



PORT of
vancouver

Vancouver Fraser
Port Authority

Project and Environmental Review Guidelines

Submarine Cable Guidelines

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1. Introduction

The Vancouver Fraser Port Authority (the port authority) is the federal agency that oversees the stewardship of the Port of Vancouver. Under the *Canada Marine Act*, the port authority is responsible for the management and control of land and water within its jurisdiction. The port authority's [jurisdiction](#) includes federally-managed lands and waters as well as navigational jurisdiction.

Under the *Impact Assessment Act*, it is the port authority's responsibility to review proposed physical works and activities that are partially or wholly within the federally-managed lands and waters of the port authority's jurisdiction. The port authority reviews proposed projects through the Project and Environmental Review (PER) process to ensure the project will not result in significant adverse effects on the environment or other effects before determining if a project should proceed.

Proponents proposing submarine cable projects (including installation, maintenance, repair, upgrades, or removal) that occur within or partially within the port authority's managed federal lands and waters jurisdiction¹ are required to obtain a project permit from the port authority through the PER process. Submarine cable projects that Applicants propose which will be located solely within the port authority's navigational jurisdiction are also subject to review by the port authority.

Proposed submarine cables are likely to require additional permits, authorizations, or approvals from other authorities. Coordination between the port authority and other agencies may also be required. The applicant is responsible for obtaining all applicable permissions and approvals, in addition to a port authority project permit.

This guideline for submarine cables provides the design criteria and environmental requirements for PER submarine cable permit applications.

2. Objectives

These guidelines apply to all proposed submarine cable projects including installation, maintenance, repair, upgrades, or removal within the port authority's jurisdiction. The port authority reviews all submarine cable applications on a case-by-case basis. These guidelines are intended to:

- Establish clear design criteria and environmental requirements
- Provide guidance on the submission requirements of submarine cable permit applications
- Support an efficient and effective review of proposed submarine cable projects
- Provide a fair and consistent process for all applicants

This document provides high-level information on the specific requirements (siting considerations, methods, drawings, plans, etc.) for a PER application proposing a submarine cable project. Full details on additional permit application requirements will be provided once the preliminary project review application is reviewed.

¹ Vancouver Fraser Port Authority. 2015. Map of the Vancouver Fraser Port Authority Jurisdiction: Navigational, and Managed Federal Lands and Waters. Available at: [Map_Jurisdiction-scaled.jpg \(2560×1978\) \(portvancouver.com\)](#)

3. Key Requirements

3.1. Valid tenure agreement

If the Project is located within the federally-managed lands and waters of the port authority's jurisdiction, the proponent will be required to enter into a tenure agreement with the port authority for a new submarine cable, or a realignment of an existing cable. In addition to the tenure agreement, a temporary construction access licence will also likely be required.

A valid agreement shall be in place prior to accessing the Project site or commencing construction or any other physical activities on the Project site. The agreement will outline the allowable uses, liability and risk assignment, the tenure area, cost, insurance terms, and any other obligations and/or restrictions. Real estate agreements are obtained through the port authority's Real Estate department and is separate to the PER process.

3.2. Cable burial

To mitigate risk of cable damage or interference with marine navigation, cable burial is the preferred method of installation for cables within the port authority's jurisdiction (managed and navigational). Depth of burial should consider the potential for damage due to deep-sea vessel anchor use at a minimum.

There are scenarios where cable burial may not be recommended or feasible (i.e., environmentally sensitive areas, unsuitable substrate, potential interference with port operations). Suitability of cable burial would be considered during the review process.

3.3. Cable removal

The port authority will require confirmation that the owner/operator remove any cable at the end of life and/or if they become damaged.

Cable removal is subject to review under the PER Process and a separate PER Permit would be required.

4. Submitting a preliminary project application for a submarine cable project

Applicants proposing a submarine cable project should submit a preliminary project review application online through the [Project and Environmental Review \(PER\) application portal](#).

Upon receipt of a preliminary application, the port authority will contact the applicant about next steps and may provide an application checklist that outlines the required documentation for a full application.

The port authority will also assess whether the proposed project has the potential to impact Indigenous rights, the public, or stakeholders. The port authority may also conduct consultation and engagement with Indigenous groups, the public, and stakeholders.

For more information on the PER application process, see the [Project and Environmental Review Process Application Guide](#).

6. Application requirements

In addition to the requirements outlined below, the following plans and studies may also be required:

- Construction and operations communication plan
- Marine communication plan
- Marine traffic study
- Marine-user working group
- Biophysical assessment
- Archaeological assessment
- Spill prevention and emergency response plan

Upon review of a preliminary application, the port authority will provide the applicant with the requirements of a full application as part of an application checklist. Links to guidelines to assist in the preparation of plans are provided in Section 6 below.

6.1. General information

6.1.1. Project information

- Name of project
- Brief background of the applicant's company and business operations in the region
 - Identify if the operating company is a non-profit and/or receiving government funding or subsidies
- Project summary including the purpose, use, rationale, and objectives
- Length of time that the cable is intended to be in place, or lifespan
- Description of the Project setting, including proximity to sensitive receptors (e.g., schools, parks, environmentally or culturally sensitive areas, etc.)
- List all studies that have been completed in support of the application

6.1.2. Project route and siting

- Provide a location map showing the proposed cable route, include the start and end of the cable route within and outside the port authority jurisdiction, if necessary (see Section 5.2 below)
- Show the navigation channel, safety channel, depths, and anchorage locations. Every effort should be made to locate the cable outside navigation channels. For more information on navigation in the port authority's jurisdiction, see the [Port Information Guide](#).
- Provide a rationale for the selected route. Describe and identify on a plan any other route alternatives that were considered and why they were not selected.
- Describe and identify on a plan any other submarine utilities (i.e., other cables, fibre optic lines, pipelines, and/or telephone lines etc.) or other utilities located in the project area (see Section 3.2.1 below).

- Define the minimum distance of separation necessary between the proposed project and any existing submarine cables, pipelines, or other structures. Explain the rationale for maintaining the specified distance. Explain how conflicts with existing cables or other structures will be avoided or otherwise addressed.

6.1.3. **Scope of work**

Provide the following information:

- Cable type and specifications (including cable components, dimensions, and density)
- The force required for cable breakage
- Details of any protective casings or armouring for the cable
- Length of cable within and outside the port authority's jurisdiction
- A description of any onshore facilities required or proposed for the cable
- A description of all elements of construction and installation (including pre-construction activities), the timing of these elements, and the overall project installation timeline.
- Proposed hours of construction
- Proposed installation methods, including proposed cable laying and/or burial techniques for different areas or substrate types and cable crossings, target cable burial depth, vessel type and equipment details, and boring operations and locations. If boring is proposed, additional details or plans may be requested.
- Rationale for method of installation
- The exact locations where the cable will be buried into the seabed, when the burial will occur, if applicable
- The method to ensure the cable does not move on the seabed once in place/how the cable will remain buried long-term. Describe contingency plans should the cable move or become exposed.
- Construction staging location and activities (including upland and marine staging requirements)

6.1.4. **Operational plan**

- Description of how the proposed cable will function once operational, and who the operator will be
- Description of any operational risks
- Description of power carrying capacity, if applicable

6.2. **Location plan**

- Location Plan(s) for selected cable route
 - Cable alignment, including locations of any armouring and entrenchment, where applicable
 - Cable start and end points
 - Port authority's jurisdictional boundaries
 - Lease and property boundaries, easements, and rights-of-way

- Existing cables and utilities, where applicable
- Marine navigation and safety channels
- Anchorages
- Legal high water mark, where applicable
- Plans for any onshore infrastructure or facilities within the port authority's jurisdiction
- Full-scale set of maps or charts that show depth derived from high-resolution survey equipment (i.e., side-scan sonar and/or multibeam surveys). If the cable would be buried, then provide results from any sampling conducted and/or sub-bottom profile surveys. The maps should show bathymetry, seabed features and profile, and shallow geology (e.g., depth or thickness of sediment substrate).

The port authority may request AutoCAD drawings and/or shapefiles for the selected cable alignment and alternative routes. If port authority spatial data (e.g., port authority jurisdictional boundary) is required, please send an email request to the assigned PER Project Lead.

6.3. Maintenance and repair plan

A maintenance and repair plan will be required either as part of the application submission. The plan must include the following:

- Describe any anticipated repair and maintenance activities, including routine inspections and surveys
- Describe anticipated maintenance and repair methods
 - Maintenance and repairs must be able to be completed outside any navigation channels to avoid interference with port operations
- Include an estimate of the frequency of cable faults, and a description of how emergency repairs would be made
- Describe the cable identification system used by the company to distinguish its cable from other cables
- Identify the expected life of the proposed cable, before replacement is required

7. Links to guidelines, plans, and other legislation

Please refer to the following for additional information on submitting a port authority PER permit application:

- Vancouver Fraser Port Authority Project and Environmental Review [Application Guide](#)
- Vancouver Fraser Port Authority Project and Environmental Review [PER Guidelines](#)
- Vancouver Fraser Port Authority [Land Use Plan](#)
- Vancouver Fraser Port Authority PER [Application Portal](#)
- Vancouver Fraser Port Authority [Port Information Guide](#)

Please refer to the following legislation that may be applicable when submitting a PER application (non-exhaustive):

- Impact Assessment Agency of Canada - [Impact Assessment Act](#)
- Vancouver Fraser Port Authority - [Canada Marine Act](#) and the [Port Authority Operations Regulations](#)
- Transport Canada - [Canadian Navigable Waters Act](#)
 - See the Navigation Protection Program [Review Tool](#)
- Fisheries and Oceans Canada - [Fisheries Act](#)
- Environment and Climate Change Canada – [Species at Risk Act](#)
- Environment and Climate Change Canada - [Migratory Birds Convention Act](#)

8. Links related to submarine cables

- International Cable Protection Committee – [ICPC Best Practices](#)

9. Contact information

Should you have any questions regarding these guidelines, please contact the port authority at PER@portvancouver.com.

10. Updates

The most up-to-date version of this guideline document will always be available to view and download from our website. All updated versions will be dated for clear identification. Please visit the [PER Guidelines](#) page to ensure that you are referring to the most recent information.