District of Sechelt

Public Hearing Binder

Official Community Plan Amendment Bylaw No. 492-37, 2024

Zoning Amendment Bylaw No. 580-14, 2024

1.	REFERRALS
2.	REFERRAL COMMENTS
3.	STAFF REPORTS AND COUNCIL MOTIONS
4.	BYLAW
5.	PUBLIC HEARING INFORMATION
6.	PUBLIC INPUT/COMMENTS
7.	MISC. INFORMATION

District of SECHELT

604 885 1986
PO Box 129, 5797 Cowrie St,
2nd Floor
Sechelt, BC V0N 3A0
www.sechelt.ca

DEVELOPMENT APPLICATION REFERRAL

Please send your reply to planning@sechelt.ca

Application No:	3360-2024-01	**Referral Date:**	May 23, 2024	X	**OCP**
File Manager:	Tyson Baker, Senior Development Planner			X	**Rezoning**
File Manager Contact:	Teams Call | tbaker@sechelt.ca				**Subdivision**
Applicant:	Craig Burns – Principle Architecture				**Variance**
Applicant Contact:	604-209-8082 | cjburns@principlearchitecture.ca				**Development Permit**
Civic Address:	No Address				**Other:**
Legal Description:	Lot B District Lot 1331 Plan 18108 PID: 007-230-516				

Please comment on the attached referral for potential effect on your groups or agency's interests. If you require additional time, please contact the File Manager to request an extension.
PLEASE RESPOND TO THIS REFERRAL BY August 14, 2024.

SUMMARY OF APPLICATION:
An application has been received to redesignate the OCP land use from Multi-Family Mixed Residential to Civic Institutional & Utilities and to rezone the subject property from CD3 (Seniors Lodge) to CC-1 (Community & Civic).

The intent of the application is to allow the construction of a new school. A proposed site plan has been submitted for review. Should the OCP amendment and rezoning be approved, the application would proceed to building permit issuance.

ATTACHMENTS:

1. Location Map
2. Site Plan
3. Applicant Submission Letter
4. Preliminary Design Brief
5. Engineering Design Package
6. Environmental Site Assessment
7. Geotechnical Report
8. Traffic Impact Assessment
9. On-site Traffic Management Detail 'A'
10. On-site Traffic Management Detail 'B'
11. On-site Traffic Management Detail 'C'

This referral has also been sent to the following agencies:

X	FortisBC	X	Ministry of Transportation & Infrastructure	X	SCRD - Infrastructure
X	Telus		Agricultural Land Commission	X	SCRD - Mapping
X	B.C. Hydro	X	Sechelt Volunteer Fire Department	X	SCRD - Transit
	Eastlink	X	District of Sechelt Engineering Department	X	School District #46
X	Canada Post	X	District of Sechelt Building Department	X	Vancouver Coastal Health Authority
		X	BC Transit	X	Sechelt Indian Government District

Community Associations and Groups:

	Selma Park/Davis Bay/Wilson Creek Community Association	X	Sechelt Village Resident Association
	East Porpoise Bay Community Association		West Sechelt Community Association
	Sunshine Heights Owners and Residents Association		Tillicum Bay Community Association
	Tuwanek Ratepayers		Sechelt Downtown Business Association
	Sandy Hook Community Association		Sechelt and District Chamber of Commerce
X	Transportation Choices Sunshine Coast (TRAC)		Sunshine Coast Car Co-op

District of SECHELT

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Location Map

CSF École Du Pacifique
Sechelt
3/3/2025

1 Site
Scale: 1:1200

0 20 40 60 m

N

Original Site Data		
Total Site Area	20,063 m²	(2.0 ha)
Current Zoning	CD-3	
Future Zoning	CC1	
Lot Coverage	8.4%	

Building Floor Area	
Total	3,316 m²

Building Height (Max per CC1 Zoning)	10.5 m

Proposed Capacity	Classes	Students
Kindergarten	1	20
Elementary	4 or 5	100
Secondary	3 or 4	50
Infant/Toddler Childcare	1	12
Preschool Age Childcare	1	24
Totals		**206**

Vehicle Parking	
Elem: 1 space / 90 m2 GFA	24
Sec: 1 spaces / 65 m2 GFA	14
NLC: I/T and Pre-K	8
Total	**46**
Accessible	2
Small (20% max.)	9

Bike Parking	
1 / 200m2, max. 20	17
Total	**17**

Land Swap Table	AREA (m²) TO D.O.S.	TO LOT B
Road Dedication	960.42	
Trail Dedication	362.70	
Potential Park Dedication	866.76	
Access and Playfield Encroachment		2,191.44
	2,191.44	2,191.44

NET Lot B Area	0 m²
Original Lot B	20,063 m²
Revised Lot B	20,063 m²

ORIGINAL PROPERTY LINE

PROPOSED PROPERTY LINE

PROPOSED SETBACK LINE

Notes:
1. Property is currently zoned CD-3 (Seniors Lodge). Development of a school will likely require rezoning.
2. Setbacks based on CC-1 Zone requirements (Community and Civic One Zone, Sechelt Bylaw 580, Zoning)
3. Maximum permitted grade for emergency vehicle access route is 1:12.5 (8%) over minimum 15m. Grading and retaining will be required to meet requirements.
4. School program is preliminary, based on projections and ministry area standards, and is subject to change.
5. Discussions are ongoing between the CSF and SD46 regarding potential sharing of Chatelech's playfields
6. Proposed capacity is preliminary and to be confirmed after reviewing enrollment projections with the ministry.

CSF École Du Pacifique
Sechelt
2024-02-05

1 Site
Scale: 1:1200

0 20 40 60 m

N

School Requirements

Department	Classes	Students
Kindergarten	1	20
Elementary	4	100
Secondary	2	50
I/T Childcare	1	12
PK Childcare	1	24
Totals		**206**

Building Area	
DAS Floor Area	2,936 m²
Childcare Floor Area	380 m²
Total Floor Area	**3,316 m²**

Building Height (2 storeys) **+/- 8 m**

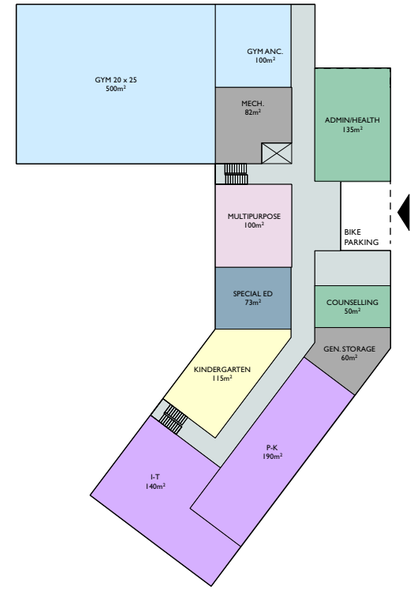
Site Area		
Total Site Area	20,063 m²	(2.0 Ha)
Zoning	CD-3	
Lot Coverage	9.6%	

Parking (Zoning Bylaw)	% of Total Enrollment	% of Enrollment x Total Floor Area	Formula (per bylaw)	**Stalls**
Kind. /Elementary	71%	2,072m²	(1/90 m²)	24
Secondary	29%	864m²	(1/65 m²)	14
NLC: I/T and Pre-K			(1/5 kids)	8
Total				**46**

Notes

1. Property is currently zoned CD-3 (Seniors Lodge). Development of a school will likely require rezoning.
2. Setbacks based on CC-1 Zone requirements (Community and Civic One Zone, Sechelt Bylaw 580, Zoning)
3. Maximum permitted grade for emergency vehicle access route is 1:12.5 (8%) over minimum 15m. Grading and retaining will be required to meet requirements.
4. School program is preliminary, based on projections and ministry area standards, and is subject to change.
5. Discussions are ongoing between the CSF and SD46 regarding potential sharing of Chatelech's playfields

Steep area of site requiring retaining and significant regrading.



LEVEL 1 - 1,898 m²

LEVEL 2 - 1,418 m²

Proposed A **1**

Principle architecture

302 – 980 George Street
Vancouver, BC
V6A 0H9

05 February 2024

Attn: Andrew Allen, Director of Planning and Development, District of Sechelt

Cc: Chafic El Rassi, Director of Capital Projects, School District 93 (CSF)
Sylvain Allison, School District 93 (CSF)

Re: Application for OCP and Zoning Amendment
Lot B – Medusa Street, Sechelt, BC

École du Pacifique

The CSF currently provides francophone education for approximately 97 students in Sechelt, BC. 53 students from kindergarten to grade 7 are enrolled at École du Pacifique, and 44 students from grade 8 to grade 12 are enrolled in the CSF heterogenous program at Chatelech secondary. Both programs are operated from within leased facilities and the CSF's aim is to develop a new school facility to operate a homogeneous K-12 program and accommodate students from Sechelt and other Sunshine Coast communities such as Gibsons. The CSF has purchased a new site and proposes to develop a new K- 12 school facility to accommodate 20 Kindergarten, 100 Elementary, and 50 Secondary students, plus two modules of childcare space for 12 Infant/Toddlers and 25 Preschool aged children. The estimated floor area of the new school facility is 3,300 sqm (35,520 sq ft) and would be constructed as a 2-storey building[1].

The Site

The property is located at the top of Medusa Street in Sechelt, BC. The legal description is Lot B, District Lot 1331, Plan 18108. PID 007-230-516. The property is 2.0ha (4.96 acres) currently zoned CD-3 Comprehensive Development. This package has been prepared to support an application for **OCP and Zoning Amendment** to allow for school use on the subject site. The proposal is to amend the zoning to CC-1 Community and Civic One Zone.

The New School Project

The Ministry of Education and Child Care treats the site acquisition and the new school construction project as two distinct, although related, endeavors. Typically, the ministry expects the completion of site acquisition, including any associated rezoning processes, before extending support to a school district for the initiation of feasibility studies for a new school project. Upon conclusion of the feasibility study, a process that may span from 6 months up to a year or more,

[1] These estimates are preliminary and will be confirmed with the ministry of education at later stages.

funding for the new school project is approved, enabling the initiation of the design phase. Therefore, the completion of the zoning and OCP amendment process precedes the detailed design phase. This step is important in garnering ministry support to commence the feasibility studies.

The Application Contents
The application provides a general description of the proposed school facility and has been provided along with conceptual site and building plans to support this application for land use change. The bullet list of items below has been included to help describe the existing site and the proposed development plans.

Architectural
Site plan and conceptual building plans have been prepared to 'test fit' the site and evaluate its suitability for a K-12 school facility. Enrollment is based on projections developed by the school district and the building program is determined by Area Standards set by the Ministry of Education and Child Care[2].

- Test Fit Site Plan and Conceptual Building Plans

Geotechnical
Preliminary geotechnical investigation has been provided to demonstrate the suitability of the site for the proposed development. Field work has been completed and commentary is provided, at the District of Sechelt's request, to address potential ground water issues.

- Geotechnical Report dated 11 April 2023 (17 pages)

Environmental
A Phase 1 ESA was completed prior to the school district purchase of the property. The site is undeveloped and has no existing structures.

- Phase 1 ESA Report dated 23 March 2023 (54 pages)

Civil
A report has been prepared to describe the Civil requirements to support the proposed school including site access design, storm water management, site servicing approach.

- Civil Report dated 11 January 2024 (17 pages)
- Appendix 1 - Drawings (11 sheets)
- Appendix 2 - Title Search and Survey (4 pages)
- Appendix 3 - Zoning Map (2 pages)
- Appendix 4 - Drainage As-built Drawings (4 sheets)
- Appendix 5 - Sanitary Calculations (2 pages)

[2] The building program is subject to change.

Traffic
A traffic study has been completed based on terms of reference coordinated with District of Sechelt staff. The report describes traffic flow related to the proposed school development, the impact on the neighbourhood, and highlights some recommendations for the design phase of the project.

- Transportation Impact Assessment dated 31 January 2024 (111 pages)

The school district is very motivated to expedite the review, referral, and approval process as much as possible to meet the educational needs of the francophone student community in Sechelt. We have a very capable team available to discuss any questions or comments regarding the proposal. Please do not hesitate to reach out for additional information or clarification.

Craig Burns, Principle Architecture (Architect) - Applicant
Chafic El Rassi, Director of Capital Projects CSF (School District 93)
Sylvain Allison, CSF (School District 93)
Adam Zywotkiewicz, Geopacific Consultants (Geotechnical)
Kevin Healy, Creus Engineering (Civil)
Yulia Liem, Bunt (Traffic)

* Please confirm receipt of the application and fee. We would like to develop a schedule that outlines the review, referral, and approval process, and request your guidance in identifying the next steps including any required public information meetings, development signage on site, presentations to staff and Council. We will follow up directly next week.

** Please note that checklist items included with the application form may require some discussion because, (a) the proposal is for an institutional school facility rather than a residential development, and (b) detailed design decisions require further work to be completed once Ministry support for the project is in place and project funding is secured.

Thank you.

Regards,

Craig Burns ARCHITECT AIBC, MRAIC, ALEP

C R E U S

Engineering

Civil Engineers & Project Managers

#610 EAST TOWER - 221 ESPLANADE WEST, NORTH VANCOUVER BC, V7M3J3

PH: 604-987-9070 WEBSITE: www.creus.ca

PROJECT:

CSF SECHELT

SECHELT, BC

CLIENT:

PRINCIPAL ARCHITECTURE

DRAWING LIST		
DWG NO.		
CONTEXT-1	CONTEXT PLAN	
KEY-1	KEY PLAN	
KEY-2	KEY PLAN	SITE SECTIONS KEY
MSP-1	MASTER SANITARY PLAN	
MDP-1	MASTER DRAINAGE PLAN	
SERV-1	SERVICING PLAN	
R-1	ROADWORKS	ROAD A
XS-1	CROSS SECTIONS	ROAD A
SS-1	SITE SECTIONS	WEST TO EAST
SS-2	SITE SECTIONS	NORTH TO SOUTH

2024-01-11
ISSUED FOR CLIENT REVIEW

SEE DRAWING KEY–1 FOR GENERAL NOTES
SEE DRAWING R–1 FOR ROADWORKS NOTES
SEE DRAWING SERV–1 FOR WATERWORKS NOTES
SEE DRAWING SERV–1 FOR STORM & SANITARY NOTES

CONTRACTOR TO VERIFY & LOCATE EXISTING MAINS & SERVICE CONNECTIONS & NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING CONSTRUCTION

WATER ZONE BOUNDARY (TYP)
EXISTING SECHELT WATER RESOURCE CENTER WWTP
ZONE 2
ZONE 1
SANITARY ALTERNATE ROUTING IF 600mm ON TRAIL AVE IS OVERCHARGED
DL1331 – LOT C
POSSIBLE WET TAP TO PRESSURE ZONE 2, COMPLETE WITH PRV
5621 DUNGENESS PL
5611 DUNGENESS PL
5623 DUNGENESS PL
5629 DUNGENESS PL
EXISTING HYDRANT (TYP)
MUNICIPALLY OWNED UNOPENED ROAD
DL1385
PROPOSED DEVELOPMENT DL1331 – LOT B
DERBY RD
DUNGENESS PL
MEDUSA PL
5896/5894 MEDUSA ST
5888 MEDUSA ST
5882 MEDUSA ST
5878 MEDUSA ST
5872 MEDUSA ST
5868 MEDUSA ST
5889 MEDUSA ST
5883 MEDUSA ST
5877 MEDUSA ST
5871 MEDUSA ST
LOT 5 MEDUSA ST
5863 MEDUSA ST
5859 MEDUSA ST
CONCEPTUAL SPORTS FIELD 50m X 90m SEE KEY–1 FOR CUT–FILL VOLUME SUMMARY
SUBJECT PROPERTY
5904 COWRIE ST CHATELECH SECONDARY SCHOOL
DL1331 – LOT A
5535 SHORNCLIFFE AVE
PEBBLE CRES
SPINDRIFT ST
MEDUSA ST
TRAIL AVE
DOLPHIN ST
STARFISH LN
MERMAID ST
OCEAN AVE
SHORNCLIFFE AVE
CLAYTON AVE
COMPASS LN

CREUS-24-0174

CREUS Engineering
Civil Engineers & Project Managers
#610 EAST TOWER - 221 ESPLANADE WEST, NORTH VANCOUVER BC, V7M3J3
PH: 604-987-9070 WEBSITE: www.creus.ca

PERMIT TO PRACTICE # 1001543

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

client
PRINCIPAL ARCHITECTURE

project
CSF SECHELT
SECHELT, BC

title
CONTEXT PLAN

no.	(y/m/d)	revision	chk'd
4	24-01-11	ISSUED FOR CLIENT REVIEW	CLW
3	23-11-24	UPDATED PER CLIENT REVIEW	CLW
2	23-11-16	ISSUED FOR CLIENT REVIEW	CLW
1	23-10-30	ISSUED FOR REVIEW	CLW

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designed by: KBH	file no.: 23310
drawn by: CLW	drawing no.: CONTEXT-1
date: 2023-10-16	

GENERAL NOTES

1. ALL CONSTRUCTION IN THE DISTRICT OF SECHELT ROAD R.O.W. MUST CONFORM TO THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) PLATINUM EDITION AND DISTRICT SUBDIVISION & DEVELOPMENT CONTROL BYLAW #430, SCHEDULE D.2, SUPPLEMENTARY SPECIFICATIONS AND STANDARD DETAIL DRAWINGS AND MUST PASS THE DISTRICT'S AND ENGINEER'S INSPECTION. THE CONTRACTOR WILL GIVE THE DISTRICT 48 HOURS NOTICE PRIOR TO HIS REQUIREMENT FOR INSPECTIONS.
2. ALL CONSTRUCTION WITHIN THE PROPERTY MUST CONFORM TO THE MASTER MUNICIPAL CONSTRUCTION DOCUMENT'S PLATINUM EDITION SPECIFICATIONS AND THE B.C. PLUMBING CODE.
3. THE CONTRACTOR SHALL ENSURE THAT ALL APPROVALS REQUIRED FOR THE PROPOSED WORK HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.
4. LOCATIONS OF EXISTING UNDERGROUND SERVICES DETERMINED FROM THE DISTRICT OF SECHELT AND UTILITY AS-CONSTRUCTED DRAWINGS. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING SERVICES PRIOR TO CONSTRUCTION AND TO NOTIFY ENGINEER OF ANY DISCREPANCIES, CONFLICTS OR OMISSIONS.
5. ALL CUTS IN EXISTING ASPHALT REQUIRED FOR TRENCHING SHALL BE VERTICAL, 100mm DEEP, WITH A DIAMOND SAW & REPLACED WITH MINIMUM 100mm ASPHALT AFTER BACKFILL AND COMPACTION. ALL PAVEMENTS, BOULEVARDS, DRIVEWAYS, FENCES ETC. ARE TO BE RESTORED TO ORIGINAL OR BETTER CONDITION WHEN NO IMPROVEMENT IS PROPOSED UNDER THIS CONTRACT.
6. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR EXISTING SERVICES AND ANY SERVICES DISTURBED ARE TO BE REPLACED TO THE SATISFACTION OF THE DISTRICT AND/OR APPROPRIATE UTILITY CORPORATION.
7. THE CONTRACTOR'S SURVEYOR WILL RECORD & CERTIFY CORRECT ALL INFORMATION REQUIRED FOR THE ENGINEER TO PROVIDE A COMPLETE SET OF AS-CONSTRUCTED DRAWINGS.
8. WHEN NO IMPROVEMENTS ARE PROPOSED UNDER THIS CONTRACT, THE EXISTING SECTION(S) OF THE ROADWAY SHALL BE KEPT CLEAN AND CLEAR FOR THE DURATION OF CONSTRUCTION AND LEFT IN THE SAME CONDITION AS PRIOR TO CONSTRUCTION
9. FOR BC HYDRO, BC TEL (EASTLINK WHERE APPLICABLE), AND FORTIS INSTALLATION, SEE APPROPRIATE UTILITY COMPANY DRAWINGS & CERTIFICATION.
10. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THAT NO SILT IS DISCHARGED TO THE STORM DRAINAGE SYSTEM, ROADWAYS OR ADJACENT PROPERTIES DURING THE COURSE OF CONSTRUCTION IN ACCORDANCE WITH DFO/ MOELP'S "LAND DEVELPMENT GUIDELINES FOR THE PROTECTION OF AQUATIC HABITAT".
11. SEE CREUS SUPPLEMENTARY GENERAL CONDITIONS AND SUPPLEMENTARY SPECIFICATIONS.

SEE DRAWING KEY-1 FOR GENERAL NOTES
SEE DRAWING R-1 FOR ROADWORKS NOTES
SEE DRAWING SERV-1 FOR WATERWORKS NOTES
SEE DRAWING SERV-1 FOR STORM & SANITARY NOTES

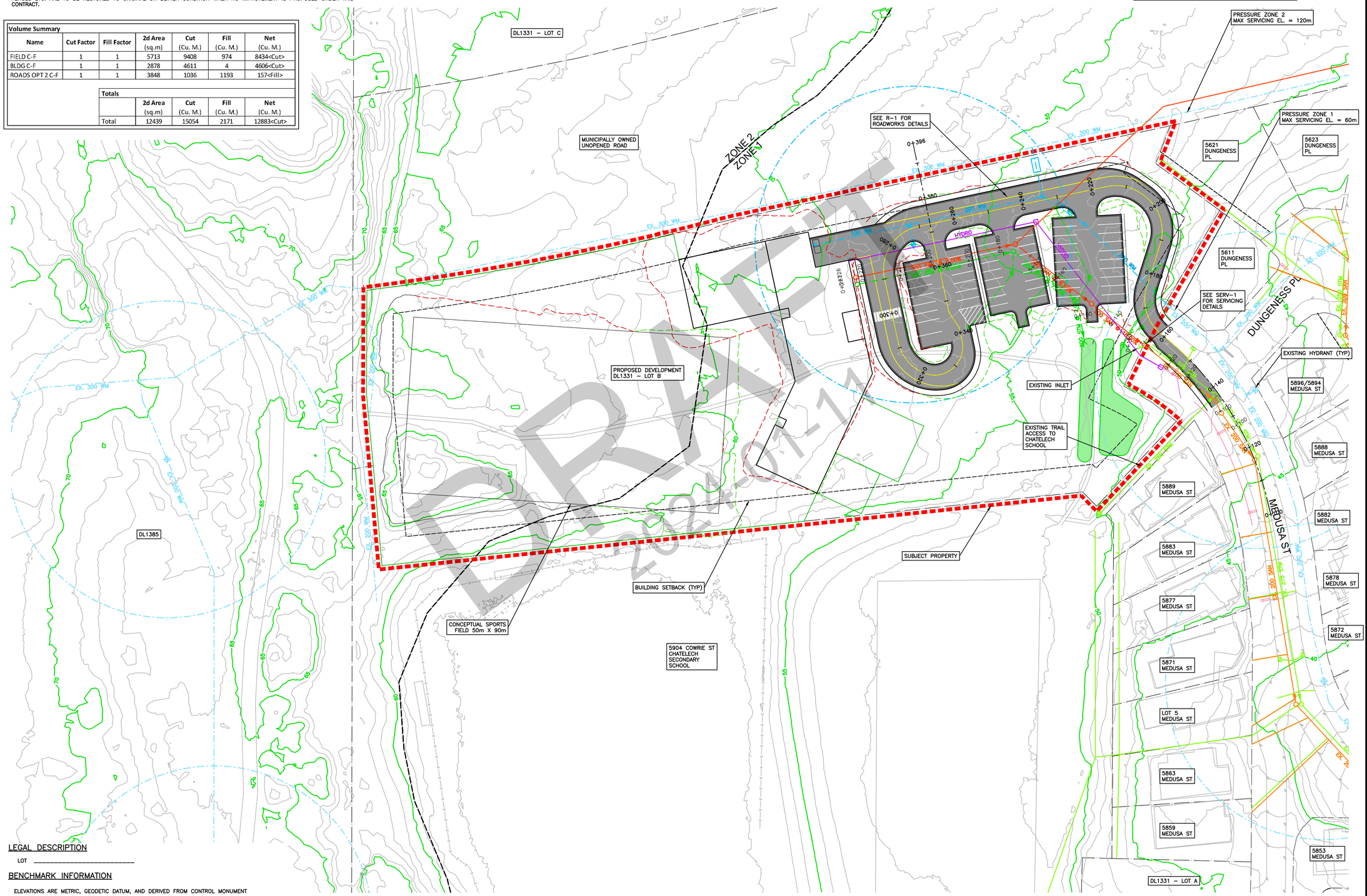
CONTRACTOR TO VERIFY & LOCATE EXISTING MAINS & SERVICE CONNECTIONS & NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING CONSTRUCTION

Volume Summary

Name	Cut Factor	Fill Factor	2d Area (sq.m)	Cut (Cu. M.)	Fill (Cu. M.)	Net (Cu. M.)
FIELD C-F	1	1	5713	9408	974	8434<Cut>
BLDG C-F	1	1	2878	4611	4	4606<Cut>
ROADS OPT 2 C-F	1	1	3848	1036	1193	157<Fill>

Totals

	2d Area (sq.m)	Cut (Cu. M.)	Fill (Cu. M.)	Net (Cu. M.)
Total	12439	15054	2171	12883<Cut>



LEGAL DESCRIPTION

LOT _____

BENCHMARK INFORMATION

ELEVATIONS ARE METRIC, GEODETIC DATUM, AND DERIVED FROM CONTROL MONUMENT

_____

CREUS Engineering

Civil Engineers & Project Managers
#610 EAST TOWER - 221 ESPLANADE WEST, NORTH VANCOUVER BC, V7M3J3
PH: 604-987-9070 WEBSITE: www.creus.ca

PERMIT TO PRACTICE # 1001543

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

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CSF SECHELT
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KEY PLAN

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4	24-01-11	ISSUED FOR CLIENT REVIEW	CLW
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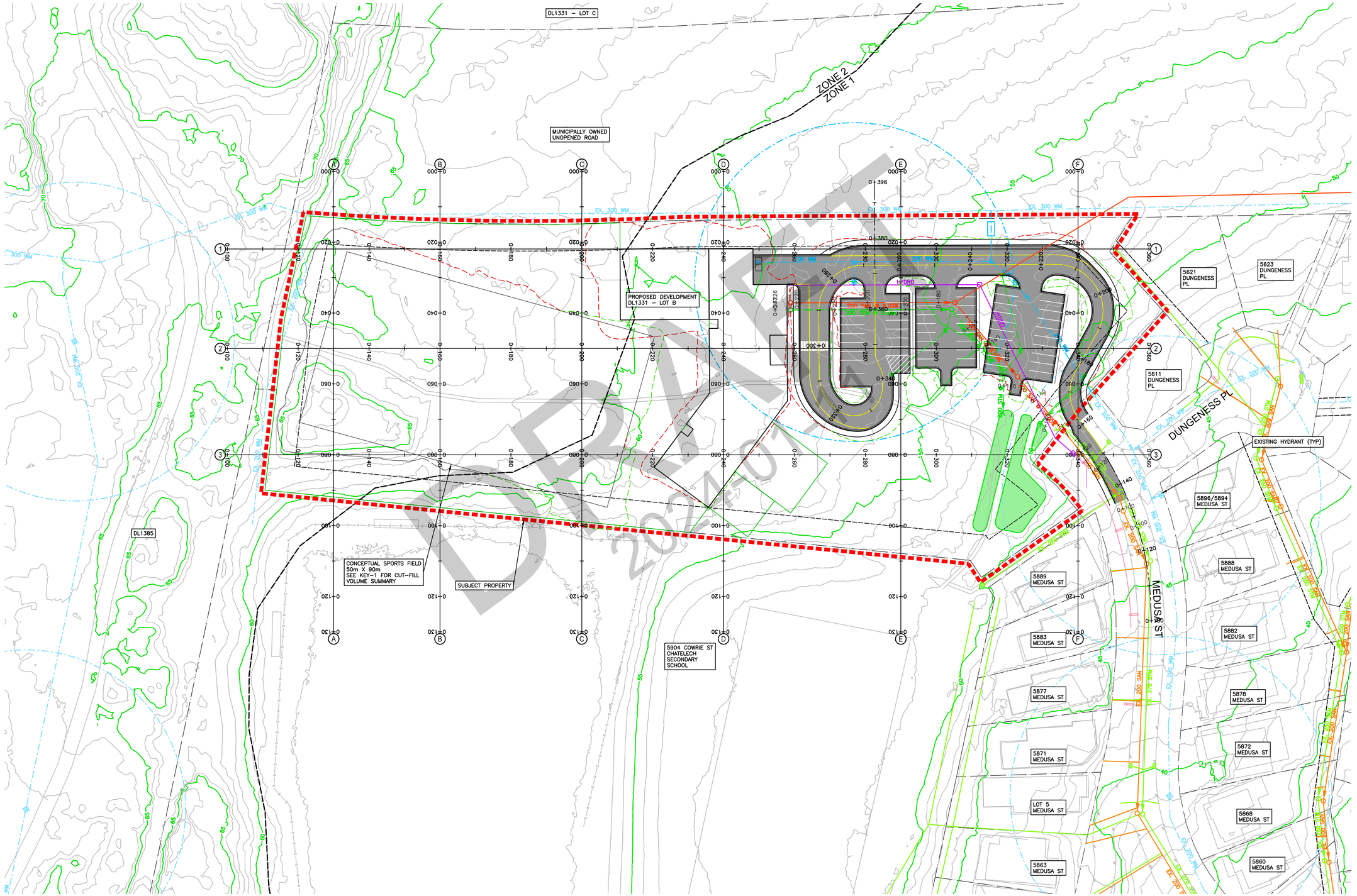

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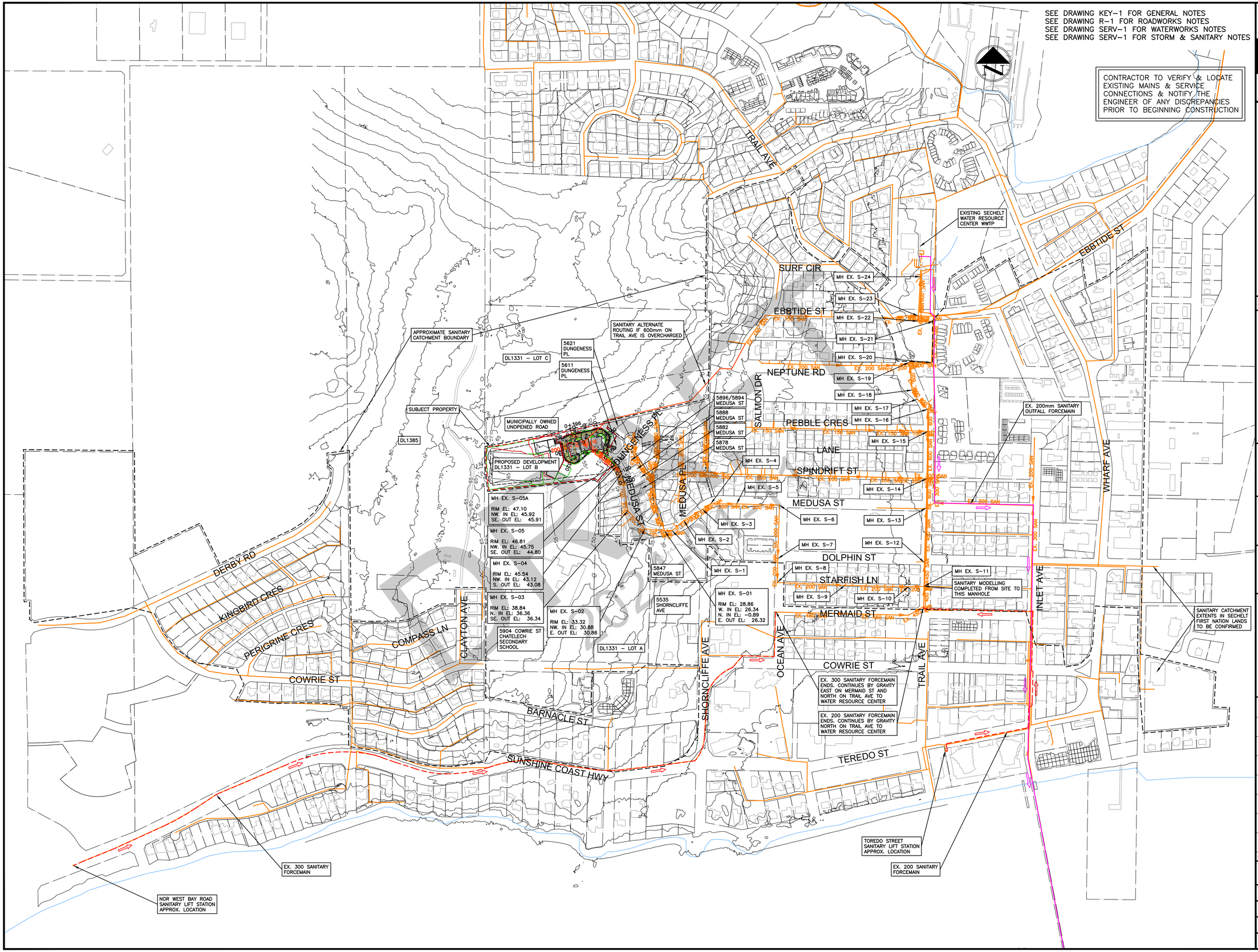

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PH: 604-987-9070 WEBSITE: www.creus.ca

PERMIT TO PRACTICE # 1001543

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
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GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
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date	2023-10-16
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file no.	23310
drawing no.	MSP-1

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DL1331 – LOT C
SUBJECT PROPERTY
MUNICIPALLY OWNED UNOPENED ROAD
DL1385
PROPOSED DEVELOPMENT DL1331 – LOT B
APPROXIMATE DRAINAGE CATCHMENT BOUNDARY
DERBY RD
5621 DUNGENESS PL
5611 DUNGENESS PL
5623 DUNGENESS PL
5629 DUNGENESS PL
DUNGENESS PL
MEDUSA PL
MEDUSA ST
5896/5894 MEDUSA ST
5888 MEDUSA ST
5882 MEDUSA ST
5878 MEDUSA ST
5872 MEDUSA ST
5868 MEDUSA ST
5853 MEDUSA ST
5847 MEDUSA ST
MH EX. D–05
RIM EL: 47.24
SW. IN EL: 45.45
NW. IN EL: 45.41
SE. OUT EL: 45.36
MH EX. D–04
RIM EL: 45.57
NW. IN EL: 43.50
S. OUT EL: 43.50
MH EX. D–03
RIM EL: 38.68
N. IN EL: 36.67
SE. OUT EL: 36.65
5904 COWRIE ST CHATELECH SECONDARY SCHOOL
DL1331 – LOT A
MH EX. D–02
RIM EL: 33.29
NW. IN EL: 30.92
E. OUT EL: 30.87
MH EX. D–01
RIM EL: 29.03
W. IN EL: 26.43
N. IN EL: –0.94
E. OUT EL: 26.41
5535 SHORNCLIFFE AVE
SHORNCLIFFE AVE
CLAYTON AVE
COMPASS LN
BARNACLE ST
SUNSHINE COAST HWY
1050 STORM OUTFALL VIA CHANNEL
MH EX. D–33
MH EX. D–31
MH EX. D–30
MH EX. D–29
MH EX. D–32
MH EX. D–28
MH EX. D–34
MH EX. D–5
MH EX. D–4
MH EX. D–3
MH EX. D–2
MH EX. D–1
MH EX. D–6
MH EX. D–7
MH EX. D–8
MH EX. D–27
MH EX. D–26
MH EX. D–9
MH EX. D–10
MH EX. D–13
MH EX. D–17
MH EX. D–18
MH EX. D–16
MH EX. D–12
MH EX. D–19
MH EX. D–11
MH EX. D–15
MH EX. D–14
PEBBLE CRES
SPINDRIFT ST
STORM FLOW PATH TO BE CONFIRMED
MEDUSA ST
TRAIL AVE
OCEAN AVE
DOLPHIN ST
STARFISH LN
MERMAID ST
INLET AVE
COWRIE ST
TEREDO ST
900 STORM OUTFALL
STRAIT OF GEORGIA
EX. 900 STM
EX. 375 STM
EX. 300 STM
EX. 450 STM
EX. 675 STM

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CREUS Engineering
Civil Engineers & Project Managers
#610 EAST TOWER - 221 ESPLANADE WEST, NORTH VANCOUVER BC, V7M3J3
PH: 604-987-9070 WEBSITE: www.creus.ca

PERMIT TO PRACTICE # 1001543

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

client
PRINCIPAL ARCHITECTURE

project
CSF SECHELT
SECHELT, BC

title
MASTER DRAINAGE PLAN

no.	(y/m/d)	revision	chk'd
4	24-01-11	ISSUED FOR CLIENT REVIEW	CLW
3	23-11-24	UPDATED PER CLIENT REVIEW	CLW
2	23-11-16	ISSUED FOR CLIENT REVIEW	CLW
1	23-10-30	ISSUED FOR REVIEW	CLW

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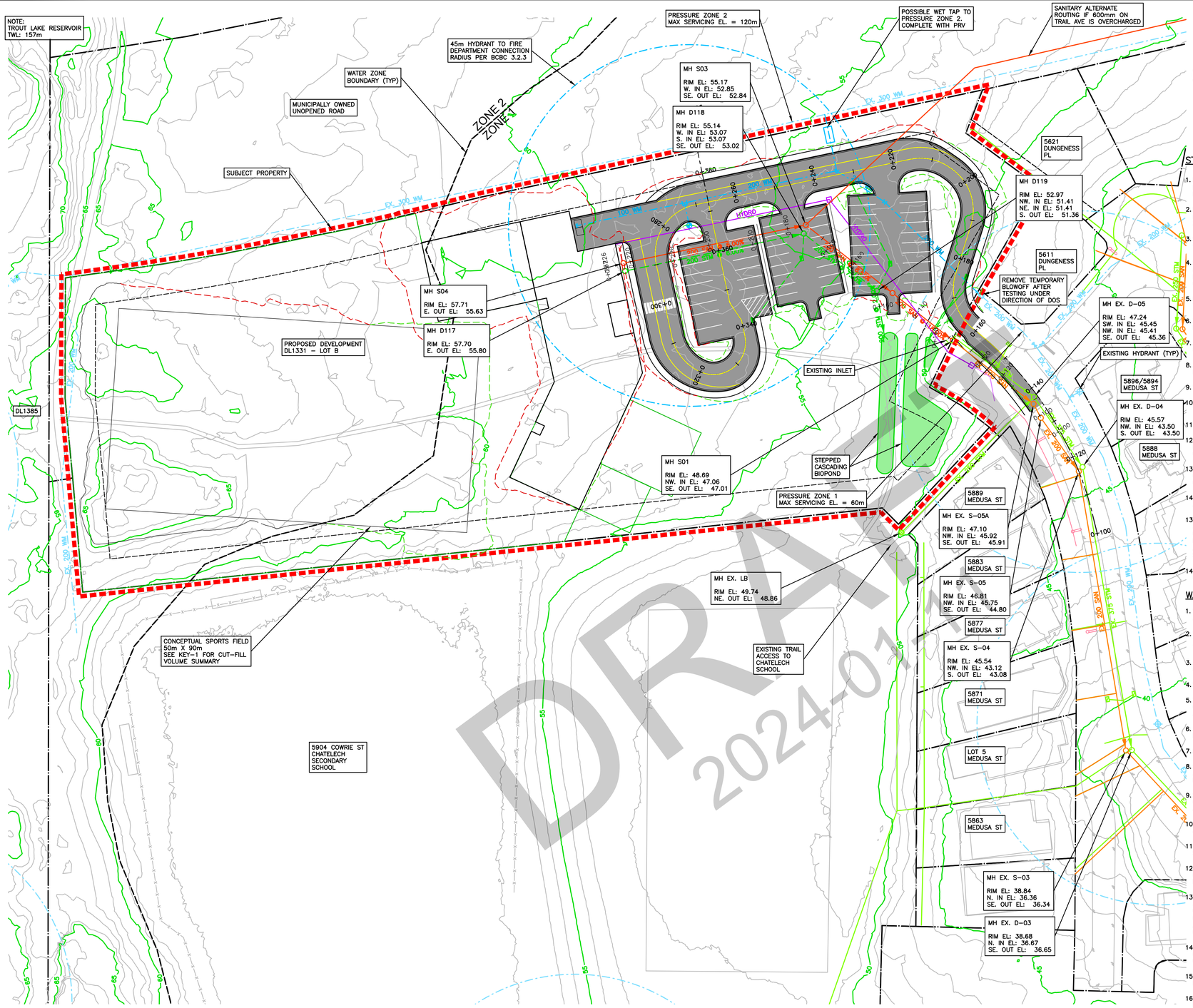
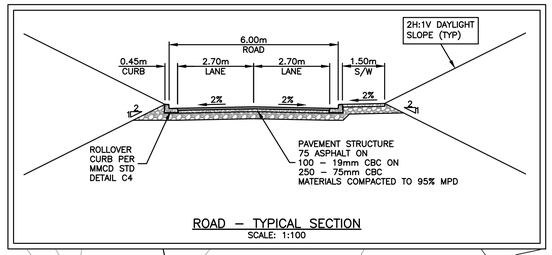
current rev. # 4

engineer of record	KBH
designed by	KBH
drawn by	CLW
date	2023-10-16
scales	hor:1:1000 vert: -
file no.	23310
drawing no.	MDP-1

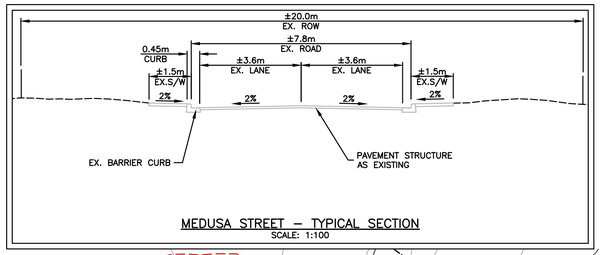

NOTE:
TROUT LAKE RESERVOIR
TWL: 157m
45m HYDRANT TO FIRE DEPARTMENT CONNECTION RADIUS PER BCBC 3.2.3
WATER ZONE BOUNDARY (TYP)
MUNICIPALLY OWNED UNOPENED ROAD
ZONE 2
ZONE 1
SUBJECT PROPERTY
PROPOSED DEVELOPMENT DL1331 – LOT B
DL1385
PRESSURE ZONE 2 MAX SERVICING EL. = 120m
POSSIBLE WET TAP TO PRESSURE ZONE 2, COMPLETE WITH PRV
SANITARY ALTERNATE ROUTING IF 600mm ON TRAIL AVE IS OVERCHARGED
MH S03
RIM EL: 55.17
W. IN EL: 52.85
SE. OUT EL: 52.84
MH D118
RIM EL: 55.14
W. IN EL: 53.07
S. IN EL: 53.07
SE. OUT EL: 53.02
MH S04
RIM EL: 57.71
E. OUT EL: 55.63
MH D117
RIM EL: 57.70
E. OUT EL: 55.80
MH S01
RIM EL: 48.69
NW. IN EL: 47.06
SE. OUT EL: 47.01
MH EX. LB
RIM EL: 49.74
NE. OUT EL: 48.86
EXISTING INLET
STEPPED CASCADING BIOPOND
PRESSURE ZONE 1 MAX SERVICING EL. = 60m
EXISTING TRAIL ACCESS TO CHATELECH SCHOOL
CONCEPTUAL SPORTS FIELD 50m X 90m SEE KEY–1 FOR CUT–FILL VOLUME SUMMARY
5904 COWRIE ST CHATELECH SECONDARY SCHOOL
5621 DUNGENESS PL
MH D119
RIM EL: 52.97
NW. IN EL: 51.41
NE. IN EL: 51.41
S. OUT EL: 51.36
5611 DUNGENESS PL
REMOVE TEMPORARY BLOWOFF AFTER TESTING UNDER DIRECTION OF DOS
MH EX. D–05
RIM EL: 47.24
SW. IN EL: 45.45
NW. IN EL: 45.41
SE. OUT EL: 45.36
EXISTING HYDRANT (TYP)
5896/5894 MEDUSA ST
MH EX. D–04
RIM EL: 45.57
NW. IN EL: 43.50
S. OUT EL: 43.50
5888 MEDUSA ST
5889 MEDUSA ST
MH EX. S–05A
RIM EL: 47.10
NW. IN EL: 45.92
SE. OUT EL: 45.91
5883 MEDUSA ST
MH EX. S–05
RIM EL: 46.81
NW. IN EL: 45.75
SE. OUT EL: 44.80
5877 MEDUSA ST
MH EX. S–04
RIM EL: 45.54
NW. IN EL: 43.12
S. OUT EL: 43.08
5871 MEDUSA ST
LOT 5 MEDUSA ST
5863 MEDUSA ST
MH EX. S–03
RIM EL: 38.84
N. IN EL: 36.36
SE. OUT EL: 36.34
MH EX. D–03
RIM EL: 38.68
N. IN EL: 36.67
SE. OUT EL: 36.65
HYDRO
EX. 300 WM
EX. 200 WM
EX. 200 SAN
EX. 600 SAN
EX. 525 SAN
EX. 450 SAN
EX. 375 SAN
EX. 250 SAN
EX. 200 STM
EX. 300 STM
EX. 450 STM
EX. 525 STM
EX. 600 STM
EX. 750 STM
EX. 900 STM
EX. 1050 STM
EX. 1200 STM
EX. 1350 STM
EX. 1500 STM
EX. 1650 STM
EX. 1800 STM
EX. 2100 STM
EX. 2400 STM
EX. 2700 STM
EX. 3000 STM
EX. 3300 STM
EX. 3600 STM
EX. 3900 STM
EX. 4200 STM
EX. 4500 STM
EX. 4800 STM
EX. 5100 STM
EX. 5400 STM
EX.

ROADWORKS NOTES

1. ALL ROADWORKS CONSTRUCTION AND METHODS MUST BE IN ACCORDANCE WITH MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD).
2. ALL LOOSE AND ORGANIC MATERIAL TO BE EXCAVATED AND DISPOSED OF OFF-SITE IN A LOCATION APPROVED BY THE ENGINEER.
3. ALL SUBGRADE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY. SUBGRADE TO BE INSPECTED BY ENGINEER PRIOR TO PLACEMENT OF GRAVEL SUBBASE. ANY WATER SOFTENED SUB GRADE SOIL SHALL BE OVER EXCAVATED AND THE GRADE RESTORED WITH GRANULAR SOILS COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
4. THE BASE AND SUBBASE MATERIALS SHALL BE PROPERLY PLACED AND COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR DRY DENSITY (ASTM D1557).
5. SIEVE ANALYSIS TO BE SUBMITTED PRIOR TO DELIVERING MATERIAL TO SITE.
6. CHANGES IN GRADE TO BE FORMED WITH SMOOTH CURVES.
7. ASPHALT PAVING CAN ONLY PROCEED IN THE PRESENCE OF THE ENGINEER OR DESIGNATED INSPECTORS.



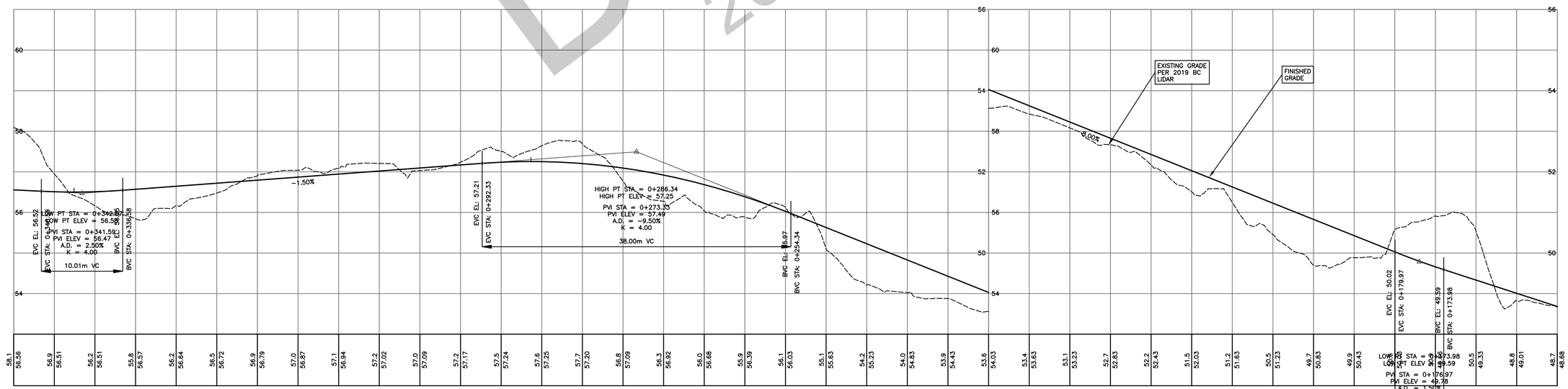
ROAD – TYPICAL SECTION
SCALE: 1:100



MEDUSA STREET – TYPICAL SECTION
SCALE: 1:100

SEE DRAWING KEY–1 FOR GENERAL NOTES
SEE DRAWING R–1 FOR ROADWORKS NOTES
SEE DRAWING SERV–1 FOR WATERWORKS NOTES
SEE DRAWING SERV–1 FOR STORM & SANITARY NOTES

CONTRACTOR TO VERIFY & LOCATE EXISTING MAINS & SERVICE CONNECTIONS & NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING CONSTRUCTION



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PERMIT TO PRACTICE # 1001543

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

client
PRINCIPAL ARCHITECTURE

project
CSF SECHELT
SECHELT, BC

title
ROADWORKS
ROAD A

no.	(y/m/d)	revision	chk'd
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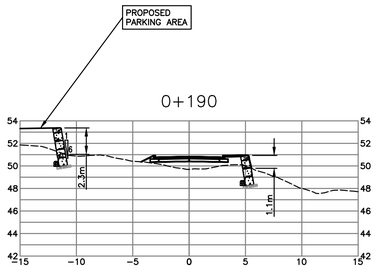
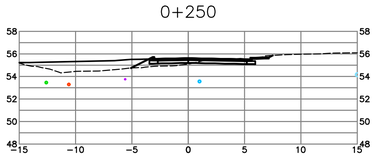
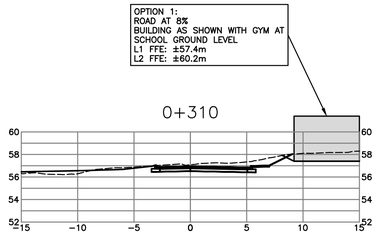
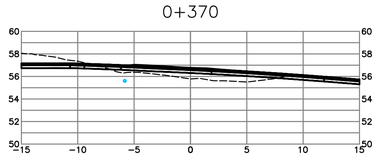
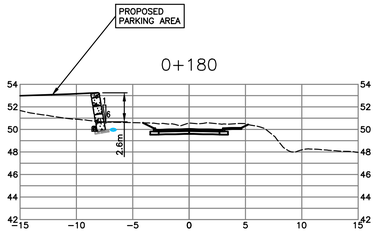
drawing no.	R-1

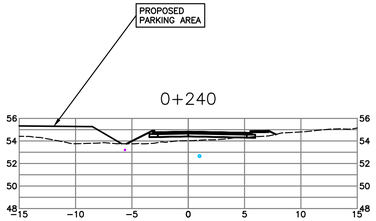


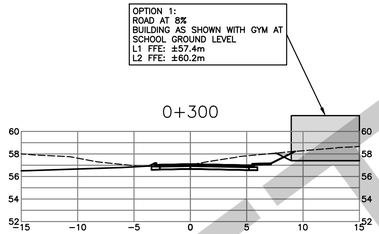


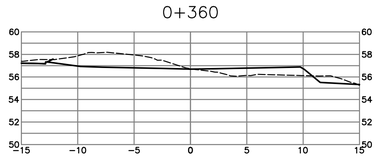


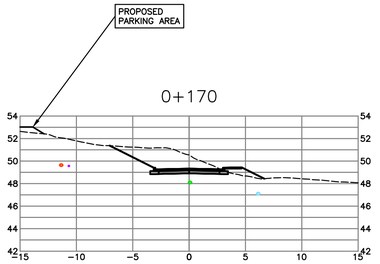


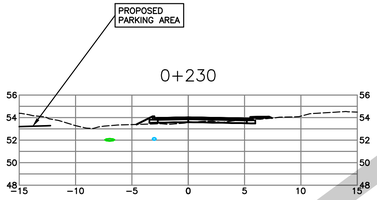


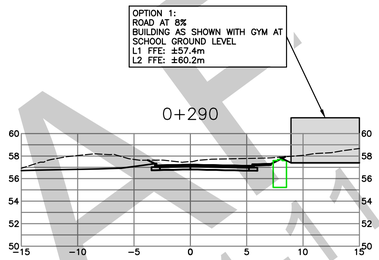


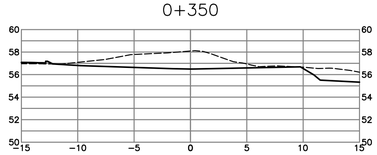


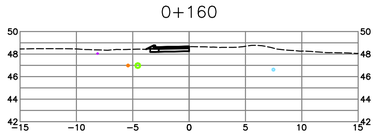


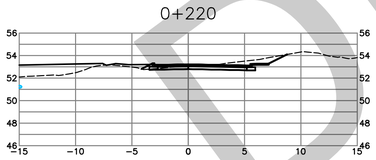


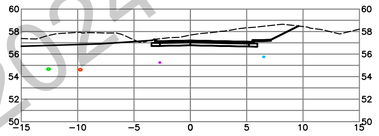


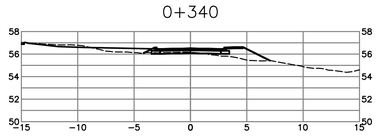


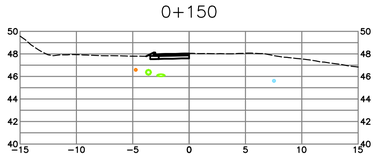


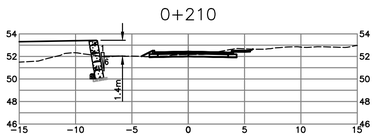


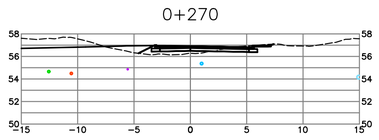


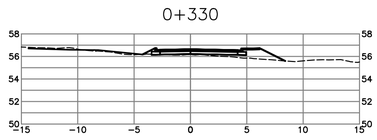


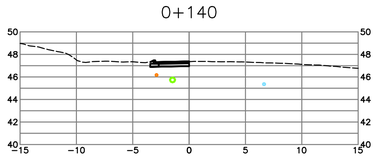


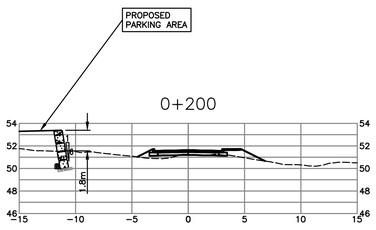


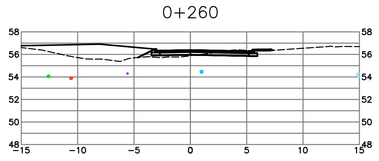


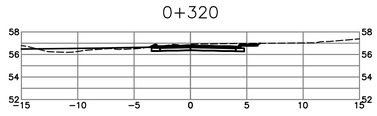












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2024-01-11

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PH: 604-987-9070 WEBSITE: www.creus.ca

PERMIT TO PRACTICE # 1001543

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

client

PRINCIPAL ARCHITECTURE

project

CSF SECHELT
SECHELT, BC

title

CROSS SECTIONS
ROAD A
STA 0+140 - 0+370

no.	(y/m/d)	revision	chk'd
4	24-01-11	ISSUED FOR CLIENT REVIEW	CLW
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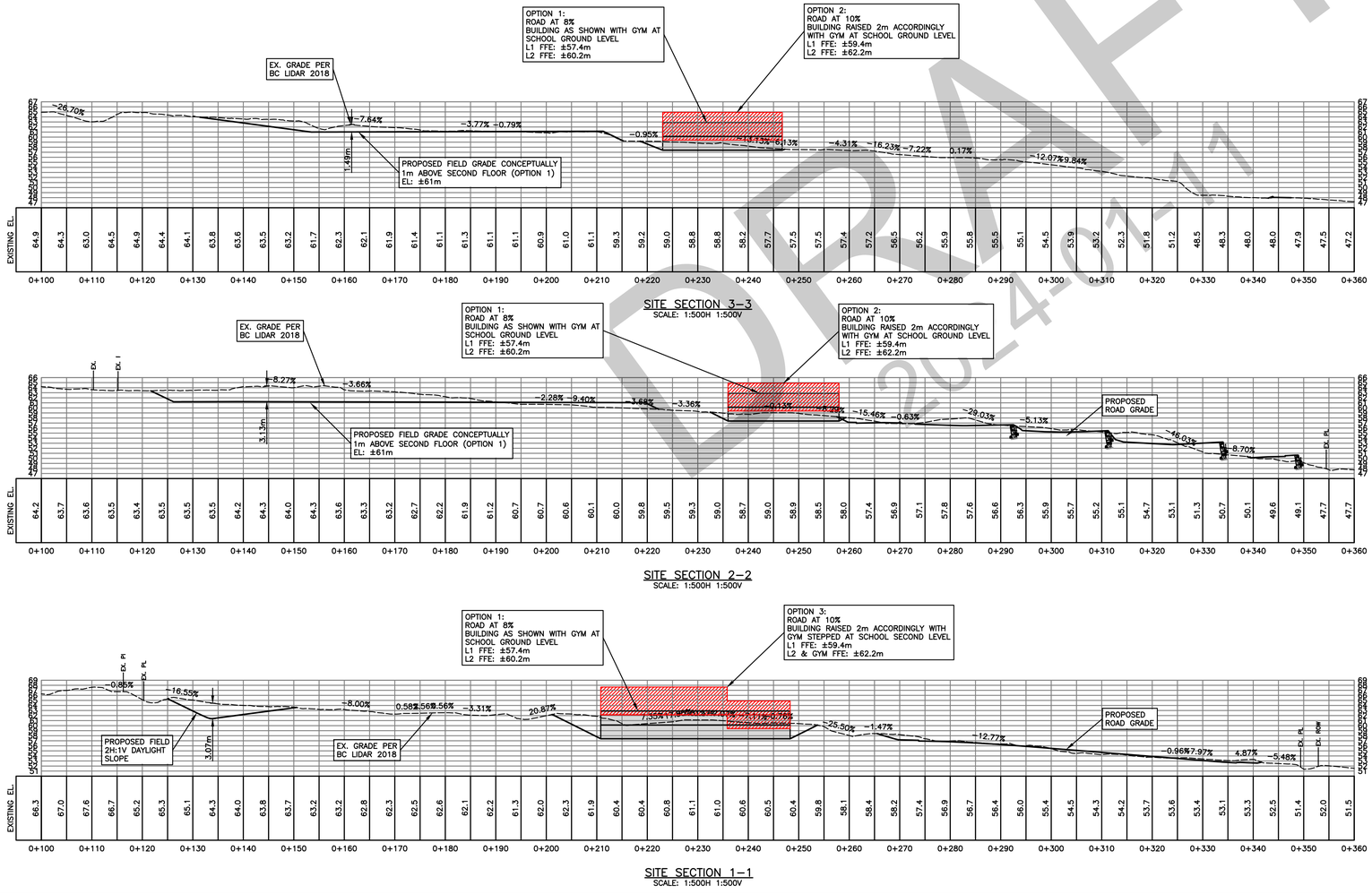

SITE SECTION 3–3
SCALE: 1:500H 1:500V

SITE SECTION 2–2
SCALE: 1:500H 1:500V

SITE SECTION 1–1
SCALE: 1:500H 1:500V

DRAFT
25-24-01-11

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	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE	GV	GV	GV
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

client
PRINCIPAL ARCHITECTURE

project
CSF SECHELT
SECHELT, BC

title
SITE SECTIONS
WEST TO EAST

no.	(y/m/d)	revision	chk'd
4	24-01-11	ISSUED FOR CLIENT REVIEW	CLW
3	23-11-24	UPDATED PER CLIENT REVIEW	CLW
2	23-11-16	ISSUED FOR CLIENT REVIEW	CLW
1	23-10-30	ISSUED FOR REVIEW	CLW

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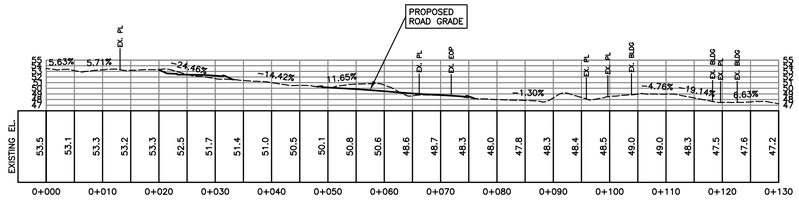
current rev. #: 4

engineer of record: KBH	scales: hor: 1:500 vert:1:500
designed by: KBH	file no.: 23310
drawn by: CLW	drawing no.: SS-1
date: 2023-10-16	



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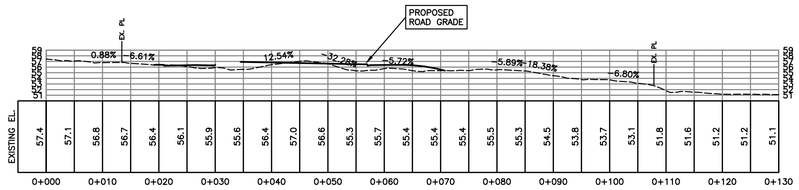

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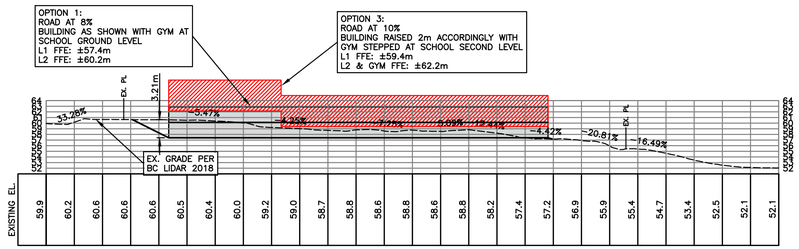

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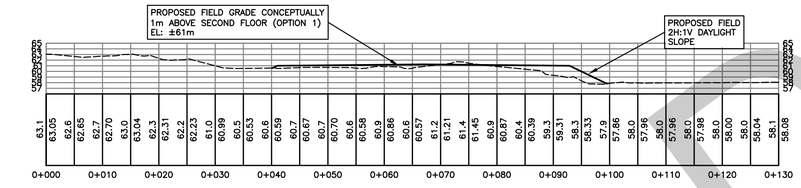

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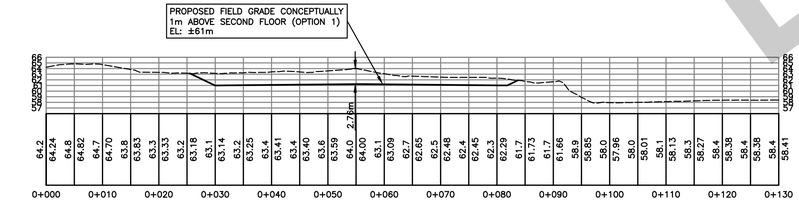

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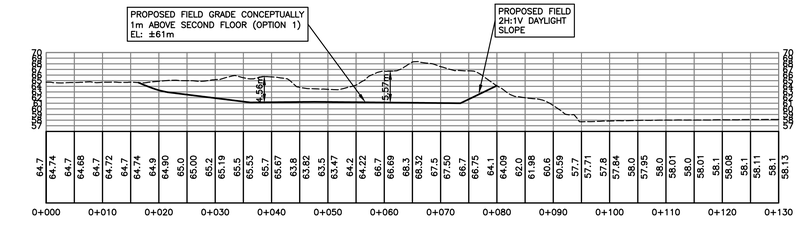

SITE SECTION A–A
SCALE: 1:500H 1:500V

DRAFT
2024-01-11

CREUS
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PERMIT TO PRACTICE # 1001543

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

client
PRINCIPAL ARCHITECTURE

project
CSF SECHELT
SECHELT, BC

title
SITE SECTIONS
NORTH TO SOUTH

no.	(y/m/d)	revision	chk'd
4	24-01-11	ISSUED FOR CLIENT REVIEW	CLW
3	23-11-24	UPDATED PER CLIENT REVIEW	CLW
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current rev. # 4

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designed by: KBH	file no. 23310
drawn by: CLW	drawing no. SS-2
date: 2023-10-16	

NEXT ENVIRONMENTAL

Project: SCH120401.01

Phase I
Environmental Site Assessment
for
Lot B – Medusa St., Sechelt, BC

Submitted to:
SCHOOL DISTRICT 93

Date of Report Validity:
March 23, 2023

Investigator
Julian Karner, Env. Eng., E.I.T.
Field Lead, Preliminary Site Investigations

Reviewer
Aio Haberli, M.Sc., P.Chem.
Technical & Regulatory Lead

2023-03-23

Compliance Statement

This report was completed in general compliance with the Canadian Standards Association Standard Z768-01 for Phase I Environmental Site Assessments as in effect at the date of the report. The staff at NEXT has over 120 years of combined experience in environmental investigation and remediation of contaminated sites. NEXT has completed over 10,000 environmental studies including Stage 1 and Stage 2 Preliminary Site Investigations (or Phase I and Phase II Environmental Site Assessments), Detailed Site Investigations, Remediation Plans, Remediations, Risk Assessments, Confirmatory Sampling and Monitoring Reports. The reviewer has participated in, coordinated and/or reviewed all types of environmental studies. The staff work under the direct supervision of the senior reviewer and has experience in on-site evaluations and investigations. Both the undersigned field staff and reviewer were directly involved in this project. Report does not constitute warranty. The assessment and conclusions in this report are based on the interpretation of information collected during investigations and/or from relevant knowledgeable parties/resources. The accuracy of the information available to or presented to NEXT cannot be warranted and/or is the responsibility of the issuers. NEXT does not therefore, warrant the information contained in this report. The responsibility of NEXT is to express an opinion on the information as obtained/presented regarding the environmental status of the Site, as at the date of the report. NEXT will render the Services outlined in the Contract to the Client with that degree of skill, care and diligence normally provided by environmental consultants in the performance of services in respect of projects of a similar nature to that contemplated by the Contract at the time and place that such Services are rendered. Services considered confidential and cannot be relied on by third parties. The contents of this report are confidential and are intended for the exclusive use of the Client unless otherwise expressly permitted by NEXT. NEXT accepts no responsibility for any damages suffered by any third party as a result of decisions made or actions taken based on this report. Any use of the report or reliance on or decision made based on its contents by any third party is at the risk of said party. NEXT is not responsible for any representations made by the Client to a third party based on the contents of this report. The Client assumes full responsibility for damages sustained by any third party arising from representations made by the Client to a third party based on the contents of this report.

NEXT ENVIRONMENTAL INC
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Engineers and Geoscientists BC
Permit to Practice #1003630

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Date of Report Validity:
March 23, 2023

Next Environmental Inc. ("NEXT") was engaged by School District 93 ("Client") to conduct a Phase I Environmental Site Assessment ("Phase I ESA") for a property located at Lot B – Medusa St., Sechelt, BC (herein referred to as the "Site"). This report has been prepared in support of due diligence. Authorization to proceed with this evaluation was provided by Chafic El Rassi on March 14, 2023.

This report summarizes the results of a Phase I Environmental Site Assessment conducted by Next Environmental Inc. Areas of Potential Environmental Concern ("**APECs**") and Items of Low Potential Environmental Concern ("**Items**") are noted in the text throughout Part 1 to Part 4 when identified from information sources, and then summarized and discussed further in Part 5 and 6. APECs generally warrant further investigation if identified. Items are not considered to be a significant environmental concern and do not require additional investigation. Please refer to the Appendices for the Methodology (including data sources), List of Acronyms, and other pertinent information provided by others.

In compliance with the Canadian Standards Association Standard Z768-01 for Phase I Assessments, this report assesses the likelihood of contamination by reviewing available information, following generally accepted consulting practice and standards. The accuracy of historical and current information provided by others cannot be warranted. Our responsibility is to express an opinion on the likelihood of contamination based on our review. Please note that this summary should be read in conjunction with the entire report.

APECs Present	**No**
Further Investigation Recommended	**No**

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Land Title(s)
Special Attention Items
iMapBC Database
Site Registry
Aerial Photographs
Waterway Maps
Authorization Management System (AMS)
Investigator & Reviewer Qualifications

Documentation Search Date: March, 2023

Part 1 – Subject Site Description

Site Civic Address	Lot B – Medusa St., Sechelt, BC *Refer to the Figure(s) for the General Site Location.*
Site Legal Address & Registered Owner	Lot B, District Lot 1331, Plan 18108. PID 007-230-516. 130666 Investments Ltd., Inc. No. BC1074453 2938 Chippendale Road West Vancouver, BC V7S 0A7 *Refer to Appendices for Land Title(s) and list of historical cancelled Land Title(s).*
Coordinates	49° 28' 32.93" N and 123° 46' 7.45" W at approximately the Site's center.
Site Dimensions	**Frontage:** ~79m **Depth:** ~200m **Area:** ~15 800m^2 (1.58ha)
Current Land Use	Wildlands
Future Land Use	According to Mr. Chafic El Rassi (Potential Buyer), the Site was planned to be developed into a public school.
Zoning	CD-3 (Comprehensive Development)

Part 2 – Physical Setting

Topography	Based on a review of the District of Sechelt GIS and Site visit observations, the regional topography slopes moderately downwards towards the southeast. The Site was noted to be sloping downwards towards the southeast.
Nearby Relevant Waterbodies	From a review of the iMapBC database, Google Maps imagery and the District of Sechelt GIS the Pacific Ocean was identified ~690m to the south of the Site and the Sechelt Marsh was ~700m to the northeast.
Geology/Stratigraphy	**Geological Survey of Canada and/or Surficial Geology Map:** Marine & Glacio-Marine Deposits: varied gravelly, sandy, stoney, clay and clay veneer normally over till.
Inferred Groundwater Flow Direction	Based on the regional topography and proximity to the Pacific Ocean, groundwater was expected to flow towards the southeast. Further hydrogeological investigation would be required to confirm groundwater flow direction at the Site.
Depth to Groundwater	Based on a Detailed Well Report from a groundwater well in the area (Well Tag 117951, located ~800m to the east of the Site), the static water in this area was ~5.8mbgs. Further hydrogeological investigation would be required to confirm the depth to groundwater at the Site.

Part 3 – Site Visit

Date of Site Visit	March 21, 2023, by Julian Karner. *Site Photos from the Date of Site Visit are provided in the attached Appendices.*
Site Configuration	The Site consisted of an irregularly shaped lot that was longer in the east/west direction than it was north/south. The Site was undeveloped and had been partially cleared of vegetation but did not appear to be maintained. Some dirt roads/paths as well as off-road trails were present at the Site, however they did not appear to be in constant use.
Construction	The Site was vacant and no structures or indications of past structures were present.
Heating/Cooling	None identified.
Current Operations	The Site was a vacant and vegetated lot.
In-Ground Structures	No in-ground structures were identified at the Site. No indications of UST(s), such as vent pipes, fill caps, backfilled excavations, or cut asphalt, were observed during the Site visit. Mr. Chafic El Rassi (Potential Buyer) was unaware of any UST(s) on-Site. *In-ground structures including but not limited to such structures as former (historical) or disused heating oil tanks may be difficult to identify during a Phase I Environmental Site Assessment for a variety of reasons such as limited access or visibility, incorrect representations by third parties or the client, subsequent construction related activities, and so on. Therefore, Next Environmental Inc. ("NEXT"), is unable to warrant their absence and the absence of contamination from their current or former presence. In the event of demolition and/or excavation, if a UST, back-filled excavation, or contamination is discovered on-Site, please contact NEXT to be present on-Site during the UST removal and/or excavation of soil to collect confirmatory soil samples. The collection of confirmatory soil samples will allow for laboratory analyses to identify the presence and/or absence of the PCOCs associated with heating oil and for proper off-Site disposal of the soil.*
Above-Ground Structures	No above-ground structures were identified at the Site.
Water Wells	From a review of the iMapBC database and Site visit observations, no water wells were identified at the Site.
Special Attention Items	Based on the lack of buildings presently or historically at the Site, (*See Part 4 – Records Review*), there was a low potential for Special Attention Items to be present at the Site, such as the following: • *Polychlorinated Biphenyls;* • *Asbestos-Containing Materials;* • *Ozone-Depleting Substances;* • *Lead-Based Paint; and,* • *Urea Formaldehyde Foam Insulation* General information on these Special Attention Items, along with Radon and Mould, is included in the Appendices. In the event of renovation or demolition of the Site or for a more thorough determination on the presence or absence of these substances, a hazardous materials or pre-demolition survey is recommended to address/satisfy any applicable WorkSafe BC, CSR, and HWR requirements.
Additional Chemical Storage	None identified.

Manufacturing Processes	
Waste Streams (non-domestic)	
Odours	
Stains	
Stressed Vegetation	
Fill Material	Fill material was not suspected at the Site as it appeared to be undeveloped and was on-grade with its surroundings. Furthermore, upon a review of historical aerial photographs (see Part 4, Records Review) there was no historical indication that fill material had been placed at the Site. *Fill material, including but not limited to that applied to improve Site grades or backfill excavations and utility trenches may be difficult to identify during a Phase I Environmental Site Assessment for a variety of reasons such as limited access or visibility, incorrect representations by third parties or the client, subsequent construction related activities, limitations in historical documentation, and so on. Therefore, Next Environmental Inc. ("NEXT"), is unable to warrant the absence of fill material and the absence of contamination in that fill material. In the event of demolition, redevelopment, and/or excavation, if suspected fill material or contamination is discovered on-Site, please contact NEXT to attend the Site to assess the situation and/or collect characterization or confirmatory soil samples. The collection of soil samples will allow for laboratory analyses to identify the presence and/or absence of PCOCs commonly associated with imported fill material and allow for proper management and off-Site disposal of the soil, as well as satisfy applicable WorkSafe BC, CSR, and HWR requirements.*
Interviews	Interview 1 – (conducted on March 20, 2023) **Name:** Mr. Chafic El Rassi **Position:** Potential Buyer **Contact:** 604-812-1524 **Site Familiarity:** ~1 year **Notes:** • Unaware of present or historical UST's • Future development will not incorporate underground parking. • Monitoring wells at the south side of the Site were likely associated with a drainage system upgrade at the school to the south of the Site.
Off-Site Activities	The following operations were noted at neighbouring properties: • North: Vacant wildlands • East: 5896 Medusa Street: Residential • South: 5904 Cowrie Street: Secondary School • West: Vacant wildlands and dirt road
Additional Observations	**Site:** An abandoned vehicle was found near the northwest corner of the Site. This vehicle had been placed there some unknown time ago and was in a state of disrepair. Upon further investigation, it appeared that the oil pan was still attached to the engine and the brake and coolant fluids appeared to still be present at adequate levels in their respective reservoirs. No leaks or staining was identified beneath the vehicle and as such it was not considered to be an area of environmental concern to the Site. Four monitoring wells were identified near the shared property line with Ecole Chatelech to the south. These wells were in two locations and appeared to be installed with two in a nested configuration. These wells were likely installed during

	a drainage system upgrade at the school to the south in order to determine the depth to groundwater. These wells were not considered to be indicative of an area of environmental concern. **Off-Site** None.
Limitations	Some of the Site was covered in dense vegetation which limited access and visibility. The majority of the Site was observed during the visit and due to the historically vacant nature of the Site, it was unlikely that this limitation affected the conclusion of this investigation.

Part 4 – Records Review

Year Built	Vacant (BC Assessment)
City Directories	City Directories for this area of Sechelt were unavailable for review for this investigation. Aerial photographs (discussed below) were deemed sufficient to assess the history of the Site.
Google Street View	Street View imagery was available from 2009 to 2001 in this area, and the following was noted: **Site:** • 2009 to 2011: The Site was undeveloped and appeared in a configuration consistent with Site visit observations. **Off-Site:** The area surrounding the Site appeared to be residential or undeveloped wildlands. As such, no areas of potential environmental concern were identified in the available in Street View Imagery.
Fire Insurance Map(s)	Fire insurance maps for this area of Sechelt were unavailable for review for this investigation.
Site Registry	**Site:** A Site Registry PID Search, Area Search, and iMapBC database search were completed for the Site. The Site was not listed in search results. **Off-Site:** A Site Registry Area Search (500m) and iMapBC database search, centered on the Site, returned a total of zero records. *Site Registry Search Results and iMapBC Database Results are included in the Appendices*
Aerial Photographs	Aerial photographs from 1950 to 2022 (5-10 year intervals) and Google Earth images from 2006 to 2022 (1-5 year intervals) were available for review for the Site and are summarized below: **Site:** • 1950 to 2006: The Site was observed to be undeveloped wildlands and was covered in vegetation. • 2009 to 2022: The Site was partially cleared of vegetation however this vegetation was allowed to partially return. The Site remained undeveloped and in a configuration consistent with Site visit observations. **Off-Site:** • 1950 to 1967: The area surrounding the Site appeared to be almost completely undeveloped and vegetated. One unpaved road was identified to the south of the Site which ran along the coast and to some residential lots. C. 1957 a strip of forest to the north of the Site was cleared to make way for electrical or telecommunication lines. • 1974 to 2003: Residential development and densification occurred to the east of the Site. Land to the south of the Site was cleared and a school was erected. • 2009 to 2022: Land to the west of the Site was partially cleared and developed into a residential subdivision. Some more residential development occurred to the east.
Lost Streams	Lost streams are evaluated as they may have been backfilled with material of unknown quality, creating a potential source of contamination. In addition, these

	streams may provide preferential pathways for groundwater and/or vapour to flow onto or away from the Site. From a review of the District of Sechelt GIS and historical aerial photographs, no lost streams were identified at the Site.
Authorization Management System Database Search	**Site:** None identified. **Off-Site:** Three active or cancelled authorizations were identified in the surrounding areas. Two were noted to be associated with the District of Sechelt municipal wastewater treatment which was not considered to be an area of environmental concern to the Site as outfalls were located into the ocean. The last was associated with stormwater regulation and was located ~1km away which was considered to be a significant distance from the Site. As such, none of the active or cancelled authorizations were areas of environmental concern to the Site.
Environmental Monitoring	**Site:** None identified. **Off-Site:** Two monitoring stations were identified. One was located ~350m to the east of the Site and due to this distance, it was not considered to be an area of environmental concern to the Site. The other was ~80m to the north of the Site. This station was associated with an open burn site that occurred in 1997. As the area surrounding this location was noted to be undeveloped wildlands from a review of aerial photographs, this monitoring station was not considered to be associated with an area of environmental concern to the Site.
Previous Report(s) & Documentation Review	No additional reports or documents were obtained or made available for review for this investigation.

Part 5 – Summary

Items of Low Potential Environmental Concern

(refer to Figure(s) for Item locations)

On-Site and Off-Site Items

None Identified

Areas of Potential Environmental Concern (APEC)

(refer to Figure(s) for APEC locations)

On-Site and Off-Site APECs

None Identified

Part 6 – Conclusion & Recommendation

Based on the findings of this Phase I ESA, no APECs were identified. Therefore, no further investigation is recommended at this time.

Figure(s)

NEXT ENVIRONMENTAL INC

LEGEND

Site Boundary

0 50m

1:1250

IMAGE SOURCES
- Inset Map: Google Maps
- Aerial Image: SCRD GIS (2021)

NOTE
All locations are approximate unless otherwise noted

DISCLAIMER
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School District 93

Phase I Environmental Site Assessment

Lot B - Medusa Street, Sechelt, BC

JK	BP March 22, 2023	AH March 22, 2023	SCH120401
Site Plan			SCH120401-001.dwg 01

Site Photographs

Photograph 1

Site (Front View) standing to the east of the Site in the cul-de-sac at the northern end of Medusa Street, looking northwest.

Photograph 2

Site (Rear View) standing to the north of the Site in the cleared area for electrical transmission lines, looking south.

Photograph 3

North of Site, standing to the north of the Site in the cleared area for electrical transmission lines, looking southwest.

Photograph 4

East of Site, standing to the south of the Site in the cul-de-sac at the northern end of Medusa Street, looking southeast.

Photograph 5

South of Site, standing near the Site's southern property line, looking south.

Photograph 6

West of Site, standing near or on the Site's western property line, looking west.

Methodology & List of Acronyms

METHODOLOGY

The Phase I is an opinion on the likelihood of significant contamination on the Site from on- or off-Site sources that may pose a risk to human health and/or the environment. The conclusions of the Phase I are constrained by the availability of reviewed information. Visual inspection of neighbouring properties is typically limited to observations made from the Site or public areas. The Phase I consisted of a Site visit and review of information from the following sources:

- Legal description, current land title, and legal lot plan from BC Online and/or Title and Survey Authority of British Columbia ("LTSA");
- Geological data from a Regional Surficial Geology map;
- Topography from iMapBC and/or municipal GIS;
- Surface waterbodies from iMapBC and/or municipal GIS and/or google maps
- Water supply information (including utilities and/or water wells and/or surface water intakes) from the municipality and/or iMapBC;
- Surface Water Intakes from iMapBC;
- Aquifer information from iMapBC;
- Water Use Determinations (from CSAP GIS info system and/or MOE);
- Climate and precipitation charts from Environment Canada Climate Normals for 1981-2010
- Zoning information from the municipality;
- Aerial photographs from various archives (primarily UBC Geography Information Centre) and/or google earth;
- Site Registry details from BC Online and iMapBC;
- Environmental Monitoring stations from iMapBC;
- Borehole Lithology Logs from iMapBC;
- Environmental Management Authorization Database from the BC ENV;
- Lost streams information from DFO Lost Streams of Lower Fraser Valley map and/or municipal sources;
- City directories for the Site and surrounding properties from various libraries (primarily Vancouver Public Library);
- Fire Insurance Maps from various municipal archives or libraries (primarily UBC Library - Rare Books and Special Collections);
- Previous environmental investigation reports identified in the report;
- Historical Site Plans from municipal archives and/or client;
- Visual inspection of the Site and adjacent properties; and,
- Interviews with knowledgeable persons.

Depending on Site specifics, not all the above mentioned sources are always available. NEXT can be contacted at any time for specific details on the available information reviewed for this Phase I. The Phase I does not include the sampling and/or analysis of any environmental media.

City Directories, if available, were reviewed as part of this report are not attached to the Appendices. However, digital copies of the City Directories applicable to this report (if any) are available upon request.

LIST OF ACRONYMS

APEC(s)	Area(s) of Potential Environmental Concern (further investigation required)
AST(s)	Aboveground Storage Tank(s)
AW	Aquatic Life Standard
BC ENV/ENV	BC Ministry of Environment & Climate Change Strategy
BTEXS	Benzene, Toluene, Ethylbenzene, Xylenes, Styrene
CL	Commercial Land Use
CSA	Canadian Standards Association
CSR	BC Ministry of Environment's Contaminated Sites Regulation
CU	Commercial Use Vapour Standard
DNAPL	Dense Non-Aqueous Phase Liquid
DFO	Department of Fisheries and Oceans Canada
DSI	Detailed Site Investigation
DW	Drinking Water Use Standard
EMA	Environmental Management Act
EPH	Extractable Petroleum Hydrocarbon
ESA	Environmental Site Assessment
GW	Groundwater
ha	Hectares
HDPE	High-density Polyethylene
HEPH	Heavy Extractable Petroleum Hydrocarbon
HWR	BC Ministry of Environment Hazardous Waste Regulation
ICOC(s)	Identified Contaminant(s) of Concern
IL	Industrial Land Use
Item(s)	An activity, operation, or structure of low potential environmental concern (no further investigation recommended)
IU	Industrial Use Vapour Standard
IW	Irrigation Water Use Standard
km	Kilometres
LEPH	Light Extractable Petroleum Hydrocarbon
LNAPL	Light Non-Aqueous Phase Liquid
LW	Livestock Water Use Standard
m	Metres
mbg	Metres below grade
mm	Millimetres
MTBE	Methyl Tert-Butyl Ether
NEXT	Next Environmental Inc.
OCP	Official Community Plan (OCP)
PAHs	Polycyclic Aromatic Hydrocarbons
PCOC(s)	Potential Contaminant(s) of Concern
Phase I	Phase I Environmental Site Assessment
Phase II	Phase II Environmental Site Assessment
QA/QC	Quality Assurance/Quality Control
RL	Residential Land Use
RU	Residential Use Vapour Standard
ROW(s)	Right of Way(s)
Stage 1	Stage 1 Preliminary Site Investigation
Stage 2	Stage 2 Preliminary Site Investigation
TG10	BC ENV's Technical Guidance 10
UST(s)	Underground Storage Tank(s)
VOCs	Volatile Organic Compounds
VPH	Volatile Petroleum Hydrocarbons

Land Title(s)

TITLE SEARCH PRINT 2023-03-17, 10:54:57

File Reference: SCH120401.01 Requestor: Emma Norman

CURRENT INFORMATION ONLY - NO CANCELLED INFORMATION SHOWN

Land Title District	VANCOUVER
Land Title Office	VANCOUVER
Title Number	CB452940
From Title Number	CA5529067
Application Received	2023-01-31
Application Entered	2023-02-02
Registered Owner in Fee Simple	
Registered Owner/Mailing Address:	130666 INVESTMENTS LTD., INC.NO. BC1074453 2938 CHIPPENDALE ROAD WEST VANCOUVER, BC V7S 0A7
Taxation Authority	North Shore - Squamish Valley Assessment Area Sechelt Fire Protection District Sechelt, District of
Description of Land	
Parcel Identifier:	007-230-516
Legal Description:	
LOT B DISTRICT LOT 1331 PLAN 18108	
Legal Notations	NONE
Charges, Liens and Interests	NONE
Duplicate Indefeasible Title	NONE OUTSTANDING
Transfers	NONE
Pending Applications	NONE

myLTSA

2023-03-17 10:54:50

Title Search Results

Requestor: Emma Norman

File Reference: SCH120401.01

7 search results found in Land Title District: All Land Title Districts

PID 007-230-516 S/18108/////B
PENDING APPLICATIONS: There are no pending applications

	Title Number	Land Title District	Status	First Owner Name on Title
☐	CB452940	Vancouver	REGISTERED	13*
☐	CA5529067	Vancouver	CANCELLED	13*
☐	CA3944100	Vancouver	CANCELLED	NO*
☐	CA616698	Vancouver	CANCELLED	07*
☐	BH248178	Vancouver	CANCELLED	47*
☐	R72436	Vancouver	CANCELLED	RA*, R*
☐	H17396	Vancouver	CANCELLED	RO*, R*

Special Attention Items

SPECIAL ATTENTION ITEMS – General Information

Polychlorinated Biphenyls:
The manufacture of polychlorinated biphenyl (PCBs) in North America was prohibited under the Toxic Substances Control Act (1977). PCB use, as a constituent of new products manufactured in or imported into Canada, was prohibited by regulations enacted in 1977 and 1980. As such, sites developed or significantly renovated after 1980 are unlikely to operate equipment containing PCBs. Equipment, which could contain PCBs, includes fluorescent mercury and sodium vapour light ballasts, oil-filled capacitors, and transformers.

As long as this electrical equipment is being used for its intended purpose, and is in good operating condition, it is not considered to be a waste material. However, if such equipment is removed during renovation or building demolition, storage or disposal of any PCBs greater than 5 kg is regulated under the EMA and HWR. Renovation and demolition activities should also be conducted in accordance with Section 20.112 of the WCB OHSR.

Asbestos-Containing Materials:
Asbestos-containing material (ACM) is fibrous hydrated silicates, and can be found in building materials as either "unbound" or "bound" asbestos. Friable asbestos refers to materials where the asbestos fibres can be separated from the material with which it is associated. Non-Friable asbestos refers to asbestos, which is associated with a binding agent (such as tar or cement). Friable asbestos is commonly found in boiler and pipe insulation. Non-Friable asbestos is typically found in roofing tars, floor and ceiling tiles, linoleum, insulations, plaster, cement products, grouts, sealants, and protective coatings.

The use of friable asbestos as a building material was banned in the U.S. in the mid-1970s. The manufacture of building materials containing asbestos was generally phased out in North America by the mid-1980s. If demolition or renovation of the structure is considered, the identification and safe removal or containment of asbestos is regulated under Section 20.112 of the OHSR. When these materials are in use they are not waste materials; however, following removal it is recommended that they be managed in accordance with the *Hazardous Waste Regulation* (HWR) and the *Environmental Management Act* (EMA).

Ozone-Depleting Substances
Chlorofluorocarbons (CFCs) are comprised of ozone-depleting substances (ODSs) such as Freon and halon, which were banned from production in Canada in 1996, with several ODSs phased out in 2010. The use of ODSs is still permitted: with the condition that a licensed contractor must service equipment such that ODSs are contained and not released to the environment. Prior to disposal, refrigerators and air-conditioning units should be degassed by a certified contractor as required by BC Ozone Depleting Substances Regulation.

Lead-Based Paint
Lead has frequently been used in oil-based paints, roofing materials, cornices, tank linings, electrical conduits and soft solders for tinplate and plumbing. The use of lead-based paint (LBP) was phased out circa 1976. Paint that was produced or used between 1976 and 1980 may contain small amounts of lead. Paint that was produced or used prior to 1950 may contain high levels of lead. The main concern regarding LBP is its potential to become airborne either through deterioration or mechanical means (i.e., sanding, abrasion, etc.).

Up until the mid-1950s, lead was the standard material for service lines. Lead pipes were banned by the National Plumbing Code of Canada in 1975. By the mid-1990s, the public portion of most lead service lines — the lateral pipe running from the main line to the sidewalk — were converted to copper. However, older homes may still have lead containing services pipes and indoor plumbing (lead solders and faucets). If demolition is considered it should be identified, removed or contained in accordance with Section 20.112 of the OHSR.

Urea Formaldehyde Foam Insulation

Urea Formaldehyde Foam Insulation (UFFI) is a type of insulation that was widely used in the 1970's for insulating and retrofitting industrial, commercial and older residential buildings. UFFI is a low density foam that has the appearance and consistency of shaving cream, and becomes stiff and self-supporting when it dries or cures (hardens).

The insulation was typically made on-site where the urea formaldehyde-based resin is mixed with a catalyst and water and foamed in place in walls or used for block fill. The foam can be forced through small openings and delivered to the entire area of any cavity before it cures. UFFI was discontinued from commercial use in the early 1980s.

Mould

Health Canada considers indoor mould growth to be a significant health hazard. Damp conditions and mould growth in homes increases the risk of respiratory allergy symptoms and exacerbate asthma in mold-sensitive individuals.

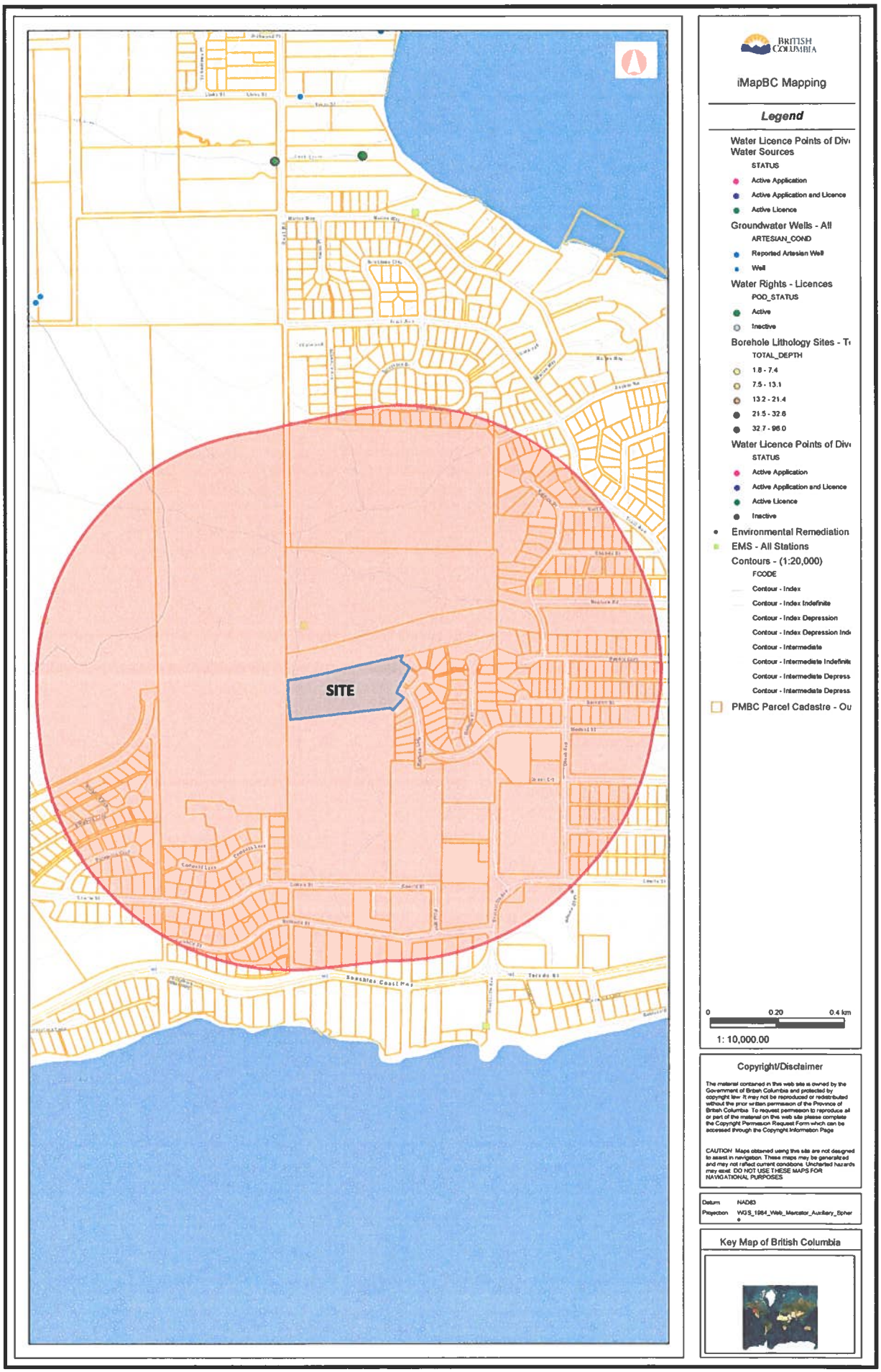
Radon

Radon is a colourless, odourless gas that occurs naturally from the breakdown of uranium. Radon can be found where soils and rocks contain uranium mineral, often in uranium rich black shale and/or granite bedrock. In open air or in areas with high air circulation, radon is not considered a health problem. However, in confined spaces (such as basements or underground structures), radon can concentrate and become a health hazard.

The BC CDC provides an interactive map of indoor radon levels recorded in homes across BC. http://www.bccdc.ca/health-info/prevention-public-health/radon

In the event of renovation or demolition of the Site, a hazardous materials or pre-demolition survey is recommended to address the potential presence of the substances listed in the report to satisfy applicable WorkSafe BC, CSR, and HWR requirements.

iMapBC Database



BRITISH COLUMBIA

iMapBC Mapping

Legend

Water Licence Points of Div
Water Sources
STATUS
Active Application
Active Application and Licence
Active Licence
Groundwater Wells - All
ARTESIAN_COND
Reported Artesian Well
Well
Water Rights - Licences
POD_STATUS
Active
Inactive
Borehole Lithology Sites - T
TOTAL_DEPTH
1.8 - 7.4
7.5 - 13.1
13.2 - 21.4
21.5 - 32.6
32.7 - 96.0
Water Licence Points of Div
STATUS
Active Application
Active Application and Licence
Active Licence
Inactive
Environmental Remediation
EMS - All Stations
Contours - (1:20,000)
FCODE
Contour - Index
Contour - Index Indefinite
Contour - Index Depression
Contour - Index Depression Ind
Contour - Intermediate
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PMBC Parcel Cadastre - Ou

0 0.20 0.4 km

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Datum NAD83
Projection WGS_1984_Web_Mercator_Auxiliary_Sphere

Key Map of British Columbia

Monitoring Location ID	Monitoring Location Name	Description	Established Date	Office Code	Latitude	Longitude	First Sample Date	Last Sample Date	Location Type Code	Location Purpose Code	Sample Count	Result Count	Permit Relationship	Permit Id	OBJECTID
E226028	SECHELT LOT C; DL.1331; PLAN 18108	Open Burn Site	1997-05-08	20	49.477	123.77			34	3	0	0	DISCHARGE	15019	72398423
E213029	SALMON DR.; SECHELT	5660 SALMON DR, SECHELT - ON BALCONY OF HOUSE	1990-09-27	20	49.47775	123.763556	1990-09-12	1990-11-19	1	1	4	14			72394339
E315051	CEDAR MILL (SESCHELT)	Cedar Mill that is currently going through upgrades that has installed a ditch around property and directing discharge towards drinking water.	2019-01-10	20	49.477093	123.777122			19	4	0	0			72420050

Site Registry

Report data as of: 2023-03-12

Report run: 2023-03-17
10:56:55 PST
For: EMMA KATHERINE NORMAN

Site Registry - Land Title Parcel Identifier (PID) Search

BC Registries and Online Services

No records from the Site Registry that match the search criteria provided:

Land Title PID: 007230516

You have been charged for this information.

Sites may be revealed by searching with alternate search methods. For example, a site not revealed in an Area search may be revealed by searching with another piece of information such as PID, PIN, address, or Crown Lands File Number.

Disclaimer: Site Registry information has been filed in accordance with the provisions of the *Environmental Management Act*. While we believe the information to be reliable, BC Registries and Online Services and the province of British Columbia make no representation or warranty as to its accuracy or completeness. Persons using this information do so at their own risk.

Report data as of: 2023-03-12

Report run: 2023-03-17
10:59:16 PST
For: EMMA KATHERINE NORMAN

Site Registry - Area Search

BC Registries and Online Services

No records from the Site Registry that match the search criteria provided:

Latitude: 49deg 28min 32.9sec

Longitude: 123deg 46min 7.4sec

Radius: 0.5km

You have been charged for this information.

Sites may be revealed by searching with alternate search methods. For example, a site not revealed in an Area search may be revealed by searching with another piece of information such as PID, PIN, address, or Crown Lands File Number.

Disclaimer: Site Registry information has been filed in accordance with the provisions of the *Environmental Management Act*. While we believe the information to be reliable, BC Registries and Online Services and the province of British Columbia make no representation or warranty as to its accuracy or completeness. Persons using this information do so at their own risk.

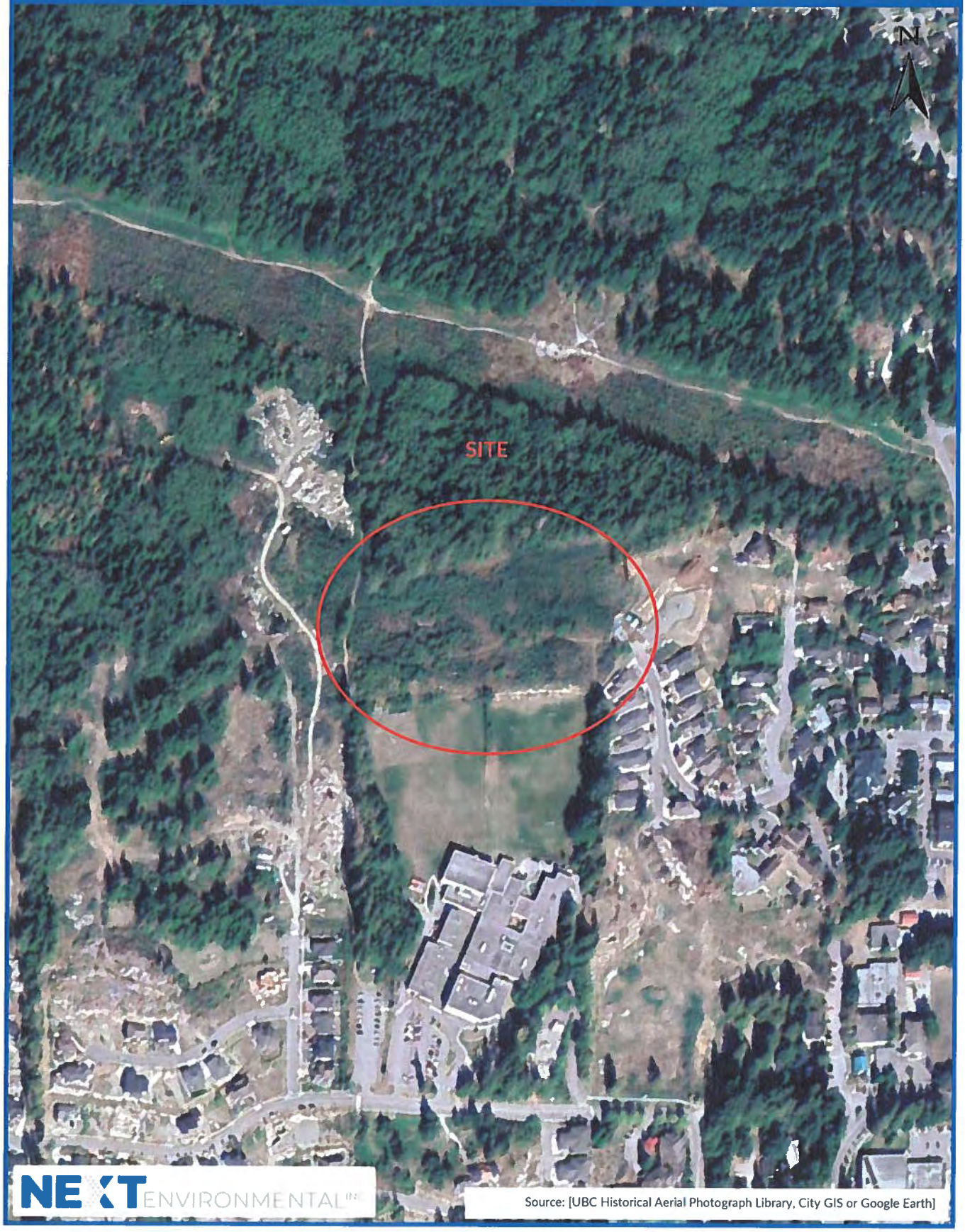
Aerial Photographs

Historical Aerial Photograph – 2022

NEXT ENVIRONMENTAL

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

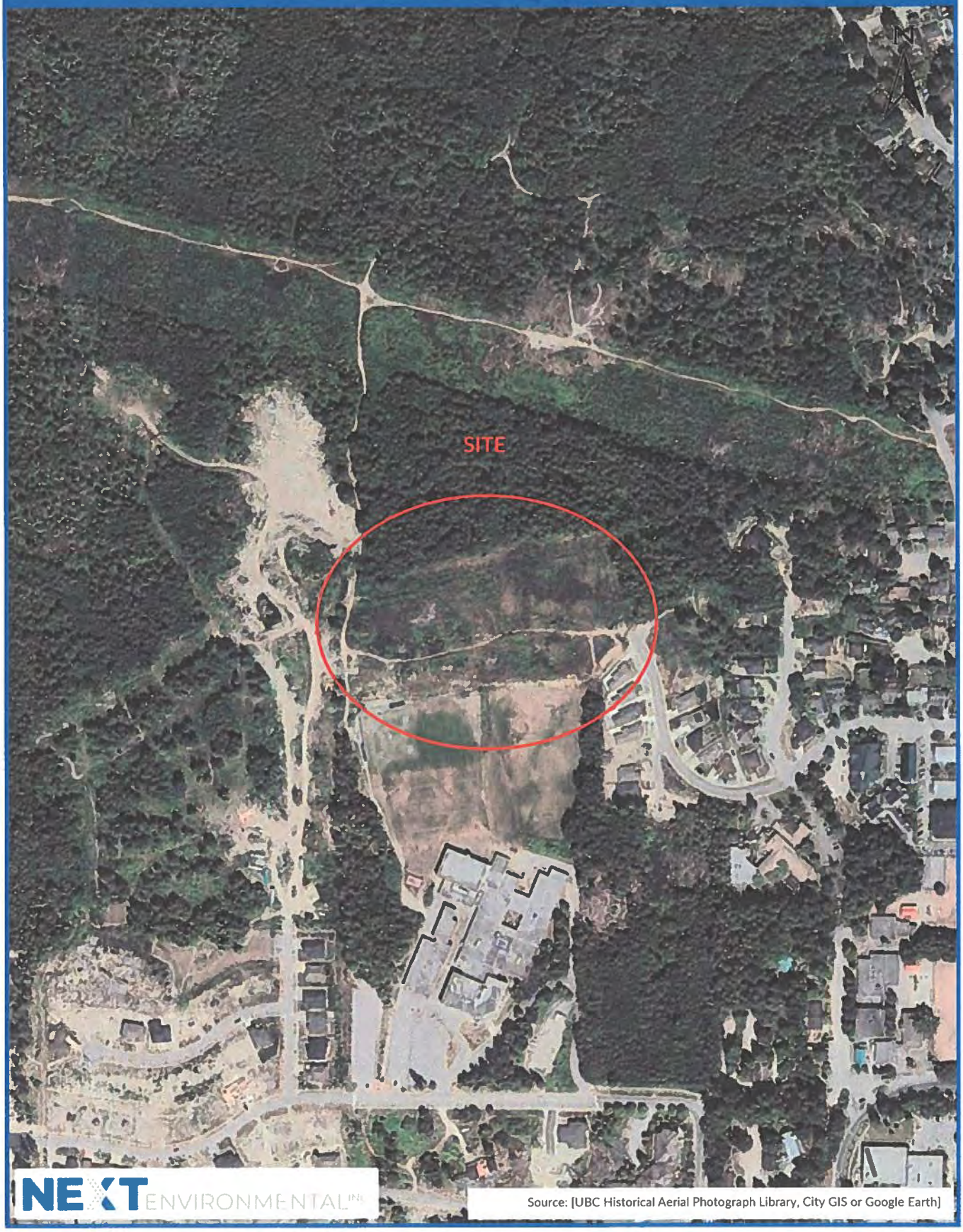
Historical Aerial Photograph –2017



NEXT ENVIRONMENTAL INC.

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

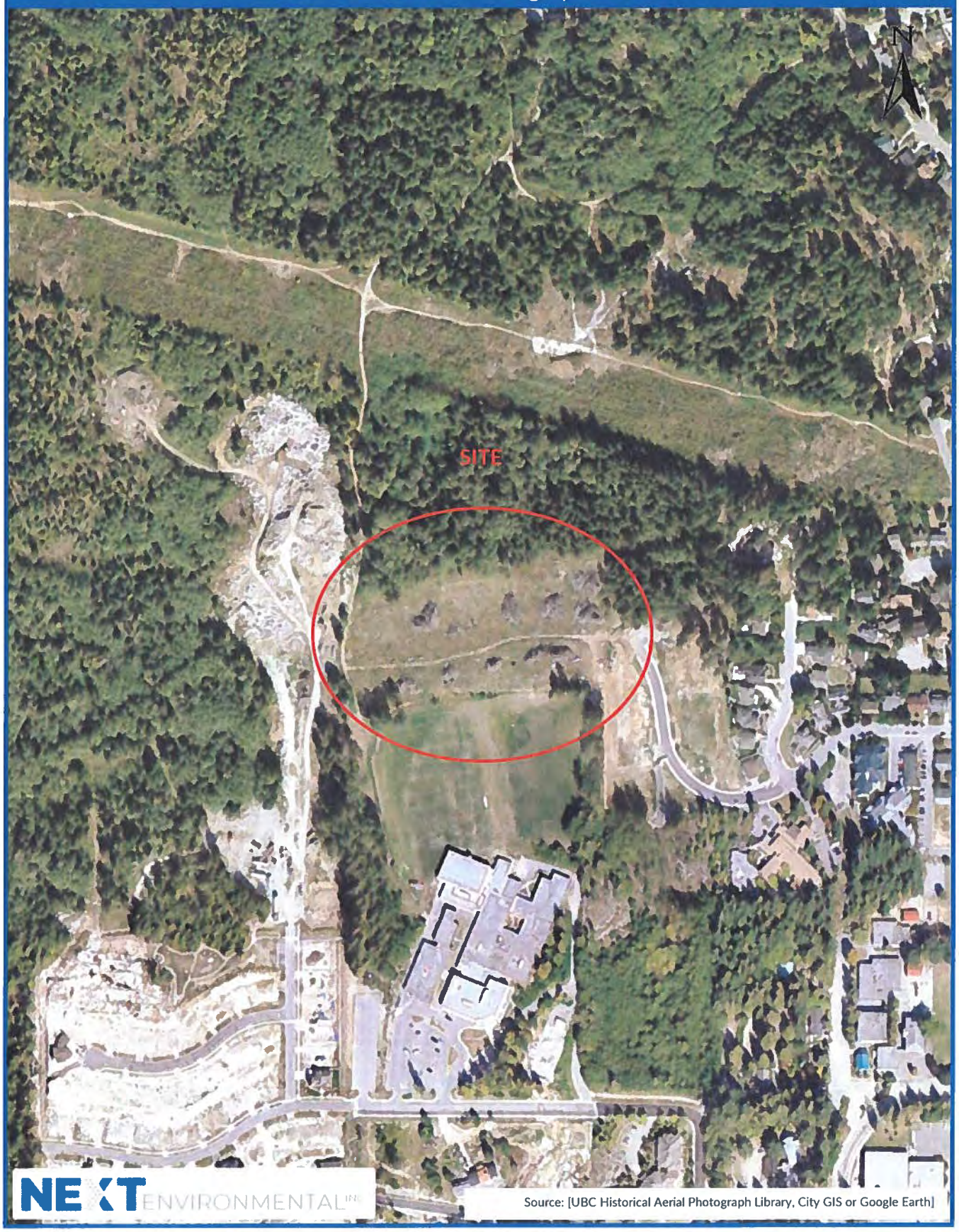
Historical Aerial Photograph – 2013



NEXT ENVIRONMENTAL INC.

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

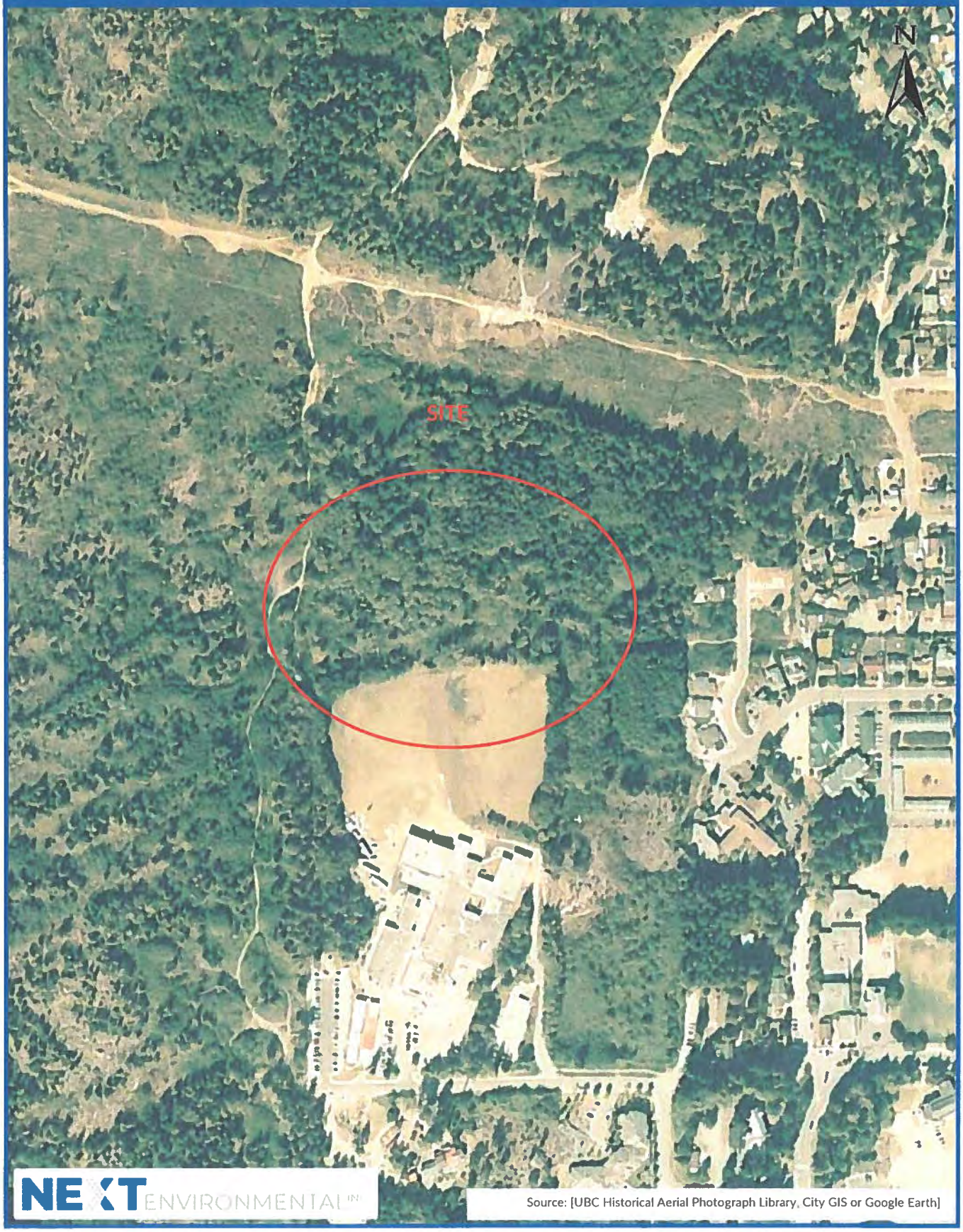
Historical Aerial Photograph –2009



NEXT ENVIRONMENTAL INC.

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

Historical Aerial Photograph – 2003



NEXT ENVIRONMENTAL INC.

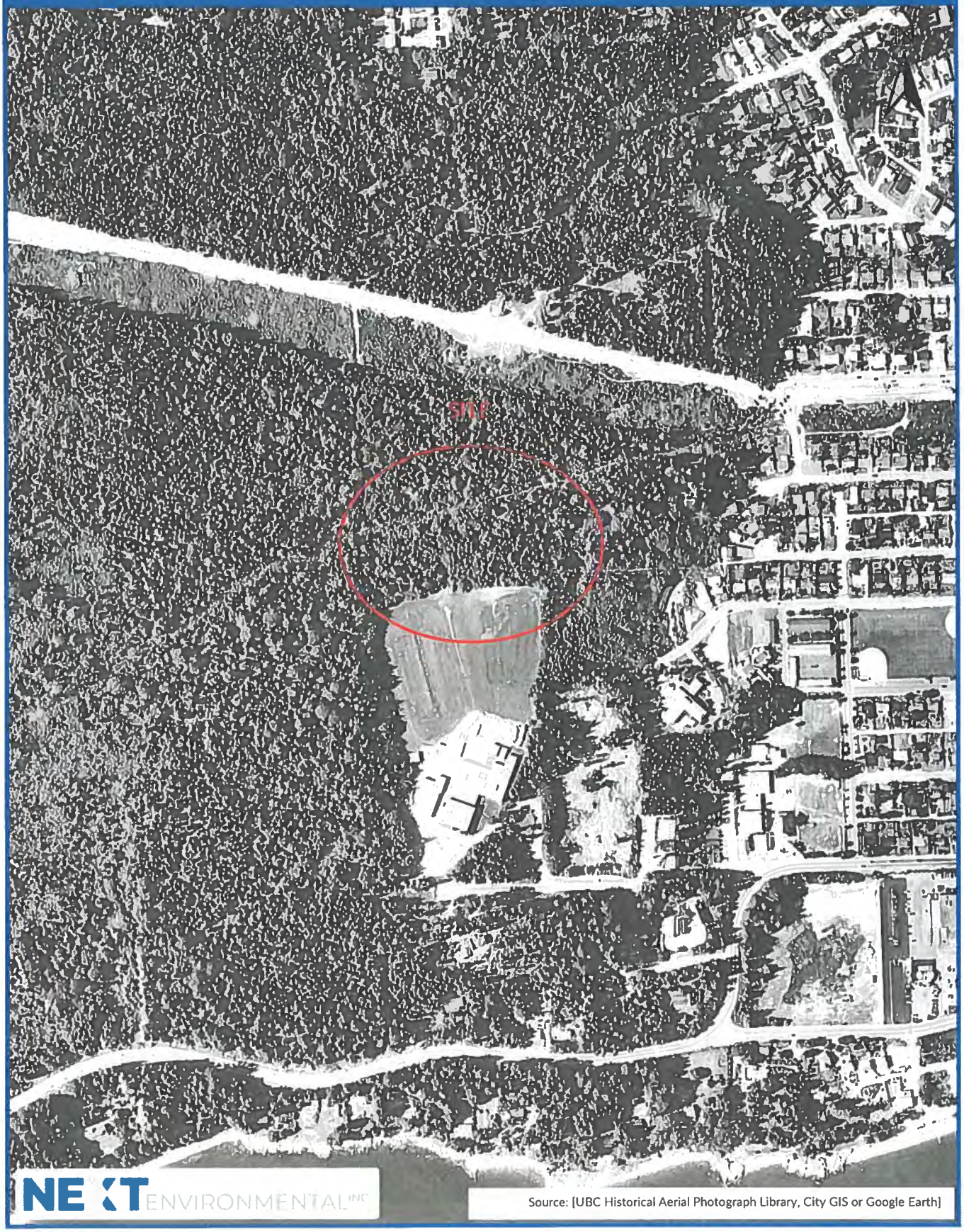
Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

Historical Aerial Photograph – 1998

NEXT ENVIRONMENTAL INC

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

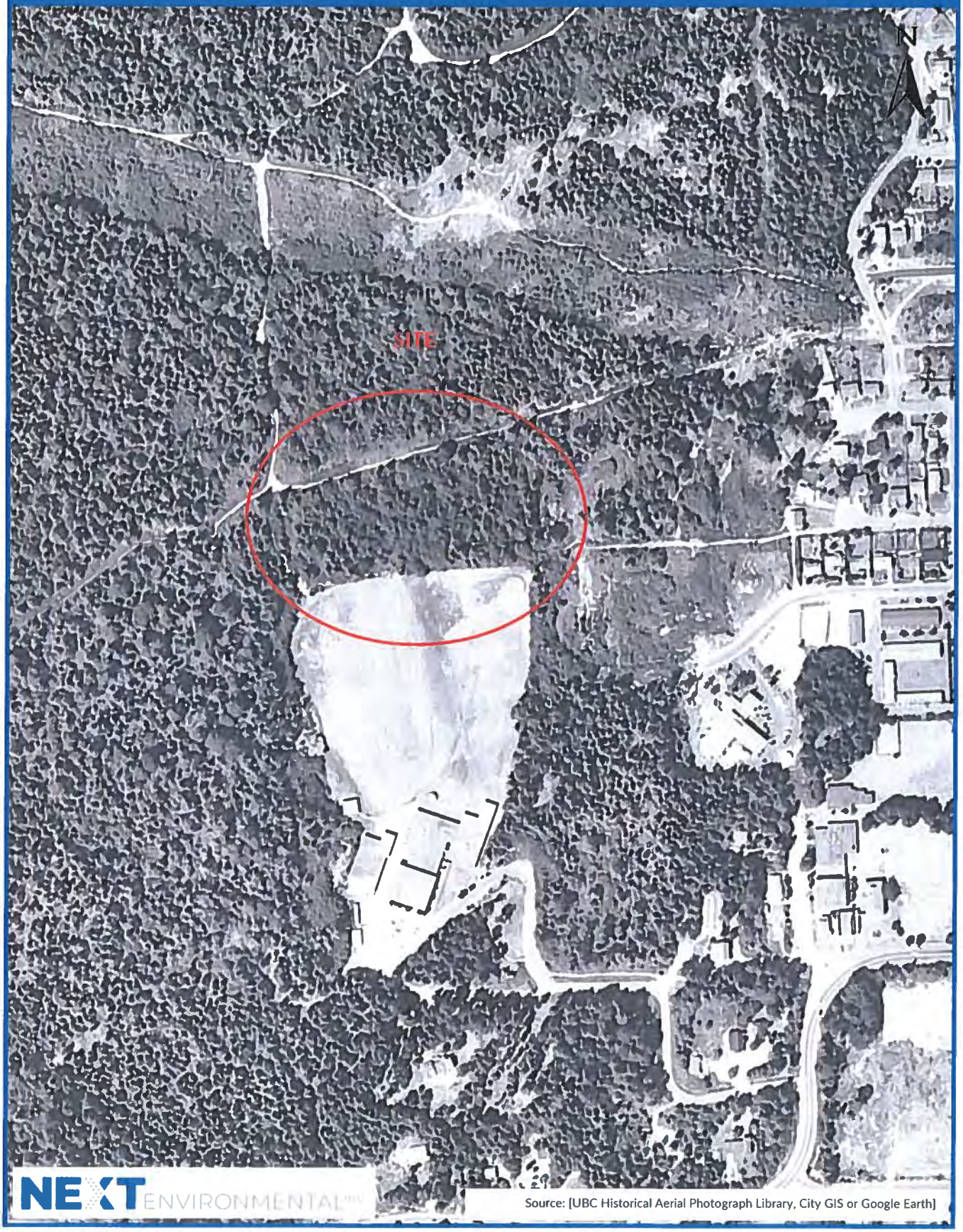
Historical Aerial Photograph – 1990



NEXT ENVIRONMENTAL INC

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

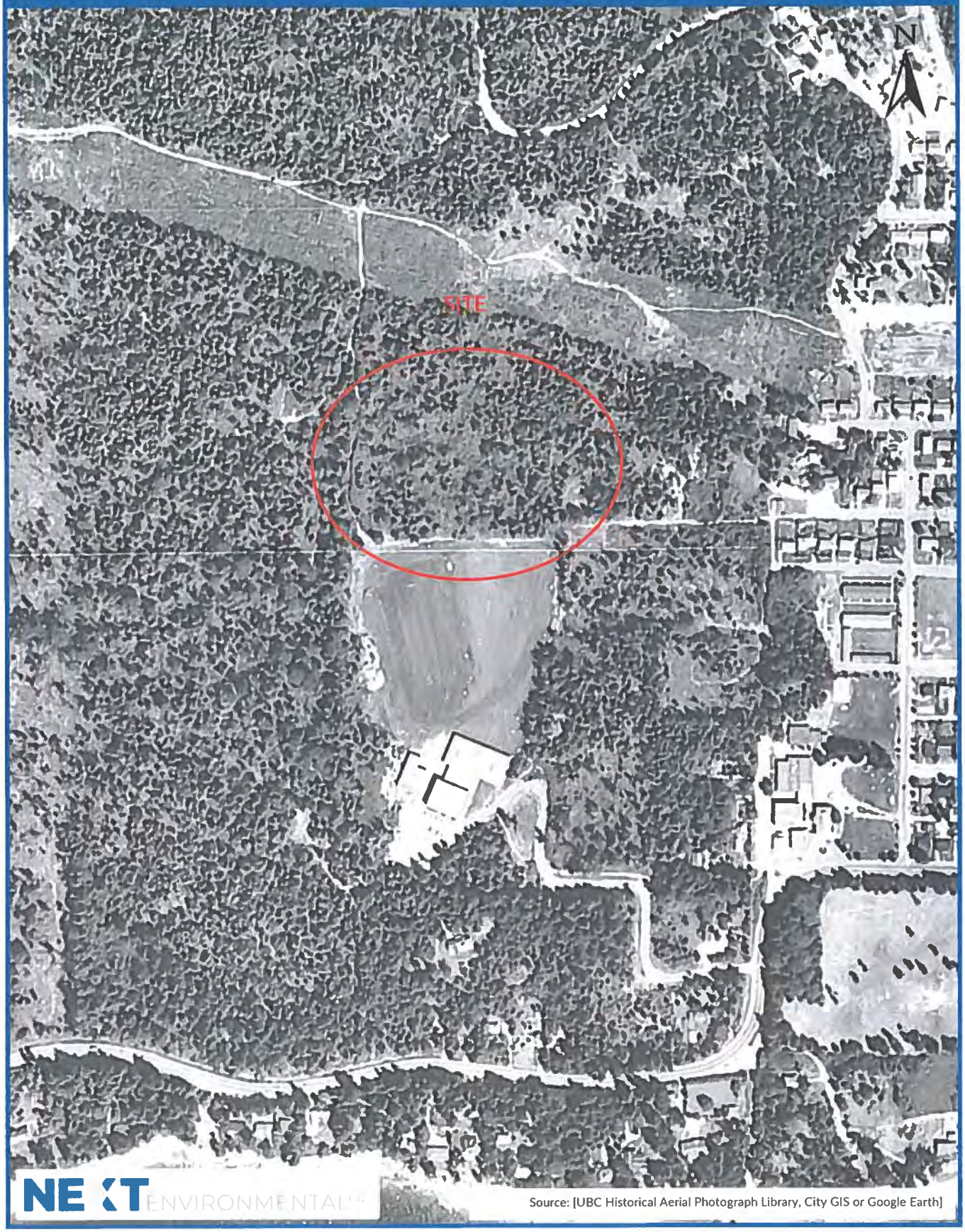
Historical Aerial Photograph –1985



NEXT ENVIRONMENTAL

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

Historical Aerial Photograph – 1980



NEXT ENVIRONMENTAL

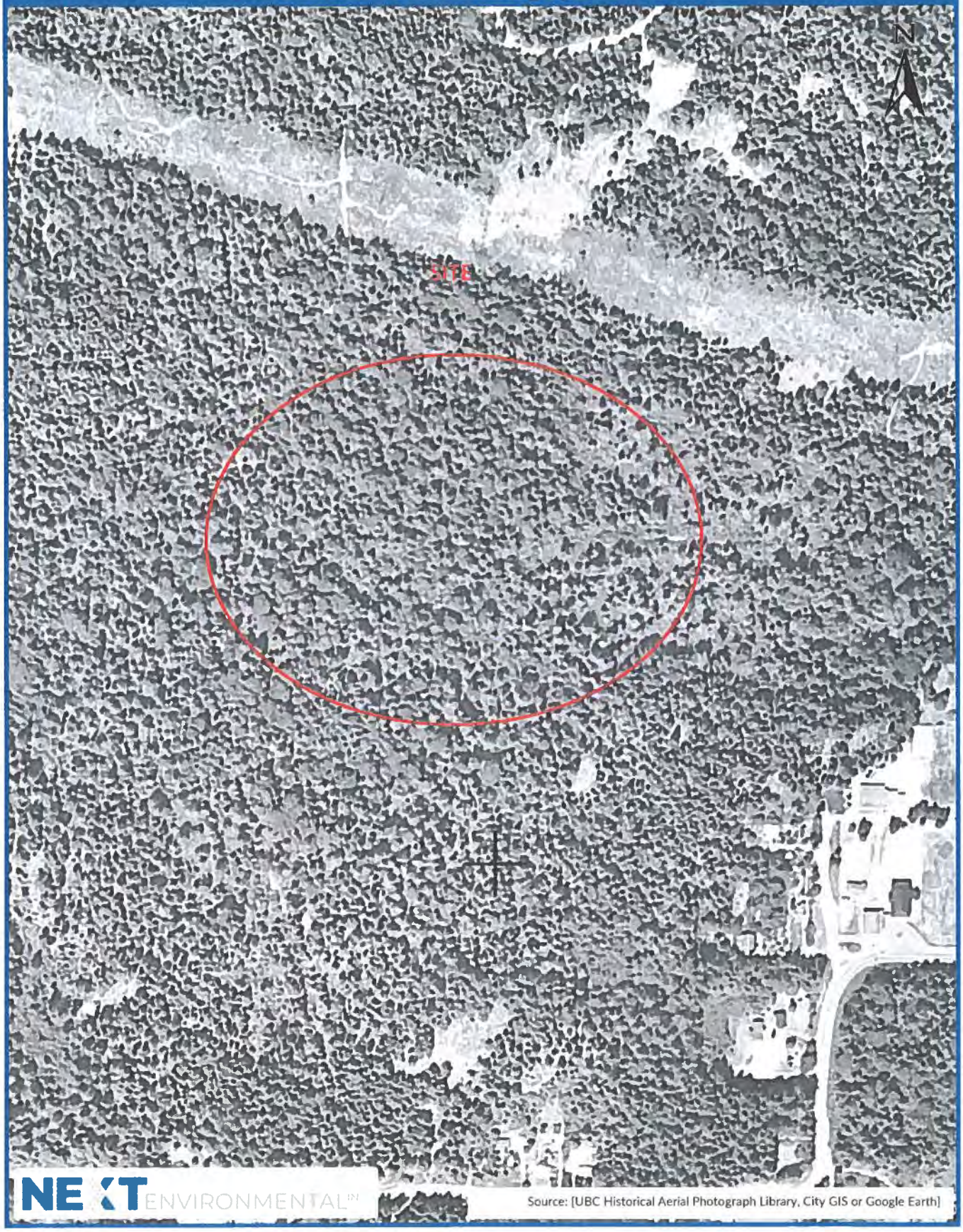
Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

Historical Aerial Photograph –1974

NEXT ENVIRONMENTAL™

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

Historical Aerial Photograph – 1967



NEXT ENVIRONMENTAL INC

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

Historical Aerial Photograph – 1962

NEXT ENVIRONMENTAL INC.

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

Historical Aerial Photograph —1957

NEXT ENVIRONMENTAL INC.

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

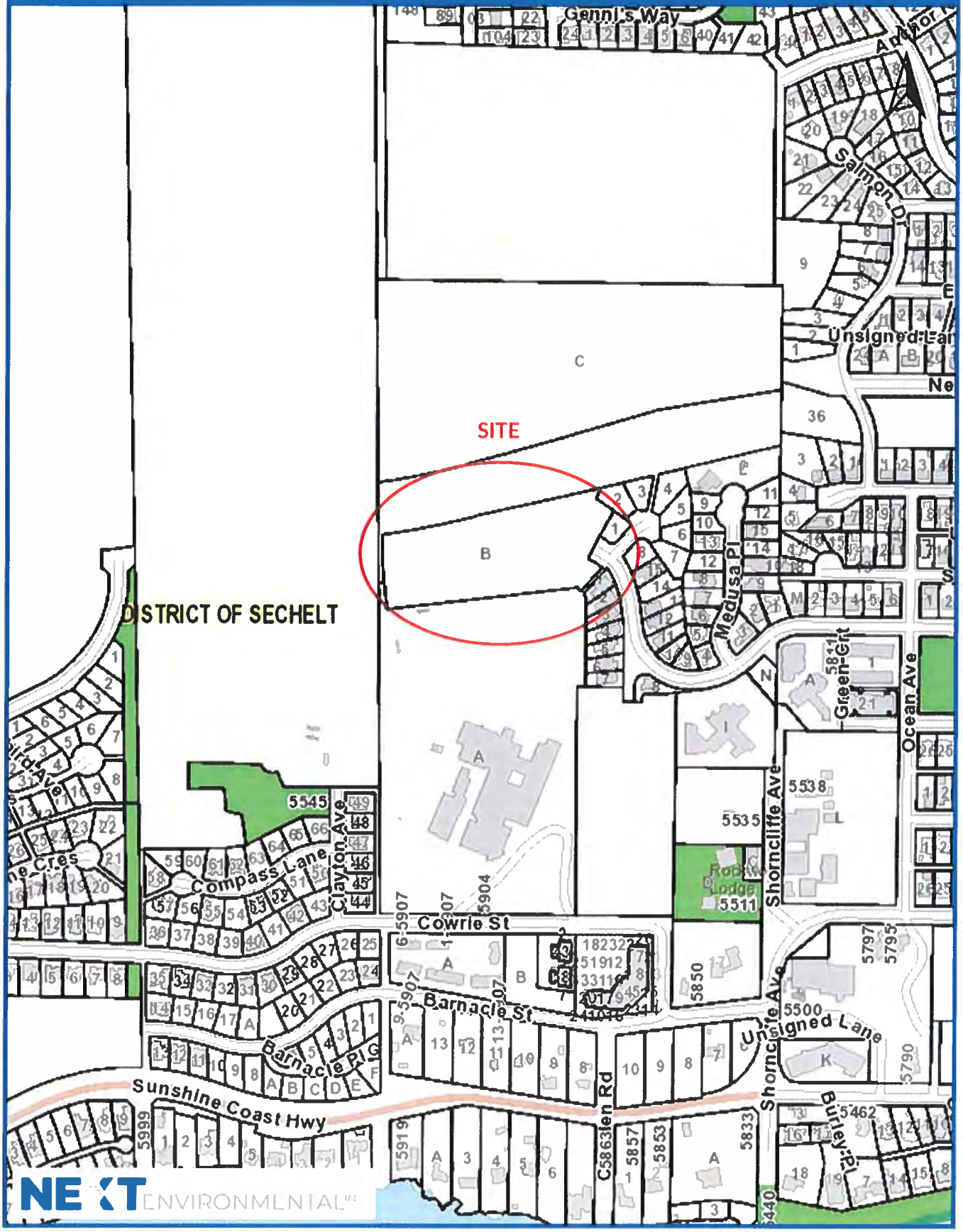
Historical Aerial Photograph – 1950

NEXT ENVIRONMENTAL INC.

Source: [UBC Historical Aerial Photograph Library, City GIS or Google Earth]

Waterway Maps

Sunshine Coast Regional District GIS Map



Authorization Management System (AMS)

Authorization Number	Authorization Type	Company	Issue Date	Waste Type	State	WDR Schedule One or Two	Facility Type - Description	Facility Address	Latitude	Longitude
4088	Permit	SECHELT, CORPORATION OF THE DISTRICT OF	1976-04-02	Effluent	Cancelled	Municipal Sewage Management	Municipal waste water treatment plant 2 separate waste water treatment plants each with disinfections facilities and a common outfall	Sechelt	49.4783	123.76
14099	Petroleum Storage and Distribution Facilities Storm Water Regulation	PETRO-CANADA PRODUCTS	1994-09-01		Cancelled			SECHELT, 5482 WHARF ST	49.476926	123.75392
106667	Municipal Wastewater Regulation	DISTRICT OF SECHELT	2013-09-23	Effluent	Active	Municipal Sewage Management	Municipal Wastewater Treatment Plant	5678 Surf Circle, Sechelt BC V0N 3A3	49.4779	123.7593

Investigator & Reviewer Qualifications

Investigator

Julian Karner, Env. Eng., E.I.T.

Field Lead, Preliminary Site Investigations

Julian joined NEXT Environmental Inc. in June 2022. He is a graduate from the University of Alberta majoring in civil engineering with a specialization in environmental engineering. Julian has completed over 60 Phase I or Stage 1 Investigations and worked on or completed several Phase II/Stage 2 or DSI projects.

Reviewer

Aio Haberli, M.Sc., P.Chem.

Technical & Regulatory Lead

Aio joined NEXT in April 2016 and has worked in the contaminated sites industry for more than ten years. He has completed hundreds of projects including Stage 1 and 2 PSIs, Phase I and II ESAs, Detailed Site Investigations, and remediations. He also supports applications for municipal permits and Regulatory Instruments. In his role as Manager Preliminary Site Investigations, he mentors and supervises the PSI team.

GEOPACIFIC
CONSULTANTS

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1779 West 75th Avenue
Vancouver, B.C. V6P 6P2

CSF de la Columbie Britannique.
100 – 13511 Commerce Parkway
Richmond, BC
V6V 2J8

April 11, 2023
File: 22541
R0

Attention: Chafic El Rassi

Re: Geotechnical Investigation Report – Proposed School Development
Lot B – Medusa Street, Sechelt, BC

1.0 INTRODUCTION

It is understood that the Conseil Scolaire Francophone (CSF) de la Colombie Britannique intends to proceed with a new school development at the site referenced above in Sechelt, BC. Preliminary information provided to us indicates that the proposed development would consist of a 2-storey school with double height gymnasium, paved parking, drive aisles and outdoor play structures, all constructed at grade. Structural loading is expected to be moderately heavy.

This report presents the results of our field investigation and makes geotechnical recommendations for the design and construction of the proposed development. This report has been prepared exclusively for our client, for their use, the use of others on their design team, and the District of Sechelt for use in the development and permitting process.

2.0 SITE DESCRIPTION

The site is located at the western terminus of Medusa Street in Sechelt, BC. The site is currently undeveloped and covered with mature trees and shrubs. It is bounded by single family homes to the east, a 2-storey school to the south and undeveloped lands to the west and north. The site slopes from approximately 64 m geodetic at the northwest side of the site to 50 m geodetic at the east side of the site over a horizontal distance of 220 m (SCRD Maps, 2023).

The location of the site in relation to its surroundings is shown on the attached Drawing No. 22541-01.

3.0 FIELD INVESTIGATION

GeoPacific completed a geotechnical investigation of the above referenced site on March 28, 2023. At that time, a total of eight solid stem auger test holes were advanced to depths of up to 7.6 m below existing site grades. All test holes were supplemented with a dynamic cone penetration test (DCPT) sounding to assist in determining the in-situ density of the upper soil profile. The drilling was completed using a track mounted auger drill rig supplied and operated by Uniwide Drilling, of Prince George, B.C.

Prior to drilling, a BC One Call was placed and Munico West Coast was on site to clear the test locations of any potential buried services. All test holes were backfilled and sealed in accordance with Provincial abandonment requirements following classification, sampling and logging.

The approximate location of each test hole is shown on our attached Drawing No. 22541-01, following the text of this report. The proposed building footprint is also included for reference.

4.0 SUBSURFACE CONDITIONS

4.1 Soil Conditions

A general description of the soils encountered at the site during our investigation is provided below.

FORREST LITTER / TOPSOIL

All of our test holes were advanced in vegetated areas covered with forest litter or sod. The surfacing was underlain by approximately 0.5 to 0.9 m of topsoil ranging from gravelly sandy silt to silty sand and gravel with trace rootlets and organics.

SAND and SILT (Post Glacial)

Interbedded sands and silts, inferred to be post glacial were encountered under the surfacing and fill described above at TH23-01, -02, -03 and -04. The composition of the post glacial soils ranged from sand to silty sand to silt. The silt dominant soils were noted to be firm to very stiff and the granular soils were noted to be compact to dense. Some moisture was noted at the interface between the differing soil types, which we expect to be perched groundwater.

SILTY SAND and GRAVEL (Glacial Till)

Glacial till consisting of sand with some silt to silty sand with varying amounts of gravel was encountered at TH23-04, -05, -06, -07 and -08 at depths ranging from 0.6 to 6.4 m below existing site grades. DCPT refusal occurred near the top contact or above this stratum at all sounding locations, indicating that it is very dense. The glacial till was observed to be grey and dry to moist.

For specific subsurface soil descriptions at each test hole location, please review our test hole logs in Appendix A, following this report.

4.2 Groundwater Conditions

The static groundwater was not encountered during our investigation and is expected to be well below the contemplated development depths. As noted, some light seepage of perched groundwater was noted at our test hole locations near the interface between differing soil types. Perched groundwater of this nature typically drains quickly when exposed to atmospheric pressures and rarely creates persistent drainage.

5.0 DISCUSSION

The contemplated school development at the subject property is understood to consist of a 2-storey school with double height gymnasium, paved parking, drive aisles and outdoor play structures, all constructed at grade. We anticipate moderately heavy structural loading.

Based on the observed soil conditions at the boreholes within the proposed school building footprint, and the likely footing elevations, the soils present at the underside of the proposed foundations are expected to be stiff to very stiff silt or very dense glacial till.

We anticipate that some re-grading of the property will be completed to accommodate the development. In general, the surficial soils were observed to be relatively silty, and thus likely unsuitable for re-use as fill. Soils consisting predominantly of sand and gravel may be re-used as fill subject to lab testing and approval.

The subsurface soils underneath the founding level are not expected to be prone to liquefaction or other forms of ground softening under the design earthquake defined under the 2018 British Columbia Building Code.

We confirm, from a geotechnical point of view, that the proposed redevelopment is feasible, provided the recommendations outlined in this report are incorporated into the overall design and construction.

6.0 RECOMMENDATIONS

6.1 Site Preparation

Prior to construction of foundations, retaining walls, utilities, grade supported slabs, and pavement structures, all vegetation, topsoil, fills, soils containing organics and loose/soft or otherwise disturbed materials should be removed to expose a subgrade of compact to dense post glacial soils or dense glacial till. Our minimum stripping depths for foundations, floor slabs, and new on-site roads are provided in Table 1 below.

Table 1: Recommended Minimum Stripping Depths

Test Pit ID	Stripping Depth (m)	Test Pit ID	Stripping Depth (m)
TH23-01	0.5	TH23-05	0.6
TH23-02	0.5	TH23-06	0.6
TH23-03	0.6	TH23-07	0.9
TH23-04	0.6	TH23-08	0.8

We emphasize that the stripping depths are the minimum stripping depths at each location. It should be recognized that the thickness of unacceptable soil can vary throughout the site. In determining the minimum stripping depths, we have measured the distance from the ground surface to the top of the first suitable subgrade layer.

Stripping should extend out beyond the building envelope and roads at a distance equal to the thickness of proposed engineered fill beneath the footings. For example, if 1 metre of engineered fill will underlie a footing then stripping should extend a minimum distance of 1 metre beyond the outer edge of that footing.

The upper weathered sands and silts and the underlying glacial till subgrade is considered sensitive to changes in moisture content. Therefore, the exposed subgrade should be graded to prevent the ponding of water at footing locations or protected by a blinding of 19 mm clear crush gravel.

Stripping is not required in landscaped areas unless the criteria stated in the previous paragraph requires the removal of that material.

Where grade reinstatement be required, we recommend the use of engineered fill. "Engineered Fill" is defined as clean sand to sand and gravel containing silt and clay less than 5% by weight, compacted in 300 mm loose lifts to a minimum of 95% Modified Proctor maximum dry density at a moisture content that is within 2% of optimum for compaction. During fill placement, benches should be cut into any sloping stripped subgrade surfaces to key the structural fill into the natural topography.

Stripped subgrades and engineered fill materials and compaction must be reviewed by the geotechnical engineer.

6.2 Foundations and Bearing Capacity

Based on the anticipated footing elevation and the soil conditions encountered on site, we envisage that footings will be founded on stiff to very stiff silt or very dense glacial till as described in Section 4.1 above.

Conventional pad and strip foundations may be used to support the proposed structures. We recommend that footings are designed using a Serviceability Limit State (SLS) bearing pressures of:

- 400 kPa based on support on dense to very dense glacial soils
- 200 kPa based on support on stiff to very stiff silt

Factored Ultimate Limit State (ULS) bearing pressures can be taken as 1.5 × SLS bearing pressure provided.

We estimate for foundations designed as recommended, settlements will not exceed 25 mm total and 2 mm per metre differential.

Irrespective of the allowable bearing pressures given, pad footings should not be less than 600 mm by 600 mm and strip footings should not be less than 450 mm in width. Footings should also be buried a minimum of 450 mm below the surface for frost protection.

Adjacent footings should achieve a maximum elevation difference equal to half of their horizontal distance to avoid superimposing the upper foundation loading to the lower foundation. Any footings, either strip or column footings, constructed within a 3.0 metre proximity to the crest of a fill or soil slope should maintain a horizontal distance of 3.0 metres from the face of the slope. This may require that the elevation of the footings be lowered to achieve the 3.0 metre requirement.

Foundation subgrades must be reviewed by the geotechnical engineer prior to footing construction.

6.3 Slab-on-Grade Floors

In order to provide suitable support and drainage for slab-on-grade floors, we recommend that floor slabs should be underlain by a minimum of 150 mm of a free draining granular material, such as 19 mm clear crushed gravel, and hydraulically connected to perimeter drainage. The crushed gravel fill should be compacted to a minimum of 95% Modified Proctor dry density (ASTM D1557), at a moisture content that is within 2% of its optimum for compaction. A moisture barrier should underlie the slab directly above the free draining granular material.

If required, general grade reinstatement or backfill should be completed with engineered fill, as discussed in the site preparation section.

The geotechnical engineer shall be contacted to review the slab-on-grade construction.

6.4 Seismic Design of Foundations

We have considered the 2018 BCBC design earthquake with a 2% probability of exceedance over a 50 year period which equates to a return period of 2,475 years. Accordingly, we have considered an earthquake having a peak horizontal ground acceleration of 0.357 g for this site (Ref. National Resources Canada, Site Coordinates: 49.476 deg. North, 123.767 deg. West).

This site is expected to qualify as "Site Class C" as defined in Table 4.1.8.4.A of the 2018 British Columbia Building Code (BCBC)

6.5 Temporary Excavations

No grading plans have been provided to us at this time, however, we expect that temporary excavations would be sloped where possible since it is more economical to do so. We would expect that slopes cut to a 1H:1V (1 horizontal to 1 vertical) can be constructed in the existing natural post glacial soils while 3H:4V may be constructed in the underlying dense glacial till. Flatter cut slopes may be required in areas with soft soils, or soils with active seepage, should they be encountered during excavation.

If perched groundwater is encountered, we expect that it can be controlled using gravity drainage or sumps and sump pumps.

Temporary cut slopes in excess of 1.2 m in height must be covered in poly sheeting and require inspection by a professional engineer in accordance with Work Safe B.C. guidelines, prior to worker-entry.

6.6 Lateral Pressures on Foundation Walls

Earth pressures against the foundation walls are dependent on factors such as available lateral restraint along the wall, surcharge loads, backfill materials, compaction of the backfill and drainage conditions.

The following loads are provided based on the assumption of a sloped excavation of 3H:4V to 1H:1V backfilled with a free draining granular backfill with a unit weight of 18 kN/m^3, friction angle of 32 degrees, level backfill, and no surcharges. Heavier backfills or backfills with a lower angle of friction would be expected to induce higher loads.

We have assumed that a free draining granular backfill will be used behind the basement walls and that a perimeter drainage system will also be employed to collect any water from behind the walls. Therefore, our wall loading scenarios presented below assume that no water pressure will be generated behind the walls.

For a partially restrained basement wall designed for static pressure a pressure distribution should be employed of 4H (kPa) triangular, where 'H' is the buried depth of the wall, in metres, below grade.

Dynamic loading induced by the 2018 BCBC design earthquake should be added to the static loads and should be taken as 3H (kPa) inverted triangular based on a peak horizontal ground acceleration of 0.370 g (Natural Resources Canada).

6.7 Site and Foundation Drainage

Given the existing slope of the site, we expect that the majority of drainage could be achieved by sloping stripped areas down gradient. In stripped or benched areas where perched groundwater or precipitation accumulates, it is anticipated that gravity drainage such as French Drains, open channels or piping systems will be an effective means to convey any temporary seepage from the construction area.

Where the slab on grade is proposed to be minimum 150 mm above exterior grades with grades sloping away from the building, no perimeter drainage is required.

A perimeter drainage system should be installed around any portion of a buried foundation wall to prevent the accumulation of water behind foundation walls and beneath slabs.

6.8 Utility Installation

For utilities bedded on compact to dense post glacial soil or dense glacial till, settlements are anticipated to be negligible. Groundwater seepage during utility installation may need to be controlled using sumps and sump pumps.

We recommend that any trenches be sloped or shored as per the latest Work Safe BC regulations. We recommend that all service trenches be backfilled with clean granular material, which conforms to municipal standards, compacted to 95% "Modified Proctor" dry density (ASTM D1557), with a moisture content within 2% of optimum for compaction.

6.9 New Pavement Structures

As indicated above, new asphaltic concrete pavements are anticipated throughout the development. Following the recommended site preparation in Section 6.1, we expect that the following pavement design structure, given in Table 1, is sufficient to carry the anticipated vehicle traffic loads for on-site local roads. The following recommendations assume traffic loading equivalent to a local road classification. This traffic load should be confirmed by the civil designer.

Table 1: Recommended Minimum Pavement Structure for Local Roads

Material	Thickness (mm)
Asphaltic Concrete	75
19 mm minus crushed gravel base course	100
75 mm minus crushed gravel sub-base course	250

All base and sub-base fills should be compacted to a minimum of 95% Modified Proctor dry density with a moisture content within 2% of optimum for compaction.

The stripped road subgrade should be proof rolled to locate any soft/loose spots. Where existing soils are soft/loose and cannot be re-compacted to a minimum of 95% Modified Proctor dry density, they must be excavated and replaced with engineered fill.

7.0 DESIGN REVIEWS AND CONSTRUCTION INSPECTIONS

The preceding sections make recommendations for the design and construction of the proposed improvements. The report is based on our drill investigation and preliminary information received at the time of the report preparation. We expect that the report would be updated once final design plan drawings are available. We have recommended the review of certain aspects of the design and construction in this report. In summary, geotechnical field reviews for the following aspects of this scheme are required:

1. Review of site stripping
2. Review of foundation subgrade prior to footing construction
3. Review of slab-on-grade fill compaction prior to slab construction
4. Review of the compaction of engineered fill
5. Review of any temporary cut slopes or excavation in excess of 1.2 meters in height prior to worker-entry
6. Review of pavement structure subgrade prior to sub-base placement
7. Review of base and sub-base fill materials and compaction

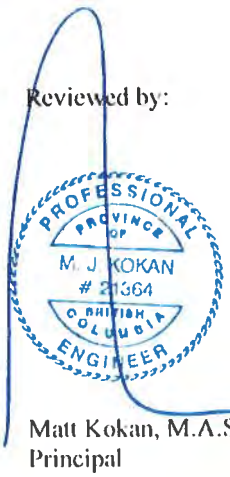
It is critical that these reviews are carried out to ensure that our intentions have been adequately communicated. It is also critical that contractors working on the site view this document in advance of any work being carried out so that they become familiarised with the sensitive aspects of the works proposed. It is the responsibility of the developer to notify GeoPacific Consultants Ltd. when conditions or situations not outlined within this document are encountered.

8.0 CLOSURE

We are pleased to assist you with this project and we trust this information is helpful and sufficient for your purposes at this time. However, please do not hesitate to call the undersigned if you should require any clarification or additional details.

For:
GeoPacific Consultants Ltd.

Reviewed by:



APR 1 1 2023

Permit to Practice
EGBC
1000782

Adam Zywotkiewicz, B.Sc., GIT
Geologist

Matt Kokan, M.A.Sc., P.Eng.
Principal

N
W E
S

SITE PLAN

SCALE = NTS

LEGEND:

LOCATIONS ARE APPROXIMATE

REFERENCE:

SCRD MAP, 2023

DATE: April 6 2023			
DRAWN BY: AZ	APPROVED BY:	REVIEWED BY: MJK	
SCALE: NTS			

GEOTECHNICAL INVESTIGATION

LOT B - MEDUSA STREET, SECHELT, BC

SITE PLAN

FILE NO.: 22541	REVISIONS: A.
DWG. NO.: 22541-01	B. C.

APPENDIX 'A'

Test Hole Log: TH23-01

File: 22541
Project: PROPOSED SCHOOL DEVELOPMENT
Client: PRINCIPLE ARCHITECTURE
Site Location: LOT B- MEDUSA ST, SECHELT, BC

GEOPACIFIC CONSULTANTS
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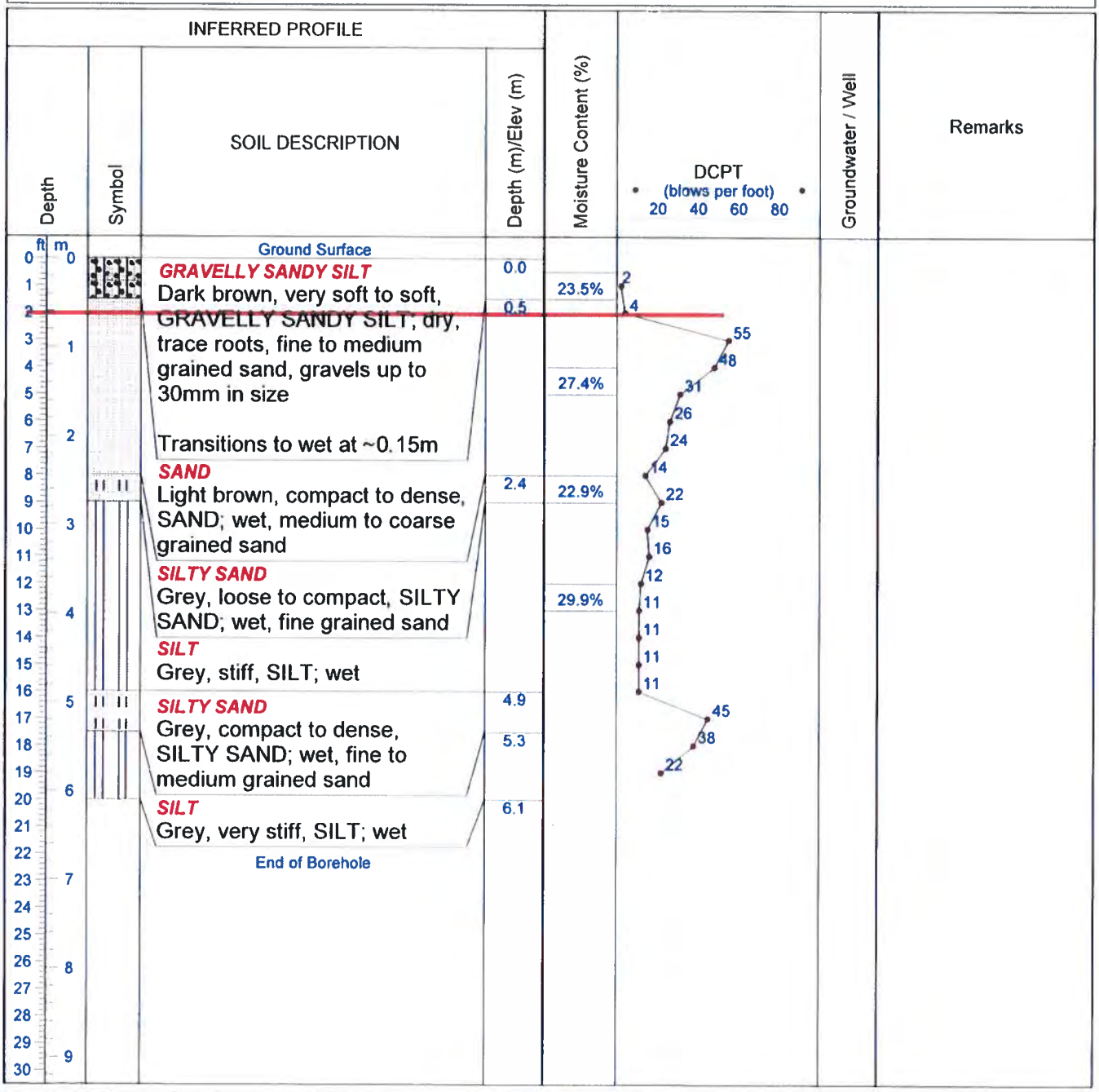

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Method: SOLID STEM AUGER
Date: MARCH 28, 2023

Datum: GROUND ELEVATION
Figure Number: A.01
Page: 1 of 1

Test Hole Log: TH23-02

File: 22541
Project: PROPOSED SCHOOL DEVELOPMENT
Client: PRINCIPLE ARCHITECTURE
Site Location: LOT B- MEDUSA ST, SECHELT, BC

GEOPACIFIC CONSULTANTS
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Tel 604-439-0922 Fax 604-439-9189

INFERRED PROFILE

Depth (ft / m)	Symbol	SOIL DESCRIPTION	Depth (m)/Elev (m)	Moisture Content (%)	DCPT (blows per foot) 20 40 60 80	Groundwater / Well	Remarks
0 / 0		Ground Surface					
		GRAVELLY SANDY SILT Dark brown, very soft to soft, GRAVELLY SANDY SILT; moist, trace roots, medium to coarse grained sand, gravels up to 30mm in size	0.0 – 1.5	19.6%	2, 3, 21, 15, 25, 48		
2		***SAND*** Light brown to grey, loose to compact, SAND; moist, fine to medium grained sand	1.5 – 2.6		14, 11, 9, 8		
3		***GRAVELLY SILTY SAND*** Grey, compact to dense, GRAVELLY SILTY SAND; moist, fine grained sand, gravels up to 20mm in size	2.6 – 3.5		25, 11, 9, 8		
4		***SANDY SILT*** Grey, stiff, SANDY SILT; moist, fine grained sand	3.5 – 4.6				
5		***SILT*** Grey, stiff, SILT; wet					
6		***SILTY SAND*** Grey, compact, SILTY SAND; wet, fine grained sand					
7		***SILT*** Grey, stiff to very stiff, SILT; wet					
8		End of Borehole					
9							

Logged: TL
Method: SOLID STEM AUGER
Date: MARCH 28, 2023

Datum: GROUND ELEVATION
Figure Number: A.02
Page: 1 of 1

Test Hole Log: TH23-03

File: 22541
Project: PROPOSED SCHOOL DEVELOPMENT
Client: PRINCIPLE ARCHITECTURE
Site Location: LOT B- MEDUSA ST, SECHELT, BC

GEOPACIFIC CONSULTANTS
1779 West 75th Avenue, Vancouver, BC V6P 6P2
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INFERRED PROFILE

Depth (ft / m)	Symbol	SOIL DESCRIPTION	Depth (m)/Elev (m)	Moisture Content (%)	DCPT (blows per foot) 20 40 60 80	Groundwater / Well	Remarks
0 / 0		Ground Surface					
0–2 / 0		***GRAVELLY SANDY SILT*** Dark brown, very soft to soft, GRAVELLY SANDY SILT; dry, trace roots, fine to medium grained sand, gravels up to 30mm in size Transitions to wet at ~0.15m	0.0 0.6		1, 2, 13, 23, 35, 38, 29, 31, 18, 21, 34, 15, 11, 8		
2–10 / 1–3		***SILTY SAND*** Grey, compact to dense, SILTY SAND; wet, fine to medium grained sand		20.4%			Trace shell fragments between ~2.7m-3.3m
10–15 / 3–4		***SILT*** Grey, stiff, SILT; wet	3.4				
15 / 5		End of Borehole	4.6				

Logged: TL
Method: SOLID STEM AUGER
Date: MARCH 28, 2023

Datum: GROUND ELEVATION
Figure Number: A.03

Test Hole Log: TH23-04

File: 22541
Project: PROPOSED SCHOOL DEVELOPMENT
Client: PRINCIPLE ARCHITECTURE
Site Location: LOT B- MEDUSA ST, SECHELT, BC

GEOPACIFIC CONSULTANTS
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Depth (ft / m)	Symbol	SOIL DESCRIPTION	Depth (m)/Elev (m)	Moisture Content (%)	DCPT (blows per foot) 20 40 60 80	Groundwater / Well	Remarks
0 / 0		Ground Surface					
0–5 / 0–1.4		***GRAVELLY SANDY SILT*** Dark brown, very soft to soft, GRAVELLY SANDY SILT; wet, trace roots, fine to medium grained sand, gravels up to 30mm in size	0.0 0.5	15.1% 21.4%	3, 11, 26, 46, 64		
5–10 / 1.4–3		***SILTY GRAVELLY SAND*** Light brown, compact to dense, SILTY GRAVELLY SAND; moist, coarse grained sand, gravels up to 30mm in size		25.1%	30, 24, 23, 22, 23		
10–13 / 3–4		***GRAVELLY SANDY SILT*** Grey, hard, GRAVELLY SANDY SILT; moist, fine grained sand			32, 21		
13–21 / 4–6.4		***SILT*** Grey, very stiff to hard, SILT; moist Transitions to wet and stiff to very stiff at ~3.7m			17, 15, 16, 20, 19, 17, 14, 21		Trace sand and gravel between ~4.6-5.2m
21–25 / 6.4–7.6		***SILTY SAND AND GRAVEL (TILL)*** Grey, very dense, SILTY SAND AND GRAVEL (TILL); dry, fine to medium grained sand, gravels up to 30mm in size	6.4 7.6	12.6%	>100		DCPT refusal at ~6.4m
25 / 7.6		End of Borehole					

Logged: TL
Method: SOLID STEM AUGER
Date: MARCH 28, 2023

Datum: GROUND ELEVATION
Figure Number: A.04
Page: 1 of 1

Test Hole Log: TH23-05

File: 22541
Project: PROPOSED SCHOOL DEVELOPMENT
Client: PRINCIPLE ARCHITECTURE
Site Location: LOT B- MEDUSA ST, SECHELT, BC

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Depth (ft / m)	Symbol	INFERRED PROFILE: SOIL DESCRIPTION	Depth (m)/Elev (m)	Moisture Content (%)	DCPT (blows per foot) 20 40 60 80	Groundwater / Well	Remarks
0 / 0		Ground Surface					
0–6 / 0–1.8		***SILTY SAND AND GRAVEL*** Dark brown, loose to compact, SILTY SAND AND GRAVEL; moist, trace roots, fine grained sand, gravels up to 20mm in size	0.0 – 0.6	21.8%	10, 7, 31, 58, 68, >100		
6–9 / 1.8–2.7		***SILTY SAND*** Grey, dense to very dense, SILTY SAND; wet, fine to medium grained sand, trace gravels up to 20mm in size	1.8 – 2.7	14.1%			
9–15 / 2.7–4.6		***SILTY GRAVELLY SAND*** Grey, very dense, SILTY GRAVELLY SAND; moist, fine to medium grained sand, gravels up to 30mm in size, trace cobbles up to 250mm in size	2.7 – 4.6				
15–30 / 4.6–9		***SILTY SAND*** Grey, compact, SILTY SAND; wet, trace shell fragments throughout, fine to medium grained sand	4.6				
		End of Borehole					

Logged: TL
Method: SOLID STEM AUGER
Date: MARCH 28, 2023

Datum: GROUND ELEVATION
Figure Number: A.05
Page: 1 of 1

Test Hole Log: TH23-06

File: 22541
Project: PROPOSED SCHOOL DEVELOPMENT
Client: PRINCIPLE ARCHITECTURE
Site Location: LOT B- MEDUSA ST, SECHELT, BC

GEOPACIFIC CONSULTANTS
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INFERRED PROFILE

Depth (ft / m)	Symbol	SOIL DESCRIPTION	Depth (m)/Elev (m)	Moisture Content (%)	DCPT (blows per foot) 20 40 60 80	Groundwater / Well	Remarks
0 / 0		Ground Surface					
0–3 / 0–1		***SILTY SAND AND GRAVEL*** Brown to orange, loose, SILTY SAND AND GRAVEL; moist, fine to medium grained sand, gravels up to 20mm in size	0.0 – 0.6		7, 9, 93, >100		DCPT refusal at ~1.2m
3–9 / 1–2		***SANDY GRAVEL*** Grey, very dense, SANDY GRAVEL; moist, fine to medium grained sand, gravels up to 30mm in size	0.6 – 2.7		0, 0, 0, 0, 0, 0		
9–10 / 3		***SILTY SAND*** Light grey, compact, SILTY SAND; moist, fine grained sand	2.7 – 3.2		>100		Secondary DCPT refusal at ~3 3m
10–20 / 3–6		***SANDY GRAVEL*** Grey, dense to very dense, SANDY GRAVEL; moist, medium to coarse grained sand, gravels up to 50mm in size	3.2 – 6.1				
20 / 6		End of Borehole	6.1				

Logged: TL
Method: SOLID STEM AUGER
Date: MARCH 28, 2023

Datum: GROUND ELEVATION
Figure Number: A.06
Page: 1 of 1

Test Hole Log: TH23-07

File: 22541
Project: PROPOSED SCHOOL DEVELOPMENT
Client: PRINCIPLE ARCHITECTURE
Site Location: LOT B- MEDUSA ST, SECHELT, BC

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INFERRED PROFILE

Depth (ft)	Depth (m)	Symbol	SOIL DESCRIPTION	Depth (m)/Elev (m)	Moisture Content (%)	DCPT (blows per foot) 20 40 60 80	Groundwater / Well	Remarks
0	0		Ground Surface					
0–3	0–1		***GRAVELLY SANDY SILT*** Dark brown to orange, firm, GRAVELLY SANDY SILT; moist, fine grained sand, gravels up to 20mm in size	0.0		4, 8, 21		
3–12	1–3		***SILTY SAND AND GRAVEL (TILL)*** Grey, very dense, SILTY SAND AND GRAVEL (TILL); dry, fine to medium grained sand, gravels up to 20mm in size, trace cobbles up to 250mm in size	0.9	7.3%	>100		DCPT refusal at ~1.2m
					5.8%			
12	3.7		End of Borehole	3.7				Auger refusal at ~3.7m

Logged: TL
Method: SOLID STEM AUGER
Date: MARCH 28, 2023

Datum: GROUND ELEVATION
Figure Number: A.07

Test Hole Log: TH23-08

File: 22541
Project: PROPOSED SCHOOL DEVELOPMENT
Client: PRINCIPLE ARCHITECTURE
Site Location: LOT B- MEDUSA ST, SECHELT, BC

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Depth (ft)	Depth (m)	Symbol	SOIL DESCRIPTION	Depth (m)/Elev (m)	Moisture Content (%)	DCPT (blows per foot) 20 40 60 80	Groundwater / Well	Remarks
0	0		Ground Surface					
0–3	0–1		***GRAVELLY SANDY SILT*** Dark brown, firm, GRAVELLY SANDY SILT; moist, fine grained sand, gravels up to 20mm in size, trace roots	0.0		4, 8, >100		DCPT refusal at ~0.9m
3–15	1–4		***SILTY SAND AND GRAVEL (TILL)*** Grey, very dense, SILTY SAND AND GRAVEL (TILL); dry, fine to medium grained sand, gravels up to 30mm in size, trace cobbles up to 250mm in size	0.8	13.2% 13.7%			
15	4.6		End of Borehole	4.6				

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Method: SOLID STEM AUGER
Date: MARCH 28, 2023

Datum: GROUND ELEVATION
Figure Number: A.08
Page: 1 of 1

TRANSPORTATION PLANNERS AND ENGINEERS

bunt &associates

CSF Sechelt School

Transportation Impact Assessment

Version 1

Prepared for

CSF Sechelt School

Date

January 31, 2024

Project No.

04-23-0251

Bunt & Associates acknowledges and respects the Traditional Territories upon which our work spans, and from which we benefit. We are grateful for the unique cultures and histories of Indigenous Peoples that enrich our understanding and connection to the lands we call home. We honour learning, listening, and truth in our journey to reconciliation.

January 31, 2023
04-23-0251

Craig Burns
Architect AIBC, MRAIC, ALEP
Principle Architecture
302-980 George Street
Vancouver, BC
V6A 0H9

Dear Mr. Burns:

Re: CSF Sechelt School
Transportation Impact Assessment

Bunt & Associates Engineering Ltd. has conducted a Transportation Impact Assessment for CSF's proposed development of a school in Sechelt, BC. This review has been completed in accordance with the Terms of Reference agreed upon with the District of Sechelt.

This Transportation Impact Assessment reviews existing traffic volumes and operations, site trip generation and distribution, future traffic forecasting and capacity analysis, site design requirements, and high-level safety of Medusa Street.

We trust this will assist in the approval project of the development. Please do not hesitate to contact us should you have any questions.

Yours truly,
Bunt & Associates

Ian Hancock, EIT
Transportation Analyst

Yulia Liem, P.Eng., PTOE
Principal, Regional Manager BC

CORPORATE AUTHORIZATION

Prepared By: Ian Hancock, EIT
Hana Stoer, EIT

Bunt & Associates Engineering Ltd.
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Date: 2024-01-31
Project No. 04-23-0251

Approved By: Yulia Liem, P.Eng., PTOE
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Permit No. 1000468
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
Y. P. LIEM
35685
2024-02-02

Written with respect and gratitude for the Traditional Territories upon which we work and live.

This document was prepared by Bunt & Associates for the benefit of the Client to whom it is addressed. The copyright and ownership of the report rests with Bunt & Associates. The information and data in the report reflects Bunt & Associates' best professional judgment in light of the knowledge and information available to Bunt & Associates at the time of preparation. Except as required by law, this report and the information and data contained are to be treated as confidential and may be used and relied upon only by the client, its officers and employees. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Bunt & Associates accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

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EXECUTIVE SUMMARY

Conseil Scolaire Francophone de la Colombie-Britannique (CSF) plans to build a new school in the District of Sechelt, located at the west end of Medusa Street. The school is planned to accommodate 206 students including 36 infant/toddler and pre-kindergarten children. Approximately 54 parking spaces, layby spaces for three school buses' parking and pick-up/drop-off activities are provided west of the school building.

CSF operates school bus to transport the majority of students to/from their school sites including this new Sechelt site. Therefore, only a small number of students will travel by private vehicles, walking, cycling or public transit. Based on Bunt observation conducted in 2019 at the existing CSF Ecole du Pacifique in Sechelt, the school is estimated to generate between 35 - 70 vehicle trips during the morning and afternoon peak hour, which translates to an average of 1 vehicle every 1-2 minutes.

All intersections within the study area are expected to operate well in the future horizon years with the addition of school trips. No improvements are required to accommodate the additional trips nor the projected background traffic growth in the area.

Bunt's recommendation proposed for the school site:

- Provision of two EV charging stations to meet the minimum Bylaw requirements.

Potential improvements along Medusa Street are also identified:

- Additional streetlight where long gap was found on Medusa Street to improve visibility,
- Pruning of vegetation at the northwest corner of Medusa Street and Medusa Place intersection and relocation of stop sign to the north on Medusa Place to improve visibility,
- Installation of sidewalk on the north side of Medusa Street west of Ocean Avenue, crosswalk on the west leg of Medusa Street and Ocean Avenue along with curb bulges to enhance pedestrian connectivity,
- Sharrow marking implementation on Medusa Street to better facilitate cycling.

1. INTRODUCTION

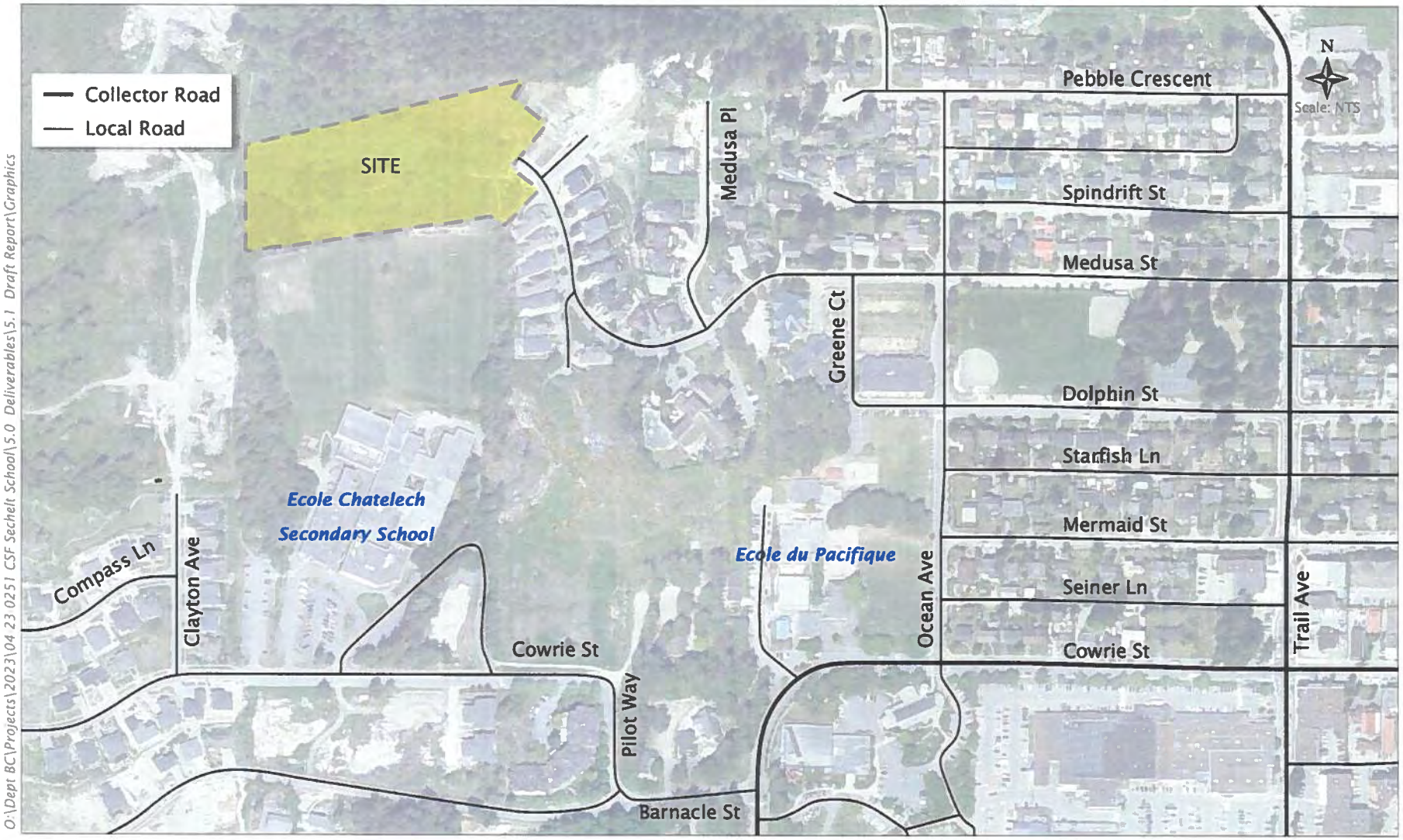
1.1 Study Purpose & Objectives

Conseil Scolaire Francophone de la Colombie-Britannique (CSF) plans to construct a new school to support 170 students from kindergarten to Grade 12, in addition to 36 infant/toddler and pre-kindergarten childcare, for a total of 206 students. The proposed site is located at the west end of Medusa Street, north of the existing Ecole Chatelech Secondary School, in Sechelt, BC. The site is currently zoned as CD-3, also known as a "Comprehensive Development Zone – Seniors Lodge", though there is currently no existing infrastructure at the site. Therefore, rezoning will be required to allow for school use.

As part of the rezoning process, Bunt and Associates Engineering Ltd. (Bunt) was retained to prepare a Transportation Impact Assessment (TIA) to understand the impact of the development traffic on the area road network, review the transportation-related design elements of the proposed development, develop a TDM strategy, and provide a high-level safety review of Medusa Street from Ocean Avenue to the school in terms of walking and cycling for school-age children.

1.2 Study Scope & Area

This report has been prepared based on the study Terms of Reference (ToR) approved by the District of Sechelt, which is attached to this report in **Appendix A**. Key tasks for Bunt that were identified in the ToR include data collection, assessment of existing and forecasting of future conditions, site trip generation and distribution, site design review, generating a suitable TDM plan, and providing a safety review. The study area agreed upon in this ToR includes the intersections of Ocean Avenue with Medusa, Cowrie, and Dolphin Street. The site location and surrounding area context are shown in **Exhibit 1.1**.



O:\Dept BC\Projects\2023\04 23 0251 CSF Sechelt School\5.0 Deliverables\5.1 Draft Report\Graphics

Exhibit 1.1

Site Location

CSF Sechelt School
January 2024

04-23-0251

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1.3 Organization of Report

This TAMS report has been set out in the following manner:

- **Section 1** summarizes and introduces the purpose and scope of the study including a description of the proposed development.
- **Section 2** describes the existing transportation network conditions, covers relevant policies, and analyzes the existing traffic volumes and operations.
- **Section 3** presents the proposed development in detail and analyzes its projected impact on the transportation network.
- **Section 4** details the current site plan, site accessibility, including parking and loading supply, and vehicle circulation.
- **Section 5** reviews the Transportation Demand Management (TDM) requirements.
- **Section 6** outlines the high-level safety review for pedestrians walking and cycling on Medusa Street; and,
- **Section 7** concludes the report and summarizes Bunt's recommendations.

1.4 Proposed Development

The proposed development includes a two-story building that aims to accommodate 206 total students. The pick-up/drop-off area and parking are located to the east of the building with access via Medusa Street. The preliminary site plan is illustrated in **Exhibit 1.2.**.

The current development site statistics broken down by the land uses per the description on page 89 of the District of Sechelt's Zoning Bylaw No. 580, 2022 are summarized in **Table 1.1**. Square footage that is shared between all students, such as hallways, the gym, the library, or administration, was divided up between these land uses based on the approximate percentage makeup of each of the student populations.

Table 1.1: Proposed Land Uses

LAND USE	GFA PROVIDED*	STUDENTS
Child Care Facility, Minor and Major	848.2 m²	36
School - Elementary	1839.6 m²	120
School - Secondary	628.2 m²	50
TOTAL	3316.0 M²	206

* Includes a factored amount of the 2341 m² GFA shared among all students (hallways, gym, etc.), based on a percentage makeup of the total number of students.

Typical CSF schools including the existing Ecole du Pacifique and Ecole Chateleh Secondary School have approximately 80% of students arriving to/departing from the schools by school bus. Based on the projected student capacity, CSF is planning to run 3 large school buses to transfer students, each bus with a capacity of up to 82 seats. Therefore, only about 40 students are expected to arrive/depart from school by private vehicles, transit, bike or walk.

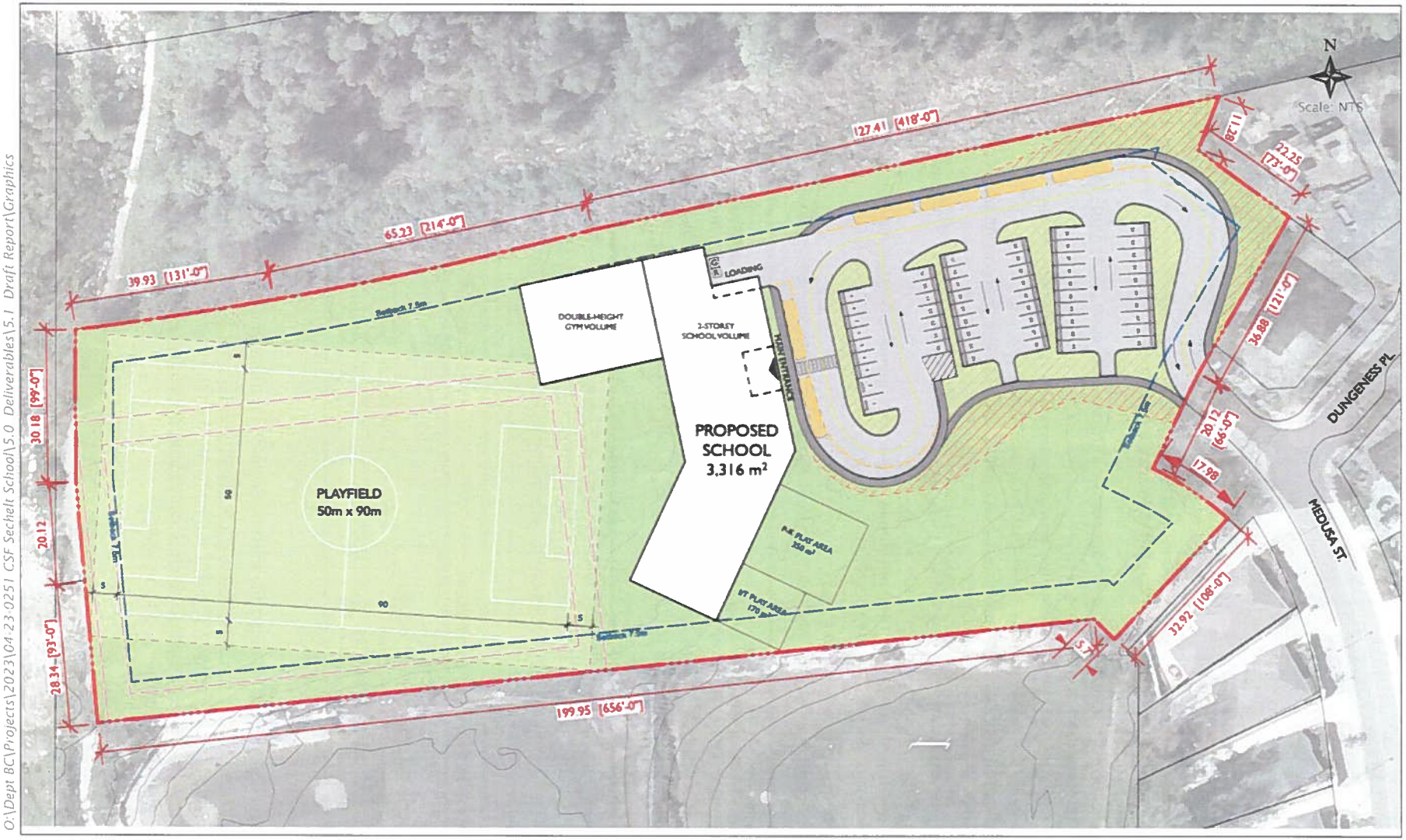

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Exhibit 1.2
Site Plan

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2. EXISTING CONDITIONS

2.1 Land Use

There is no infrastructure that currently exists on the site, besides a small unpaved footpath that connects to the northeast and northwest corners of the Ecole Chatelech Secondary School property and runs north-south along the west side of the property up to the powerline access trail. The local area predominantly features single family housing along Medusa Street, Dungeness Place and Medusa Place. Shorncliffe Intermediate Care Home is also located along Medusa Street.

The site is currently zoned as CD-3, a "Comprehensive Development Zone - Seniors Lodge", and rezoning to CC-1, "Community and Civic One Zone", is proposed.

2.2 Existing Transportation Network

2.2.1 Road Network

To the east of the site, Ocean Avenue is a local street, running north-south between Cowrie Street to the south and Pebble Crescent to the north. Ocean Avenue features one travel lane per direction with on-street parking available on the east side and sidewalk provided on the west side for the portion between Cowrie and Medusa Street.

Medusa Street is a local road extending to Inlet Avenue to the east. The road features one travel lane per direction with on-street parking on one side or both sides of the road between Medusa Place and Inlet Avenue. Sidewalk is available on both sides of the road from the site to the 5824 Medusa Street property, then only on the south side of the road until Trail Avenue. East of Ocean Ave, sidewalk is provided on both sides.

Dolphin Street is also a local east-west road stretching between Ocean Avenue to the west and Wharf Avenue to the east, then becomes Sunshine Coast Highway further east. Angle parking is provided along the north side fronting the Hackett baseball Park with parallel parking along the south side. East of Trail Avenue, parallel parking is available on both sides of the street. West of Ocean Avenue, Dolphin Street becomes Greene Ct with 90-degree parking spaces along the south side.

Cowrie Street is a collector east-west road stretching from Shorncliffe Avenue to the west and Sunshine Coast Highway to the east. It has one travel lane per direction with parallel parking and sidewalk on both sides of the road.

Ocean Avenue and Cowrie Street features an all-way stop, while the intersections of Ocean Avenue at Dolphin and Medusa Street have stop signs for the east-west legs.

This laning and traffic control along with the street classifications are presented in **Exhibit 2.1**, and summarized in **Table 2.1**.

Table 2.1: Existing Street Characteristics

STREET	CLASSIFICATION	NUMBER OF TRAVEL LANES	POSTED SPEED (KM/H)	PARKING FACILITIES
Medusa Street	Local Road	2	30	Sections of no, one, or both sides of on-street parking allowed
Dolphin Street	Local Road	2	50	Both sides
Cowrie Street	Collector Road	2	50	Both sides
Ocean Avenue	Local Road	2	30	East side only

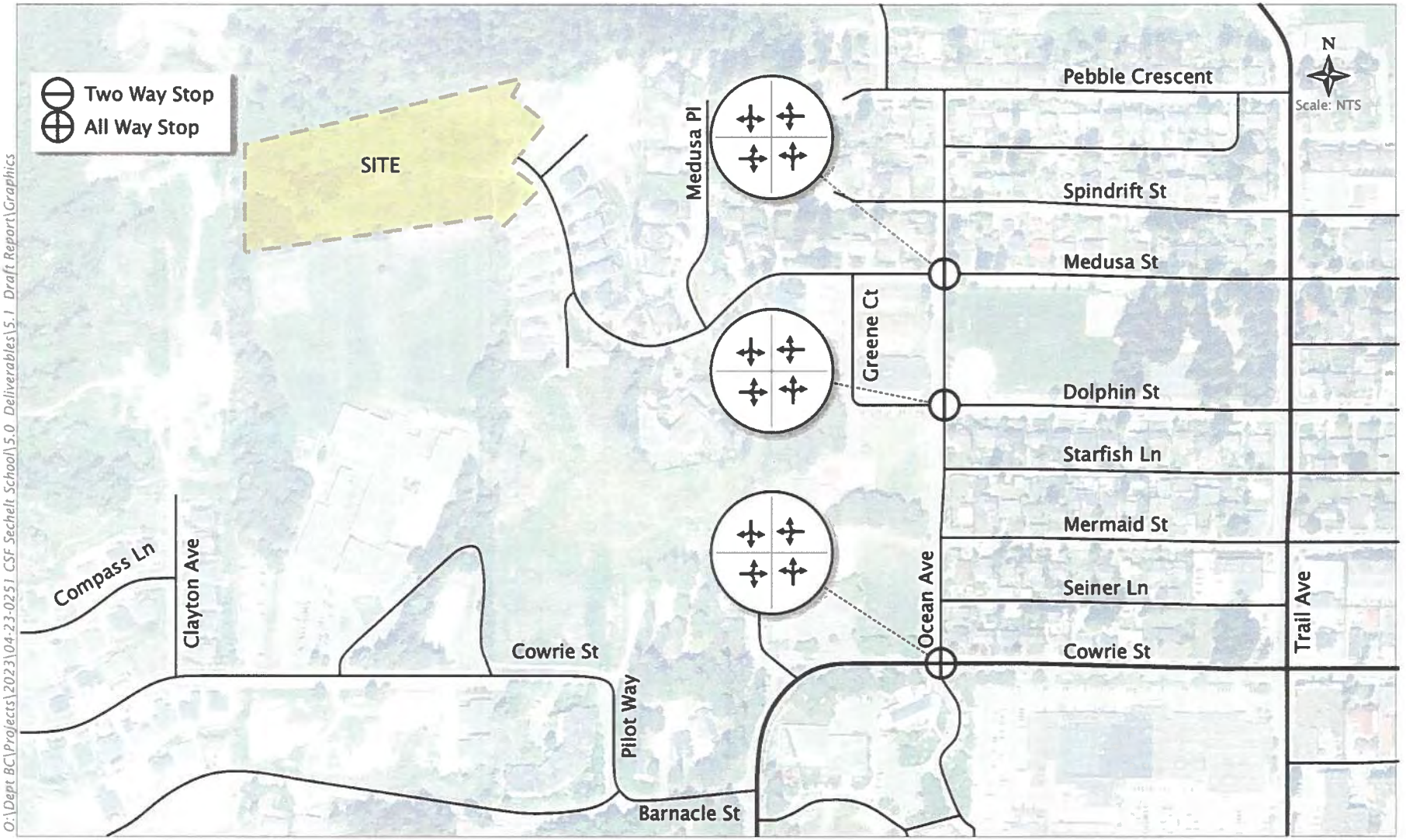

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Exhibit 2.1

Existing Laning and Traffic Control

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2.2.2 Transit Network

Bus routes #1 and #90 lines can be accessed between Dolphin and Mermaid Street on Ocean Avenue just slightly outside of a 400m radius from the site, and is the closest bus stop accessible while staying on paved sidewalks. Within an 800m radius of the school, or what is approximately a 10-minute walk, is multiple stops in the downtown area that service the #2, #3, and #4 lines. Students that specifically want to take the #3 line northbound can walk to the slightly closer Trail Avenue and Sherlock Lane stop. Similarly, students wanting to access the nearest #2 line can theoretically cut through the Ecole Chatelech Secondary School property to the nearest bus stop on Cowrie Street, if and when the connection remains.

The #1 and #90 lines allow for commuters to travel southeast as far as the Langdale ferry terminal. The #2 line provides a local loop to access the west of Sechelt, while the #4 provides a much longer line that extends out to Halfmoon Bay. The #3 line also allows for access to the north of Sechelt. This places the site at a very advantageous location of being within walking distance of every bus route in the Sunshine Coast Transit System, which services a wide range of locations for commuting students.

A summary of the nearest bus stops that service each of these lines is provided in **Table 2.2**, along with a more accurate estimate of how long it would take to walk to them via sidewalks. The entire nearby transit network is depicted in **Exhibit 2.3**.

Table 2.2: Nearest Transit Stops within Walking Distance of Site

STOP LOCATION	DIRECTION	STOP ID	AMENITY	ROUTES SERVICED	BEELINE DISTANCE	WALKING DISTANCE ALONG SIDEWALKS
Cowrie at Clayton	Westbound	118024	None	#2	385m	1400m
Ocean at Mermaid	Southbound	118010	Bench	#1, #90	485m	650m
Shorncliffe at Barnacle	Northbound	118039	Handicap Parking	#2, #3, #4	540m	950m
Trail at Sherlock	Northbound	170237	None	#3	700m	800m

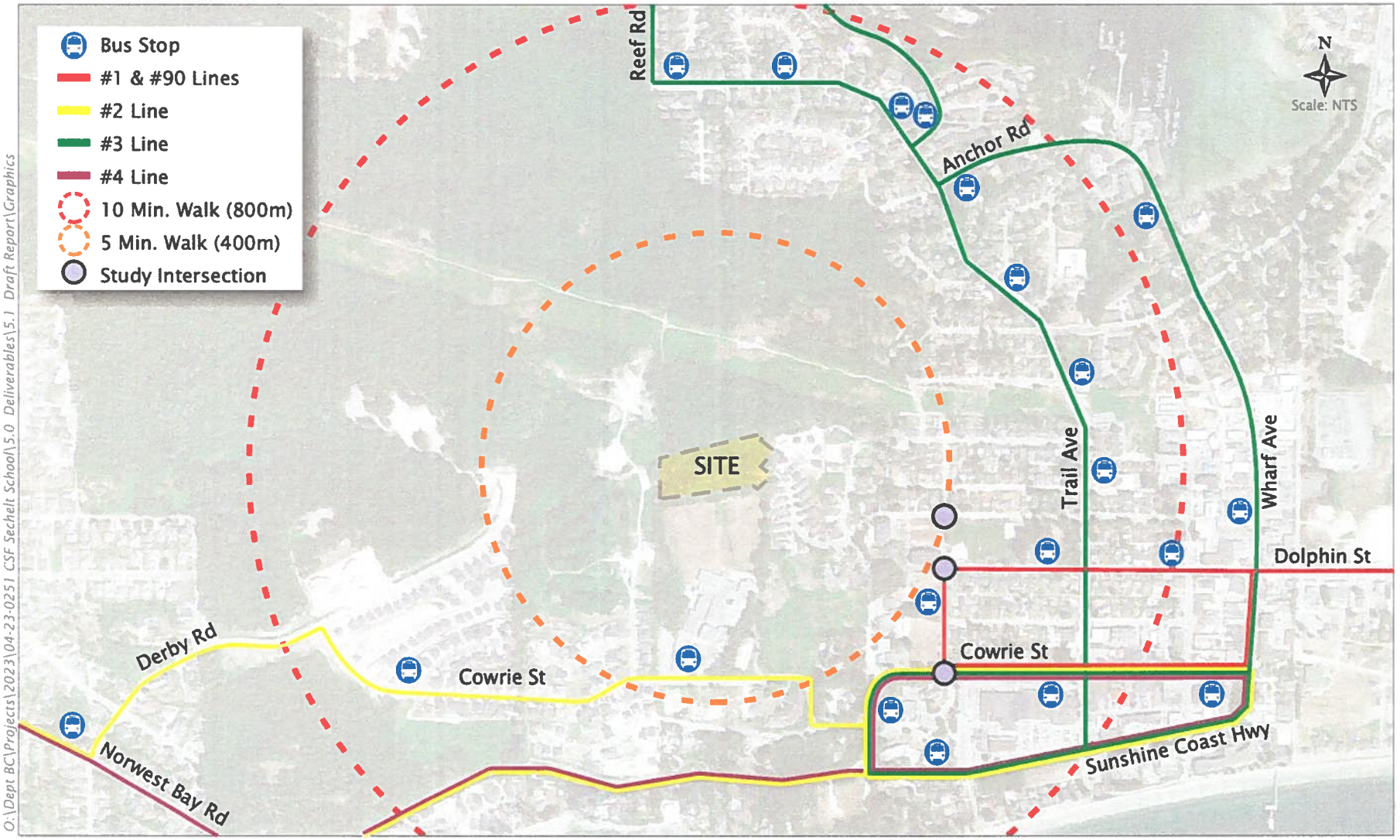

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Exhibit 2.3

Transit Routes and Stops

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2.2.3 Cycling & Pedestrian Networks

Exhibit 2.4 illustrates the available cycling network within proximity of the site. Within 800 meters (approximately a 10 minute walk) of the proposed site are two main sections of the bike network. The first of these to the northeast along Trail Avenue, from Cowrie Street to the block before Anchor Road, features a raised, separated bike lane on both sides of the road. Past this point before Anchor Road, the lane transitions into an at grade, painted lane on just the northeast side of the road. About 300 meters before the bike lanes terminate at the intersection with Reef Road, painted bike lanes are again available on both sides of Trail Avenue. The raised bike lane along Trail Avenue also extends onto the north side of Dolphin Avenue to the east of Trail Avenue.

At the other section to the southwest, cyclists may ride between painted bike lanes on either side of Derby Road which transitions into a single raised, separated lane on the south side of the road. This continues at the intersection onto Cowrie Street for another 150 meters, before turning to painted bike lanes on either side of the road.

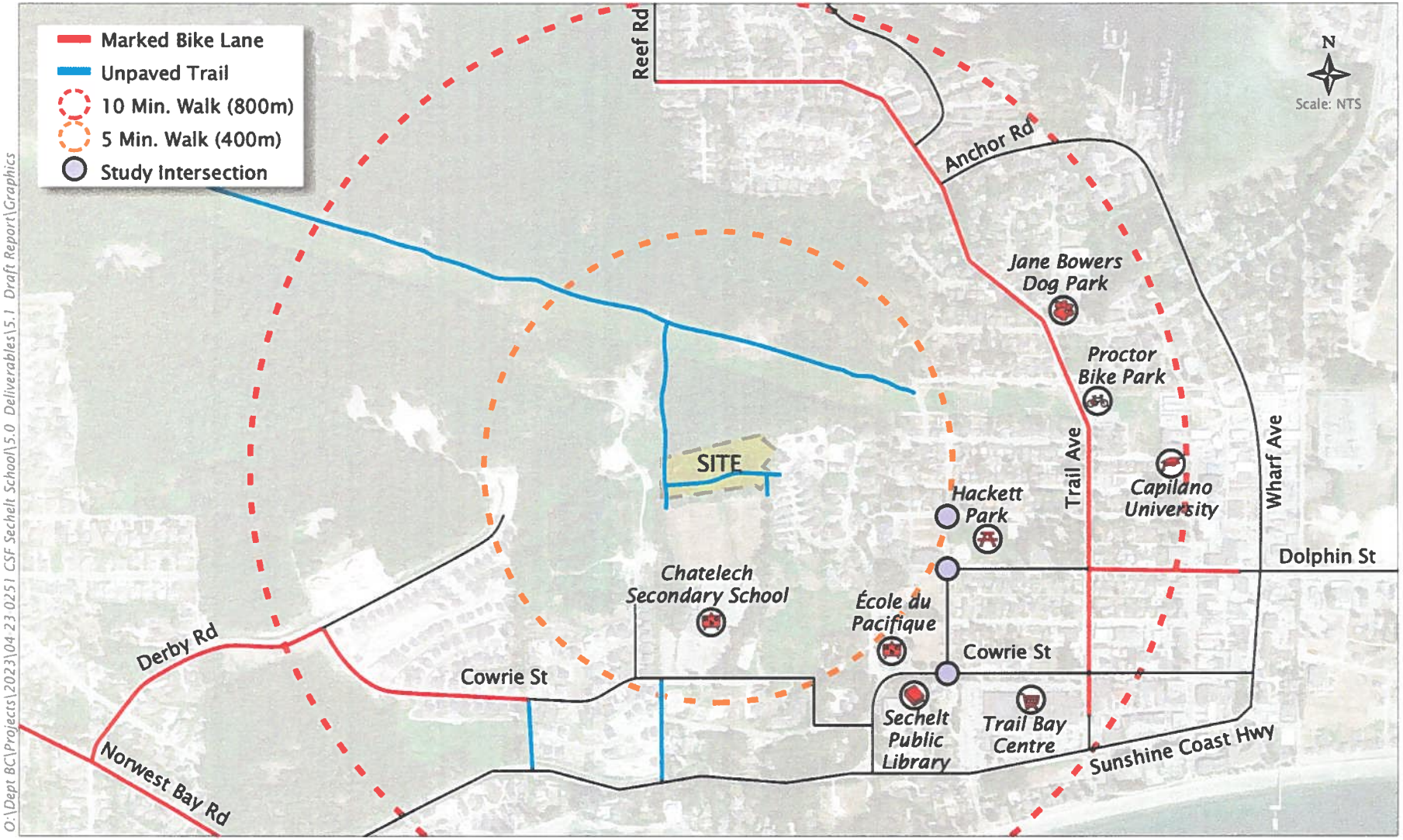

Exhibit 2.4

Pedestrian and Cycling Routes

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2.3 Current Relevant Policies & Plans

2.3.1 Municipal Plans

The District of Sechelt adopted its Official Community Plan in 2011 that contains A Transportation Master Plan (TMP) completed in 2009. The District is currently in the process of creating a new TMP that will guide the planning and prioritization of the transportation infrastructure needs for the next 20 years to accommodate the growing community. The 2009 Official Community Plan calls out a large parcel of land, "Special Infill Area #4", which shares a border with the north edge of the proposed development. This is an area that is largely undeveloped, and due to topographic constraints is recommended to be zoned as high-density residential housing in order to preserve open space areas elsewhere in Sechelt. This is relevant as development of this area could potentially introduce additional connectivity to the site.

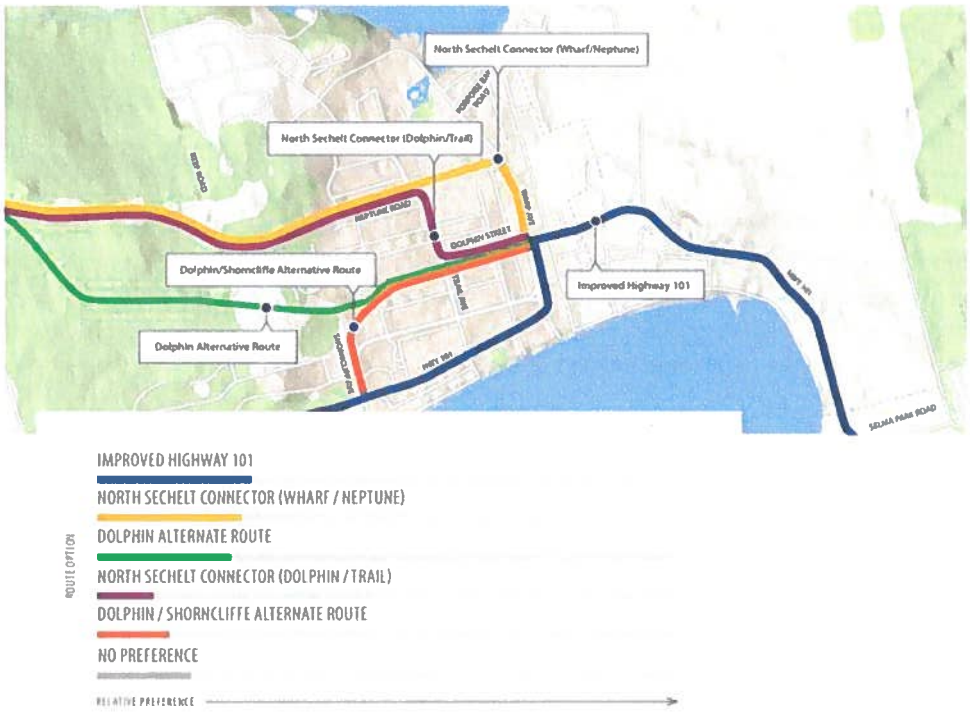
2.3.2 Regional Plans

The most recent regional plan with an effect on the development is the "Sunshine Coast - Transit Future Action Plan" of February 2022. This lays out a series of improvements that are targeted to be completed between 2022-2026, and another series of targets after 2026. Of these improvements some have already been made and improve connectivity to the site, such as increasing the service along the Route 90 bus line to 30-minute service between 6:00 AM - 6:00 PM on weekdays and rerouting of Route 1 (already reflected in this report). Future improvements include increasing Route 90-to-30-minute service for the entire day, modifying Route 2 to bi-directional service, increasing Route 2 service frequency, and addition of multiple new lines to Pender Harbour and Earls Cove Ferry Terminal/Egmont which would connect to the Sechelt transit network. They also list several less concrete improvements, such as optimization of underperforming services, improving timing and connections, and investing in bus stop infrastructure. Beyond 2026 other frequency improvements, route extensions, and new routes are outlined as well. These improvements stand to considerably improve the transit experience for the students and staff that will be commuting to this development.

2.3.3 Provincial Plans

As mentioned in the 2009 TMP, the improvement or addition of an alternate arterial to Highway 101/the Sunshine Coast Highway is a conversation that has been ongoing for a considerable time. Most recently in May of 2023 the BC Ministry of Transportation and Infrastructure (MoTI) released the "Highway 101 Alternate Route Planning Study Engagement Report". This report calls out a 20 per cent increase in traffic volumes between 2017 and 2023, primarily between Sechelt and Gibsons as the motivating factor for the investigation. Though it finds "no foreseeable need for a full, end-to-end bypass route", it does investigate how alternate routes or improvements along key segments could be implemented. This report gathered comments from locals in the Sechelt community on potential options, some of which route through or near the development location. **Figure 2.1** shows the potential options that respondents preferred.

Figure 2.1: Sechelt Public Engagement Results of Highway 101 Improvement/Rerouting Options



Source: Highway 101 Alternate Route Planning Study Engagement Report

2.4 Existing Traffic Volumes

2.4.1 Traffic Data Collection Program

Bunt conducted a traffic count on the afternoon of November 1st and the morning of November 2nd of 2023, a Wednesday and Thursday respectively, to acquire data for a typical weekday. These counts, at the three study intersections of Cowrie, Dolphin, and Medusa Street with Ocean Avenue were captured between 7:00-9:00 AM for the morning, and 3:00-6:00 PM for the afternoon. As summarized in **Table 2.4**, the peak hours of the study network were found to be between 8:00-9:00 AM and 3:00-4:00. A summary of the traffic data collected can be found in **Appendix B**. Notably, there was an active construction project on the parcel directly southwest of the Medusa Street and Ocean Avenue intersection. This particularly inflated the number of heavy vehicles that would be expected on the study network.

Table 2.4: Summary of Available and Counted Traffic Data

INTERSECTION	SOURCE	DATE OF COUNT	PEAK HOURS	
			AM	PM
Ocean Ave & Medusa St	Bunt	Nov 1 & 2, 2023	8:00-9:00	3:15-4:15
Ocean Ave & Dolphin St	Bunt	Nov 1 & 2, 2023	8:00-9:00	3:00-4:00
Ocean Ave & Cowrie St	Bunt	Nov 1 & 2, 2023	8:00-9:00	3:00-4:00
	OVERALL STUDY AREA PEAK HOUR		8:00-9:00 AM	3:00-4:00 PM

2.4.2 Peak Hour Traffic Volumes

The existing peak hour vehicle volumes are illustrated in **Exhibit 2.5** while **Table 2.5** presents a summary of the two-way peak-hour vehicle movements for the streets in the study area. **Exhibit 2.6** shows the pedestrian and cycling volumes during the AM and PM peak hour. The influxes of pedestrian and cyclist traffic correspond with the beginning and end of the day at nearby schools, which is likely also a factor in the early PM peak hour.

Table 2.5: Existing Peak Hour Roadway Link Volumes

ROAD LINK	PEAK LINK VOLUMES (VEH/HR)	
	AM	PM
Ocean Ave, north of Medusa St	40	53
Medusa St, west of Ocean Ave	44	71
Medusa St, east of Ocean Ave	35	54
Dolphin St, east of Ocean Ave	152	242
Ocean Ave, north of Cowrie St	185	221
Cowrie St, east of Ocean Ave	233	378
Cowrie St, west of Ocean Ave	363	329
Rosina Giles Way, south of Cowrie St	43	232

Currently, Medusa Street west of Ocean Avenue carries a low level of traffic, between 40 - 70 vehicles during the weekday peak hour.

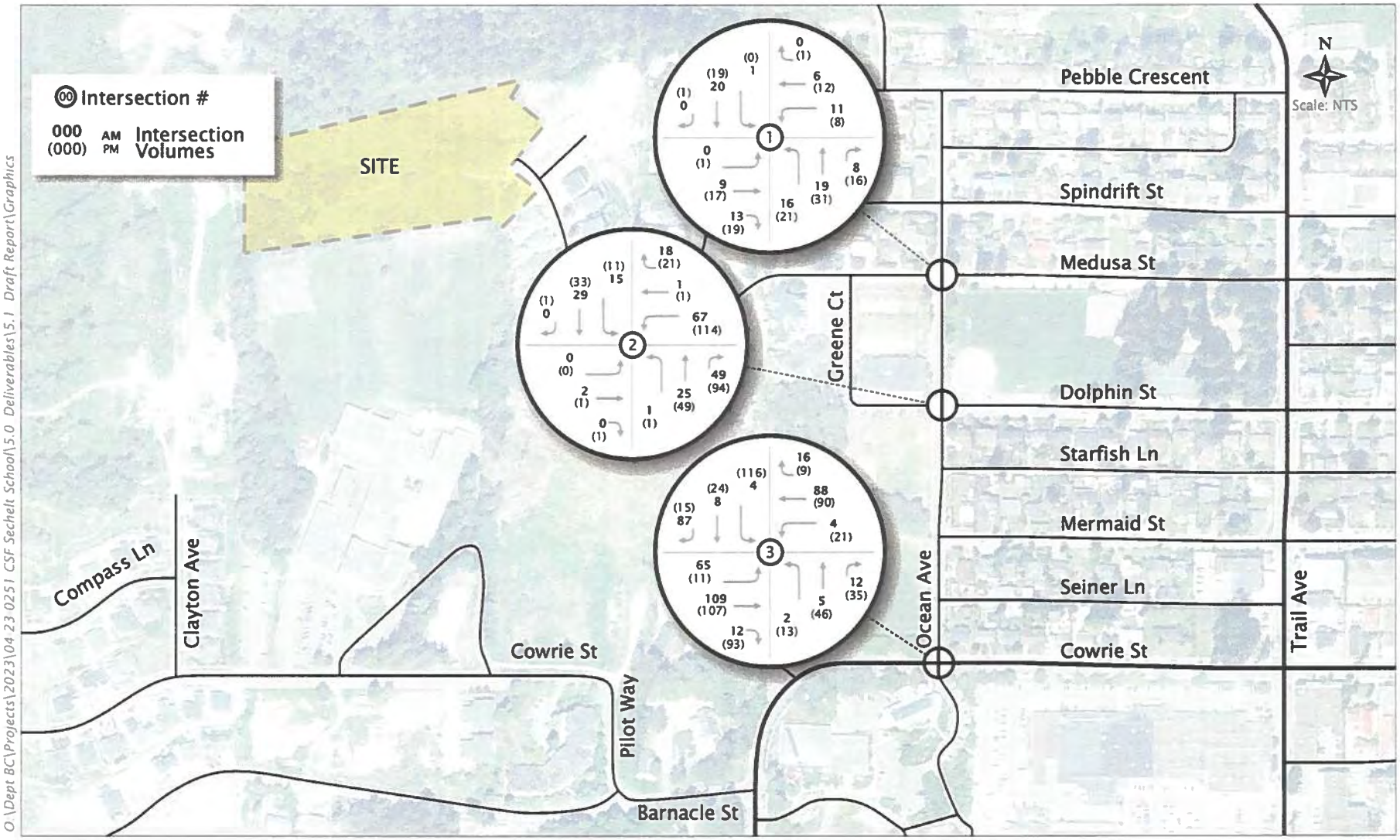


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Exhibit 2.5

Existing Peak Hour Vehicle Traffic Volumes

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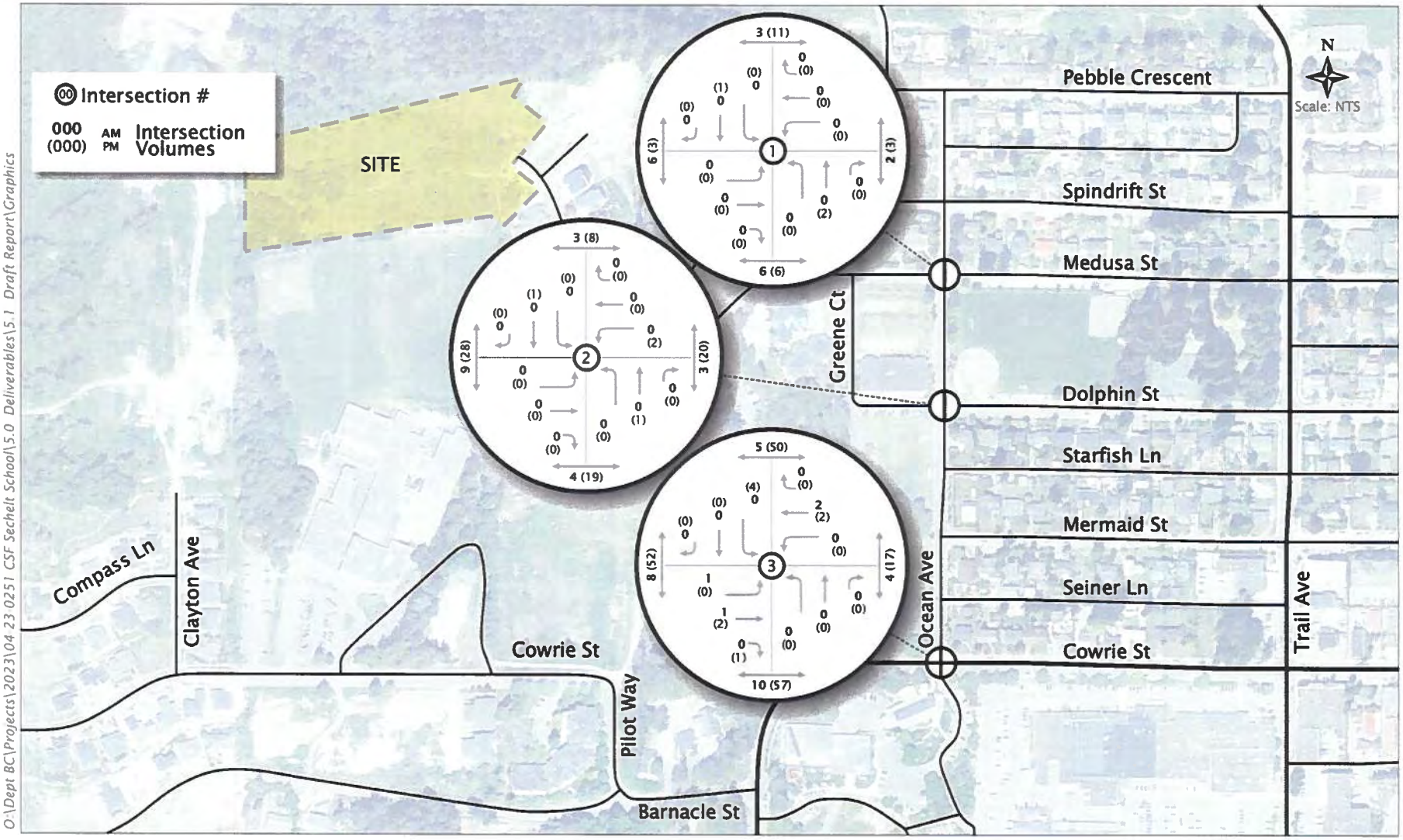

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Exhibit 2.6

Existing Peak Hour Cyclist and Pedestrian Volumes

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2.5 Existing Operations

2.5.1 Performance Thresholds

The existing operations of study area intersections and access points were assessed using the methods outlined in the 2000 Highway Capacity Manual (HCM), using the Synchro 11.1 analysis software (Build 1, Revision 6). The traffic operations were assessed using the performance measures of Level of Service (LOS) and volume-to-capacity (V/C) ratio.

The LOS rating is based on average vehicle delay and ranges from "A" to "F" based on the quality of operation at the intersection. LOS "A" represents optimal, minimal delay conditions while a LOS "F" represents an over-capacity condition with considerable congestion and/or delay. Delay is calculated in seconds and is based on the average intersection delay per vehicle.

Table 2.6 below summarizes the LOS thresholds for the six Levels of Service, for both signalized and unsignalized intersections.

Table 2.6: Intersection Level of Service Thresholds

LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)	
	SIGNALIZED	UNSIGNALIZED
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Source: Highway Capacity Manual

The volume to capacity (V/C) ratio of an intersection represents ratio between the demand volume and the available capacity. A V/C ratio less than 0.85 indicates that there is sufficient capacity to accommodate demands and generally represents reasonable traffic conditions in suburban settings. A V/C value between 0.85 and 0.95 indicates an intersection is approaching practical capacity; a V/C ratio over 0.95 indicates that traffic demands are close to exceeding the available capacity, resulting in saturated conditions. A V/C ratio over 1.0 indicates a very congested intersection where drivers may have to wait through several signal cycles. In downtown and Town Centre contexts, during peak demand periods, V/C ratios over 0.90 and even 1.0 are common.

For an unsignalized intersection, the target individual moment Level of Service should be E or better, unless volumes are very low and LOS F is acceptable. A LOS worse than this would justify consideration of roadway or traffic control improvements.

In interpreting of the analysis results, note that the HCM methodology reports performance differently for various types of intersection traffic control. In this report, the performance reporting convention is as follows:

- For unsignalized two-way stop-controlled intersections: HCM 2000 LOS and V/C output is reported just for individual lanes as the HCM methodology does not report overall performance;
- For unsignalized all-way Stop controlled intersections: HCM 2000 unsignalized LOS is reported for the overall intersection as well as by intersection approach LOS. The HCM 2000 methodology does not report an overall V/C ratio for all-way Stop controlled intersections. Degree of Utilization calculated with the HCM 2000 methodology is reported for individual movements in place of V/C, which is not part of the HCM 2000 report;

The performance reporting conventions noted above have been consistently applied throughout this document and the detailed outputs are provided in **Appendix C**.

2.5.2 Existing Conditions Analysis Assumptions

Synchro Parameters

Some adjustments were made to the Synchro model to assess existing conditions:

- Road widths reflect actual conditions measured from aerial and/or site observations,
- PHF was adjusted based on count data,
- Heavy vehicle % reflect observed traffic.

Other than the above noted changes, the Synchro default settings were applied.

2.5.3 Existing Operational Analysis Results

The intersection operations of the study intersections are shown in **Exhibits 2.7** and **2.8** for weekday AM and PM peak conditions, respectively. As indicated in the exhibits and confirmed through the site visit, no operation issues were identified.

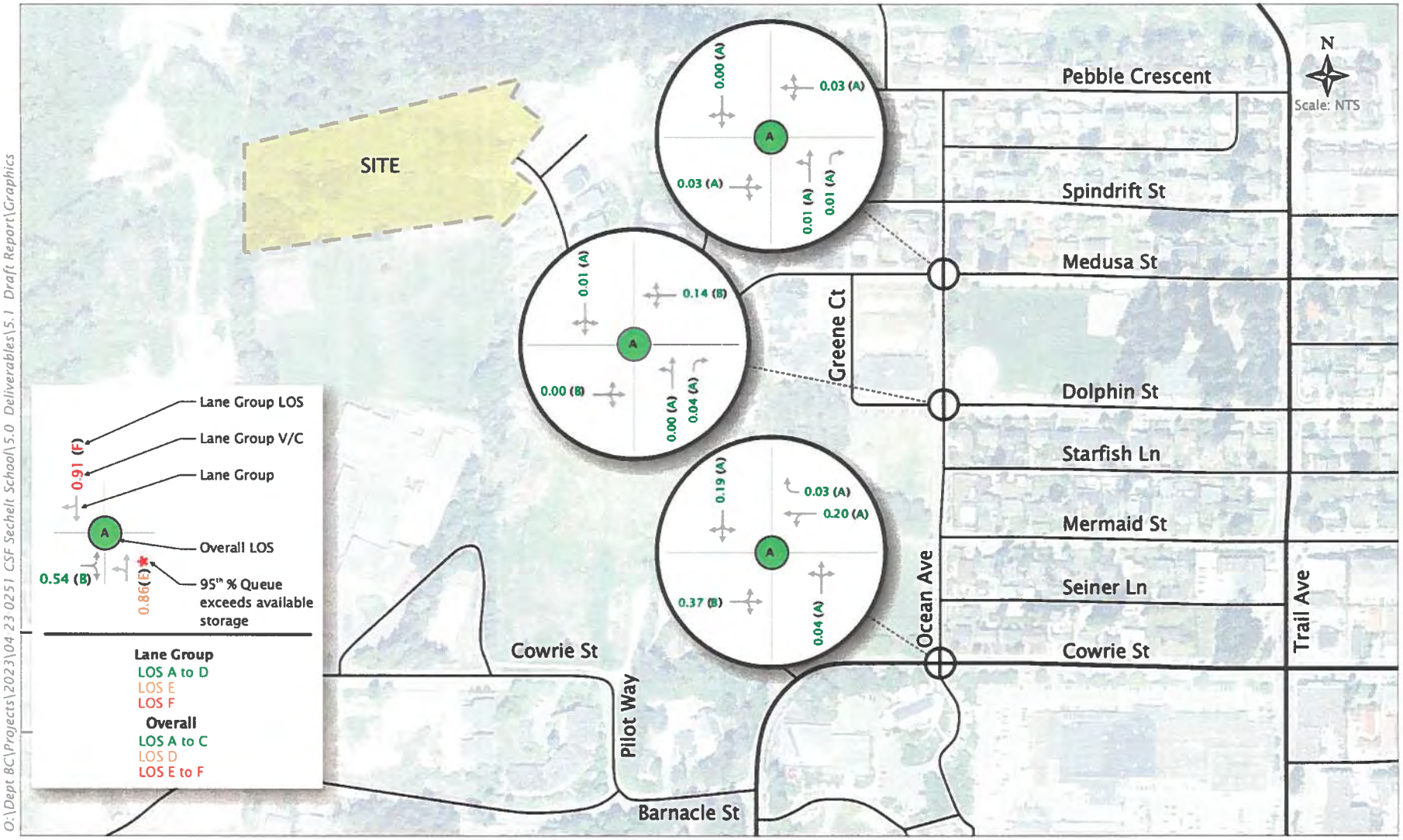

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Exhibit 2.7

Existing AM Peak Hour Performance

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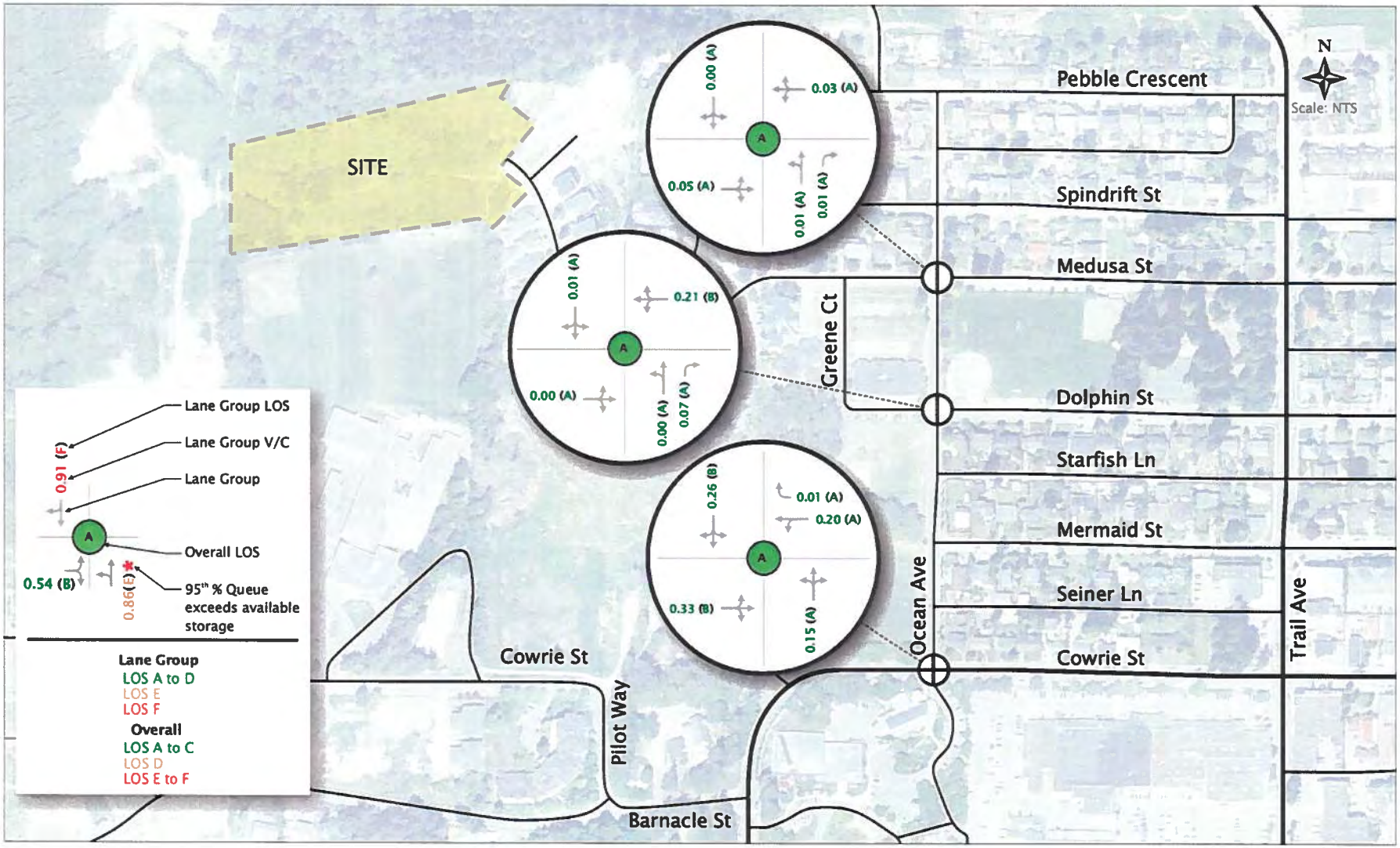

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Exhibit 2.8

Existing PM Peak Hour Performance

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3. FUTURE TRAFFIC CONDITIONS

3.1 Traffic Forecasts

3.1.1 Background Traffic Forecasts

Background traffic is traffic that would be present on the road network if the site did not redevelop. Given that the site is currently vacant, this will reflect the current non-site traffic. A conservative linear growth rate of 2.0% growth per year is applied to estimate the future background traffic volumes in the area. This is shown in **Exhibit 3.1** for the opening day of the site in 2029, and then again 10 years after opening day in **Exhibit 3.2**.

3.1.2 Site Traffic

Trip Generation

Bunt has conducted trip generation observations on November 28, 2019 at the existing Ecole du Pacifique site as part of the traffic study completed for the proposed school expansion at the time. As the site does not follow a typical school traffic, with 80% of students arrive/depart by school buses, ITE Trip Generation rates are not applicable to the site. Therefore, Bunt feels it appropriate to apply the observed trip rates collected at the site access in 2019 to estimate the future school vehicle trips, but use the in/out split based on ITE Trip Generation Manual for daycare, elementary and high-school. As the observed school did not have secondary school component, it was assumed that the trip rates for elementary school represent the secondary school component. The trip generation calculation table is included in **Appendix D**.

Table 3.1: Peak Hour Vehicle Trip Rates

LAND USE	UNITS (STUDENTS)	AM PEAK HOUR			PM PEAK HOUR		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Day Care Center (565)	36	53%	47%	0.21	47%	53%	0.63
Elementary School (520)	120	54%	46%	0.17	46%	54%	0.27
High School (525)	50	68%	32%	0.17	48%	52%	0.27
TOTAL	206						

Table 3.2 summarizes the anticipated future site generated vehicle trips for the proposed development based on the above rates.

Table 3.2: Estimated Peak Hour Site Vehicle Trips

LAND USE	AM PEAK HOUR			PM PEAK HOUR		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Day Care Center (565)	4	4	8	11	12	23
Elementary School (520)	11	9	20	15	17	32
High School (525)	6	3	9	7	7	14
TOTAL	21	16	37	33	36	69

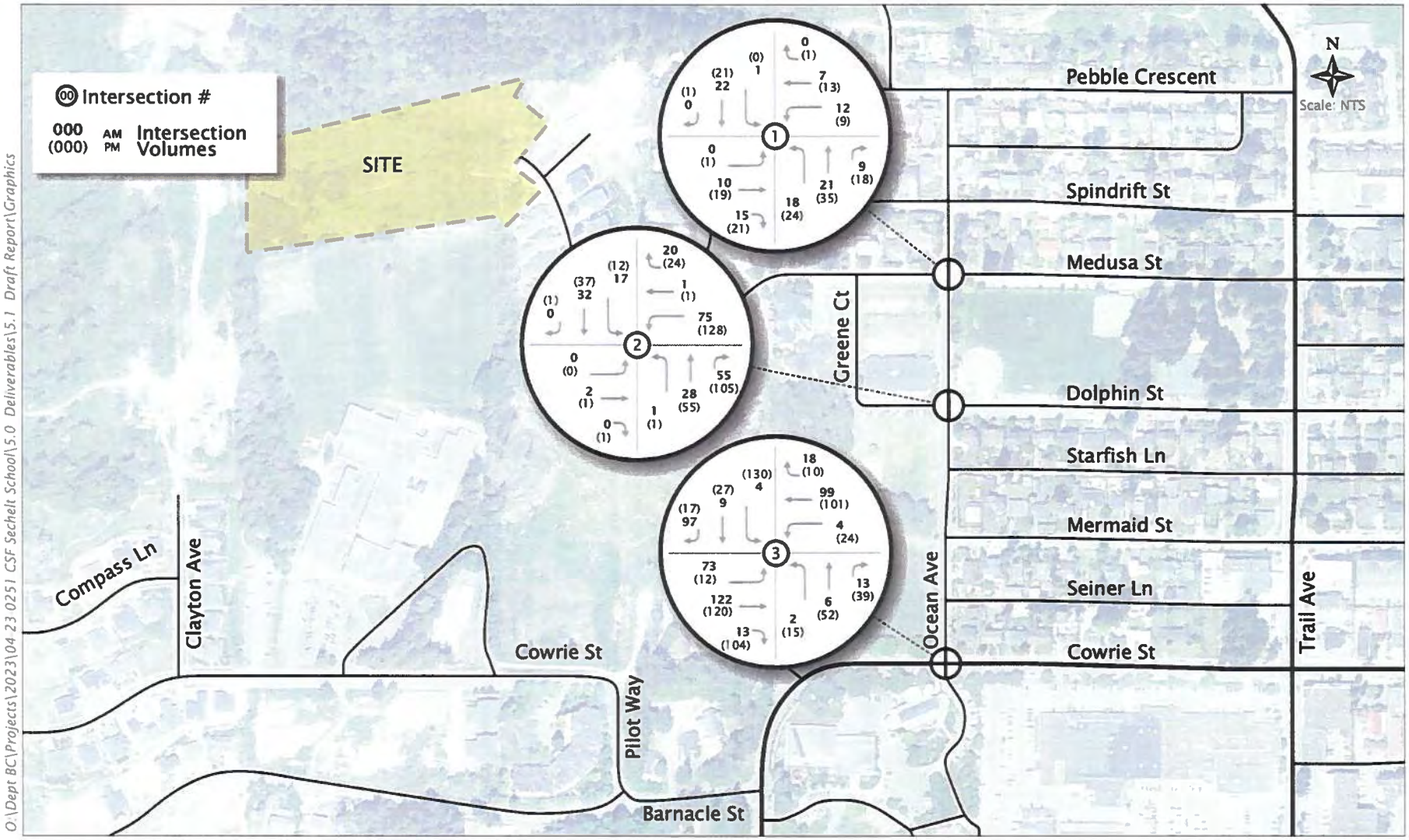

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Exhibit 3.1

Opening Day Background Traffic Forecasts

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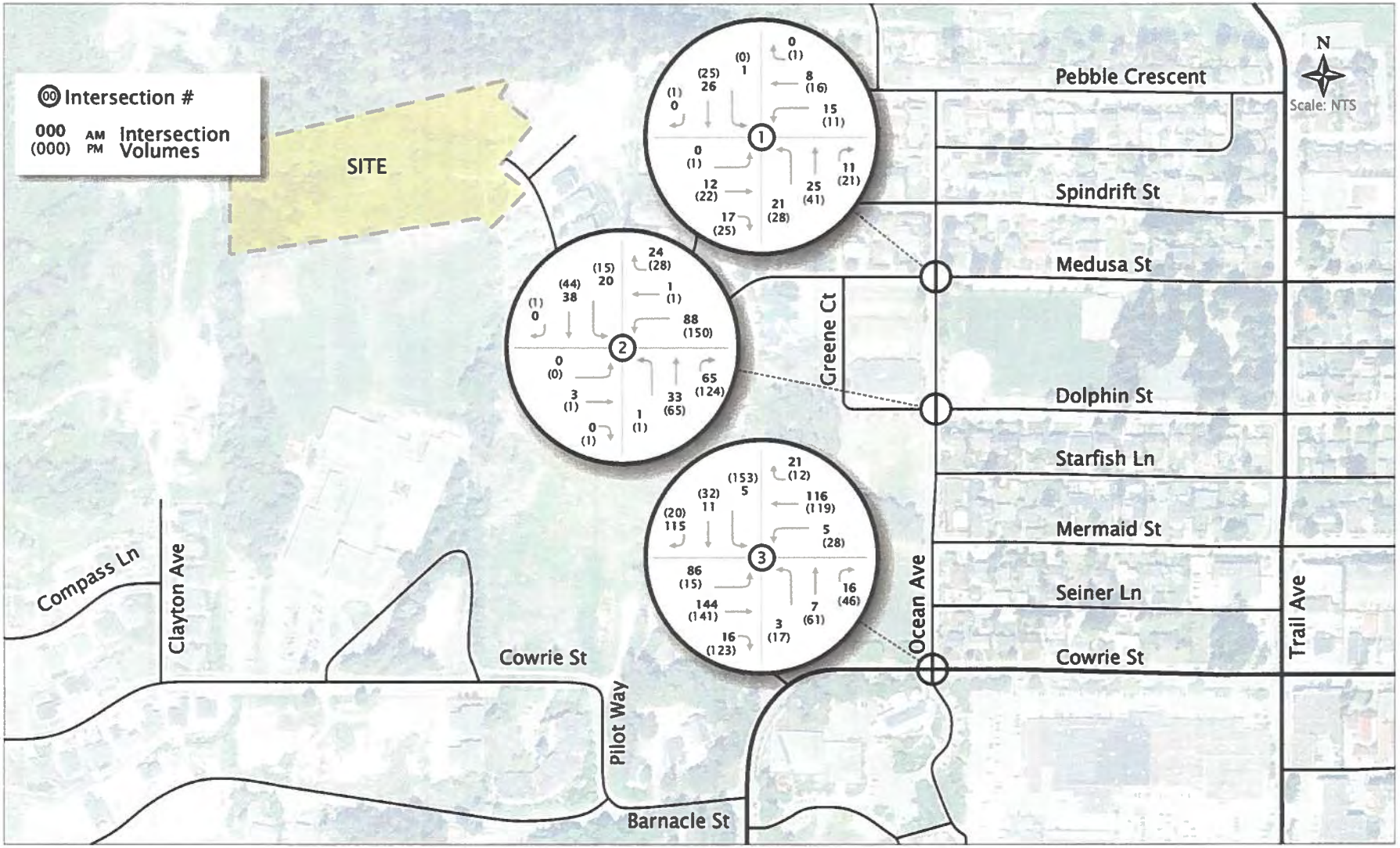

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Exhibit 3.2

Opening Day + 10 Background Traffic Forecasts

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Trip Distribution & Assignment

Trip distribution, a makeup of where inbound trips originate and outbound trips terminate, was estimated based on the data collected during the traffic counts on November 1st and 2nd, 2023 and is shown in **Table 3.3**. As this is based on real data, the AM and PM trip distributions vary.

Table 3.3: Estimated Trip Distribution

ORIGIN/DESTINATION	AM PEAK HOUR		PM PEAK HOUR	
	IN (%)	OUT (%)	IN (%)	OUT (%)
Ocean Avenue North	5	5	5	5
Medusa Street East	5	5	5	5
Dolphin Street East	20	15	20	15
Cowrie Street East	25	30	20	40
Cowrie Street West	40	40	35	15
Rosina Giles Way South	5	5	15	20
TOTAL	100%	100%	100%	100%

Using this trip distribution, and the estimated peak hour site traffic volumes, the site traffic has been assigned to the study network, and is shown at each of the study intersections in **Exhibit 3.3**. **Table 3.4** presents the net traffic impact of the proposed development on the study intersections relative to the expected background volumes on the opening day.

Table 3.4: Net Change in Future Intersection Vehicle Volumes with New Site Trips

INTERSECTION	AM PEAK HOUR VOLUMES			PM PEAK HOUR VOLUMES		
	BACK-GROUND	SITE	% CHANGE	BACK-GROUND	SITE	% CHANGE
Ocean Ave & Medusa St	115	37	32	164	69	42
Ocean Ave & Dolphin St	232	33	14	366	62	17
Ocean Ave & Cowrie St	524	26	5	792	50	6

This shows that the Ocean Ave & Cowrie Street intersection, which already carries a higher volume of traffic, experience smaller percent increases in traffic at 5% and 6% for the AM and PM peaks, respectively. This is more pronounced at Ocean Ave & Medusa Street as all site trips must pass through this intersection with 32% and 42% increase in the morning and afternoon peak, respectively.

3.1.3 Total Traffic

Total traffic is the sum of the background volumes and the forecasted site traffic volumes. The total traffic volumes for the opening day and opening day + 10 are illustrated in **Exhibits 3.4** and **3.5**, respectively.

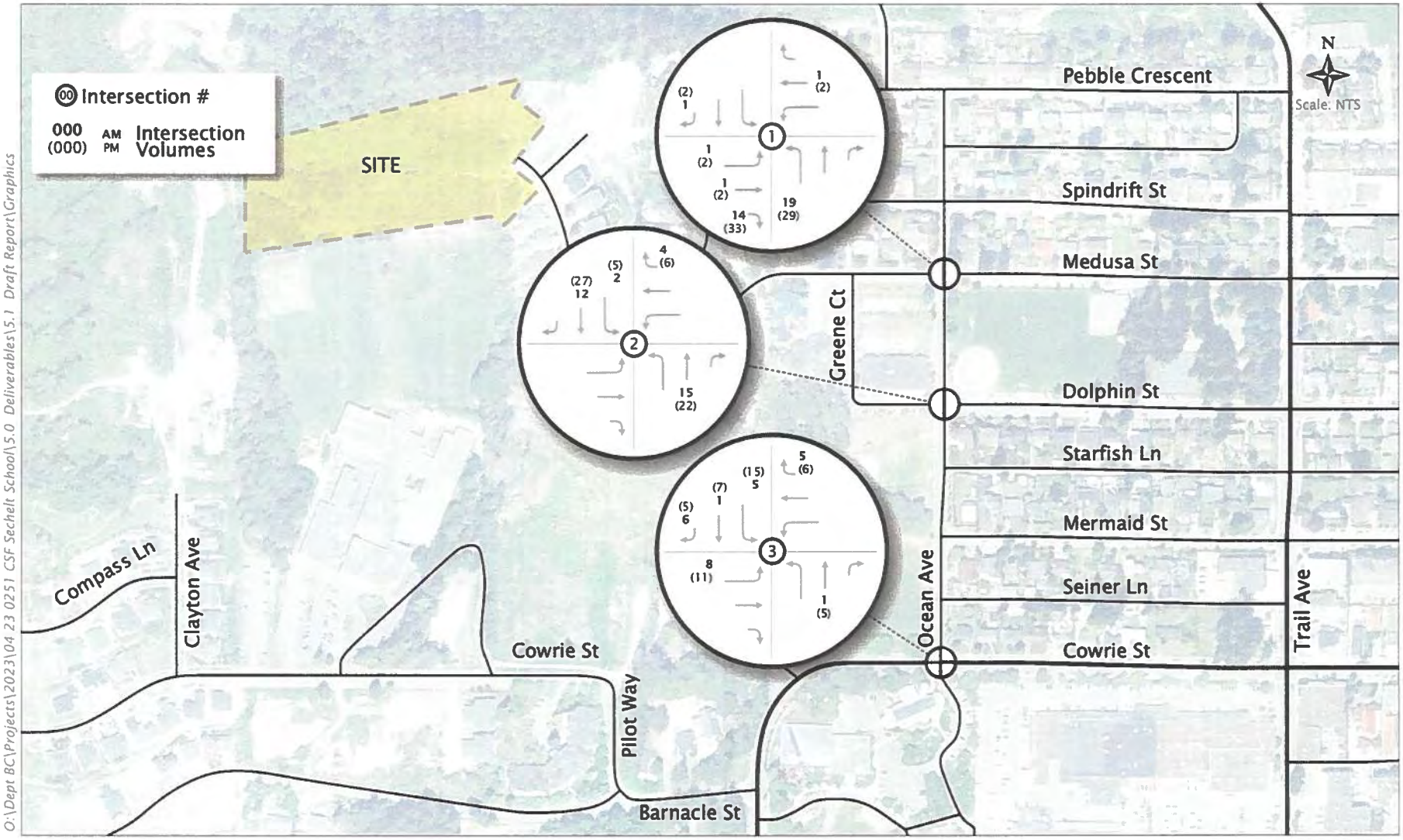

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Exhibit 3.3

Site Traffic Forecasts

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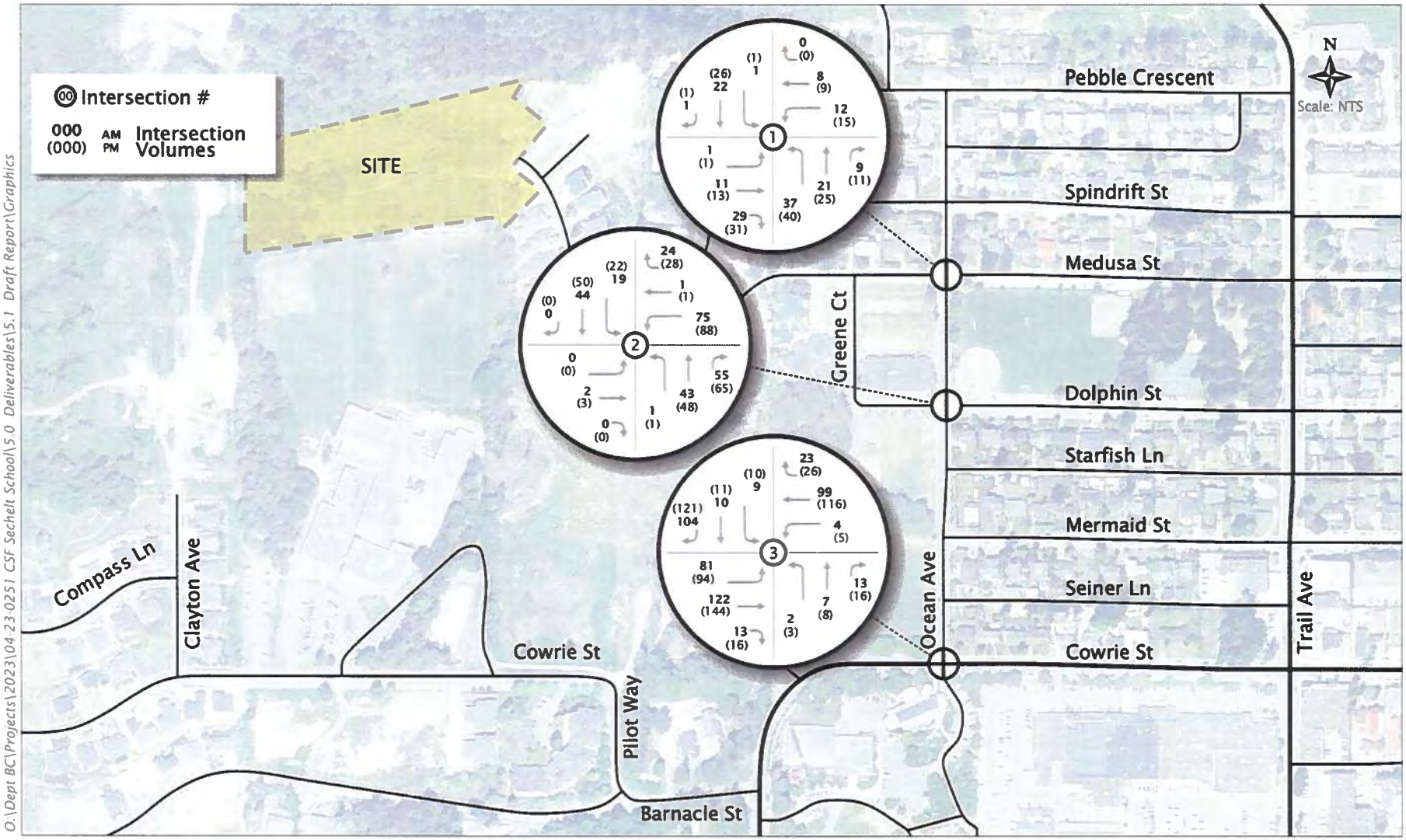

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Exhibit 3.4

Opening Day Total Traffic Forecasts

04-23-0251

CSF Sechelt School
January 2024

bunt & associates

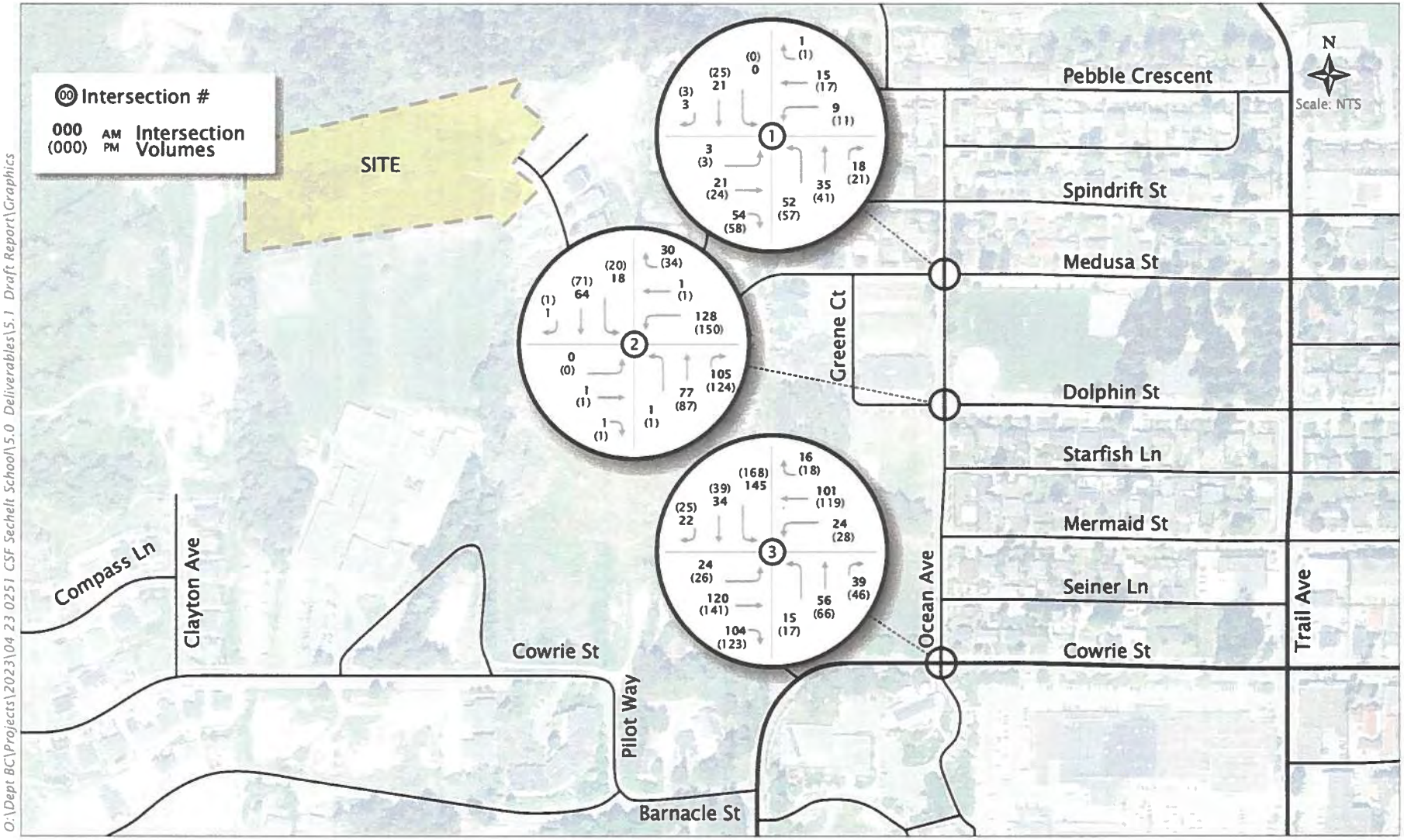

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Exhibit 3.5

Opening Day + 10 Total Traffic Forecasts

04-23-0251

CSF Sechelt School
January 2024

bunt & associates

3.2 Future Traffic Operations

3.2.1 Future Conditions Analysis Assumptions

An adjustment to the default settings was made to maintain the integrity of the dataset for the PM count of the Ocean Avenue and Cowrie Street intersection. Only a total of four vehicles made a southbound left movement during the existing peak hour, with two of those being made by heavy vehicles. However, it would be unreasonable to assume such a high percentage of movements are typically made only by heavy vehicles as we scale these volumes to forecast future traffic conditions. Thus, the number of heavy vehicles making this movement was set at fixed value of two and not scaled in future forecasts. This should have a negligible impact on the accuracy of the results. Otherwise, Synchro settings per existing conditions were used.

3.2.2 Future Background Traffic Operations

For the opening day of 2029, the background conditions without the development traffic were analyzed for the AM and PM peak hours and the operation results are respectively presented in **Exhibits 3.6** and **3.7**.

Similarly, **Exhibits 3.8** and **3.9** show the operation results of the study intersections for the AM and PM peak hour of the horizon year in 2039 without the development in place. The detailed Synchro outputs are provided in Appendix C.

3.2.3 Future Total Traffic Operations

Exhibits 3.10 and **3.11** reflect the opening day AM and PM intersection conditions in 2029 with the forecasted trips to and from the planned school added to the background volumes.

Exhibits 3.12 and **3.13** similarly accounts for the total trips in the network, but in the horizon year of 2039.

3.2.4 Summary of Traffic Impacts & Recommended Mitigations

The site traffic is not anticipated to have a material impact on the traffic operations within the study area, with a LOS B or better for all lane movements and intersections in the long term 2039 horizon year. No mitigations to the existing road network are required to accommodate the background traffic growth, nor the addition of the development trips.

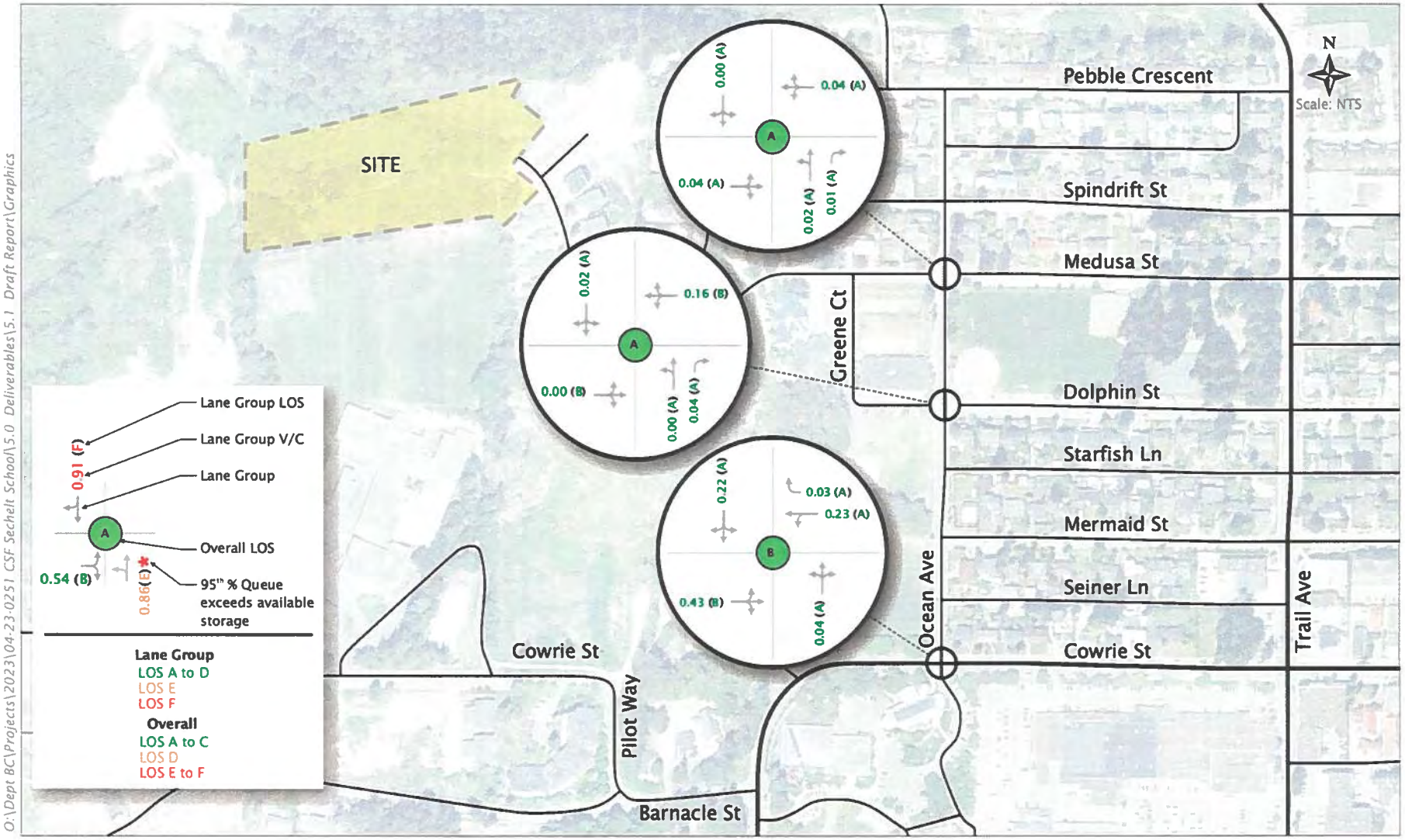

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Exhibit 3.6

Opening Day Background AM Peak Hour Performance

04-23-0251

CSF Sechelt School
January 2024

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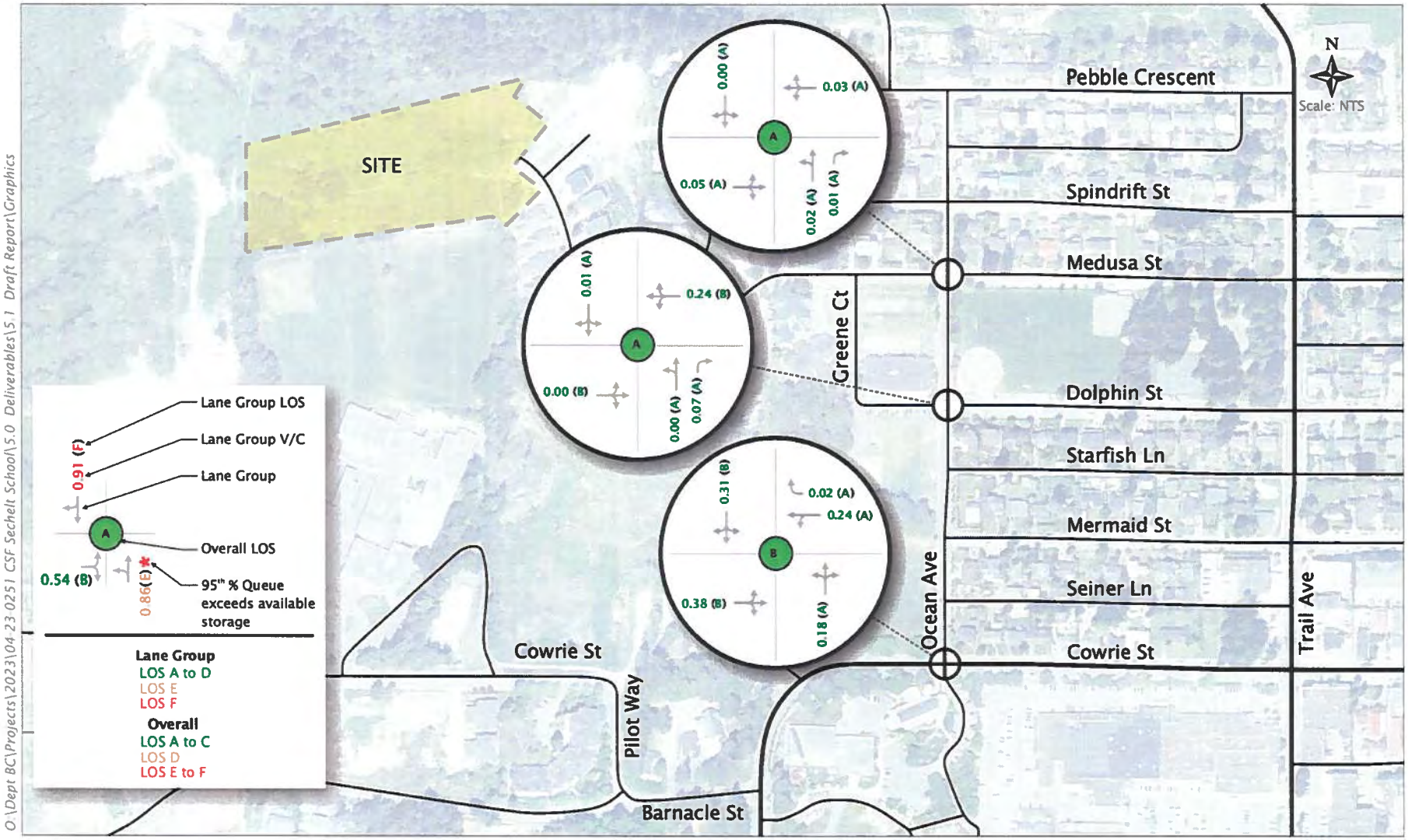

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Exhibit 3.7

Opening Day Background PM Peak Hour Performance

04-23-0251

CSF Sechelt School
January 2024

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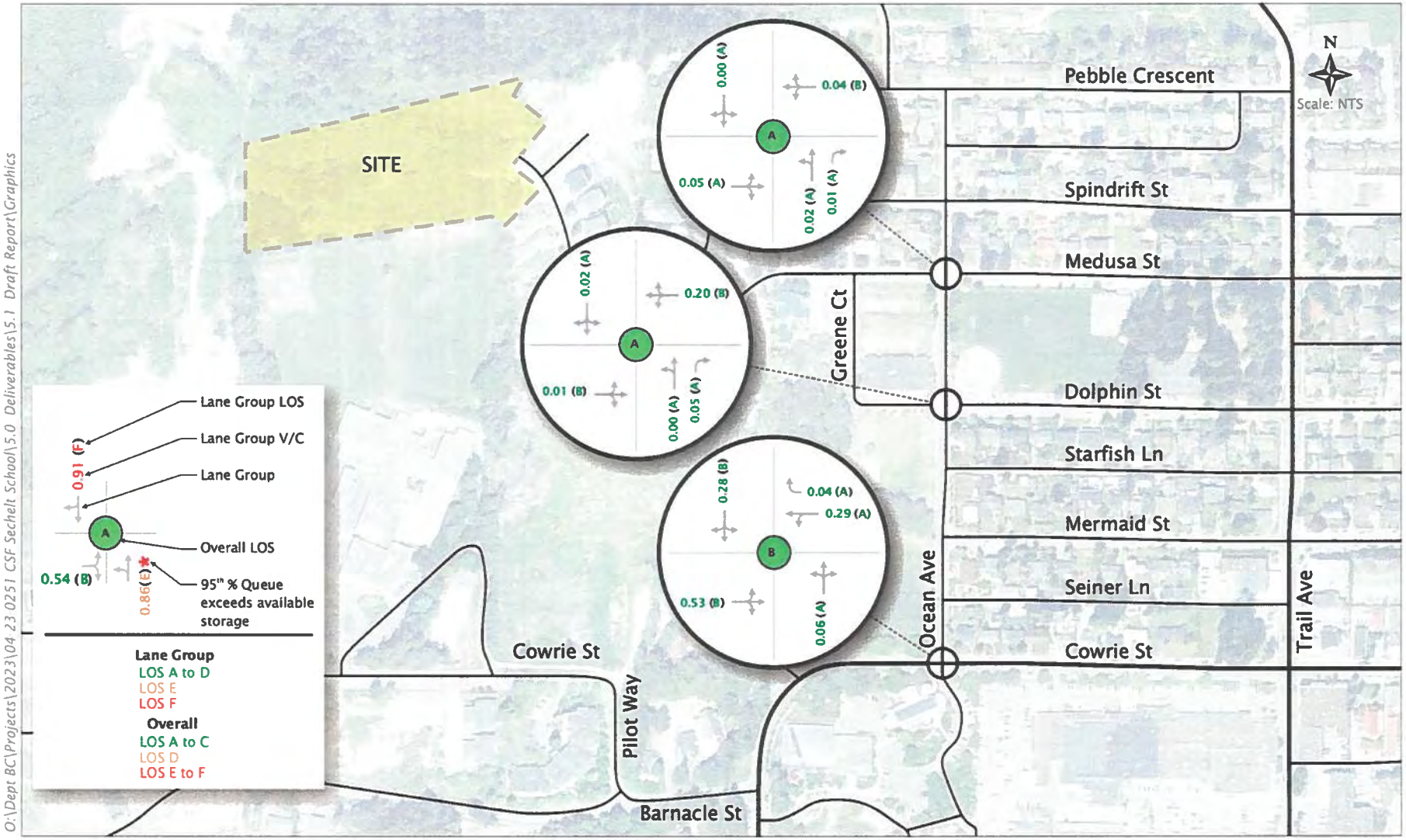

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Exhibit 3.8

Opening Day + 10 Years Background AM Peak Hour Performance

04-23-0251

CSF Sechelt School
January 2024

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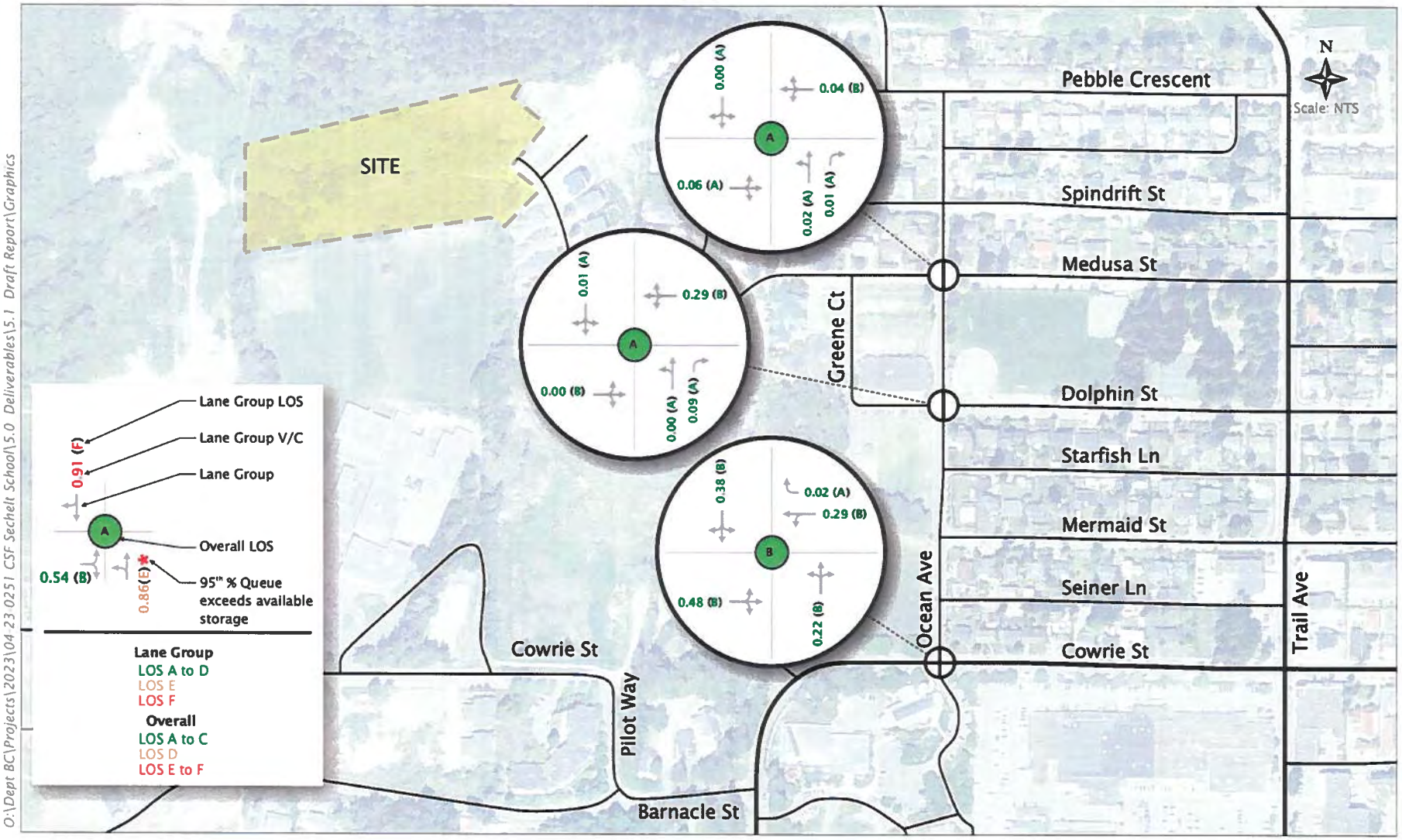

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Exhibit 3.9

Opening Day + 10 Years Background PM Peak Hour Performance

04-23-0251

CSF Sechelt School
January 2024

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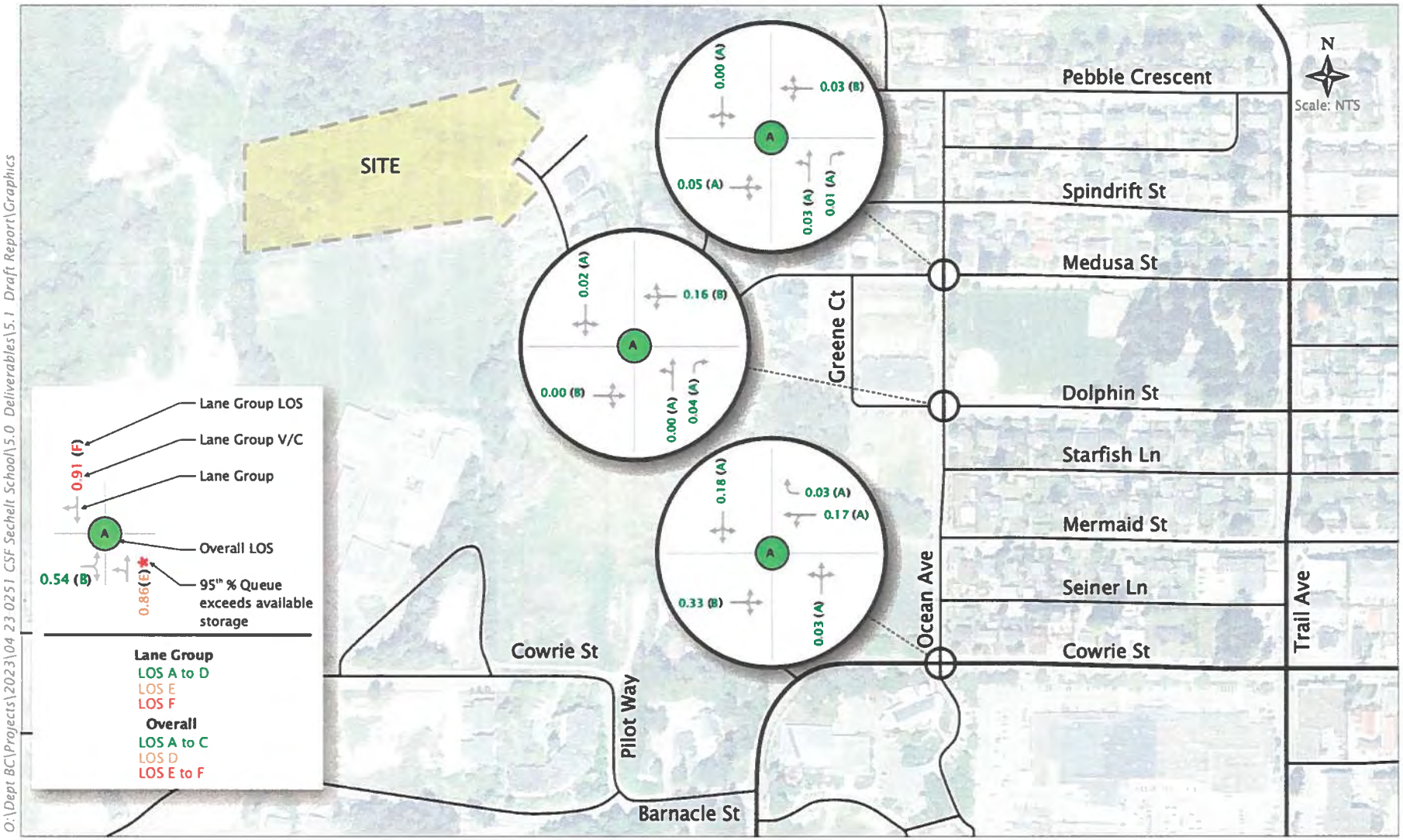

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Exhibit 3.10

Opening Day Total AM Peak Hour Performance

04-23-0251

CSF Sechelt School
January 2024

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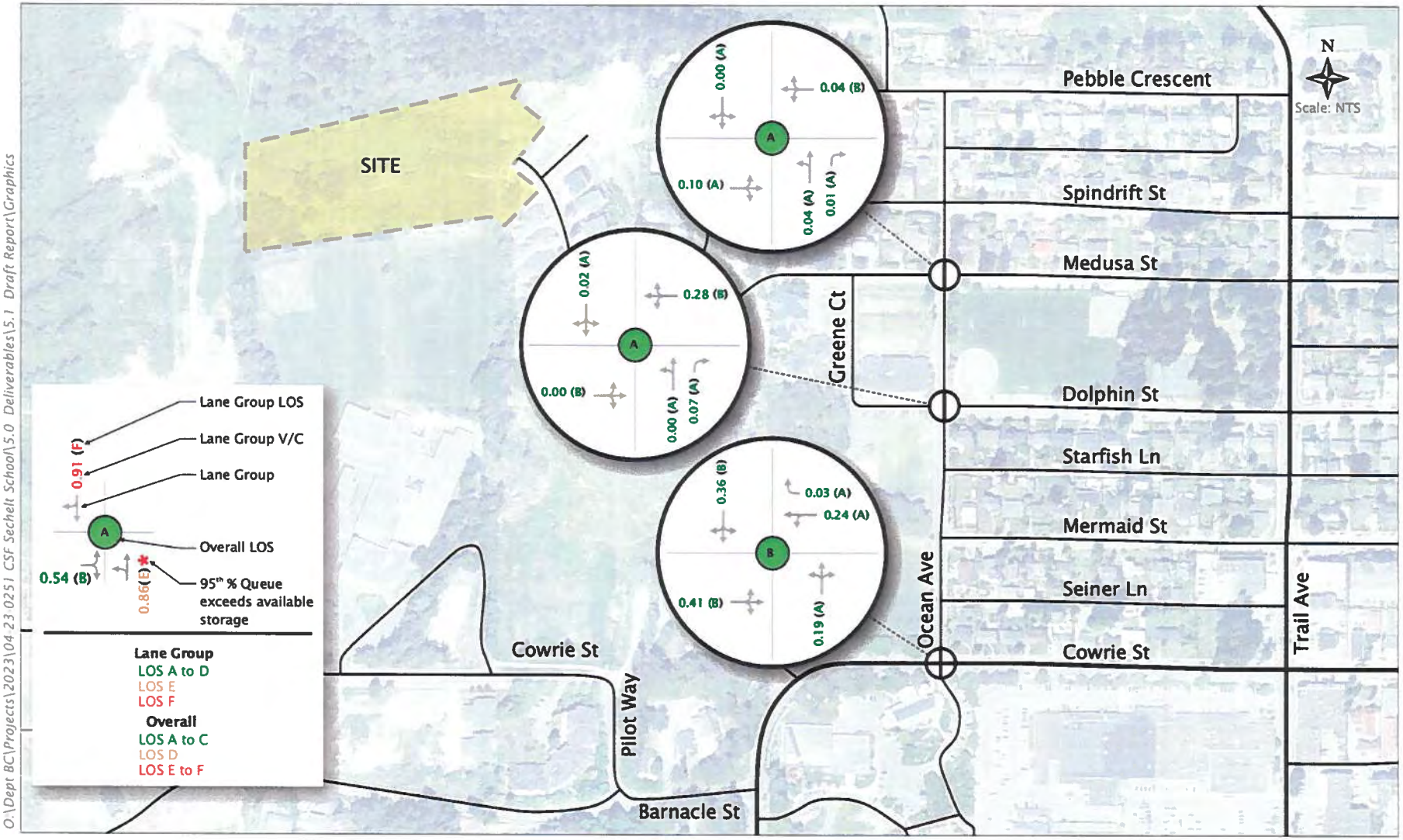

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Exhibit 3.11

Opening Day Total PM Peak Hour Performance

04-23-0251

CSF Sechelt School
January 2024

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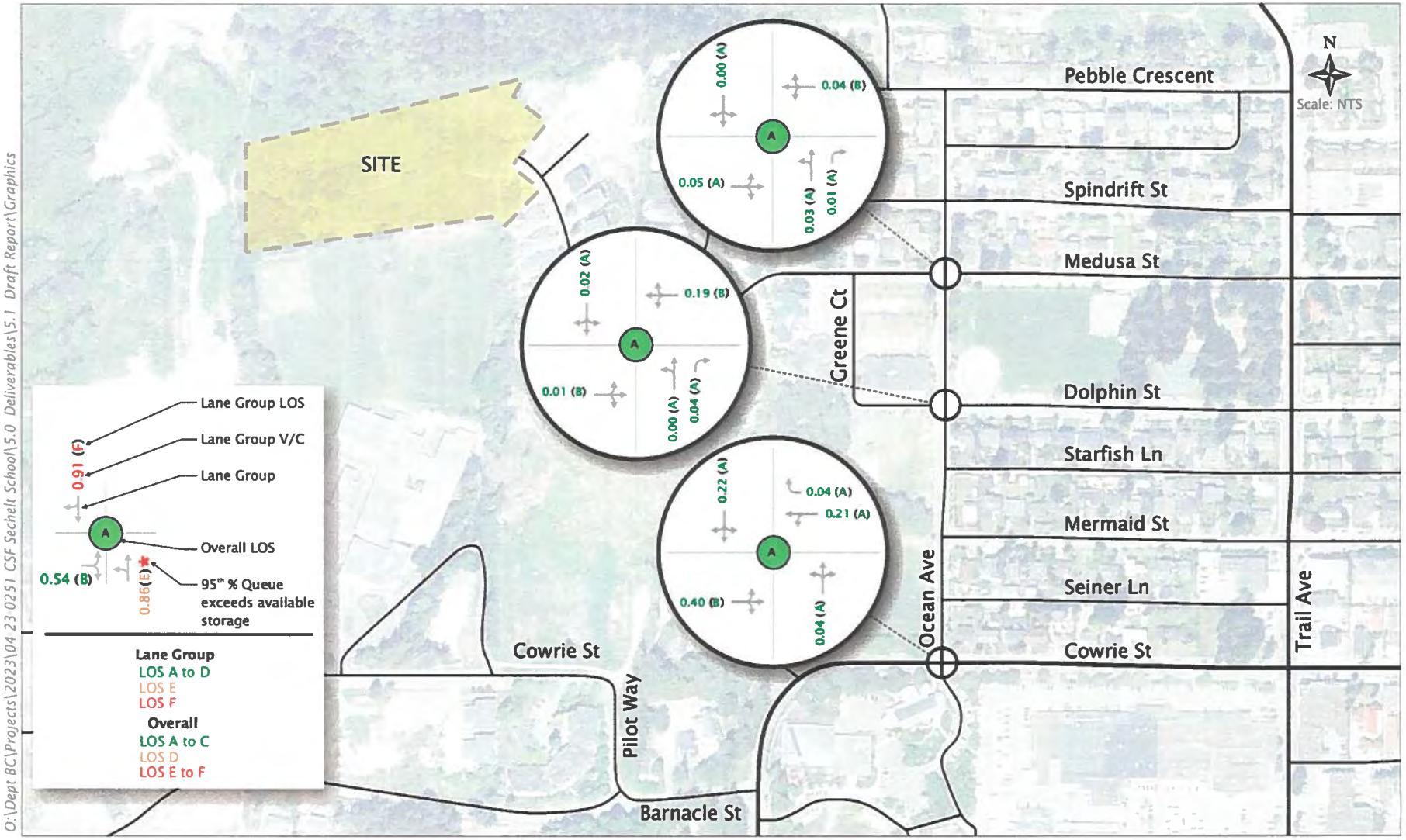

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Exhibit 3.12

Opening Day + 10 Years Total AM Peak Hour Performance

04-23-0251

CSF Sechelt School
January 2024

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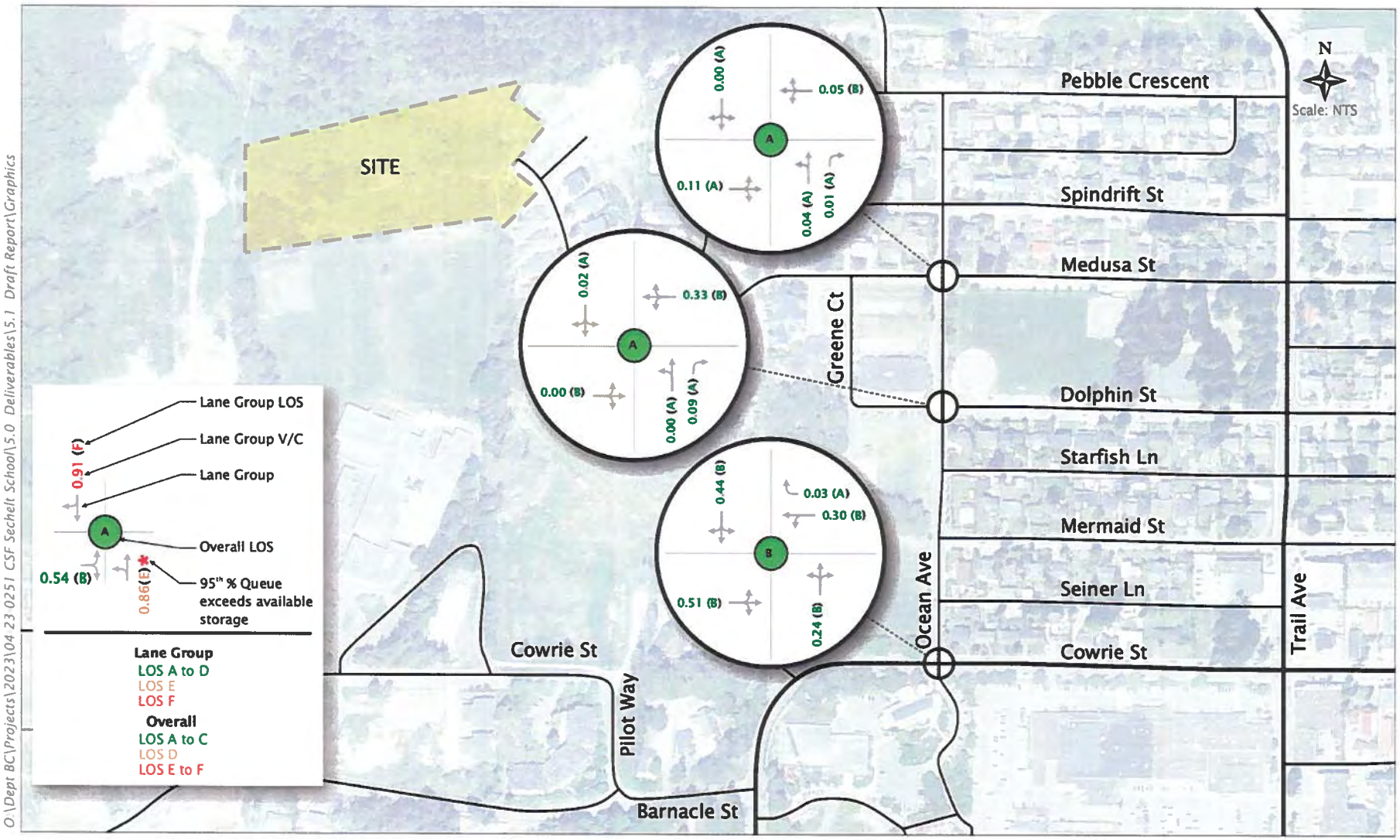

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Exhibit 3.13

Opening Day + 10 Years Total PM Peak Hour Performance

04-23-0251

CSF Sechelt School
January 2024

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4. SITE PLAN DESIGN REVIEW

4.1 Site Access Design

The location of the site access is at the western terminus of Medusa Street, which serves as the sole point of entry and egress to and from the site. A curving, two-way roadway leads to three separated parking pockets, and a one-way counterclockwise loop for pick-up/drop-off activities. The site currently provides layby spaces for pick-up/drop-off with the west portion reserved for school buses.

Creus Engineering has tested school bus ingress and egress routes that preserves two-way traffic flow along the site entrance, which are attached in **Appendix E**.

4.2 Parking Supply

4.2.1 Vehicle Parking

Table 4.1: Vehicle Parking Supply Requirement & Provision

LAND USE	DENSITY	BYLAW RATE	BYLAW SUPPLY REQUIREMENT	PROVIDED
Child Care Facility, Minor and Major	36 Students	1 space per 5 students	7	54
School - Elementary	1839.6 m²	1 space per 90 m² of GFA	20	
School - Secondary	628.2 m²	1 space per 65 m² of GFA	10	
TOTAL			37	54

The 36 students that make up the Child Care Facility land use consists of a planned 12 infant/toddlers, and 24 pre-kindergarteners. When determining GFA for the Elementary and Secondary uses, the total area of the site was split between dedicated child care, elementary, secondary, and shared spaces like hallways, the library, or the gym. As the planned 120 elementary and 50 secondary students made up approximately 60% and 20% of the total student population respectively, the area of the shared spaces (2,341 m²) were added to the dedicated GFA multiplied by these percentages.

20% of the minimum required parking is allowed to be designated as small car parking, which translates to 7 vehicles. These stalls must be clearly labeled for compact or small vehicles. As 36 full sized stalls are provided, only 3% of the stalls the development are required to provide are small car parking, and thus the parking lot is compliant despite providing a total of 18 small car spaces.

Two accessible parking spaces are provided which meets the Bylaw requirements.

Two electric charging stations are also required to be provided based on the 37 required parking spaces.

4.2.2 Bicycle Parking

As the sites land uses fall under institutional use, there are no requirements for bicycle parking spaces. Regardless, the site plan indicates a designated area at the entrance of the building for short-term bike parking.

4.3 Service Vehicle Requirements

As the sites land uses fall under institutional use, there are no requirements for loading spaces. Garbage is to be located at the northeast corner of the parking lot, accessed through the same ingress and egress point as the other vehicles.

5. TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) is defined as the "application of strategies and policies to reduce travel demand (specifically that of single-occupancy private vehicles), or to redistribute this demand in space or in time"[1]. A successful TDM program can influence travel behaviour away from Single Occupant Vehicle (SOV) travel during peak periods towards more sustainable modes such as High Occupancy Vehicle (HOV) travel, transit, cycling or walking.

The District of Sechelt does not require submission of a TDM plan, though the benefit of reducing vehicular traffic to and from the site is benefit enough to consider mitigation strategies. Unlike other public schools that typically draw most students from within a surrounding catchment area, as a French school, the planned development is more likely to attract specific students looking for this unique learning environment. More than the average public school, it is expected that students live farther from school and will be more reliant on auto mode.

CSF has been operating with school buses to transport students to/from school in all their school sites. There are currently eight (8) school buses serving Ecole du Pacifique and Ecole Chatelech Secondary School. The proposed school with 206 student capacity will be served with three (3) school buses where 80% of the students will likely use this service. This is an effective TDM measure for school as it reduces a high percentage of auto trips to/from the school.

In addition, as noted previously, the school will provide short-term bike parking near the building entrance to facilitate those who want to bike to school, even though it's not required per the Bylaw.

[1] http://ops.fhwa.dot.gov/tdm/index.htm FHWA Travel Demand Management home page

6. MEDUSA STREET HIGH-LEVEL SAFETY REVIEW

As part of the TIA, the District of Sechelt requested that a high-level safety review of Medusa Street from Ocean Avenue to the future school be conducted with regards to children walking and cycling. The following sections outline existing conditions, corresponding key concerns, and recommendations for improvement. These findings are based on a visit to the location on November 1st and 2nd, 2023.

6.1 Infrastructure Review

6.1.1 Lighting

There are 14 streetlights along Medusa Street between the site and Ocean Avenue as illustrated in **Exhibit 6.1**. Spacing of streetlights is dependent on the type of light fixture, type of bulb used, and height of the lamppost, among other factors. The distance between most lampposts measured along the roadway is approximately 25 to 35 meters, which is a sufficient spacing in providing lighting for comfortable walking experience. There is 70m - 100m gap between the lampposts along a portion of the roadway west and east of Medusa Place, which result in lack of lighting coupled with foliage further west obstructing the light.

6.1.2 Sidewalks

Approximately 125 meters west of the Medusa/Ocean intersection, the sidewalk on the north side of Medusa Street transitions into an at-grade, unpaved shoulder shared with parked vehicles. There are no crosswalks at any point along Medusa Street between the planned site access and the intersection with Ocean Avenue. This means that those who exit the site on this side of the street will have no opportunity to safely cross before this point.

6.2 Speed Review

6.2.1 Ocean Avenue

With the use of a radar speed gun, a sample of vehicle speeds was collected on Ocean Avenue at Medusa Street during the PM period. It was found that the average speed of a vehicle driving along Ocean Avenue northbound and southbound was 36.3 km/h with a sample size of 91 vehicles.

While vehicles driving northbound along Ocean Avenue are not obligated to stop, it was observed that several vehicles turning left or right onto Medusa Street did so without slowing down if no other vehicles were immediately present. Referring to Exhibit 2.5 for the existing traffic volumes, it can be calculated that these turning movements make up a significant 23.3% and 25.4% of existing AM and PM peak traffic.

6.2.2 Medusa Street

Vehicles were found to travel at an average speed of 34.3 km/h (travelling westbound and eastbound) along Medusa Street, though with a smaller sample of only 10 vehicles. The speed samples were taken during the AM peak period.

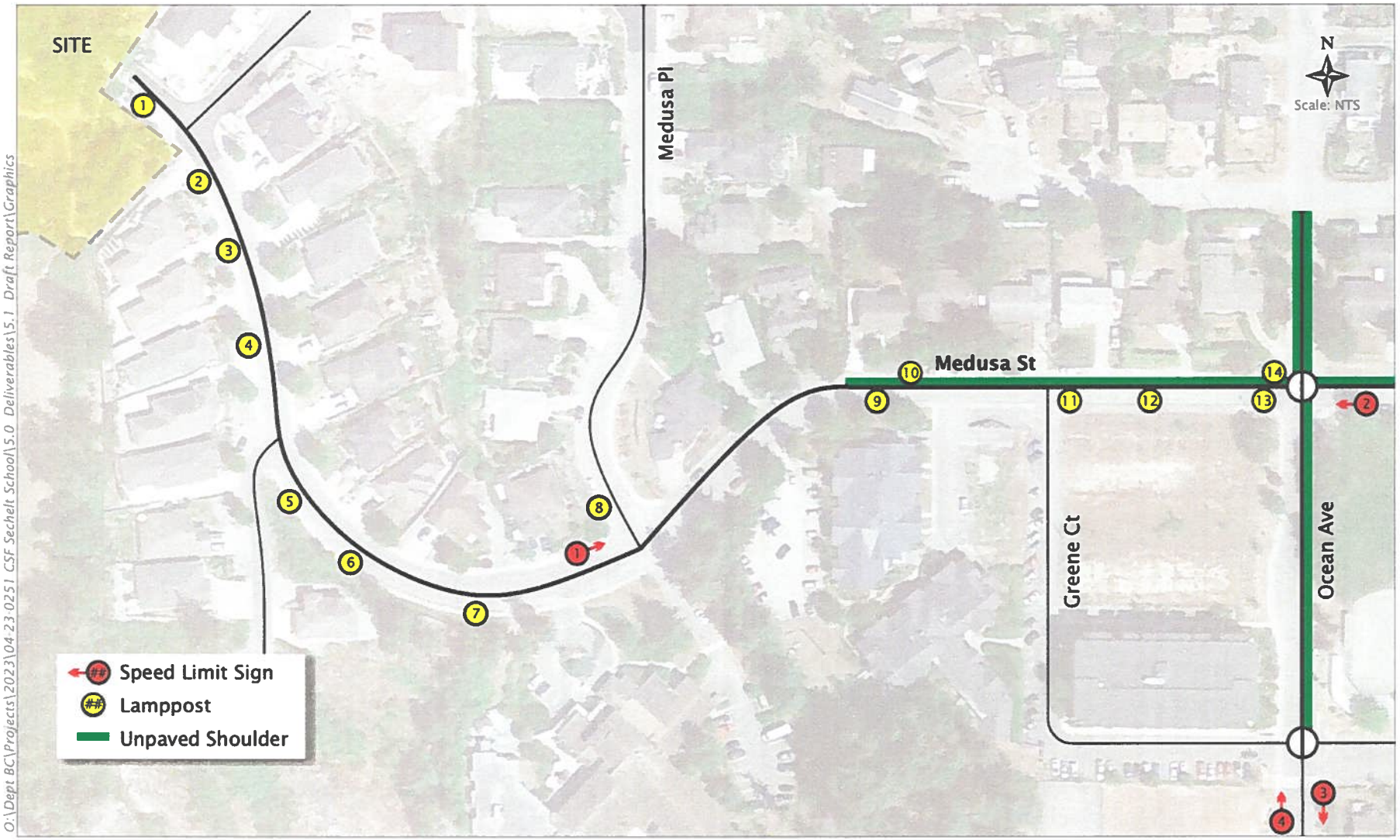

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Exhibit 6.1

Medusa Street Features

04-23-0251

CSF Sechelt School
January 2024

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6.3 Sightline Review

It was observed that the vegetation on the southwest corner of Ocean Avenue and Medusa Street blocks the sightline visibility for vehicles heading north on Ocean Avenue approaching Medusa Street and vehicles heading eastbound on Medusa Street approaching Ocean Avenue.

Figure 6.1: Northbound View on Ocean Avenue Approaching Medusa Street

Figures 6.2 and **6.3** highlight the tall and thick foliage to the northwest of the Medusa Street and Medusa Place intersection that both obstruct the east facing speed limit sign, the north facing stop sign, and incoming vehicles around the curve of the road.

Figure 6.2: Obstructing Foliage Around Medusa Street/Medusa Place Intersection Speed Limit Sign

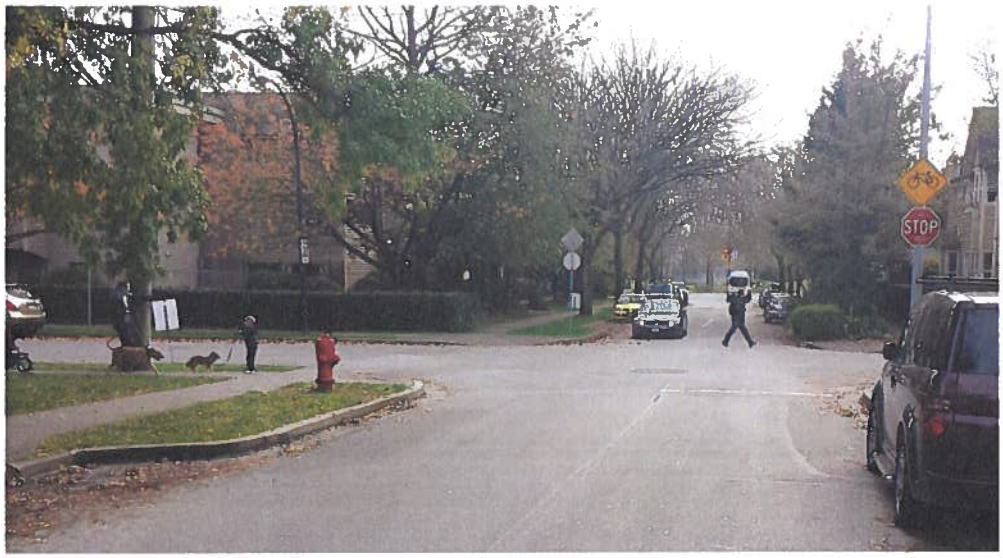
Figure 6.3: Obstructing Foliage Around Medusa Street/Medusa Place Intersection Stop Sign

6.4 Recommendations

Given the observations discussed above, Bunt recommends the following mitigations for consideration by the District of Sechelt, notwithstanding the proposed school development.

- Install more lights where there is a long gap between the existing light fixtures on the east and west of Medusa Place to increase visibility in the area.
- Regularly prune the foliage at the northwest corner of Medusa Street & Medusa Place intersection to ensure visibility at this location and relocate the obstructed speed limit sign further north of the foliage to improve visibility.
- Install sidewalk on the north side of Medusa Street west of Ocean Ave to improve pedestrian connectivity in the area.
- Install crosswalk on west leg of Ocean/Medusa intersection along with bulges at the northwest and southwest of the intersection to shorten pedestrian crossing and improve sight visibility around the corners.

Figure 6.4: Example of Curb Bulge

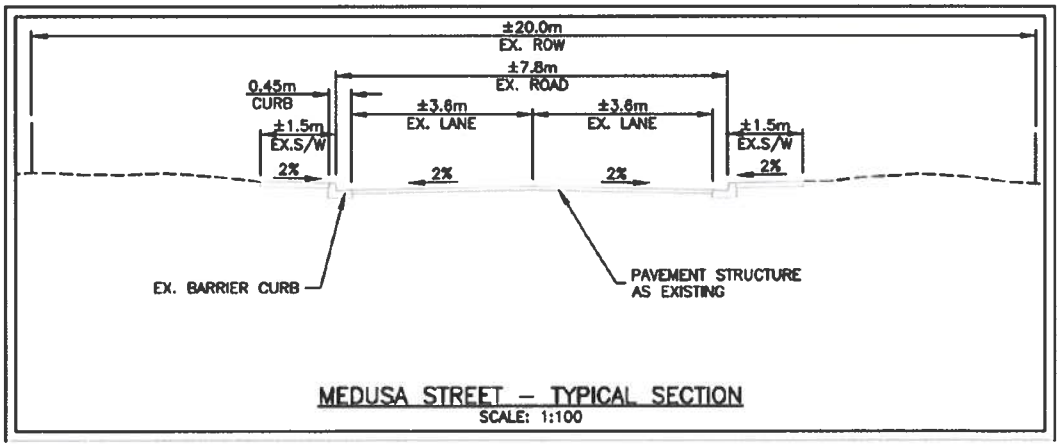


Source: Urban Reality, https://dnproulx.wordpress.com/2014/11/

Given the grade of the road (up to 8% at some portions), Medusa Street was not identified as a cycling route. There were 9 - 17 cyclists observed travelling on Medusa Street crossing Ocean Avenue during the AM and PM peak hour. As vehicle volumes on Medusa Street are low even with the future school traffic, sharrow marking can be considered to facilitate cycling on Medusa Street and put awareness to drivers that cyclists may be present.

In addition, an effective method of slowing traffic that could be broadly applied along Medusa Street would be the reduction of lane width. The minimum recommended lane width is 3 meters, and as **Figure 6.5** shows, the typical lane width along Medusa Street is 3.6 meters wide. Sidewalks along Medusa Street were measured to be 1.5-1.65 meters wide, which is the practical lower limit for a road this size as specified in Table 6.3.1 of the TAC Geometic Design Guide for Canadian Roads. Widening one or both sidewalks to the recommended range of 1.8-2.0 meters would provide sufficient space for two pedestrians to pass each other, a wheelchair to perform an about-turn, or at the upper end allow a pedestrian walking abreast with a child to pass another pedestrian. This widening simultaneously reducing lane width would result in vehicle speeds' reduction.

Figure 6.5: Medusa Street Typical Cross Section



Source: CREUS Engineering Ltd., CSF Sechelt Preliminary DP Design Brief, 2024

7. CONCLUSIONS & RECOMMENDATIONS

7.1 Conclusions

1. CSF plans to construct a new school at the west end of Medusa Street to support a total of 206 students including 36 infant/toddler and pre-kindergarten children.

2. CSF operates school buses for all their schools to transport approximately 80% of students to/from the school. For the new school with 206 students' capacity, three (3) school buses are planned, which contribute as a Transportation Demand Management (TDM) measure to reduce vehicle trips.

3. The school will have a single ingress/egress at the west end of Medusa Street with parking spaces and pick-up/drop-off layby provided west of the school building.

4. Sidewalk is currently provided on both sides of Medusa Street leading to the school, except for about 120m west of Ocean Avenue where there is no sidewalk on the north side.

5. The nearest bus stop is on Ocean Avenue between Dolphin Street and Mermaid Street, serving bus routes #1 and 90.

6. The school is expected to generate approximately 35 - 70 vehicles during a typical weekday morning and afternoon peak hour, which translates to an average of 1 vehicle every 1-2 minutes added onto the area network. This level of vehicle trips is not anticipated to have a material impact on the road network.

7. The study intersections were found to operate well in the current and future conditions with the additional school traffic; therefore, no mitigations are required.

8. The current site plan shows a total of 54 parking spaces, which is more than the minimum requirement of 37 spaces per Sechelt Zoning Bylaw. 36 of these stalls are full sized, and thus with only one of the required spaces being for small cars, this is compliant with the small car provision requirement. Two accessible parking spaces are planned, which meet the minimum requirement.

9. Bicycle parking and loading spaces are not required for institutional use; however, the school will provide short-term bicycle racks near the building entrance.

10. There is a long gap between streetlights along Medusa Street near Medusa Place coupled with thick vegetation which creates poor visibility along this stretch.

11. Vehicles were observed travelling 10-20% above the 30km/h speed limit along Medusa Street and Ocean Avenue. A couple locations were identified to have poor visibility due to overgrown foliage: at the southwest corner of Medusa Street and Ocean Avenue intersection and northwest corner of Medusa Street and Medusa Place intersection.

7.2 Recommendations

Bunt recommends the following mitigation for the school site:

- Provide two electric vehicle charging stations to meet the Zoning Bylaw.

The following recommendations to improve the broader area network include:

- Install a sidewalk on the north side of Medusa Street west of Ocean Ave to improve pedestrian connectivity in the area.
- Install crosswalk on west leg of Ocean/Medusa intersection along with bulges at the northwest and southwest of the intersection to shorten pedestrian crossing and improve sight visibility around the corners.
- Install more lights where there is a long gap between the existing light fixtures on the east and west of Medusa Place to increase visibility in the area.
- Regularly prune the foliage at the northwest corner of Medusa Street & Medusa Place intersection to ensure visibility at this location and relocate the obstructed stop sign further north of the foliage to improve visibility.
- Paint sharrow marking on Medusa Street to facilitate cycling and put awareness to vehicles that cyclists may be present.

APPENDIX A

Terms of Reference

MEMO

DATE:	October 11, 2023
PROJECT NO:	04-23-0251
PROJECT:	**CSF Sechelt School**
SUBJECT:	**Proposed CSF School – Sechelt, BC** **Terms of Reference – Transportation Impact Assessment**
TO:	Sven Koberwitz, Senior Development Planner District of Sechelt
PREPARED BY:	Ian Hancock, EIT; Hana Stoer, EIT;
REVIEWED BY:	Stuart Thornley, P.Eng. Yulia Liem, P.Eng., PTOE

Bunt & Associates Engineering Ltd. (Bunt) has been retained by Conseil Scolaire Francophone de la Colombie-Britannique (CSF), also referred to as School District No. 93, to produce a Traffic Impact Assessment (TIA) report for the proposed development of a school at the west end of Medusa Street, north of the existing Ecole Chatelech Secondary School in Sechelt, BC. The planned school would support 206 students from kindergarten to Grade 12, in addition to 36 in infant/toddler and pre-kindergarten childcare. **Figure 1** illustrates a potential site plan of the proposed school with a floor area of approximately 3,315 m^2.

Figure 1: Potential School Site Plan

The proposed focus of this study will be to assess the transportation-related design elements of the proposed development (e.g., vehicle access, parking layout, vehicle circulation, waste collection strategy), review parking and loading supply requirements, and provide a Transportation Demand Management (TDM) Plan. This memo provides the outline of our proposed scope of work to be used as the Terms of Reference (ToR) for the study.

1. ANTICIPATED SCOPE OF WORK

1.1 Project Initiation & Data Collection

- Obtain signal timing plans and any relevant background information from the District of Sechelt.
- Collect weekday morning (7-9 AM) and afternoon (3-6 PM) pedestrian/cycling/vehicle peak traffic volume data at the following study area intersections:
    1. Medusa Street & Ocean Avenue.
    2. Cowrie Street & Ocean Avenue.
    3. Dolphin Street & Ocean Avenue.

1.2 Existing Conditions Review

- Assess existing transportation network features:
    - Pedestrian connections (trails, sidewalks, crosswalks).
    - Cycling connections (designated cycling routes, cycling infrastructure).
- Assess existing weekday morning and afternoon peak hour traffic operations using Synchro analysis software.

1.3 Future Conditions Review

- Based on CSF school travel characteristics, predict the future trip generation for the new school for all modes of travel (school bus, vehicle, walking, cycling, etc.).
- Forecast future traffic volumes for the study area network for two horizon years:
    - Opening Day (2029).
    - Opening Day + 10 years (2039).
- Obtain background traffic growth rate value(s) from the District of Sechelt.
- Assess background and total (background plus site) traffic operations using Synchro/SimTraffic and Highway Capacity Manual (HCM) 2000.

- Identify the anticipated transportation impact of the proposed school and possible mitigation measures if warranted (i.e. traffic laning, intersection traffic control, etc.) to provide safe and efficient movement of pedestrians, cyclists, and vehicles to and from the school.
- Bunt will estimate the vehicle trip generation using rates from the Institute of Transportation Engineers' (ITE) Trip Generation Manual (11th Edition). **Table 1** summarizes the trip generation rates.

Table 1: Peak Hour Vehicle Trip Rates

LAND USE	UNITS	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		IN	OUT	AVERAGE RATE	IN	OUT	AVERAGE RATE
ITE 520 - Elementary School, General Urban/Suburban	Students	54%	46%	0.74	46%	54%	0.16
ITE 522 - Middle School, General Urban/Suburban	Students	54%	46%	0.67	48%	52%	0.15
ITE 525 - High School, General Urban/Suburban	Students	68%	32%	0.52	48%	52%	0.14
ITE 222 - Day Care Centre, General Urban/Suburban	Students	53%	47%	0.78	47%	53%	0.79

1.4 Site Plan Review

- Provide input on transportation features of the site plan (i.e., pick-up/drop-off layout, etc.) as it evolves through the development application and review process with the District.
- Review Zoning Bylaw requirements (parking/loading supply and configuration).
- AutoTURN vehicle turning path analysis of passenger vehicles, school bus, loading, and waste/recycling collection vehicle movements.
- Suitability of the proposed school bus loading design.
- Assist CSF with the development of a suitable TDM Strategy.

1.5 Reporting & Meetings

- Distribute TIA report to the District of Sechelt for review and comments.

The attached information is provided to support the agency's review process and shall not be distributed to other parties without written consent from Bunt & Associates Engineering Ltd.

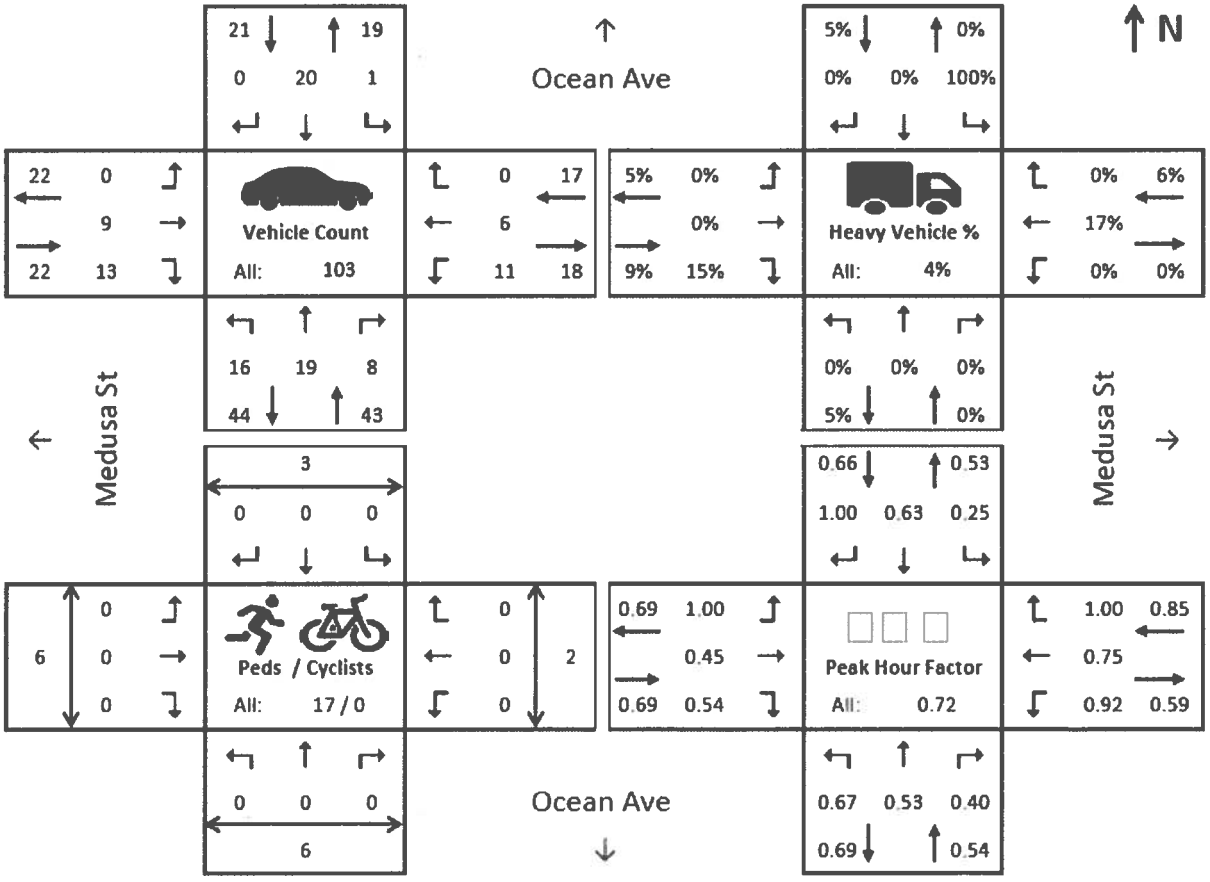
APPENDIX B

Traffic Data

Ocean Ave @ Medusa St – Sechelt, BC

Project#:	04-23-0251	**Weather:**		**Analysis Period:**	8:00 - 9:00
Date:	Nov 02, 2023 (Thu)	**Road Cond:**		**Intersection Peak:**	8:00 - 9:00
Notes:					

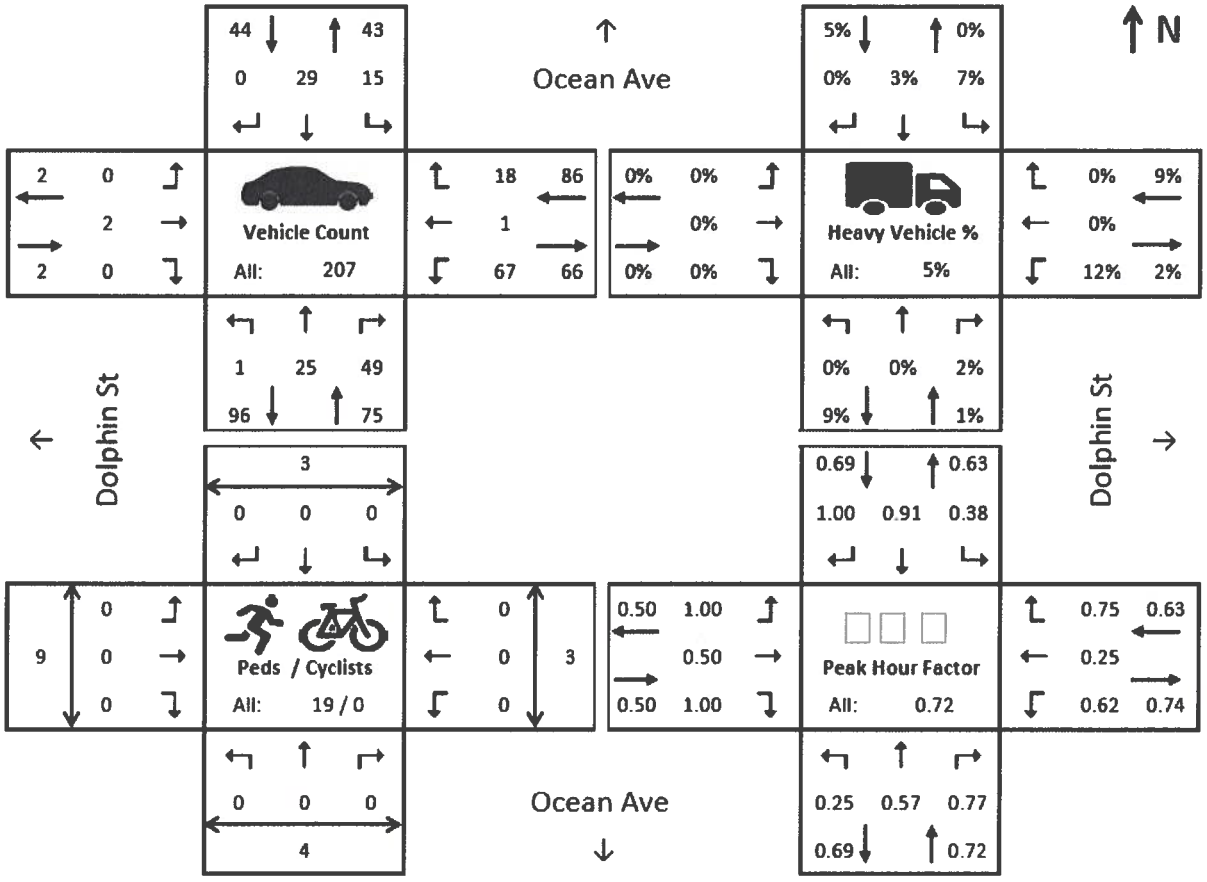
TIME INTERVAL	AUTOMOBILE COUNT											PEDESTRIANS			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	1	1	0	0	2	0	0	0	3	0	0	0	0	0	0	0
7:15 - 7:30	1	0	1	0	1	0	0	0	2	0	1	0	0	0	1	1
7:30 - 7:45	2	3	0	1	2	0	0	2	4	0	3	0	0	0	0	0
7:45 - 8:00	4	1	1	0	0	0	0	2	0	2	4	0	0	0	1	0
8:00 - 8:15	5	2	1	0	3	0	0	5	1	3	0	0	1	1	1	2
8:15 - 8:30	3	2	1	0	8	0	0	2	6	2	2	0	0	0	1	2
8:30 - 8:45	2	6	1	0	4	0	0	1	2	3	2	0	1	3	0	1
8:45 - 9:00	6	9	5	1	5	0	0	1	4	3	2	0	1	2	0	1



Ocean Ave @ Dolphin St – Sechelt, BC

Project#:	04-23-0251	**Weather:**		**Analysis Period:**	8:00 - 9:00
Date:	Nov 02, 2023 (Thu)	**Road Cond:**		**Intersection Peak:**	8:00 - 9:00
Notes:					

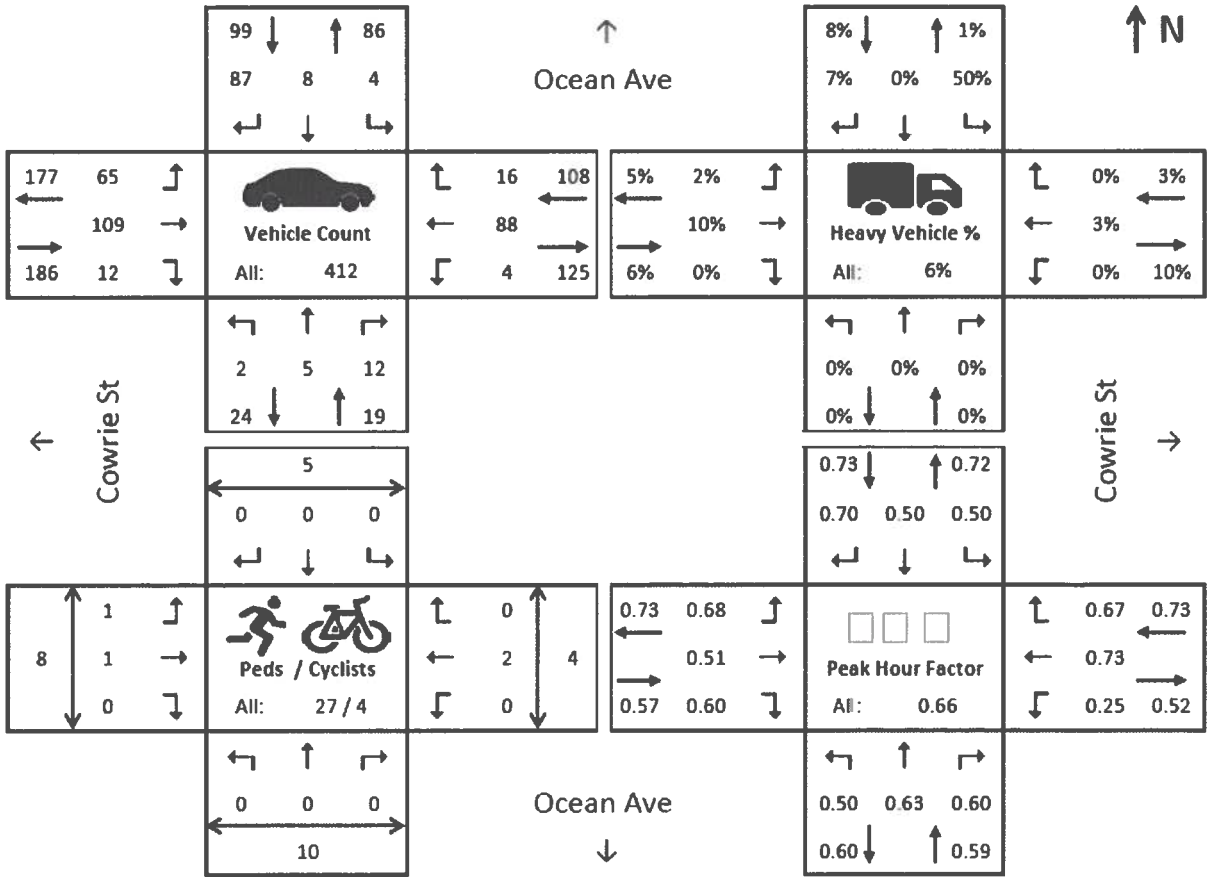
TIME INTERVAL	AUTOMOBILE COUNT												PEDESTRIANS			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	0	1	1	2	4	0	0	1	0	4	0	1	0	0	0	0
7:15 - 7:30	0	0	1	2	0	0	0	0	0	6	0	2	0	0	0	2
7:30 - 7:45	0	3	8	5	1	0	0	0	0	6	0	2	0	0	0	0
7:45 - 8:00	0	6	6	2	3	0	0	1	0	8	0	3	0	0	0	0
8:00 - 8:15	**0**	**3**	**6**	**0**	**7**	**0**	**0**	**0**	**0**	**6**	**0**	**4**	**0**	**0**	**0**	**0**
8:15 - 8:30	**0**	**3**	**16**	**10**	**6**	**0**	**0**	**1**	**0**	**15**	**0**	**5**	**0**	**1**	**1**	**1**
8:30 - 8:45	**1**	**8**	**12**	**1**	**8**	**0**	**0**	**1**	**0**	**19**	**0**	**3**	**0**	**2**	**1**	**5**
8:45 - 9:00	**0**	**11**	**15**	**4**	**8**	**0**	**0**	**0**	**0**	**27**	**1**	**6**	**3**	**1**	**1**	**3**



Ocean Ave @ Cowrie St – Sechelt, BC

Project#:	04-23-0251	**Weather:**		**Analysis Period:**	8:00 - 9:00
Date:	Nov 02, 2023 (Thu)	**Road Cond:**		**Intersection Peak:**	8:00 - 9:00
Notes:					

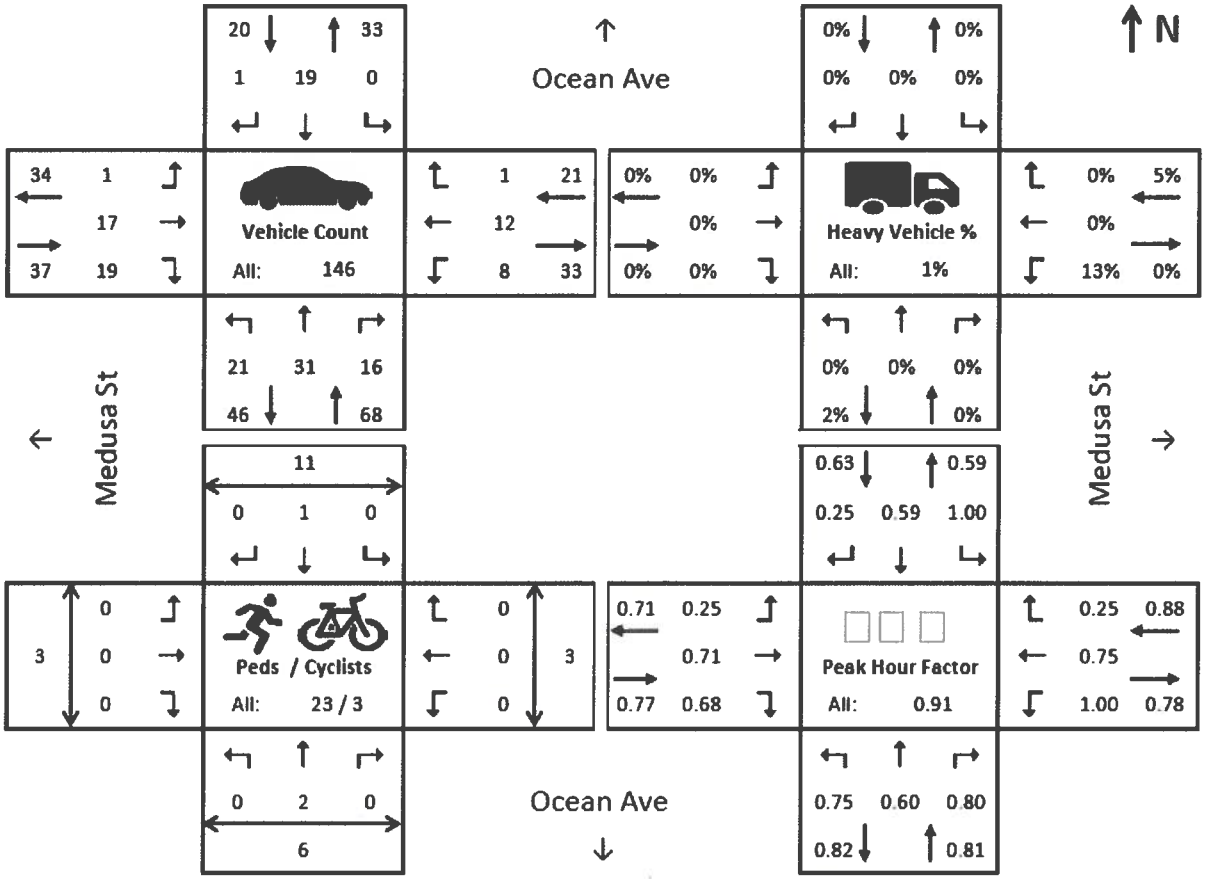
TIME INTERVAL	AUTOMOBILE COUNT												PEDESTRIANS			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	0	1	0	1	2	5	2	4	1	0	8	0	0	1	0	0
7:15 - 7:30	1	0	0	2	2	6	4	7	1	0	7	3	0	3	0	2
7:30 - 7:45	0	3	0	0	0	6	8	12	0	0	2	5	0	0	0	0
7:45 - 8:00	0	1	1	1	0	11	11	15	2	1	6	3	0	1	0	0
8:00 - 8:15	0	0	1	2	1	10	10	10	1	0	10	3	0	2	1	2
8:15 - 8:30	1	2	5	0	1	21	17	11	5	0	18	6	0	2	0	2
8:30 - 8:45	1	1	1	1	4	25	14	35	2	4	30	3	4	4	3	4
8:45 - 9:00	0	2	5	1	2	31	24	53	4	0	30	4	1	2	0	0



Ocean Ave @ Medusa St – Sechelt, BC

Project#:	04-23-0251	**Weather:**		**Analysis Period:**	15:00 - 16:00
Date:	Nov 01, 2023 (Wed)	**Road Cond:**		**Intersection Peak:**	15:15 - 16:15
Notes:					

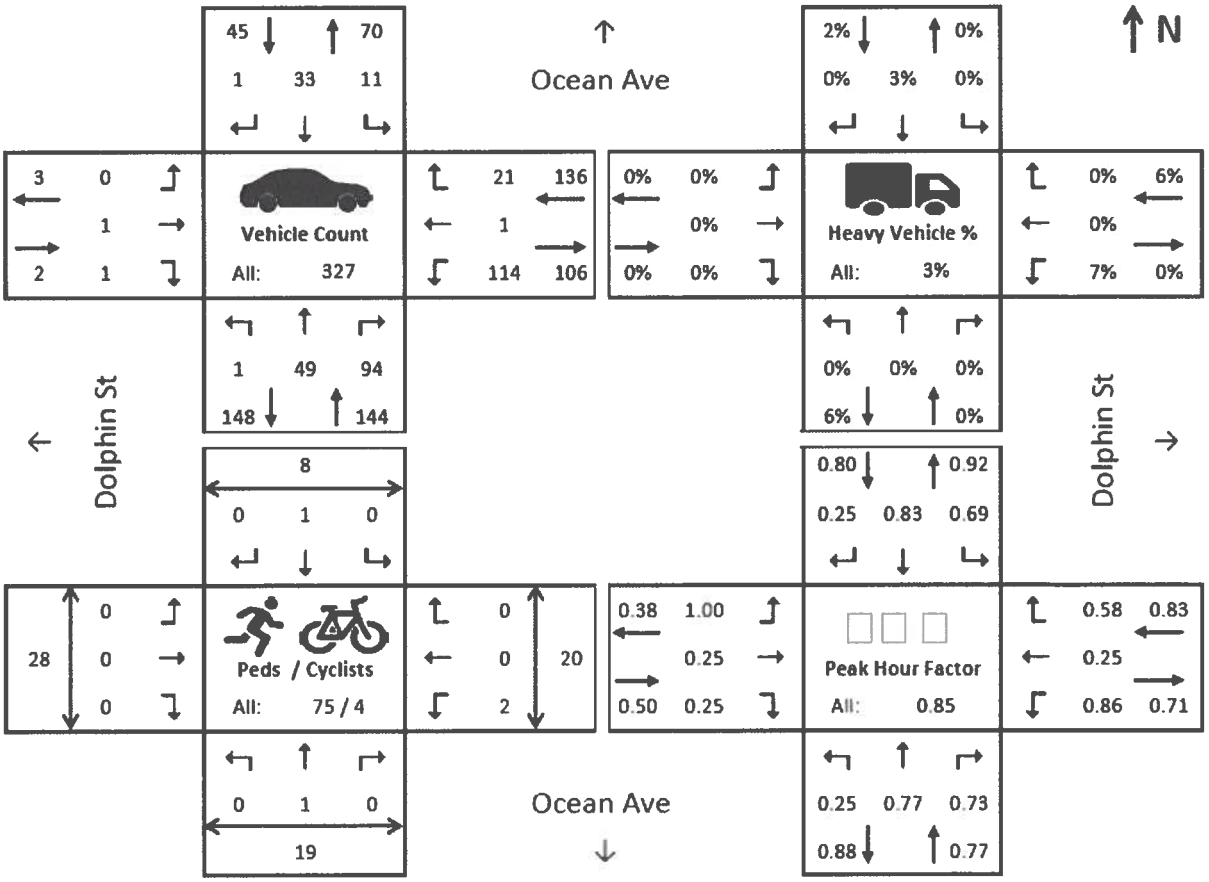
TIME INTERVAL	AUTOMOBILE COUNT												PEDESTRIANS			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	7	7	2	0	5	1	0	5	7	2	4	0	1	0	0	0
15:15 - 15:30	4	13	4	0	3	0	0	6	3	2	3	1	2	6	2	0
15:30 - 15:45	5	4	5	0	8	0	0	2	2	2	1	0	6	0	1	2
15:45 - 16:00	5	7	5	0	3	0	1	4	7	2	4	0	2	0	0	1
16:00 - 16:15	3	13	4	0	3	0	0	4	7	7	1	1	2	0	0	0
16:15 - 16:30	5	4	7	1	4	1	1	3	3	2	2	0	1	0	0	3
16:30 - 16:45	4	4	6	0	6	0	0	4	4	3	2	0	1	2	1	1
16:45 - 17:00	4	8	2	0	1	0	0	3	7	2	0	0	0	0	0	0
17:00 - 17:15	4	4	2	0	2	0	0	2	4	0	1	1	1	1	0	0
17:15 - 17:30	1	4	2	0	1	0	1	0	1	2	1	0	0	0	0	0
17:30 - 17:45	4	1	0	0	0	0	0	3	5	0	2	0	0	0	0	0
17:45 - 18:00	5	4	1	0	3	0	1	0	1	1	1	0	0	0	0	0



Ocean Ave @ Dolphin St – Sechelt, BC

Project#:	04-23-0251	Weather:		Analysis Period:	15:00 - 16:00
Date:	Nov 01, 2023 (Wed)	Road Cond:		Intersection Peak:	15:00 - 16:00
Notes:					

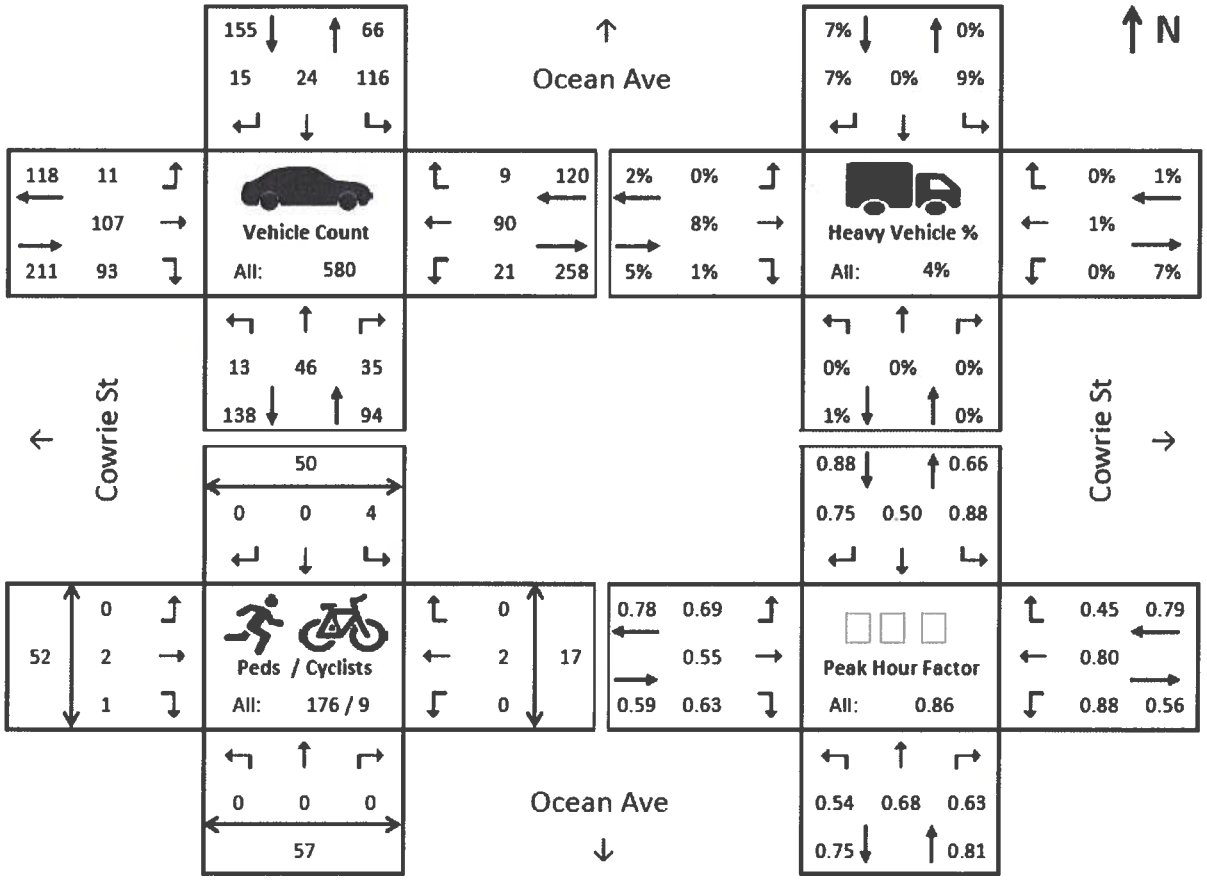
TIME INTERVAL	AUTOMOBILE COUNT												PEDESTRIANS			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	0	8	32	4	10	0	0	1	0	32	0	9	2	13	13	9
15:15 - 15:30	1	16	30	1	7	0	0	0	0	26	0	3	1	5	2	6
15:30 - 15:45	0	14	18	4	7	1	0	0	0	33	1	3	3	1	5	7
15:45 - 16:00	0	11	14	2	9	0	0	0	1	23	0	6	2	0	0	6
16:00 - 16:15	0	11	16	10	9	0	0	1	0	25	1	8	1	2	0	6
16:15 - 16:30	1	10	14	0	9	0	0	0	0	31	0	7	2	2	0	0
16:30 - 16:45	0	14	8	3	10	0	0	0	0	24	0	6	2	2	1	1
16:45 - 17:00	1	10	11	4	7	0	1	0	1	19	1	4	3	1	1	3
17:00 - 17:15	1	7	11	2	4	0	0	0	0	19	0	3	0	2	0	0
17:15 - 17:30	0	5	9	0	3	1	0	0	0	11	0	2	0	1	0	0
17:30 - 17:45	0	2	11	2	3	0	0	0	0	20	0	3	2	2	0	1
17:45 - 18:00	0	5	5	1	5	0	0	0	0	15	0	5	2	0	0	1



Ocean Ave @ Cowrie St – Sechelt, BC

Project#:	04-23-0251	**Weather:**		**Analysis Period:**	15:00 - 16:00
Date:	Nov 01, 2023 (Wed)	**Road Cond:**		**Intersection Peak:**	15:00 - 16:00
Notes:					

TIME INTERVAL	AUTOMOBILE COUNT												PEDESTRIANS			
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	6	16	7	27	12	5	4	27	27	6	27	5	10	8	3	5
15:15 - 15:30	3	6	14	30	5	2	3	49	37	4	15	1	33	31	6	41
15:30 - 15:45	3	17	6	33	4	3	0	22	15	5	20	1	4	10	6	3
15:45 - 16:00	1	7	8	26	3	5	4	9	14	6	28	2	3	8	2	3
16:00 - 16:15	4	10	4	23	6	2	3	15	13	5	16	3	2	4	4	5
16:15 - 16:30	2	9	7	33	6	5	1	19	11	3	21	6	1	5	1	6
16:30 - 16:45	0	6	3	26	5	3	2	23	11	3	15	5	2	3	1	4
16:45 - 17:00	1	6	1	20	2	6	2	17	12	3	24	4	1	0	0	7
17:00 - 17:15	1	2	6	19	4	3	3	23	15	3	28	1	1	3	0	1
17:15 - 17:30	1	7	3	12	3	2	1	13	6	4	8	0	2	2	2	0
17:30 - 17:45	0	2	1	19	3	2	1	6	11	2	4	0	0	3	0	3
17:45 - 18:00	1	2	3	14	4	2	1	7	6	2	15	1	0	2	0	2



The attached information is provided to support the agency's review process and shall not be distributed to other parties without written consent from Bunt & Associates Engineering Ltd.

APPENDIX C

Synchro Reports

HCM Unsignalized Intersection Capacity Analysis
1: Ocean Ave & Medusa St 01-30-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	9	13	11	6	0	16	19	8	1	20	0
Future Volume (Veh/h)	0	9	13	11	6	0	16	19	8	1	20	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	0	12	18	15	8	0	22	26	11	1	28	0
Pedestrians		6			2			6			3	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	113	119	40	132	108	31	34			39		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	113	119	40	132	108	31	34			39		
tC, single (s)	7.1	6.5	6.4	7.1	6.7	6.2	4.1			5.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.2	3.3	2.2			3.1		
p0 queue free %	100	98	98	98	99	100	99			100		
cM capacity (veh/h)	842	758	985	801	739	1045	1583			1116		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	30	23	48	11	29
Volume Left	0	15	22	0	1
Volume Right	18	0	0	11	0
cSH	880	778	1583	1700	1116
Volume to Capacity	0.03	0.03	0.01	0.01	0.00
Queue Length 95th (m)	0.8	0.7	0.3	0.0	0.0
Control Delay (s)	9.2	9.8	3.4	0.0	0.3
Lane LOS	A	A	A		A
Approach Delay (s)	9.2	9.8	2.8		0.3
Approach LOS	A	A			

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	24.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2	0	67	1	18	1	25	49	15	29	0
Future Volume (Veh/h)	0	2	0	67	1	18	1	25	49	15	29	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	0	3	0	93	1	25	1	35	68	21	40	0
Pedestrians		9			3			4			3	
Lane Width (m)		3.6			4.1			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	156	199	53	128	131	41	49			106		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	156	199	53	128	131	41	49			106		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.3		
p0 queue free %	100	100	100	88	100	98	100			99		
cM capacity (veh/h)	771	683	1009	800	744	1030	1559			1450		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	3	119	36	68	61
Volume Left	0	93	1	0	21
Volume Right	0	25	0	68	0
cSH	683	838	1559	1700	1450
Volume to Capacity	0.00	0.14	0.00	0.04	0.01
Queue Length 95th (m)	0.1	3.9	0.0	0.0	0.4
Control Delay (s)	10.3	10.0	0.2	0.0	2.7
Lane LOS	B	B	A		A
Approach Delay (s)	10.3	10.0	0.1		2.7
Approach LOS	B	B			

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	28.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	65	109	12	4	88	16	2	5	12	4	8	87
Future Volume (vph)	65	109	12	4	88	16	2	5	12	4	8	87
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	98	165	18	6	133	24	3	8	18	6	12	132

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	281	139	24	29	150
Volume Left (vph)	98	6	0	3	6
Volume Right (vph)	18	0	24	18	132
Hadj (s)	0.14	0.07	-0.70	-0.35	-0.38
Departure Headway (s)	4.8	5.3	4.5	4.8	4.6
Degree Utilization, x	0.37	0.20	0.03	0.04	0.19
Capacity (veh/h)	717	649	756	660	708
Control Delay (s)	10.6	8.4	6.4	8.0	8.7
Approach Delay (s)	10.6	8.1		8.0	8.7
Approach LOS	B	A		A	A

Intersection Summary				
Delay	9.4			
Level of Service	A			
Intersection Capacity Utilization	32.3%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
1: Ocean Ave & Medusa St 01-30-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	17	19	8	12	1	21	31	16	0	19	1
Future Volume (Veh/h)	1	17	19	8	12	1	21	31	16	0	19	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	1	19	21	9	13	1	23	34	18	0	21	1
Pedestrians		3			3			6			11	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	123	126	30	141	108	48	25			55		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	123	126	30	141	108	48	25			55		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	97	98	99	98	100	99			100		
cM capacity (veh/h)	822	754	1042	756	771	1015	1599			1559		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	41	23	57	18	22
Volume Left	1	9	23	0	0
Volume Right	21	1	0	18	1
cSH	880	773	1599	1700	1559
Volume to Capacity	0.05	0.03	0.01	0.01	0.00
Queue Length 95th (m)	1.2	0.7	0.4	0.0	0.0
Control Delay (s)	9.3	9.8	3.0	0.0	0.0
Lane LOS	A	A	A		
Approach Delay (s)	9.3	9.8	2.3		0.0
Approach LOS	A	A			

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	24.2%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	1	114	1	21	1	49	94	11	33	1
Future Volume (Veh/h)	0	1	1	114	1	21	1	49	94	11	33	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	1	1	134	1	25	1	58	111	13	39	1
Pedestrians		28			20			19			8	
Lane Width (m)		3.6			4.1			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			2			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	187	284	86	166	174	86	68			189		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	187	284	86	166	174	86	68			189		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	82	100	97	100			99		
cM capacity (veh/h)	705	596	940	728	686	953	1510			1371		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	2	160	59	111	53
Volume Left	0	134	1	0	13
Volume Right	1	25	0	111	1
cSH	729	756	1510	1700	1371
Volume to Capacity	0.00	0.21	0.00	0.07	0.01
Queue Length 95th (m)	0.1	6.4	0.0	0.0	0.2
Control Delay (s)	10.0	11.0	0.1	0.0	1.9
Lane LOS	A	B	A		A
Approach Delay (s)	10.0	11.0	0.0		1.9
Approach LOS	A	B			

Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	37.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	11	107	93	21	90	9	13	46	35	116	24	15
Future Volume (vph)	11	107	93	21	90	9	13	46	35	116	24	15
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	13	124	108	24	105	10	15	53	41	135	28	17

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	245	129	10	109	180
Volume Left (vph)	13	24	0	15	135
Volume Right (vph)	108	0	10	41	17
Hadj (s)	-0.18	0.11	-0.70	-0.20	0.22
Departure Headway (s)	4.8	5.6	4.8	5.0	5.3
Degree Utilization, x	0.33	0.20	0.01	0.15	0.26
Capacity (veh/h)	703	594	689	659	633
Control Delay (s)	10.1	8.9	6.7	8.8	10.1
Approach Delay (s)	10.1	8.7		8.8	10.1
Approach LOS	B	A		A	B

Intersection Summary				
Delay	9.6			
Level of Service	A			
Intersection Capacity Utilization	44.5%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
1: Ocean Ave & Medusa St 01-30-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	10	15	12	7	0	18	21	9	1	22	0
Future Volume (Veh/h)	0	10	15	12	7	0	18	21	9	1	22	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	0	14	21	17	10	0	25	29	12	1	31	0
Pedestrians		6			2			6			3	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	126	132	43	148	120	34	37			43		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	126	132	43	148	120	34	37			43		
tC, single (s)	7.1	6.5	6.4	7.1	6.7	6.2	4.1			5.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.2	3.3	2.2			3.1		
p0 queue free %	100	98	98	98	99	100	98			100		
cM capacity (veh/h)	822	745	982	776	726	1041	1579			1111		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	35	27	54	12	32
Volume Left	0	17	25	0	1
Volume Right	21	0	0	12	0
cSH	871	757	1579	1700	1111
Volume to Capacity	0.04	0.04	0.02	0.01	0.00
Queue Length 95th (m)	1.0	0.9	0.4	0.0	0.0
Control Delay (s)	9.3	9.9	3.5	0.0	0.3
Lane LOS	A	A	A		A
Approach Delay (s)	9.3	9.9	2.8		0.3
Approach LOS	A	A			

Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	24.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2	0	75	1	20	1	28	55	17	32	0
Future Volume (Veh/h)	0	2	0	75	1	20	1	28	55	17	32	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	0	3	0	104	1	28	1	39	76	24	44	0
Pedestrians		9			3			4			3	
Lane Width (m)		3.6			4.1			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	174	221	57	142	145	45	53			118		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	174	221	57	142	145	45	53			118		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.3		
p0 queue free %	100	100	100	87	100	97	100			98		
cM capacity (veh/h)	748	662	1004	781	729	1025	1554			1436		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	3	133	40	76	68
Volume Left	0	104	1	0	24
Volume Right	0	28	0	76	0
cSH	662	822	1554	1700	1436
Volume to Capacity	0.00	0.16	0.00	0.04	0.02
Queue Length 95th (m)	0.1	4.6	0.0	0.0	0.4
Control Delay (s)	10.5	10.2	0.2	0.0	2.7
Lane LOS	B	B	A		A
Approach Delay (s)	10.5	10.2	0.1		2.7
Approach LOS	B	B			

Intersection Summary				
Average Delay	5.0			
Intersection Capacity Utilization	29.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	73	122	13	4	99	18	2	6	13	4	9	97
Future Volume (vph)	73	122	13	4	99	18	2	6	13	4	9	97
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	111	185	20	6	150	27	3	9	20	6	14	147

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	316	156	27	32	167
Volume Left (vph)	111	6	0	3	6
Volume Right (vph)	20	0	27	20	147
Hadj (s)	0.14	0.07	-0.70	-0.36	-0.39
Departure Headway (s)	4.9	5.4	4.6	5.0	4.8
Degree Utilization, x	0.43	0.23	0.03	0.04	0.22
Capacity (veh/h)	703	634	735	627	683
Control Delay (s)	11.5	8.8	6.6	8.3	9.1
Approach Delay (s)	11.5	8.5		8.3	9.1
Approach LOS	B	A		A	A

Intersection Summary				
Delay	10.0			
Level of Service	B			
Intersection Capacity Utilization	34.0%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
1: Ocean Ave & Medusa St 01-30-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	19	21	9	13	1	24	35	18	0	21	1
Future Volume (Veh/h)	1	19	21	9	13	1	24	35	18	0	21	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	1	21	23	10	14	1	26	38	20	0	23	1
Pedestrians		3			3			6			11	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	136	140	32	156	120	52	27			61		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	136	140	32	156	120	52	27			61		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	97	98	99	98	100	98			100		
cM capacity (veh/h)	805	739	1039	734	758	1010	1596			1551		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	45	25	64	20	24
Volume Left	1	10	26	0	0
Volume Right	23	1	0	20	1
cSH	869	756	1596	1700	1551
Volume to Capacity	0.05	0.03	0.02	0.01	0.00
Queue Length 95th (m)	1.3	0.8	0.4	0.0	0.0
Control Delay (s)	9.4	9.9	3.0	0.0	0.0
Lane LOS	A	A	A		
Approach Delay (s)	9.4	9.9	2.3		0.0
Approach LOS	A	A			

Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	25.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	1	128	1	24	1	55	105	12	37	1
Future Volume (Veh/h)	0	1	1	128	1	24	1	55	105	12	37	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	1	1	151	1	28	1	65	124	14	44	1
Pedestrians		28			20			19			8	
Lane Width (m)		3.6			4.1			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			2			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	204	312	92	180	188	93	73			209		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	204	312	92	180	188	93	73			209		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	79	100	97	100			99		
cM capacity (veh/h)	685	575	934	713	673	945	1504			1348		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	2	180	66	124	59
Volume Left	0	151	1	0	14
Volume Right	1	28	0	124	1
cSH	712	741	1504	1700	1348
Volume to Capacity	0.00	0.24	0.00	0.07	0.01
Queue Length 95th (m)	0.1	7.6	0.0	0.0	0.3
Control Delay (s)	10.1	11.4	0.1	0.0	1.9
Lane LOS	B	B	A		A
Approach Delay (s)	10.1	11.4	0.0		1.9
Approach LOS	B	B			

Intersection Summary				
Average Delay	5.1			
Intersection Capacity Utilization	38.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	12	120	104	24	101	10	15	52	39	130	27	17
Future Volume (vph)	12	120	104	24	101	10	15	52	39	130	27	17
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	14	140	121	28	117	12	17	60	45	151	31	20

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	275	145	12	122	202
Volume Left (vph)	14	28	0	17	151
Volume Right (vph)	121	0	12	45	20
Hadj (s)	-0.18	0.11	-0.70	-0.19	0.22
Departure Headway (s)	5.0	5.9	5.0	5.2	5.5
Degree Utilization, x	0.38	0.24	0.02	0.18	0.31
Capacity (veh/h)	679	572	658	626	610
Control Delay (s)	11.0	9.4	6.9	9.3	10.8
Approach Delay (s)	11.0	9.3		9.3	10.8
Approach LOS	B	A		A	B

Intersection Summary				
Delay	10.3			
Level of Service	B			
Intersection Capacity Utilization	46.3%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
1: Ocean Ave & Medusa St 01-30-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	12	17	15	8	0	21	25	11	1	26	0
Future Volume (Veh/h)	0	12	17	15	8	0	21	25	11	1	26	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	0	17	24	21	11	0	29	35	15	1	36	0
Pedestrians		6			2			6			3	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	146	154	48	172	139	40	42			52		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	146	154	48	172	139	40	42			52		
tC, single (s)	7.1	6.5	6.4	7.1	6.7	6.2	4.1			5.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.2	3.3	2.2			3.1		
p0 queue free %	100	98	98	97	98	100	98			100		
cM capacity (veh/h)	796	722	975	743	706	1033	1572			1101		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	41	32	64	15	37
Volume Left	0	21	29	0	1
Volume Right	24	0	0	15	0
cSH	852	730	1572	1700	1101
Volume to Capacity	0.05	0.04	0.02	0.01	0.00
Queue Length 95th (m)	1.2	1.1	0.5	0.0	0.0
Control Delay (s)	9.4	10.2	3.4	0.0	0.2
Lane LOS	A	B	A		A
Approach Delay (s)	9.4	10.2	2.8		0.2
Approach LOS	A	B			

Intersection Summary				
Average Delay	5.0			
Intersection Capacity Utilization	24.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	3	0	88	1	24	1	33	65	20	38	0
Future Volume (Veh/h)	0	3	0	88	1	24	1	33	65	20	38	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Hourly flow rate (vph)	0	4	0	122	1	33	1	46	90	28	53	0
Pedestrians		9			3			4			3	
Lane Width (m)		3.6			4.1			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	202	259	66	166	169	52	62			139		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	202	259	66	166	169	52	62			139		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.3		
p0 queue free %	100	99	100	84	100	97	100			98		
cM capacity (veh/h)	710	629	993	750	705	1016	1542			1410		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	4	156	47	90	81
Volume Left	0	122	1	0	28
Volume Right	0	33	0	90	0
cSH	629	794	1542	1700	1410
Volume to Capacity	0.01	0.20	0.00	0.05	0.02
Queue Length 95th (m)	0.2	5.8	0.0	0.0	0.5
Control Delay (s)	10.8	10.6	0.2	0.0	2.7
Lane LOS	B	B	A		A
Approach Delay (s)	10.8	10.6	0.1		2.7
Approach LOS	B	B			

Intersection Summary				
Average Delay	5.1			
Intersection Capacity Utilization	30.5%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	86	144	16	5	116	21	3	7	16	5	11	115
Future Volume (vph)	86	144	16	5	116	21	3	7	16	5	11	115
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	130	218	24	8	176	32	5	11	24	8	17	174

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	372	184	32	40	199
Volume Left (vph)	130	8	0	5	8
Volume Right (vph)	24	0	32	24	174
Hadj (s)	0.14	0.07	-0.70	-0.33	-0.38
Departure Headway (s)	5.1	5.6	4.9	5.4	5.1
Degree Utilization, x	0.53	0.29	0.04	0.06	0.28
Capacity (veh/h)	677	604	696	561	642
Control Delay (s)	13.7	9.7	6.9	8.8	10.1
Approach Delay (s)	13.7	9.3		8.8	10.1
Approach LOS	B	A		A	B

Intersection Summary				
Delay	11.4			
Level of Service	B			
Intersection Capacity Utilization	37.1%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
1: Ocean Ave & Medusa St 01-30-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	22	25	11	16	1	28	41	21	0	25	1
Future Volume (Veh/h)	1	22	25	11	16	1	28	41	21	0	25	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	1	24	27	12	18	1	31	45	23	0	27	1
Pedestrians		3			3			6			11	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	158	164	36	182	141	59	31			71		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	158	164	36	182	141	59	31			71		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	97	97	98	98	100	98			100		
cM capacity (veh/h)	772	715	1034	698	735	1001	1591			1538		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	52	31	76	23	28
Volume Left	1	12	31	0	0
Volume Right	27	1	0	23	1
cSH	853	727	1591	1700	1538
Volume to Capacity	0.06	0.04	0.02	0.01	0.00
Queue Length 95th (m)	1.6	1.1	0.5	0.0	0.0
Control Delay (s)	9.5	10.2	3.1	0.0	0.0
Lane LOS	A	B	A		
Approach Delay (s)	9.5	10.2	2.4		0.0
Approach LOS	A	B			

Intersection Summary				
Average Delay	5.0			
Intersection Capacity Utilization	26.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	1	150	1	28	1	65	124	15	44	1
Future Volume (Veh/h)	0	1	1	150	1	28	1	65	124	15	44	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	1	1	176	1	33	1	76	146	18	52	1
Pedestrians		28			20			19			8	
Lane Width (m)		3.6			4.1			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			2			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	236	360	100	207	215	104	81			242		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	236	360	100	207	215	104	81			242		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	74	100	96	100			99		
cM capacity (veh/h)	647	538	924	682	648	932	1494			1311		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	2	210	77	146	71
Volume Left	0	176	1	0	18
Volume Right	1	33	0	146	1
cSH	680	712	1494	1700	1311
Volume to Capacity	0.00	0.29	0.00	0.09	0.01
Queue Length 95th (m)	0.1	9.8	0.0	0.0	0.3
Control Delay (s)	10.3	12.2	0.1	0.0	2.1
Lane LOS	B	B	A		A
Approach Delay (s)	10.3	12.2	0.0		2.1
Approach LOS	B	B			

Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	38.8%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	15	141	123	28	119	12	17	61	46	153	32	20
Future Volume (vph)	15	141	123	28	119	12	17	61	46	153	32	20
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	17	164	143	33	138	14	20	71	53	178	37	23

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	324	171	14	144	238
Volume Left (vph)	17	33	0	20	178
Volume Right (vph)	143	0	14	53	23
Hadj (s)	-0.18	0.11	-0.70	-0.19	0.22
Departure Headway (s)	5.3	6.2	5.4	5.6	5.8
Degree Utilization, x	0.48	0.29	0.02	0.22	0.38
Capacity (veh/h)	639	536	609	565	573
Control Delay (s)	13.0	10.6	7.3	10.2	12.3
Approach Delay (s)	13.0	10.3		10.2	12.3
Approach LOS	B	B		B	B

Intersection Summary				
Delay	11.8			
Level of Service	B			
Intersection Capacity Utilization	49.4%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
1: Ocean Ave & Medusa St 01-30-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	11	29	12	8	0	37	21	9	1	22	1
Future Volume (Veh/h)	1	11	29	12	8	0	37	21	9	1	22	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	1	12	32	13	9	0	41	23	10	1	24	1
Pedestrians		3			3			6			11	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	150	148	34	178	138	37	28			36		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	150	148	34	178	138	37	28			36		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	97	98	99	100	97			100		
cM capacity (veh/h)	786	724	1038	704	733	1029	1595			1584		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	45	22	64	10	26
Volume Left	1	13	41	0	1
Volume Right	32	0	0	10	1
cSH	925	716	1595	1700	1584
Volume to Capacity	0.05	0.03	0.03	0.01	0.00
Queue Length 95th (m)	1.2	0.8	0.6	0.0	0.0
Control Delay (s)	9.1	10.2	4.8	0.0	0.3
Lane LOS	A	B	A		A
Approach Delay (s)	9.1	10.2	4.1		0.3
Approach LOS	A	B			

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	26.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2	0	75	1	24	1	43	55	19	44	0
Future Volume (Veh/h)	0	2	0	75	1	24	1	43	55	19	44	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	2	0	88	1	28	1	51	65	22	52	0
Pedestrians		28			20			19			8	
Lane Width (m)		3.6			4.1			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			2			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	214	262	99	189	197	79	80			136		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	214	262	99	189	197	79	80			136		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	87	100	97	100			98		
cM capacity (veh/h)	673	609	925	700	662	962	1495			1433		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	2	117	52	65	74
Volume Left	0	88	1	0	22
Volume Right	0	28	0	65	0
cSH	609	749	1495	1700	1433
Volume to Capacity	0.00	0.16	0.00	0.04	0.02
Queue Length 95th (m)	0.1	4.4	0.0	0.0	0.4
Control Delay (s)	10.9	10.7	0.1	0.0	2.3
Lane LOS	B	B	A		A
Approach Delay (s)	10.9	10.7	0.1		2.3
Approach LOS	B	B			

Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	36.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	81	122	13	4	99	23	2	7	13	9	10	104
Future Volume (vph)	81	122	13	4	99	23	2	7	13	9	10	104
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	94	142	15	5	115	27	2	8	15	10	12	121

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	251	120	27	25	143
Volume Left (vph)	94	5	0	2	10
Volume Right (vph)	15	0	27	15	121
Hadj (s)	0.12	0.04	-0.70	-0.34	-0.38
Departure Headway (s)	4.7	5.2	4.4	4.7	4.5
Degree Utilization, x	0.33	0.17	0.03	0.03	0.18
Capacity (veh/h)	731	663	771	687	734
Control Delay (s)	10.0	8.0	6.4	7.9	8.5
Approach Delay (s)	10.0	7.7		7.9	8.5
Approach LOS	A	A		A	A

Intersection Summary				
Delay	8.9			
Level of Service	A			
Intersection Capacity Utilization	42.6%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	21	54	9	15	1	52	35	18	0	21	3
Future Volume (Veh/h)	3	21	54	9	15	1	52	35	18	0	21	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	3	23	59	10	16	1	57	38	20	0	23	3
Pedestrians		3			3			6			11	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	200	202	34	256	184	52	29			61		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	200	202	34	256	184	52	29			61		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	97	94	98	98	100	96			100		
cM capacity (veh/h)	718	669	1038	596	685	1010	1593			1551		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	85	27	95	20	26
Volume Left	3	10	57	0	0
Volume Right	59	1	0	20	3
cSH	891	657	1593	1700	1551
Volume to Capacity	0.10	0.04	0.04	0.01	0.00
Queue Length 95th (m)	2.5	1.0	0.9	0.0	0.0
Control Delay (s)	9.5	10.7	4.5	0.0	0.0
Lane LOS	A	B	A		
Approach Delay (s)	9.5	10.7	3.7		0.0
Approach LOS	A	B			

Intersection Summary				
Average Delay	6.0			
Intersection Capacity Utilization	26.0%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	1	128	1	30	1	77	105	18	64	1
Future Volume (Veh/h)	0	1	1	128	1	30	1	77	105	18	64	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	1	1	151	1	35	1	91	124	21	75	1
Pedestrians		28			20			19			8	
Lane Width (m)		3.6			4.1			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			2			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	282	382	122	251	259	119	104			235		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	282	382	122	251	259	119	104			235		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	76	100	96	100			98		
cM capacity (veh/h)	601	522	898	637	611	914	1465			1319		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	2	187	92	124	97
Volume Left	0	151	1	0	21
Volume Right	1	35	0	124	1
cSH	660	675	1465	1700	1319
Volume to Capacity	0.00	0.28	0.00	0.07	0.02
Queue Length 95th (m)	0.1	9.0	0.0	0.0	0.4
Control Delay (s)	10.5	12.4	0.1	0.0	1.8
Lane LOS	B	B	A		A
Approach Delay (s)	10.5	12.4	0.0		1.8
Approach LOS	B	B			

Intersection Summary				
Average Delay	5.0			
Intersection Capacity Utilization	38.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	24	120	104	24	101	16	15	56	39	145	34	22
Future Volume (vph)	24	120	104	24	101	16	15	56	39	145	34	22
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	28	140	121	28	117	19	17	65	45	169	40	26

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	289	145	19	127	235
Volume Left (vph)	28	28	0	17	169
Volume Right (vph)	121	0	19	45	26
Hadj (s)	-0.16	0.11	-0.70	-0.19	0.20
Departure Headway (s)	5.2	6.0	5.2	5.4	5.5
Degree Utilization, x	0.41	0.24	0.03	0.19	0.36
Capacity (veh/h)	655	552	631	595	603
Control Delay (s)	11.8	9.7	7.2	9.6	11.6
Approach Delay (s)	11.8	9.4		9.6	11.6
Approach LOS	B	A		A	B

Intersection Summary				
Delay	10.9			
Level of Service	B			
Intersection Capacity Utilization	47.4%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	13	31	15	9	0	40	25	11	1	26	1
Future Volume (Veh/h)	1	13	31	15	9	0	40	25	11	1	26	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	1	14	34	16	10	0	44	27	12	1	29	1
Pedestrians		3			3			6			11	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	166	164	38	196	153	41	33			42		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	166	164	38	196	153	41	33			42		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	97	98	99	100	97			100		
cM capacity (veh/h)	766	707	1031	681	718	1024	1588			1576		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	49	26	71	12	31
Volume Left	1	16	44	0	1
Volume Right	34	0	0	12	1
cSH	906	695	1588	1700	1576
Volume to Capacity	0.05	0.04	0.03	0.01	0.00
Queue Length 95th (m)	1.4	0.9	0.7	0.0	0.0
Control Delay (s)	9.2	10.4	4.6	0.0	0.2
Lane LOS	A	B	A		A
Approach Delay (s)	9.2	10.4	4.0		0.2
Approach LOS	A	B			

Intersection Summary				
Average Delay	5.6			
Intersection Capacity Utilization	26.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	3	0	88	1	28	1	48	65	22	50	0
Future Volume (Veh/h)	0	3	0	88	1	28	1	48	65	22	50	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	4	0	104	1	33	1	56	76	26	59	0
Pedestrians		28			20			19			8	
Lane Width (m)		3.6			4.1			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			2			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	238	293	106	210	217	84	87			152		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	238	293	106	210	217	84	87			152		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	85	100	97	100			98		
cM capacity (veh/h)	643	584	917	675	643	956	1486			1414		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	4	138	57	76	85
Volume Left	0	104	1	0	26
Volume Right	0	33	0	76	0
cSH	584	726	1486	1700	1414
Volume to Capacity	0.01	0.19	0.00	0.04	0.02
Queue Length 95th (m)	0.2	5.6	0.0	0.0	0.4
Control Delay (s)	11.2	11.1	0.1	0.0	2.4
Lane LOS	B	B	A		A
Approach Delay (s)	11.2	11.1	0.1		2.4
Approach LOS	B	B			

Intersection Summary				
Average Delay	5.0			
Intersection Capacity Utilization	37.2%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	94	144	16	5	116	26	3	8	16	10	11	121
Future Volume (vph)	94	144	16	5	116	26	3	8	16	10	11	121
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	109	167	19	6	135	30	3	9	19	12	13	141

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	295	141	30	31	166
Volume Left (vph)	109	6	0	3	12
Volume Right (vph)	19	0	30	19	141
Hadj (s)	0.11	0.04	-0.70	-0.35	-0.38
Departure Headway (s)	4.8	5.3	4.6	4.9	4.7
Degree Utilization, x	0.40	0.21	0.04	0.04	0.22
Capacity (veh/h)	712	643	742	644	699
Control Delay (s)	11.0	8.5	6.6	8.2	9.0
Approach Delay (s)	11.0	8.2		8.2	9.0
Approach LOS	B	A		A	A

Intersection Summary				
Delay	9.6			
Level of Service	A			
Intersection Capacity Utilization	43.6%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	24	58	11	17	1	57	41	21	0	25	3
Future Volume (Veh/h)	3	24	58	11	17	1	57	41	21	0	25	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	3	26	64	12	19	1	63	45	23	0	27	3
Pedestrians		3			3			6			11	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	224	228	38	286	207	59	33			71		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	224	228	38	286	207	59	33			71		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	96	94	98	97	100	96			100		
cM capacity (veh/h)	687	645	1033	563	662	1001	1588			1538		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	93	32	108	23	30
Volume Left	3	12	63	0	0
Volume Right	64	1	0	23	3
cSH	872	627	1588	1700	1538
Volume to Capacity	0.11	0.05	0.04	0.01	0.00
Queue Length 95th (m)	2.9	1.3	1.0	0.0	0.0
Control Delay (s)	9.6	11.0	4.4	0.0	0.0
Lane LOS	A	B	A		
Approach Delay (s)	9.6	11.0	3.6		0.0
Approach LOS	A	B			

Intersection Summary				
Average Delay	6.0			
Intersection Capacity Utilization	27.4%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1	1	150	1	34	1	87	124	20	71	1
Future Volume (Veh/h)	0	1	1	150	1	34	1	87	124	20	71	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	1	1	176	1	40	1	102	146	24	84	1
Pedestrians		28			20			19			8	
Lane Width (m)		3.6			4.1			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			2			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	313	430	132	277	285	130	113			268		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	313	430	132	277	285	130	113			268		
tC, single (s)	7.1	6.5	6.2	7.2	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	71	100	96	100			98		
cM capacity (veh/h)	568	489	887	611	590	901	1454			1283		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	2	217	103	146	109
Volume Left	0	176	1	0	24
Volume Right	1	40	0	146	1
cSH	631	650	1454	1700	1283
Volume to Capacity	0.00	0.33	0.00	0.09	0.02
Queue Length 95th (m)	0.1	11.7	0.0	0.0	0.5
Control Delay (s)	10.7	13.3	0.1	0.0	1.9
Lane LOS	B	B	A		A
Approach Delay (s)	10.7	13.3	0.0		1.9
Approach LOS	B	B			

Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	39.5%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	26	141	123	28	119	18	17	66	46	168	39	25
Future Volume (vph)	26	141	123	28	119	18	17	66	46	168	39	25
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	30	164	143	33	138	21	20	77	53	195	45	29

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	337	171	21	150	269
Volume Left (vph)	30	33	0	20	195
Volume Right (vph)	143	0	21	53	29
Hadj (s)	-0.16	0.11	-0.70	-0.19	0.20
Departure Headway (s)	5.5	6.4	5.6	5.8	5.9
Degree Utilization, x	0.51	0.30	0.03	0.24	0.44
Capacity (veh/h)	618	515	585	545	565
Control Delay (s)	14.1	11.0	7.6	10.6	13.5
Approach Delay (s)	14.1	10.6		10.6	13.5
Approach LOS	B	B		B	B

Intersection Summary				
Delay	12.7			
Level of Service	B			
Intersection Capacity Utilization	51.5%	ICU Level of Service		A
Analysis Period (min)	15			

The attached information is provided to support the agency's review process and shall not be distributed to other parties without written consent from Bunt & Associates Engineering Ltd.

APPENDIX D

Trip Generation Calculations

APPENDIX A Calculation Of Trip Generation Rates

This section documents the methodology used to adjust trip generation rates based on observed vehicle counts at the site access. In **Step 1**, the 37 observed site trips in the AM and 65 in the PM peak hours were then proportioned to each of the existing land uses based on the methodology from the ITE Trip Generation Manual 10th Edition. This is presented in **Table 1**.

Table 1: Step 1, Existing ITE Trip Rates used to Allocate Observed trips

Current Site Use	Capacity Students	ITE Land Use	ITE Independent Var.	ITE Trip Rates		Peak Trips (Generator)		% of ITE Total		Allocation of Observed	
				AM	PM	AM	PM	AM	PM	AM	PM
CSF Elementary School	70	Elementary School (520)	Students	0.65	0.34	46	24	33%	29%	12	19
Sechelt Learning Center	30	Daycare (565)		0.79	0.81	24	24	17%	29%	6	19
Alternative School	75	Middle School (522)		0.70	0.35	53	26	38%	32%	14	21
Youth Drop-in Center	25	Middle School (522)		0.70	0.35	18	9	13%	11%	5	7
	200					139	83	100%	100%	37	65

In **Step 2**, resulted vehicle trips from Table 1 were allocated to each land use to calculate the peak hour vehicle trip rates. Outputs from this exercise are presented in **Table 2**.

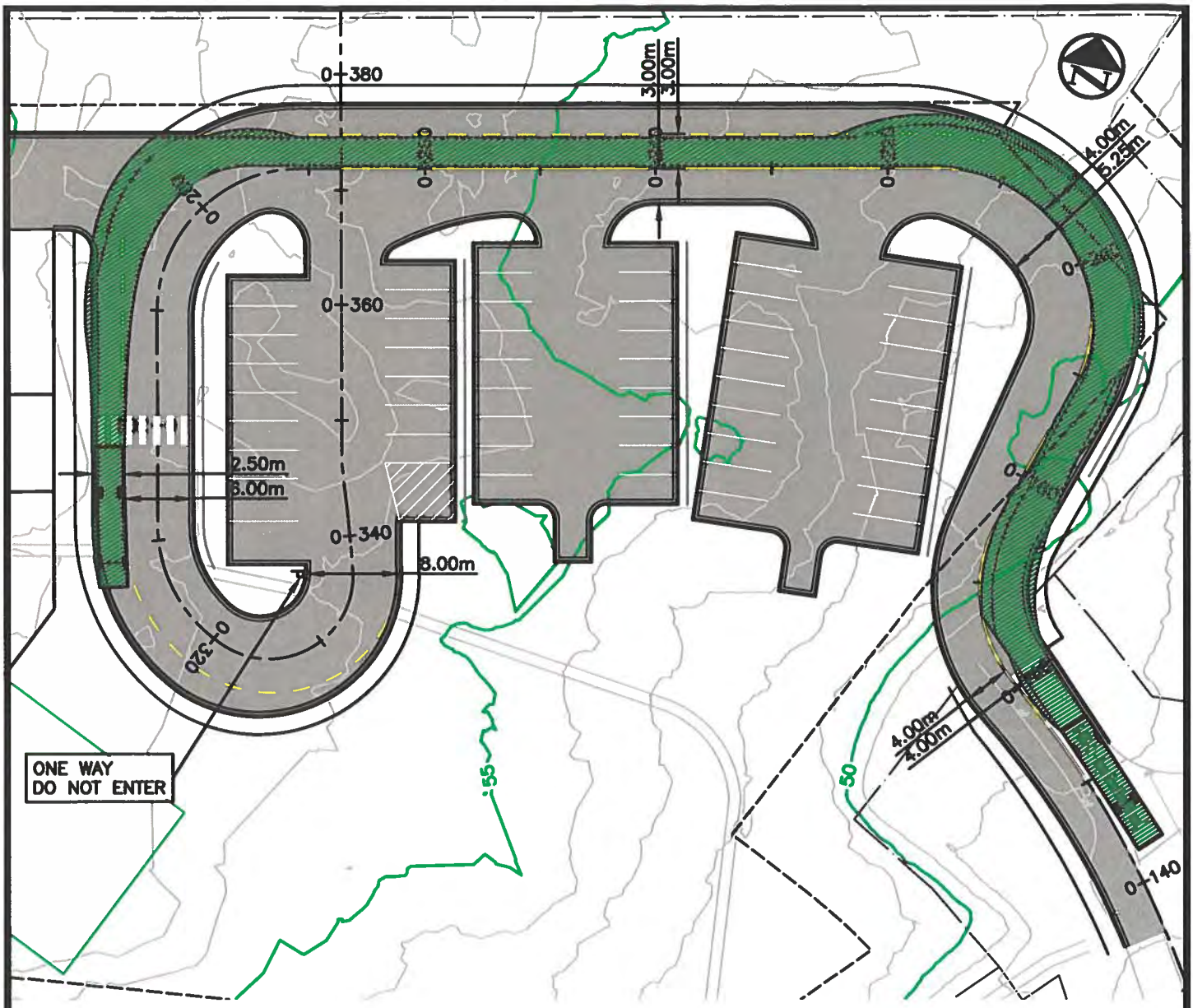
Table 2: Step 2, Allocation of Observed Trips to adjust Trip Generation Rates

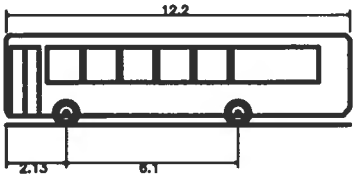
Current Site Use	Capacity Students	ITE Land Use	ITE Independent Var.	Peak Trips (Generator)		Resulting Observed Rates	
				AM	PM	AM	PM
CSF Elementary School	70	Elementary School (520)	Students	12	19	0.17	0.27
Sechelt Learning Center	30	Daycare (565)		6	19	0.21	0.63
Alternative School	75	Middle School (522)		14	21	0.19	0.27
Youth Drop-in Center	25	Middle School (522)		5	7	0.19	0.27
				37	65		

These adjusted rates were then applied to the increased student capacity numbers for the new school facilities to calculate the 'net new' school trips.

APPENDIX E

Creus AutoTurn Test





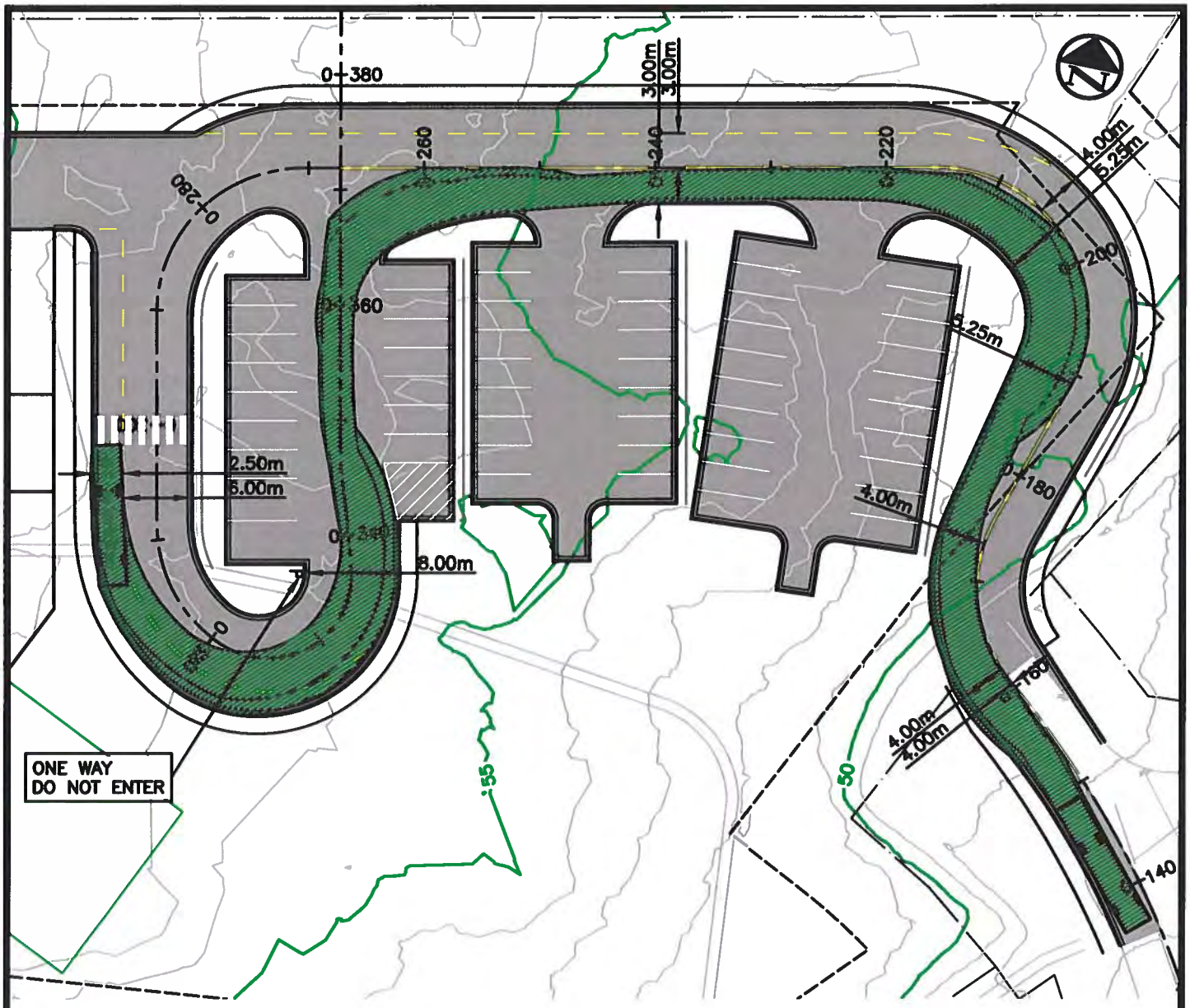
S-BUS-12 - Large School Bus (84 pass.)

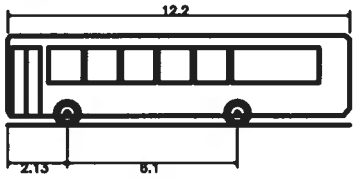
Overall Length	12.200m
Overall Width	2.440m
Overall Body Height	3.200m
Min Body Ground Clearance	0.326m
Track Width	2.440m
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	34.40°

AUTOTURN
CSF SECHELT
S-BUS-12 (84 PASSENGER)
ENTERING PATH

CREUS Engineering
Civil Engineers & Project Managers
PH: 604-987-9070 WEB: www.creus.ca

dwg by: CLW	scale: hor. 1:500
dwg date: 24-01-29	vert. -
dwg #: AT-2	proj #: 23310





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AUTOTURN
CSF SECHELT
S-BUS-12 (84 PASSENGER)
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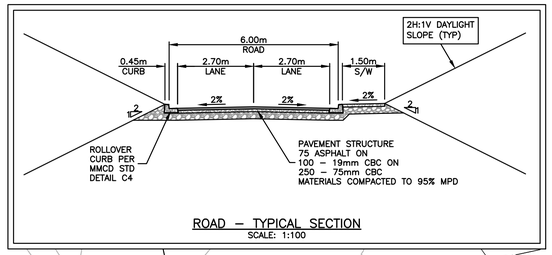
Civil Engineers & Project Managers
PH: 604-987-9070 WEB: www.creus.ca

dwg by: CLW	scale: hor. 1:500
dwg date: 24-01-29	vert. -
dwg #: AT-3	proj #: 23310

ROADWORKS NOTES

1. ALL ROADWORKS CONSTRUCTION AND METHODS MUST BE IN ACCORDANCE WITH MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD).
2. ALL LOOSE AND ORGANIC MATERIAL TO BE EXCAVATED AND DISPOSED OF OFF-SITE IN A LOCATION APPROVED BY THE ENGINEER.
3. ALL SUBGRADE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY. SUBGRADE TO BE INSPECTED BY ENGINEER PRIOR TO PLACEMENT OF GRAVEL SUBBASE. ANY WATER SOFTENED SUB GRADE SOIL SHALL BE OVER EXCAVATED AND THE GRADE RESTORED WITH GRANULAR SOILS COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
4. THE BASE AND SUBBASE MATERIALS SHALL BE PROPERLY PLACED AND COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR DRY DENSITY (ASTM D1557).
5. SIEVE ANALYSIS TO BE SUBMITTED PRIOR TO DELIVERING MATERIAL TO SITE.
6. CHANGES IN GRADE TO BE FORMED WITH SMOOTH CURVES.
7. ASPHALT PAVING CAN ONLY PROCEED IN THE PRESENCE OF THE ENGINEER OR DESIGNATED INSPECTORS.



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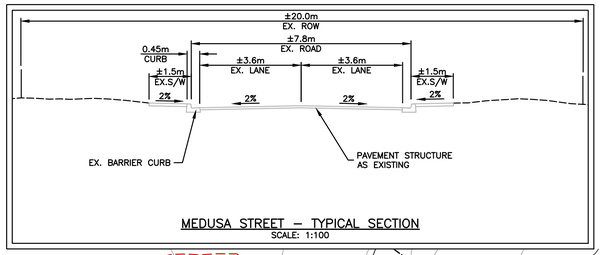
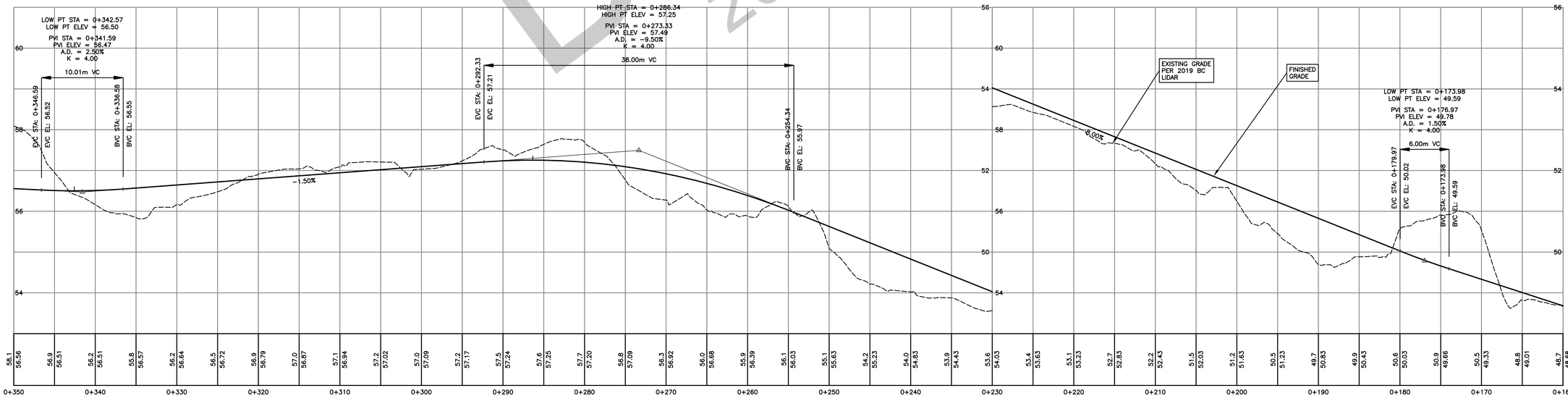
SCALE: 1:100



MEDUSA STREET – TYPICAL SECTION
SCALE: 1:100

SEE DRAWING KEY–1 FOR GENERAL NOTES
SEE DRAWING R–1 FOR ROADWORKS NOTES
SEE DRAWING SERV–1 FOR WATERWORKS NOTES
SEE DRAWING SERV–1 FOR STORM & SANITARY NOTES

CONTRACTOR TO VERIFY & LOCATE EXISTING MAINS & SERVICE CONNECTIONS & NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING CONSTRUCTION



DRAFT
2024-01-22

CREUS Engineering
Civil Engineers & Project Managers
#610 EAST TOWER - 221 ESPLANADE WEST, NORTH VANCOUVER BC, V7M3J3
PH: 604-987-9070
WEBSITE: www.creus.ca

PERMIT TO PRACTICE # 1001543

SITE MAP

DRAWING LEGEND

	EXISTING	PROP.	TO BE REMOVED
LEGAL LINE			
EASEMENT			
WATERMAIN			
SANITARY			
STORM			
HYDRO			
TEL			
STREETLIGHT			
GAS			

	EXISTING	PROP.	TO BE REMOVED
FIRE HYDRANT			
GATE VALVE			
AIR VALVE			
REDUCER			
INSPECTION CHAMBER			
CATCHBASIN (STD/SI)			
CAP			
MANHOLE			
POWER POLE			
STREETLIGHT			

approved

client
PRINCIPAL ARCHITECTURE

project
CSF SECHELT
SECHELT, BC

title
ROADWORKS
ROAD A

no.	(y/m/d)	revision	chk'd
5	24-01-22	REVISED PER BUNT COORDINATION	CLW
4	24-01-11	ISSUED FOR CLIENT REVIEW	CLW
3	23-11-24	UPDATED PER CLIENT REVIEW	CLW
2	23-11-16	ISSUED FOR CLIENT REVIEW	CLW
1	23-10-30	ISSUED FOR REVIEW	CLW

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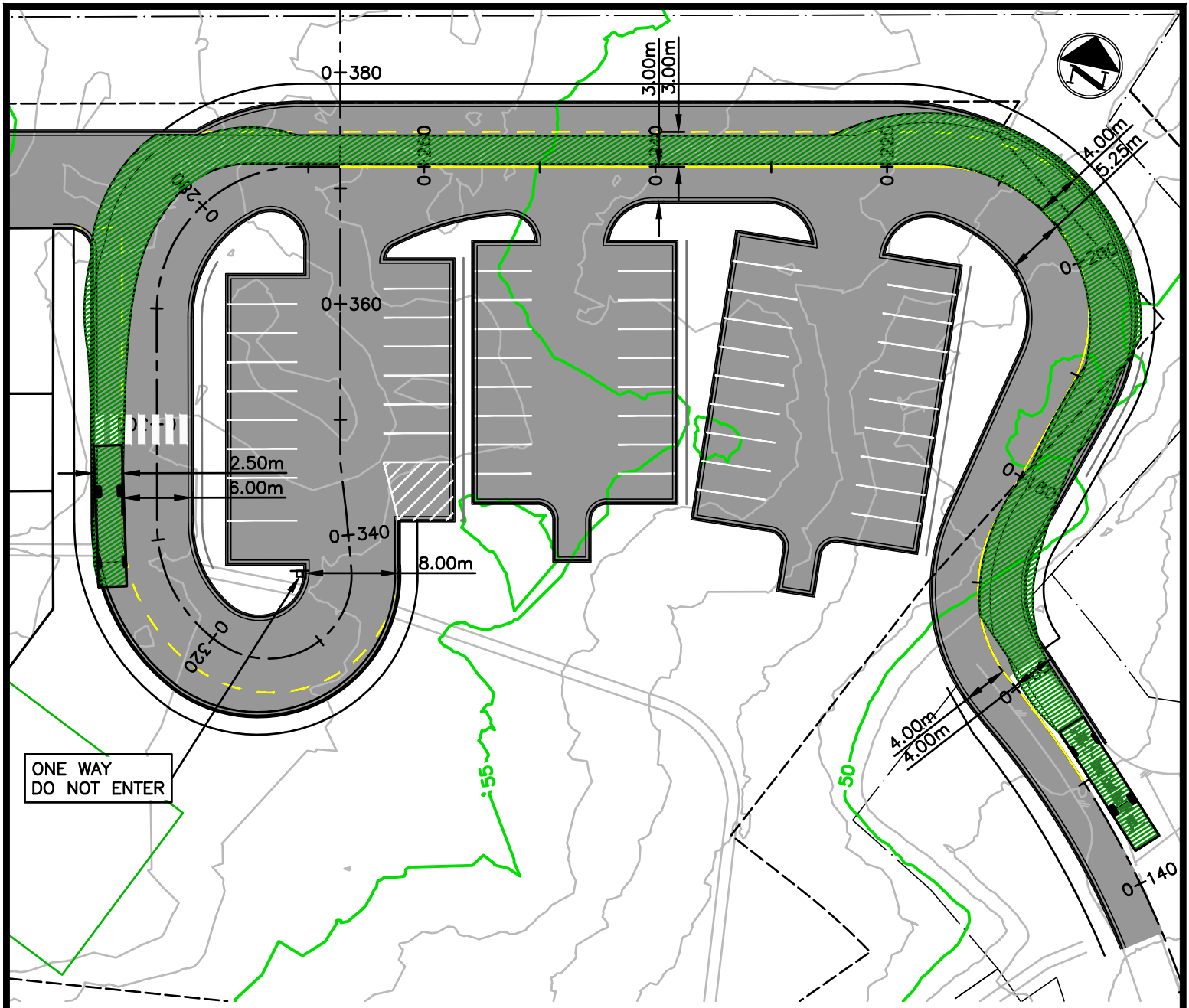
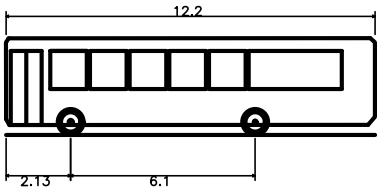
current rev. #: 5

engineer of record	KBH
designed by	KBH
drawn by	CLW
date	2023-10-16
scales	hor: 1:250 vert: 1:50
file no.	23310
drawing no.	R-1





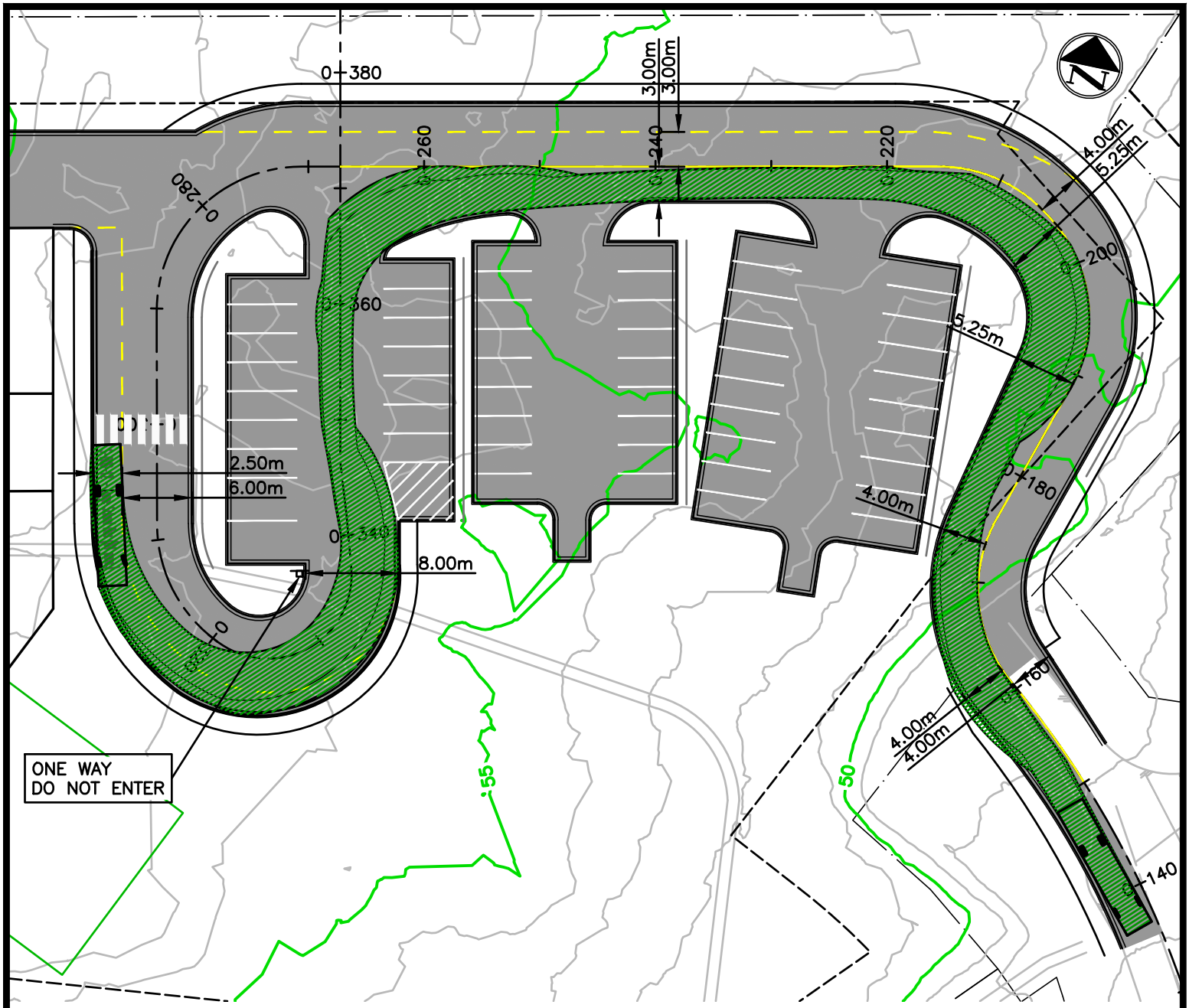
S–BUS–12 – Large School Bus (84 pass.)

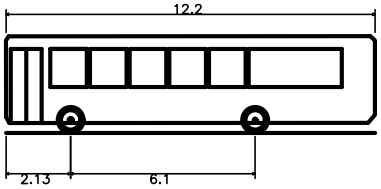
Overall Length	12.200m
Overall Width	2.440m
Overall Body Height	3.200m
Min Body Ground Clearance	0.326m
Track Width	2.440m
Lock–to–lock time	5.00s
Max Steering Angle (Virtual)	34.40°

AUTOTURN
CSF SECHELT
S-BUS-12 (84 PASSENGER)
ENTERING PATH

CREUS Engineering
Civil Engineers & Project Managers
PH: 604-987-9070 WEB: www.creus.ca

dwg by: CLW	scale: hor. 1:500
dwg date: 24-01-29	vert. -
dwg #: AT-2	proj #: 23310





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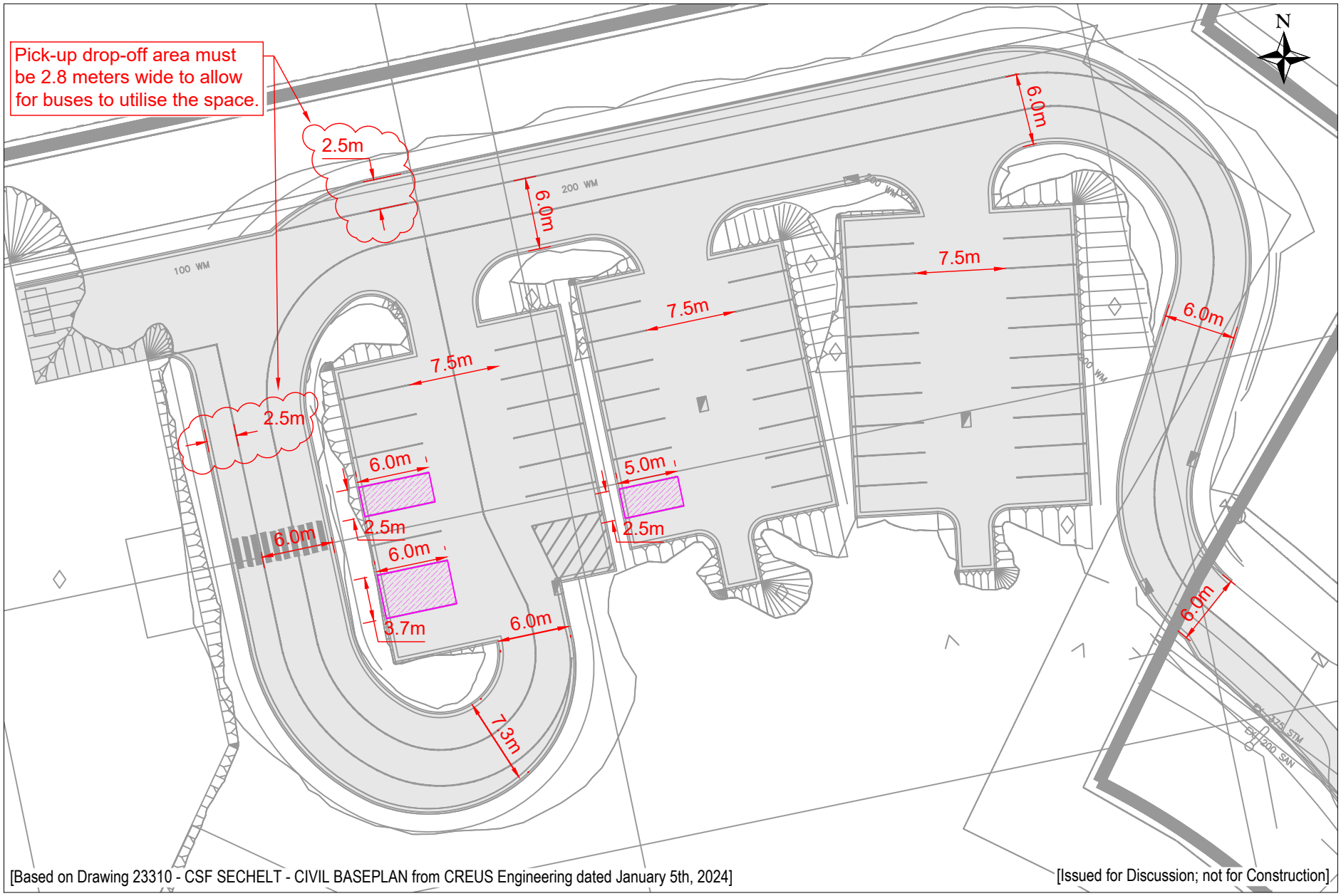

[Based on Drawing 23310 - CSF SECHELT - CIVIL BASEPLAN from CREUS Engineering dated January 5th, 2024]

[Issued for Discussion; not for Construction]

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2024/01/26 17:18, Plotted by Ian Hancock

Exhibit 4.1

Site Plan Review

CSF Sechelt School

04-23-0251 January 2024 Scale 1:450 on Letter Prepared by IH

bunt & associates

O:\Dept BC\Projects\2023\04-23-0251 CSF Sechelt School\4.0 Analysis & Design\4.1 ACAD\swpt_Pth\04-23-0251_Sechelt_AT_V03-01.dwg
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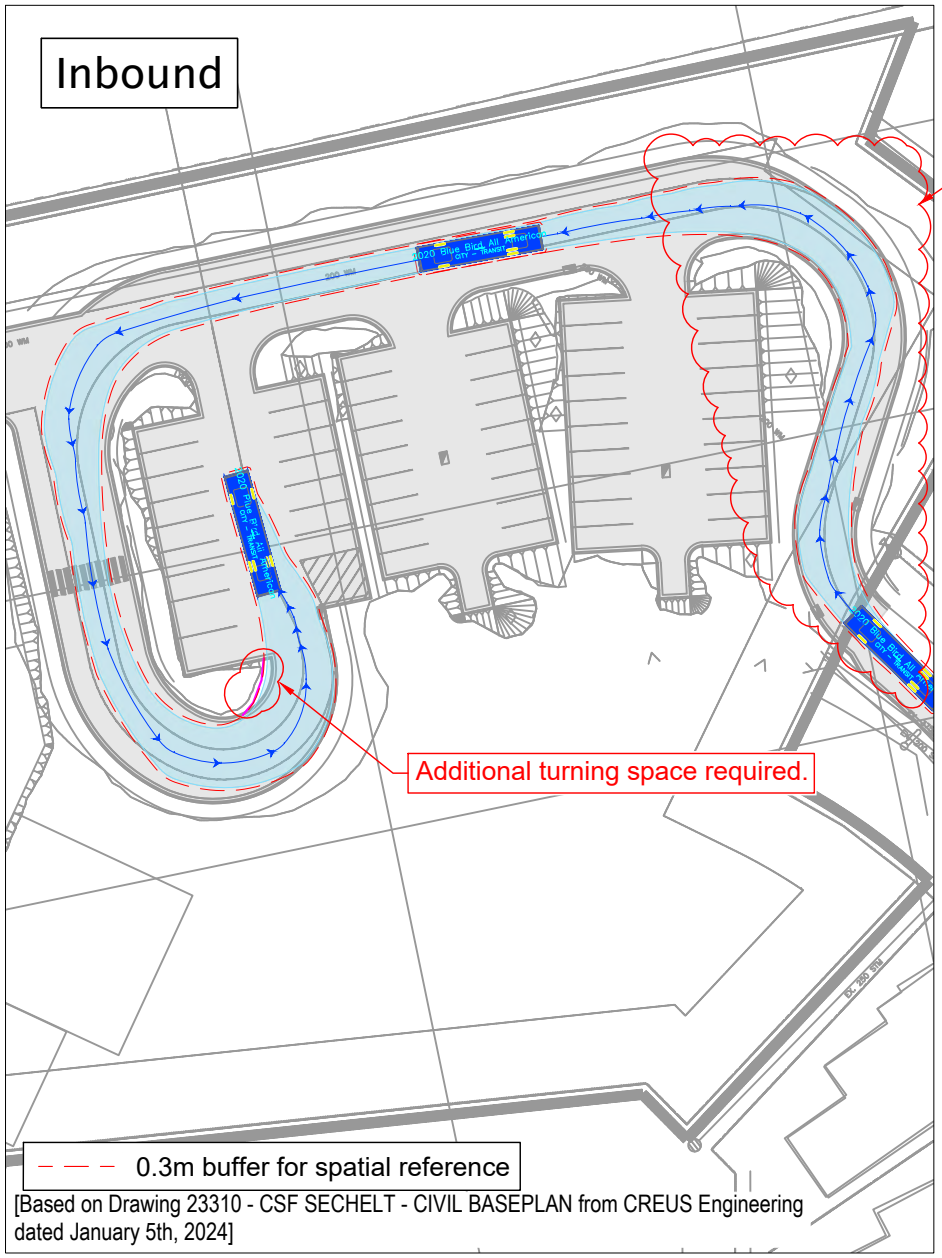
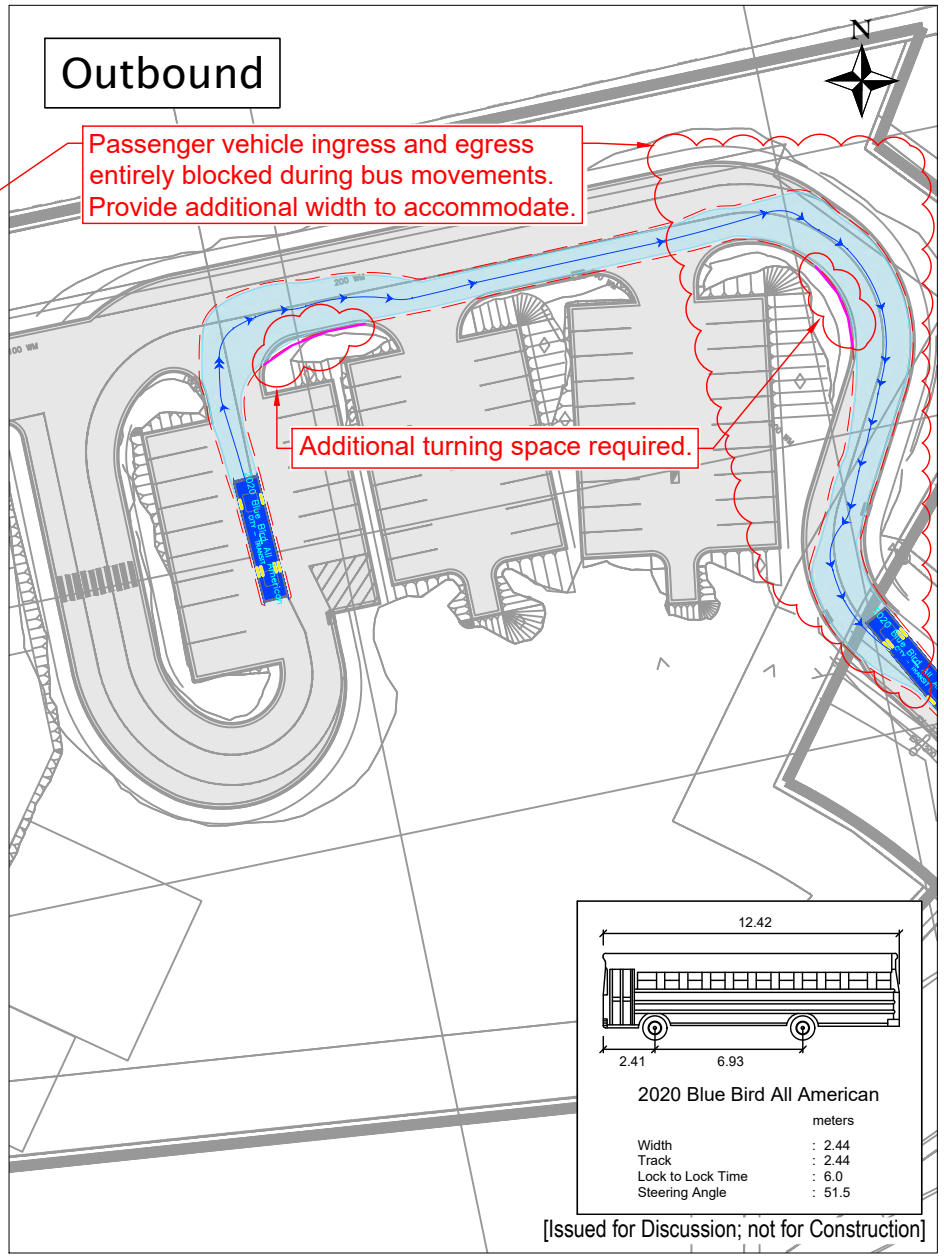


[Based on Drawing 23310 - CSF SECHELT - CIVIL BASEPLAN from CREUS Engineering dated January 5th, 2024]



[Issued for Discussion; not for Construction]

Exhibit 4.2

Bus Circulation

CSF Sechelt School

04-23-0251 January 2024 Scale 1:750 on Letter Prepared by IH

bunt & associates

Design No.: N/A; External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" - Sechelt ~ PRS Response

Bender, Krysta <Krysta.Bender@bchydro.com>

Mon 2024-07-22 8:12 AM

To:Tyson Baker <TBaker@sechelt.ca>
Cc:Genzel, Carolyn <Carolyn.Genzel@bchydro.com>;Properties, Help Desk <properties.helpdesk@bchydro.com>;Design, NSC <design.nsc@bchydro.com>

7 attachments (16 MB)

3. Applicant Submission Letter.pdf; 4. Engineering Design Package.pdf; 5. Environmental Site Assessment.pdf; 6. Geotechnical Report.pdf; 0. DEVELOPMENT APPLICATION REFERRAL - EXTERNAL.pdf; 1. Location Map.pdf; 2. Site Plan.pdf;

Caution! This message was sent from outside your organization. Allow sender | Block sender

Your File No.: External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)

Hello Tyson

Thank you for your email. BC Hydro has no objection in principle to the proposed French Immersion School at Lot B Medusa Street. When the site is developed and servicing is requested a SRW will be **required** for Underground Works.

BC Hydro wishes to ensure that building permits do not get issued that allow for encroachment of buildings into the safety clearance zones required around existing bare utility conductors.

The following comments are for the property owner's information:

1. It is the responsibility of the Architect and Electrical Engineer of Record (EEOR) to ensure compliance with the Canadian Electrical Code (CEC), Canadian Safety Association (CSA) and WorkSafe BC (WSBC). The CEC, CSA and WSBC stipulate minimum clearances of powerlines and equipment from buildings for safety and safe working clearances (Limits of Approach).

2. If the Developer or Property Owner wishes to relocate the existing powerline or equipment BC Hydro will work with the Developer or Property Owner to find a solution mutually satisfactory to all parties involved.

3. For new construction power connections please contact the BC Hydro Electric Service Coordination Centre at 1-877-520-1355 and/or email expressconnect@bchydro.com.

Any questions or concerns please let our office know.

Kind Regards,

Krysta Bender | Property Coordinator, Property Rights Services, Properties

BC Hydro
8475 128th St.
Surrey, BC V3W 0G1

P 604-543-1592
E krysta.bender@bchydro.com.

From: Tyson Baker <TBaker@sechelt.ca>
Sent: 2024, July 17 2:54 PM
To: Properties, Help Desk <properties.helpdesk@bchydro.com>
Subject: [External] Tyson Baker shared the folder "External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" with you

You don't often get email from tbaker@sechelt.ca. Learn why this is important

Don't click on links or open attachments unless you trust the sender and are expecting the link or attachment. If you suspect this message to be phishing, please report it by clicking the Report Message button in the Outlook toolbar and select "Phishing."

Tyson Baker shared a folder with you

Hi there,

You're comments are being requested for the subject application.

External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)

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-BCHydroDisclaimerID5.2.8.1541

August 8, 2024

Tyson Baker
tbaker@sechelt.ca
Sunshine Coast Regional Transit System

Re: Proposed Development at Lot B District Lot 1331 Plan 18108

Dear Mr. Baker,

Based on the plans received July 22, 2024 BC Transit staff have completed a detailed review of the proposal to assess if this development could be considered ‘transit ready’, and to provide recommendations on changes to the proposal which may help this development integrate into your existing transportation network and aid in increasing transit ridership.

The attached document outlines the BC Transit recommendations based on your last submission. After reviewing the information enclosed within this letter, you are welcome to request a meeting with members of our team if you have any questions or if clarification is needed.

Should you have any questions or concerns, please contact me at 250-508-4959 or by email at amcmullen@BCTransit.com

Sincerely,

Adriana McMullen
Planning Special Projects
BC Transit
amcmullen@BCTransit.com

Development Referral Feedback

Development Address: No Civic Address, Lot B District Lot 1331 Plan 18108
Local Government District of Sechelt
Local Government File Number: 3 360-2024-01
Date Plans Received: July 22, 2024
Date Referral Feedback Sent: August 9, 2024
Review Completed By: Adriana McMullen

Context Overview	
Land Use Typology	☐ Urban ☐ Rural ☒Suburban
Local Context	☐ Urban Infill ☐Urban-Suburban Fringe ☒ Suburban Infill ☐ Suburban-Rural Fringe ☐Rural ☐Exurban ☐Suburban
Nearest Existing Transit Stop to the Development	Sidewalk: 650 Metres, Route Beeline: 380 Metres (Route 2; Cowrie)
Service Frequency of Existing Transit to the Development	☐ Frequent (15-minute headways or better) ☐ Local - Ridership (15 to 60-minute headways) ☒ Local- Coverage (60 to 120-minute headways) ☐ Targeted ☐ Other:

Feedback Related to Use and Density

The following recommendations relate to the proposed use and proposed densities of the development in question.

- **Surrounding Land Use:**
    - Superficially the proposed use appears to fit well with surrounding land use, however the subject property is on the fringe of the transit service area of Route 2. There is not lit or improved sidewalk access to the nearest route 2 stop situated on Cowrie.
    - The proposed K-12 school will attract additional transportation from beyond the traditional catchment area, increasing demand for motorized travel. The large existing catchment of Chatelech Secondary School means that the combined impact of both schools will further drive this demand[1].
    - Future land use and subdivision plaits should prioritize the provision of improved transit-suitable roads (collectors?) contiguous to the existing road network to support future transit development to serve both schools.

Feedback Related to Design and Connectivity

The following recommendations relate to the proposed design of the development, and how it may be altered to better integrate with existing or future transit service, in addition to design changes may improve ridership or modal split numbers.

- **Site Plan and Building Massing**: Vehicle access is oriented to Medusa, but the building is not street oriented. Pedestrians arriving from Medusa to the subject property may need to traverse a further 80 -100 m across the parking lot. Please consider opportunities to re-locate parking to a less prominent location, and to reorient the building to shorten the walk distance for patrons arriving on foot to the main entrance.
- **Surrounding Road Network:**
    - The site plan places the school at a dead-end street, and the surrounding road network is characterized by cul-de-sacs. This road network is unlikely to be served by public transit.
        - Access to the nearest transit stop using sidewalks is to the Ocean Ave at Mermaid St. (Route 90) stop. The distance to the subject property is 650 metres with 40-metre grade difference. The traditional walkshed for transit is about 400 metres; steep grades can restrict access for those reliant on mobility devices.
        - Access to the nearest transit stop as a beeline (without sidewalks) is to the Cowrie St at Clayton Rd stop (Route 2) serving Ecole Chateleh. The distance is 380 metres with a 4-metre grade difference.

[1] School bus services work for those students who arrive and depart for school hours. Students staying late or starting early for sports, music or other programs are often reliant on other forms of transportation.

- The district is encouraged to consider further development of Clayton Rd, with improved road network connectivity northwest of the subject property (Derby, Clayton, east to downtown). Improved connections would provide future opportunities for additional transit service (and stops) to be situated within an easy (less sloped) walk of the proposed school.

- **Supporting transit users**: The most direct and least sloped access to existing transit would be to pass from the subject property through the Chatelech School site.
  - Improvements of the pedestrian route across both existing and proposed school properties (such as wayfinding, pavement, lighting, potentially a sheltered walkway) recommended to formalize and support transit access to the proposed school.
  - Alternatively, the extension of Clayton Road northward (with its sidewalks) could serve to provide a more traditional street/sidewalk access directly to the subject property. This would provide improved integration of the school with the neighbourhood, improve the sense of security for transit customer by providing "eyes on the street" for those accessing the subject property from Cowrie.

Assessment of Transit Readiness

The following section assesses the transit readiness of the location that this development is proposed within. This assessment considers both the existing and planned services accessible to the development, but also the existing and planned infrastructure. For information on infrastructure design, please refer to BC Transit's On-Street Infrastructure Design Guide.

1. Current service is
   - The nearest transit service stop is situated on Cowrie at Clayton and the most direct access (about 400m) would require passing through the Chatelech school site and travel off sidewalks.
   - Route 2 West Sechelt is:
     - a local route that operates every 50-90 minutes in a counterclockwise loop connecting Trail Bay Mall to West Sechelt as far as Mason Road
     - the second most productive transit route in the Sunshine Coast Regional Transit System (rides per hour of service offered) after route 90.
     - operates from about 5 am to 10 pm

2. Planned service is
   - The 3 to 5-year Transit Future Action Plan for the Sunshine Coast has identified the following improvements for Route 2 West Sechelt.
     - Increase the frequency to 60 minutes with service at 30 minutes at peak times
     - Make the route bidirectional

Implementation of these changes is subject to provincial funding approval for expansion hours and an additional vehicle. The soonest they could occur would be in the winter of 2026/27.

3. Current Infrastructure

There is a rough E-W pathway across the subject property that connects to another pathway at the top of Clayton street. The undeveloped path route is about 400 m and had some grade changes. Pedestrians using it to link to the transit stop on Cowrie at Clayton then have a further 200 m walk on sidewalks to reach the stop at Cowrie and Clayton for a total distance of about 600 m. The industry standard for distance to access transit is areas that are 400m or closer.

There is not rough or developed pathway or sidewalk passing through the Chatelech site to connect the subject property directly to the nearest bus stop at Cowrie and Clayton.

4. Planned infrastructure

As Route 2 is further improved BC Transit will encourage improvements to Route 2 stops and sidewalks that serve high-use destinations.

From: VEENSTRA, Henrietta
To: Tyson Baker
Subject: RE: Tyson Baker shared the folder "External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" with you
Date: Thursday, July 18, 2024 1:19:45 PM
Attachments: image002.png
image004.png
image006.png
image007.png
image009.png
image010.png

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Hello Tyson

The new school will be served out of the Sechelt Post Office.

Thank you

Henrietta Veenstra
Delivery Services Officer| Canada Post
henrietta.veenstra@canadapost.ca
Unit 153 5940 Ferguson Road
Richmond, BC V7B 0B1

DELIVERY STANDARDS MANUAL

From: Tyson Baker <TBaker@sechelt.ca>
Sent: July-17-24 2:54 PM
To: VEENSTRA, Henrietta <henrietta.veenstra@canadapost.postescanada.ca>
Subject: Tyson Baker shared the folder "External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" with you

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Report Suspicious

Tyson Baker shared a folder with you

Hi there,

You're comments are being requested for the subject application.

External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)

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<!--[if !vml]--> Open <!--[endif]-->

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From:	Building Department
To:	Tyson Baker; Building Department; DevEng
Cc:	Meghan Lee
Subject:	RE: Referral: 3360-20-2024 - Medusa Street (French School District No. 93)
Date:	Wednesday, July 17, 2024 2:17:49 PM
Attachments:	image001.png

Hi Tyson,

1. The Fire Department Access Route must conform to 3.2.5.6. of the 2024 BC Building Code.

2. As the Building will rely on retaining walls for access and egress, professional design complete with Letters of Assurance are required for that.

3. They should consider at this time the means of egress from the exits to the public thoroughfare.

That's all for now!

James

From: Tyson Baker <TBaker@sechelt.ca>
Sent: Wednesday, July 17, 2024 2:05 PM
To: Building Department <BuildingDept@sechelt.ca>; DevEng <DevEng@sechelt.ca>
Cc: Meghan Lee <mlee@sechelt.ca>
Subject: Referral: 3360-20-2024 - Medusa Street (French School District No. 93)

Hi there,

Your comments are being requested for the above subject application. Please see link below:

Referral: "M:\3360 Rezoning\3360-20-2024\3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa)\Referrals\DEVELOPMENT APPLICATION REFERRAL.pdf"

Kindly,

District of SECHELT

Tyson Baker, B.Pl.

Senior Development Planner

Office 604-885-1986 | Direct 604-740-8459

PO Box 129 | 2nd Floor, 5797 Cowrie St. | Sechelt, BC | V0N 3A0

Outlook

FW: [External Email] - Re: 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" - Fortis Property Referral #2024-913 - Due Aug 14 - Sechelt

From Montgomery, Brandon <brandon.montgomery@fortisbc.com>
Date Mon 2024-08-12 4:09 PM
To Planning <Planning@Sechelt.ca>
Cc Tyson Baker <TBaker@sechelt.ca>

7 attachments (17 MB)

3. Applicant Submission Letter.pdf; 4. Engineering Design Package.pdf; 5. Environmental Site Assessment.pdf; 6. Geotechnical Report.pdf; DEVELOPMENT APPLICATION REFERRAL - EXTERNAL.pdf; 1. Location Map.pdf; 2. Site Plan.pdf;

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Hello,

There is no conflict with the proposed development and FortisBC. We have an existing gas main on the north side of Dungeness Pl that can be connected to if the development requires a natural gas service.

Thanks!

Brandon Montgomery
Planning and Design Technologist
Nanaimo, BC
Office: 250-751-8336
brandon.montgomery @fortisbc.com

FORTIS BC

From: Tyson Baker <TBaker@sechelt.ca>
Sent: Thursday, July 25, 2024 4:00 PM
To: Montgomery, Brandon <brandon.montgomery@fortisbc.com>
Subject: [External Email] - Re: 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" - Fortis Property Referral #2024-913 - Due Aug 14 - Sechelt

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Hi Brandon,

Please see attached.

Kindly,

Tyson Baker, B.PI.

Senior Development Planner

Office 604-885-1986 | Direct 604-740-8459

PO Box 129 | 2nd Floor, 5797 Cowrie St. | Sechelt, BC | V0N 3A0

From: Montgomery, Brandon <brandon.montgomery@fortisbc.com>
Sent: July 23, 2024 2:18 PM
To: Tyson Baker <TBaker@sechelt.ca>
Subject: RE: 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" - Fortis Property Referral #2024-913 - Due Aug 14 - Sechelt

Hi Tyson,

Could you please send me the files/drawings for this? I don't have permission to open the link.

Thanks,

Brandon Montgomery
Planning and Design Technologist
Nanaimo, BC
Office: 250-751-8336
brandon.montgomery @fortisbc.com

From: Referrals <Referrals@fortisbc.com>
Sent: Thursday, July 18, 2024 9:56 AM
To: Montgomery, Brandon <brandon.montgomery@fortisbc.com>
Subject: 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" - Fortis Property Referral #2024-913 - Due Aug 14 - Sechelt

Fortis Property Referral #2024-913

Please review the attached / below and provide your comments directly to planning@sechelt.ca by **August 14, 2024**.

If a Statutory Right of Way is required, please copy referrals@fortisbc.com in on your response so that we may update our records.

Thank you,

Liz Dell
Lands Department, Property Services Assistant
16705 Fraser Highway | Surrey BC V4N 0E8
P: 778-578-8038 / referrals@fortisbc.com

From: Tyson Baker <TBaker@sechelt.ca>
Sent: Wednesday, July 17, 2024 2:54 PM
To: Referrals <Referrals@fortisbc.com>
Subject: [External Email] - Tyson Baker shared the folder "External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" with you

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Hi there,

You're comments are being requested for the subject application.

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RE: [pims.scrd.ca #29045] Tyson Baker shared the folder "External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" with you

From Emilia Walton via RT <pims@is.scrd.ca>
Date Thu 2024-08-08 11:53 AM
To Tyson Baker <TBaker@sechelt.ca>

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That worked, thanks. It appears the school would be at the top of Medusa St and therefore get a Medusa St address. No issues there.

Emilia Walton, GIS Coordinator

Sunshine Coast Regional District

1975 Field Road, Sechelt, BC V7Z 0A8

Phone: 604-885-6800, ext 6412

From: Tyson Baker via RT <pims@is.scrd.ca>
Sent: Thursday, August 8, 2024 10:00 AM
Subject: Re: [pims.scrd.ca #29045] Tyson Baker shared the folder "External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" with you

Ticket URL: https://rt4.scrd.ad/pims/Ticket/Display.html?id=29045

Aye... Technology...

Okay, try this link for the School site:

External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)

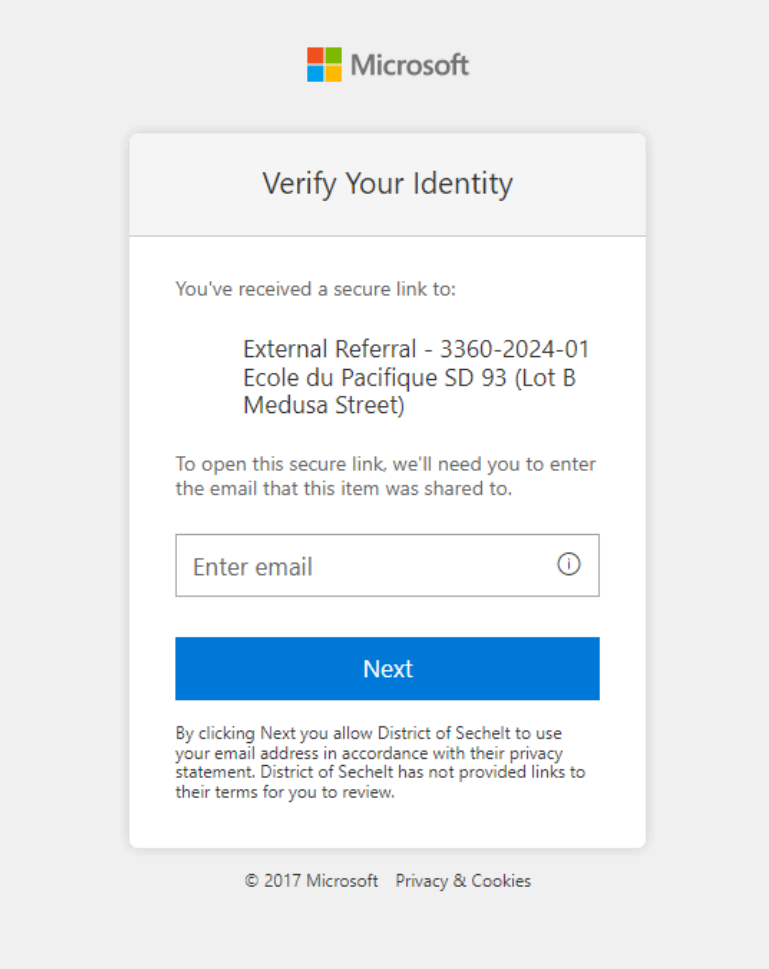
Kindly,

Tyson Baker, B.Pl.
Senior Development Planner

Office 604-885-1986 | Direct 604-740-8459
PO Box 129 | 2nd Floor, 5797 Cowrie St. | Sechelt, BC | V0N 3A0

From: Emilia Walton via RT <pims@is.scrd.ca>
Sent: August 8, 2024 9:56 AM
To: Tyson Baker <TBaker@sechelt.ca>
Subject: RE: [pims.scrd.ca #29045] Tyson Baker shared the folder "External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" with you

Yes the Shoal Way link works great. Just can't through to the Ecole du Pacifique one. I get this:



Emilia Walton, GIS Coordinator

Sunshine Coast Regional District

1975 Field Road, Sechelt, BC V7Z 0A8

Phone: 604-885-6800, ext 6412

From: Tyson Baker via RT <pims@is.scrd.ca>
Sent: Thursday, August 8, 2024 9:53 AM
Subject: Re: [pims.scrd.ca #29045] Tyson Baker shared the folder "External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" with you

Ticket URL: https://rt4.scrd.ad/pims/Ticket/Display.html?id=29045

Hi Emilia,

I seem to be having issues with OneDrives.

Can you try this link and let me know if it works? External Referral - 3360-2024-04 - 5926 Shoal Way

If not, I will have to get IT support.

Kindly,

Tyson Baker, B.Pl.
Senior Development Planner

Office 604-885-1986 | Direct 604-740-8459
PO Box 129 | 2nd Floor, 5797 Cowrie St. | Sechelt, BC | V0N 3A0

From: Emilia Walton via RT <pims@is.scrd.ca>
Sent: August 8, 2024 9:20 AM
To: Tyson Baker <TBaker@sechelt.ca>
Subject: [pims.scrd.ca #29045] Tyson Baker shared the folder "External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" with you

Hi Tyson,

I wasn't able to access these files. I tried with our mapping email (mapping@scrd.ca) and mine (emilia.walton@scrd.ca). I was able to access the referral that came through for the Shoal Way project (We have no comments on civic addressing for that one).

If this Ecole du Pacifique one doesn't involve new roads or multi-residential, I don't think we'd have any comment about civic addressing.

On Wed Jul 17 15:00:32 2024, TBaker@sechelt.ca wrote:

> Tyson Baker shared a folder with you

Hi there,

You're comments are being requested for the subject application.

External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)

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Emilia Walton, GIS Coordinator
Sunshine Coast Regional District
1975 Field Road, Sechelt, BC V7Z 0A8
Phone: 604-885-6800, ext 6412

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Re: Tyson Baker shared the folder "External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" with you

Steven Achterberg | Deputy Chief of Prevention | Sechelt Fire Department <s.achterberg@secheltfire.ca>

Mon 2024-07-22 8:46 AM

To:Tyson Baker <TBaker@sechelt.ca>

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Mr. Baker,

The Sechelt Fire Department has reviewed the following submitted OCP and Rezoning application:

APPLICATION NO. 3360-2024-01

APPLICANT: Craig Burns – Principle Architecture

SITE ADDRESS: Lot B District Lot 1331 Plan 18108 PID: 007-230-516

DATE: May 23, 2024

PURPOSE OF APPLICATION: To redesignate the OCP land use from Multi-Family Mixed Residential to Civic Institutional & Utilities and to rezone the subject property from CD3 (Seniors Lodge) to CC-1 (Community & Civic) with the intent to allow the construction of a new school.

COMMENTS: The Sechelt Fire Department does not have any additional comments regarding this application.

Regards,

Steven Achterberg, LAFC, CFEI, CFPE
Deputy Chief of Prevention

Phone 604-885-7017 ext 107 **Mobile:** 604-741-2785
Web secheltfiredepartment.ca
Email s.achterberg@secheltfire.ca
B944 – 5525 Trail Ave, Sechelt, BC V0N 3A0

From: Tyson Baker <TBaker@sechelt.ca>
Sent: Wednesday, July 17, 2024 2:54 PM
To: Steven Achterberg | Deputy Chief of Prevention | Sechelt Fire Department <s.achterberg@secheltfire.ca>
Subject: Tyson Baker shared the folder "External Referral - 3360-2024-01 Ecole du Pacifique SD 93 (Lot B Medusa Street)" with you

Tyson Baker shared a folder with you

Hi there,

You're comments are being requested for the subject application.

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Outlook

SNR24166.01- District of Sechelt - OCP & Zoning Amendment Application Referral - Ecole Du Pacifique (3360-2024-01)

From Russell Paris <rparis@shishalh.com>
Date Fri 2024-08-30 1:55 PM
To Tyson Baker <TBaker@sechelt.ca>
Cc Jane Newlands <jnewlands@shishalh.com>

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ʔiy te kwayel (good afternoon),

I am writing in response to the Development Application Referral for the OCP and zoning bylaw amendment for the land legally described as Lot B District Lot 1331 Plan 18108 PID: 007-230-516 5397, within shíshálh *swiya* (world, birthplace, lands, "Territory"), to allow the construction of a new school, our file SNR24151.01. Please refer to this unique file number in the subject line of all correspondence. This application is being reviewed following the shíshálh Nation Lands and Resources Decision-Making Policy. If you have not done so already, Chief and Council require you and the Proponent to closely read this policy.

We note the following questions and concerns:

- **Preliminary Field Reconnaissance**

  Due to the extremely high concentration of recorded and unrecorded archaeological sites in the area, the shíshálh Nation strongly recommend an archaeological Preliminary Field Reconnaissance (PFR) for this application. PFR is a surface inspection of the area by a trained archaeological professional prior to the commencement of proposed development activities. The PFR study is designed to assess the archaeological potential of the area and inspect for archaeological materials such as stone tools, shell midden, pictographs, and culturally modified trees. It is a surface inspection only; no ground disturbance is involved. A PFR Report will either recommend that no further archaeological survey is required prior to proposed development activities or will clearly outline the level of archaeological study required to proceed with development activities.

  Please direct the Proponent to contact our Rights and Title department via lilxmit@shishalh.com and CC heritage@shishalh.com and rparis@shishalh to commission the PFR.

- **Nesting Bird Window**

  The federal *Migratory Birds Convention Act* (1994) and the provincial *Wildlife Act* (1996) prohibit the disturbance or destruction of active nests and eggs. Tree-cutting and vegetation-clearing should be avoided during the critical bird breeding window of March 1st to August 31st. This general nesting period covers most federally protected migratory bird species; however, it may not include the complete nesting period for all species under provincial jurisdiction. If avoidance of tree-cutting and vegetation-clearing during this window is not possible, a nest survey by a

Registered Professional Biologist (RPBio) should be conducted 24-48 hrs in advance to identify active bird nests and apply appropriate buffers and timing windows. Please respond with the Proponent's assurances that tree-cutting and vegetation-clearing will take place outside of the above bird breeding window. If that is not possible, please provide written assurance that an RPBio will be on site to identify and buffer active nests prior to development.

- **Protection of nesting and roosting raptors and *smeḵw'a* (heron)**

  The Proponent is expected to provide details regarding their approach to identifying and ensuring the protection of nesting and roosting birds, including raptors and *smeḵw'a* (heron). Completion of a nest survey by a Qualified Environmental Professional (QEP) is strongly recommended to safeguard against impacts to *smeḵw'a* (heron) and raptors including *sx̱ix̱iwenik̲* (owls), *k̲'eyk̲'aykw* (eagles), *sts'ixwts'ixw* (osprey), etc. Please ask the Proponent to respond with details of the approach.

ʔulnumschxw (Thank you),

shíshálh NATION

Russell Paris (he/him)
Implementation Coordinator, Rights and Titles Department
Stewardship and Territorial Land Management Division
5545 Hwy. 101
BC, V0N 3A0
rparis@shishalh.com
www.shishalh.com
Toll Free: 1-866-885-2275
(778) 726-3273

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Sunshine Coast Regional District
1975 Field Road
Sechelt, British Columbia
Canada V7Z 0A8

P 604-885-6800
F 604-885-7909
Toll free 1-800-687-5753

info@scrd.ca
www.scrd.ca

2025-05-15

District of Sechelt
2nd Floor, 5797 Cowrie Street
PO Box 129, Sechelt, BC V0N 3A0

Re: Infrastructure Referral Comments
Reference No: 3360-2024-01
Folio No: **570.00325.010**

Please be advised that the subject property is located within the Regional Water Service Area, and as such the Sunshine Coast Regional District (SCRD) can provide water for the proposed development. As per the Local Government Act and SCRD Bylaw 693, a Development Cost Charge (DCC) is required to be paid in full by certified cheque to the District of Sechelt on behalf of the Sunshine Coast Regional District prior to issuance of final development approval. Floor plans must be provided to the SCRD at time of building permit application for the calculation of DCCs.

The SCRD requests detailed hydraulic modelling to assess the impacts of the development on the existing water system. If pressure zone 1 does not meet the water pressure and/or flow requirements of the development, a tie-in to pressure zone 2 is permissible with SCRD approval. A Right of Way (RoW) will be required for any SCRD watermains constructed on the property. All water usage, except for fire suppression, must be metered. Detailed engineering drawings of the watermain and associated appurtenances as well as mechanical drawings illustrating the meter installation(s) will need to be reviewed and approved by the SCRD prior to building permit approval.

The applicant is requested to contact the SCRD to discuss the provisions of water servicing and hydraulic modelling.

Sunshine Coast Regional District | Utility Engineering
Phone: 604.885.6800
Email: utility.engineering@scrd.ca
Website: www.scrd.ca

That additional funding for the Wakefield Road Culvert Replacement project in the amount of $300,000 be approved for a total project cost of $1,182,238.00 with funding to come from the Growing Communities Fund; and

That the Wakefield Road Culvert Replacement contract be awarded to NB Contracting LTD. in the amount of $864,366.88 + GST; and that the Director of Engineering and Operations and the Corporate Officer be authorized to sign the contract.

CARRIED

6. BYLAWS

6.1 Official Community Plan and Zoning Amendment for École du Pacifique

Council received a request for an Official Community Plan Amendment, and a Zoning Amendment to allow for the construction of a new Francophone Educational Facility.

During discussion it was noted:

- The proposed Francophone facility would offer primary and secondary education, along with a child care centre.
- Statistics Canada projects around 200 Francophone students within ten years.
- In depth traffic and geotechnical studies are expected as the project progresses.

a. For First Reading

Res. No. 2024-8A-05

Moved/ Seconded

That Official Community Plan Amendment Bylaw No. 492-37, 2024 be read a first time this 7th day of August 2024; and

That Council consider Official Community Plan Amendment Bylaw No. 492-37, 2024 in conjunction with the District of Sechelt Financial Plan and Waste Management Plan, pursuant to Section 477 of the Local Government Act; and

That Council refer Official Community Plan Amendment Bylaw No. 492-37, 2024 to relevant organizations for comment as part of early and on-going engagement, pursuant to Section 475 of the Local Government Act and Council Policy 3.3.7 Official Community Plan Consultation; and

That Zoning Amendment Bylaw No. 580-14, 2024 be read a first time this 7th day of August 2024; and

That prior to consideration of adoption, the applicant shall:

a. Enter into a section 219 covenant to be registered on the property title to require a landscape plan and cost estimate from a qualified professional to the satisfaction of the District, be provided prior to the issuance of a Building Permit.

CARRIED

7. MINUTES OF PREVIOUS MEETINGS

7.1 Minutes of the July 17, 2024 Regular Council Meeting

Res. No. 2024-8A-06

Moved/ Seconded

That the Minutes of the July 17, 2024 Regular Council Meeting be adopted.

CARRIED

7.2 Minutes of the July 24, 2024 Regular Council to Closed Meeting

Res. No. 2024-8A-07

Moved/ Seconded

That the Minutes of the July 24, 2024 Regular Council to Closed Meeting be adopted.

CARRIED

OPPOSED: Mayor Henderson

7.3 Minutes of the July 19, 2024 Special Council to Closed Meeting

Res. No. 2024-8A-08

Moved/ Seconded

That the Minutes of the July 19, 2024 Special Council to Closed Meeting be adopted.

CARRIED

7.4 Minutes of the July 10, 2024 Regular Council to Closed Meeting

Res. No. 2024-8A-09

Moved/ Seconded

That the Minutes of the July 10, 2024 Regular Council to Closed Meeting be adopted.

CARRIED

8. BUSINESS ARISING FROM THE MINUTES

District of SECHELT

REQUEST FOR DECISION

TO:	Council	**MEETING DATE:**	August 7, 2024
FROM:	Tyson Baker, Senior Development Planner		
SUBJECT:	**Official Community Plan Amendment and Zoning Amendment for École du Pacifique School District 93**		
FILE NO:	3060-20-2024		

RECOMMENDATIONS

1. **That Official Community Plan Amendment Bylaw No. 492-37, 2024 be read a first time;**
2. **That Council consider Official Community Plan Amendment Bylaw No. 492-37, 2024 in conjunction with the District of Sechelt Financial Plan and Waste Management Plan, pursuant to Section 477 of the *Local Government Act;***
3. **That Council refer Official Community Plan Amendment Bylaw No. 492-37, 2024 to relevant organizations for comment as part of early and on-going engagement, pursuant to Section 475 of the *Local Government Act* and Council Policy 3.3.7 Official Community Plan Consultation;**
4. **That Zoning Amendment Bylaw No. 580-14, 2024 be read a first time;**
5. **That prior to consideration of adoption, the applicant shall:**
    a. **Enter into a section 219 covenant to be registered on the property title to require a landscape plan and cost estimate from a qualified professional to the satisfaction of the District, be provided prior to the issuance of a Building Permit.**

PURPOSE

To present Council with a rezoning application for a property legally described as Lot B District Lot 1331 Plan 18108 for a new school consisting of rooms for daycare, preschool, elementary and secondary, for approximately 200 students. Official Community Plan (OCP) and Zoning Bylaw amendment bylaws for first reading are attached for Council's consideration.

OPTIONS

1. Defer the application pending additional information as directed.
2. Reject the application.

DISCUSSION

Summary

The applicant, on behalf of Conseil Scolaire Francophone de la Colombie-Britannique (School District No. 93) would like to amend the OCP and Zoning Bylaw to allow for a new school site on the subject property. The proposed school would be operated by School District No. 93 (Francophone) and would have enough space for approximately 200 pupils consisting of between daycare to secondary level education which can be summarized in *Table 1 – Student Demographic Analysis*. The subject property is located within a predominantly residential neighbourhood just west of the town centre. Additionally, the subject property is located directly north of Chatelech Secondary School. School District No. 93 has approached School District No. 46 regarding the ability to share the playfields on Chatelech Secondary School.

The proposed school would be accessed from Medusa Street with parking, bus loop and pick up and drop off areas located in front of the school. Outdoor play areas would be located adjacent to the bus loop abutting the school while a large play field would be located behind the school. Lot grading will likely be required for areas in the proposed playfield, bus loop and parking areas.

Education Level	Number of Classrooms	Number of Pupils
Infant/Toddler Childcare	1	12
Pre-Kindergarten Childcare	1	24
Kindergarten	1	20
Elementary	4	100
Secondary	2	50
Total	**9**	**206**

Table 1 – Student Demographic Analysis

Overall, a new school could contribute to the well-being of the community by providing additional spaces for children of all ages to attend, specifically for those seeking language acquisition beyond English which may be attractive to certain demographics. Furthermore, the addition of the school would allow for increased greenspace and assets such as a field that could be used by the community outside of instruction hours. The development is proposing approximately 36 childcare spaces which will contribute to needed childcare spaces within Sechelt. Furthermore, childcare spaces must also comply with provincial government regulations for childcare operations that impose a variety of conditions including indoor and outdoor space requirements.

This proposed development would be exempt from any amenity contributions as it is a civic use. Additionally, this application is not subject to a development permit for form and character as institutional uses are exempt from being within a development permit area as per section 488 of the *Local Government Act.* However, the application can go to the Advisory Planning Commission for general review and feedback on the preliminary design should Council wish to do so.

Figure 1 – Subject Property

Legislative Context

Because the proposal is not consistent with the Official Community Plan (OCP), an OCP amendment is required to change the land use designation to permit such a use. A public hearing will be required as per section 464 of the *Local Government Act*. Public Notice will be required prior to the commencement of a Public Hearing.

Background

Table 1 – Application Background

Applicant	Craig Burns (Principle Architecture)
Owner	Conseil Scolaire Francophone de la Colombie-Britannique (School District No. 93)
Civic Address	Not Applicable
Legal Address	Not Applicable
Size of Properties	20,044.30 m^2
OCP Designation	Multi-Family Mixed Residential
Zoning Designation	CD-3 – Seniors Lodge
DP Areas	DPA 7 - Multiple Family Residential

POLICY AND BYLAW IMPLICATIONS

Official Community Plan

The proposed development of a school is not a supported use in the Multi-family Mixed Residential designation. Therefore, an amendment to the Official Community Plan (OCP) will be required to change the designation from Multi-family Mixed Residential to Civic Institutional Utilities in order to allow for the proposed development.

Zoning Bylaw

The property is currently zoned Comprehensive Development 3 – Seniors Lodge (CD-3) and would need to be rezoned to Community and Civic 1 (CC-1) which permits the use of a school. The preliminary site plan does appear to meet the setback, height, lot coverage and other applicable regulations as provided in the CC-1 zone, such as parking. Should the application proceed staff will work with the applicants to seek zoning compliance or possibly site-specific regulations if needed.

There is also a housing agreement bylaw registered on title respecting a former development. This agreement will need to be removed prior to consideration of adoption of a bylaw amendment.

SUSTAINABILITY PLAN IMPLICATIONS

This development would align with the following goals of the Integrated Community Sustainability Plan

1. Social Sustainability and Community Well Being
2. Economic Sustainability
6. Sustainable Community Growth and Development

STRATEGIC PLAN IMPLICATIONS

1. Effective Growth

COMMUNICATIONS

Public Notice and a Public Hearing would be required for this application at a later date, subject to Council' support for the application. If approved by Council a Public Hearing would be advertised in the newspaper, District website and social media. Referrals for the application were sent on July 17, 2024.

Respectfully submitted,

Tyson Baker
Senior Development Planner

Attachments:

1 – Site Plan

2 – OCP Amendment Bylaw No. 492-37, 2024

3 – Zoning Amendment Bylaw No. 580-14, 2024

1 Site
Scale: 1:1200

0 20 40 60 m

N

School Requirements

Department	Classes	Students
Kindergarten	1	20
Elementary	4	100
Secondary	2	50
I/T Childcare	1	12
PK Childcare	1	24
Totals		**206**

Building Area	
DAS Floor Area	2,936 m²
Childcare Floor Area	380 m²
Total Floor Area	**3,316 m²**

Building Height (2 storeys) **+/- 8 m**

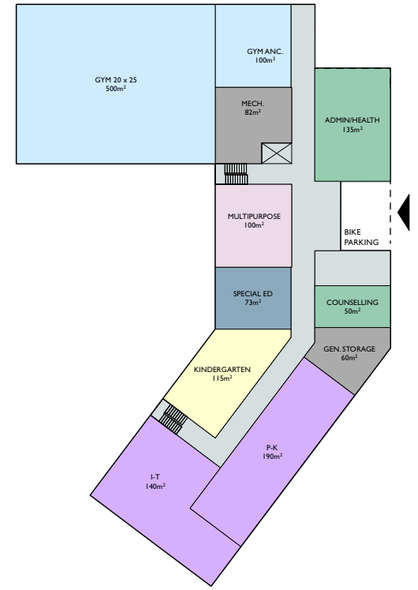
Site Area		
Total Site Area	20,063 m²	(2.0 Ha)
Zoning	CD-3	
Lot Coverage	9.6%	

Parking (Zoning Bylaw)	% of Total Enrollment	% of Enrollment x Total Floor Area	Formula (per bylaw)	**Stalls**
Kind. /Elementary	71%	2,072m²	(1/90 m²)	24
Secondary	29%	864m²	(1/65 m²)	14
NLC: I/T and Pre-K			(1/5 kids)	8
Total				**46**

Notes

1. Property is currently zoned CD-3 (Seniors Lodge). Development of a school will likely require rezoning.
2. Setbacks based on CC-1 Zone requirements (Community and Civic One Zone, Sechelt Bylaw 580, Zoning)
3. Maximum permitted grade for emergency vehicle access route is 1:12.5 (8%) over minimum 15m. Grading and retaining will be required to meet requirements.
4. School program is preliminary, based on projections and ministry area standards, and is subject to change.
5. Discussions are ongoing between the CSF and SD46 regarding potential sharing of Chatelech's playfields

Steep area of site requiring retaining and significant regrading.



LEVEL 1 - 1,898 m²

LEVEL 2 - 1,418 m²

DISTRICT OF SECHELT
Bylaw No. 492-37, 2024

Being a bylaw to amend District of Sechelt Official Community Plan Bylaw No. 492, 2010 for Lot B District Lot 1331 Plan 18108.

WHEREAS the District of Sechelt deems it necessary to amend the District of Sechelt Official Community Plan Bylaw No. 492, 2010;

NOW THEREFORE, the Council of the District of Sechelt in open meeting assembled enacts as follows:

TITLE

1. This bylaw may be cited for all purposes as, "Official Community Plan Amendment Bylaw No. 492-37, 2024".

AMENDMENTS

2. That LOT B DISTRICT LOT 1331 PLAN 18108 on Medusa Street, as shown on the plan attached to and forming part of this bylaw as Schedule A, be redesignated from Multifamily Mixed Residential to Civic Institutional Utilities.
3. Schedule C1 of Official Community Plan Bylaw No. 492, 2010 be amended to reflect the land use designation and boundaries brought into force by this bylaw.

PROVISIONS

4. If any section, subsection or clause of this bylaw is for any reason held to be invalid by the decision of a court of competent jurisdiction, such decision will not affect the validity of the remaining portions of this bylaw.
5. That Schedule A is attached to and forms part of this bylaw.

READ A FIRST TIME THIS	DAY OF	2024
READ A SECOND TIME THIS	DAY OF	2024
PUBLIC HEARING HELD THIS	DAY OF	2024
READ A THIRD TIME THIS	DAY OF	2024
ADOPTED THIS	DAY OF	2024

_____ _____

Mayor **Corporate Officer**

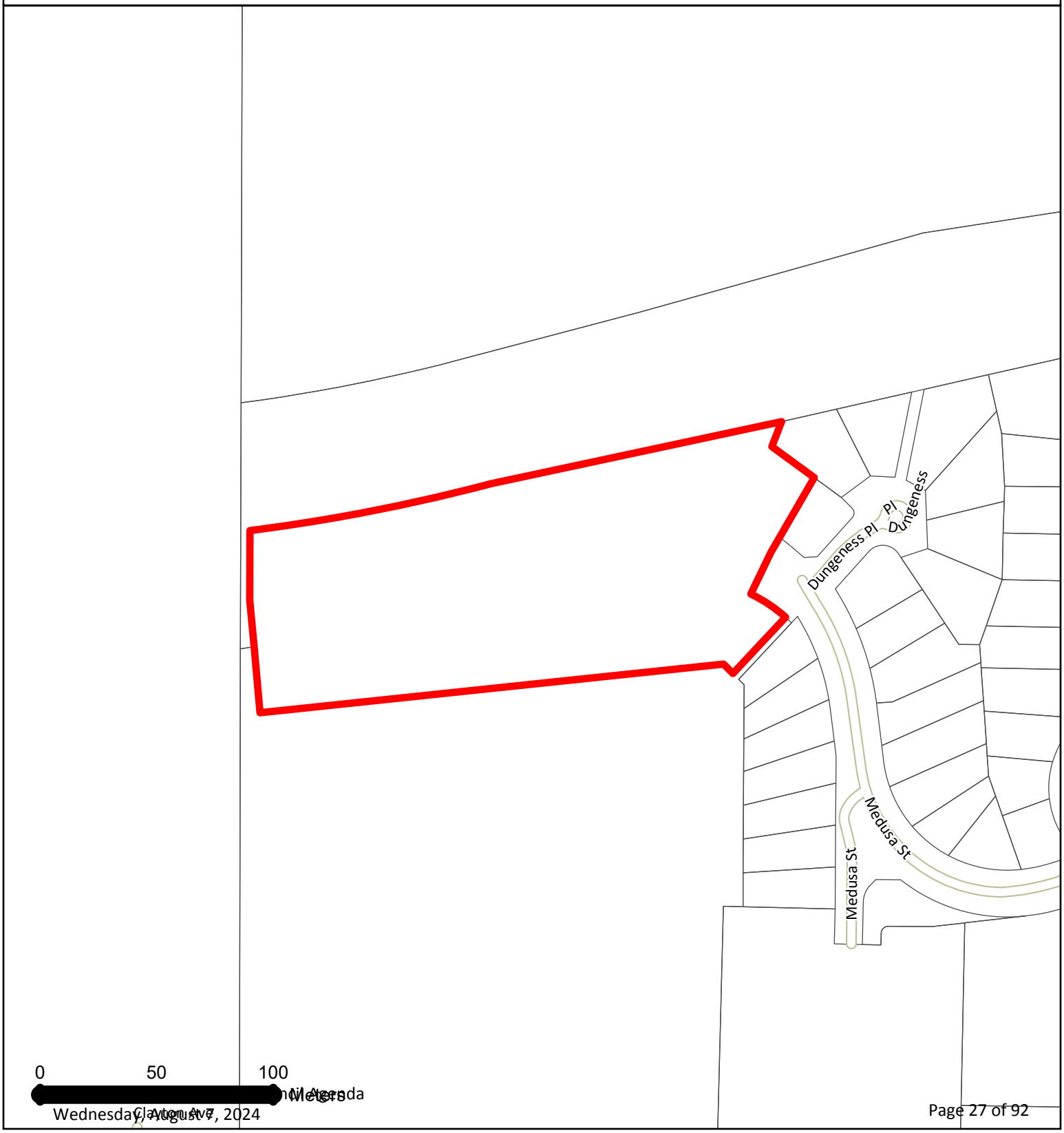
District of SECHELT

Schedule A
Amendment Bylaw No. 492-37 2024

CIVIC: NO ASSIGNED ADDRESS
LEGAL: LOT B DISTRICT LOT 1331 PLAN 18108
PID: 007-230-516

Subject Parcel

N



DISTRICT OF SECHELT
Bylaw No. 580-14, 2024

A bylaw to amend District of Sechelt Zoning Bylaw No. 580, 2022 for Lot B District Lot 1331 Plan 18108.

WHEREAS the District of Sechelt deems it necessary to amend the District of Sechelt Zoning Bylaw No. 580, 2022;

AND WHEREAS the proposed rezoning is consistent with Official Community Plan Bylaw No. 492, 2010;

NOW THEREFORE, the Council of the District of Sechelt in open meeting assembled enacts as follows:

TITLE

1. This bylaw may be cited for all purposes as "Zoning Amendment Bylaw No. 580-14, 2024".

AMENDMENTS

2. That LOT B DISTRICT LOT 1331 PLAN 18108 on Medusa Street, as shown on the plan attached to and forming part of this bylaw as Schedule A, be rezoned from CD3 (Comprehensive Development 3 – Seniors Lodge) to CC1 (Community and Civic 1).
3. That Zoning Designation Schedules of Zoning Bylaw No. 580, 2022 (Official Zoning Maps Schedule A1) be amended to reflect the zoning designation and boundaries brought into force by this bylaw.

PROVISIONS

4. If any section, subsection or clause of this bylaw is for any reason held to be invalid by the decision of a court of competent jurisdiction, such decision will not affect the validity of the remaining portions of this bylaw.
5. That Schedule A is attached to and forms part of this bylaw.

READ A FIRST TIME THIS	DAY OF	2024
READ A SECOND TIME THIS	DAY OF	2024
PUBLIC HEARING HELD THIS	DAY OF	2024
READ A THIRD TIME THIS	DAY OF	2024
ADOPTED THIS	DAY OF	2024

_____ Mayor

_____ Corporate Officer

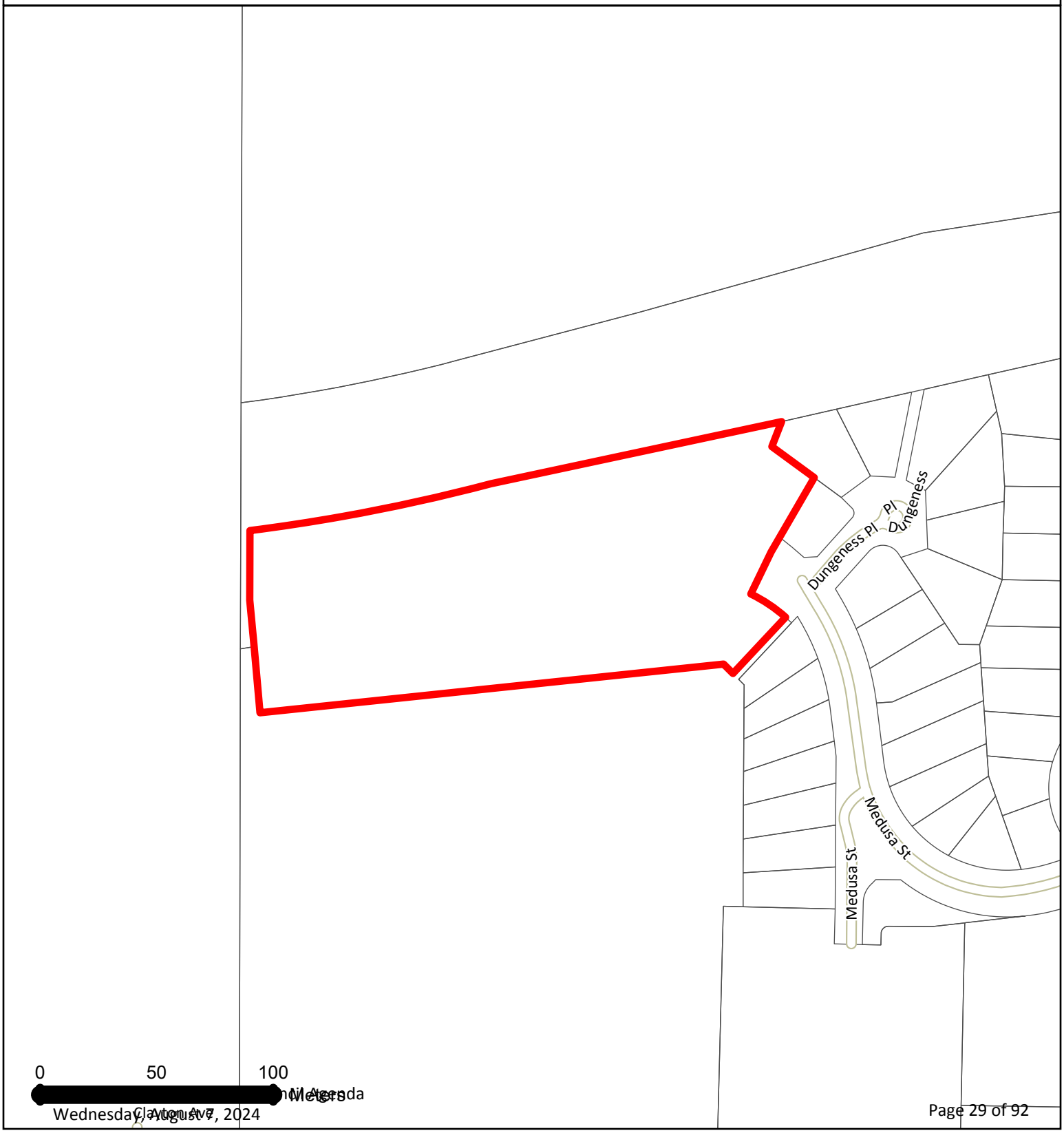
District of SECHELT

Schedule A
Amendment Bylaw No. 580-14 2024

CIVIC: NO ASSIGNED ADDRESS
LEGAL: LOT B DISTRICT LOT 1331 PLAN 18108
PID: 007-230-516

Subject Parcel

N



Res. No. 2025-4D-09

Moved/ Seconded

That Zoning Amendment Bylaw No. 580-09, 2023 be considered for adoption.

CARRIED

OPPOSED: Councillors McLauchlan and Shepherd

a. Zoning Amendment Bylaw No. 580-09, 2023

Res. No. 2025-4D-10

Moved/ Seconded

That Zoning Amendment Bylaw No. 580-09, 2023 be adopted April 16, 2025.

CARRIED

OPPOSED: Councillors McLauchlan and Shepherd

6.2 Official Community Plan and Zoning Amendment for École du Pacifique School District 93

Staff informed Council of an error in the report - the lot size should have been listed as 2,110 square metres.

A member of Council noted that increasing the radius for public notification from 100m to 250m would include more properties that could be impacted by traffic changes in the area.

Council discussed neighbourhood fit and parking.

Res. No. 2025-4D-11

Moved/ Seconded

That the area for public notification radius be increased from 100m to 250m.

CARRIED

Res. No. 2025-4D-12

Moved/ Seconded

1. That Council consider second reading of Official Community Plan Amendment Bylaw No. 492-37, 2024, as amended.
2. That Council consider second reading of Zoning Amendment Bylaw No. 580-14, 2024, as amended.

3. That staff be authorized to schedule a Public Hearing for Official Community Plan Amendment Bylaw No. 492-37, 2024 and Zoning Amendment Bylaw No. 580-14, 2024.

4. That prior to consideration of adoption, the applicant shall:

    a. Discharge the existing Housing Agreement on Title.

    b. Enter into a Land Exchange Agreement which outlines the road closure and disposition process, including.

        i. Closure of a portion of an existing road dedication.

        ii. Dedicate a portion of the property to allow the extension of Medusa Street.

    c. Dedicate a portion of the property along the western boundary for future pedestrian access.

    d. Register of a Statutory Right of Way in favour of Sunshine Coast Regional District for Water Utilities, if required.

    e. Enter into a section 219 covenant to be registered on the property title to require a landscape plan and cost estimate from a qualified professional to the satisfaction of the District, be provided prior to the issuance of a Building Permit.

    f. Submit a Preliminary Field Reconnaissance (archaeological study).

CARRIED

a. Official Community Plan Amendment Bylaw No. 492-37, 2024

Res. No. 2025-4D-13

Moved/ Seconded

That Official Community Plan Amendment Bylaw No. 492-37, 2024 be read a second time April 16, 2025, as amended.

CARRIED

b. Zoning Amendment Bylaw No. 580-14, 2024 (École du Pacifique)

Res. No. 2025-4D-14

Moved/ Seconded

That Zoning Amendment Bylaw No. 580-14, 2024 be read a second time April 16, 2025, as amended.

CARRIED

6.3 2025 Fees and Charges Amendment Bylaw- Solid Waste Bins

Staff confirmed that this amendment would allow for fees to be charged for replacement of solid waste bins, including new wildlife resistant bins. It was noted that on average six or more replacement bins are requested each year, for varying reasons, including wildlife, damage, or theft. Bins have been serialized so if they are located, they can be returned to the correct house.

Res. No. 2025-4D-15

Moved/ Seconded

That Council consider first, second and third reading of Fees and Charges Amendment Bylaw No. 575-18, 2025.

CARRIED

a. Fees and Charges Amendment Bylaw No. 575-18, 2025

Res. No. 2025-4D-16

Moved/ Seconded

That Fees and Charges Amendment Bylaw No. 575-18, 2025 be read a first, second and third time April 16, 2025.

CARRIED

7. MINUTES OF PREVIOUS MEETINGS

7.1 Minutes of the April 2, 2025 Regular Council Meeting

Res. No. 2025-4D-17

Moved/ Seconded

That the Minutes of the April 2, 2025 Regular Council Meeting be adopted.

CARRIED

District of SECHELT

REQUEST FOR DECISION

TO: Council **MEETING DATE:** April 16, 2025

FROM: Tyson Baker, Senior Development Planner

SUBJECT: **Official Community Plan Amendment and Zoning Amendment for Conseil Scolaire Francophone de la C.-B. School District 93**

FILE NO: 3360-2024-01

RECOMMENDATIONS

1. **That Council consider second reading of Official Community Plan Amendment Bylaw No. 492-37, 2024, as amended.**
2. **That Council consider second reading of Zoning Amendment Bylaw No. 580-14, 2024, as amended.**
3. **That staff be authorized to schedule a Public Hearing for Official Community Plan Amendment Bylaw No. 492-37, 2024 and Zoning Amendment Bylaw No. 580-14, 2024.**
4. **That prior to consideration of adoption, the applicant shall:**
    a. **Discharge the existing Housing Agreement on Title.**
    b. **Enter into a Land Exchange Agreement which outlines the road closure and disposition process, including.**
        i. **Closure of a portion of an existing road dedication.**
        ii. **Dedicate a portion of the property to allow the extension of Medusa Street.**
    c. **Dedicate a portion of the property along the western boundary for future pedestrian access.**
    d. **Register of a Statutory Right of Way in favour of Sunshine Coast Regional District for Water Utilities, if required.**
    e. **Enter into a section 219 covenant to be registered on the property title to require a landscape plan and cost estimate from a qualified professional to the satisfaction of the District, be provided prior to the issuance of a Building Permit.**
    f. **Submit a Preliminary Field Reconnaissance (archaeological study) to the District.**

PURPOSE

To present Council with an amended rezoning and Official Community Plan application for a property legally described as Lot B District Lot 1331 Plan 18108 which now includes a portion of a District road right of way shown in Plan 18108, for a new school designed to accommodate

approximately 200 students including space for daycare, preschool, elementary and secondary education. Following the applicant's public information session, OCP and Zoning Bylaw amendment bylaws are now attached for Council consideration of second reading, as amended. Amendments are required to move from the previously permitted residential use to the proposed school use.

DISCUSSION

Summary

Conseil Scolaire Francophone de la C.-B. School District 93 (SD93) has applied to amend the OCP and Zoning Bylaw to permit a new school site for École du Pacifique on the subject property. On August 7, 2024, Council gave first reading to the OCP and zoning bylaw amendments. Upon receiving first reading for both bylaws, the applicants conducted a Public Information Meeting on October 16, 2024. Approximately 14 members of the public attended the meeting and a presentation given by the applicants. Questions and concerns were raised at the meeting regarding traffic, noise, enrollment, school design, and project timeline. A summary of the meeting is attached to and forming part of this report (Attachment 1).

While many of the questions were related to the activities by the school, there were concerns from the public regarding traffic circulation and perceived congestion. In response, the applicants stated that approximately 80% (160 out of 200) of students would be travelling to school via school bus and would arrive in staggard time intervals while the remaining students would arrive by other means. The Transportation Impact Assessment provided by Bunt & Associates Engineering Ltd., provides a detailed table (Table 1 – Traffic Circulation) regarding the maximum peak hour of vehicle trips in the morning for drop-off and evening pick-up.

Land Use	Units (Students)	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Daycare Centre	36	4	4	8	11	12	23
Elementary School	120	11	9	20	15	17	32
High School	50	6	3	9	7	7	14
Total	206	21	16	**37**	36	36	**69**

Table 1 – Traffic Circulation

To improve traffic circulation in the area and encourage improved transit options in the future, staff recommends that Council support a land exchange. The land exchange would include a requirement that a portion of the property be dedicated as road and a portion of undeveloped road could be traded to the school property. This is different than registering a Road Reservation Agreement as was originally conveyed to Council (Attachment 2).

The reason for the change is because the applicants intend to start development shortly after the application process, if approved. Additionally, the land needed (1,827 m^2) to construct the Medusa Street extension inhibits the minimum area requirements for establishing a school on the parcel, which requires at least 2 hectares which is also the current parcel size. Therefore, to

proceed with the school project, staff have proposed that a portion the existing road right of way, which is much larger than what is required by the District, be exchanged in a 1:1 ratio as shown in Figures 1a & 1b in blue and red hatching below.

Figure 1a – Proposed Land Exchange (Site Plan Overlay)

Therefore, as part of the rezoning application process, staff recommends to Council that the District and the applicant enter into a land exchange agreement that outlines the terms and conditions of the exchange of land; this would involve a portion of the existing road right of way (District owned) located to the north being exchanged on the west and east sides of the property being provided to the District for future street and pedestrian/trail connections. This agreement would then inform the metrics for a future road closure bylaw that would occur after the rezoning process, should Council adopt the zoning and OCP amendment bylaws. The road closure bylaw would be presented to Council in a separate meeting for their consideration.

This connection provides further access points from West Sechelt to downtown and also improves pedestrian and cycling in the area creating more connections beyond Medusa Street.

Furthermore, staff has recommended that a small portion of the property along the western property line be dedicated as part of the land exchange for pedestrian connectivity purposes.

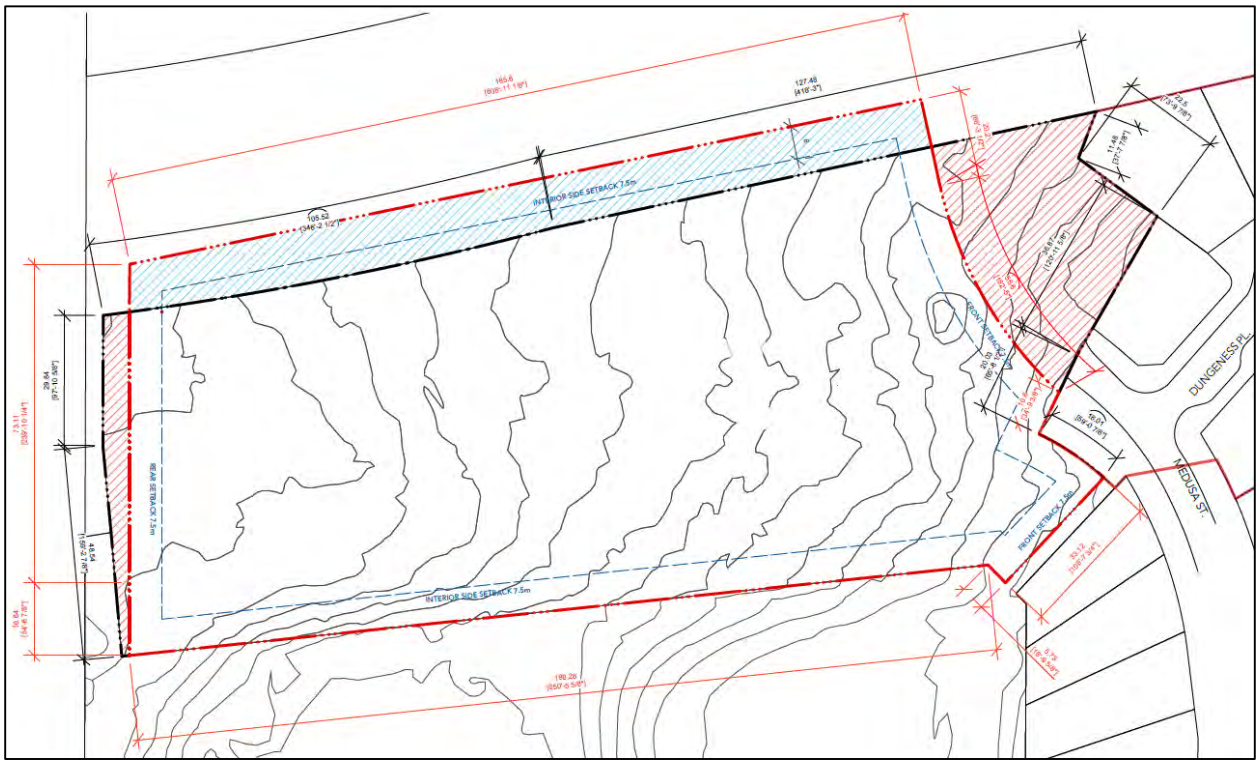


Figure 1b – Proposed Land Exchange (Technical Overlay)

If the proposed land exchange were to be endorsed and approved by Council, a Statutory Right-of-Way may be needed on the property. This would be registered in favour of the Sunshine Coast Regional District (SCRD), located in the blue hatched area in Figures 1a & 1b as the SCRD has existing water lines in this area. Based on the proposed site plan, no structures or buildings would be located in this area. The specifics would be identified in a future servicing agreement for the property.

Legislative Context

An OCP amendment is required to change the land use designation to permit such a use and therefore a public hearing will be required as per section 464 of the *Local Government Act*.

Public Notice will be required prior to the commencement of a Public Hearing. Public Notice will be required prior to the land exchange.

Background

Table 2 – Applicant Information

Applicant	Craig Burns (Principle Architecture)
Owner	Conseil Scolaire Francophone de la Colombie-Britannique (School District No. 93)

Civic Address	Not Applicable
Legal Address	Lot B District Lot 1331 Plan VAP18108
Size of Properties	20,044.30 m^2
OCP Designation	Multi-Family Mixed Residential
Zoning Designation	CD-3 – Seniors Lodge
DP Areas	DPA 7 - Multiple Family Residential

Figure 3 – Subject Property

POLICY AND BYLAW IMPLICATIONS

Official Community Plan

An amendment to the OCP is required to change the designation from Multi-family Mixed Residential to Civic Institutional Utilities to support the proposed school. A portion of the existing road right of way would need to be designated accordingly.

Zoning Bylaw

The property is currently zoned Comprehensive Development 3 – Seniors Lodge (CD-3) and would need to be rezoned to Community and Civic 1 (CC-1) to permit the use of a school. A portion of the existing road right of way would need to be designated accordingly. There is also a housing agreement bylaw registered on title respecting a former development. This agreement will need to be removed prior to consideration of adoption of a bylaw amendment. Like the OCP amendment, a portion of the existing road right of way would need to be rezoned accordingly.

SUSTAINABILITY PLAN IMPLICATIONS

1. Social Sustainability and Community Well Being
2. Economic Sustainability
6. Sustainable Community Growth and Development

STRATEGIC PLAN IMPLICATIONS

1. Effective Growth

COMMUNICATIONS

Should Council grant second reading, a Public Hearing would be required and likely scheduled for May 2025. Notice of the Public Hearing would be mailed out to residences within 100 metres of the subject property as well as posted in the local newspaper and on the District's website.

Respectfully submitted,

Tyson Baker
Senior Development Planner

Attachments:
1 – Public Information Meeting Summary
2 – Site Plan
3 – OCP Amendment Bylaw No. 492-37, 2024
4 – Zoning Amendment Bylaw No. 580-14, 2024

Additional Information available online:

- Traffic Impact Assessment (https://www.sechelt.ca/en/business-and-development/resources/Current-Developments/3360-2024-01/Traffic-Impact-Assessment.pdf)

Conseil scolaire francophone de la Colombie-Britannique

Dans un esprit de réconciliation, nous reconnaissons que notre organisation et nos écoles se trouvent sur les territoires traditionnels des Premiers Peuples de la Colombie-Britannique.

Public Meeting Report
October 16, 2024

Development Application
École du Pacifique - Sechelt

1. Location, time, and duration of the meeting

The public meeting was held at the École du Pacifique Library, located at 5538 Shorncliffe Avenue, Sechelt, BC, on Wednesday, October 16, 2024. The meeting commenced at 6:00 PM and concluded at 7:20 PM.

2. Number of attendees

The meeting was attended by 17 community members, among them Mayor John Henderson of Sechelt. 4 staff members from the Conseil scolaire francophone de la Colombie-Britannique (CSF) and the project architect were also present:

- Craig Burns, Architect, Principle Architecture
- Chafic El Rassi, Director, Capital Projects Office, CSF
- Mélanie Vallières, Principal, École du Pacifique, CSF
- Fariba Daragahi, Assistant Superintendent, CSF
- Nicolas Camargo Coronado, Public Relations Manager, CSF

Only 14 individuals signed the attendance sheet, with three community members, including the Mayor, not signing due to arrival after the beginning of the meeting or early departure.

3. How the meeting was advertised and surrounding property owners notified

The public meeting was advertised using the following methods:

- Local newspaper (Coast Reporter): An ad was published in the print version of the Coast Reporter on October 11, 2024, with additional online and mobile ads running during the weeks of October 7 and October 14, 2024.
- Social media: A Facebook event was created and shared through the École du Pacifique Facebook page.
- Direct mail: Letters were sent to surrounding property owners based on a list provided by the District. These letters included all necessary information as required by the District.
- Signage: The development was sign posted on site on October 4, 2024, and included details about Public Information Meeting date, time and location.

4. Information provided at the meeting

The meeting primarily focused on the proposed development of a new K-12 school on Medusa Street. CSF representatives provided the following key information:

- CSF's mission: The CSF operates 47 schools across 33 communities in British Columbia, serving French-speaking families under Section 23 of the Canadian Charter of Rights and Freedoms. The CSF is committed to providing French-language education to eligible students in BC, offering a unique alternative to the province's anglophone school system.

- Current school in Sechelt: The CSF has had a presence in Sechelt since 1998, with the school currently located in the Trail Building on Shorncliffe Avenue. Secondary students from the catchment area, which includes Sechelt and nearby communities, currently attend Chatelech Secondary School for part of their studies in French and part in English. Most students rely on school bus transportation provided by School District 46.

- Proposed development: In the summer of 2023, the CSF acquired a new site on Medusa Street for the construction of a K-12 school. The CSF is applying for an Official Community Plan (OCP) and Zoning Amendment to change the zoning from CD3 (Seniors Lodge) to CC-1 (Community and Civic 1), which will allow the construction of a public school on the site.

- Projected enrollment: The projected enrollment in 10 years is 120 students for grades K-12 and 20 childcare spaces.

- Proposed capacity: The preliminary proposed capacity is 170 students for the school and 37 childcare spaces. The CSF clarified that these numbers are preliminary, and that capacity differs from projected enrollment.

- Community benefits: The school will serve not only as an educational institution but also as a community resource, offering playgrounds, gymnasium access, and other facilities for community use outside school hours. These community benefits will depend on additional federal and provincial funding for public spaces within the school.

5. Questions raised and major discussion points

Several topics and concerns were raised by the community members during the meeting. These focused primarily on traffic impact, school design and enrollment projections, and the project timeline. CSF staff and architect Craig Burns provided clarifications, emphasizing that this was an early consultation phase.

5.1 Traffic concerns

Traffic congestion and the impact on Medusa Street were primary concerns for the community members. Medusa Street is perceived as a narrow road with limited accessibility, and residents worried that the new school would exacerbate these issues.

- Bus Transportation: CSF representatives explained that this is a small school, and approximately 80% of the students would arrive by school bus, which would significantly reduce traffic from personal vehicles. The buses would use an on-site loading and unloading zone, with staggered arrival times to prevent congestion. A traffic impact analysis is included as part of the project planning.

- Community concerns about noise: Some community members raised concerns about the potential noise from the buses and the overall increase in traffic. A suggestion was made to consider an alternative road to divert traffic away from Medusa Street. Craig Burns noted that while this was not part of the current plan, traffic concerns would be addressed in future consultations with city planners.

- Mayor John Henderson's Input: Mayor Henderson briefly attended the meeting and reassured the audience that the city council had already flagged traffic issues during the first reading of the project. After this intervention, the mayor left the meeting.

5.2 School enrollment projections

Many attendees questioned the student enrollment projections, particularly the feasibility of it in the first 10 years.

- CSF's Response: CSF Capital Projects Office Director explained that the projections were based on regional demographics and trends across other CSF schools, and that the preliminary proposed capacity was designed to allow for future growth.

- Multi-grade classes: Concerns were also raised about the number of classrooms and how multi-grade classes would be managed, particularly for secondary students. CSF staff reassured parents that these concerns would be addressed as the design stages progress, and that the school should have flexible spaces designed to adapt to needs.

5.3 School design and parental involvement

The community expressed concerns about the school design, particularly for secondary students, and whether parents would have input in the process.

- Design Flexibility: Architect Craig Burns emphasized that the design process had not yet begun, and the current meeting was intended to gather feedback on land use. The school's design would prioritize flexibility, ensuring that it could adapt to the needs of the community.

- Parental Input: Some parents felt that their input about the school program was not being fully considered and expressed concern that updates might be provided during the summer when families are typically unavailable. CSF staff reassured parents that they would be actively involved once the design phase begins and reiterated that the purpose of this meeting was to gather preliminary feedback on land use.

5.4 Project timeline and approval process

Several attendees inquired about the timeline for project approval and when they could expect further updates.

- CSF's Response: The rezoning application is the first step in a multi-year process that will eventually lead to design and construction. Throughout this process, starting with rezoning, various aspects of the project—such as traffic and environmental assessment—are thoroughly studied.

5.5 Additional questions

- Childcare Spaces: Community members asked about the inclusion of the 37 childcare spaces capacity in the project. CSF confirmed that funding to deliver childcare spaces will be requested, but that like for the school, the proposed capacity is preliminary and would need to be reviewed and approved by the Ministry of Education and Child Care or other funding partners.

- Cafeteria and multi-purpose space: Some community members asked if the school would have a cafeteria. Craig Burns indicated that this would depend on funding but that multi-purpose spaces were planned for both students and the wider community.

- Geotechnical Studies: Craig Burns confirmed that geotechnical studies had been conducted, ensuring that the site was structurally suitable for construction.

5.6 Conclusion

The meeting concluded at 7:20 PM, with assurances from CSF staff that community feedback would be considered in future stages of the project. Further public hearings and consultations will be held to address specific concerns.

Proposed Site Plan - Revised (w/ School)

Attachment 2

CSF École Du Pacifique
Sechelt
3/3/2025

1 Site
Scale: 1:1200

0 20 40 60 m

N

Original Site Data		
Total Site Area	20,063 m²	(2.0 ha)
Current Zoning	CD-3	
Future Zoning	CC1	
Lot Coverage	8.4%	

Building Floor Area	
Total	3,316 m²

Building Height	
(Max per CC1 Zoning)	10.5 m

Proposed Capacity	Classes	Students
Kindergarten	1	20
Elementary	4 or 5	100
Secondary	3 or 4	50
Infant/Toddler Childcare	1	12
Preschool Age Childcare	1	24
Totals		**206**

Vehicle Parking	
Elem: 1 space / 90 m2 GFA	24
Sec: 1 spaces / 65 m2 GFA	14
NLC: I/T and Pre-K	8
Total	**46**
Accessible	2
Small (20% max.)	9

Bike Parking	
1 / 200m2, max. 20	17
Total	**17**

Land Swap Table	AREA (m²) TO D.O.S.	TO LOT B
Road Dedication	960.42	
Trail Dedication	362.70	
Potential Park Dedication	866.76	
Access and Playfield Encroachment		2,191.44
	2,191.44	2,191.44
NET Lot B Area	0 m²	
Original Lot B	20,063 m²	
Revised Lot B	20,063 m²	

ORIGINAL PROPERTY LINE

PROPOSED PROPERTY LINE

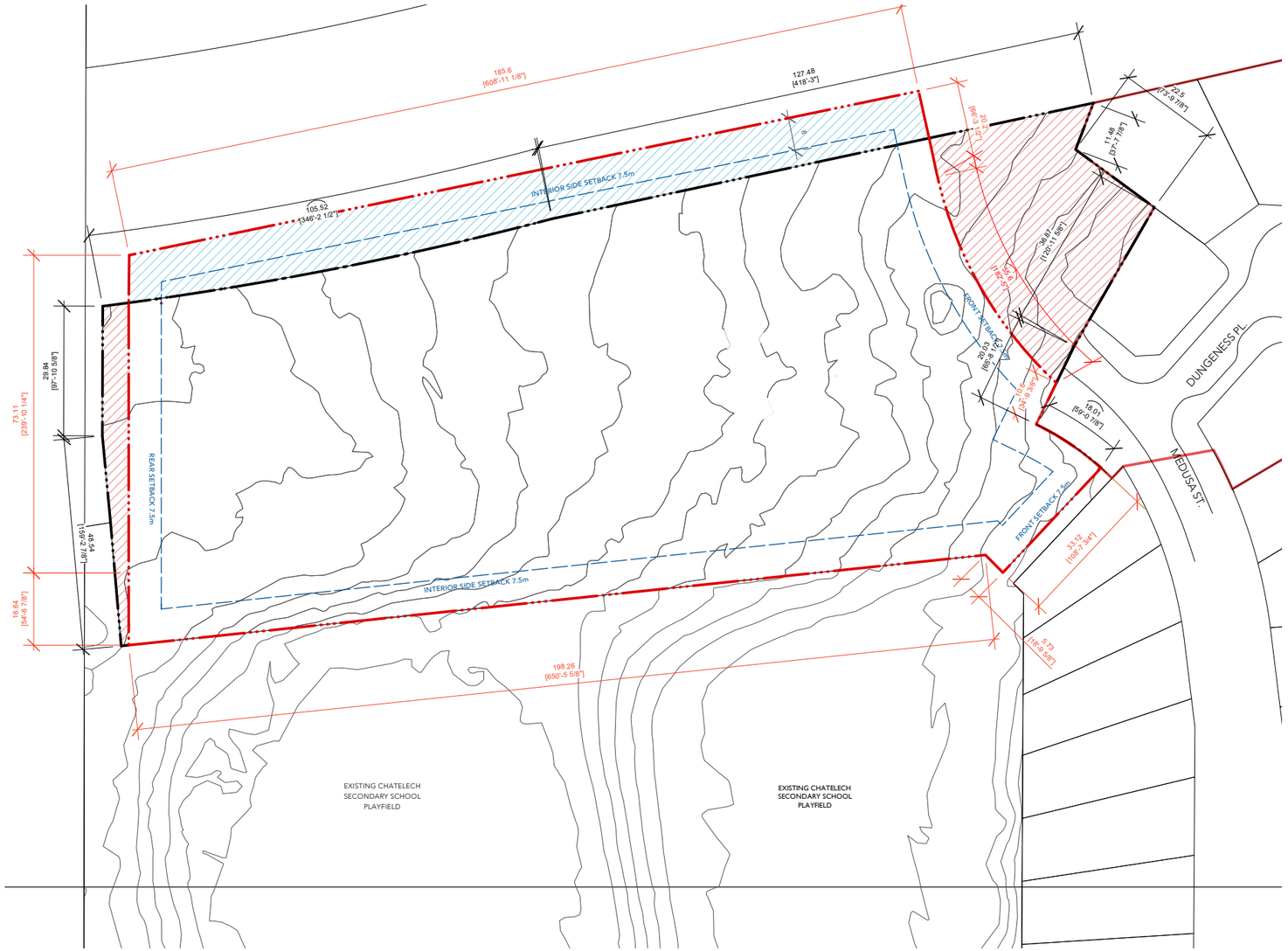
PROPOSED SETBACK LINE

Notes:
1. Property is currently zoned CD-3 (Seniors Lodge). Development of a school will likely require rezoning.
2. Setbacks based on CC-1 Zone requirements (Community and Civic One Zone, Sechelt Bylaw 580, Zoning)
3. Maximum permitted grade for emergency vehicle access route is 1:12.5 (8%) over minimum 15m. Grading and retaining will be required to meet requirements.
4. School program is preliminary, based on projections and ministry area standards, and is subject to change.
5. Discussions are ongoing between the CSF and SD46 regarding potential sharing of Chatelech's playfields
6. Proposed capacity is preliminary and to be confirmed after reviewing enrollment projections with the ministry.

Option 1 **1**

Proposed Site Plan - Revised (Technical)

CSF École Du Pacifique
Sechelt
3/3/2025



1 **Site**
Scale: 1:1200

0 20 40 60 m

N

Original Site Data		
Total Site Area	20,063 m²	(2.0 ha)
Current Zoning	CD-3	
Future Zoning	CC1	
Lot Coverage	8.4%	

Building Floor Area	
Total	3,316 m²
Building Height (Max per CC1 Zoning)	10.5 m

Proposed Capacity	Classes	Students
Kindergarten	1	20
Elementary	4 or 5	100
Secondary	3 or 4	50
Infant/Toddler Childcare	1	12
Preschool Age Childcare	1	24
Totals		**206**

Vehicle Parking	
Elem: 1 space / 90 m2 GFA	24
Sec: 1 spaces / 65 m2 GFA	14
NLC: I/T and Pre-K	8
Total	**46**
Accessible	**2**
Small (20% max.)	9

Bike Parking	
1 / 200m2, max. 20	17
Total	**17**

Land Swap Table	AREA (m²) TO D.O.S.	TO LOT B
Road Dedication	960.42	
Trail Dedication	362.70	
Potential Park Dedication	866.76	
Access and Playfield Encroachment		2,191.44
	2,191.44	2,191.44
NET Lot B Area	0 m²	
Original Lot B	20,063 m²	
Revised Lot B	20,063 m²	

ORIGINAL PROPERTY LINE

PROPOSED PROPERTY LINE

PROPOSED SETBACK LINE

Notes:
1. Property is currently zoned CD-3 (Seniors Lodge). Development of a school will likely require rezoning.
2. Setbacks based on CC-1 Zone requirements (Community and Civic One Zone, Sechelt Bylaw 580, Zoning)
3. Maximum permitted grade for emergency vehicle access route is 1:12.5 (8%) over minimum 15m. Grading and retaining will be required to meet requirements.
4. School program is preliminary, based on projections and ministry area standards, and is subject to change.
5. Discussions are ongoing between the CSF and SD46 regarding potential sharing of Chatelech's playfields
6. Proposed capacity is preliminary and to be confirmed after reviewing enrollment projections with the ministry.

Previous Site Plan - (For Reference)

CSF École Du Pacifique
Sechelt
2024-02-05

1 Site
Scale: 1:1200

0 20 40 60 m

N

School Requirements

Department	Classes	Students
Kindergarten	1	20
Elementary	4	100
Secondary	2	50
I/T Childcare	1	12
PK Childcare	1	24
Totals		**206**

Building Area	
DAS Floor Area	2,936 m²
Childcare Floor Area	380 m²
Total Floor Area	**3,316 m²**

Building Height (2 storeys) **+/- 8 m**

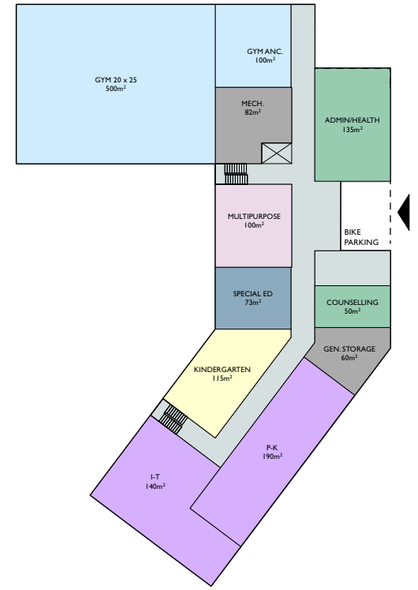
Site Area		
Total Site Area	20,063 m²	(2.0 Ha)
Zoning	CD-3	
Lot Coverage	9.6%	

Parking (Zoning Bylaw)	% of Total Enrollment	% of Enrollment x Total Floor Area	Formula (per bylaw)	**Stalls**
Kind. /Elementary	71%	2,072m²	(1/90 m²)	24
Secondary	29%	864m²	(1/65 m²)	14
NLC: I/T and Pre-K			(1/5 kids)	8
Total				**46**

Notes

1. Property is currently zoned CD-3 (Seniors Lodge). Development of a school will likely require rezoning.
2. Setbacks based on CC-1 Zone requirements (Community and Civic One Zone, Sechelt Bylaw 580, Zoning)
3. Maximum permitted grade for emergency vehicle access route is 1:12.5 (8%) over minimum 15m. Grading and retaining will be required to meet requirements.
4. School program is preliminary, based on projections and ministry area standards, and is subject to change.
5. Discussions are ongoing between the CSF and SD46 regarding potential sharing of Chatelech's playfields

Steep area of site requiring retaining and significant regrading.



LEVEL 1 - 1,898 m²

LEVEL 2 - 1,418 m²

Proposed A 1

DISTRICT OF SECHELT
Bylaw No. 492-37, 2024

Being a bylaw to amend District of Sechelt Official Community Plan Bylaw No. 492, 2010 for Lot B District Lot 1331 Plan 18108.

WHEREAS the District of Sechelt deems it necessary to amend the District of Sechelt Official Community Plan Bylaw No. 492, 2010;

NOW THEREFORE, the Council of the District of Sechelt in open meeting assembled enacts as follows:

TITLE

1. This bylaw may be cited for all purposes as, "Official Community Plan Amendment Bylaw No. 492-37, 2024".

AMENDMENTS

2. That LOT B DISTRICT LOT 1331 PLAN 18108 on Medusa Street, as shown on the plan attached to and forming part of this bylaw as Schedule A, be redesignated from Multifamily Mixed Residential to Civic Institutional Utilities.
3. That a portion of the District Road Right of Way identified in Plan 18108, as shown on the plan attached to and forming part of this bylaw as Schedule A, be designated to to CC1 (Community and Civic 1).
3. Schedule C1 of Official Community Plan Bylaw No. 492, 2010 be amended to reflect the land use designation and boundaries brought into force by this bylaw.

PROVISIONS

4. If any section, subsection or clause of this bylaw is for any reason held to be invalid by the decision of a court of competent jurisdiction, such decision will not affect the validity of the remaining portions of this bylaw.
5. That Schedule A is attached to and forms part of this bylaw.

READ A FIRST TIME THIS	7th	DAY OF	AUGUST, 2024
READ A SECOND TIME THIS		DAY OF	2025
PUBLIC HEARING HELD THIS		DAY OF	202X
READ A THIRD TIME THIS		DAY OF	202X
ADOPTED THIS		DAY OF	202X

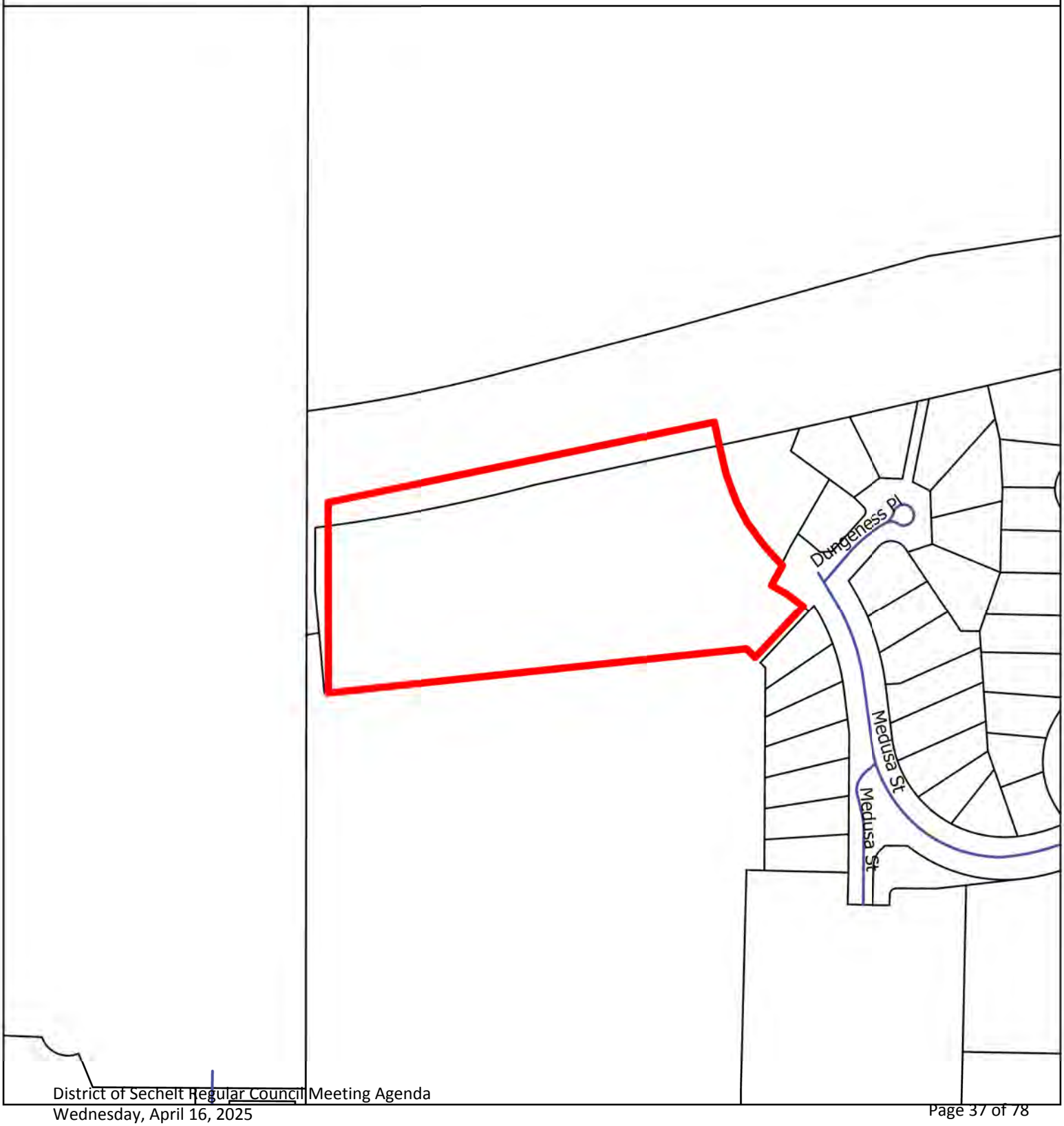
_____ _____

Mayor **Corporate Officer**

District of SECHELT

Schedule A
Amendment Bylaw No. 492-37, 2024

CIVIC: NO ASSIGNED ADDRESS
LEGAL: BLOCK B DISTRICT LOT 1331 PLAN 18108
PID: 007-230-516



DISTRICT OF SECHELT
Bylaw No. 580-14, 2024

A bylaw to amend District of Sechelt Zoning Bylaw No. 580, 2022 for Lot B District Lot 1331 Plan 18108.

WHEREAS the District of Sechelt deems it necessary to amend the District of Sechelt Zoning Bylaw No. 580, 2022;

AND WHEREAS the proposed rezoning is consistent with Official Community Plan Bylaw No. 492, 2010;

NOW THEREFORE, the Council of the District of Sechelt in open meeting assembled enacts as follows:

TITLE

1. This bylaw may be cited for all purposes as "Zoning Amendment Bylaw No. 580-14, 2024".

AMENDMENTS

2. That LOT B DISTRICT LOT 1331 PLAN 18108 on Medusa Street, as shown on the plan attached to and forming part of this bylaw as Schedule A, be rezoned from CD3 (Comprehensive Development 3 – Seniors Lodge) to CC1 (Community and Civic 1).
3. That a portion of the District Road Right of Way identified in Plan 18108, as shown on the plan attached to and forming part of this bylaw as Schedule A, be zoned to CC1 (Community and Civic 1).
3. That Zoning Designation Schedules of Zoning Bylaw No. 580, 2022 (Official Zoning Maps Schedule A1) be amended to reflect the zoning designation and boundaries brought into force by this bylaw.

PROVISIONS

4. If any section, subsection or clause of this bylaw is for any reason held to be invalid by the decision of a court of competent jurisdiction, such decision will not affect the validity of the remaining portions of this bylaw.
5. That Schedule A is attached to and forms part of this bylaw.

READ A FIRST TIME THIS	7th	DAY OF	AUGUST, 2024
READ A SECOND TIME THIS		DAY OF	2025
PUBLIC HEARING HELD THIS		DAY OF	202X
READ A THIRD TIME THIS		DAY OF	202X
ADOPTED THIS		DAY OF	202X

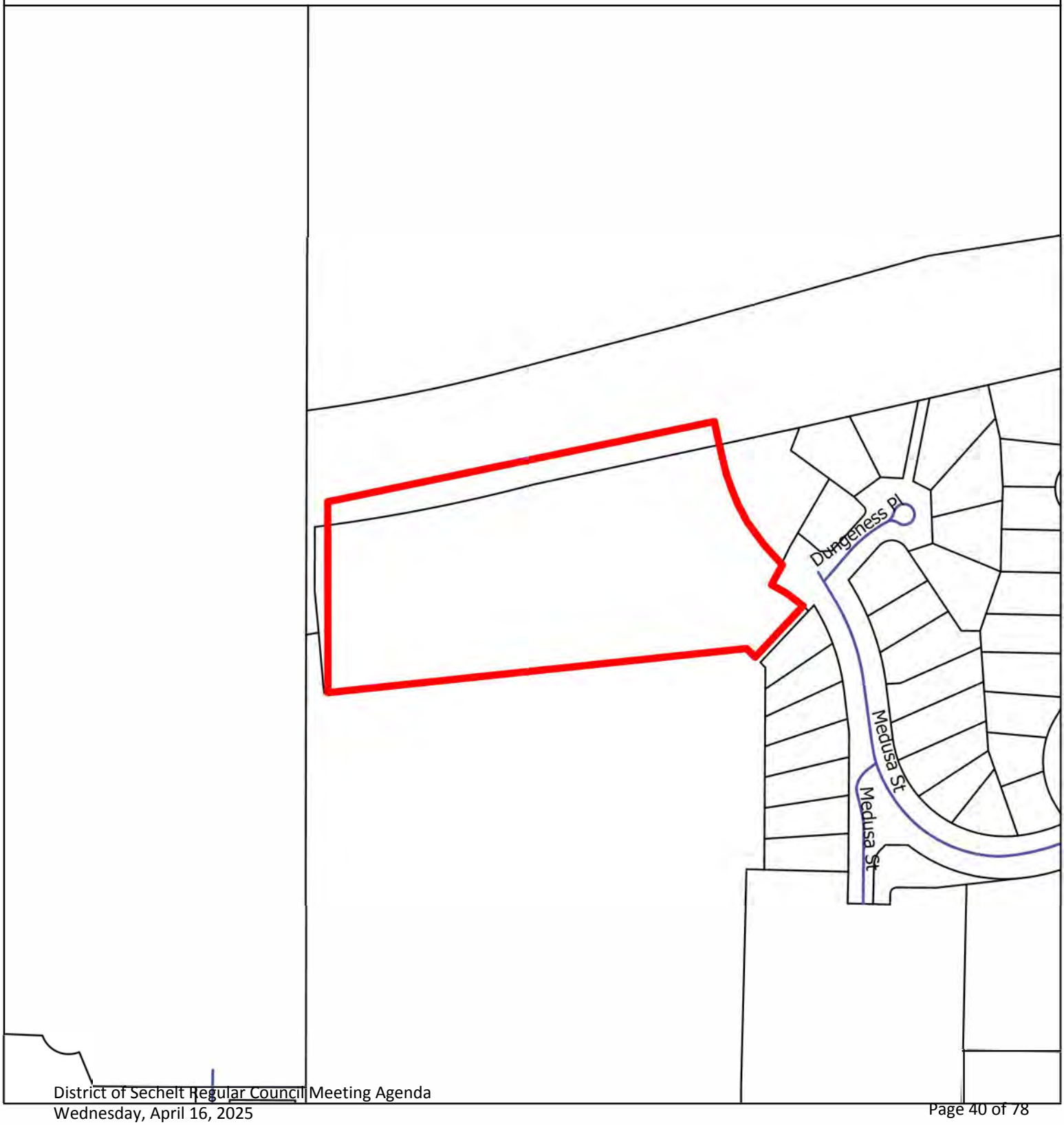
_____ _____

Mayor **Corporate Officer**

District of SECHELT

Schedule A
Amendment Bylaw No. 580-14, 2024

CIVIC: NO ASSIGNED ADDRESS
LEGAL: BLOCK B DISTRICT LOT 1331 PLAN 18108
PID: 007-230-516



DISTRICT OF SECHELT
Bylaw No. 492-37, 2024

Being a bylaw to amend District of Sechelt Official Community Plan Bylaw No. 492, 2010 for Lot B District Lot 1331 Plan 18108.

WHEREAS the District of Sechelt deems it necessary to amend the District of Sechelt Official Community Plan Bylaw No. 492, 2010;

NOW THEREFORE, the Council of the District of Sechelt in open meeting assembled enacts as follows:

TITLE

1. This bylaw may be cited for all purposes as, "Official Community Plan Amendment Bylaw No. 492-37, 2024".

AMENDMENTS

2. That LOT B DISTRICT LOT 1331 PLAN 18108 on Medusa Street, as shown on the plan attached to and forming part of this bylaw as Schedule A, be redesignated from Multifamily Mixed Residential to Civic Institutional Utilities.
3. Schedule C1 of Official Community Plan Bylaw No. 492, 2010 be amended to reflect the land use designation and boundaries brought into force by this bylaw.

PROVISIONS

4. If any section, subsection or clause of this bylaw is for any reason held to be invalid by the decision of a court of competent jurisdiction, such decision will not affect the validity of the remaining portions of this bylaw.
5. That Schedule A is attached to and forms part of this bylaw.

READ A FIRST TIME THIS	7th	DAY OF	AUGUST, 2024
READ A SECOND TIME THIS	16th	DAY OF	APRIL, 2025
PUBLIC HEARING HELD THIS		DAY OF	202X
READ A THIRD TIME THIS		DAY OF	202X
ADOPTED THIS		DAY OF	202X

_____ _____

Mayor **Corporate Officer**

DISTRICT OF SECHELT
Bylaw No. 580-14, 2024

A bylaw to amend District of Sechelt Zoning Bylaw No. 580, 2022 for Lot B District Lot 1331 Plan 18108.

WHEREAS the District of Sechelt deems it necessary to amend the District of Sechelt Zoning Bylaw No. 580, 2022;

AND WHEREAS the proposed rezoning is consistent with Official Community Plan Bylaw No. 492, 2010;

NOW THEREFORE, the Council of the District of Sechelt in open meeting assembled enacts as follows:

TITLE

1. This bylaw may be cited for all purposes as "Zoning Amendment Bylaw No. 580-14, 2024".

AMENDMENTS

2. That LOT B DISTRICT LOT 1331 PLAN 18108 on Medusa Street, as shown on the plan attached to and forming part of this bylaw as Schedule A, be rezoned from CD3 (Comprehensive Development 3 – Seniors Lodge) to CC1 (Community and Civic 1).
3. That Zoning Designation Schedules of Zoning Bylaw No. 580, 2022 (Official Zoning Maps Schedule A1) be amended to reflect the zoning designation and boundaries brought into force by this bylaw.

PROVISIONS

4. If any section, subsection or clause of this bylaw is for any reason held to be invalid by the decision of a court of competent jurisdiction, such decision will not affect the validity of the remaining portions of this bylaw.
5. That Schedule A is attached to and forms part of this bylaw.

READ A FIRST TIME THIS	7th	DAY OF	AUGUST, 2024
READ A SECOND TIME THIS	16th	DAY OF	APRIL, 2025
PUBLIC HEARING HELD THIS		DAY OF	202x
READ A THIRD TIME THIS		DAY OF	202x
ADOPTED THIS		DAY OF	202x

_____ _____

Mayor Corporate Officer

District of SECHELT

NOTICE OF PUBLIC HEARING

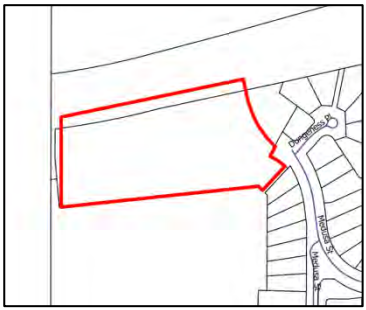
The District of Sechelt will hold a Public Hearing to consider Official Community Plan Amendment Bylaw No. 492-37, 2024 and Zoning Amendment Bylaw No. 580-14, 2024. In accordance with the *Local Government Act* this public hearing will be held in a hybrid format, both in person and electronically.

WHAT'S PROPOSED

To allow the construction of a Grade K-12 Francophonie School with a pre-school and daycare component.

AFFECTED LANDS

Lot B District Lot 1331 Plan 18108, PID 007-230-516
A portion of District Road Right-of-Way shown in Plan 18108.



BYLAWS

Official Community Plan Amendment Bylaw No. 492-37, 2024
Zoning Amendment Bylaw No. 580-14, 2024

TUESDAY, May 27, 2025 AT 5:00 P.M.

For instructions on how to participate in the meeting go to: sechelt.ca/meetings

The proposed amendments and associated documents may be viewed on the District's website at: sechelt.ca. Alternatively, an appointment can be made with staff regarding the proposal.

Before the Public Hearing: You can submit comments before the public hearing in the following ways:

Email: planning@sechelt.ca
Regular Mail: Box 129, Sechelt, BC V0N 3A0
In Person: 5797 Cowrie Street, 2nd floor, from Monday to Friday between 9:00 a.m. to 4:00 p.m. except holidays

At the Public Hearing: You can participate in person at the Community Meeting Room, First Floor, 5797 Cowrie Street, or virtually via computer, tablet or phone. The meeting link, dial-in number and instructions can be found at: sechelt.ca/meetings

Council will not receive any submissions after the end of the Public Hearing.

From:	Melva/Gordon Bradshaw
To:	Planning
Subject:	Public Hearing re Official Community Plan & Zoning Bylaw Amendment Application No. 3360-2024-01
Date:	Tuesday, May 27, 2025 1:37:29 PM

CAUTION: This email originated from outside the organization. **Use caution opening links or attachments.**

Caution! This message was sent from outside your organization. Allow sender | Block sender

This is Melva & Gordon Bradshaw's submission for consideration re the above proposed Bylaw amendment re the construction of a Grade K-12 Francophone School with both a pre-school and daycare component.

We have read the Document provided re the details of the above and have several comments and queries we hope to have answered tonight. We first would like to note that the majority of the Exhibits included in the Document were indecipherable. They provided no insight that we could figure out. We don't know how other readers felt about these Exhibits but to us they seemed to be totally bafflegab.

Section 1.4 (Pg. 3): According to information provided at the first public meeting on October, 16 2024 there are presently 58 students at the existing ecole du Pacifique and 39 students at Ecole Chatelech Secondary School for a total of 97 students. The Study indicates that "... approx. 80% of students arriving to/eparting from the schools do so by school bus. That works out to 77 students being transported by buses. On Page 39, currently 8 buses are used or ~9 kids/bus. Page 3 & Page 39 indicate that for the new school, only 3 buses will be utilized for 80% of 206 students (165 students or 55 students/bus).
Pg. 3 also notes that "...only ~ 40 students will use other means" The report doesn't mention any allowance for staff, special instructors, administration or Service vehicles.

Exhibit 1.2 (Site Plan) shows 54 parking spots - who will be parkling here? If we assume Staff and some of the kids not bussing (40), this will create a huge traffic ingestion into a quiet area.

Table 2.1 (Page 6): Existing Street Characteristics. Note that the table indicates that Medusa St has a No Parking designation which extends from prior to Medusa Place to the end of Medusa (proposed site). Note also that there is a steep (12%) grade for the upper reaches of Medusa, making winter conditions difficult to navigate.

Table 2.2 (Page 8): Nearest Transit Stops within Walking Distance of Site: Is it logical or likely that students would walk from 0.43 mile to 0.86 mile from a bus stop to school? The access from the Cowrie @ Clayton stop would require some bushwhacking.

2.3.1 (Page 12): Municipal Plans: Could you please advise where the "Special Infill Area #4" is located - not shown on any plan we have. Also if it is under consideration for "...high density residential housing..." and that "...development of this area could potentially introduce additional connectivity to the site..." This obviously means more road infrastructure so why not use this area now as connectivity to the proposed school? And why not strongly consider using access from Chatelech around the back bordering on the Clayton Lands - we're sure such a publically oriented family and founding family of Sechelt would endeavour to assist in this cause.

2.4.1 (Page 13): Traffic Data Collection Program: It is interesting to note that the statistics were gathered 1.5 years ago. How have they now changed?

2.4.2 (Page 14): Note at page bottom "...Currently Medusa Street west of Ocean Avenue carries a low level of traffic, between 40 - 70 vehicles during the weekday peak hour..." Yes, and we want to keep it that way! We have done a rough estimate of vehicular traffic that would possibly occur each school day with parents/caregivers dropping off children, then returning back home/work and in the afternoon returning to the school to pick up students and leave. A conservative estimate would be 100 students/children which would work out to 400 trips/day! Plus additional vehicular traffic after school hours and weekends should the school be made available for other events.

3.1.2 (Page 21): Trip Generation: "... Bunt has conducted trip generation observations on November 28, 2019 at the existing Ecole du Pacifique site..." These observations are 6.5 years old. Please explain the 2 tables, Tables 3.1 and 3.2 and their relevance and comparability?

Table 3.3 (Page 24): Estimated Trip Distributions: & Table 3.4 Net Change in Future Intersection Vehicle Volumes with New Site Trips: Please explain. Medusa is 5% of what?

4.1 (Page 37): Site Access Design: We dispute the statements "... The location of the site access ..." Should read "Potential site access" and also "...which serves as the sole point of entry and egress to and from the site..." should say "potential sole point of entry, etc.

5.1 (Page 39): Transportation Demand Management: "...though the benefit of reducing vehicular traffic to and from the site is benefit enough to consider mitigation strategies..." "...it is expected that students live further from school and will be more reliant on auto mode..." A reduction from 8 present buses for 97 students to 3 buses for 206 students is illogical.

6. (Page 40): Medusa Street High Level Safety Review: Again, findings are based on outdated stats of Nov, 2023.

6.2.1 (Page 40): Speed Review: Ocean Ave. Speed check found avg speed of 91 vehicles in PM to be 36.3 km/hr. Table 2.5 (Page 14) showed 71 vehicles.

Our concern is the increase of traffic on a now pleasant and quiet residential street, many of the houses in the upper reaches of Medusa being occupied by seniors. We implore you to reconsider the present proposed access and to find a less invasive one : perhaps one coming from Chatelech or the Clayton's lands.

NOTES re SCHOOL BUSES:
Road width on Upper Medusa (i.e. Medusa Place to top of Medusa): 25' (12.5 ft from curb to yellow centre line).
Normal car width (7.5 ft plus 1 'ft for distance to curb, ~8.5 ft.
Vehicles parked on both sides of street would take up to 17 ft width. There are parking restrictions on both sides of Medusa from just above Medusa Place to top of Medusa (proposed site)
School bus widths are ~ 7.75 ft to 7 ft 9 inches, length from 25 ft to 39 ft.
Conclusion: It is likely that Type "D" buses would have to be used (capacity of 82 students). These buses (39 ft in length) would definitely have difficulty negotiating the 12% grade of

upper Medusa and the turning circle will certainly be compromised by the small area that now exists, not to mention the potential "student catchment' problems on the far away country lanes.

Respectfully submitted,
Melva & Gordon Bradshaw
5882 Medusa Street
Phone 604-885-0818

From: Laura Enright
To: Planning
Subject: File # 3360-2024-01 - Opinion
Date: Monday, May 26, 2025 3:12:20 PM

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Hello Mr. Baker

My husband and I live at 5889 Medusa Street the last lot on the West side, right up against the proposed development site.

We feel that the school would be a good use of that land. And support in concept that proposal. Our preference is that it remain wild as hundreds of birds live and nest on that lot. And other wildlife species use it on a regular basis. And there are lots of humans who cross through that area hiking or biking on the trail that links to the powerline trail and other trails, including students of the existing high school .

However we realize the property IS going to be developed and feel a school would be less disruptive to "peace" in the neighborhood than the high density of several multi-family units.

While some neighbors have expressed concern about the traffic - and we did too originally. But upon much consideration we believe the generally episodic nature of school traffic would be much more tolerable than the comings and goings of many dozens of households at all hours of the day and perhaps night.

Also construction of a school would occur in a specific time frame versus the rollout of many buildings over perhaps years (?)

Also we cannot forget that Canada is a bilingual country, we must not claim a French school is merely an unnecessary educational redundancy. (Which is another opinion I have heard voiced)
That is bigotry. French Canadians deserve French schools as English Canadians have English schools.

Two humble requests:

1. Could there be a way to create a trail through the property so humans and animals could continue pass through it to other areas of Sechelt and
2. A green "buffer" zone ie leave some of the existing trees and bushes in place, so we do not

have a chain-link fence right up against our yard and private outdoor space?

Thanks,
Laura Enright

We will attend the meeting tomorrow afternoon.

From: Charlie Lorimer
To: Planning
Subject: Amend Official Community Plan
Date: Sunday, May 18, 2025 12:42:49 PM

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Regarding the Public Hearing Notice for Tuesday, May 27, 2025 at 5:00 PM, we wish to submit the following for consideration.

We were very disappointed to find that the zoning has been changed from Seniors Housing to a School - (Multi-family Mixed Residential to Civic Institutional Utilities).

We know we cannot stop the school from going ahead, but our council could stop the traffic on Medusa Street by putting access from Chatelech Secondary School for bus pick up and drop-off. This would also give a second access from the school if there was an emergency or disaster.

Since buses already drop off students at Chatelech Secondary School, would it not be easier (and safer) to provide a gravel road from the Chatelech Secondary School parking lot to the rear of the proposed school to drop off students, both by car and bus?

It is also worth noting the new Greencourt addition and whatever is proposed for the Provincial Coastal Health 'Shorncliffe" building which would most likely increase traffic on Medusa Street.

May 26th, 2025

4856 Laurel Ave,
Sechelt, V7Z 0B5

Re: Public Hearing

OCP Amendment Bylaw 492 - 37, 2024
ZBL Amendment Bylaw 580-14, 2024

Mayor and Council

Please accept the following comments regarding the above proposed OCP/ZBL amendments.

I support the amendments to allow the Francophone School Board to construct a K-Grade 12 school including preschool and day care on Lot B, DL 1331.

The proposed use is consistent with the abutting Chatelech High School.

I suggest that a road dedication be taken across the northerly portion of Lot B to adjoin that part of the existing municipal right of way and that a cash in lieu be undertaken for future road construction. (approximately 250 meters.) (The School Board should not be given the portion of the Road Right of way described on the Public Hearing Notice)

The Neptune Connector described in the 2010 OCP has been eliminated in the current draft Road Master Plan because of excessive costs. This leaves the current Cowrie Street, Pilot Way, Barnacle-Shorncliffe as a major connector between downtown and the new development in the Silverstone and Clayton Family lands.

As illustrated on the attached plan, the Medusa connector would be a vital link between the northern portions of the Silverstone and Clayton properties and the downtown. This would be consistent with the new Transportation Master Plan and the road network in the proposed Silverstone master plan.

Regards,

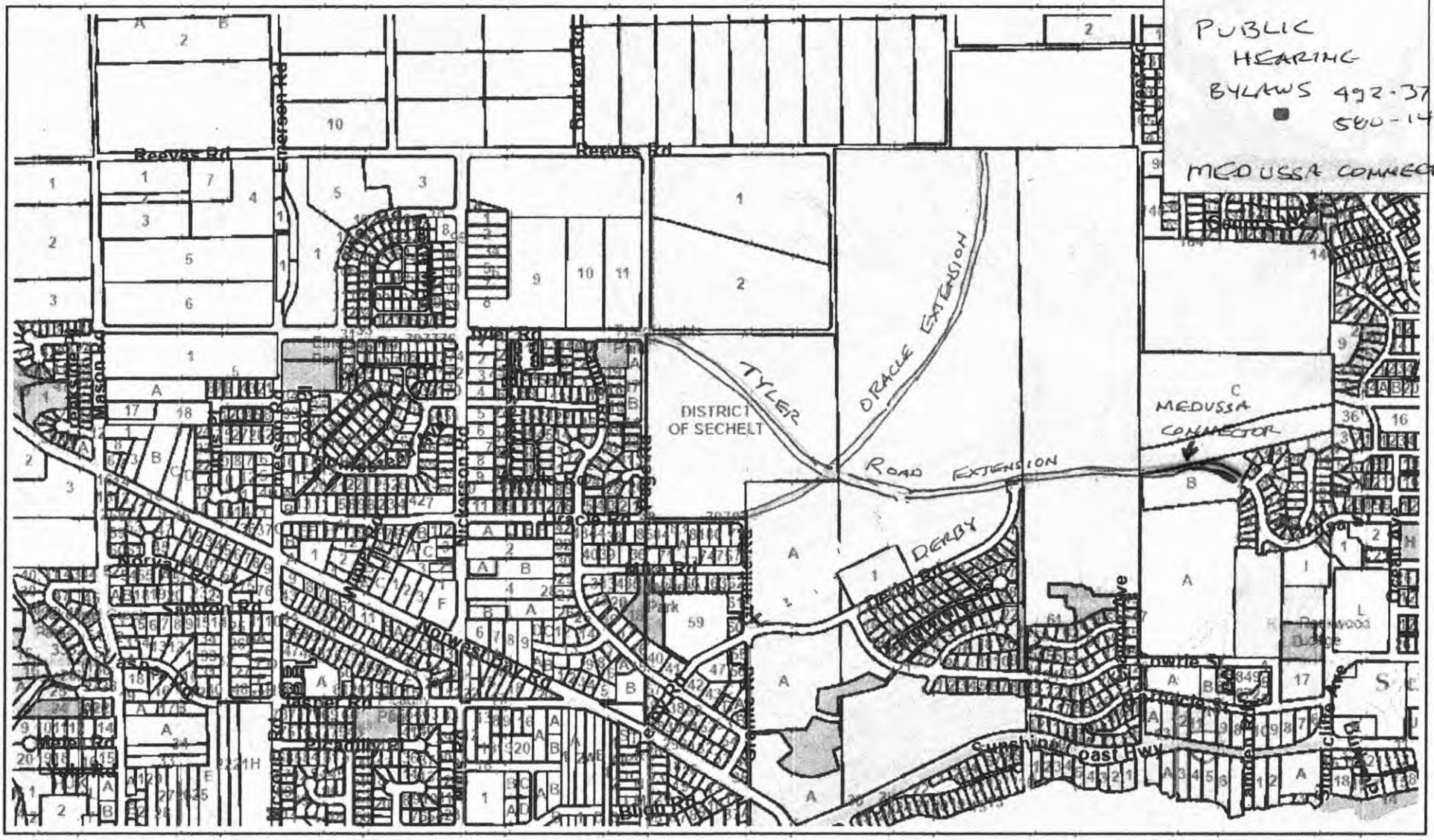
Ray Parfitt

Minimal cost to District. Diener foundation ($5 million)

Index Map

PUBLIC
HEARING
BYLAWS 492-37
560-14

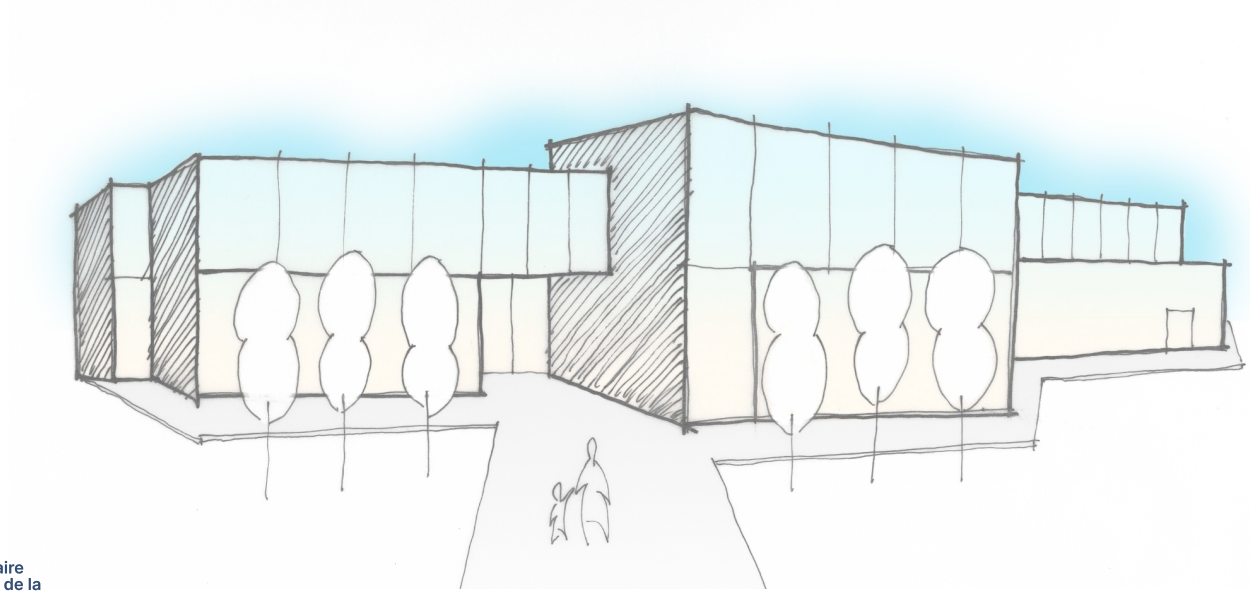
MEDUSSA CONNECTOR



596.2 0 298.10 596.2 Meters

This information has been compiled by the Sunshine Coast Regional District (SCRD) using data derived from a number of sources with varying levels of accuracy. The SCRD disclaims all responsibility for the accuracy or completeness of this information.

5/25/2025
1: 11,736



Conseil scolaire francophone de la Colombie-Britannique

École du Pacifique
Public hearing - May 27 2025

Index

Conseil scolaire francophone de la Colombie-Britannique

I. CSF’s mission

II. Existing school in Sechelt

III. Acquired Site and proposed rezoning

IV. Project Implementation Process

V. Proposed concept and rezoning benefits

Conseil scolaire
francophone de la
Colombie-Britannique

I. CSF's Mission

CSF's Mission

Conseil scolaire francophone de la Colombie-Britannique

- One of the 60 public school districts in BC
- Operates 47 schools in 33 communities in BC
- Over 1200 employees province-wide
- CSF Head Office is located in Richmond
- Delivers minority language education under Section 23 of the Canadian Charter of Rights and Freedoms
- Offers french education from K to 12

Section 23 Right holders

Conseil scolaire francophone de la Colombie-Britannique

- Citizens of Canada
  - whose first language learned, and still understood, is French
  - who have received their primary school instruction in Canada in French
  - of whom any child has received or is receiving primary or secondary school instruction in French
- Immigrants who meet one of the above requirements

Conseil scolaire
francophone de la
Colombie-Britannique

II. Existing School in Sechelt

Existing School in Sechelt

Conseil scolaire francophone de la Colombie-Britannique

- Initially located in the Sunshine Building in 1998
- Moved to the Trail Building a few years later (5538 Shorncliffe)
- Secondary students currently attend Chatelech Secondary School where they receive part of their instruction in French and part in English.
- The catchment area includes Sechelt, Gibsons, Roberts Creek, Port Mellon, Halfmoon Bay, Earl's Cove, Egmont and Pender Harbour
- Most students use the school bus transportation service offered by SD46 (anglophone school district)

Conseil scolaire
francophone de la
Colombie-Britannique

III. Acquired site and proposed rezoning

Acquired site and proposed rezoning

Conseil scolaire francophone de la Colombie-Britannique

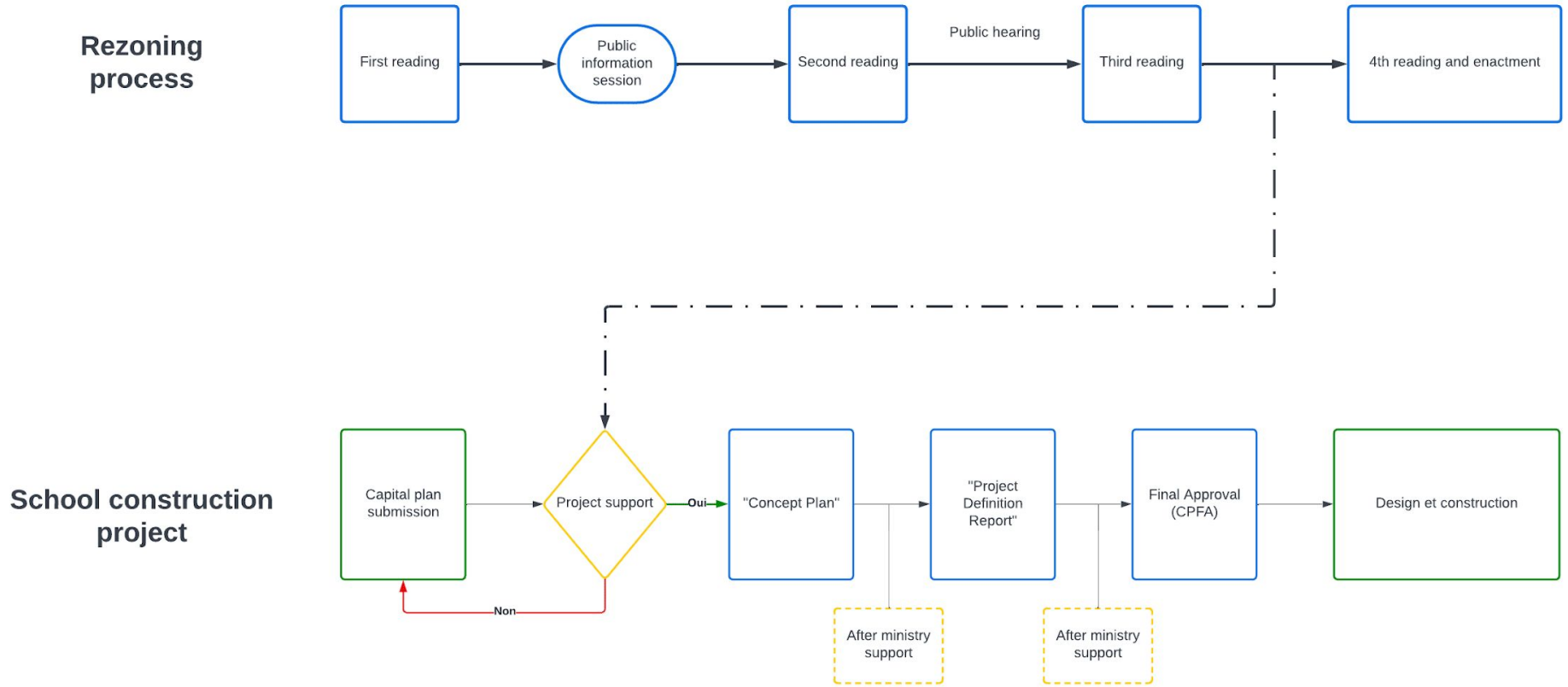
- In the Summer of 2023, the CSF acquired a site to build a new K-12 school on Medusa Street
- The CSF applied for an OCP and Zoning Amendment to allow for school use on the new site
  - **Current zoning: CD3 (Seniors Lodge)**
  - **Proposed zoning: CC-1 (Community and Civic 1)**
- Once the OCP and Zoning Amendment process is completed, the CSF will work with the Ministry of Infrastructure to obtain funding for the construction of the school
- Enrolment projections show at least 150 students attending the new school in 10 years

Conseil scolaire
francophone de la
Colombie-Britannique

IV. Project Implementation Process

Project Implementation Process

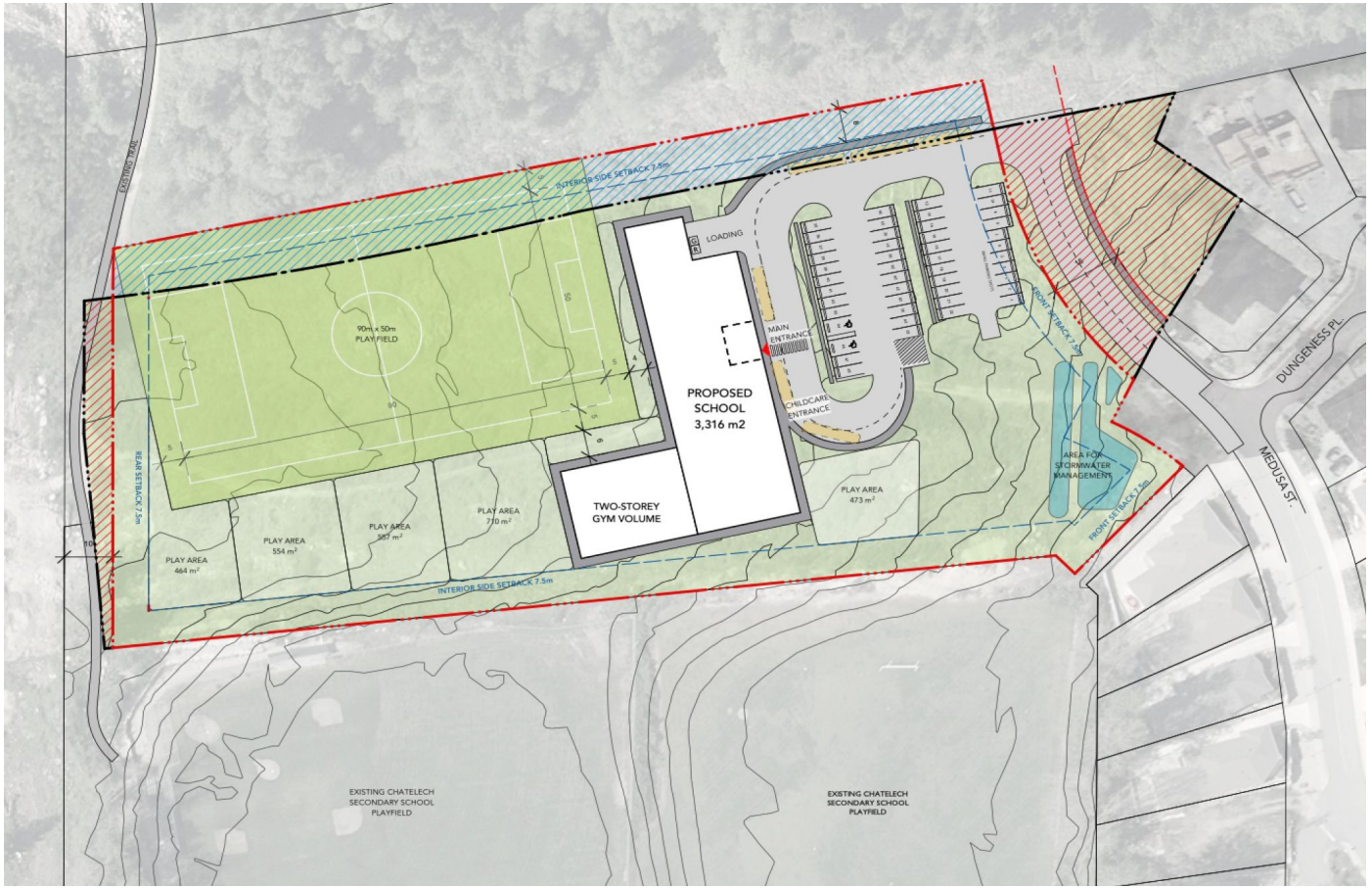
Conseil scolaire francophone de la Colombie-Britannique



Conseil scolaire francophone de la Colombie-Britannique

IV. Concept plan and rezoning benefits

Concept plan



Benefits of the rezoning

Conseil scolaire francophone de la Colombie-Britannique

- New public school facility
- Francophone childcare spaces to be included in the project
- Play field and playground access for the community outside of school hours
- Gymnasium access for community groups when not used by school
- Potential access to other community facilities in the school, if Federal and Provincial authorities approve funding to build additional community spaces
- Minimal traffic impact

Thank you

Public Meeting Report
October 16, 2024

Development Application
École du Pacifique - Sechelt

1. Location, time, and duration of the meeting

The public meeting was held at the École du Pacifique Library, located at 5538 Shorncliffe Avenue, Sechelt, BC, on Wednesday, October 16, 2024. The meeting commenced at 6:00 PM and concluded at 7:20 PM.

2. Number of attendees

The meeting was attended by 17 community members, among them Mayor John Henderson of Sechelt. 4 staff members from the Conseil scolaire francophone de la Colombie-Britannique (CSF) and the project architect were also present:

- Craig Burns, Architect, Principle Architecture
- Chafic El Rassi, Director, Capital Projects Office, CSF
- Mélanie Vallières, Principal, École du Pacifique, CSF
- Fariba Daragahi, Assistant Superintendent, CSF
- Nicolas Camargo Coronado, Public Relations Manager, CSF

Only 14 individuals signed the attendance sheet, with three community members, including the Mayor, not signing due to arrival after the beginning of the meeting or early departure.

3. How the meeting was advertised and surrounding property owners notified

The public meeting was advertised using the following methods:

- Local newspaper (Coast Reporter): An ad was published in the print version of the Coast Reporter on October 11, 2024, with additional online and mobile ads running during the weeks of October 7 and October 14, 2024.
- Social media: A Facebook event was created and shared through the École du Pacifique Facebook page.
- Direct mail: Letters were sent to surrounding property owners based on a list provided by the District. These letters included all necessary information as required by the District.
- Signage: The development was sign posted on site on October 4, 2024, and included details about Public Information Meeting date, time and location.

4. Information provided at the meeting

The meeting primarily focused on the proposed development of a new K-12 school on Medusa Street. CSF representatives provided the following key information:

- CSF's mission: The CSF operates 47 schools across 33 communities in British Columbia, serving French-speaking families under Section 23 of the Canadian Charter of Rights and Freedoms. The CSF is committed to providing French-language education to eligible students in BC, offering a unique alternative to the province's anglophone school system.

- Current school in Sechelt: The CSF has had a presence in Sechelt since 1998, with the school currently located in the Trail Building on Shorncliffe Avenue. Secondary students from the catchment area, which includes Sechelt and nearby communities, currently attend Chatelech Secondary School for part of their studies in French and part in English. Most students rely on school bus transportation provided by School District 46.

- Proposed development: In the summer of 2023, the CSF acquired a new site on Medusa Street for the construction of a K-12 school. The CSF is applying for an Official Community Plan (OCP) and Zoning Amendment to change the zoning from CD3 (Seniors Lodge) to CC-1 (Community and Civic 1), which will allow the construction of a public school on the site.

- Projected enrollment: The projected enrollment in 10 years is 120 students for grades K-12 and 20 childcare spaces.

- Proposed capacity: The preliminary proposed capacity is 170 students for the school and 37 childcare spaces. The CSF clarified that these numbers are preliminary, and that capacity differs from projected enrollment.

- Community benefits: The school will serve not only as an educational institution but also as a community resource, offering playgrounds, gymnasium access, and other facilities for community use outside school hours. These community benefits will depend on additional federal and provincial funding for public spaces within the school.

5. Questions raised and major discussion points

Several topics and concerns were raised by the community members during the meeting. These focused primarily on traffic impact, school design and enrollment projections, and the project timeline. CSF staff and architect Craig Burns provided clarifications, emphasizing that this was an early consultation phase.

5.1 Traffic concerns

Traffic congestion and the impact on Medusa Street were primary concerns for the community members. Medusa Street is perceived as a narrow road with limited accessibility, and residents worried that the new school would exacerbate these issues.

- Bus Transportation: CSF representatives explained that this is a small school, and approximately 80% of the students would arrive by school bus, which would significantly reduce traffic from personal vehicles. The buses would use an on-site loading and unloading zone, with staggered arrival times to prevent congestion. A traffic impact analysis is included as part of the project planning.

- Community concerns about noise: Some community members raised concerns about the potential noise from the buses and the overall increase in traffic. A suggestion was made to consider an alternative road to divert traffic away from Medusa Street. Craig Burns noted that while this was not part of the current plan, traffic concerns would be addressed in future consultations with city planners.

- Mayor John Henderson's Input: Mayor Henderson briefly attended the meeting and reassured the audience that the city council had already flagged traffic issues during the first reading of the project. After this intervention, the mayor left the meeting.

5.2 School enrollment projections

Many attendees questioned the student enrollment projections, particularly the feasibility of it in the first 10 years.

- CSF's Response: CSF Capital Projects Office Director explained that the projections were based on regional demographics and trends across other CSF schools, and that the preliminary proposed capacity was designed to allow for future growth.

- Multi-grade classes: Concerns were also raised about the number of classrooms and how multi-grade classes would be managed, particularly for secondary students. CSF staff reassured parents that these concerns would be addressed as the design stages progress, and that the school should have flexible spaces designed to adapt to needs.

5.3 School design and parental involvement

The community expressed concerns about the school design, particularly for secondary students, and whether parents would have input in the process.

- Design Flexibility: Architect Craig Burns emphasized that the design process had not yet begun, and the current meeting was intended to gather feedback on land use. The school's design would prioritize flexibility, ensuring that it could adapt to the needs of the community.

- Parental Input: Some parents felt that their input about the school program was not being fully considered and expressed concern that updates might be provided during the summer when families are typically unavailable. CSF staff reassured parents that they would be actively involved once the design phase begins and reiterated that the purpose of this meeting was to gather preliminary feedback on land use.

5.4 Project timeline and approval process

Several attendees inquired about the timeline for project approval and when they could expect further updates.

- CSF's Response: The rezoning application is the first step in a multi-year process that will eventually lead to design and construction. Throughout this process, starting with rezoning, various aspects of the project—such as traffic and environmental assessment—are thoroughly studied.

5.5 Additional questions

- Childcare Spaces: Community members asked about the inclusion of the 37 childcare spaces capacity in the project. CSF confirmed that funding to deliver childcare spaces will be requested, but that like for the school, the proposed capacity is preliminary and would need to be reviewed and approved by the Ministry of Education and Child Care or other funding partners.

- Cafeteria and multi-purpose space: Some community members asked if the school would have a cafeteria. Craig Burns indicated that this would depend on funding but that multi-purpose spaces were planned for both students and the wider community.

- Geotechnical Studies: Craig Burns confirmed that geotechnical studies had been conducted, ensuring that the site was structurally suitable for construction.

5.6 Conclusion

The meeting concluded at 7:20 PM, with assurances from CSF staff that community feedback would be considered in future stages of the project. Further public hearings and consultations will be held to address specific concerns.