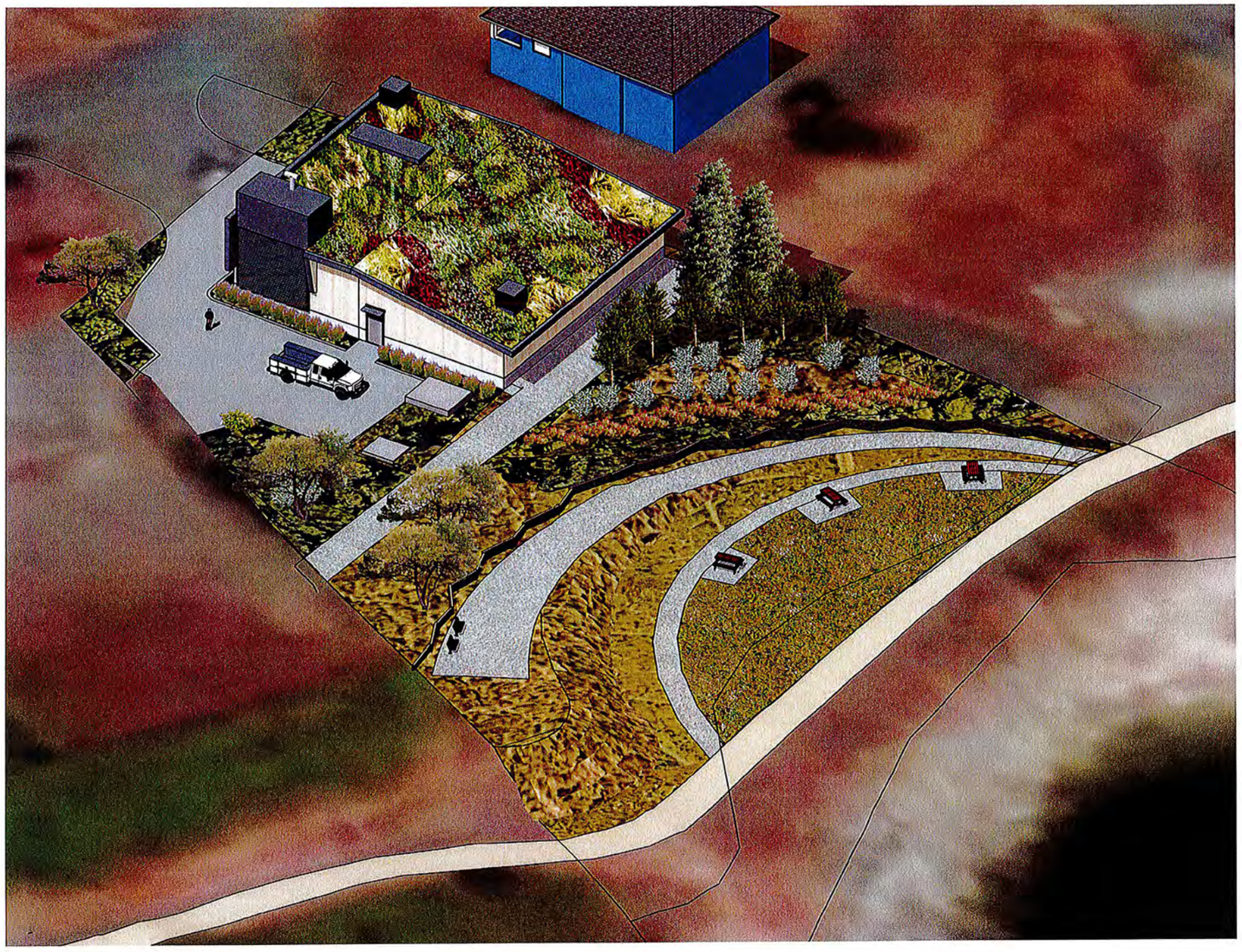
In order to reduce truck traffic and waste removal. All excavated material will be relocated on-site and will be used to fill in the old pump station and to create a naturalized elevated public pathway which will enable views out to the ocean, where Orcas, whales, sea lions, otters are frequently seen.

Proposed vs Existing Massing



Comparing the proposed and the existing pump stations, it is clear that the station has been moved further back from the public pathway, dramatically increasing the public open space; the majority of the facility has been moved below-grade with the above-grade portion kept as small as possible; and, there is a large increase in landscape including the sedum green roof.

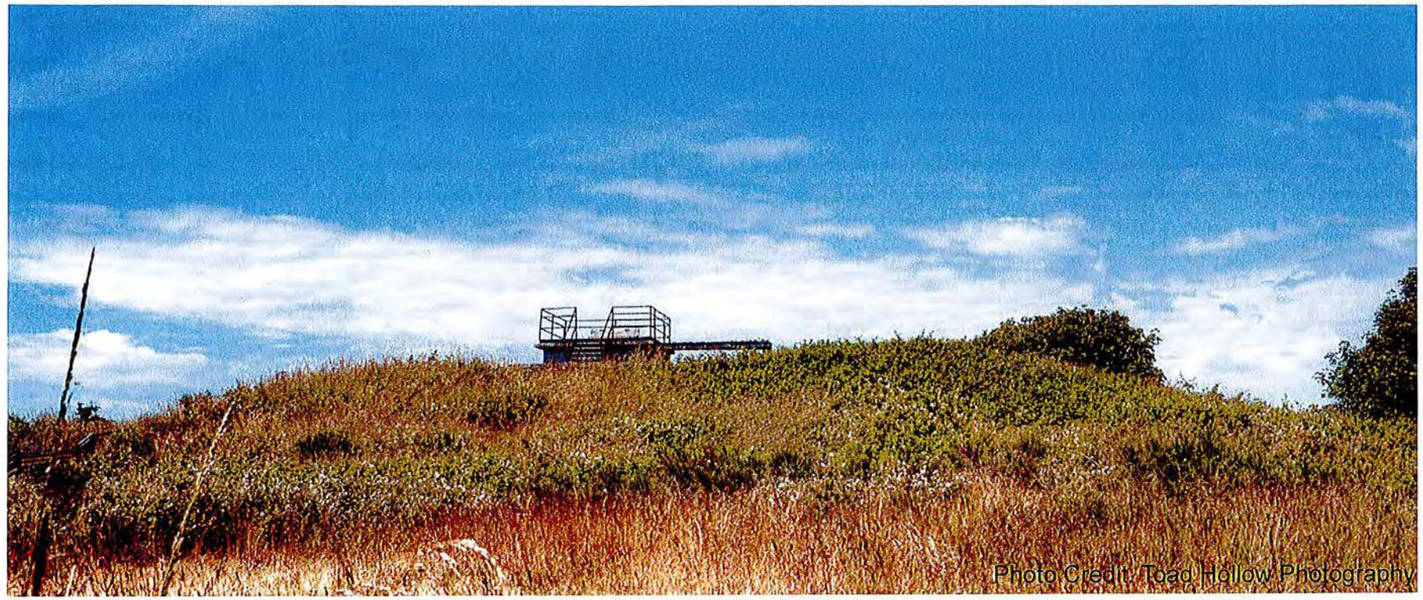
Proposed massing



The proposed massing respects the existing slope of the site, minimizing its scale and its impact on the landscape. It is screened from the public pathway, from the air and from the water. It is an all-wood building, both the structure and its cladding. The facility will no longer be a workyard as it will be moved to the water treatment plant. There will be no fencing or gate around the building. Only one antenna will project above the roof.
Mechanical air intake and exhaust have been combined with roof access into a single vertical element.

Concept Rendering

The nearby Fort Macaulay provides a precedent for how to mask a structure along the coast, hidden and screened within a rolling landscape meadow and peeking out from just above.



Fort Macaulay Bunker

Rendering of the proposed public open space and the building screening

Building Materials

Sedum Green Roof

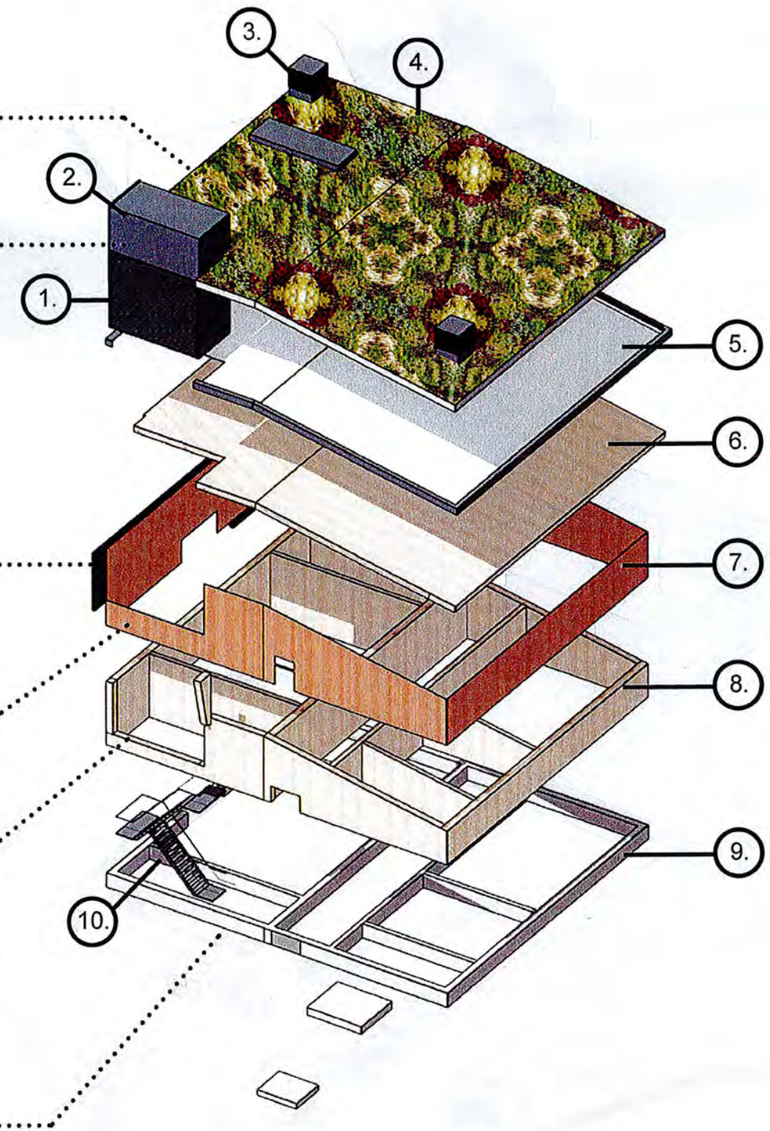
Composite Aluminum Panel

Accoya Shou Sugi Ban Wood Siding

Accoya Natural Wood Siding

CLT Structure

Concrete



As we considered the exterior materials for a building with such an exposed oceanfront site, many critieria had to be addressed:
- durability
- quality
- low maintenance
- weathering
- natural
- sustainable

The proposed green roof provides a natural material when seen from above, such as cruise ships, ferries, planes and helicopters; it provides protection to the roof membranes from sun and extreme weather as well as gull droppings which are caustic to roofing; it provides additional acoustic dampening; and, provides additional habitat for birds and insects.

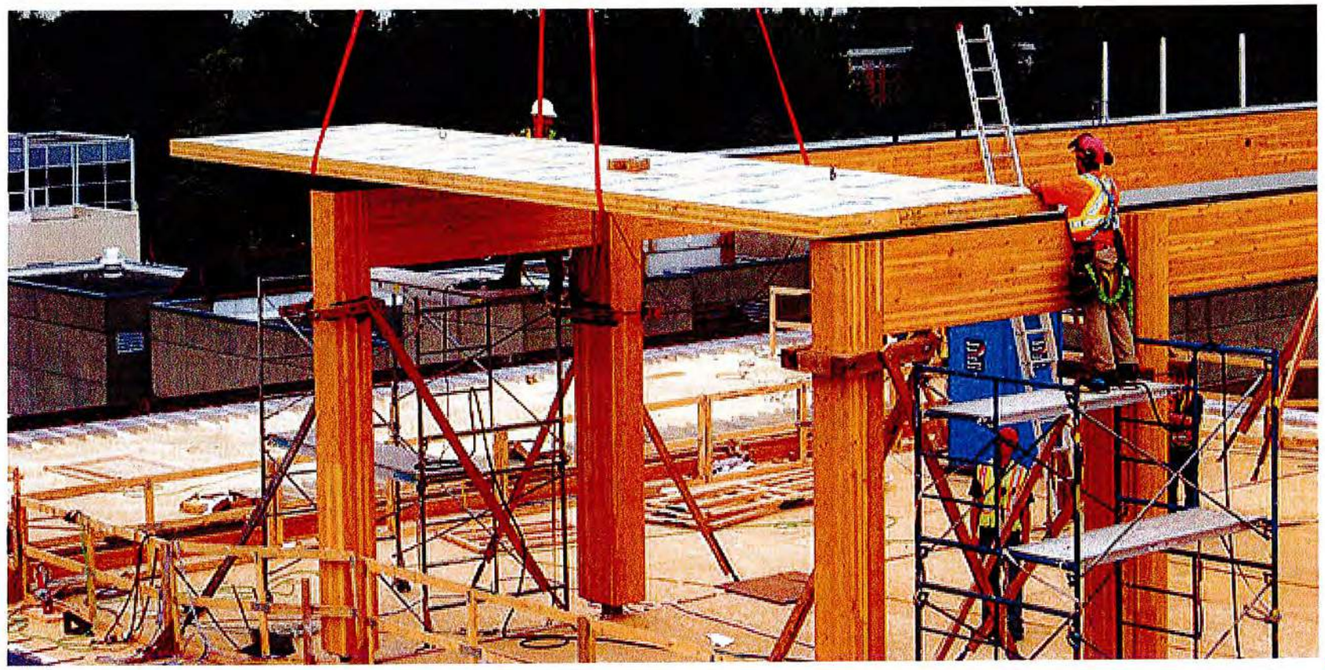
The proposed Accoya wood cladding is a high quality, Cradle-to-Cradle Gold Certified, durable material with a 50+ year warranty, without the need for a coating. To differentiate the front from the rear or the exposed, weathering side of the building, we propose a Shou Sugi Ban finish which is a walnut-coloured charred finish that naturally protects the wood further, as seen in Japanese and Northern Scandinavian architecture.

All metal must be durable due to the exposure to salt spray and we propose a durable composite aluminum panel colour matched with the acoustic louvres.

The concrete base will be clad in concrete-faced rigid insulation which will be fully screened with planting.

1. Genset intake and Exhaust
2. Roof Access penthouse
3.Equipment Ventilation
4. Green Roof
5. Roof Membrane (protected by Greenroof)
6 . CLT Wood Roof Structure
7. 50 year Wood Cladding
8. CLT Above Grade Walls
9. Roof Access Stair
10. Concrete Foundations + Below Grade Structure

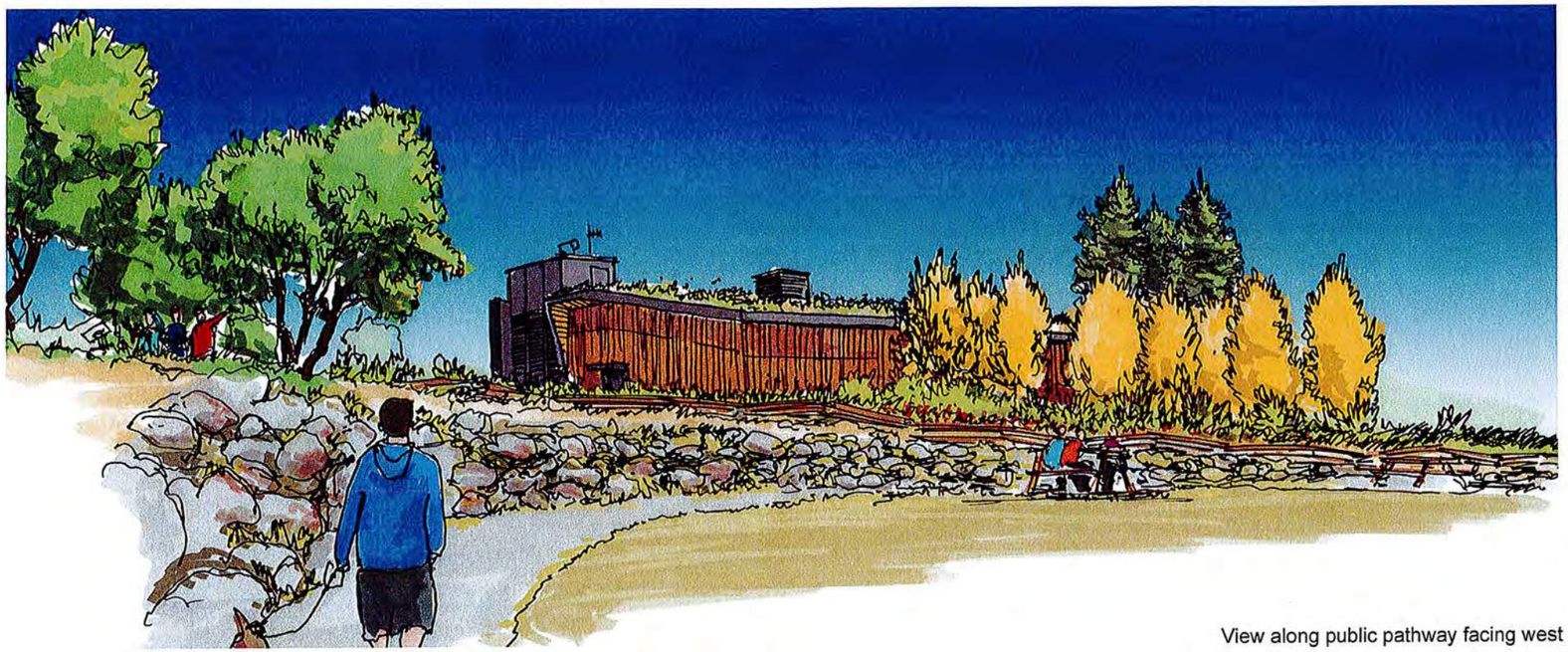
Building Structure



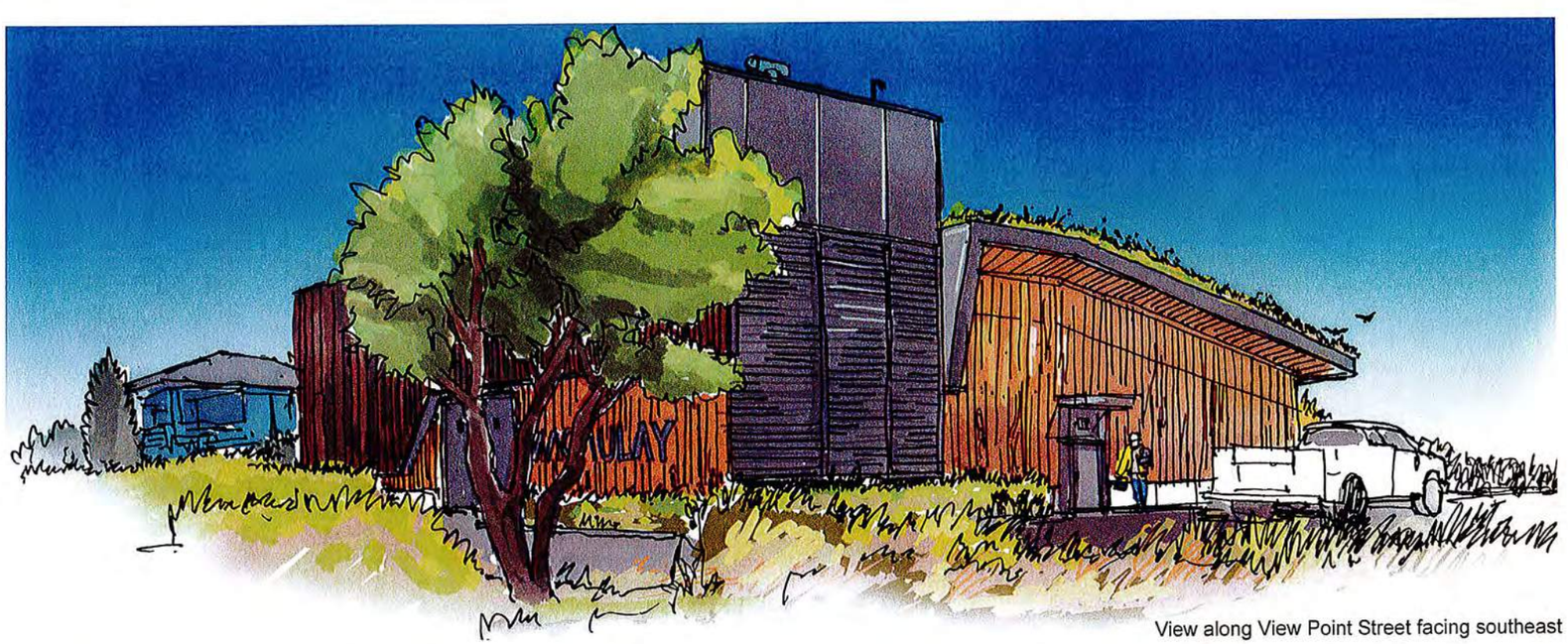
To further our drive for sustainability, we propose the use of cross-laminated timber (CLT) panels, made entirely of BC wood, for the entire above-grade structure (clad in wood). CLT is simple to manufacture as it is made of standard size 2x6 lumber that is glued together into flat panels. There are many advantages:

- light weight
- better seismic response
- reduction in the size of footings
- can use beetle-killed wood or sustainably harvested BC wood
- durable and proven
- efficient, assembles like a Lego set
- acoustic benefit
- speed of construction as panels are pre-manufactured (reduced site noise, fewer trucks)
- sequester carbon

By using CLT on this project, we anticipate sequestering 40,000 kgs of CO2!!



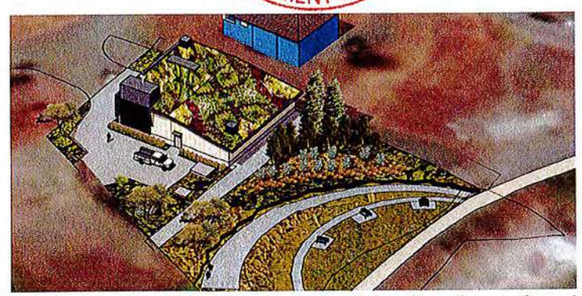
View along public pathway facing west



View along View Point Street facing southeast

Sustainability

Summary of the project's sustainable features:
- durable materials
- all BC wood above-grade structure sequestering 40,000 kgs of CO2
- green roof
- on-site stormwater management
- small footprint
- phasing/staging/siting by maintaining the existing pump station while the proposed one is under construction
- increase bi-diversity and habitat on-site
- support Macaulay Point Natural Areas Management recommendations
- reduce waste and also truck traffic which will minimize the impact to the community
- insulated for high acoustic performance with a thermal benefit
- eliminate light pollution by avoiding flood lighting and using only a single motion-activated light above the entry door
- significant increase in public open space



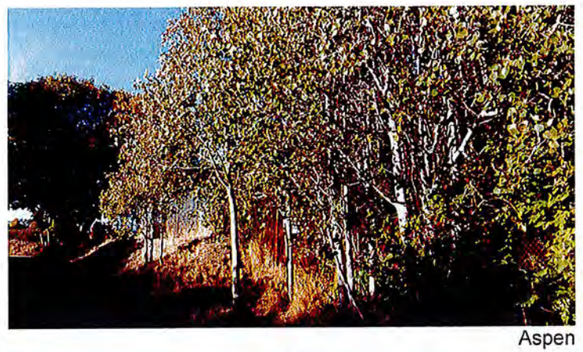
View from the southwest

Landscape Context

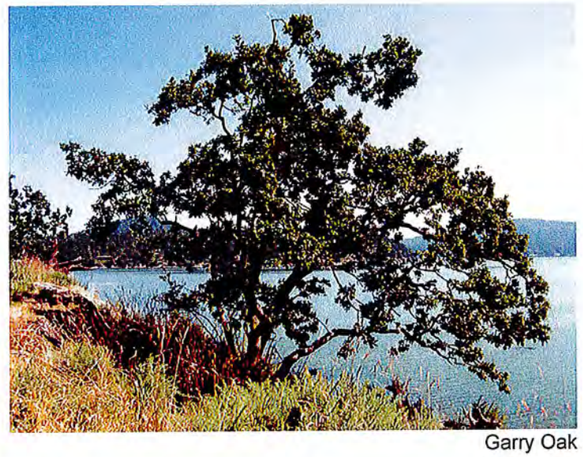
Macaulay Point Management Plans
Township of Esquimalt

Figure 1

Figure 1. Preliminary management zones suggested for Macaulay Point Park.



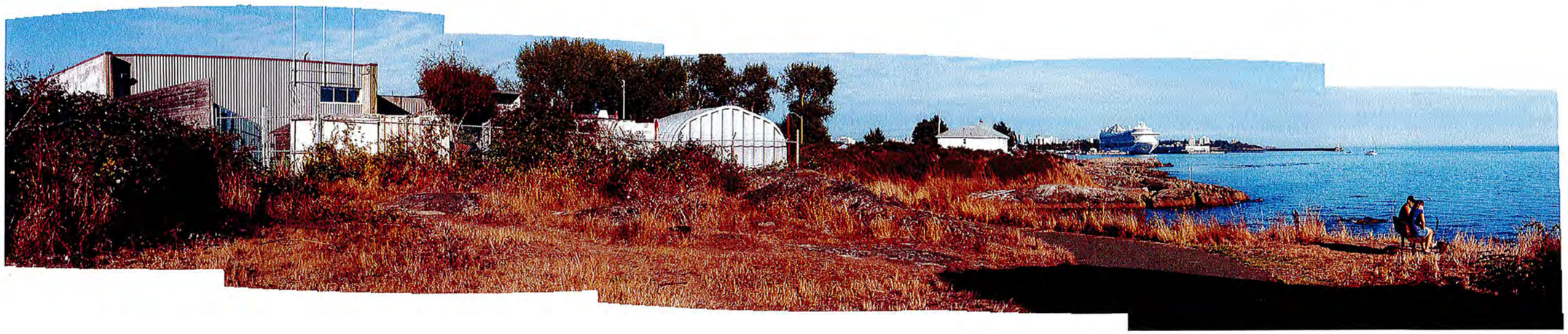
Aspen



Garry Oak

The Macaulay Pump Station site has several notable features:
- located on traditional Lkwungen territory
- located on the Pacific Flyway, a major north/ south flyway that extends 4000 miles from Alaska to Patagonia and is used by millions of migratory birds each spring and fall
- adjacent coastal bluff marine habitat and coastal waters where whales, sea otters, sea lions and porpoises are seen
- part of the Gateway to Victoria when travelling by boat or plane
- surrounded by DND lands including Search and Rescue, and married military personnel housing
- adjacent a popular trail that links Work Point and the Greater Esquimalt community to Macaulay Point Park, a park on the site of an 1800's fortification and the only Esquimalt park with a management plan
- currently bereft of ecological values

Landscape Design Objectives

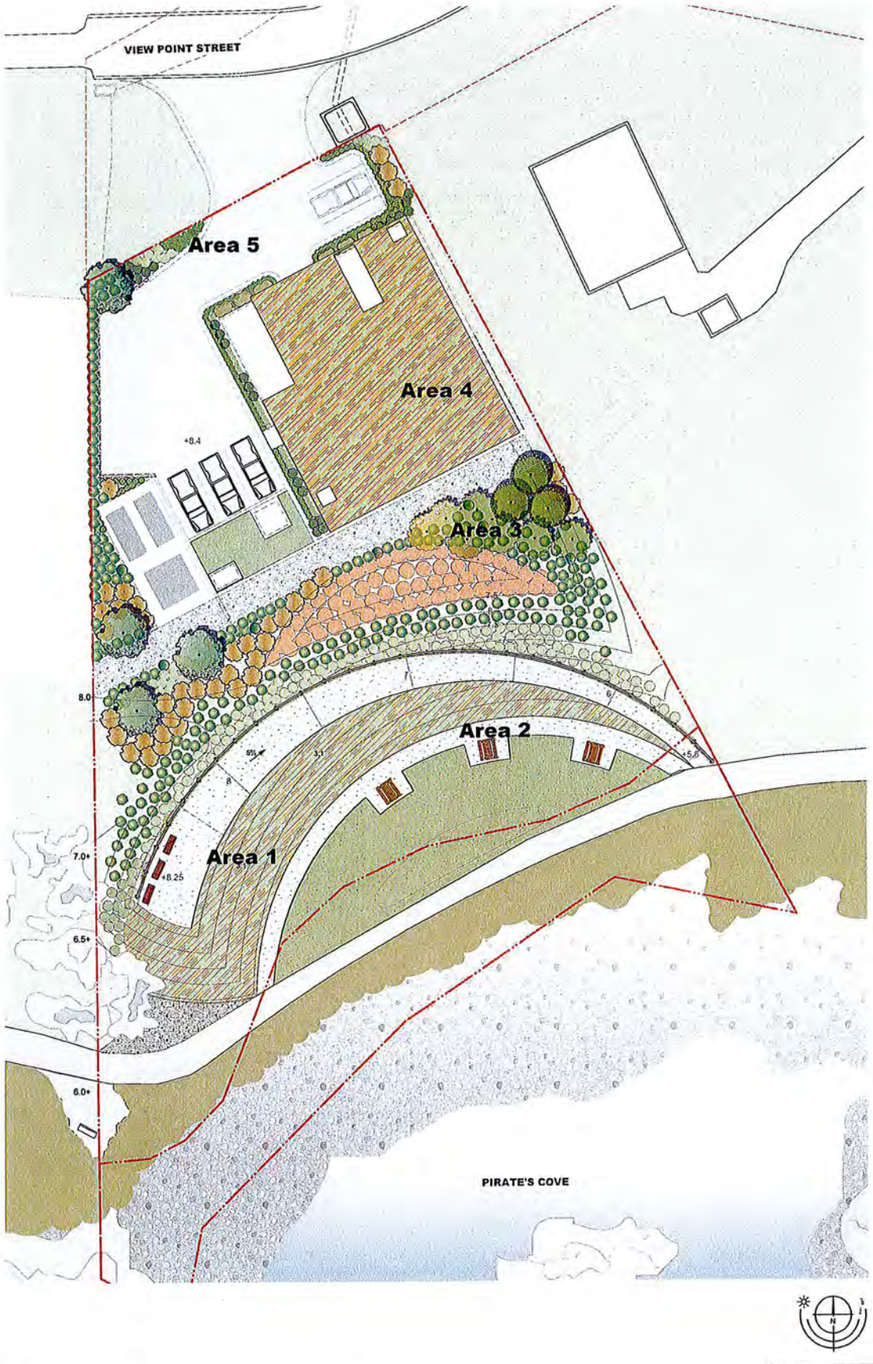


Using the Macaulay Point Park Management Plan and in-house restoration and shoreline experience for reference, LADR Landscape Architects established the following vision and goals:

Vision: Establish an ecologically intelligent landscape that buffers the pump station from water views and provides an amenity to the neighbourhood.

Goals:
1) Create the foundation for a self sustaining (potentially novel) ecosystem; include biological diversity and opportunities for bird and wildlife habitat
2) Create a low maintenance, low irrigation demand landscape, that allows for anticipated climate change, succession and park maintenance budgets
3) Support relevant Macaulay Point Park Management Plan goals
4) Create an attractive, welcoming, safe environment for residents

Landscape Design Summary



The design maximises vegetation opportunities and landscape functionality. The design transforms an almost entirely impermeable lot into an environmentally rich park-like setting with public amenities.

It can be described as 5 distinct areas.

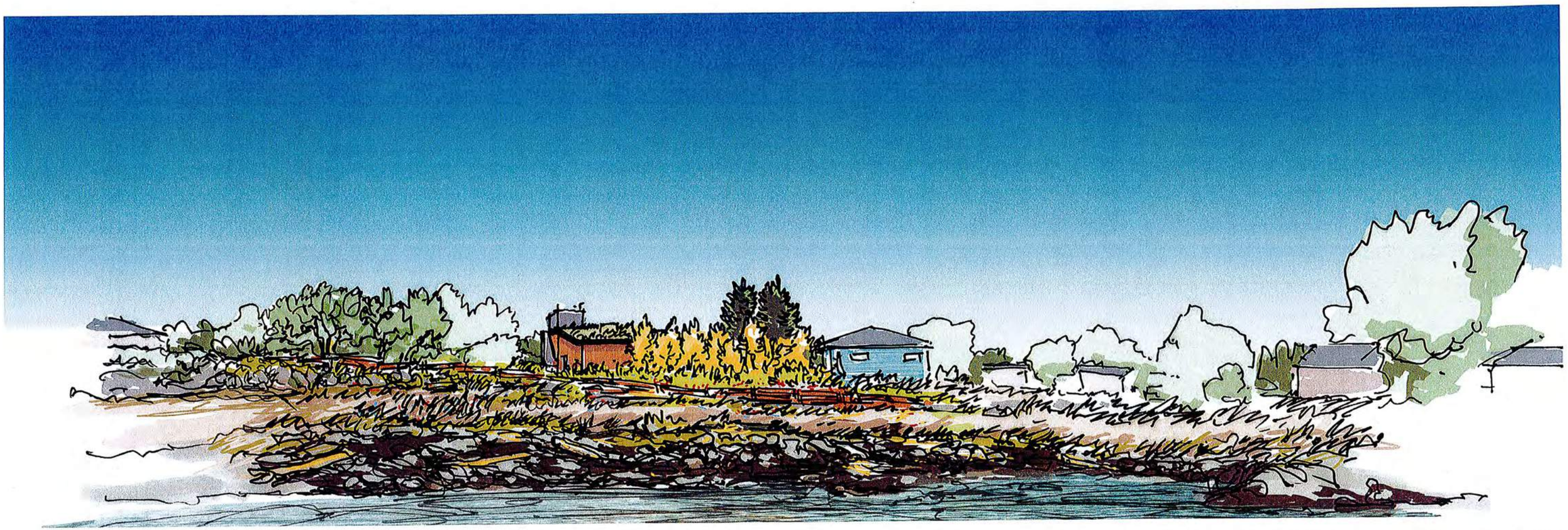
Area 1: Viewing Platform. A universally accessible path leading to a viewing platform bisects the site into a public amenity area to the south and largely inaccessible landscape areas to the north. The path, located on a landform comprised of excavated fill, is edged by a south facing 3:1 slope planted with low maintenance (mowed once per year) Garry oak meadow mix and camas bulbs. At the west edge this mix will ease into the existing outcrop that transverses the property line. A small stone trench at the south-west corner of the site will collect stormwater not absorbed by the meadow or absorbent lawn area located in Area 2. The lookout provides a quiet bird/sea life watching opportunity and affords excellent views to Ogden Point and the Olympics beyond.

Area 2: Picnic / Open Space. A universally accessible path at the toe of the landform edges an amenity area intended for picnicking, socializing, and informal play. A slightly dished, low maintenance park style grass lawn (mowed 3-4 times per year) provides stormwater detention/infiltration during the rainy season and flexible open space throughout the summer. This area is intended to feel like a quiet extension of Macaulay Point Park and to provide a counterpoint to Park activity. Of note, the shoreline immediately south of Area 2 falls within the 'Conservation/On Leash Dog Walking Zone' of the MPP Management Plan.

Area 3: Habitat Restoration/Rain Garden. Separated from Area 1 with a low cedar rail fence to discourage people and dogs from accessing it, and edged on the north side by a 3m wide rough blast rock building maintenance strip, the habitat area includes massed native plantings that have been selected for their resilience to anticipated climate change and specific site conditions, for their habitat value, and because they are among the recommended species in the MPP Management Plan. Trees include Douglas fir, quaking aspen and Garry oak; shrubs include redtwig dogwood, oceanspray, Oregon grape, flowering currant, Nootka rose, snowberry, salal and honeysuckle. The expansive rain garden will infiltrate roof water not absorbed by the green roof, and trees and large shrubs will screen views from the waterfront to the pump station and associated parking yard.

Area 4: Green Roof. The pump station includes an extensive style pre-vegetated sedum mat green roof which contributes to roof membrane protection, thermal and acoustic control, stormwater management, biodiversity and aesthetics. Tilted towards the water, the roof will be seen from the public walkway as well as from planes and boats entering the harbour.

Area 5: Service Entry and Yard. Select native plant species used in the habitat restoration area are used everywhere space allows in and around the service entry and yard. Tall and Low Oregon grape and salal are planted along the foundation wall, and flowering currant, snowberry and oceanspray are added to the palette to create a vegetative buffer at the north-east corner of the site. The palette extends further to include a Garry oak at the north-west corner of the site and another at the south-west corner of the yard. Massed Nootka roses define the west property line and combine with oceanspray to create dense planting immediately west of the utility pads (diesel fuel and transformer).



Sketch of the building screened by landscaping and public open space nestleling into the shoreline

SCHEDULE C

Township of ESQUIMALT

GREEN BUILDING CHECKLIST

The purpose of this Checklist is to make property owners and developers aware of specific green features that can be included in new developments to reduce their carbon footprints to help create a more sustainable community.

Creating walkable neighbourhoods, fostering green building technologies, making better use of our limited land base and ensuring that new development is located close to services, shops and transit are some of the means of achieving sustainability.

The Checklist which follows focuses on the use of **Green Technologies** in new buildings and major renovations. The Checklist is not a report card, it is a tool to help identify how your project can become 'greener' and to demonstrate to Council how your project will help the Township of Esquimalt meet its sustainability goals. It is not expected that each development will include all of the ideas set out in this list but Council is looking for a strong commitment to green development.

There are numerous green design standards, for example, Built Green BC; LEED ND; Living Building Challenge; Green Shores; Sustainable Sites Initiative. Esquimalt is not directing you to follow any particular standard, however, you are strongly encouraged to incorporate as many green features as possible into the design of your project .

As you review this checklist, if you have any questions please contact **Development Services at 250.414.7108** for clarification.

New development is essential to Esquimalt. We look forward to working with you to ensure that development is as green and sustainable as possible.

Other documents containing references to building and site design and sustainability, which you are advised to review, include:

- Esquimalt's Official Community Plan
- Development Protocol Policy
- Esquimalt's Pedestrian Charter
- Tree Protection Bylaw No. 2664
- A Sustainable Development Strategic Plan for the Township of Esquimalt

Adopted on January 10th, 2011

"One-third of Canada's energy use goes to running our homes, offices and other buildings. The federal government's Office of Energy Efficiency (Natural Resources Canada) reports that a corresponding one-third of our current greenhouse gas (GHG) emissions come from the built environment."
[Green Building and Development as a Public Good, Michael Buzzelli, CPRN Research Report June 2009]

Please answer the following questions and describe the green and innovative features of your proposed development. Depending on the size and scope of your project, some of the following points may not be applicable.

Green Building Standards

Both energy use and emissions can be reduced by changing or modifying the way we build and equip our buildings.

1	Are you building to a recognized green building standard? If yes, to what program and level?	Yes	No X
2	If not, have you consulted a Green Building or LEED consultant to discuss the inclusion of green features?	Yes ✓	No
3	Will you be using high-performance building envelope materials, rainscreen siding, durable interior finish materials or safe to re-use materials in this project? If so, please describe them. Exterior timber cladding to be long lifewood with 50 year design guarantee	Yes ✓	No
4	What percentage of the existing building[s], if any, will be incorporated into the new building? 0 %		
5	Are you using any locally manufactured wood or stone products to reduce energy used in the transportation of construction materials? Please list any that are being used in this project. BC Cross Laminated Timber (CLT) used in structure		
6	Have you considered advanced framing techniques to help reduce construction costs and increase energy savings?	Yes	No X
7	Will any wood used in this project be eco-certified or produced from sustainably managed forests? If so, by which organization? Cradle to Cradle Gold Certified For which parts of the building (e.g. framing, roof, sheathing etc.)? External wall cladding		
8	Can alternatives to Chlorofluorocarbon's and Hydro-chlorofluorocarbons which are often used in air conditioning, packaging, insulation, or solvents] be used in this project? If so, please describe these. Mineral wool insulation	Yes ✓	No
9	List any products you are proposing that are produced using lower energy levels in manufacturing. CLT timber structure and Enviro concrete (containing ground blast furnace slag)		
10	Are you using materials which have a recycled content [e.g. roofing materials, interior doors, ceramic tiles or carpets]? Landscape sculpting carried out using recycled fill & demolition material	Yes ✓	No
11	Will any interior products [e.g. cabinets, insulation or floor sheathing] contain formaldehyde?	Yes	No X

Water Management

The intent of the following features is to promote water conservation, re-use water on site, and reduce storm water run-off.

Indoor Water Fixtures

12	Does your project exceed the BC Building Code requirements for public lavatory faucets and have automatic shut offs?	Yes	No X
13	For commercial buildings, do flushes for urinals exceed BC Building Code requirements?	Yes	No X
14	Does your project use dual flush toilets and do these exceed the BC Building Code requirements?	Yes ✓	No
15	Does your project exceed the BC Building Code requirements for maximum flow rates for private showers?	Yes	No X
16	Does your project exceed the BC Building Code requirements for flow rates for kitchen and bathroom faucets?	Yes	No X

Storm Water

17	If your property has water frontage, are you planning to protect trees and vegetation within 60 metres of the high water mark? [Note: For properties located on the Gorge Waterway, please consult Sections 7.1.2.1 and 9.6 of the Esquimalt Official Community Plan.]	Yes	No	N/A X
18	Will this project eliminate or reduce inflow and infiltration between storm water and sewer pipes from this property?	Yes ✓	No	N/A
19	Will storm water run-off be collected and managed on site (rain gardens, wetlands, or ponds) or used for irrigation or re-circulating outdoor water features? If so, please describe. Green roof and storm water attenuation / soakaway pond	Yes ✓	No	N/A
20	Have you considered storing rain water on site (rain barrels or cisterns) for future irrigation uses?	Yes	No X	N/A
21	Will surface pollution into storm drains will be mitigated (oil interceptors, bio-swales)? If so, please describe. No connections to storm drain	Yes ✓	No	N/A
22	Will this project have an engineered green roof system or has the structure been designed for a future green roof installation?	Yes ✓	No	N/A
23	What percentage of the site will be maintained as naturally permeable surfaces? The existing site has 0% naturally permeable surfaces	66%		

Waste water

24	For larger projects, has Integrated Resource Management (IRM) been considered (e.g. heat recovery from waste water or onsite waste water treatment)? If so, please describe these.	Yes	No X	N/A

Natural Features/Landscaping

The way we manage the landscape can reduce water use, protect our urban forest, restore natural vegetation and help to protect the watershed and receiving bodies of water.

25	Are any healthy trees being removed? If so, how many and what species? Could your site design be altered to save these trees? Have you consulted with our Parks Department regarding their removal?	Yes	No X	N/A

26	Will this project add new trees to the site and increase our urban forest? If so, how many and what species? 3No. Douglas Fir, 4No. Garry Oak, 7No. Quaking Aspen	Yes ✓	No	N/A
27	Are trees [existing or new] being used to provide shade in summer or to buffer winds?	Yes ✓	No	N/A
28	Will any existing native vegetation on this site be protected? If so, please describe where and how. _____	Yes	No	N/A X
29	Will new landscaped areas incorporate any plant species native to southern Vancouver Island?	Yes ✓	No	N/A
30	Will xeriscaping (i.e. the use of drought tolerant plants) be utilized in dry areas?	Yes ✓	No	N/A
31	Will high efficiency irrigation systems be installed (e.g. drip irrigation; 'smart' controls)?	Yes ✓	No	N/A
32	Have you planned to control invasive species such as Scotch broom, English ivy, Himalayan and evergreen blackberry growing on the property?	Yes ✓	No	N/A
33	Will topsoil will be protected and reused on the site?	Yes	No	N/A X

Energy Efficiency

Improvements in building technology will reduce energy consumption and in turn lower greenhouse gas [GHG] emissions. These improvements will also reduce future operating costs for building occupants.

34	Will the building design be certified by an independent energy auditor/analyst? If so, what will the rating be? _____	Yes	No X	N/A
35	Have you considered passive solar design principles for space heating and cooling or planned for natural day lighting?	Yes	No X	N/A
36	Does the design and siting of buildings maximize exposure to natural light? What percentage of interior spaces will be illuminated by sunlight? _____%	Yes	No X	N/A
37	Will heating and cooling systems be of enhanced energy efficiency (ie. geothermal, air source heat pump, solar hot water, solar air exchange, etc.). If so, please describe. _____ If you are considering a heat pump, what measures will you take to mitigate any noise associated with the pump? _____	Yes	No X	N/A
38	Has the building been designed to be solar ready?	Yes	No X	N/A
39	Have you considered using roof mounted photovoltaic panels to convert solar energy to electricity?	Yes	No X	N/A
40	Do windows exceed the BC Building Code heat transfer coefficient standards?	Yes	No	N/A X
41	Are energy efficient appliances being installed in this project? If so, please describe.			X
42	Will high efficiency light fixtures be used in this project? If so, please describe. LED lighting to be used	Yes ✓	No	N/A
43	Will building occupants have control over thermal, ventilation and light levels?	Yes ✓	No	N/A
44	Will outdoor areas have automatic lighting [i.e. motion sensors or time set]?	Yes ✓	No	N/A
45	Will underground parking areas have automatic lighting?	Yes	No	N/A X

Air Quality

The following items are intended to ensure optimal air quality for building occupants by reducing the use of products which give off gases and odours and allowing occupants control over ventilation.

46	Will ventilation systems be protected from contamination during construction and certified clean post construction?	Yes ✓	No	N/A
47	Are you using any natural, non-toxic, water soluble or low-VOC [volatile organic compound] paints, finishes or other products? If so, please describe. _____	Yes	No	N/A X
48	Will the building have windows that occupants can open?	Yes	No	N/A X
49	Will hard floor surface materials cover more than 75% of the liveable floor area?	Yes	No	N/A X
50	Will fresh air intakes be located away from air pollution sources?	Yes ✓	No	N/A

Solid Waste

Reuse and recycling of material reduces the impact on our landfills, lowers transportation costs, extends the life-cycle of products, and reduces the amount of natural resources used to manufacture new products.

51	Will materials be recycled during demolition of existing buildings and structures? If so, please describe. Demonlition material to be used in forming landscape. Electrical equipment may be recycled	Yes ✓	No	N/A
52	Will materials be recycled during the construction phase? If so, please describe. _____	Yes ✓	No	N/A
53	Does your project provide enhanced waste diversion facilities i.e. on-site recycling for cardboard, bottles, cans and or recyclables or on-site composting?	Yes	No X	N/A
54	For new commercial development, are you providing waste and recycling receptacles for customers?	Yes	No	N/A X

Green Mobility

The intent is to encourage the use of sustainable transportation modes and walking to reduce our reliance on personal vehicles that burn fossil fuels which contributes to poor air quality.

55	Is pedestrian lighting provided in the pathways through parking and landscaped areas and at the entrances to your building[s]?	Yes	No	N/A X
56	For commercial developments, are pedestrians provided with a safe path[s] through the parking areas and across vehicles accesses?	Yes	No	N/A X
57	Is access provided for those with assisted mobility devices?	Yes	No	N/A X
58	Are accessible bike racks provided for visitors?	Yes	No	N/A X
59	Are secure covered bicycle parking and dedicated lockers provided for residents or employees?	Yes	No	N/A X
60	Does your development provide residents or employees with any of the following features to reduce personal automobile use [check all that apply]: ☐ transit passes ☐ car share memberships ☐ shared bicycles for short term use ☐ weather protected bus shelters ☐ plug-ins for electric vehicles			

Is there something unique or innovative about your project that has not been addressed by this Checklist? If so, please add extra pages to describe it.