

Technical Memorandum



To: Krishan Anand
1156038 BC Ltd.
7495 Whelen Court
Burnaby BC V5E 1X4

By Email: NuGenprojects@gmail.com

From: Jason Barsanti, R.P.Bio.
Barsanti Environmental Services Ltd.
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778-908-9711

April 3, 2020
Rev. September 1, 2020
Rev. January 20, 2021
Project No. 19.0047

Re: REVISED: Watercourse Classification at 2222 Clarke St, Port Moody BC

1 Introduction

NuGen Projects, 1156038 BC Ltd. (the Client) has retained Barsanti Environmental Services Ltd. (Barsanti Environmental) to prepare a watercourse classification report on their project site at 2222 Clark St, Port Moody BC (the Site, Figure 1).

This January 20, 2021 revision supplies revised drawings in Appendix 1 and 2. It is understood that no changes to the RPEA resulted from the revised Stormwater Management Plan and Culvert Crossing designs supplied by Core Concept (pers. comm. Anthony Read, 2021-01-20)

This report provides the opinion of a Qualified Environmental Professional (QEP) on watercourse classification and habitat enhancement measures.

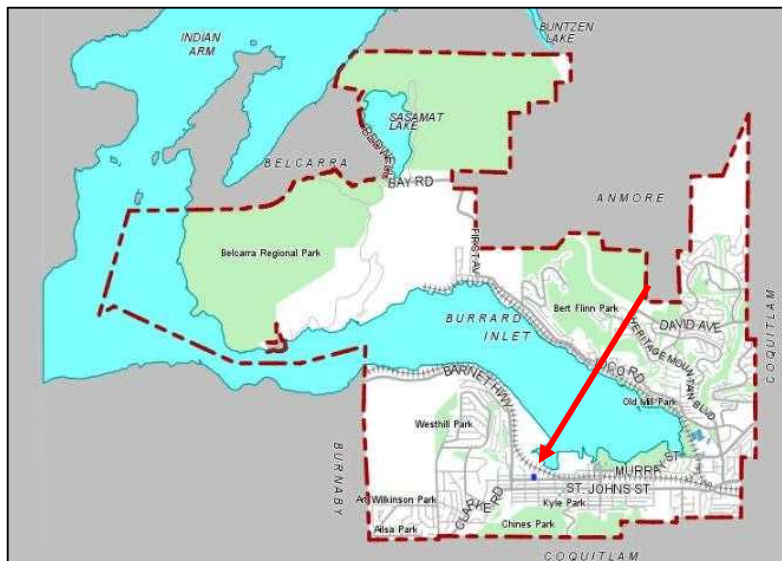


Figure 1. Location of 2222 Clarke St, the subject property, in Port Moody BC.

2 Limits of Assignment

- Our investigation is limited to ecological conditions – fish and wildlife habitat assessment.
- Our investigation is based on our visual inspection of the site and the surrounding area and from information obtained in publicly available resources. No sampling was conducted for this report.
- No design or review of proposed civil infrastructure works is within our scope or capacity.

3 Methods

Barsanti Environmental reviewed Client supplied architectural drawings, a previously prepared watercourse classification report¹ and Port Moody staff comments on the Client's proposal. Watercourse mapping, available on Port Moody GIS Webmap, and Moody Centre Stormwater Management Servicing Plan² (referred to here as, KWL-10-19) were reviewed. The project was discussed with Karen Devitt, Environmental Coordinator, City of Port Moody. Port Moody's streamside protection bylaw was reviewed. I attended the site on December 17, 2019. Observations were recorded with notes and pictures.

4 Observations

4.1 Desktop Analysis

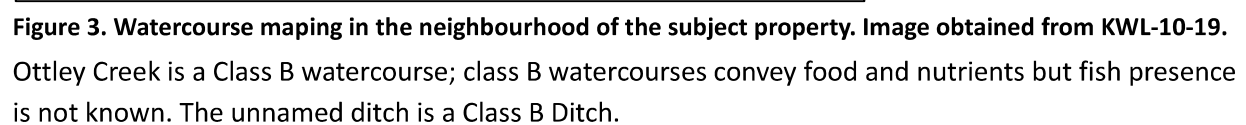
Two watercourses are mapped within 30 m of the project site. Ottley Creek and an unnamed Ditch (Figures 2 and 3).

The headwaters of Ottley Creek occur in Chines Park, a large natural area approximately 1.6 km south of the site. Ottley Creek bifurcates in an urbanized part of Port Moody on its course north towards Burrard Inlet. The west fork, the smaller of the two branches of Ottley Creek, continues north and flows through 2214 Clarke St., the second lot west of the subject property. At Vintner Street, Ottley Creek crosses under Vintner Street through a pipe and continues flowing south.

A roadside ditch on the north side of Vintner Street is the second watercourse encumbering the subject property. It flows east adjacent to the subject property and eventually through a designated Environmentally Sensitive Area (ESA) and into Burrard Inlet. The ditch length across the site is approximately 20 m of which approximately 4.5 m is conveyed through a pipe. The ditch was assessed in KWL-10-19 and described as, "providing groundwater interception, surface water capture from the adjacent road and driveways, storage, and infiltration of stormwater".

¹ SER Environmental Management, Technical Report. April 13, 2018.

² Kerr Wood Leidal. Technical Report. KWL Project No. 0310.055. October 2019.



4.2 Site Visit

The subject property occurs within a residential / commercial area. The unnamed ditch was flowing during the site visit. The ditch daylights from underground storm water infrastructure at the corner of Vintner and Douglas Street, five lots to the west of the site. It flows east and collects water from Ottley Creek before flowing past the site. The ditch profile is relatively small at approximately 1.5 m or less width.

A culvert is present in the ditch at the site to provide vehicle access from Vintner Street. The culvert is on the west side of the lot; it appears to be approximately 4.5 m long and 300 mm diameter.

On the site, herbaceous weed and lawn species are the only plants in the ditch and its' riparian area. Please refer to selected site photos in Appendix 1.

5 Discussion

Recommendations in SER for Ottley Creek called for a 10.0 m Streamside Protection and Enhancement Area (SPEA) on Ottley Creek per terms of the detailed methodology in the Riparian Areas Regulation (RAR, now called RAPR). I agree with that assessment. At 10.0 m the SPEA does not encumber the subject property.

The roadside ditch conveys groundwater interception and surface water from roads and driveways, it has no natural headwaters or springs, there are no fish present in the ditch, but the ditch conveys food and nutrients downstream. It is described as a Class B Ditch by Port Moody and per Port Moody streamside protection policy, a 5.0 m Riparian Protection and Enhancement Area (RPEA) from top-of-bank (TOB) applies to this ditch. According to methodology in the RAPR the SPEA on this ditch 2.0 m from TOB.

It is understood that the Client is proposing to remove the existing culvert to relocate the driveway access to the center point of the lot. The Client is proposing to use an open bottom culvert for the crossing. The Client supplied the proposed culvert design, please see Appendix 2. The Client will make an application for Notification of instream works under Section 11 of the *Water Sustainability Act* (WSA) to Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) upon approval of the proposed crossing design and specs by Port Moody.

6 Proposed Works

The Client is proposing to remove the existing culvert and replace it with a 6.5 m, open bottom crossing centered on the lot. Please see the Client supplied design drawing in Appendix 2.

7 Habitat Balance

Streamside Regulations on Ditches in Port Moody: ditches in Port Moody require a 5.0 m Riparian Protection and Enhancement Area (RPEA).

Existing conditions: the ditch on the subject property consists of 15.5 m open channel and 4.5 m piped channel which corresponds to a RPEA of 77.5 m². Vegetation in the RPEA is currently lawn.

Proposed conditions: Remove the existing 4.5 m pipe culvert and replace it with a 6.5 m open bottom culvert centered on the lot plant native species throughout the RPEA and below TOB.

Proposed Mitigation Works: The Client is proposing habitat enhancement planting throughout the RPEA for a planted area of 67.5 m². Additional planting is proposed on the north side of the ditch if accepted by Port Moody. Enhancement planting is proposed through the restoration works area in the ditch amounting to approximately 45.5 m² planting. Please refer to the landscape plan Appendix 3 for an illustrative description of these measures.

Result:

- The driveway crossing is wider by 2.0 m which translates into a loss of 10 m² RPEA, an impact.
- 4.5 m closed pipe culvert is removed and replaced with an open bottom crossing, a benefit.
- 67.5 m² RPEA that is currently lawn is improved with native herb, shrub, and tree species, a benefit.
- 45.5 m² habitat below TOB is improved with native hydrophytic species, a benefit.
- Additional planting is proposed on the north bank if accepted by Port Moody, a benefit.

8 Proposed Mitigation and SPEA Enhancement Measures

8.1 Planting

Riparian planting at the ditch bank will help to enhance water quality through shading and insect and litter drop.

Riparian enhancement planting is recommended to occur in the following manner.

Shrubs: Red-osier Dogwood (*Cornus sericea*), Oregon Grape (*Mahonia aquifolium*), Red-flowering Currant (*Ribes sanguineum*), Baldhip Rose (*Rosa gymnocarpa*), Salal (*Gaultheria shallon*), Western Sword Fern (*Polystichum munitum*), Evergreen Huckleberry (*Vaccinium ovatum*).

Shrubs need to be obtained in 1-gallon pots and planted at 0.5 m on-center spacing.

Trees: Species in the tree layer should be selected from: Vine Maple (*Acer circinatum*), Pacific Willow (*Salix lucida* spp. *lasianдра*), Pussy Willow (*Salix discolor*), Casacara (*Rhamnus purshiana*) Pacific Crabapple (*Malus diversifolia*) and Choke Cherry (*Prunus virginiana*). A minimum of three different species should be planted at 1.5 m spacing on-center. Tree stock must be a minimum of 1.5 m height at first branch.

All plants must be certified native BC species and must retain a Nursery attached identification label after planting.

As these plants mature, they will provide water quality enhancement through temperature modulation by shading in the summer as well as nutrients through litter and insect drop. A secondary benefit of the plants in this list is the development of food and nesting opportunities for songbirds.

It is recommended that planting occur in the early spring or autumn months to help prevent desiccation from drying out. Irrigation is recommended during the dry summer months.

A thick layer of bark mulch is recommended over the entire area to help suppress herbaceous weeds. Weeds are fast growing and, if not kept in check, commonly overgrow, and suffocate young woody species.

One-hundred percent survival of plant stock over three years is commonly mandated. Any losses should be replaced with a like species.

Fencing is recommended to help ensure the planted area is protected from human encroachment and trampling.

8.2 Instream

The watercourse is not a fish bearing stream therefore the instream works may occur outside of the fish window, on the condition that the channel is dry during the construction works.

The following erosion and sediment control (ESC) measures are required.

- The works should be scheduled to occur during an extended period of dry weather.
- Disturbance of existing vegetation should be as small as possible while allowing the works to be completed safely.
- Lining the ditch bed with clean, washed river rock and sand will help control sediment transport.
- Ditch banks should be seeded with a seed mix that is certified all-native species and then, covered with wood-fibre roll matting.

Additional Terms and Conditions may be ordered by FLNRORD through the approval of Notification of instream works under Section 11 of the WSA.

9 Limitations

Barsanti Environmental Services Ltd. will conduct this project and prepare our reports in a manner consistent with the level of care normally exercised by environmental professionals currently practicing in the area under similar conditions and budgetary constraints. Barsanti Environmental Services Ltd. offers no other warranties, either expressed or implied. Barsanti Environmental Services Ltd. will prepare our reports for your use for the purposes for which they are commissioned and for use by government agencies regulating the specific activities to which they pertain. It will not be reasonable for other parties to rely on the observations or conclusions of the reports and you may not give, lend, sell, or otherwise make available the report or any portion to any other party without Barsanti Environmental Services Ltd. express written consent. The information supplied will provide guidance and recommendations in accordance with the most current guidelines and best management practices but ultimately it is up to the Client to apply them.

10 Closing

We trust that the information supplied in this document meets your needs. Should more information or clarification on any part of this report be required please feel free to contact me.

BARSANTI ENVIRONMENTAL SERVICES LTD.

Jason Barsanti, R.P.Bio.
Principal Biologist



This document is a digital copy. A hardcopy of this document, with official signature and stamp will be provided immediately upon request to the author.

11 Appendix 1: Site Photos

The following site photos were obtained on December 17, 2019.



Photo 1. Viewing south at 2222 Clark Street from the north verge of Vintner Street. Not existing driveway on west side of the lot and absence of riparian vegetation.



Photo 2. Viewing east at the ditch adjacent to the subject property.



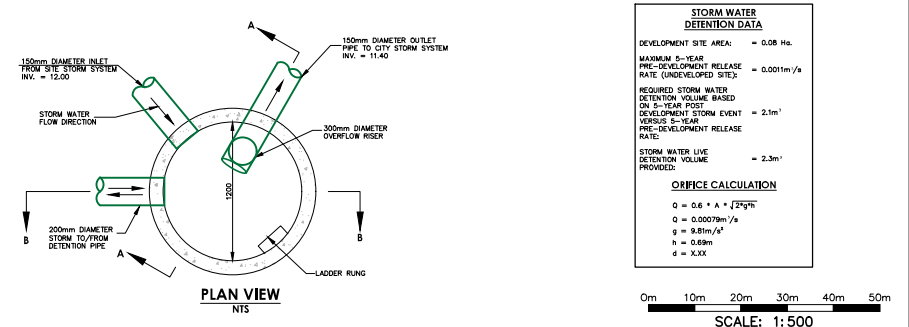
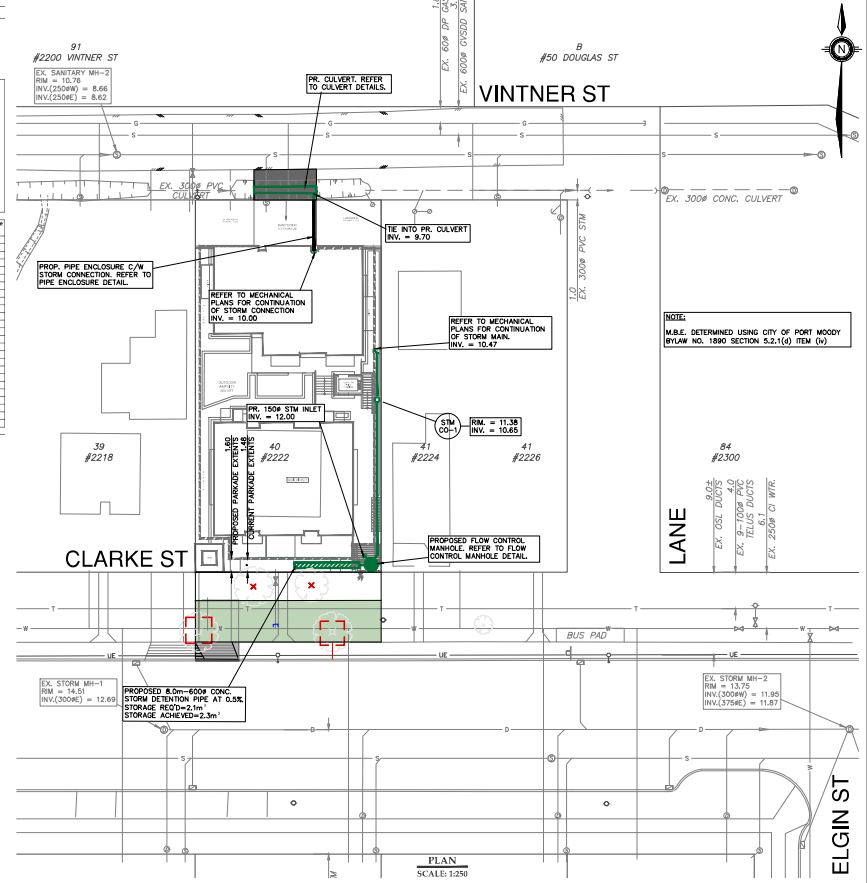
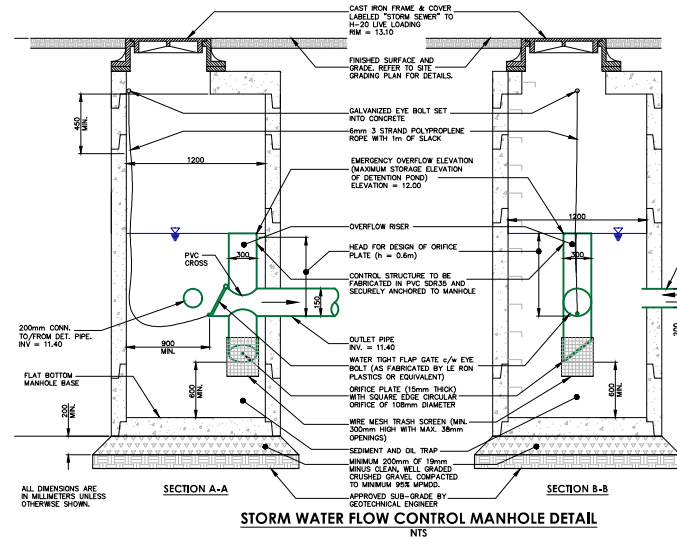
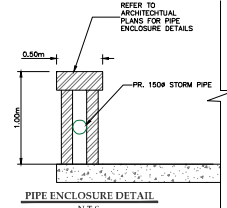
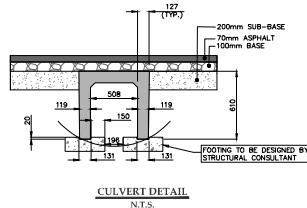
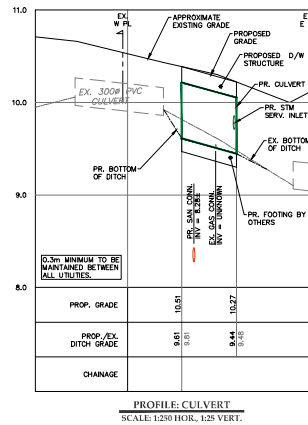
Photo 3. Viewing pipe inlet for conveying Ottley Creek under Vintner Road, and roadside ditch beside Vintner Street.


























































12 Appendix 2: Proposed Driveway Crossing

Culvert design plan. Supplied by Client.

Please see next page.

- ALL WORKS SHALL BE IN ACCORDANCE WITH THE MASTER LIST OF SPECIFICATIONS AND STANDARDS OF THE CITY OF PORT MORTON'S SURVEILLANCE AND DEVELOPMENT DEPARTMENT, AS WELL AS THE CITY OF PORT MORTON'S BY-LAW (LATEST EDITIONS), UNLESS OTHERWISE SPECIFIED.
2. PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS, THE CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER, A STORM WATER MAIN AT THE POINT OF TIE-IN AND AT UTILITY CONNECTIONS, A PROPOSED CONNECTION DETAIL, AND SHALL REPORT TO THE CITY ENGINEER IMMEDIATELY TO CORRECT ANY DEFECTS.
 3. STORM WATER SERVICE CONNECTION SHALL CONFORM TO THE CITY ENGINEER'S STANDARD DRAWING NUMBER 300/100 STANDARD DRAWING NUMBER 300/100, UNLESS OTHERWISE SPECIFIED.
 4. PIPE BENDING AND PIPE SURROUND SHALL BE 180mm MINIMUM RIGID POLYETHYLENE PIPE WITH A WALL THICKNESS OF 14" AND AS PER THE UTILITY TRENCH DETAIL, ON THIS SHEET.
 5. STORM WATER SERVICE CONNECTION SHALL BE 150mm PVC SDN325.
 6. STORM WATER INSPECTION CHAMBER SHALL BE A 200mm MINIMUM RIGID POLYETHYLENE MANHOLE STANDARD DRAWING NUMBER 300/99 COMPLETE WITH A GREEN INTERIOR TOP LID.
 7. ALL WORK SHALL BE IN ACCORDANCE WITH:
 8. STORM MANHOLE, UNDERPASS AND BOXES AND SIDEWALK SHALL BE 100mm RIGID POLYETHYLENE MANHOLE, AS PER THE CITY ENGINEER'S STANDARD DRAWING NUMBER 300/99 AND AS PER THE UTILITY TRENCH DETAIL ON THIS SHEET.



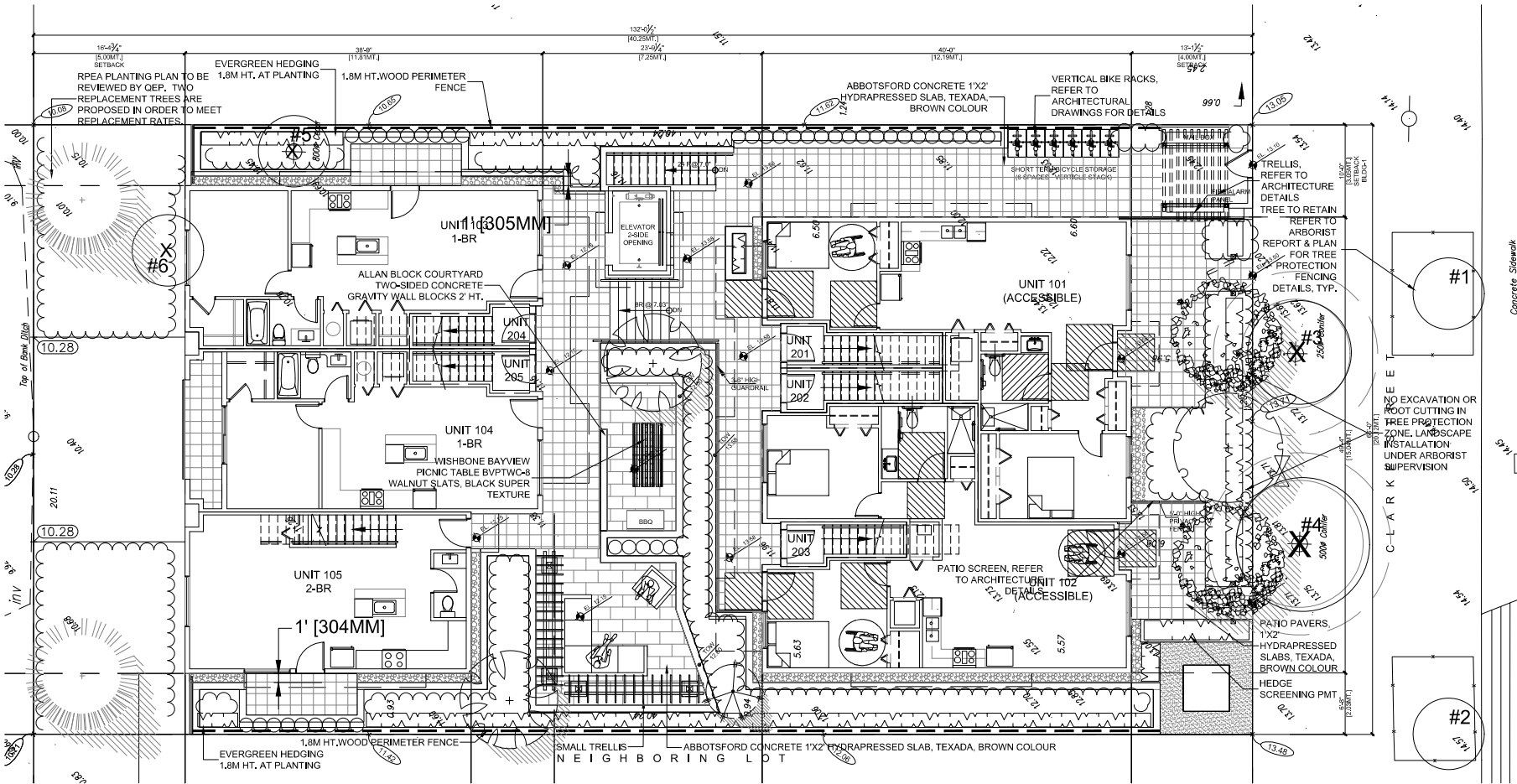
REMARKS	No.	DATE	REVISIONS / SUBMISSIONS	ENGINEER	DEVELOPER	PROJECT	SEAL	CITY OF PORT MOODY
ALL ELEVATIONS ARE GEODETIC AND REFER TO SURVEY MOUNTAIN MEASURES. (NOUSAR) LOCATED AT: ELEVATION ARE GEODETIC, 5' DOWN IN METERS DERIVED FROM CANADIAN MOUNTAIN MEASURES (GDA84-CANADIAN WGS 2005). AND HAVING ELEVATION OF: 22.42M	                                                     				NU-GEN PROJECTS LTD.	PROPOSED RESIDENTIAL BUILDING	 December 10, 2020	STORM WATER MANAGEMENT PLAN
LOT 40, BLOCK PLAN REVISED REFLECT 12/20, NEW WEST PROJECT				#2220-2639 Viking Way, Richmond, BC V6V 3B7 tel: (604) 249 5042 fax: (604) 249 5043 www.coreconceptconsulting.com		SITE ADDRESS 2222 CLARKE STREET PORT MOODY, BC		DESIGN:  DRAWING NUMBER: 18026-5 CHECKED: SCALE ENGINEER: RF
		12 DEC 2020 24 SEP 2020	FOR DISCUSSION FOR DISCUSSION		TEL: FAX:			DESTROY ALL PRINTS BEARING PREVIOUS REVISION NUMBER
								REV. 0

13 Appendix 3: Proposed Restoration Area Planting

Design plan supplied by PMG Landscape Architects through the Client.

Please refer to Drawing L3.

Please see next page.



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Suite C100 - 4185 5th Creek Drive
Burnaby, British Columbia, V5C 6G9
P: 604-294-0211 F: 604-294-0222

SEAL:

Concrete Sidewalk

CLARK STREET

NO EXCAVATION OR
ROOT CUTTING IN
TREE PROTECTION
ZONE, LANDSCAPE
INSTALLATION
UNDER ARBORIST
SUPERVISION

1' [304MM]

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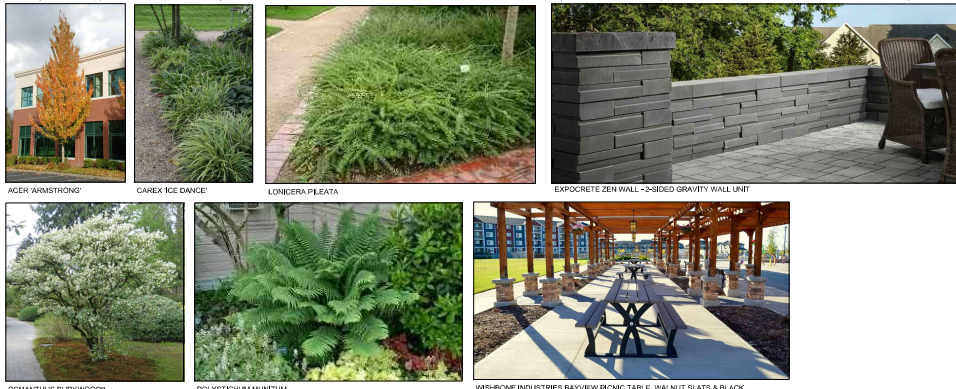
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ACER ARMSTRONG

CAREX ICE DANCE

LONICERA PILEATA

EXPocrete ZEN WALL - 2-SIDED GRAVITY WALL UNIT

OSMANTHUS BURKWOODII

POLYSTICHUM MUNIUM

WISHBONE INDUSTRIES BAYVIEW PICNIC TABLE, WALNUT SLATS & BLACK POWDERCOAT BVP/TWC

PLANT SCHEDULE - MAIN LEVEL				PMG PROJECT NUMBER: 18-121
KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SEE / REMARKS
TREE	2	ACER CIRCINATUM	VINE MAPLE	7CM CAL, B&B
	2	ACER RUBRUM 'ARMSTRONG'	COLUMNAR ARMSTRONG MAPLE	7.0CM CAL; 2M STD; B&B
	2	CORNUS KOUSA 'SATOMI'	PINK KOUSA DOGWOOD	7CM CAL, B&B
	2	PICEA OMORICA 'BRUNS PENDULA'	WEeping BRUNS SERBIAN SPRUCE	1.5M HT; B&B
SHRUB	18	BUKUS MICROPHYLLA 'WINTER GEM'	LITTLE-LEAF BOX	#3 POT; 40CM
	43	LONICERA PILEATA	BOXLEAF HONEYSUCKLE	#2 POT; 30CM
	2	OSMANTHUS X BURKWOODII	BURKWOOD OSMANTHUS	#3 POT; 50CM
	93	SARCOCOCOA HOOKERIANA VAR. HUMILIS	HIMALAYAN SWEET BOX	#2 POT; 25CM
	31	SKIMMIA REEVESIANA	DWARF SKIMMIA	#2 POT; 25CM
	76	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN CEDAR	1.8M HT; B&B
GRASS	61	CAREX OSHIMENSIS 'EVERGOLD'	EVERGOLD JAPANESE SEDGE	#1 POT
PERENNIAL	24	HEUCHERA MACRANTHA 'PALACE PURPLE'	CORAL BELLS; PURPLE-RED	15CM POT
GC	8	ATHYRIUM NIPONICUM PICTUM 'REGAL RED'	REGAL RED JAPANESE PAINTED FERN	#1 POT; 30CM
	34	POLYSTICHUM MUNIUM	WESTERN SWORD FERN	#1 POT; 25CM

NOTES: * PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNLA STANDARD. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. * REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. * SEARCH AND REVIEW MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. * SUBSTITUTIONS OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY. * ALL LANDSCAPE MATERIAL AND WORKMANSHIP MUST MEET OR EXCEED BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD LATEST EDITION. * ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. * BIO-SOLIDS NOT PERMITTED IN GROWING MEDIUM UNLESS AUTHORIZED BY LANDSCAPE ARCHITECT.

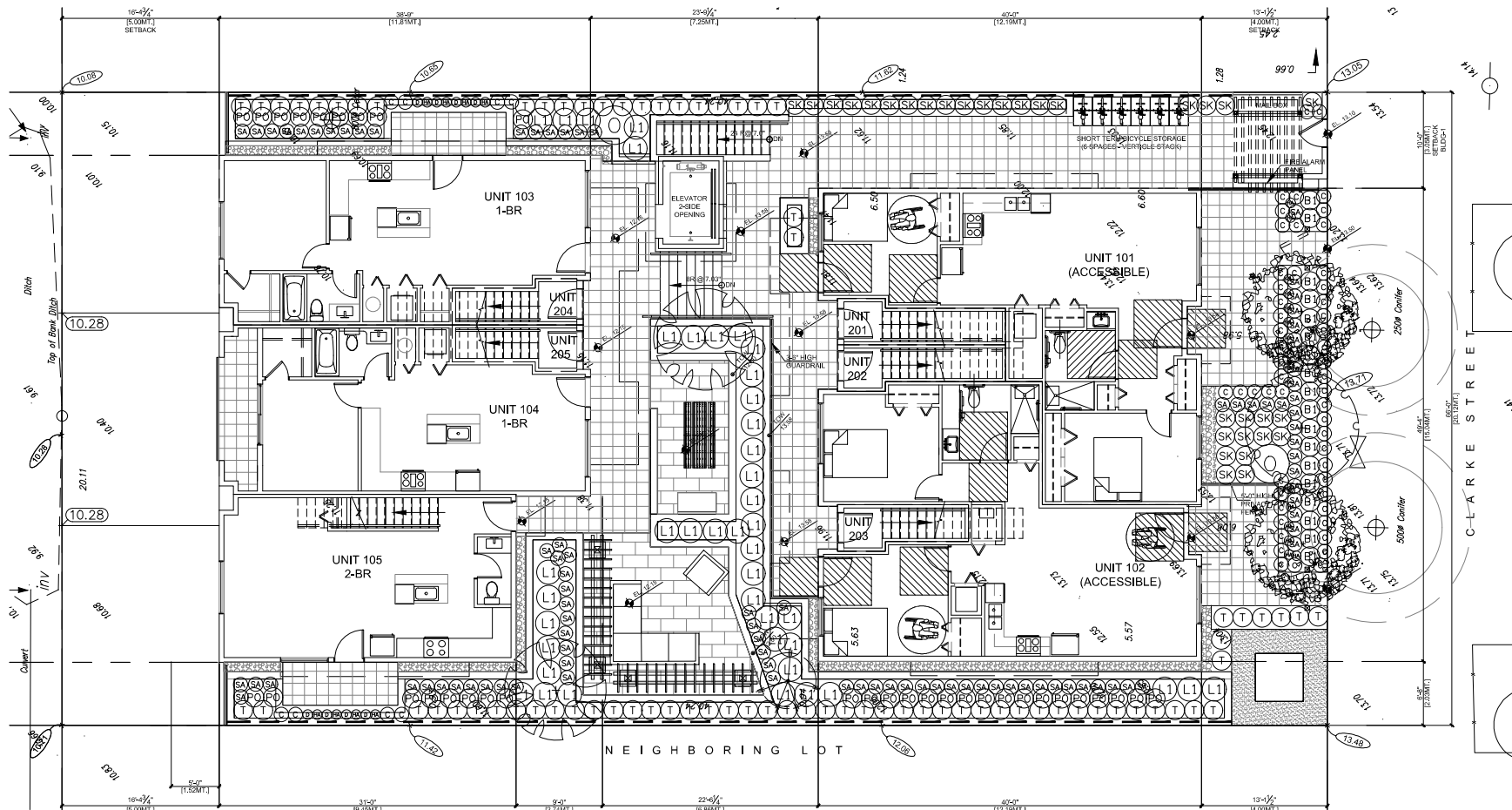
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**10 UNIT TOWNHOUSE
DEVELOPMENT**
2222 CLARKE STREET
PORT MOODY

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**LANDSCAPE
PLAN**

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SCALE: 3/16" = 1'-0"
DRAWN:
DESIGN:
CHKD: PCM OF 4

PMG PROJECT NUMBER: 18-121

18121-6.2P



PLANT SCHEDULE - MAIN LEVEL				PMG PROJECT NUMBER: 18-121	
KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS	
TREE					
2	2	ACER CIRCINATUM	VINE MAPLE	70CM CAL: B&B	
2	2	ACER RUBRUM 'ARMSTRONG'	COLUMNAR ARMSTRONG MAPLE	70CM CAL: 2M STD: B&B	
1	1	CORNUS KOUSA 'SATORI'	PINK KOUSA DOGWOOD	70CM CAL: B&B	
1	1	PICEA OMORIKI 'BRUNS PENDULA'	WEeping BRUNS SERBIAN SPRUCE	1.5M HT: B&B	
SHRUB					
18	18	BUXUS MICROPHYLLA 'WINTER GEM'	LITTLE-LEAF BOX	#3 POT: 40CM	
43	43	LOXCERA FLEATA	BOXLEAF HONEYSUCKLE	#2 POT: 30CM	
2	2	OSMANTHUS X BURKWOODII	BURKWOOD OSMANTHUS	#3 POT: 50CM	
93	93	SARCOCOCCA HOOKERANA VAR. HUMILIS	HIMALAYAN SWEET BOX	#2 POT: 25CM	
31	31	SKIMMIA REEVESIANA	DWARF SKIMMIA	#2 POT: 25CM	
76	76	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN CEDAR	1.8M HT: B&B	
GRASS					
61	61	CAREX OSHIMENSIS 'EVERGOLD'	EVERGOLD JAPANESE SEDGE	#1 POT	
PERENNIAL					
24	24	HEUCHERA MACRANTHA 'PALACE PURPLE'	CORAL BELLS: PURPLE-RED	15CM POT	
GC					
8	8	ATHYRIUM NIPONICUM PICTUM 'REGAL RED'	REGAL RED JAPANESE PAINTED FERN	#1 POT: 30CM	
34	34	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT: 20CM	

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SEAL:

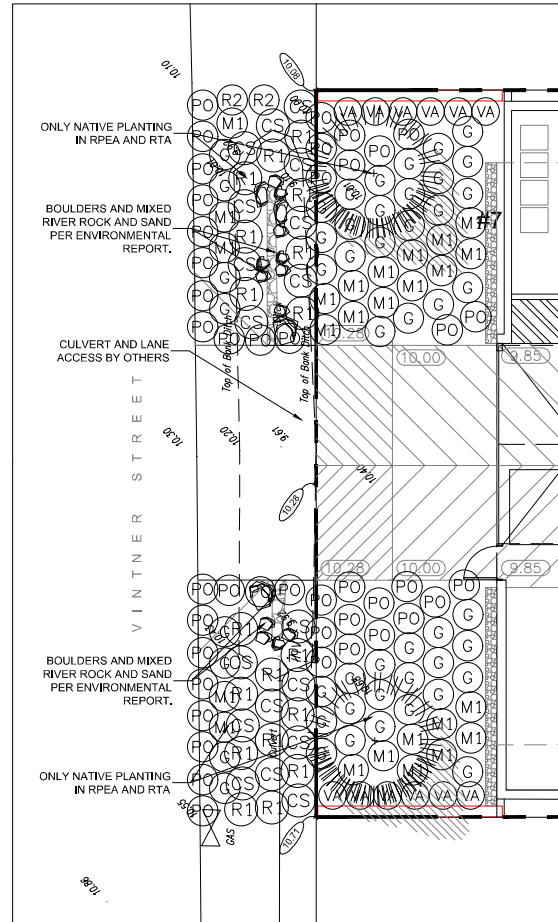
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3	30.MAR.21	UPDATE BPEA REPORT	CLD
4	30.MAR.21	UPDATE BPEA REPORT	CLD
5	30.MAR.21	UPDATE NEW SITE PLAN	CLD
6	28.JUL.21	UPDATE DESIGN STRIP DE VAL	CLD
7	28.JUL.21	UPDATE AND FINISH	CLD
8	28.JUL.21	NEW SITE PLAN	CLD
9	18.JUL.21	DESIGN CONCEPT	CLD
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**10 UNIT TOWNHOUSE
DEVELOPMENT**

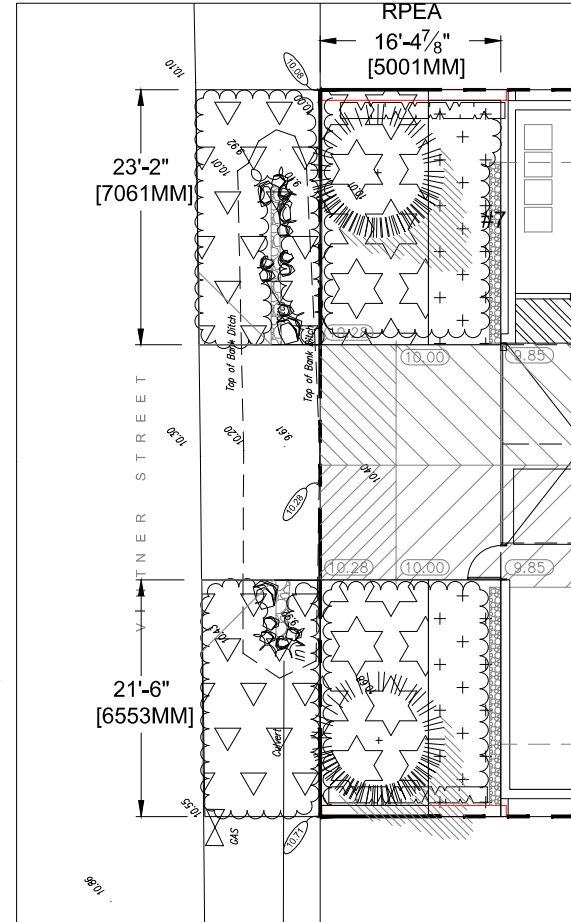
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PORT MOODY

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MAIN LEVEL**

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DRAWN:
DESIGN:
CHKD: PCM OF 4



LEGEND	
KEY	QTY
	DITCH RESTORATION PLANTING = 45.5M2
	RPEA PLANTING = 39.9M2
	RTA PLANTING = 26.6M2



ENVIRONMENTAL AREA PLANT SCHEDULE - OFFSITE ON LANE					PMG PROJECT NUMBER: 18-121
KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS	
SHRUB	18	CORNUS SERICEA	RED OSIER DOGWOOD	#3 POT; 80CM	
SHRUB	5	MAHONIA AQUIFOLIUM	OREGON GRAPE	#3 POT; 50CM	
SHRUB	18	RIBES SANGUINEUM	RED FLOWERING CURRANT	#3 POT; 80CM	
SHRUB	2	ROSA GYMNOCARPA	BALDHIP ROSE	#2 POT; 40CM	
GC	8	GAULTHERIA SHALLON	SALAL	#1 POT; 20CM; 100CM O.C.	
GC	22	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT; 20CM	

NOTES: * PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNLA STANDARD. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. * REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. * SEARCH AND REVIEW: MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE: LOWER MAINLAND AND FRASER VALLEY. * SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY. * ALL LANDSCAPE MATERIAL AND WORKMANSHIP MUST MEET OR EXCEED BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD LATEST EDITION. * ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. * BIO-SOLIDS NOT PERMITTED IN GROWING MEDIUM UNLESS AUTHORIZED BY LANDSCAPE ARCHITECT.

PARKADE LEVEL PLANT SCHEDULE					PMG PROJECT NUMBER: 18-121
KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS	
TREE	2	THUJA PLICATA	WESTERN RED CEDAR	1.5M HT; B&B	
SHRUB	20	MAHONIA AQUIFOLIUM	OREGON GRAPE	#3 POT; 50CM	
SHRUB	12	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	#3 POT; 60CM	
GC	41	GAULTHERIA SHALLON	SALAL	#1 POT; 20CM; 100CM O.C.	
GC	21	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT; 20CM	

NOTES: * PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNLA STANDARD. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. * REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. * SEARCH AND REVIEW: MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE: LOWER MAINLAND AND FRASER VALLEY. * SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY. * ALL LANDSCAPE MATERIAL AND WORKMANSHIP MUST MEET OR EXCEED BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD LATEST EDITION. * ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. * BIO-SOLIDS NOT PERMITTED IN GROWING MEDIUM UNLESS AUTHORIZED BY LANDSCAPE ARCHITECT.

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SEAL:

NO.	DATE	REVISION DESCRIPTION	DR.
1	24.MAY.21	UPDATE RPEA DISCUSSIONS	CLD
2	20.MAY.20	UPDATE NEW ADDRESS REPORT	CLD
3	20.MAY.19	UPDATE RPEA PER CONSULTANT	CLD
4	20.MAY.19	UPDATE BROWNIER REPORT	CLD
5	20.FEB.20	UPDATE NEW SITE PLAN	CLD
6	28.JUL.07	UPDATE DESIGN STRIP DE VAL	CLD
7	19.MAY.11	UPDATE AND REWORK	CLD
8	18.JUL.12	NEW SITE PLAN	CLD
9	18.JUL.12	DESIGN CONCEPT	CLD

CLIENT:

PROJECT:
**10 UNIT TOWNHOUSE
DEVELOPMENT**

**2222 CLARKE STREET
PORT MOODY**

DRAWING TITLE:
**ENVIRONMENTAL
AREA SHRUB PLAN**

DATE: 18.FEB.21 DRAWING NUMBER:
SCALE: 3/16" = 1'-0"
DRAWN:
DESIGN:
CHKD: PCM OF 4

PMG PROJECT NUMBER: 18-121

18121-6-2P

