

STAFF REPORT

File No.: PLRZ20240104

DATE OF MEETING: October 21, 2024

TO: Lasqueti Island Local Trust Committee

FROM: Stephen Baugh, Island Planner

Northern Team

COPY: Renée Jamurat, Regional Planning Manager

SUBJECT: PLRZ20240104 – Bylaw Amendment application to facilitate the Connected Coast project

Applicant: Renée LaBoucane and Christina Owens

RECOMMENDATION

- That the Lasqueti Island Local Trust Committee request staff to prepare a draft bylaw to amend the Lasqueti Island Land Use Bylaw No. 78 cited as "Lasqueti Island Land Use Bylaw No. 78, 2005" to proceed with application PLRRZ20240104 (Connected Coast) and permit the public utility use in all zones.
- 2. That the Lasqueti Island Local Trust Committee is not required to hold a public hearing on Bylaw No. 104 cited as "Lasqueti Island Land Use Bylaw No. 78, 2005, Amendment No. 2, 2024" as the Bylaw is consistent with the Lasqueti Island Official Community Plan Bylaw, 2005, and request Staff to proceed with public notification as per Section 467 of the Local Government Act.
- 3. That the Lasqueti Island Local Trust Committee request staff to refer Bylaw No. 104 to the following First Nations, agencies, and organization:

Cowichan Tribes, Da'naxada'xw First Nation, Halalt First Nation, K'omoks First Nation, Lyackson First Nation, Mamalilikulla First Nation, Nanwakolas Council, Penelakut Tribe, Qualicum First Nation, Snaw-Naw-As First Nation, Snuneymuxw First Nation, Stz'uminus First Nation, Te'mexw Treaty Association, Tla'amin Nation, Tlowitsis Nation, Ts'uubaa-asatx First Nation, We Wai Kai Nation, Wei Wai Kum Nation, Shishalh, qathet Regional District, Ministry of Water, Land, and Resource Stewardship, Department of Fisheries and Oceans, Transport Canada, and the Lasqueti Internet Access Society.

REPORT SUMMARY

The purpose of this report is to introduce an application for a bylaw amendment to the Lasqueti Island Land Use Bylaw No. 78 in order to permit a fibre optic cable connection to Lasqueti Island. Staff recommend that the LTC request staff to draft an amendment bylaw, refer the draft bylaw to First Nations and agencies, and send a public notice of First Reading.

Islands Trust Staff Report 123

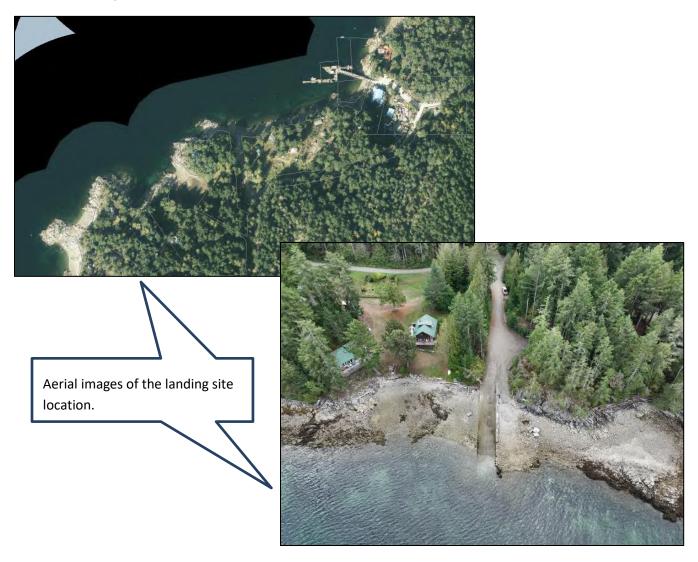
BACKGROUND

In March 2024, Islands Trust received a Crown lease referral for multiple locations and landing sites of fibre-optic cable within different Local Trust Areas including the Lasqueti Island Local Trust Area. On July 2, 2024, the Strathcona Regional District Connected Coast Corporation (SRDCCC) submitted the rezoning request for the installation of the Connected Coast Project (CCP) to Lasqueti Island.

The Connected Coast Project provides 'backbone' infrastructure only. It does not include last-mile connectivity for communities to connect to the high-speed infrastructure. 'Last-mile' generally refers to running the cable from a landing site directly to individual properties, and providing internet service packages to customers.

The referral response to Ministry of Water, Land and Resource Stewardship regarding the placement of the fibreoptic cable on Crown land identified that neither the marine or land area where the fibre optic cable is proposed are zoned to permit the proposed utility.

Other proposed marine locations for the Connected Coast Project with the Islands Trust Area are compatible with zoning, aside from the marine area surrounding Valdes Island in the Thetis Island Local Trust Area, which has also received a bylaw amendment application, and the marine area around Keats Island which has now been rezoned to permit the utility use. Fibre optic cables are generally a permitted use as 'public utility' in many existing Islands Trust Land Use Bylaws.



ANALYSIS

Islands Trust Policy Statement:

Staff note that an ITPS Checklist will be completed at the time that draft bylaw amendment is presented to the LTC. The ITPS does contain the following Commitment of Trust Council related to this application:

5.3.1 Trust Council holds that local trust committees and island municipalities should be consulted and involved in the decision-making process regarding provision of utilities, transportation services or facilities that might affect land use in their local planning areas.

This bylaw amendment application serves as the LTC's opportunity to be consulted and involved in the decision-making process regarding the provision of fibre optic utilities that may affect land use on Lasqueti Island.

Official Community Plan:

A detailed analysis of the Lasqueti Island Official Community Plan (OCP) is provided as Attachment 2. Overall, staff find that this application is consistent with the relevant OCP policies.

Land Use Bylaw:

This application proposes to permit a utility use on Lasqueti Island and in the surrounding marine area to facilitate the installation of a fibre optic cable connection to Lasqueti Island. The cable is proposed to pass through the Marine Conservation (M1), Marine General (M2), Marine Multi-Use Ramp (M9) and Land Based (LB) zones.

Currently, there are no zones on Lasqueti Island which permit utilities. Since the proposed routing of the cable will pass through 4 separate zones and future 'last mile' connections may necessitate utility cable routing through other zones, staff recommend the LTC direct staff to draft a bylaw amendment to permit public utilities in all zones.

Consultation

Staff are also recommending that the draft bylaw be referred to the First Nations and agencies listed in recommended motion 3 prior to First Reading. If the LTC wishes to refer the bylaw to additional First Nations, agencies or organizations they should indicate that at this time.

The Local Government Act (LGA) states that a Public Hearing is not required for a proposed zoning bylaw if an OCP is in effect for the area and the proposed bylaw is consistent with the OCP. When a Public Hearing is not held, the LGA requires that a local government give notice of First Reading of the bylaw. Since Lasqueti Island has an OCP and the proposed bylaw would be consistent with the OCP, staff recommend that the LTC does not hold a Public Hearing and that the LTC send a public notice for consideration of First Reading.

Local Government Act

- **464(2)** Subject to this section, a local government is not required to hold a Public Hearing on a proposed zoning bylaw if
 - (a) an official community plan is in effect for the area that is the subject of the zoning bylaw, and
 - (b) the bylaw is consistent with the official community plan.
- **467(1)** If a local government decides not to hold, or is prohibited from holding, a public hearing referred to in section 464 (2), (3) or (4) [public hearing not required, or prohibited, for certain zoning bylaws] on a proposed zoning bylaw, it must give notice in accordance with this section.
- (2) The notice must state the following:
 - (a) in general terms, the purpose of the zoning bylaw;

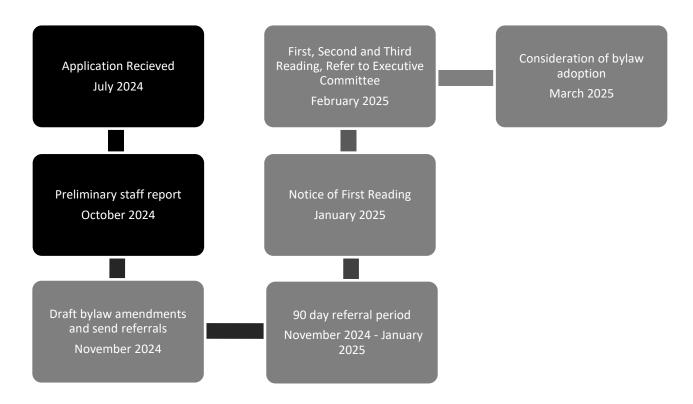
- (b) the land or lands that are the subject of the bylaw;
- (c) the date of the first reading of the bylaw;
- (d) the place where and the times and dates when copies of the bylaw may be inspected

Issues and Opportunities

This application proposes to amend the Land Use Bylaw to facilitate fibre optic cable installation on Lasqueti Island. Staff find the application is consistent with the OCP policies and is recommending the LTC proceed with this application. Staff are also recommending that the LTC request staff to draft bylaw amendments to permit public utilities in all zones. This will enable the proposed fibre optic cable to be routed through the marine area and onto the landing site at the corner of Weldon Road and Weldon Boat Ramp Road, and ensure that additional bylaw amendment applications would not be required for future 'last mile' connections to bring the fibre optic connection to different parts of Lasqueti Island. In addition, by allowing public utilities instead of limiting the bylaw amendment to only permitting a fibre optic utility, the bylaw amendment would enable other types of public utilities on Lasqueti Island.

Timeline

This timeline reflects the progress on this application up to today in black and illustrates the possible timeline if the staff recommendations are moved by the LTC.



First Nations

The Islands Trust reviews all applications to ensure the preservation and protection of cultural heritage, archaeological sites, and ancestral places. As reviewed, the application is consistent with respect to LTC Standing Resolutions on reconciliation. Notwithstanding, to provide applicants with awareness regarding unknown archaeological areas, staff forwarded the Islands Trust Chance Find Protocol and the provincial Archaeological Branch guidelines on Heritage Act directly to the applicants.

Staff recommend the draft bylaw be referred to First Nations prior to First Reading.

Rationale for Recommendation

As this application is consistent with OCP policies, staff recommend that the LTC direct staff to draft an amendment bylaw to permit public utilities in all zones, refer the draft bylaw to First Nations and agencies, and that the LTC send notice of consideration of First Reading.

ALTERNATIVES

The LTC may consider the following alternatives to the staff recommendation:

1. Request further information

The LTC may request further information prior to making a decision. Staff advise that the implications of this alternative are additional staff and longer application processing time. If selecting this alternative, the LTC should describe the specific information needed and the rationale for this request. Recommended wording for the resolution is as follows:

That the Lasqueti Island Local Trust Committee request that the applicant submit to the Islands Trust [insert specific information].

2. Proceed with the application and hold a public hearing

The LTC may choose to proceed with this application and hold a Public Hearing, in this case there would be no notice of First Reading. Implications of this alternative are that the processing time for the application would be longer. To give this direction the LTC can move recommended motions 1 and 3.

3. Proceed no further with this application

The LTC may proceed no further with the application. The application would be closed. Staff advise that an implication of this alternative is that Lasqueti Island may not be able access the fibre-optic cable telecommunications utility through the Connected Coast project.

NEXT STEPS

If the LTC moves forward with the staff recommendations, staff will draft an amendment bylaw, send the bylaw referral to agencies and First Nations, and send a public notice of First Reading for the bylaw.

Submitted By:	Stephen Baugh, Island Planner	September 19, 2024
Concurrence:	Renée Jamurat, RPP MCIP, Regional Planning Manager	October 7, 2024

ATTACHMENTS

- 1. Site Context
- 2. OCP Policies
- 3. Plans
- 4. Management Plan

ATTACHMENT 1 - SITE CONTEXT

LOCATION

Location	Weldon Road Boat Ramp, Lasqueti Island	
Lot Size	N/A	

LAND USE

Current Land Use	Marine, Boat Ramp, Road Right of Way
Surrounding Land Use	Residential, Marine

HISTORICAL ACTIVITY

File No.	Purpose
N/A	N/A

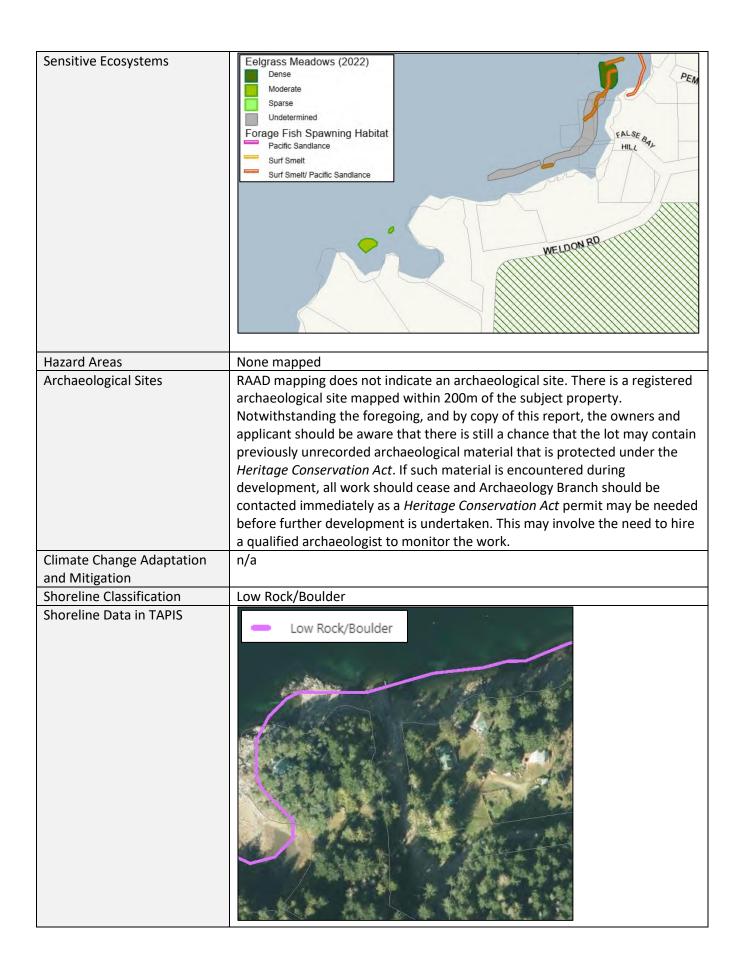
POLICY/REGULATORY

Official Community Plan	Marine (M) and Land Based (LB)
Designations	

Land Use Bylaw	Marine Conservation (M1), Marine General (M2), Multi Use Ramp (M9), Land Based (LB)
Other Regulations	Fisheries Act, Land Act
Covenants	N/A
Bylaw Enforcement	N/A

SITE INFLUENCES

Islands Trust Conservancy	The proposal does not directly affect an Islands Trust Conservancy Board (ITC) -owned property or conservation covenant, nor directly affects a property adjacent to an ITC-owned property or conservation covenant. Referral to ITC for comment is not required
Regional Conservation	This application has no considerations for the Regional Conservation Plan.
Strategy	
Species at Risk	None mapped



LASQUETI ISLAND OFFICIAL COMMUNITY PLAN BYLAW No. 77, 2005

OCP Objective/Policy	Complies	Planner Comments
3.3 Heritage, Archaeologic and Historic Matters		1.00.000
Policy 3 The Lasqueti Island Local Trust Committee wishes to support proactive and mutually respectful interests by consulting with the Tla'amin (Sliammon) First Nation.	Yes	Staff are recommending the bylaw be referred to First Nations with interest in the Lasqueti Local Trust Area, including the Tla'amin First Nation.
Policy 4 The Local Trust Committee recognizes that past, present and future generations have shared and will share experiences on Lasqueti Island and the Trust Area; it is encouraged that fair and reasonable discussion and action occurs to preserve the natural and human-made sites.	Yes	The site has been chosen, in part, to avoid conflict with a known archaeological site. Notwithstanding, the proposed cable will be installed within 200m of a known archaeological site and in an area of high archaeological potential. The applicant states they have engaged Baseline Archaeological Services Ltd. to review the installation area.
Policy 6 The Local Trust Committee recognizes that treaty negotiations with First Nations continue to be unresolved and until the resolution of First Nation interests within the Lasqueti Planning Area relationship building and cooperation between the Local Trust Committee and other First Nations may be developed over time.	Yes	Staff are recommending the bylaw be referred to First Nations with interest in the Lasqueti Local Trust Area, including the Tla'amin First Nation.
3.5 Lands Identified as Subject to Hazardous Cond	itions	
Policy 1 Development on lands known or suspected to be subject to flooding, landslide, avalanche or other hazardous conditions should be limited, unless protective measures are taken to prevent any detrimental consequences such as damage to property or risks to inhabitants.	Yes	Fibre optic cable will be installed on the sea bed and foreshore areas and is designed to withstand the conditions in these areas.
3.6 Environmental Management – General Policies		
Policy 1 The Lasqueti Island Local Trust Committee should undertake initiatives to identify environmentally sensitive and important ecosystems and flora and fauna to assist in future decision making.	Yes	For LTC information.

Policy 3 Lasqueti Island's rural marine landscape and scenic views should be maintained and protected.	Yes	Fibre optic cable is expected to have negligible visual impact to the marine landscape, structures to support the utility except for the cable itself are set back from the shoreline. The applicant has stated that when possible the split pipe covering the cable is covered in order to obscure it from view.
Policy 5 Native flora and fauna should be retained to protect natural habitats of local significance.	Yes	The utility will be installed in an area that has been previously disturbed at the edge of a road right of way. As a result there will be minimal disruption to flora and fauna. In addition, the applicant states that an Environmental Monitor will be on site during construction. The Management Plan provided by the applicant contains strategies to minimize impacts to flora and fauna.
Policy 8 When fill or debris is placed on land in such a way that it could lead to discharge of deleterious material into a water course, adequate mitigative design and construction measures are required acceptable to Fisheries and Oceans Canada, Ministry of Sustainable Resource Management, and the Ministry of Water, Land and Air Protection.	Yes	Applicant states that no fill will be used on this project and that backfilling will be done using native materials. In addition, the cable routing for each segment has included engagement with First Nations, fishing associations, Pacific Pilotage Authority/BC Coast Pilots and Transport Canada. The applicants have also worked with DFO on mitigations for installation.
3.6 Environmental Management – Marine Coastal	Policies	
Policy 9 Native flora and fauna should be retained to protect natural habitats of local significance along the foreshore and in the intertidal areas.	Yes	The utility will be installed in an area that has been previously disturbed at the edge of a road right of way. As a result there will be minimal disruption to flora and fauna. In addition, the applicant states that an Environmental Monitor will be on site during construction. The Management Plan provided by the applicant contains strategies to minimize impacts to flora and fauna including eelgrass beds.
Policy 10 The marine environment, including associated riparian areas, should be adequately protected from unreasonable adverse effects or inadequate mitigation measures resulting from development.	Yes	There are potential impacts to the marine environment and riparian areas, the applicant does have a Management Plan with mitigation measures.

Policy 12 Designation and regulation of the foreshore and marine coastal areas should be designed to preserve and protect the natural environment and character and should recognize the need to dedicate areas of the foreshore for the following purposes: • to provide for access; • to protect existing mariculture uses; • to encourage low impact public uses on and along the foreshore; • to provide for public transportation services; • to maintain public access to shellfish; • to retain the undeveloped character of the marine coastal area; • to protect marine coastal habitats for conservation purposes; • to provide for commercial and industrial uses; and • to retain representative areas of natural foreshore.	Yes	This application is not expected to have any long term adverse effects on the natural environment.
Policy 13 The type and use-level of foreshore and coastal water areas can significantly influence the rural/marine character of Lasqueti Island. Uses of Crown foreshore and water areas must be authorized by the appropriate Provincial Ministry, comply with the provisions of the Navigable Waters Protection Act administered by the Coast Guard, and also comply with the bylaws of the Local Trust Committee.	Yes	Application is seeking to amend the Lasqueti Land Use Bylaw to permit the utility as a use. Islands Trust has received a referral from the Ministry of Water, Land and Resource Stewardship for use of the crown land. The applicant is also seeking a permit from the Ministry of Transportation and Infrastructure to install the utility in the road right of way.
3.7 Community Servicing and Utilities		
Policy 3 Community services should provide a level and be conducted in a manner appropriate to the Island's needs.	TBD	For LTC consideration.
Policy 7 A precautionary approach should be used when considering additional and more sophisticated service facilities as they typically have significant associated costs.	TBD	For LTC consideration.

Advocacy Policy 11 The Local Trust Committee encourages: • the appropriate Provincial Ministry and any company to avoid routings on Lasqueti for high tension electrical transmission lines and pipelines intended for large scale movement of fuels; and • communication companies to continue the practice of placing telephone wires underground or at grade and to follow the same practice for electrical wires in the event that electrical service is extended to Island properties.	Yes	Although the utility is a fibre optic cable and not electrical or telephone wires, the terrestrial portion of the fibre optic cable and the vault will be installed underground.
Policy 2 Development on Crown lands including, but not limited to, gravel extraction, road construction or community facilities must be compatible with overall conservation values.	Yes	The proposed development is not expected to have significant impacts to the natural environment. Applicant states that habitat such as eelgrass is addressed by routeing, float and lower and transplants over the buried split pipe and that they have worked with DFO on mitigations for installation. The Management Plan does contain mitigation measures for impacts of the placement of the cable.
3.9 Climate Change Adaptation and Mitigation Advocacy Policy 8 Provincial agencies, when considering changes to infrastructure on the Islands, are strongly encouraged to take a "small footprint" approach to any proposals for public infrastructure development. The investigation of opportunities to share resources or develop common facilities is strongly encouraged.	TBD	For LTC consideration.

Attachment 3

Client:

CityWest & Strathcona Regional District

Site Location

Lasqueti

Project Description:

Bringing high-speed Internet accessibility to rural & remote communities along coastal BC, Haida Gwaii & Vancouver Island.

Revision

Revision R03

Prepared by:

Baylink Networks

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- MOVED EQUIPMENT -UPDATED LANDSCAPE

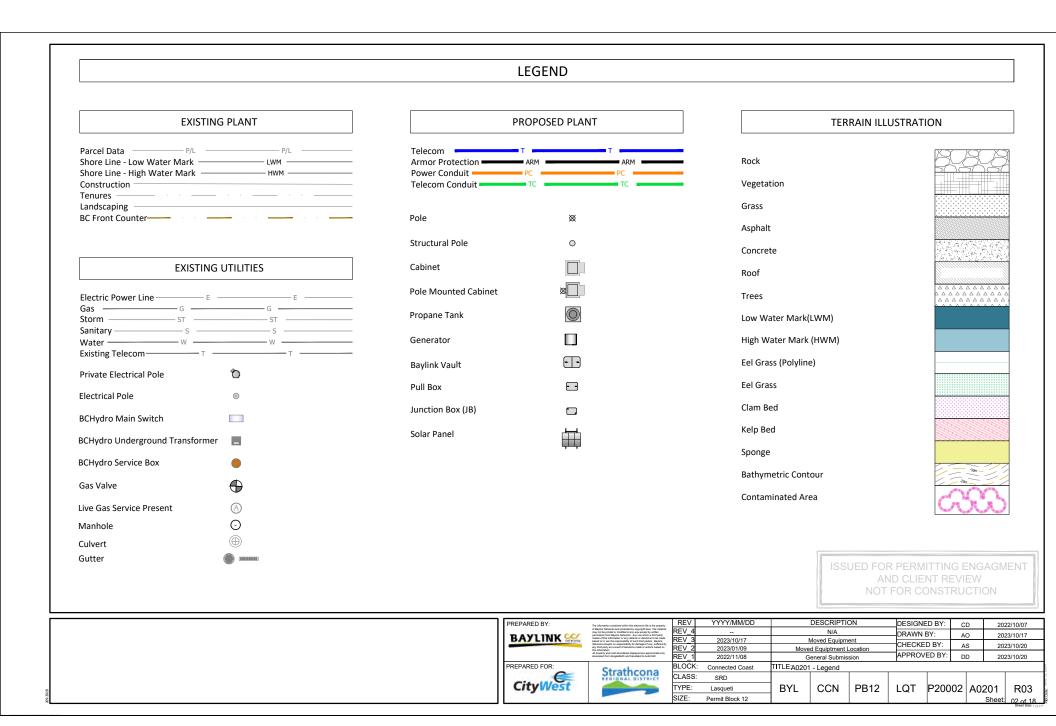
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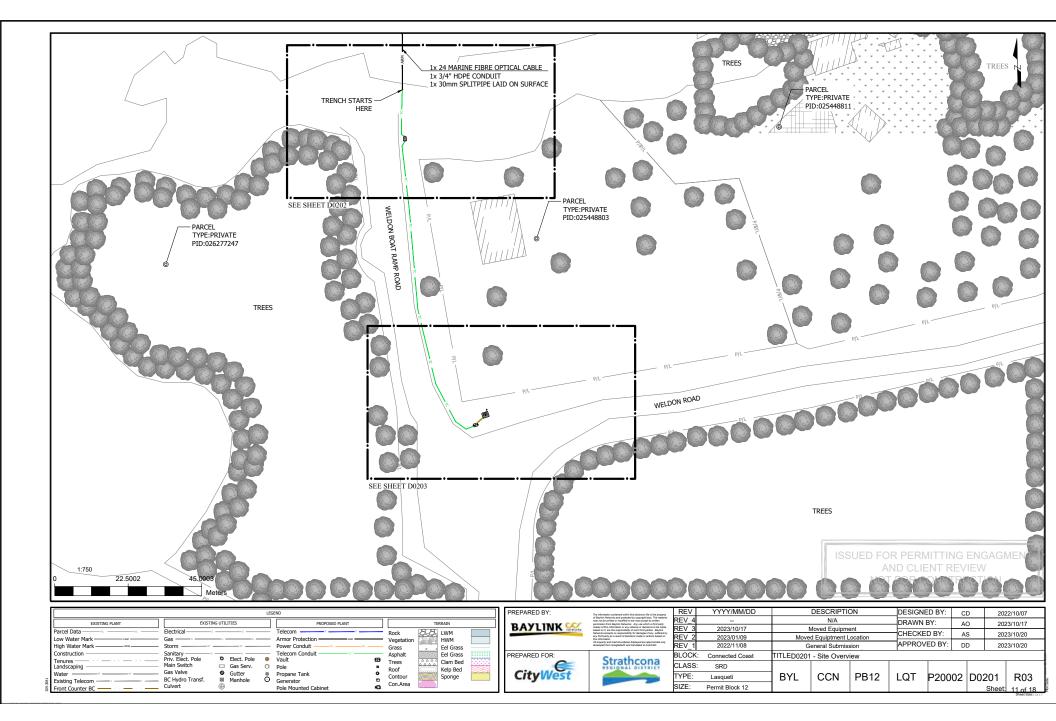
Drawings List

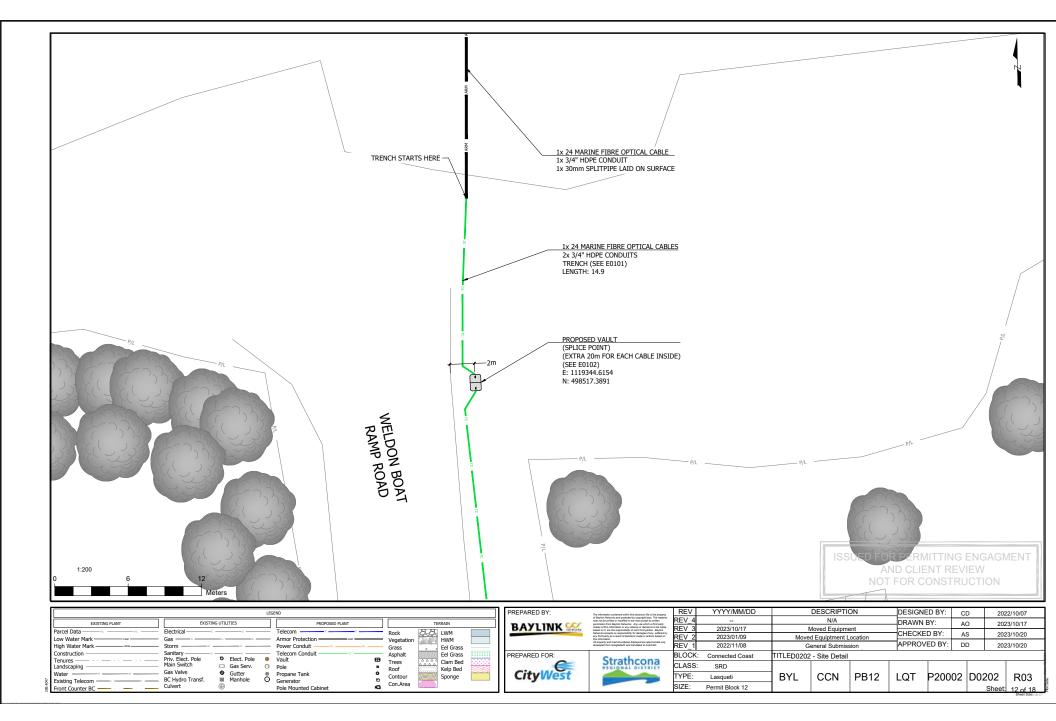
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01	00200 - Cover Sheet
02	A0201 - Legend
03	B0101 - Keymap
04	C0101 - Route Drawing
11	D0201 - Site Overview
12	D0202 - Site Detail
13	D0203 - Site Detail
14	E0201 - Trench & Splitpipe Specification
15	E0202 - Vault Specification
16	E0203 - Pole Mounted Solar Panel Specification
17	E0204 - Pole Mounted Solar Panel Specification
18	E0205 - Earthquake Sensor Specification
19	E0206 - Earthquake Sensor Specification

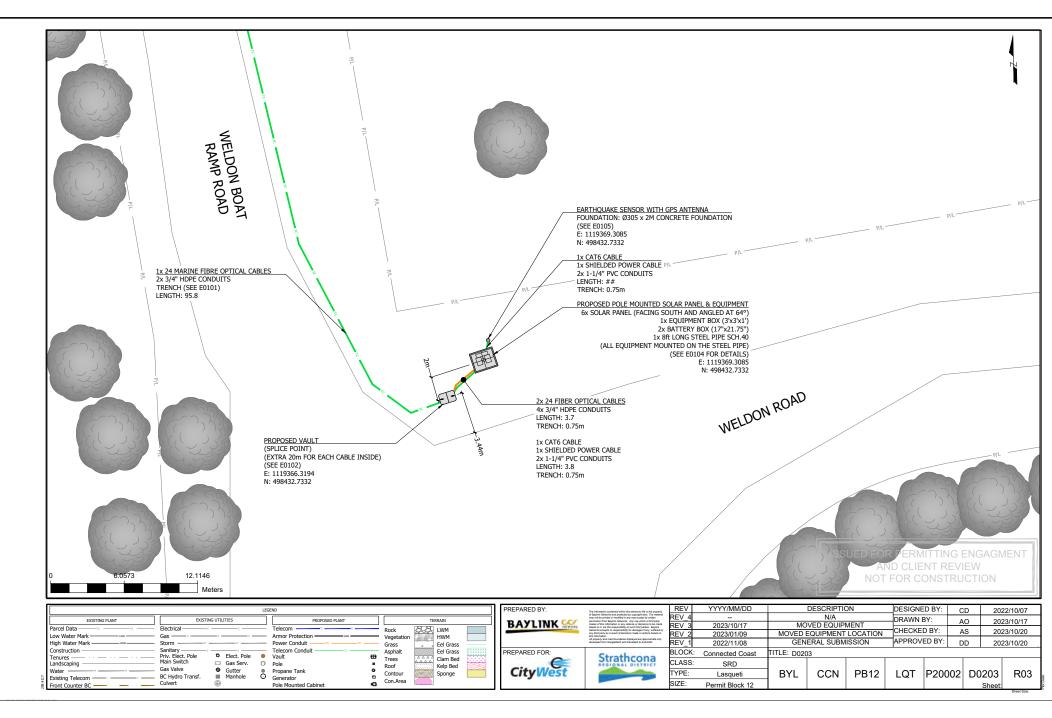


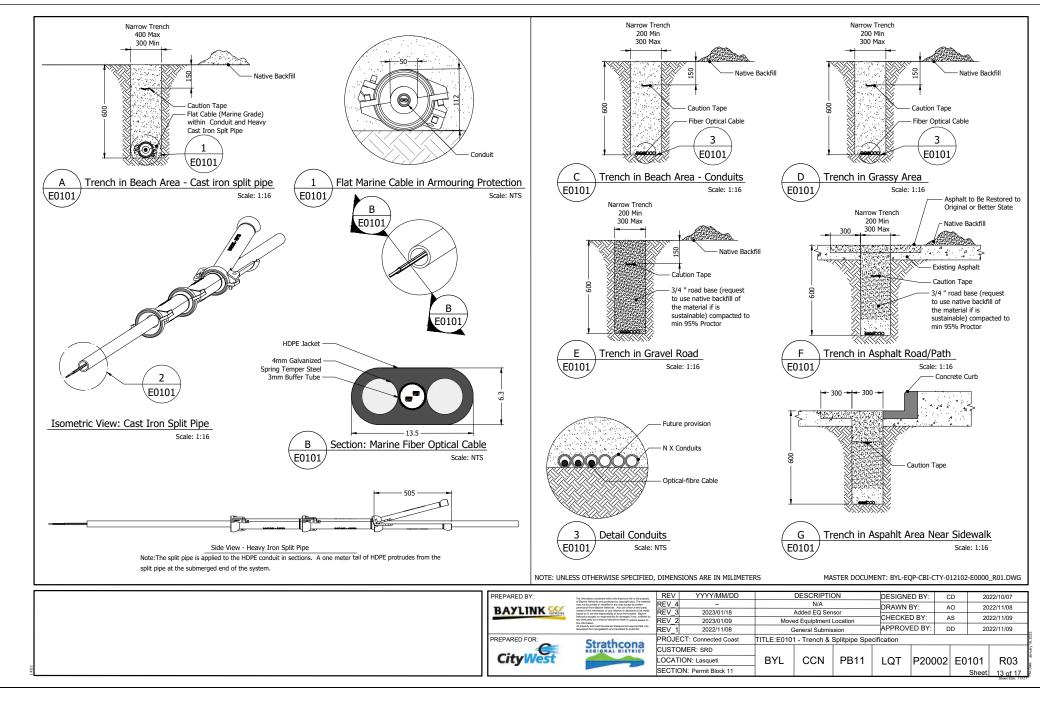
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CLASS	S: SRD										
TYPE:	Lasqueti	BYL	BYL CCN			LQT	P20002		002	200	R03
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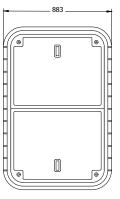






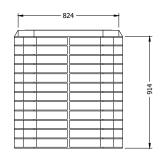
General notes:

1. Unless otherwise specified, dimensions are in millimeters.



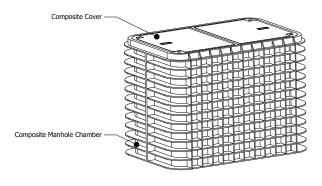
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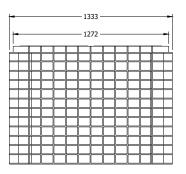
Front View: Composite Manhole Chamber

Scale: 1:20



Isometric View: Composite Manhole Chamber

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Side View: Composite Manhole Chamber

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MASTER DOCUMENT: BYL-EQP-ENC-VLT-032001-E0000_R01.DWG

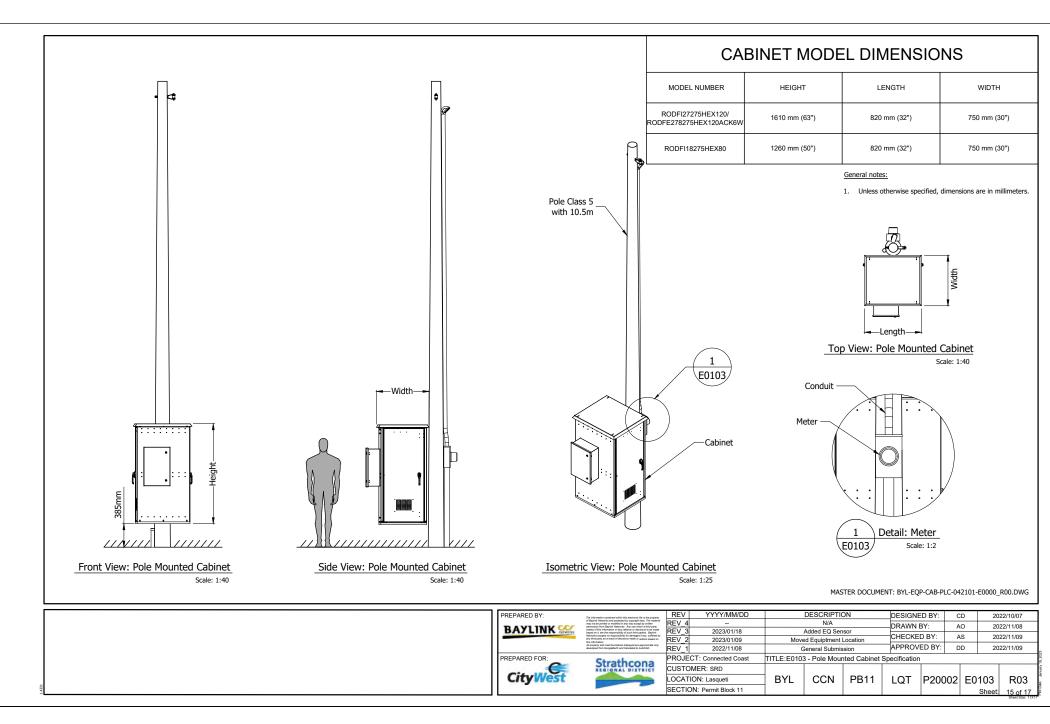


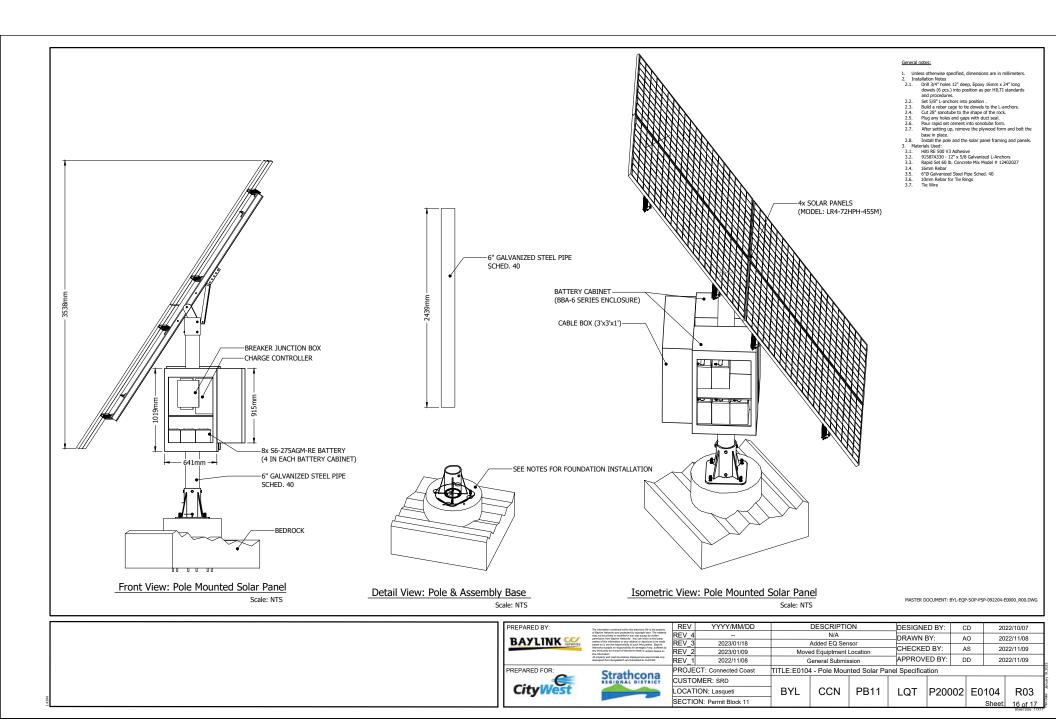


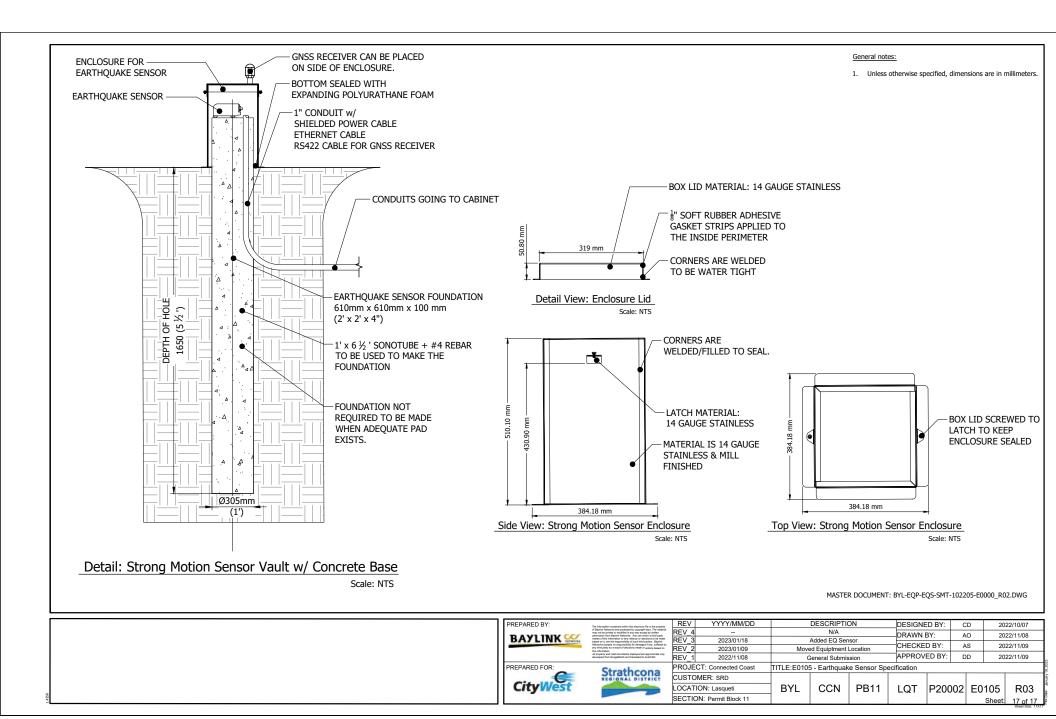
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PROJECT: Connected Coast CUSTOMER: SRD

PB11 LOCATION: Lasqueti BYL CCN LQT | P20002 | E0102 R03 SECTION: Permit Block 11







Management Plan

Please describe the details of your project to the extent known. Consult the guidance document for further information on regulatory requirements, rational for why the information is required, and how to find required information.

The scope and the timing for response will be provided. If information is requested and not received, it may result in the disallowance of the application.

Information on these topics may be required as part of the application processing and if further detail is necessary that is not part of the application and management plan received, you will be contacted and requested to provide additional information. In some circumstances, the use of a qualified professional to complete the plan may be required.

1.0 Background

1.1 Project Overview

Describe project for which authorization is requested, including construction and/or phased development details:

The Connected Coast project, once completed, will provide up to 139 rural and remote communities including 48 Indigenous communities representing 44 First Nations. This encompasses the BC coast from north of Prince Rupert, to Haida Gwaii, south to Vancouver and around Vancouver Island. The fully complete project will include 3,400 km of subsea fibre-optic cable (placed on the seabed), between Prince Rupert (the existing CityWest infrastructure) to Vancouver, where it will link to existing infrastructure, then around Vancouver Island. The Connected Coast program is anticipated to take approximately three-years.

The project will be constructed in 4 phases which are generally defined as:

Phase 1: Vancouver to Prince Rupert primary route with Discovery Islands spurs and some other spurs

Phase 2: All connections between Port Hardy and Gold River plus all remaining spurs on Phase1

Phase 3a: All connections between Gold River and Nanaimo going South

Phase 3b: All connections on the Sunshine Coast plus connections to Texada Island and Lasqueti Island.

Construction phases may shift based on when permits are received.

Permit applications will be submitted in blocks which represent a subset of a construction phase.

This application is for permit Block 12 and represents the following sites and segments:

6000,1,COM-PWR,Qualicum Beach,Lasqueti Site 1: Quallicum Beach

Site 2: Lasqueti

1.2 Investigative Work

If any preliminary investigative work has been carried out, with or without an investigative authorization, provide details on work completed, incomplete or on-going from previous term. Please provide comments on any archaeological work, new technology or any First Nations agreements undertaken.



Activity	Brief Description of Activity	Status (e.g. Complete, incomplete, ongoing)	Comments / Milestones

Add Row

1.4 First Nations Consultation

Describe any contact you may have had, including the name of the First Nation(s) and representatives contacted including a description of any discussion of potential adverse effects from the proposed activity and any discussed mitigation measures.



The Connected Coast Project team has been engaging Indigenous groups, based on the BC Consultative database beginning in February 2021 and will continue to, as is suitable. The groups and engagement to date following initial outreach includes the
following, further outlined in a supporting attachment:

2.0 Location

2.1 Description

Provide a general description of the location of the project. Include activities such as traffic patterns and volume; parking; drilling and sampling etc.



The undersea fiber optic cable will be laid onto the sea floor using a cable installation vessel.

As the cable comes to shore it will transition into a rugged conduit system which will be installed through the intertidal zone as well as the beach and upland area. In the upland area a telecommunications vault (flush with grade) will be placed as well as a private power pole and an equipment cabinet. The crown land boundary is generally at the beach therefore the on shore components are within a MOTI, Municipal or other jurisdiction. The conduit system will be buried in the beach and upland area using a small excavator.

Segment specific details can be found on the overall route detailed drawing package.

6000,1,COM-PWR,Qualicum Beach,Lasqueti

Site specific details can be found in the attached detailed drawing package.

Site 1: Qualicum Beach

Site 2: Lasqueti

2.2 Location Justification

Provide your reasons/justification of the need for this type of project at this location. For example, is the activity close to a main highway for truck access purposes; or adjacent to other examples of this use - ie. is the proposed marina close to an existing marina



The landing sites have been selected based on the following criteria:

There is a need at this location or near this location for broadband telecommunications services.

There is a reasonable method available at the site to extend the network to the homes and businesses in the area (example: aerial infrastructure)

The landing site is such that the installations will have a very low impact to the area.

There is a power line connection available at the location.

The landing site is governed by a public entity such as MOTI or a Municipality or similar that will grant a right of way for the installation.

2.3 Seasonal Expectations of Use

When will the Project require use of the land? Include information on key works during construction phases as well as operations phase and indicate seasons or full year activities. Please reference reduced risk fish windows as required by DFO:



Project Phase (Construction / Operations)

Brief Description of Activity / Works

Season

Project Phase (Construction / Operations)	Brief Description of Activity / Works	Season
Construction	Excavation for and installation of telecommunications vault, equipment cabinet and private power pole in the upland area. Excavation of trench and installation of protected cable in intertidal zone. Placement of cable on seabed surface.	Project funding requires a commitment to installation within a certain time frame. The schedule of installation is weather and regulatory permitting dependent and may be adjusted as the program progresses. The Project is continually pursuing regulatory and stakeholder authorizations and will target the earliest possible installation dates available. Landing construction will be completed over one to two days per site. Landing construction may occur outside DFO's recommended least risk window for some sites within the respective area. Construction impacts are expected to be minimal and there will be a Qualified Environment Professional (QEP) or delegate, and Environmental Monitor (EM) on site at all times during construction. Peak herring and squid spawn periods will be avoided. However, if unforeseen Project delays occur resulting in construction occurring within these time periods, measures will be in place to observe for spawning activity. If spawning is observed the within the Project Study Area, works will be stopped and will not proceed until embryos have hatched.
Operations	The operations phase will be minimal. The only required activities during the operational phase will be routine inspections of the below grade terrestrial vault and above grade terrestrial cabinet, and repairs of damaged cable on an as needed basis.	As needed basis.

Add Row

3.0 Infrastructure and Improvements

3.1 Facilities and Infrastructure

Detail any new and existing facilities, infrastructure or processes proposed and any ancillary uses. Provide details of planned construction methods and materials, and construction scheduling.

Construction Schedule	is 2 to 3 days of work are required per landing site. Please refer to above 2.3	The rate of which cable is laid is at 3-4 km/hr. Total installation time depends on the length of cable section to be laid. Please refer to above 2.3.
Construction Methods/Materials	The vault will be 24" wide x 36" long x 36" deep. The body is constructed of HDPE and the lid is composite material designed for forces greater than a 20000 lbs. The conduit is heavy wall HDPE 1.25" The additional protection in the wave crash area is created by articulating ductile iron split pipes which snap together over the top of the HDPE conduit.	The cable is a custom designed marine grade fiber optic cable (14mm wide x 7mm high).
Facility/Infrastructure/Process	The landing sites, a 24" wide x 36" long x 36" road rated telecommunications Bulk 7 vault will be installed within 125 meters of the shore. A 1.25" HDPE conduit will be install excavator. The trench will extend from the vault to the inlet shore and also beyond (into the inlet) 20 meters. In the wave crash area, additional protection will be applied to the HDPE conduit via a 42mm (ID) articulating ductile iron split pipe. The fibre optic cable within 125 meters of the shore and also beyond (into the inlet) for approximately 20 meters. In the wave crash area, additional protection will be applied to the HDPE conduit via a 42mm (ID) articulating ductile iron split pipe. The fibre optic cable will travel through the conduit system then out onto the inlet floor, towards deep water.	The underwater cable will be installed by unreeling the cable off of the back of a cable laying vessel. The cable vessel will drive the designed route. A GPS log will be taken in the event of any deviations in the course (for as-built purposes).

Add Field

3.2 Access

Identify existing and proposed roads used for access and their use by season. Include any proposed connections that require either a Ministry of Transportation and Infrastructure permit for connection or use of a Forest Service Road and what type of FS road and types of vehicles expected. Include information on any road use agreements and include the volume of traffic during construction/operation and phase or season that the traffic is expected.

Roadway/Proposed	() () () () () () () () () ()	Existing Road	Road Permittee	Traffic Volume	/olume	Mitigation of Traffic
Connection	existing/Proposed	Classification	Information and Road Use Agreements	Construction Phase	Operations Phase	Effects
Landing Type: MOTI The landing will be leaded on a Ministry of Pansportation and				A small construction vehicle pulling trailer arriving at each cable landing site in the morning and leaving in the evening (2 to 3 days	Negligible	Landing sites are not on highway roadways therefore will be little to no impact to traffic during construction or operational phases.



Infrastructure right of		to complete each	
way		landing site)	
Add Field			

3.3 Utility Requirements and Sources

Describe utility requirements and sources, include agreements in place or underway allowing access to utilities. Utilities include power generation, electrical or gas transmission or distribution lines, telecommunications.



The underwater cable network will have no impact to other utilities in the area.

Before any excavations are carried out BC one call tickets will be submitted to identify existing utilities.

The installation crew will take steps to identify all utilities in or near the construction area

The underwater cable network will be registered with BC One call and with the Regional District as well as local municipalities. The proposed network will connect to a BC Hydro aerial power pole at almost every location.

Also the fiber optic network will be extended in the future to homes, businesses and other telecommunication providers.

3.4 Water Supply

description of infrastructure planned to meet water supply requirements, include any agreements outside of Water Act Authorizations, such as Municipal water Identify water requirements for construction and operation phases (e.g. surface water and/or groundwater), including sources, location, volume and a general supply.

Project Phase (Construction/ Operation)	Water Requirement (e.g. Surface water or ground water, etc)	Source/location	Volume	Infrastructure Description	Agreements
no water supply required					

3.5 Waste Collection Treatment and Disposal

Identify any waste disposal (note septic system required), sewage, sanitation facilities and refuse disposal proposed. Include agreements in place or underway such as Health Regional Board Sewage Disposal Permits etc.



4.0 Environmental

Describe any significant impacts and proposed mitigation for the following environmental classes:

4.1 Land Impacts

4.1.1 Vegetation Removal

Is any timber removal required?

Are any areas of vegetation to be cleared, outside of timber removal?

Yes
No

Removal Type	Impacts	Proposed Mitigation
Clearing of grasses and shrubbery will be required at the Lasqueti Site 25 m2) landing site.	Potential to destroy wildlife and wildlife habitat (see Section 4.4.1). Potential to unintentionally disturb anc spread invasive species.	The area for clearing will be delineated and appropriate buffers placed around any sensitive environmental features. - Vegetation clearing will be minimized to construction specified dimensions. - Cleared vegetation, expected to consist of primarily shrubbery, foliage, and woody debris, will be retained and dispersed on site to serve as wildlife habitat and minimize soil erosion and siltation. Removal of mature trees will be avoided. - Where trenching is conducted in close proximity to trees: o Cable route will be adjusted to maximize distance from tree bases. If possible, trenching will be conducted outside of tree drip lines. At a minimum, a 1 m excavation exclusion zone will be maintained around the base of all trees. o Trenching will be conducted by hand in vegetated areas. An air spade will be used to expose the root system and allow strategic pruning of roots. o The trench will be limited to 30 cm deep and 30 cm wide in the vicinity of tree roots systems. - Backfilled or disturbed areas in the upland zone will be seeded with a suitable reclamation seed mix approved by the property owner and covered with straw (or equivalent erosion control matting). - An Invasive Species Management Plan has been prepared.

•	•

Add Field

4.1.2 Soil Disturbance

Yes
No

Disturbance Type	Impacts	Proposed Mitigations
Trenching through upland and intertidal zone up 1 m wide and 60 cm deep.	Potential erosion and sediment control (ESC) issues.	See ESC measures in Section 4.4.1.
Upland excavations for subsurface telecommunications vault, private power pole and generator/propane tank setup (if applicable).	Potential ESC issues.	See ESC measures in Section 4.4.1.

Add Field

Is the area to be excavated a Brownfield site or has the p	ootential to be contaminated
--	------------------------------

Is there potential for disturbance of archaeological, paleontological fossils or historical artifacts?

Yes
No

4.1.3 Riparian Encroachment

Will any works be completed within or adjacent to the riparian zone of any water body? If your project is within 30 meters of a watercourse and you intend to: disturb soil, remove plants, construct, install works for flood protection, develop drainage systems or service sewer or water systems the Riparian Areas Regulation may affect your development.



Yes
No

Identify all works that may affect the Riparian zone, the impacts, and proposed mitigations:

Work Type	Impacts	Proposed Mitigations
A trench will be created from the low water mark of the beach area up to the terrestrial zone	minimal	See Section 4.4 for proposed mitigation measures in this zone.

Add Field

4.1.4 Pesticides and Herbicides

Will there be any use of pesticides or herbicides during construction, operations and/or maintenance?

No

4.1.5 Visual Impacts

		be any adverse effects of the projects, and any potential adverse effects on sight lines to the project surrounding areas likely to be used for scenic viewing by residents or other users?
\bigcirc Y	⁄es	No
4.1.6 Archae	eolog	gical Sites
Are	there a	any known or high potential (Arch Procedure) archaeological sites within the project area?
\bigcirc Y	⁄es	No No
Hav	e you	conducted an AIA or engaged an archaeologist to assist with your investigations?
(•) Y	⁄es	○ No
Plea	ase incl	ude information or reports generated:
	Ī	Baseline Archaeological Services Ltd. has been contacted to review the proposed installation area.

4.1.7 Construction Methods and Materials

Identify the types of construction materials, the methods used, their impacts, and any mitigations:

The fiber optic cable itself is armoured with galvanized steel rods packaged in High Density Polyethylene (HDPE) 1.35	Construction Material/Method	Impacts	Mitigations
centimetre (cm) wide. With the exception of the portion of cable installed offshore, the cable will be encased within a 3.18 cm diameter HDPE conduit. The portion of cable installed in the intertidal zone will be additionally armoured with 44 or 81 mm diameter ductile iron split pipe casing to provide long term protection from anthropogenic and ecological influences in the intertidal zone. None - The cable and protective casing is composed of inert material that will not react with the environment. The cable does not emit anything that would be harmful to the environment.	with galvanized steel rods packaged in High Density Polyethylene (HDPE) 1.35 centimetre (cm) wide. With the exception of the portion of cable installed offshore, the cable will be encased within a 3.18 cm diameter HDPE conduit. The portion of cable installed in the intertidal zone will be additionally armoured with 44 or 81 mm diameter ductile iron split pipe casing to provide long term protection from anthropogenic and ecological	is composed of inert material that will not react with the environment. The cable does not emit anything that would be harmful to the environment.	N/A

Construction Material/Method	Impacts	Mitigations
Fiber optic cables will tie into subsurface telecommunication vaults. The excavation required to accommodate the installation of the subsurface telecommunication vaults is expected to be approximately 1.5 m x 1.5 m x 1.5 m in dimension. Select landing sites will also require the installation of a wooden private power pole requiring an excavation approximately 0.4 m wide x 1.5 m long x 1.7 m deep in dimension or a propane tank/generator requiring a an excavation 1 m x 1 m x 0.1 m in dimension.	See potential impacts and proposed mitigation measures described below in Sections 4.2.1 to 4.4.1.	N/A
From the terrestrial subsurface vault to the low intertidal zone, the conduit with split pipe armouring will be buried within a trench approximately 60 cm deep and up to 1 m wide. Trenching will be completed with a mini excavator unless site access is limited in which case the trench will be dug with hand tools.	See potential impacts and proposed mitigation measures described below in Sections 4.2.1 to 4.4.1.	N/A
In the subtidal zone, the cable with protective split pipe will either be pulled out across the seabed or floated out during high tide, facilitated by a skiff, and gently lowered onto the seabed surface.	See potential impacts and proposed mitigation measures described below in Sections 4.2.1 to 4.4.1.	N/A
In the open ocean, cable will be installed via a cable lay vessel. The cable will be laid on the ocean floor (cable burial via jetting or ploughing is not proposed).	See potential impacts and proposed mitigation measures described below in Sections 4.2.1 to 4.4.1.	N/A
A record of line placement into the watercolumn of +/- 1m accuracy will be created as the line is placed. If it is determined that the line location as placed, at any location along the authority, differs from the centerline of the authority for Crown land use by more than the measurements specified below an application for amendment to the Crown land use authority will be made within 45 days of line laying completion. (The table below recognizes the greater risk of Crown land use conflict occurring as water depths decrease and the line approaches landfall, and provides information on where the line can be expected to be encountered relative to authorized location as waterdepths increase.)		5

mean/	
low water mark (m) Variance allowed	
from centerline of authority	
<0 /0.3m	
0-5 /0.4m	
5-10/ 0.8m	
10-20/ 1.0m	
20-30 /1.5m	
30-50 /2.5m	
50-100/ 5m	
100+/ 20m	

4.2 Atmospheric Impacts

Add Field

4.2.1 Sound, Odor, Gas or Fuel Emissions

Will the project construction or operation cause any of the following to disturb wildlife or nearby residents:

Explain the current conditions, source, type and range of emission. Provide a description of atmospheric effects from proposed construction, operation, and decommissioning phases. Also include proposed mitigation measures to manage or mitigate adverse effects.

Emission Source	Current Conditions	Project Impacts	Proposed Mitigations / Management
Equipment (mini excavator and/or skid steer)	Natural ambient noise from wildlife, ocean, and adjacent residential community.	Although no exceptionally loud noises are expected to be generated by construction activities, slightly increased ambient noise levels from construction crew and equipment may be temporarily disruptive to local residents and terrestrial wildlife.	Construction at each landing site will be limited to the day Equipment will be turned off when not in use to avoid unnecessary idling Equipment will be maintained and in sound working order to minimize noise pollution. All equipment will have functioning exhaust and muffler systems. All bolts and fasteners will be tight to avoid rattling. Any construction activities that cause elevated noise will be conducted within timelines stipulated by applicable municipal noise bylaws.
Vessel (hydroacoustic noise)	Existing commercial and recreational vessel traffic.	See Section 4.4.2 for potential impacts to marine mammals.	See Section 4.4.2 for proposed mitigation measures to protect marine mammals.

Add Field

Odor? Yes

Explain the current conditions, source, type and range of emission. Provide a description of atmospheric effects from proposed construction, operation, and decommissioning phases. Also include proposed mitigation measures to manage or mitigate adverse effects.

Emission Source	Current Conditions	Project Impacts	Proposed Mitigations / Management
Equipment (mini excavator, skid steer, light duty trucks, cable laying vessel, support vessel).	No air quality issues noted.	Potential minor degradation in air quality due to equipment emissions. Impact is expected to be negligible due to the open area and relatively minor volume of emissions produced.	- All equipment will be inspected by the EM prior to entering site and must be in good working order - Equipment will be turned off when not in use to avoid unnecessary idling

4.3 Aquatic Lands

4.3.1 Drainage Effects

Add Field

Will the project result in change	es to land drainage?
○ Yes	
4.3.2 Public Access	
Will the project result in change	es to public access?
○ Yes	
4.3.3 Flood Potential	
Will the project result in a poter	ntial for flooding?
○Yes	

4.4 Fish and Wildlife Habitat

4.4.1 Disturbance to Fish/Wildlife and Fish/Wildlife Habitat

Will the project result in adverse effects to wildlife or wildlife habitat? (BC Wildlife Act)

<u> </u>	<u> </u>
Yes	\bigcirc No
(U) C 3	(/110

Provide a description of any potential adverse effects to wildlife and wildlife habitat from proposed construction and operation (including seasonal considerations, potential adverse effects from changes to access by hunters and fishers, along with proposed measures to mitigate adverse effects).

Project Phase	Potential Impacts	Proposed Mitigations / Management Plan
Construction - cable installation in upland area and intertidal zone	Potential impact to terrestrial wildlife. Equipment operation and the presence of crew have the potential to disturb wildlife and wildlife habitat through elevated noise generation or physical contact.	 Crews will not approach, harass, feed, harm, capture, or kill any wildlife. A stop work will be implemented if wildlife is observed onsite. Work will not resume until wildlife has vacated the vicinity of the site on their own accord. A stop work will be implemented if a wildlife habitat feature (ie. nest, den, burrow) is encountered. Work will not proceed until a management plan in compliance with the BC Wildlife Act and Migratory Birds Convention Act is prepared. All wildlife observations will be reported to the EM. In the event that wildlife appears to be injured, abandoned, or in distress, a BC conservation officer will be immediately notified at the BC Report All Poachers and Polluters Hotline (RAPP) (1-877-952-7277). The BC RAPP will advise on the appropriate management strategy. All food and domestic waste will be stored securely in wildlife proof containers or within vehicles, and removed from site at the end of each day. Post-construction, each landing site will be restored to pre-construction conditions as much as possible. This ensures no hazardous obstacles are present which could harm wildlife (ie. open excavations, standing pools of water.)
Construction - all phases	Potential impact to bird and bird habitat.	• Compliance with the provincial Wildlife Act a

Construction - all phases	Potential impact to bird and bird habitat.	federal Migratory Birds Convention Act will be achieved by conducting pre- disturbance nest surveys as required. This will involve conducting nest sweeps for nests of species protected year-round (e.g., Bald Eagle and Great Blue Heron) as well as nest sweeps to avoid impacting any active nests of migratory birds during the breeding season. • If a nest is identified during the survey or construction activities, a stop work will be implemented. Work will not proceed until a nest management plan has been developed. • Proactively, bird nesting will be prevented in equipment during nesting season (late March to mid August) by covering pipe ends and keeping equipment mobile on a daily basis.
		during nesting season (late March to mid August) by covering pipe ends and keeping equipment mobile on

Will the project (construction or operations phase) occur in and around streams, lakes, estuarine or marine environments?

Yes
No

Add Field

Describe the fish habitat on or near the project site, include potential impacts of the Project (e.g. stream crossings, water diversions, etc), including seasonal considerations, and plans to manage/mitigate effects.

Project Phase	Impacts	Proposed Mitigations / Management
Construction - cable placement on ocean floor	Potential impact to fish habitat (eelgrass). Eelgrass in the subtidal zone and shallow ocean, may be impacted when the cable is laid on the seabed floor, however the magnitude of impact is anticipated to be minimal due to the area of disturbance being limited to the width of the cable (1.35 cm) or the split pipe casing (8 cm). Placing the cable on the seabed (no burial or trenching) is a non- intrusive installation method that limits sediment disturbance.	Prior to construction commencing, an ROV or dive team will be used to survey the proposed cable alignment in the subtidal zone, from 0 m to -10 m CD. The cable route will be adjusted to avoid eelgrass beds if possible. If unavoidable, the route with the least dense or shortest distance of eelgrass will be selected. Installation methods in the subtidal zone will be determined based on the presence or absence of native eelgrass identified during the survey. If eelgrass is present in the vicinity, the split pip § 8

Project Phase	Impacts	Proposed Mitigations / Management
Construction - cable placement on ocean floor	the cable is laid on the seabed floor, however the magnitude of impact is anticipated to be minimal due to the area of disturbance being limited to the width of the cable (1.35 cm) or the split pipe casing (8 cm). Placing the cable on the seabed (no burial or trenching) is a non- intrusive installation method that limits sediment disturbance.	will be floated during high tide and gently lowered onto the subtidal seabed in order to minimize seabed disturbance. The split pipe will not be dragged through substrate. Live monitoring will be used to guide the installation and ensure accurate spatial management. An ROV or dive team will be used to conduct a post construction survey of the subtidal zone and installed split pipe. Cable installation in the subtidal zone will only be conducted during suitable high tides to ensure the skiff used for installation does not scour substrate or sensitive marine vegetation. If technically feasible, smaller diameter split pipe (44 mm instead of 81 mm) will be used in the subtidal zones of landing sites where eelgrass is identified to minimize the Project footprint and environmental impact. Vessels laying cable in the open ocean will travel at less than 4 km/hr (2.2 knots) to ensure cable placement is precise. Personnel will be trained with Archaeological chance find procedures to be prepared in the event that an artifact is found during construction Personnel will be trailed with a Fossil Chance find protocol and will know next steps if a fossil is observed.
Construction - trench excavation in intertidal zone	Potential to impact sensitive fish habitat (eelgrass). Trench excavation and associated substrate disturbance in the mid to low intertidal zones poses the risk of damaging sensitive marine habitat (eelgrass) through physical contact, displacement and burial. Personnel assisting with equipment operations in the intertidal zone risk destroying eelgrass by trampling on it.	Work will be scheduled during suitable low tides. The EM will conduct a sweep of the low intertidal zone work area prior to any construction commencement to identify any native eelgrass present. If encountered, the trench route will be adjusted to avoid if possible (ie. around patchy distribution). If unavoidable, the cable route will be shifted to the route with the least impact to eelgrass. Eelgrass within the trench footprint will be salvaged and transplanted back into the disturbed trench footprint post backfill. Plywood will be laid on either side of

		the trench to protect the eelgrass from
		equipment tracks and spoil piles.
		Personnel accessing the intertidal zone
		by foot will be limited. Care will be taken by these individuals to avoid
		trampling any marine flora and fauna.
		Personnel will be trained with Archaeological chance find procedures to be prepared in the event that an artifact is found during construction
		Personnel will be trailed with a Fossil Chance find protocol and will know next steps if a fossil is observed.
	Potential to impact fish and fish habitat (eelgrass). Substrate disturbance in the intertidal	See below sections for the proposed erosion and sediment control (ESC) measures and the Water Quality Monitoring Program.
Construction - trench excavation in intertidal zone	zone caused by excavation activities poses the risk of sediment suspension during tidal inundation and increased turbidity in the marine environment. Elevated turbidity in the marine	Personnel will be trained with Archaeological chance find procedures to be prepared in the event that an artifact is found during construction
	environment can be detrimental to fish and marine vegetation.	Personnel will be trailed with a Fossil Chance find protocol and will know next steps if a fossil is observed.
		Spill Prevention Plan
Construction - all phases	Potential to impact fish and fish habitat Operating equipment in the marine environment poses the risk of an accidental release of a deleterious substance such as hydraulic fluid or diesel fuel which could have harmful effects on marine flora and fauna.	 All equipment will be inspected by the EM prior to entering site and must be in good working order and free of leaks, excess grease, oil, and soil. Equipment inspections will be completed and documented daily by operators prior to use. Equipment will have secondary containment in place (ie. drip trays) when not being operated. Fueling and maintenance of equipment will be conducted greater than 30 m from the high water mark and any watercourses Fueling will be performed by two qualified personnel on a sealed surface with the use of drip trays. All fueling hoses will have an automatic shut-off valve. All equipment in the intertidal zone will be operated in the dry, above the water mark and will be clear of the intertidal zone prior to tidal inundation. Equipment operations in the intertidal zone will be limited as much as possible to reduce the spill potential. Effort will be made to use biodegradable hydraulic fluid in

equipment dedicated to working on, near or above water when logistics allow.

• Parking and laydown areas will be established greater than 30 metres from the high water mark if possible.

Spill Response Plan

- An emergency spill response plan in compliance with the BC Spill Reporting Regulation (B.C. Reg. 221/2017) has been prepared and will be readily available on site at all times.
- All crew members will be trained in spill response procedures and will be familiar with the location and contents of spill kits.
- Each piece of equipment, including skiffs, will be equipped with a small spill response kit.
- Each active work front (ie. landing site, cable laying vessel) will have a large spill response kit housed in a sealed container readily available.
- In addition to spill kits, five-gallon buckets, shovels, tarps and poly sheeting will be available on site for any potential emergency cleanup of contaminated soil required in the intertidal zone.
- The cable laying vessel is equipped with an oil containment boom and is registered with Western Canada Marine Response Corporation. In the event a spill is uncontainable by resources on site, the WCMR will be notified to respond.

Potential impact to benthic organisms in the intertidal zone.

Construction - trench excavation in intertidal zone

Trench excavation in the intertidal zone poses the risk of harming benthic organisms by direct impacts such as displacement, crushing or burial. Mobile benthos (ie. crabs) should be able to avoid physical interaction. Bivalves and tubeworms may be impacted. Post construction, natural recolonization of the disturbed areas is expected and no permanent impacts are expected from the Project.

- The EM will conduct a sweep of the intertidal zone work corridor prior to any substrate disturbance to identify any sessile invertebrates (clams, oysters, mussels) susceptible to harm from construction. These sessile invertebrates will be relocated. An invertebrates salvage permit has been obtained from the DFO to conduct such work.
- Salvaged sessile invertebrates will be relocated to disturbed substrate at a similar depth and tidal height within 20 m of the harvested location. Care will be taken to ensure that all bivalves are repositioned in an orientation such as to minimize time for resumption of their natural state (ie. bivalves will be oriented such that their posterior side is closer to the surface).

Excavated stockpiles will be assessed

by the EM for the presence of bivalves and if located will be salvaged. Project funding requires a commitment to installation be completed by March of 2025. The schedule of installation is weather and regulatory permitting dependent and may be adjusted as the program progresses. The Project is continually pursuing regulatory and stakeholder authorizations and will target the earliest possible installation dates available. Landing construction will be completed over one to two days per site. Landing construction may occur outside DFO's recommended least risk Potential impact to spawning fish and window for some sites within the spawning habitat. respective area. Construction impacts are expected to be minimal and there The majority of the BC coastline has will be a Qualified Environment been identified as juvenile salmonid Professional (QEP) or delegate, and habitat. Environmental Monitor (EM) on site at all times during construction. Peak The risk of direct interaction with fish herring and squid spawn periods will Construction - cable placement on species during in water works is be avoided. However, if unforeseen anticipated to be low due to the nonocean floor Project delays occur resulting in intrusive nature of the work (placemen construction occurring within these of cable on seabed and operating low time periods, measures will be in place speed vessels) and the mobility of the to observe for spawning activity. If species. spawning is observed the within the Project Study Area, works will be stopped and will not proceed until embryos have hatched. Where suitable forage fish (eg. Pacific herring, Surf Smelt) spawning habitat is present, a qualified environmental professional will conduct a forage fish egg survey in accordance with an accepted survey method prior to trenching within the intertidal zone. Based on avoidance of herring spawning season, no indications of spawning herring are anticipated. If forage fish spawning is detected, work will be suspended until no incubating embryos are present. During all in water works, a 100 m exclusion zone will be established around the active work area for whales, Potential impact to marine mammals. dolphins and porpoises, unless the animal is resting or with a calf in which The risk of physical interaction with a 200 m exclusion zone applies. With Construction - cable placement on marine mammals during in water works the exception of killers whales where a ocean floor is anticipated to be low due to the low 400 m exclusion zone will apply. A speed of operating vessels and the MMO will be present to monitor for any mobility of the species. marine mammals entering exclusion zones during in water works. If a marine mammal is observed entering its

Construction - cable placement on ocean floor	The risk of physical interaction with marine mammals during in water works is anticipated to be low due to the low speed of operating vessels and the mobility of the species.	respective exclusion zone, a stop work will be implemented. Construction activities will only resume once the individual(s) has been confirmed to have left the exclusion zone or has not been sighted for a duration of 30 minutes. The aforementioned marine mammal exclusion zones comply with the approach distance requirements identified in the Marine Mammal Regulations. The MMO will also monitor for pinnipeds including harbour seals which may be encountered during Project work. It will be left to the discretion of the MMO if a work stoppage should be implemented upon observation of a pinniped. If the MMO deems Project work may cause direct harm to the individual or if the individual appears under distress a work stoppage will be implemented. Work may continue if pinnipeds enter the exclusion zone but are not considered to be at risk of harm from Project activities.
Construction - cable placement on ocean floor	Potential impact to marine mammals. Vessels may cause hydroacoustic noise with the potential to impact select marine mammal species such as Killer Whales by interfering with echolocation vital for foraging, communication, and navigation. The most substantial hydroacoustic disturbance anticipated during the installation of the fibre optic cable will be the noise generated by the vessel itself. Vessel noise is typically higher in frequency and lower in intensity than acoustics known to cause serious harm to marine mammals such as seismic airgun blasts and impact pile driving. The DFO's recommended mitigation measure for minimizing adverse hydroacoustic impact from vessels is to reduce the vessel speed.	Vessels will travel at less than 4 km/hr (2.2 knots) during construction operations to minimize engine noise and vessel wake. At this speed, personnel will have ample opportunity to observe and react to potential hazards on route.
Add Field		

Is the project (construction or operations phase) likely to increase erosion or sedimentation?

Yes
No

Describe the fish habitat on or near the project site, include potential impacts of the Project (e.g. stream crossings, water diversions, etc), including seasonal considerations, and plans to manage/mitigate effects.

Project Phase	Impacts	Proposed Mitigations / Management
Construction - trench excavation in upland area and intertidal zone	Potential for erosion and release of sediment laden water from disturbed areas in upland and intertidal zone to cause increased turbidity in marine environment.	An ESC Plan has been developed. ESC mitigation measures include: All work in the intertidal zone will be completed in the dry, above the water mark. Prior to initiating excavation in the intertidal zone, crews will review tidal forecasts and plan accordingly an appropriate length of trench to excavate such that the entire trench length can be backfilled prior to tidal inundation. If for any reason cable installation is delayed, trenches will still be backfilled and contoured prior to tidal inundation to prevent sediment stranding. - Swamp mats or equivalent will be used as necessary to reduce substrate compaction by machinery. - Overland surface water flowing towards the work area will be diverted and overland surface water leaving the work area will be collected/filtered using methods such as berms, ditches, sandbags and silt fencing. - ESC materials including polyethylene plastic, silt fencing, tarps, sand bags and straw mulch will be available onsite for use as prescribed by the EM - Any coarse material originally on the surface will be returned to the surface (ie. cobbles, driftwood) to retain underlying fines - Disturbed areas in the upland that were originally vegetated will be seeded with a suitable reclamation seed mix - Construction will be deferred during heavy precipitation A Water Quality Monitoring Program has been developed. Components of the program include: - Visual monitoring for turbidity plumes in the marine environment. - Observation of a turbidity plume triggering in situ water quality monitoring for turbidity within 10 m of the plume on an hourly basis until measurements meet BC Approved Water Quality Guidelines. - Background in situ turbidity measurements will be collected for comparison purposes. - Construction activity directly causing.

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		the increased turbidity will be halted immediately Water quality monitoring to be conducted by qualified EM.
Construction - cable with protective split pipe placed on seabed in low intertidal zone and subtidal zone	Potential for resuspension of seabed floor sediment in low intertidal zone and subtidal zone. Split pipe (44 or 81 mm diameter) is anticipated to extend to 4 m below Chart Datum and then just cable (1.35 cm wide) beyond that.	An ESC Plan has been developed. ESC mitigation measures include: • Cable with protective split pipe in the low intertidal and subtidal zones will be placed on the seabed surface (no trenching or burial required). • No personnel will be accessing the subtidal zone by foot. • Installation in the subtidal will only be complete during suitable high tides to ensure the skiff used for installation does not ground or prop scour.
Construction - placement of cable on seabed floor	Potential for resuspension of seabed floor sediment in open ocean. Between landing sites, cable will be laid on the seabed surface via a cable lay vessel. Based on the slight diameter of the cable (1.35 cm), slow speed of installation (less than 4 km/hour) and non-intrusive method of installation (no trenching or burial) sedimentation of the seabed floor is expected to be minimal.	• Cable will be laid at less than 4 km/hr.
Add Field		

Will the project (construction or operations phase) require water diversion?

Will the project threaten or endanger species at risk in the area?

Species At Risk Act

Yes
No

How and what mitigation is planned?

Project Phase	Impacts	Proposed Mitigations / Management
Construction - trench excavation in intertidal zone	Potential impact to SARA listed Olympia Oysters (special concern) and Northern Abalone (endangered) during trench excavation in the intertidal zone causing direct impacts such as displacement, crushing or burial. Post construction, natural recolonization of the disturbed areas is expected and no permanent impacts are expected from the Project.	

Project Phase	Impacts	Proposed Mitigations / Management
	the disturbed areas is expected and no permanent impacts are expected from the Project.	invertebrates) susceptible to harm from construction. These sessile invertebrates will be relocated. An invertebrates salvage permit has been obtained from the DFO to conduct such work. • Salvaged sessile invertebrates will be relocated to disturbed substrate at a similar depth and tidal height within 20 m of the harvested location. Care will be taken to ensure that all bivalves are repositioned in an orientation such as to minimize time for resumption of their natural state (ie. bivalves will be oriented such that their posterior side is closer to the surface). • Excavated stockpiles will be assessed by the EM for the presence of bivalves and if located will be salvaged.
Construction - cable lay in subtidal zone	Potential impact to Olympia Oysters (special concern) and Northern Abalone (endangered). Benthic organisms in the subtidal zone may be impacted when the cable is laid on the seabed floor, however the magnitude of impact is anticipated to be minimal due to the area of disturbance being limited to the width of the split pipe casing (10 cm) and cable (1.35 cm). It is anticipated that the split pipe will extend out approximately 2 m below 0.0 m Chart Datum elevation. Beyond that, cable (1.35 cm width) will be laid. Placing the cable on the seabed (no burial or trenching) is a non-intrusive installation method that limits sediment disturbance.	

Add Field

5.0 Socio-Community

5.1 Land Use

Describe the current community setting on or near the project area, including the location of non-aboriginal and aboriginal communities or known use areas.

The undersea network traverses the major water ways of the BC coastline.

The landing sites for the cable are typically near communities where there is a need for high bandwidth services.

The footprint of the cable and conduit installation will be negligible and will not have any impact to the use of the land or sea floor. Fishing practices that drag the sea floor could be in conflict with the cable installation.

The equipment in the back-shore area is one telecom cabinet 48inches x 48inches x 60inches, one power pole at 14 inches in diameter and one vault at 36" x 48" flush with the ground. This equipment is typically placed in a suitable design location based on (power availability, foot traffic, vehicle traffic, accessibility, and land ownership).

Lasqueti - Beach Access

5.1.1 Land Management Plans and Regional Growth Strategies

Are there any land and resource management plans, coastal plans, provincial, regional growth strategies or local government plans with zoning, or management policies or use restrictions in place that could limit or preclude your proposed use of the land? (Please refer to the Union of BC Municipalities (UBCM), and check the websites of the municipality, regional district or other organization with jurisdiction including your project area.)

5.2 Socio-Community Conditions

5.2.1 Adjacent Users or Communities

Is the project likely to restrict public access, or the ability, or the ability of adjacent land owners or tenure holder to access their property or tenures?

No

5.2.2 Existing Services

Provide a description any increased demand on fire protection and other health facilities and emergency services arising from your Project, including proposed management or mitigation measures.

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This project will not result in any increased demands of any public services.	

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