BRITISH COLUMBIA | Ministry of Transportation and Infrastructure

Belleville Terminal Redevelopment Project

Business Case

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InfrastructureBC

CONTENTS

LIST OF APPENDICES

Appendix A-1 – Economic Impact Study

Appendix A-2 – Description of Existing Terminal Facilities and Structures

Appendix A-3 - Facility Condition Assessment Summary

Appendix B-1 - Service Delivery Options Analysis.

Appendix B-2 - Public Engagement Summary Report

Appendix B-3 - Revenue Opportunities Report

Appendix B-4 - Energy Conservation Measure – Alternative Design Options

Appendix B-5 – Quantity Surveyor Report

Appendix B-6 – Energy Modeling Report

Appendix B-7 - Climate Resiliency Report

Appendix B-8 – Capital Cost Memo

Appendix B-9 - Geotechnical Investigation Location Diagram

Appendix C-1 - Qualitative Procurement Options Assessment MCA Report

Appendix C-2 - Market Sounding Report

Appendix C-3 - Financial Model Report

Appendix C-4 - Level of Private Finance Report

Appendix C-5 - Risk Report

LIST OF FIGURES

LIST OF TABLES

LIST OF DEFINITIONS

Affordability Refresh is a point during the procurement process where the Project's expected costs are reviewed and updated to reflect market conditions at the time of the refresh.

Belleville Terminal Redevelopment Project (the Project) is the redevelopment of the existing Belleville Terminal site through the construction of a new terminal to provide new and expanded space, designed to modern terminal standards, which will address marine infrastructure requirements, enhance border security requirements, and improve user accessibility compliant with the standardized safety and security measures for a preclearance international border crossing. The Project directly responds to the US decision to transition from a pre-inspection model to single preclearance border security processing, in alignment with the requirements outlined in the agreement on Land, Rail, Marine, and Air Transport Preclearance (LRMA) between the Government of Canada and United States of America. It will also provide collaborative opportunities with Indigenous communities and promote cultural significance to support meaningful reconciliation and positive self-determination outcomes.

Capital Asset Management Framework (CAMF) is the provincial document that describes government's objectives and policies for planning and managing publicly funded capital assets such as schools, hospitals, and transportation infrastructure.

Competitive Selection Process is the overall process for the selection of a Preferred Proponent for the Project.

Design Bid Build (DBB) is a procurement model whereby the Owner retains design risk, and the private sector partner assumes construction risk.

Design Build (DB) is a procurement model whereby the private partner accepts responsibility for the design and construction of the project.

Fairness Advisor is the individual appointed by the Authority to monitor the fairness of the Competitive Selection Process.

Financial Close is the time when the Project Agreement and all financing and other agreements related to the Project have been executed and delivered and all conditions to the effectiveness of the Project Agreement and Project financing agreements have been satisfied.

Freedom of Information and Protection of Privacy Act (FOIPPA) is provincial legislation that gives the public a right of access to records that are in the control of the BC government.

Funding Analysis is the analysis conducted to determine the total funding requirement for the Project in both operating and capital dollars.

Indicative Design or Reference Concept is the pre-design stage where the functional requirements are refined, and the program is advanced to reflect interior space planning and adjacencies that inform the building massing, or the 3D form of the building. The intent of this phase is to prove that the functional requirements can be achieved. The output consists of architectural and corresponding engineering drawings.

Market Sounding is the series of interviews with potential private sector partners to determine views to both raise awareness of the project and obtain market feedback.

Multiple Criteria Analysis (MCA) is the process which provides a framework for evaluating both quantitative and qualitative factors and presents the advantages and disadvantages of each option in a form that can easily be assimilated by decision-makers.

Net Present Value (NPV) (also referred to as Net Present Cost (NPC)) is the difference between the present value of the future cash flows from an investment and the amount of investment. Present value (PV) of the expected cash flows is computed by discounting them at the required rate of return.

Owner is the Ministry of Transportation and Infrastructure for Project delivery and the BC Transportation Financing Authority (BCTFA) for long term operation of the resulting asset.

Owner's Costs is the costs associated with the planning, procurement, construction, and operation of the Project that are incurred by the Owner. These costs include project management, pre-design services, design services, engineering services, contract administration, and contingency on these items.

Pre-Inspection is an arrangement between two countries where screening processes are split between both sides of the border. In the case of Belleville Terminal, immigration processes occur in Canada by United States Custom Border Protection (USCBP) officers, while customs and agriculture processes occur in Washington State by additional USCBP resources.

Preclearance is the procedure by which the inspecting party conducts in the territory of the host party any examination, search, and inspection for the purpose of ensuring that the admission of persons and entry of goods into the territory of the inspecting party conform to the inspecting party's laws concerning customs, immigration, agriculture, public health and safety and other requirements relating to that entry and admission.

Preferred Proponent is the Proponent selected pursuant to the RFP to enter into negotiations with the Owner for a Project Agreement (PA).

Post-Clearance is the clearance of persons and goods at a port of entry in the territory of the Inspecting Party.

Request for Proposals (RFP) is the second stage of the Competitive Selection Process issued by the Owner.

Request for Qualifications (RFQ) is the first stage of the Competitive Selection Process issued by the Owner.

Risk Management Branch (RMB) is a branch of the Ministry of Finance accountable for the effective management of risk to which the government is exposed by virtue of its assets, programs, and operations.

Schematic Design is a design phase following the indicative design phase and preceding the design development phase. A schematic design will typically include floor plans, room data sheets, building sections and elevations, as well as outline mechanical, electrical, plumbing (MEP) systems, structural and foundation solutions.

Temporary Terminal is a facility formed by portions of the Steamship building, a temporary extension adjacent to the Steamship building, and the existing Black Ball building, which would facilitate operational continuity for Black Ball, Clipper, USCBP, and Canadian Border Services Agency (CBSA) for the duration of the Project's Phase II construction. The Temporary Terminal will be constructed as Phase I of the Project.

Value for Money (VFM) is the value for taxpayers' dollars, which is typically established by calculating the estimated net present cost (NPC, also referred to as net present value, or NPV) of a project based on a particular procurement model and comparing it to the estimated NPC if the project were procured entirely by the public sector using a traditional model.

EXECUTIVE SUMMARY

INTRODUCTION

The Belleville Terminal Redevelopment Project (the Project) is located on the traditional territory of the Lekwungen People, also known today as the Esquimalt and Songhees Nations, and includes two phases. Phase I involves building a temporary terminal for FRS Clipper Navigation Inc. (Clipper) using the Steamship building and wharf. Phase II involves demolishing the existing Clipper Terminal infrastructure and constructing a new consolidated preclearance terminal building with modern border security standards that abide by the agreement on Land, Rail, Marine, and Air Transport Preclearance Agreement (LRMA) between the Government of Canada (Canada or federal government) and the United States of America (US) [1]. The proposed new terminal will be located on the existing site of the Belleville International Ferry Terminal (Belleville Terminal) and include a commercial goods processing facility. Ageing wharf facilities will also be raised and replaced to address climate change and rising sea-levels.

The Belleville Terminal is an international marine vehicle and passenger terminal owned by the British Columbia Transportation Financing Authority (BCTFA) and managed by the Ministry of Transportation and Infrastructure (the ministry). It is a major tourism gateway, serving two international cross-border ferry routes between Vancouver Island and Washington State. Clipper operates the Clipper vessel, which is a foot-passenger-only service between Seattle and Victoria. Black Ball Ferry Line (Black Ball) operates the Motor Vessel Coho (Coho), which provides a foot-passenger and vehicle service between Port Angeles and Victoria.

Although Belleville Terminal receives marine-based vessels, its federal security functions are regulated as a land border. Canada Border Services Agency (CBSA) inspection and clearance services are provided onsite for inbound traffic. United States Customs and Border Protection (USCBP) pre-inspection services are provided onsite for outbound travellers, with final USCBP customs clearance and immigration provided in Seattle for Clipper and in Port Angeles for Black Ball. In addition, Belleville Terminal acts as the headquarters for USCBP operations in southern Vancouver Island, which services Clipper, Black Ball, and other carriers like Washington State Ferries in Sidney, which has been suspended due to the impacts of COVID-19, labour shortages, an aging vessel fleet, and not meeting the LRMA requirements.

The ministry has advanced a phased revitalization plan for Belleville Terminal to address the operational and maintenance challenges created by the existing aging and undersized building as well as marine infrastructure. In 2017, the ministry undertook the first phase of revitalizing Belleville Terminal, which included raising and replacing the Black Ball wharf, as well as temporary repairs to the Clipper wharf to

[1] https://www.treaty-accord.gc.ca/text-texte.aspx?id=105453

extend its usable life. The existing facilities at Belleville Terminal are shown in Figure 1: Existing Belleville Terminal Site Plan below.

Figure 1: Existing Belleville Terminal Site Plan

Site Map:

1. Clipper Navigation
2. Black Ball Ferry Line
3. Steamship Building
4. Stores Building
5. US Customs and Border Protection (USCBP)
6. Steamship Wharf

Proceeding with the Project will finalize the last phase of the revitalization plan and thereby address Belleville Terminal's outdated passenger-handling facilities, the aging Clipper wharf and the Stores wharf, as well as bring border security facilities up to modern standards to be in alignment with the LRMA.

The Project is an investment in terminal and land border improvements, as well as supports provincial strategies and economic development of the region, the province of British Columbia (the Province or BC), and Canada.

This Business Case establishes the need and rationale for investing in the Project, along with context that highlights the need to replace ageing infrastructure and redevelop the Belleville Terminal to ensure this important international gateway is maintained.

NEED FOR INVESTMENT

The existing Belleville Terminal is an international port-of-entry for goods, services, and passengers to BC and Canada, which provides a significant contribution to the regional, provincial, and national economies.

In 2019, more than 680,000 passengers travelled through Belleville Terminal, of which approximately 217,000 were international visitors who spent an estimated $174 million in Greater Victoria. Visitor expenditures translate to value-added gross domestic product (GDP), support jobs, and generate taxes locally, provincially, and nationally. The economic impacts from these visitor expenditures generated approximately $268 million in provincial economic output and $155 million in provincial GDP (2019). Belleville Terminal generates approximately 220,000 overnight visitors and sells over 16,000 vacation packages annually to their passengers, all of which are provided by local businesses in the region. It is anticipated to support approximately $257 million in visitor spending and 3,200 jobs over the next 20 years[2].

The majority of Belleville Terminal's marine assets and buildings are approaching the end of their safe and useful service life, and there is an urgent need to replace them to facilitate operational continuity at the terminal. The existing facilities are inefficient and undersized, causing operational challenges to both ferry operations and border security agencies, including restrictions on the number of passengers/vehicles that can travel, thereby limiting their ability to meet current demands and the ability to grow their businesses in the long-term. This also impacts regional, provincial, and national economic growth opportunities, as well as limits government revenues and potentially the future economic viability of the operators.

Although Black Ball's vessel currently accommodates approximately 1,000 inbound and outbound commercial vehicle trips annually, Belleville Terminal is not currently designated for commercial goods processing and does not have a dedicated commercial processing facility onsite, which carries the risk of commercial vehicles potentially not being permitted to use the Belleville Terminal in the future to transport goods.

In 2019, Canada and the US negotiated the LRMA, which was a commitment of the 2011 *Beyond the Border Action Plan*. The agreement authorized expanded preclearance for travellers at land, rail, and marine facilities in both countries, as well as airports, and allowed either country to compel border crossings to transition to the preclearance model. The Belleville Terminal currently has pre-inspection border security processing for US-bound travellers but does not accommodate preclearance border security processing.

In 2020, USCBP notified the Province of the requirement for Belleville Terminal to adopt the preclearance model. If the Project does not continue to advance, and preclearance at Belleville Terminal is not achieved, they will withdraw their services permanently from southern Vancouver Island, which would result in existing ferry operations being shut down and/or significantly reduced.

In the absence of preclearance at Belleville Terminal, Black Ball and Clipper would be required to build and fund post-clearance facilities in the US, which would require a significant investment and may hinder their operations. Furthermore, both operators' US terminals currently have limited physical space to

[2] Values derived from the 2022 Belleville Terminal Economic Impact Study prepared for the ministry by HDR Corporation.

accommodate a post-clearance facility capable of processing passengers, vehicles, and commercial goods; therefore, they may be required to either relocate their operations or withdraw their services from Vancouver Island. This would result in direct and significant impacts to businesses and employment in Greater Victoria, particularly in the tourism sector.

Consequently, the development of a new consolidated preclearance terminal that aligns with the LRMA and is appropriately sized with designated amenities is required to ensure operational continuity of Belleville Terminal and both countries' shared commitment to facilitate travel and strengthen the Canadian and US economies.

SCOPE OF THE PROJECT

The Project consists of two sequential phases – Phase I and Phase II.

Phase I involves relocating Clipper and USCBP operations to a Temporary Terminal, which will be accommodated at the Steamship building and wharf, as well as the expansion of CBSA operations on the lower/ground level of the Black Ball building to allow for primary and secondary security processing of both the Coho and Clipper vessels.

Phase II will accommodate the required transition to preclearance by USCBP, replace aging upland and marine infrastructure, and raise the site to account for sea level rise (and to align with the elevation of the existing Black Ball holding compound that was replaced and raised in 2017). The scope of this phase includes demolition of the existing Clipper building, the USCBP administrative building, the Clipper wharf and Stores wharf, and subsequent construction of a consolidated terminal building for the ferry operators, USCBP and CBSA security and administrative control requirements, a reconfigured and expanded terminal compound, replacing and raising the Clipper wharf and marine structures, improvements to the existing Black Ball wharf, replacing and upgrading site services, and decommissioning of the Temporary Terminal at the Steamship building.

Phase I is on the critical path and will need to be completed before Phase II can begin.

BENEFITS OF THE PROJECT

The ministry recognizes the Project is an opportunity and an effective way to implement the Province 's Environmental, Social, and Governance (ESG) Framework, which focuses on reconciliation with Indigenous peoples, achieving emission targets while building a cleaner economy that benefits everyone, ensuring BC is prepared for climate impacts in the near term, reducing greenhouse gas (GHG) emissions from key sector including transportation, buildings, and industry, as well as improving accessibility for everyone.

In alignment with the main Project goals and the ESG Framework, the Project will provide the following benefits:

- Creates a safe and secure modern port of entry and international ferry terminal facility that:
  - includes enhanced border security that accommodates USCBP Preclearance border security processing requirements per the LRMA;
  - ensures safe and efficient transportation movement for inbound and outbound passengers;
  - provides a commercial goods processing facility that will accommodate CBSA's requirements for the terminal's intended commercial designation; and
  - is used efficiently, is affordable to the operators and end users, is comfortable for customers, and encourages passengers to maximize their experience while visiting the region.
- Improves an international transportation gateway that drives the economy and supports the current and future economic contribution to southern Vancouver Island's tourism industry and the regional, provincial, and national economies.
- Supports Reconciliation with Indigenous peoples by:
  - offering opportunities to recognize and promote economic, as well as social and cultural significance of the Lekwungen Peoples in the Inner Harbour; and
  - supporting partnerships with the Songhees and Esquimalt Nations, and other Indigenous groups, to advance the process of reconciliation.
- Provides new facilities designed and constructed to respond to current and long-term operational needs and environmental goals that aligns with CleanBC, demonstrate resilience to the changing climate, and reduce GHG emissions.
- Increases terminal capacity to facilitate future expansion of marine transportation services and provide opportunities for new service offerings.

In addition to the numerous benefits of addressing the challenges with the existing Belleville Terminal facilities, the Project will also respect neighbouring businesses and residences.

PROCUREMENT ASSESSMENT AND PROJECT DELIVERY

A procurement assessment was completed that included a discussion of the procurement objectives, followed by the identification of suitable procurement delivery options to be analyzed for the Project. The selection of the potential delivery options was primarily driven by the following considerations:

- size and scope of the work for each phase of the Project;

- ability of the procurement model to support a timely delivery of the Project; and
- capacity and interest of the market with the procurement models.

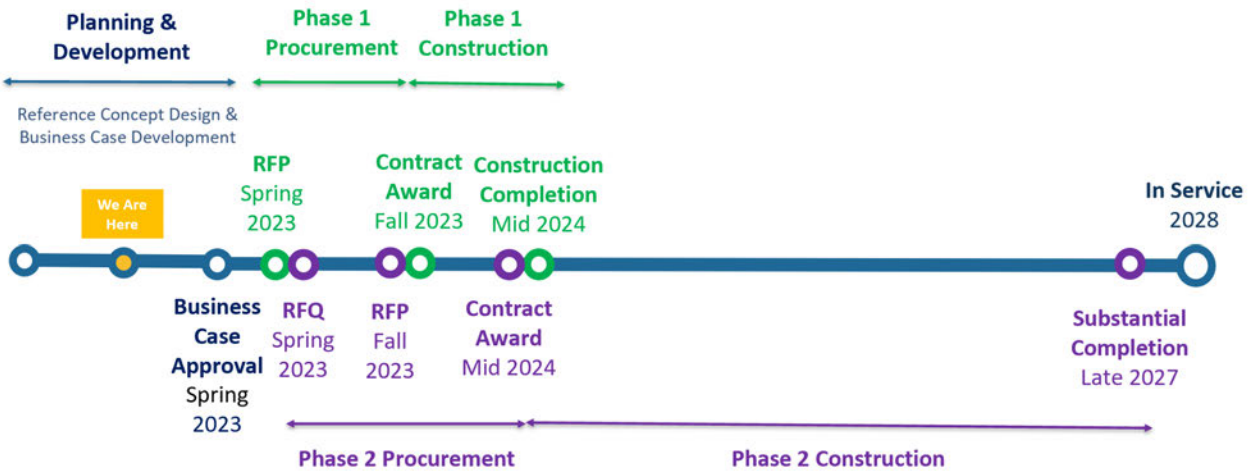
The procurement options analysis identified Construction Management (CM) as the recommended procurement model for Phase I and Design-Build (DB) as the recommended model for Phase II.

As a key public-sector infrastructure project, the Project presents an opportunity to deliver good-paying jobs, better training, apprenticeships, and more trades opportunities for Indigenous peoples, women, and youth to ensure local projects benefit BC workers, families, and communities. To meet community benefit objectives, the labour objective assessment results recommend Procurement Contract Terms (PCT) as the recommended labour agreement option for the Project.

PROJECT SCHEDULE

The anticipated timeline for the Project from the time of this Business Case to the end of construction is outlined in Figure 2.

Figure 2: Anticipated Project Schedule



COST ESTIMATE AND FUNDING

The Project cost estimate, including planning, procurement, construction, and Interest During Construction (IDC) is $303.9 million (nominal basis, 2022 as base year). Refer to Table 1 for a summary level breakdown of the Project costs.

The Province has been actively engaging the federal government to cost share the Project, and in February 2023, the federal government publicly stated they would be contributing to the Project. The Province is working collaboratively with the federal government to confirm their contribution through the Investing in Canada Infrastructure Program (ICIP), National Trade Corridor Fund (NTF), and potentially other means.

The ministry has also been working collaboratively with the City of Victoria (the City) to establish municipal and land transfer agreements for the Project.

In addition, both Clipper and Black Ball are international for-profit companies that will benefit significantly from the Project. The ministry is working collaboratively with both operators to confirm their capital contributions to the Project.

Table 1: Project Capital Cost Estimates

Components in the Capital Cost Estimates ($ million, nominal dollars)	Allocation
Contractor's Construction Cost	
Design and Construction	[redacted]
Transferred Risks	[redacted]
Owner's Cost	
Project Management & Staff Costs	[redacted]
Phase I - Temporary Facility	[redacted]
Retained Risks and Contingencies	[redacted]
Provincial IDC	[redacted]
Total Capital Costs	**303.90**

Total Capital Cost of $303.9 million [redacted]

1 PURPOSE AND APPROACH

1.1 PURPOSE

This Business Case establishes the need to invest in the Project. It describes how the recommended service delivery option will contribute to the regional, provincial, and national objectives, strategies, and economies.

The main purpose of this Business Case is to:

- demonstrate the need for the Project;
- provide context and background information with respect to the Project;
- describe the planning process and recommended Project scope to meet the need;
- describe the procurement assessment conducted for the Project; and
- recommend a procurement approach and implementation strategy.

This Business Case also provides information and analysis to inform decisions on the Project.

1.2 APPROACH

The document consists of the following five main parts:

Part A: Need for Investment: describes the need for the Project based on strategic context and regional, provincial, and national priorities, goals, and objectives, as well as the current conditions of the existing Belleville Terminal facilities.

Part B: Service Delivery Options Analysis: describes the process to determine the physical scope of the Project for implementation and provides a capital cost estimate based on the Indicative Design and two phased construction plans for the Project.

Part C: Procurement of the Project: presents the analysis and results of the detailed assessment undertaken to determine the optimal approach to procure the Project.

Part D: Implementation Plan and Funding: describes the plan to implement the Project, based on the recommended procurement models and Project schedule, and presents the estimated Project budget and potential funding sources.

Part E: Decision Request: provides the overall recommendation to proceed with the Project.

PART A – NEED FOR INVESTMENT

This part of the Business Case describes the need for the Project. The discussion highlights the strategic context and regional, provincial, and national priorities, goals, and objectives. It also describes the need for investment based on the current conditions of the existing terminal facilities, as well as the program requirements for an international ferry terminal to abide by the LRMA and to accommodate USCBP Preclearance border security processing.

2 STRATEGIC CONTEXT

2.1 REGIONAL

Victoria is the capital city of BC. Greater Victoria is comprised of 13 municipalities, with a total population of 397,000 (2021 Census). It is widely recognized as a top destination in the travel and tourism industry and internationally renowned for providing a high quality of life.

2.1.1 Economic Impact

Tourism is the second largest industry in Greater Victoria, generating $2.3 billion in economic impact annually, injecting $1.4 billion in new revenue from visitors into the local economy each year[3]. This revenue is critical to small and medium sized businesses throughout the Greater Victoria area.

As a major international gateway and port of entry for the region, province, and nation, the Belleville Terminal provides a significant contribution to the economy. Visitor expenditures generate economic activity, which translates to value-added GDP, supports local jobs, and generates taxes locally, provincially, and nationally.

In 2019, Black Ball and Clipper brought more than 680,000 passengers making Belleville Terminal the largest western marine international border crossing in North America, with the primary markets being Washington, Oregon, and California. Most of the economic impacts of the Belleville Terminal to the Canadian economy result from Americans and other international visitors arriving at the terminal. For Black Ball, approximately 70 percent of annual passenger traffic is from international travellers, including US visitors. For Clipper, the share of international travellers is even higher, at approximately 84 percent of total passenger traffic volumes. This number is expected to grow by one to two percent per year.

Expenditures by international travellers arriving at the Belleville Terminal represent an important component of spending in the Victoria tourism and hospitality sector. These results reflect the nature of international travellers arriving at the Belleville Terminal, most of whom are visiting Canada for several days, and who purchase accommodation, food, and other goods and services during that time. In comparison, cruise ship visitors to Greater Victoria are typically day-only visitors, visiting local attractions and purchasing some souvenirs and food items, but not requiring accommodation and other services. The average per passenger expenditures for Belleville Terminal is approximately $440, which is five times greater than the per passenger expenditures for cruise ship day visitors in Victoria, which is estimated at $83.

In 2022, the ministry commissioned an economic impact study (see Appendix A-1 – *Economic Impact Study*) to gain a better understanding of the current and potentially future economic impacts of the Belleville Terminal on local, provincial, and national economies. According to the study, based on approximately

[3] Economic Impact and the VCC | Tourism Victoria

680,000 passengers that travelled through the Belleville Terminal in 2019, it's estimated they spent approximately $174 million in the region, which generated $268 million in provincial economic output and $155 million in provincial GDP[4]. The Belleville Terminal generates approximately 220,000 overnight visitors and sells over 16,000 vacation packages annually to their passengers, all of which are provided by local businesses in the region. The Project is anticipated to support approximately $257 million in visitor spending and 3,200 jobs a year in 20 years.

2.1.2 Regional Planning

The City has established planning and policy documents to provide guidance and identify specific opportunities for advancing further revitalization of the Inner Harbour. They are also intended to provide direction and certainty for land use and marine dependent activities in and around the Victoria Harbour. The *Victoria Harbour Plan (2001)*[5], *Official Community Plan (2012)* [6]*, and the Downtown Core Area Plan (2022)*[7] specifically reference the City's support for the redevelopment of the Belleville Terminal site as a transportation terminal for ferries and international gateway. Some of the plans also mention the City would undertake improvements to Belleville Street, such as sidewalks, lighting, and street treatment as a capital budget project in conjunction with the development of the Belleville Terminal.

The *Victoria Harbour Plan* specifically identifies the following three objectives for the Belleville Terminal site:

- develop the site as a major transportation terminal for ferries;
- improve the Belleville Street frontage;
- introduce uses that will provide vitality, complement the terminal, and make the Project economically viable; and
- improve points of public access through the Belleville Terminal site and extend the David Foster Harbour Pathway system around the site.

[4] Economic Impact Study p21: Total tourist expenditures are estimated assuming that US visitors spend an average of [redacted] Expenditure assumptions are taken from Destination Greater Victoria's 2019 Visitor Survey Report (December 2019). The expenditures only reflect the costs that visitors spend in Victoria and assume that visitors, on average, stay in the Victoria region for 3 nights. The expenditures do not include the transportation costs incurred by visitors to get to Victoria.
[5] The Victoria Harbour Plan
[6] OCP
[7] Downtown Core Area Plan March 2022

The *Victoria Harbour Plan* highlights that southwestern BC has the highest earthquake risk in Canada, and many areas around the Victoria Harbour are at moderate to high risk for amplification and liquefaction, particularly areas that have been filled, including the Belleville Terminal site.

The David Foster Harbour Pathway is also included in a few the City's plans, which is a waterfront route that connects residents and visitors with key destinations in the City – including restaurants and marine-based tourism activities. It celebrates Victoria's unique working harbour and provides the opportunity to recognize the Esquimalt and Songhees Nations' history, enhance the natural marine habitat, and support social and economic well-being. There are currently a few gaps in the David Foster Harbour Pathway, including at the Belleville Terminal; however, the vision is that once complete, the pathway will extend over five kilometres from Rock Bay to Ogden Point.

2.2 BORDER STRATEGIES

Canada and the US share the longest international border in the world. The border partnership between the two countries is built on a perimeter approach to security and economic competitiveness. In 2011, Canada and the US established *Beyond the Border: A Shared Vision for Perimeter Security and Economic Competitiveness*[8], which focuses on enhancing security and accelerating the legitimate flow of people, goods, and services.

Public Safety Canada takes a leadership role in promoting the safety and economic well-being of Canadians through supporting secure and efficient management of Canada's borders. There are three forms of customs processing in use at Canada/US border crossings:

- Pre-inspection: An arrangement between two countries where screening processes are split between both sides of the border. In the case of Belleville Terminal, immigration processes occur in Canada by USCBP officers, while customs and agriculture processes occur in Washington State by additional USCBP resources.

- Post-clearance: An arrangement where all customs and immigration functions are provided for passengers upon arrival. CBSA uses this model at Belleville Terminal for arriving passengers and vehicles in Canada, with no CBSA presence at the origin facility in the US.

- Preclearance: An arrangement between two countries that allows customs and immigration officials from the country of destination to be in the country of origin to clear or deny the admission of travellers or goods to the destination country.

[8] Beyond the Border (publicsafety.gc.ca)

One commitment of *Beyond the Border* was the LRMA, which was signed between Canada and the US. As of August 2019, Canada's treaty obligations under the LRMA were officially implemented using the *Preclearance Act, 2016*. The LRMA allows for preclearance operations to be conducted in all modes of transport (e.g., land, rail, marine, and air transport) as well as for cargo operations. It permits either country to establish preclearance operations in the territory of the other country (e.g., Canada in the US or the US in Canada). Preclearance strengthens the economy by expediting the flow of legitimate travel, trade and ensures border security between both countries. Furthermore, travellers and goods that are "pre-cleared" experience faster and more reliable service moving through border points and these operations provide a higher level of security by identifying potential threats at the earliest point in the process. By facilitating the fast and secure movement of people and goods across the border, preclearance supports trade and economic prosperity.

The existing Belleville Terminal operates in a pre-inspection model, which requires USCBP to complete a pre-inspection of each passenger and vehicle boarding a vessel for each sailing. Once a vessel arrives in the US, USCBP completes a post-inspection at the arrival port. This process is cumbersome, operationally inefficient, and not cost effective.

In alignment with expectations set by the LRMA, USCBP informed the ministry in March 2020 of their plans to fully transition away from current pre-inspection processing at all facilities on southern Vancouver Island, including the Belleville Terminal and Washington State Ferries service (Sidney BC – Anacortes WA). If the Project does not continue to advance, and preclearance at Belleville Terminal is not achieved, they will withdraw their services permanently from southern Vancouver Island. Withdrawal of services would potentially result in existing ferry operations being shut down and/or significantly reduced. This would result in direct and significant impacts to businesses and employment in Greater Victoria, particularly in the tourism sector.

The Project proposes building a consolidated preclearance facility, meaning all passengers and vehicles would be processed at a single location for each sailing and cleared for entry to the US prior to departure from Canada. This approach would align with the LRMA, streamline USCBP border security process by making it significantly more efficient and cost effective. This would also allow both operators to remain in business, and continue to benefit the regional, provincial, and national economies.

2.3 EXISTING BELLEVILLE TERMINAL FACILITIES

Belleville Terminal is located on the traditional territory of the Lekwungen peoples in Victoria's Inner Harbour and is a major tourism gateway. It also provides international cross-border service for transporting travellers, goods, and services, as well as connecting families and businesses between Vancouver Island and the US Pacific Northwest. Figure 3 below is a site map of the existing Belleville Terminal and Appendix A-2 –

Description of Existing Terminal Facilities and Structures provides a description of the facilities and structures.

Figure 3: Existing Belleville Terminal Site Plan

Site Map:

1. Clipper Navigation
2. Black Ball Ferry Line
3. Steamship Building
4. Stores Building
5. US Customs and Border Protection (USCBP)
6. Steamship Wharf

Black Ball has operated a foot-passenger and vehicle service between Port Angeles and Victoria since 1959. Clipper has operated a passenger-only service between Seattle and Victoria since 1980. In 1993, they relocated to a “temporary” home at Belleville Terminal in advance of the 1994 Commonwealth Games to provide passenger ferry services from downtown Victoria to downtown Seattle.

Although Belleville Terminal receives marine-based vessels, its federal security functions are regulated as a land border. CBSA inspection and clearance services are provided onsite for inbound traffic. USCBP pre-inspection services are provided onsite for outbound travellers, with final USCBP customs clearance and immigration provided at Seattle for Clipper and at Port Angeles for Black Ball. In addition, the terminal acts as the headquarters for USCBP operations in southern Vancouver Island for Clipper, Black Ball, and other carriers like Washington State Ferries in Sidney, which has been suspended due to the impacts of COVID-19, labour shortages, an aging vessel fleet, and not meeting the LRMA requirements.

2.4 PROVINCE OF BRITISH COLUMBIA

The ministry plans transportation networks, provides transportation services and infrastructure, develops, and implements transportation policies, and administers many related acts and regulations.

The ministry has established key strategic priorities and goals in its Service Plan, which the Project will support as described below:

- Goal 1: Invest in rural and urban infrastructure improvements that help build a strong, sustainable economy including key strategies to:
    - lead infrastructure planning needs of rural and urban BC, in partnership with other Provincial ministries to support local government's priority infrastructure projects, and
    - use innovative solutions and best practices to deliver the most cost-effective transportation investment plans.
- Goal 2: Improve transportation network efficiency to provide British Columbians with safe and reliable access to the services they depend on including key strategies to:
    - integrate climate change and seismic resilience considerations, and
    - ensure a GBA+ lens is applied to the planning of services and policies that impact ministry stakeholders and the general public.

Strategic direction of the ministry is provided by the Government of British Columbia, which remains focused on five key commitments to British Columbians: putting people first, reconciliation, equity and anti-racism, fighting climate change, and a strong, sustainable economy that works for everyone. Key initiatives underpinning these strategic priorities are the implementation of:

- The *Declaration on the Rights of Indigenous Peoples Act* (DRIPA) and the Truth and Reconciliation Commission Calls to Action, demonstrating support for true and lasting reconciliation,
- *CleanBC*, putting BC on the path to a cleaner, better future – with a low carbon economy that creates opportunities while protecting our clean air, land, and water, and
- The *Mass Timber Action Plan*, a central part of the *StrongerBC Economic Plan*, which aligns with the Province's climate goals by supporting clean growth and using renewable resources.

United Nations Declaration on the Rights of Indigenous Peoples

In 2019, BC was the first province to pass DRIPA, which has been put in place to ensure and respect the human rights of Indigenous peoples while introducing better transparency and predictability in the work carried out together. The legislation sets out a process to align provincial laws with the *United Nations*

Declaration on the Right of Indigenous Peoples (UNDRIP), and mandates government to bring provincial laws into harmony with the declaration.

DRIPA provides a framework for decision-making between Indigenous governments and the Province on matters that impact their citizens. DRIPA is supported by the Draft Principles that Guide the Province's relationship with Indigenous Peoples (the Principles). The Principles provide guidance on how provincial representatives engage with Indigenous Peoples. These Principles have been incorporated into this Project and inform how the ministry will continue to engage with Indigenous people.

Climate Change

The Province is undertaking multiple strategies to address climate change and reduce GHG emissions. Through the *CleanBC Roadmap to 2030*[9], the Province outlines a wide range of actions to reduce GHG emissions and meet BC's 2030 emission reduction target targets, including requirements for all new buildings to be zero carbon and new space and water heating equipment to be highest efficiency by 2030. The ministry has incorporated a number of the CleanBC initiatives into the Project to ensure it aligns with the Province's plan to achieve 100% of the emission targets while building a cleaner economy that benefits everyone. The Project includes the following requirements as part of its design criteria:

- inclusion of LEED Gold and the Province's Environmental Stewardship Policy standards;
- compliance with the BC Step Code performance requirements;
- terminal facility to be all-electric and have a high performing building envelope that exceeds building code requirements; and
- energy targets will promote a design that reduces the consumption of energy, thereby reducing carbon emissions.

Climate modelling analysis was also undertaken to identify future climate risks affecting the Belleville Terminal, select applicable adaptation measures, and perform energy simulations using future weather conditions to mitigate the impacts on architectural, mechanical, and electrical designs. The notable climate risks and associated adaptation measures that were contemplated as part of the Indicative Design are as follows:

- possible flooding – the new terminal's wharfs and structures will be raised above predicted sea level rise and flooding risk projections; and
- considerable increase in temperature – the new terminal will incorporate high performance building envelope components, passive cooling strategies, and future proofing of cooling systems.

[9] Cleanbc_roadmap_2030.pdf (gov.bc.ca)

3 EXISTING CHALLENGES

This section highlights key challenges with the Belleville Terminal, as discussed in the following categories:

- Border Security
- Commercial Goods Processing
- Facility Condition and Constraints
- Active Transportation

3.1 BORDER SECURITY

Both USCBP and CBSA have expressed concerns and identified challenges regarding the current state of border security processing onsite at Belleville Terminal. The existing site configuration does not meet many of their basic operational needs and presents security screening functionality challenges. There are many spaces identified within the CBSA statement of requirements that cannot be accommodated by Belleville Terminal, including but not limited to

- no enclosed vehicle exam bays to conduct safe vehicle exams;
- no space to conduct roving activities;
- no space for current technology such as primary inspection kiosk terminals; and
- limited space for proper detention.

CBSA requires new and renovated facilities to comply with their current border control statement of requirements.

In addition, the facilities and site configuration are inadequate to implement preclearance. Transitioning border security processing to preclearance requires significant redevelopment at Belleville Terminal to include full customs and immigration processing of all US bound travellers at the facility prior to departure with no further screening upon arrival in the US. This requires all passengers and vehicles to be contained in a secured perimeter after being cleared and prior to boarding the vessel. Limitations include:

- no secure consolidated space for foot passengers and vehicles to receive full customs processing, including agriculture inspections;
- no space for current technology required for primary processing (radiation monitors, license plate readers, cameras, etc.);

- the adjacencies between primary/secondary functions are inefficient due to the current site layout; and
- no allowance for site sterility between processed and unprocessed travellers.

Furthermore, for USCBP and CBSA officers, the adjacencies between primary and secondary processing functions are problematic; for example, due to the site layout, officers often must separate and manage security processing in multiple areas onsite, which is ineffective and creates safety and security challenges.

Currently, the pedestrian primary processing for Clipper and Black Ball happens in two separate locations on the site, resulting in USCBP officer resources having to divide their workforce to multiple locations whenever processing times overlap. The same happens for secondary processing for Clipper passengers, Black Ball vehicle passengers, and Black Ball pedestrians as they all take place in different locations. This processing model is not efficient and creates security risks for the customs agents and terminal users.

Vehicle processing for Black Ball does not allow for sterility between processed and unprocessed travellers. The lack of primary processing booths creates inefficiencies in primary and secondary processing, thereby requiring additional staffing. The primary processing lane and booths for vehicles do not have the standard technology used for pre-inspection primary processing. There are no radiation monitors, license plate readers, or cameras. There are also no enclosed vehicle exam bays to conduct vehicle exams safely. These deficiencies do not allow for effective management of secure cross-border processing.

There is also inadequate space for x-ray, live scan and fingerprint readers for biometric capture, no space for proper detentions, and no safe space for managing toxic substances or storing seized goods. Examination areas are overcrowded, presenting privacy concerns and these areas do not incorporate technology such as computers to conduct database checks. Furthermore, there is no space for current technology that assists with positive customer experience (e.g., Primary Inspection Kiosks). Baggage handling capability is poor, and officers cannot conduct roving activities to speak with passengers before picking up baggage and prior to departing CBSA space.

Consistent with the requirements of the LRMA, USCBP must convert from pre-inspection to full preclearance services at the Belleville Terminal. Pre-inspection involves performing screening services on both sides of the border; whereas preclearance involves performing full customs and immigration processes in Canada prior to the passenger arriving in the US. For this to happen, changes are required at the Belleville Terminal to accommodate the space requirements for the prescribed security procedures and other operational needs consistent with the preclearance standard outlined in the LRMA. If these changes do not occur, and the Project does not continue to progress and move forward, USCBP will withdraw its services from the South Island, including from the Belleville Terminal, and the impacted ferry operators will be responsible for accommodating these services at the US terminals using a post-inspection security model. It would take time

and a significant investment by multiple parties to abide by a full post-clearance model. This would have a negative economic impact on both operators, small businesses, and the tourism industry on the regional, provincial, and national levels, which would in turn result in significant job losses.

3.2 COMMERCIAL GOODS MOVEMENT AND PROCESSING

Belleville Terminal is an important connection for commercial goods movement on and off Vancouver Island. In 2019, Black Ball had approximately 1,000 inbound and outbound commercial vehicle trips. Commercial goods are currently moved off Vancouver Island and exported to California, Utah, Idaho, Oregon, and Washington. Inbound goods include groceries, household goods, building materials, and military supplies, which all play a crucial role in providing supplies to Vancouver Island, particularly the Canadian Armed Forces and the construction industry.

Belleville Terminal is currently designated as a "Ferry Terminal"[10], not as a Canadian commercial port of entry, which means it is only authorized for travellers and/or vehicles arriving by ferry. Consequently, commercial goods movement presents a challenge for CBSA because it is technically not permitted without the proper designation and a dedicated commercial vehicle processing facility. Therefore, commercial goods will continue to be limited, and there is a risk imported commercial goods will not be permitted at all in the future, which will have a significant economic impact.

3.3 FACILITY CONDITION AND CONSTRAINTS

Based on facility condition assessments that were completed in December 2019, May 2020, and April 2022, there are several building and wharf assets with observed defects and no residual life. There is a pressing need to address these facility challenges immediately as many critical assets will either need full replacement or major capital repairs in the short term for ferry operations to continue. Failure to adequately address the failing conditions of these key assets will likely result in ceasing operations.

In addition, while considered operationally safe, the anticipated response of the Belleville Terminal to a large seismic event is below the 2020 National Building Code (NBC 2020) standards for new structures[11] and below performance levels of other infrastructure built to earlier design standards. The site also has a number of concerns including liquefaction and contamination due to it being predominantly backfilled.

[10] https://www.cbsa-asfc.gc.ca/do-rb/offices-bureaux/470-eng.html

[11] The design seismic requirement according to the 2020 National Building Code and CSA S6:2019 is as high as 2475-year return period earthquake event (2% probability for of exceedance in 50 years).

3.3.1 Clipper Terminal

The passenger and vehicle terminal facilities onsite are constrained in relation to the capacity of the vessels. The Clipper vessel has a capacity of 580 passengers; however, it does not sail at full capacity due to facility limitations. Additionally, to allow all passengers to be processed safely and in a reasonable time given space constraints, CBSA and USCBP are restricting the number of inbound and outbound passengers to a maximum of 475 and 525 respectively. The Clipper building includes space for approximately 125 passengers for inbound sailings and approximately 250 passengers for outbound sailings. The seating area is comprised of foldable chairs and lacks circulation space, natural light, and multifunctional spaces. All other passengers must wait either outside on the wharf or on the boat before being processed by border security as demonstrated in Figure 4.

Figure 4: Clipper Building – Indoor Outbound and Outdoor Passenger Waiting Areas

This leads to significant inefficiencies in processing passengers as well as capacity loss for Clipper, which during peak season results in an estimated net capacity loss of approximately 6,700 potential passengers per month.

Furthermore, the insufficient size, poor layout, and circulation of existing facilities are not conducive to implementation of modern accessibility and mobility standards. This significantly limits the opportunities at Belleville Terminal to facilitate inclusivity and equity for all user groups, and inherently deters some people from using the Belleville Terminal.

3.3.2 Clipper Wharf

The ministry repaired Clipper's wharf in 2017; however, there are structural components that will require full replacement within the next three to seven years to ensure it remains operationally safe. If structural repairs

are not addressed, the wharf will degrade to a condition that will render it unfit for use, which would result in Clipper's operations ceasing.

In addition, when the wharf is replaced, it will need to meet current environmental requirements and be raised by approximately 1-metre to address sea-level rise associated with climate change. Raising the wharf will also require the Clipper Terminal to be raised, which is near the end of its useful life.

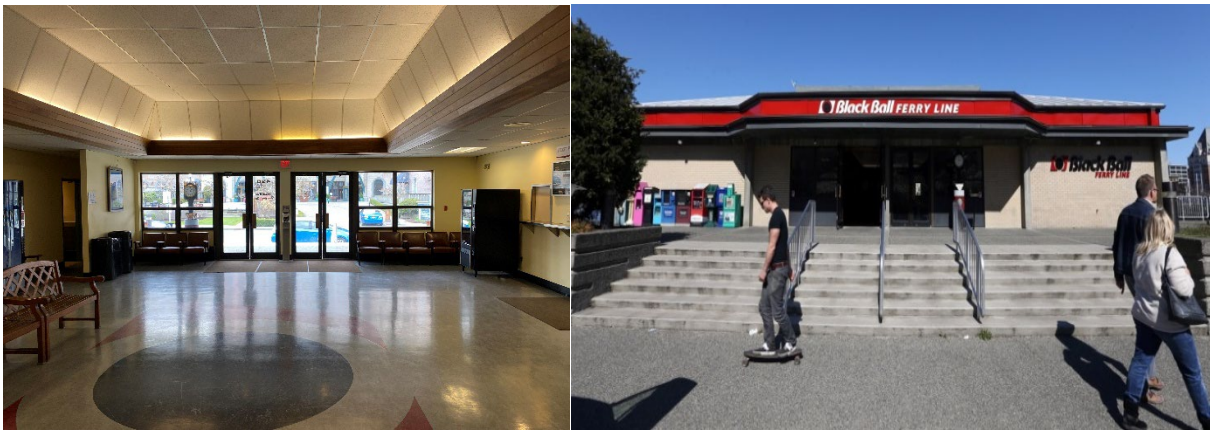
3.3.3 Black Ball Terminal

Black Ball's building was constructed in 1982, and although the building is well maintained and in serviceable condition, many of the building systems will require major repairs or full replacement within the next five to ten years. Major replacements include structural elements, mechanical, and electrical components that do not meet current code and will create safety issues. The building will also require seismic upgrades if it is to remain in service for the foreseeable future.

Furthermore, Black Ball's Terminal has several modern code compliance issues that make it unable to support future ferry service expansion. The Coho's maximum capacity is approximately 120 vehicles; however, this depends on the mix of vehicles on each sailing. The existing Black Ball holding compound capacity matches the Coho capacity of 120 vehicles, based on an Automobile Equivalent[12] (AEQ) of 5.6 metres. Typically, holding compounds at ferry terminals are designed to accommodate more than one vessel capacity; however, the existing site in its current configuration does not have sufficient room to increase the capacity ratio beyond 1:1. While there is no intent to increase the number of sailings for Black Ball, increasing the ratio beyond 1:1 would create greater flexibility to store and marshal vehicles, as well as provide a safer and more secure environment for the border agencies when inspecting and processing vehicles. Additionally, the Black Ball site has limited capacity in the pre-ticket area and often cannot process tickets quickly enough to offset the arriving vehicle demand. These two issues combined can lead to vehicle queues forming that extend onto Belleville Street, particularly during peak periods. USCBP officers conduct identification checks and limited inspections in the holding compound, which are near other passengers and vehicles. With Belleville Street directly overlooking the vehicle compound, inspections are done openly with no privacy, which presents border security screening challenges.

[12] Automobile Equivalent is used to determine vessel capacity based on a standard vehicle measure of 6.1 by 2.6 metres, roughly equal to a full-size family vehicle. It is expressed in metres per vehicle.

Figure 5: Black Ball Building – Waiting Area and Entrance



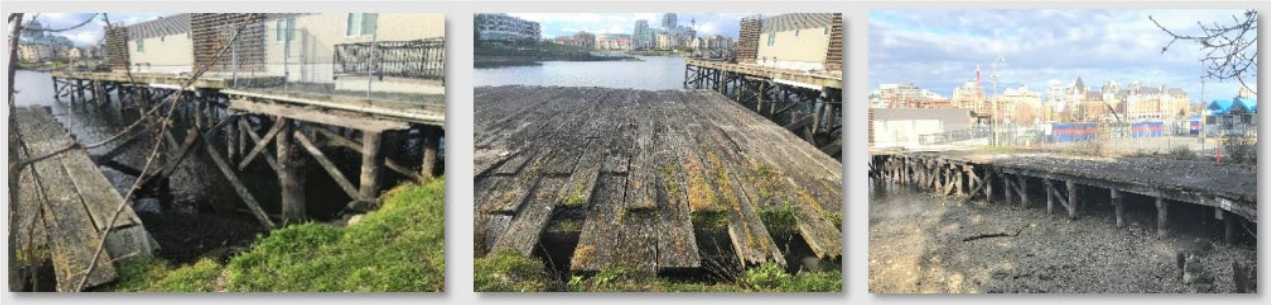
3.3.4 Black Ball Wharf

The Black Ball wharf was raised and replaced in 2017. It has no known structural or durability issues; however, it was designed according to previous seismic design standards (1 in 475-year earthquake event), which have significantly increased (1 in 2,475-year earthquake event per the 2020 National Building Code). Therefore, it is expected a portion of the existing Black Ball wharf will require some further upgrades to ensure it meets current design and seismic standards that will be applied to the other marine and building structures on the site as part of the Project.

3.3.5 Stores Wharf

The Stores wharf has reached the end of its life and must be entirely replaced. It will require a similar approach to the Clipper wharf and will need to meet environmental requirements, as well as be raised by approximately 1-metre to address sea-level rise associated with climate change, which will also require the Clipper Terminal to be raised. While the Stores wharf is not currently used for terminal operations, capacity requirements of the proposed terminal would require its use to ensure safe turning radii for vehicles being processed through the terminal.

Figure 6: Stores Wharf



PART B – SERVICE DELIVERY OPTIONS ANALYSIS

This part of the Business Case outlines the guiding principles and objectives for the Project, describes the scope of the service delivery option for implementation and provides a cost estimate based on the Indicative Design.

The ministry led the Project through the conceptual development and planning phases. The ministry will build the Project and own the asset upon completion, as well as establish contracts for occupancy, operations, and maintenance.

4 BACKGROUND

4.1 REDEVELOPMENT OF THE BELLEVILLE TERMINAL

The Province has owned the Black Ball site since 1975, and in 2001, the federal government transferred ownership of the Clipper site to the Province. The ministry's crown corporation, BCTFA, assumed ownership of the Belleville Terminal site in 2014 when the Provincial Capital Commission (PCC) was dissolved. The ministry also owns the Steamship building and wharf, which is proposed to be used as a temporary terminal as part of the Project.

Since 2014, the ministry has been leading the redevelopment of Belleville Terminal. Throughout the planning and development phase, the ministry has worked closely with both border agencies, both ferry operators, Indigenous groups, the City, and stakeholders to ensure their needs and interests are met.

In 2017, the ministry replaced the Black Ball wharf and extended the operating life of the Clipper wharf to ensure both operators were able to continue providing ferry services between Vancouver Island and the US.

As part of the Project planning and development, the ministry established the following process to support the project planning as described below:

- **Vision, Guiding Principles, and Objectives (2020)** – Developed project vision, guiding principles, and objectives.
- **Concept Plan (2021)** – Completed a Concept Plan that identifies a shortlist of potential options to redevelop the Belleville Terminal, conducted a Multiple Criteria Analysis (MCA) of the shortlisted options, and provided a recommendation for a preferred option.
- **Business Case (2023)** – Complete the Business Case for the Project and develop an Indicative Design that will:
    - accommodate preclearance;
    - replace aging infrastructure; and
    - raise the site to account for sea level rise due to climate change.

4.2 VISION, GUIDING PRINCIPLES, AND OBJECTIVES

The ministry developed the following vision to support the Project:

> *"Belleville Terminal, in Victoria's Inner Harbour and on the traditional territory of the Lekwungen Peoples, provides a safe and secure port of entry & gateway to British Columbia and Canada.*

Belleville Terminal's redevelopment supports its significant contributions to the Province's tourism economy while supporting local jobs as part of a strong, sustainable economy that works for everyone."

The ministry also established the following guiding principles for the Project:

- safe and secure;
- support Reconciliation with Indigenous peoples;
- sustainable; and
- economic development.

These guiding principles are the basis of the Project and serve as the foundation for the Project.

Objectives and associated Resulting Project Outcomes are outlined in Table 2 below. The Project Objectives are grouped into categories by which the ministry identifies the key themes and establishes evaluation criteria.

Table 2: Project Objectives and Outcomes

Categories	Project Objectives	Resulting Project Outcomes
Affordability & Delivery	Deliver the Project within the approved budget.	Demonstrates an effective use of public funds and is cost-efficient to construct and operate over the asset's life.
		Meets target budget for capital, as well as facility operations and is adaptable to operational changes.
Transportation	Provide a safe and secure modern port of entry and terminal facility.	Provides a safe and secure port facility compliant with all present-day required border control measures.
		Provides a safe and accessible transportation facility with strong multi-modal connections.
	Provide a terminal facility that responds to current and long-term operational requirements.	Maximizes the terminal facility's capacity to respond to changes in user and security requirements, and expansion in service.
		Ensures marine infrastructure needs meet current and future operational requirements by being flexible and adaptable.
Economic Development	Create a transportation gateway and welcoming port of	Supports the continuity of business and operations throughout construction.

Categories	Project Objectives	Resulting Project Outcomes
	entry that drives the economy and supports the social and cultural values of the people of British Columbia and Canada.	Increases terminal capacity to facilitate future expansion of marine transportation services and provide opportunities for new service offerings.
		Supports the expansion of the regional tourism sector and enables economic growth beyond the terminal facility.
Urban Revitalization	Ensure positive integration of the Project with surrounding community and urban landscape.	Employs good urban planning and design principles to celebrate its prominent location within Victoria's Inner Harbour.
		Creates an urban environment within Victoria's Inner Harbour that supports implementation of GBA+ and barrier-free accessibility principles.
		Promotes opportunities to increase local Indigenous presence in Victoria's Inner Harbour.
Environment	Provide a terminal facility that responds to current and long-term environmental requirements.	Aligns with CleanBC through implementation of the highest efficiency standards and exploration of future fuels opportunities.
		Supports facilitation of climate change resilience, GHG efficient practices, and integration of mass timber into the facility.
		Will address existing on-site soil contamination during construction to mitigate future environmental risks.
Social and Community	Advance BC's goals for Reconciliation with Indigenous peoples and implementation of the Declaration Act Action Plan.	Supports positive self-determination outcomes for Indigenous groups through short- and long-term economic development opportunities.
		Recognizes and promotes the Indigenous cultural significance of the Inner Harbour.
Deliverability	An International Ferry Terminal service that is constructible, operable, and publicly accepted.	Publicly accepted, through all phases, and perceived as a positive development for the community and region.
		Procurement and construction are strategically phased to mitigate and minimize adverse labour impacts to other Provincial priorities in the Inner Harbour.

4.3 CONCEPT PLAN

During the development of the Concept Plan the following four service delivery options were considered and analyzed using an MCA approach:

- **Option 1: Status Quo** – The Belleville Terminal would stay in operation for as long as the marine infrastructure permits (approximately 5 years). The LRMA would not be met, so USCBP would close their operations on south Vancouver Island and the operators would have to adopt to a post-inspection facility that would require exploring alternative arrangements to either make significant improvements to US facilities and/or relocate their businesses.
- **Option 2: Replacement on Existing Site** – A single main terminal building constructed on the existing site that connects to all vessels from a common secured facility. This option would meet the LRMA, modern USCBP preclearance requirements, and CBSA post-inspection requirements.
- **Option 3: Renovate and Expand on Existing Site** – The Steamship building and causeway would be renovated, and a new, larger building would replace the existing Black Ball building, joining the two into a single terminal facility. An additional building for border services would need to be located at the west end of the site (outbound traffic). The Steamship wharf would be repurposed to permanently host the Clipper. This option would consolidate Clipper and Black Ball outbound passenger traffic into a single facility, but an additional building for border services would need to be located at the west end of the site for inbound vehicle traffic.
- **Option 4: Replacement on a New Site** – Relocate the operators to a new site and construct a new consolidated preclearance facility on a new site in the Victoria area. This option would meet the LRMA, modern USCBP preclearance requirements, and CBSA post-inspection requirements. Acquisition of a new site would be required.

The analysis concluded that **Option 2: Replacement on Existing Site** was the best option to achieve the Project objectives. This option would:

- provide new and expanded space, designed to modern terminal standards that would address marine infrastructure requirements, enhance border security processing requirements, improve user accessibility, and comply with the standardized safety and security measures of the LRMA for a preclearance international border crossing;
- utilize an already well-established tourism gateway with strong industry ties, so it is far better positioned to serve and support the ‘promotion of tourism’; and

- have the added benefit of being the only option that could provide the future opportunity for domestic service by use of the Steamship wharf. As this option requires the upgrading and expansion of the Steamship building, this space would have the added benefit of re-use as a domestic ferry terminal.

Furthermore, benefits of replacing the existing Belleville Terminal include:

- building a safe and secure modern port of entry and international ferry terminal facility that:
    - ensures safe and efficient ground transportation movement to expedite inbound and outbound passengers;
    - includes enhanced border security that accommodates USCBP Preclearance border security processing; and
    - is used efficiently, is affordable to the operators and end users, is comfortable for customers, and encourages passengers to maximize their experience while visiting Victoria.
- creating a transportation gateway that drives the economy and supports the current and future economic contribution to southern Vancouver Island's tourism industry and the regional economy;
- supporting Truth and Reconciliation and offering opportunities to partner with Indigenous groups to recognize and promote the economic, social, and cultural significance of the Lekwungen Peoples in the Inner Harbour;
- building a new facility that is designed and constructed to respond to current and long-term operational needs and environmental goals, which aligns with CleanBC and will reduce GHG emissions; and
- increasing Terminal capacity to facilitate future expansion of marine transportation services and provide opportunities for new service offerings.

For additional details see Appendix B-1 *Service Delivery Options Analysis*.

4.4 ENGAGEMENT WITH INDIGENOUS GROUPS

Belleville Terminal is within the core territory of the Lekwungen Peoples, known today as the Songhees and Esquimalt Nations. Upholding the commitment of the Province to reconcile with Indigenous groups, and based on the *Declaration on the Rights of Indigenous Peoples Act* and the *Updated Procedures for Meeting Legal Obligations When Consulting with First Nations*, the ministry has developed the Consultation and Engagement Framework (CAF). The CAF is the basis for the Indigenous engagement approach that will guide consultation on this Project. In 2017, as part of the Black Ball wharf replacement and Clipper wharf repairs at Belleville Terminal, the ministry engaged with Songhees and Esquimalt Nations [redacted]

[redacted] that would find joint opportunities that support economic and cultural goals, as well as advance the objectives of reconciliation and self-determination. [redacted] the ministry established a Liaison Committee with Songhees and Esquimalt Nations that meets regularly to discuss the Project as well as future economic and cultural opportunities. The Liaison Committee works together to identify and refine interests and opportunities to be provided as part of the Project, including economic, cultural, and social opportunities for Songhees and Esquimalt Nations during the construction and subsequent operation of the Project.

In addition to engaging with Songhees and Esquimalt Nations, the ministry has undertaken engagement with ten additional Indigenous groups that have identified interests in the Project Area, however, two of these groups have deferred engagement to Indigenous groups local to the Project, and the remainder have not responded. The ministry will continue to work with all 12 Indigenous groups as the Project moves forward unless engagement is declined. Key elements of this Project's engagement include:

- incorporating Indigenous goals and objectives into Project planning, contract requirements, and deliverables;
- working with the Liaison Committee for the life of the Project to ensure that commitments to the Indigenous groups are realized;
- completing a Traditional Use Memo specific to the Belleville Terminal property that complements existing studies;
- developing an economic development strategy to provide immediate and ongoing opportunities to Indigenous groups; and
- collaboratively implementing a cultural recognition strategy with the Indigenous groups and builder that will showcase Indigenous art and presence in the new terminal.

4.5 STAKEHOLDER ENGAGEMENT

Stakeholder and public engagement are key components to planning and help to inform decision-making, including Project development and design work. The Project team developed a comprehensive stakeholder engagement and communications plan for the development of the Business Case. The purpose of the engagement and communications plan was to ensure stakeholders and the public are informed about the Project, as well as to provide an opportunity to give input and indicate whether or not they support the Project. Since the plan was implemented, the ministry has met with over 26 stakeholder organizations, sometimes multiple times, and feedback received thus far has been overwhelmingly positive.

Public engagement ran from September 20 to October 20, 2022, and included focused discussions with 26 stakeholders, social media and website interactions, an online survey, and a public open house. The open house was held on September 27, 2022, where the public could ask questions and fill out the survey in

person. In total, 507 respondents took the survey and 451 of them self-identified as ferry users. Of the respondents, 88% supported the proposed Project.

Key themes that emerged included:

- strong support for the Project with a desire to see it move forward as soon as possible;
- importance of a new terminal being a first impression of Victoria and the Inner Harbour;
- desire for the terminal to be seismically sound;
- desire to ensure the terminal was designed to be universally accessible to all users;
- recommendations to use the new ferry terminal for historical, arts and cultural amenities;
- recommendations to have outdoor washrooms as an amenity open to the public; and
- desire for the terminal to be a mobility hub to provide connections to active transportation facilities and public transit.

All feedback gathered from stakeholders and the public during this initial phase of engagement is summarized in Appendix B-2 - *Public Engagement Summary Report*.

4.6 MUNICIPAL SUPPORT

The ministry has valued its partnership and close working relationship with the City throughout the planning and development phase of the Project. [redacted]

5 PROJECT SCOPE

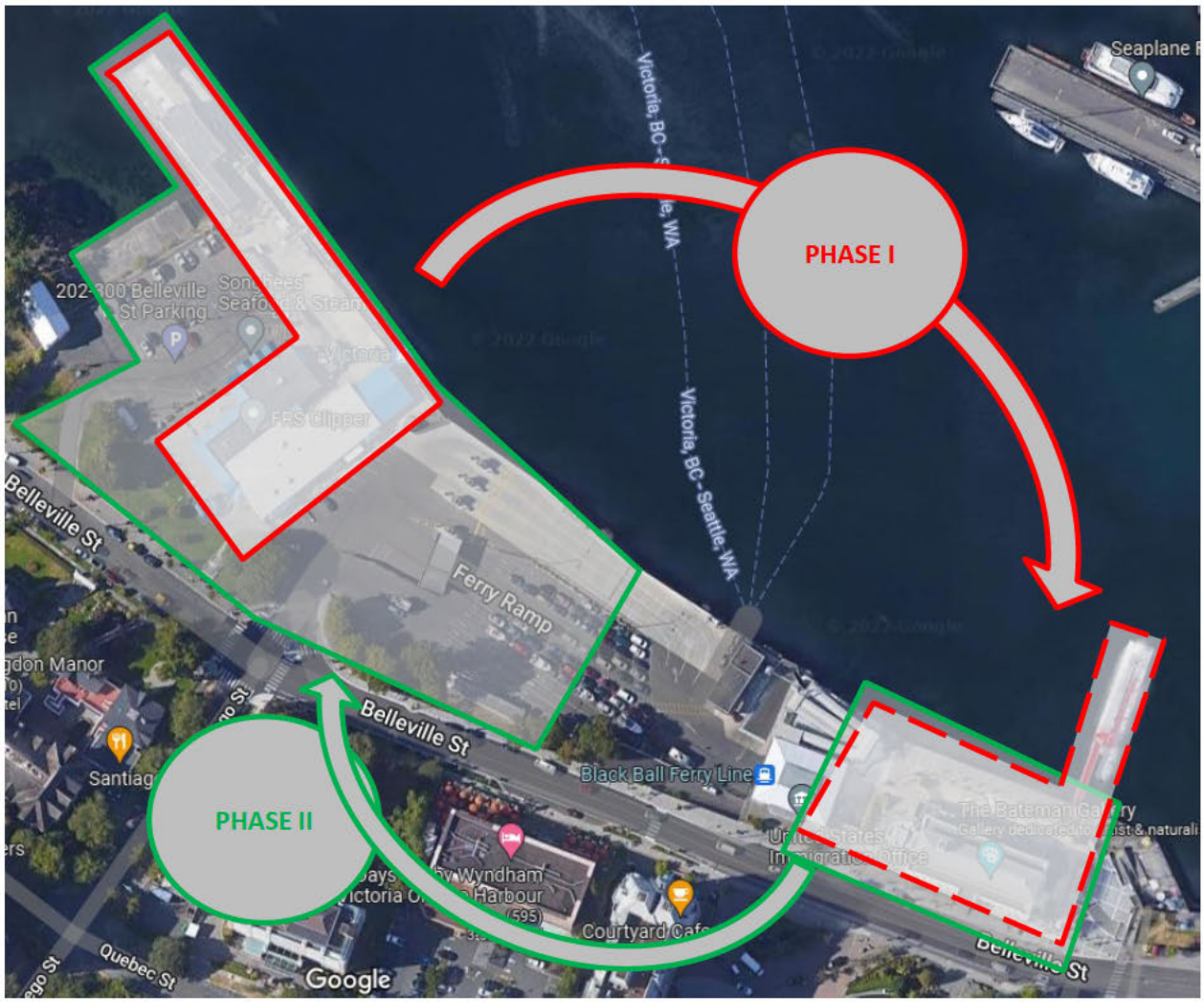
The proposed Project scope includes the following two phases:

- **Phase I: Temporary Terminal (estimated 2023-2024**) - involves converting the Steamship building and wharf into a temporary terminal to accommodate Clipper operations, USCBP pre-inspection border security processing, and USCBP administration. Black Ball vehicle ferry operations and administration will remain as-is onsite. A summary of Phase I scope includes:
    - construction and relocation of Clipper operations and departures wait area to the ground level of the Steamship building;
    - construction and relocation of USCBP primary foot passenger processing to ground level of Steamship building;
    - construction and relocation of Clipper arrivals queue and select CBSA spaces to Steamship building and Black Ball building;
    - modifying the size and alignment of the Steamship wharf, located on the east-end of the water lot, to accommodate the Clipper vessel;
    - construction and expansion of CBSA operations on the lower level/grounds of the Black Ball building to allow for primary and secondary security processing of both the Coho and Clipper arrival passengers; and
    - construction and relocation of USCBP administration to the Steamship building.
- **Phase II: New Consolidated Preclearance Terminal (estimated 2024-2027)** - involves the demolition of aging land and marine infrastructure, the design and construction of a consolidated preclearance ferry terminal with an outdoor vehicle compound, and the deconstruction of the temporary terminal. A summary of Phase II scope includes:
    - demolish the Clipper Terminal, USCBP administrative building, Clipper wharf, and Stores wharf;
    - complete environmental remediation and seismic improvements to the site, as required;
    - upgrade site services;
    - construct a new consolidated terminal building for both ferry operators, USCBP and CBSA that complies with the LRMA and modern security and administrative control requirements, and includes third party commercial revenue opportunities (e.g., commercial retail units);

- construct and raise the Clipper and Stores wharfs and marine structures;
- improve the existing Black Ball wharf as required;
- relocate both operators and border agencies into the new terminal; and
- remove and demolish temporary structures from the Steamship building that were used to accommodate ongoing operations at the temporary terminal.

Figure 7 below illustrates the phasing approach to support continuity of operations.

Figure 7: Phasing Approach



5.1 FUNCTIONAL PROGRAM AND SPACE REQUIREMENTS

For Phase I, sections of the Steamship building will be temporarily modified and expanded to replicate existing Clipper and USCBP operations (which currently occur at the proposed Phase II construction site). Passenger queuing is intended to be maximized within the available space, in particular the post-customs processing departures wait area. The CBSA arrivals queue is replicated in the Steamship building, while the rest of CBSA's operations are intended to continue at their current location in the Black Ball building. Table 3 summarizes the space requirements for Phase I.

Table 3: Phase I - Program Space Summary

Temporary Terminal Program Areas	Program Net Square Metres (NSM)
Interior Program Areas	
CBSA Primary	118
CBSA Secondary	86
Washroom Trailer	19
Departures Wait Area	411
Storage	17
US Customs	109
Ferry Operator Workspace – Clipper	56
Public Ticket Hall / Lobby	61
USCBP Pre-Inspection Que	317
Washrooms	59
Total Interior Requirements	**1,253**
Outdoor Areas	
CBSA Queuing	232
Disembarking and Luggage Pickup	78
Boarding Queuing	72
Luggage Staging	18
Total Outdoor Requirements	**400**
Total Program Requirements	**1,653**

Phase II is designed to incorporate the terminal program areas which represent user requirements and includes spaces within the main terminal, bridge, and elevated indoor space. The indoor net program area for Phase II, is programmed at 4,353 NSM as summarized below.

Table 4: Phase II – New Terminal Program Space Summary

Terminal Program Areas	Net Square Metres
Indoor Program Area (Building)	
Border Agency - CBSA[1]	1,408
Border Agency - USCBP	1,858
Border Agencies – CBSA & USCBP Shared	158
All Users (CBSA / USCBP/ Black Ball / Clipper - Shared	14
Ferry Operator – Clipper[2]	202
Ferry Operator - Black Ball	123
Ferry Operators - Shared	159
Public Spaces	342
Support Spaces	89
Total Net Indoor (Building) Requirements	**4,353**
Total Gross Area	6,600
Outdoor Program Area (Wharf)	
Border Agency - CBSA	2,422
Border Agency - USCBP	1,665
Ferry Operator - Black Ball	2,260
Ferry Operator - Clipper	139
Public Spaces	616
Support Spaces	54
Total Outdoor (Wharf) Requirements	**7,156**
Total Net Site Requirements	**11,509**

Note: [1] Includes 5.2 NSM for elevated walkway area and note[2] includes 60.5 NSM which totals 65.7 NSM for all elevated walkway areas.

5.2 THIRD-PARTY COMMERCIAL REVENUE OPPORTUNITIES

As part of the Business Case development, the ministry explored opportunities to use the new terminal for commercial activities that would supplement the Project's primary use as an international ferry terminal. Such activities would optimize the use of the terminal space, provide a positive customer experience,

generate revenues to offset the Province's investment in the Project, and contribute to the long-term financial sustainability of the terminal.

The proposed Project's Indicative Design currently includes dedicated space for two CRUs, including spaces at the street entrance level and in the departures waiting area. It is intended that the CRU spaces would be leased by the Province to third-party operators.

The ministry had a *Revenue Opportunities Report* (Appendix B-3) completed that involved conducting a research and information review, market sounding, strategic analysis, and a quantitative analysis to identify and evaluate the following potential commercial opportunities:

- Indigenous & cultural exhibition space;
- concessions (food and beverage, retail, vending machines);
- advertising;
- restaurants and event rentals;
- taxis;
- electric vehicle charging stations; and
- workspaces.

These opportunities were evaluated via an MCA, with focus on safety and security, Indigenous considerations, passenger experience, implementation, spatial constraints, as well as magnitude and certainty of revenue generation. The criteria also considered the Project objectives, market sounding feedback, and other project-specific considerations. Advertising, concessions, as well as Indigenous and cultural exhibitions were identified as the most viable commercial opportunities for the new terminal because they complement the primary purpose of this international transportation gateway, require minimal spatial allocations, and support the Project objectives.

The restaurant opportunity, while viable, requires a significant amount of space and active management to implement. Taxi services are pivotal for passenger experience and terminal operations; however, spatial constraints and the level of active management required make taxis a challenge to implement as a dedicated revenue stream. Electric Vehicle (EV) is an important consideration for electrification and CleanBC considerations at the new terminal; however, it does not yield a revenue generating opportunity given the transient nature of the space for vehicle passengers and constraints of the site. Opportunities for Indigenous and cultural exhibitions at the new terminal are recommended for further consideration as part of the Project design. These opportunities are not anticipated to be revenue-generating for the Province but is rather a

cost-neutral initiative that will enhance the passenger experience and educate passengers and tourists on Indigenous culture and history. Partnerships with local Indigenous groups would enhance the educational aspect of the exhibitions and potentially drive economic opportunities.

5.3 FACILITY MANAGEMENT

The ministry will retain responsibility for the major building and terminal rehabilitation responsibilities. The ministry will establish a contract agreement for the property management, which will include the day-to-day management of the facility including most of the facility management services. The ministry will also maintain long-term lease agreements with both operators, as well as agreements with both border agencies. The ministry will also ensure lease agreements are in place for any commercial units and providers in the building.

5.4 INDICATIVE DESIGN

After confirming the functional program and border security requirements, an Indicative Design was developed. The ministry worked collaboratively with the operators, border agencies, and the City to confirm the functional requirements and program the spaces. The Indicative Design is an interpretation of these requirements and was prepared by a multi-disciplinary team including contributions from architectural, structural, mechanical, electrical, civil, utilities, marine structural, transportation planning, energy modelling, environmental, and geotechnical.

The purpose of an Indicative Design is not to provide the design solution, but to test the following parameters:

- Does the functional program fit within the physical requirements of the site?
- Can the program elements be organized in a manner that optimizes functionality?
- Can the concept be realized within the existing zoning and building bylaw parameters?

Further, the Indicative Design is the basis upon which the quantity surveyor developed its Class C estimate to support the estimated Project cost.

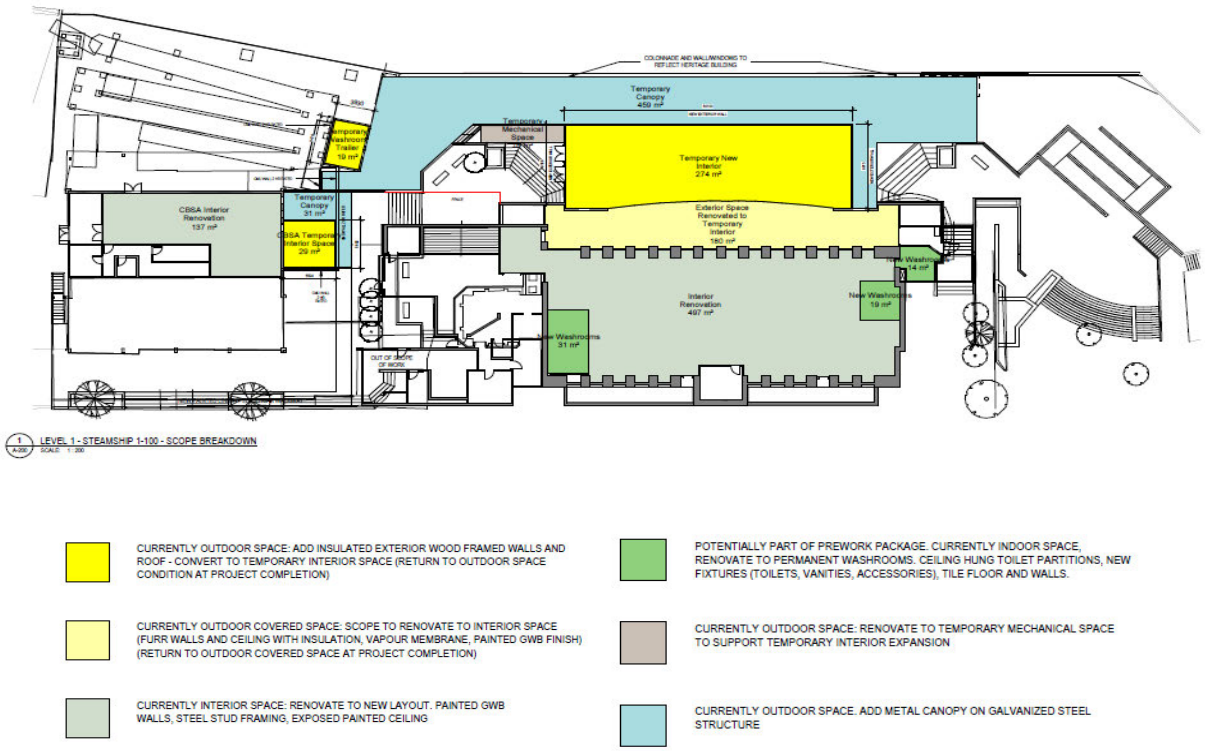
Through the Indicative Design process, the following was confirmed:

- Phase I: The Steamship and Black Ball buildings can accommodate the Phase I functional program requirements for a temporary terminal. The resulting Indicative Design for Phase I satisfies all the parameters above with a total net area of approximately 1,250 square metres and an approximate total gross area of 1,700 square metres.
- Phase II: The current site can accommodate the Phase II functional program requirements for a new consolidated preclearance terminal. The resulting Indicative Design for Phase II satisfies all the

parameters above with a total net area of approximately 4,290 square metres and an approximate total gross area of 6,600 square metres.

The site plan in Figure 8 below demonstrates how the Phase I temporary facility can be accommodated in the current Steamship building and Black Ball building.

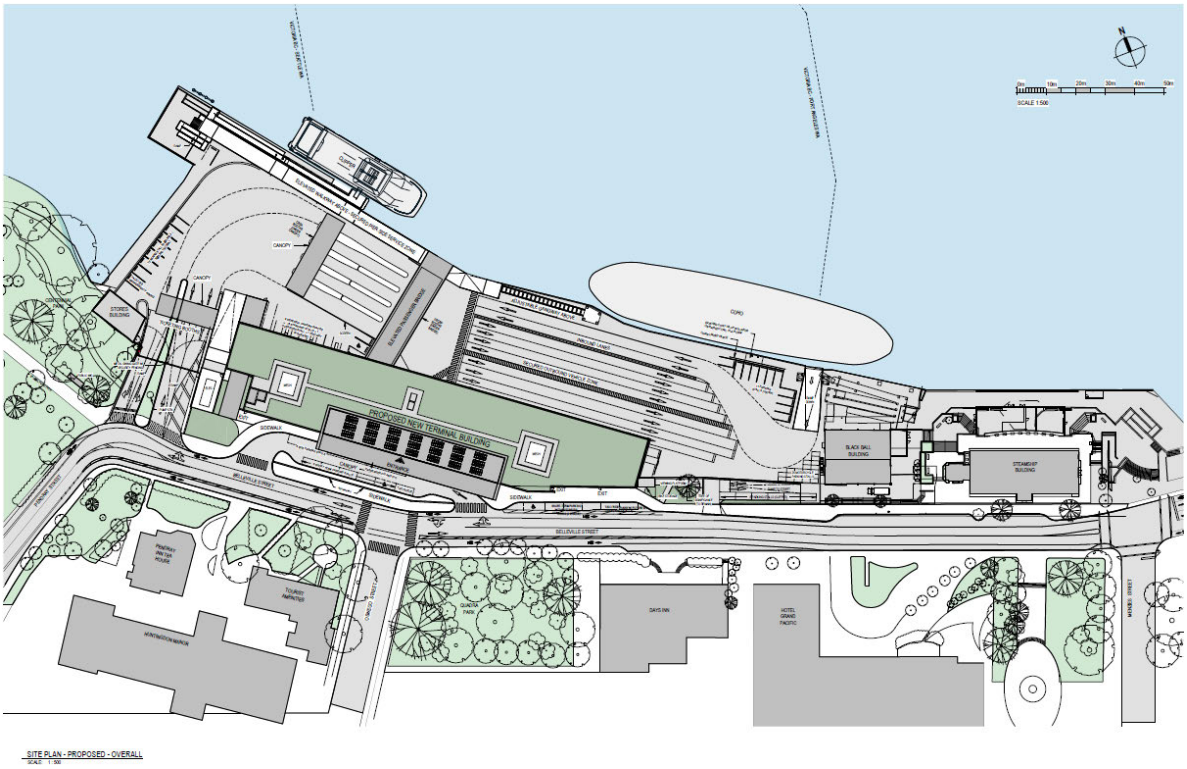
Figure 8: Phase I – Site Plan



The Phase II concept drawing in Figure 9 and site plan shown in Figure 10 demonstrate how the program could fit within the current zoning and site.

Figure 9: Phase II – Concept Drawing

Figure 10: Phase II – Site Plan



The Indicative Design carried typical base building components to inform floorplate net areas including:

- facility mechanical and electrical spaces;
- janitorial spaces;
- facility washrooms;
- vertical cores;
- facility corridors, including back of house service corridors, distinct secure corridors for border agencies and wide corridors to support passenger flows; and
- interior / exterior walls.

To inform costing, the Indicative Design outlined the gross floor area (program and building net area) with exterior perimeter calculated separately to inform overall gross building area. The Indicative Design carries a building gross up factor of approximately [redacted]

Key findings from the Indicative Design that may influence the gross building area for the terminal and site for consideration include:

- limited plannable area: constrained by the outdoor vehicle compound and process flows, in tandem with overall narrow site with wharf structures and Belleville Street flanking the parcel, consideration for a non-rectilinear terminal solution;
- circulation within the terminal supports distinct workflows and secured operational spaces:
    - site factor: the terminal parcel includes a grade change from wharf to Belleville Street that may result in the need for additional circulation to address the grade change and exiting strategies;
    - the terminal solution will require wide corridors to support passenger flows throughout the building;
    - the Province's preference to provide a facility over two floors versus three, which allows for the more efficient movement of passengers through the border processes and reduces the building massing along Belleville Street, however this may contribute to additional corridor lengths;
    - the directive to enable vehicle passengers to access the departures wait area amenity space may result in a dedicated vertical core;
    - ideally the border agency spaces are consolidated on a single level with primary and secondary processing co-located. However, with the restricted plannable area on the wharf level, the Indicative Design carries a vertical core allowance to support a vertical border agency solution. With a vertical solution, each agency requires a dedicated core to allow passengers secured access to and from secondary processing, separated from the foot passenger primary processing areas; and
    - border agencies require secured operational zones, separate from main terminal operating spaces, with consideration for a discrete terminal service corridor.

6 PROJECT CONSIDERATIONS

In alignment with the Environmental, Social, and Governance Framework (ESGF), which guides the delivery of key government priorities by applying an Environmental, Social and Governance lens to capital plan investments and initiatives, the ministry considered the following six key components as part of the Project:

- Engagement with Indigenous groups
- Mass timber
- CleanBC
- Childcare
- Gender-Based Analysis Plus (GBA+)
- Labour objectives

6.1 ENGAGEMENT WITH INDIGENOUS GROUPS

The ministry has a duty to engage with Indigenous groups where it proposes to take actions that could impact asserted interests of Indigenous groups. To uphold the Province's commitment to reconciliation with Indigenous groups, the ministry has developed its Indigenous engagement approach based on meaningful actions, as described in Section 4.4.

6.2 MASS TIMBER

Belleville Terminal is required under the BC Wood First Act to utilize, wherever possible, mass timber and wood construction. The mass timber approach is in support of the Province's priority to stimulate the forestry industry and generate new business opportunities within BC, as well as supporting the Project's vision, guiding principles, and objectives of environmental sustainability.

From an architectural standpoint, mass timber and wood construction offer an opportunity to enhance the exterior and interior aesthetic, while facilitating best practices for the use of an environmentally responsible building material.

Mass timber has been integrated throughout the Project's Indicative Design, particularly in some exterior and structural components of the building, as well as the exposed cross-laminated timber ceiling. It is assumed that for Phase II of the Project, the natural wood aesthetic will be maximized where possible, except where code or other considerations provide rationale otherwise.

6.3 CLEANBC

CleanBC includes sustainability and environmental policies related to energy efficiency, a reduction of GHG emissions, and adaptation to climate change. Phase II of the Project will be designed to respect the local and global environment, promote local materials, be energy efficient, and create healthy environments for the building's inhabitants and visitors.

In support of CleanBC's actions, the ministry has included a high-performance building design and sustainability targets. The following strategies have been considered for Phase II of the Project:

- LEED® Gold and the Province's Environmental Stewardship Policy standards will be the minimum requirements for the Project;
- the new facility will comply with the BC Code Step 3 – net-zero energy ready performance requirements;
- an all-electric facility and a high performing building envelope that exceeds building code requirements has been considered in the Indicative Design; and
- energy targets will promote a design that reduces the consumption of energy, thereby reducing carbon emissions.

Sustainability initiatives were developed in consultation with the Climate Action Secretariat (CAS) as discussed below.

6.3.1 LEED®

The Indicative Design's preliminary LEED® Scorecard indicates that there are 72 recommended points, a minimum of 60 points are required to achieve LEED® Gold. A minimum of 65 points should be targeted to maintain a buffer to reduce the risk of not achieving certification.

6.3.2 Energy Efficiency

The ministry worked in consultation with CAS and technical consultants to identify additional energy conservation measures that provide an option for Phase II of the Project to further reduce energy usage intensity and GHG emissions during operations over the base building (LEED® Gold) requirements.

Energy conservation was explored to improve the building envelope (roof, walls, windows, air tightness), heating and humidification sources, and use of renewable energy (e.g., photovoltaic panels). The individual measures were grouped into two Alternative Design Options (ADO) and compared to the Indicative Design (see Appendix B-4 - *Energy Conservation Measure – Alternative Design Options*).

Consistent with provincial policy to explore options that achieve a 50 percent GHG emission reduction relative to the LEED® Gold base building design within a three percent incremental cost, the ministry analyzed the building energy performances and compared them to the Indicative Design. The incremental cost was provided as part of the analysis. Table 5 provides a summary of the performances and incremental cost under each ADO.

Table 5: Energy Conservation Measures and Impact

	Net Annual Energy Use Intensity (kWh/year)	EUI Savings (%)	GHG Intensity (kgCO2e/m2/year)	GHGI Savings	Cost[13]
Indicative Design	103.9	-	1.85	-	-
ADO 1	42.4	59.2%	0.5	74.8%	[redacted] (1.1%)
ADO 2	0.0	117.5%	0.0	100%	[redacted] (2.2%)

ADO1 provides just under a 75 percent reduction in GHG emissions at less than an incremental three percent of the capital cost. ADO2 provides 100 percent reduction in GHG emissions, which will make the new Belleville Terminal carbon neutral during operation, at less than an incremental [redacted] percent of the capital cost[14]. In addition, there will be a combined reduction in annual energy consumption for ADO1 and ADO2 of [redacted] (46.5%) and [redacted] (90.2%) respectively. However, despite the annual cost savings, the ongoing cyclical renewal and maintenance cost for the two options will exceed that of the LEED® Baseline, meaning the electricity savings alone[15] will not cover the increased capital cost as described in the Class C Estimate. Refer to Appendix B-5 – *Quantity Surveyor Report*.

Based on the information provided above, ADO2 is a more effective means of advancing the CleanBC objectives and provides the opportunity to operate a carbon neutral facility. Therefore, the ministry will recommend ADO2 be further analyzed for detailed costing and presented as an add-on option for Treasury Board decision.

Refer to Appendix B-6 – *Energy Modeling Report* for more details on the energy and carbon conservation measures, performance analysis and findings.

[13] Costs are not escalated, nor risk adjusted. Refer to Part D for the adjusted values.

[14] Percentages are based on the non-escalated and non-risk adjusted construction costs.

[15] Assumption: In Western Canada, electricity charges are not expected to increase as rapidly as other energy sources.

6.3.3 Climate Resiliency

CAS has recently developed a draft version of the Guidebook & Standards for Climate Resilient Public Sector Buildings (Guidebook). This document is intended to address future climate change that could potentially cause severe impacts on buildings and assist public sector organizations in applying a climate resilience perspective to capital projects. The Project has been identified to incorporate several of the guidelines on a trial basis.

Climate modelling analysis has been requested to:

- identify future climate risks that potentially affect the Project;
- select applicable solutions from the Guidebook; and
- perform energy simulations using future weather conditions to mitigate the impacts on architectural, mechanical, and electrical designs.

Climate risks were identified for the Project using Plan2Adapt, an online tool recommended by CAS that generates maps, plots, and data describing projected future climate conditions for regions throughout BC. [16] The climate risk analysis selected 'Vancouver Island' as the location, and '2050s and 2080s' weather conditions. This resulted in the following climate risks being identified as applicable for the Project:

- possible flooding (high risk) – mitigation strategies have been incorporated into the Indicative Design by raising the new terminal wharf and structures above predicted sea level rise and flooding risk projections;
- considerable increase in temperature (medium risk) – mitigation strategies have been incorporated into the Indicative Design with high performance building envelope components, passive cooling strategies, and future proofing of cooling systems; and
- waterlogged soil (low risk) – mitigation strategies have been considered in the Indicative Design; however, it is not believed to be applicable to this specific site based on its location (at the edge of the harbour partially built over water with no remaining natural soil areas onsite) and likely structural foundation (piles founded on bedrock).

[16] Provided by the Pacific Climate Impacts Consortium, website: https://www.pacificclimate.org/analysis-tools/plan2adapt

In addition, energy simulations with future weather files of 2050s and 2080s were completed to examine the impacts on architectural, mechanical, and electrical designs due to the significant increases in temperature. Refer to Appendix B-7 - *Climate Resiliency Report* for more details.

6.4 CHILD CARE

The ministry completed a viability assessment of childcare spaces as part of the Project, including:

- engaging with the Ministry of Education and Child Care (ECC) to assess the need for childcare in the surrounding community (James Bay);
- assessing space availability both in the proposed new terminal building, and elsewhere onsite;
- consulting with USCBP and CBSA on potential location choices onsite and collected their feedback on a non-terminal use in proximity to security-controlled facilities;
- reviewing existing municipal zoning for the site and engaged City staff on the potential placement of a childcare facility at the new terminal;
- assessing parking availability onsite and along Belleville Street for childcare pick-up and drop off; and
- assessing the municipal approvals process for childcare in relation to the approvals path for the Project.

The assessment concluded that a childcare facility onsite is not recommended as part of the Project for the following reasons:

- USCBP and CBSA confirmed childcare is not a suitable use for a controlled border crossing;
- there is insufficient space onsite outside of the border-controlled areas to provide a sufficient footprint for childcare space; and
- childcare is not permitted under the current zoning and would require the ministry to seek a series of municipal approvals, which will be challenging, and likely add considerable time and scope to the Project (e.g., permitting timing and potential municipal improvements expectations). A delay in the Project would also risk USCBP removing services from south Vancouver Island.

The ministry shared the results of the assessment with ECC, and they supported the assessment recommendation that a childcare facility is not well suited for inclusion in this type of Project.

6.5 GENDER-BASED ANALYSIS PLUS (GBA+)

GBA+ is an analytical tool used to assess how diverse groups of women, men, and gender-diverse people may experience policies, programs, and initiatives. The “plus” in GBA+ acknowledges that GBA goes beyond biological (sex) and socio-cultural (gender) differences and considers various other identity factors, such as race, ethnicity, religion, age, and mental or physical ability.

Based on results of the GBA+ analysis, the following opportunities were identified and incorporated into the Indicative Design work in the following ways:

- automated ticket kiosks & ticket counters to allow individuals to choose their desired interaction level (e.g., multiple languages to serve customers of various ethnicities in their languages) and use of technology;
- gender-neutral washroom strategy, with fully enclosed toilet stalls and shared common support spaces such as sinks and infant changing stations;
- a family washroom, with an adult change station;
- a pet relief area (guide/support dogs, pets); and
- providing technology and telecommunications including wi-fi in passenger areas (ticket hall, departures wait area, terminal exit points, arrivals exit point) with information/phones/wi-fi to allow for passenger pick-up/taxi.

Further analysis will need to be completed to gain a better understanding of the different ways people may experience the proposed terminal-built environment and help to meet stakeholder goals of providing an improved overall user experience. Some additional opportunities to support inclusion and diversity that could be incorporated into a subsequent design phase include, but are not limited to:

- greater accessibility initiatives;
- additional amenity/support spaces including multi-purpose space, employee/public quiet spaces; and
- inclusive wayfinding and signage.

6.6 LABOUR OBJECTIVES

As a key public-sector infrastructure project, the Project presents an opportunity to deliver good-paying jobs, better training, apprenticeships, and more trades opportunities for Indigenous peoples, women, and youth to ensure local projects benefit BC workers, families, and communities. The ministry recognizes the importance of closing BC’s skilled trades gap and maximizing the local social and economic benefits that come from infrastructure development, including:

- priority hiring for Indigenous peoples, local workers, and workers traditionally underrepresented in the construction trades;
- growing apprenticeship opportunities and increasing the number of successful trades certifications;
- cultural safety training for all workers and ongoing support to create safe and respectful jobsites to better recruit and retain underrepresented workers; and
- building a network of training and upskilling pathways to help British Columbians build a career in construction.

The ministry assessed two labour agreement options for the Phase II of the Project to achieve government's community benefit objectives, a Procurement Project Labour Agreement (PLA) and Procurement Contract Terms (PCT). The ministry used a MCA assessment framework to identify the relative benefits or impacts of each labour agreement option. Tables 6 and 7 below summarize the results of the MCA.

Table 6: Labour Agreement Community Benefits MCA Assessment Framework

X	✓	✓✓	✓✓✓
Ineffective in satisfying the labour objectives.	Minimally effective in satisfying the labour objectives.	Somewhat effective in satisfying the labour objectives.	Fully effective in satisfying the labour objectives.

Table 7: Labour Agreement Community Benefits Assessment – MCA Results

Objectives	Considerations	PLA	PCT
Increased Opportunities for Indigenous Groups	▪ Provide contracting opportunities on the site for Indigenous Contractors.	✓	✓✓✓
	▪ Provide employment and training opportunities to Indigenous people.	✓	✓✓
Increased Opportunities for Under-Represented Groups	▪ Increase opportunities for members of equity seeking groups traditionally under-represented in the construction workforce.	✓✓	✓✓
Access and opportunity for local workers and businesses	▪ Individuals, communities, and businesses in the local area have full and fair opportunity to participate in the Project.	✓✓✓	✓✓
	▪ Increase apprenticeship and skills training opportunities.	✓✓	✓✓
Stability and Harmony in Labour Management	▪ Aligned and predictable wages. ▪ Wages are responsive to market conditions.	✓✓✓	✓✓✓

Objectives	Considerations	PLA	PCT
	▪ Establish fair working conditions and practices for all employees working on the Project. ▪ Minimize disruptions that may result from labour or collective bargaining disputes.	✓✓✓	✓✓
Market Interest	▪ Ability to attract sufficient interest from the market to generate a competition and attract multiple proponents.	✓✓	✓✓✓

The ministry also conducted market sounding to understand the market interest and to gain clarity on Project-specific labour items that could be impacted by the application of a labour agreement. All market sounding participants favoured PCT mainly because of its flexibility and its ability to mirror some of the same goals contractors already have in place to manage and control labour. PLA were generally favourable to the market as well; however, a risk was identified that unions may not be able to supply workers.

The results of the assessment indicate that both the PLA and PCT are ranked as being somewhat to fully effective at meeting the labour community benefit objectives. PLA and PCT are not mutually exclusive, which is a key consideration in assessing their suitability to the Project as the agreements could be used separately or together to meet labour objectives. However, implementation of an exclusive agreement for access to trades and labour under the PLA will limit the effectiveness of the PCT for some of the labour objectives if the agreements were to be used together (e.g., requirement to join a specific union for certain trades under the PLA).

Based on these results, the ministry recommends the PCT as the preferred labour agreement option for Phase II of the Project because it will:

- provide opportunities to Indigenous groups that could support their economic and cultural interests;
- facilitate collaboration and feedback from proponents;
- provide an opportunity to develop Project-specific community benefit targets supported by incentives; and
- meet community benefit objectives while providing constructors flexibility to retain labour and subtrades in an already constrained market.

The incremental capital cost on the recommended labour agreement option, PCT, is incorporated in the Project's total capital cost.

7 COST ESTIMATE

Table 6 presents the total Project cost estimate (in nominal dollars and includes Interest During Construction (IDC)), which covers design, construction, and financing based on a CM procurement method for Phase I and a DB procurement method for Phase II. The total Project cost estimates was prepared based on the physical asset scope described in section 5 and detailed through the Indicative Design drawings, as well as the QS class C capital cost estimate[17] for the Project (see Appendix B-5 - *Quantity Surveyor Report*).

Table 8 - Project Cost Estimates

Components in the Capital Cost Estimates ($ million, nominal dollars)	Allocation
Contractor's Construction Cost	
Design and Construction	[redacted]
Transferred Risks	[redacted]
Owner's Cost	
Project Management & Staff Costs	[redacted]
Phase I - Temporary Terminal	[redacted]
Retained Risks and Contingencies	[redacted]
Provincial IDC	[redacted]
Total Capital Costs	**303.90**

Total capital cost of $303.9 million [redacted]

For additional details, please see Appendix B-8 – *Capital Cost Memo*.

7.1 BENEFIT COST ANAYSIS

The tables below outline the Benefit Cost Ratio (BCR) and the Net Present Value (NPV) of the Project. The values shown are relative to the business as usual and are based on proceeding under the current Project schedule.

[17] Class C cost estimate is +/- 15%, 18 times out of 20.

Table 9 - Benefit Cost Ratio Analysis

Stream	Account	Present Value in $2022 million
($million, NPV $2022)		
Costs		
	Capital	[redacted]
	O&M Cost	[redacted]
	Total Costs	[redacted]
Benefits		
	Economic benefits	[redacted]
	Lease Revenue	[redacted]
	GHG Savings	[redacted]
	Total Benefits	[redacted]

Table 8 summarizes the Project benefit-cost-ratio and net-present-value. Overall, the Project generates a good economic value as indicated by the positive NPV and the BCR exceeding 1.01.

Table 10 - Benefit Cost Ratio and Net Present Value

Lifecycle Economic Indicator	Value
Net Present Value ($million, NPV $2022)	[redacted]
Benefit Cost Ratio	1.01

8 PROJECT STATUS

8.1 TECHNICAL

In addition to the Indicative Design for the proposed new preclearance terminal (as described in section 5.4 of the Business Case), the ministry has also advanced a schematic design and associated engineering works for Phase I of the Project and is working with the City to secure a Heritage Alteration Permit and Building Permit to facilitate the proposed modifications of the Steamship building for the Temporary Terminal. Additionally, the ministry continues to refine the Project's design criteria based on the requirements and objectives set out by the CBSA, USCBP, and the City.

8.2 UTILITIES

The ministry has been in preliminary discussions with BC Hydro and the City regarding the Project's utility needs and impacts. Through the development of the Indicative Design the requirements, relocations and/or connections to electrical and municipal utility infrastructure have been considered. Further discussions will take place as the procurement and design for the Project progresses.

8.3 GEOTECHNICAL

Geotechnical investigations have been completed at the Belleville Terminal site to characterize the ground conditions and to support the development of the Indicative Design report. There was also a desktop review of the historical information and geotechnical assessments completed within the Project area prior to the completion of a preliminary geotechnical assessment in May 2017, which included drilling six boreholes. Further investigative works were completed in April of 2022, consisting of 14 bedrock probe holes, to assess the bedrock elevation for structural planning purposes. Appendix B-9 - *Geotechnical Investigation Location Diagram* shows a diagram of the geotechnical investigations that have been completed in the project area to date.

Further geotechnical and structural input will be required as the Project moves towards detailed design phases to confirm requirement for drains, water levels, foundation depth and expected load/pipe size. In addition, the report indicated the overlaying soil on the slope and behind the Clipper wharf is weak and susceptible to liquefaction and possible failure during the 2,475-year earthquake event. This could impose permanent displacement and failure of the wharf structure. Similar geotechnical issues can be anticipated at the Black Ball wharf during a 2,475-year seismic event, as the upgrade in 2018 to this wharf was only completed to a 475-year seismic event.

In advance of procurement, the ministry is completing further geotechnical investigations of the site and marine environments to support both Phase I & II.

8.4 ENVIRONMENTAL

In June 2022, a preliminary desktop environmental assessment was conducted for the Project that focused on the components of the environment that have the potential to trigger environmental permitting requirements and represent typical environmental issues of concern. This assessment recommended completing an assessment of terrestrial, intertidal (riparian), and subtidal habitat prior to construction. This is necessary to identify and inventory existing habitat and associated vegetation and species to determine baseline conditions and possible project impacts. Subtidal investigations will need to be undertaken by qualified divers or remote operated vehicles equipped with cameras and other sensors. Terrestrial and riparian habitat will need to be undertaken by registered professional biologists. These studies will be key in acquiring necessary permits under the following acts:

- *Federal Fisheries Act;*
- *Federal Species at Risk Act*;
- *Federal Canadian Navigable Waters Act*;
- *Provincial Wildlife Act* should we need to salvage or relocate any wildlife (including birds); and
- *Provincial Weed Control Act* should any noxious or invasive weeds be found onsite.

The ministry is planning to initiate the studies and permitting. During construction, the ministry will require the contractor to submit a detailed construction environmental management plan stating how they will avoid or mitigate Project related environmental impacts.

8.5 CONTAMINATED SOILS & HAZARDOUS MATERIALS

The ministry is aware that the site is predominantly fill and presents contamination risks. Contamination in environmental media (e.g., soil, soil vapour and sediment) that interface with the Project elements will be mitigated (e.g., removed) as required. Hazardous building materials will be abated where construction interfaces with these materials. To confirm site conditions, the ministry is advancing investigations relating to site contamination and a Hazardous Building Material Assessment (HBMA) for the Steamship building lower level and other buildings onsite that will be removed as part of the proposed development.

8.6 ARCHAEOLOGY

The ministry has undertaken some archaeological investigations and completed an Archaeological Overview Assessment (AOA), as well as an Archaeological Impact Assessment (AIA), which is required by the BC *Heritage Conservation Act.* A Heritage Investigation Permit and a Site Alteration Permit may also be necessary if ground disturbance impacts a known archaeological site.

The ministry has also been working closely with the Esquimalt and Songhees Nations on Traditional Knowledge and Use Studies.

8.7 ENGAGEMENT WITH INDIGENOUS GROUPS

The ministry undertook early engagement with twelve identified Indigenous groups. The Project is located in Songhees and Esquimalt Nations' traditional territory and they have been engaged on a regular basis to discuss the Project and their specific interests. Engagement has been in alignment with the economic and other objectives [redacted] between the ministry and Songhees and Esquimalt Nations, while considering other opportunities in the context of the Project.

As noted in Section 4.4, the ministry will continue to work with all twelve Indigenous groups as the Project moves forward unless engagement is declined. Through the Liaison Committee [redacted] the ministry has engaged with Esquimalt and Songhees Nations and is making progress toward incorporating their economic and cultural goals into the Project. Other Indigenous groups with identified interests have been notified by the ministry, but none have requested further engagement.

8.8 ENGAGEMENT WITH STAKEHOLDERS

The ministry completed stakeholder and public engagement in fall 2022. The ministry has also developed a Project website [18] to provide information about the Project and an email inbox to receive public queries and respond accordingly.

Stakeholder and public engagement are key to the success of the Project and will continue throughout each phase of the Project's delivery.

8.9 PROPERTY ACQUISITION

The ministry already owns the entire Belleville Terminal site and water lots, including the Steamship building. [redacted]

[18] https://www2.gov.bc.ca/gov/content/transportation-projects/belleville-terminal-redevelopment

8.10 ACTIVE TRANSPORTATION

The Province aims to double the percentage of trips taken by active transportation by 2030 as part of its CleanBC plan to make active transportation an option for more people and to reduce GHG emissions and build a better future for all British Columbians.

Active transportation opportunities at Belleville Terminal include the potential provision of dedicated bike lanes along Belleville Street, and the inclusion of a multi-use path via expansion of the David Foster Harbour Pathway. Construction of end-of-trip facilities at or near the new terminal are also being considered to service ferry passengers, Belleville Terminal employees and tenants, and other active transportation users requiring an end-of-trip facility in the vicinity of the Belleville Terminal.

Furthermore, Black Ball's vessel currently accommodates cyclist travellers; however, the existing gangway configuration can be challenging to navigate for some active transportation users. To mitigate this, the Project's design criteria was developed in consultation with the BC Active Transportation Design Guide to consider the needs of various active transportation users at or near the Belleville Terminal.

The ministry is also working collaboratively with the City to ensure the Project's active transportation elements align with the regional and municipal active transportation plans.

PART C – PROCUREMENT OPTIONS ANALYSIS

This part of the Business Case presents the analysis and results of the detailed assessment undertaken to determine the optimal approach to procure the Project and concludes the recommended procurement option for the Project.

9 OVERVIEW OF PROCUREMENT OPTIONS AND OBJECTIVES

Procurement options for Project delivery are defined in terms of the scope of activities to be carried out by the contractor, and the extent to which key Project risks can be transferred. For complex projects such as this Project, there are numerous ways to split or combine specific scope elements into one or more procurement packages.

As explained in Section 8.1, the Project will be implemented in two phases to allow for continuity of Clipper and Black Ball operations on the existing site. Phase I of the Project requires Clipper operations to relocate to a temporary terminal accommodated in the Steamship and Black Ball buildings. Completion of Phase I is on the critical path and must be completed before Phase II, construction of the new consolidated preclearance ferry terminal and outdoor vehicle compound, can begin.

9.1 PROCUREMENT OPTIONS CONSIDERED FOR PHASE I

A key consideration in the identification of procurement options for Phase I is the multi-phased and discrete renovation scopes required within the Steamship building (designated heritage building) and Black Ball building required for the relocation of Clipper operations, and CBSA and USCBP border security processing. In addition, rebuilding the Steamship wharf is required to accommodate the size of the Clipper vessel. As all ferry operations must continue during the redevelopment of the Project, Phase I is required to maintain Clipper operations, and allow for Phase II construction of the new consolidated terminal.

Construction Management (CM) and Design-Bid-Build (DBB) are traditionally seen as the most efficient way to complete renovations and construction in existing facilities. While the DBB model relies on completion of the entire design work for tendering and construction purposes, under the CM model there is an opportunity to fast track the procurement and tender in phases as the designs of subcomponents are completed. With the early involvement of the construction manager under a CM model, challenging renovation components can benefit from the advice of a construction expert during development of the design packages, and tender packages can be amended to suit unanticipated site conditions as they become known through work of prior packages being executed. These benefits are of value for complicated phased renovations and are not replicated in a DBB model.

9.2 PROCUREMENT OBJECTIVES FOR PHASE II

A number of procurement objectives are identified for Phase II of the Project to provide an analytical framework for evaluating the procurement options and are outlined in the table below.

Table 6: Procurement Objectives

	Procurement Objective	Assessment Criteria
1	**Design Optimization & Functionality**	• Contributes to a functional and constructable design solution; and • Optimizes design solutions to balance capital and operational efficiencies and long-term asset performance.
2	**Optimizing Risk Management and Allocation**	• Ability to optimize risk allocation, including risk management, between the ministry and the contractor.
3	**Cost Certainty within Budget**	• Level of cost certainty provided by the model; and • The project is managed within the approved budget.
4	**Schedule**	• Impact on total schedule; and • Impact on schedule certainty.
6	**Effective stakeholder engagement**	• Opportunities for meaningful dialogue with the stakeholders in design, construction.

9.3 PROCUREMENT OPTIONS CONSIDERED FOR PHASE II

Expected outcomes vary between models with respect to risk transfer, schedule, and budget adherence. In reviewing all potential procurement options, the Project Team considered the procurement objectives, challenges associated with aspects of Phase II of the Project, the experience of the local construction market and the ministry's implementation experience, and identified the following procurement options for analysis:

- Construction Management (CM);
- Design-Bid-Build (DBB);
- Design-Build (DB);
- Progressive Design-Build (PDB); and
- Design-Build-Finance (DBF).

Descriptions of the procurement options are provided in Appendix C-1 - *Qualitative Procurement Options Assessment MCA Report*.

10 QUALITATIVE ANALYSIS OF PROCUREMENT OPTIONS FOR PHASE II

10.1 PROCUREMENT MULTIPLE CRITERIA ANALYSIS ASSESSMENT

The first step in assessing the procurement options is a qualitative approach. The analytical framework for considering the relative merits of the procurement options is based on an MCA approach.

10.2 MCA ASSESSMENT FRAMEWORK

The assessment framework for the qualitative criteria requires judgments to be made on the magnitude of the relative benefits, or impacts, of each option for a particular criterion. In order to discuss criteria and judge their values on a consistent basis, the assessment framework shown in Table 12 has been used to assess how well each option achieves the stated objective.

Table 7: MCA Assessment Framework

X	✓	✓✓	✓✓✓	✓✓✓✓
Fails to satisfy the basic requirements of the ministry and the program.	Partially effective in satisfying the requirements of the ministry and the program.	Moderately effective in satisfying the requirements of the ministry and the program.	Substantially effective in satisfying the requirements of the ministry and the program.	Highly effective in satisfying the requirements of the ministry and the program.

10.3 PROCUREMENT CRITERIA

The criteria considered for the MCA assessment are the same as the procurement objectives stated in Section 9.2 of this Business Case.

10.4 PROCUREMENT OPTIONS MCA RESULTS

The results of the procurement options MCA assessment for Phase II of the Project are summarized in the Table 13 below:

Table 8: Summary of Procurement Options MCA Results

	DBB	CM	DB	PDB	DBF
1. Design Optimization & Functionality:					
▪ Contributes to a functional and constructable design solution; and ▪ Optimizes design solutions to balance capital and operational efficiencies and long-term asset performance.	✓	✓✓	✓✓✓✓	✓✓✓	✓✓✓✓
2. Optimizing Risk Management and Allocation:					
▪ Ability to optimize risk allocation, including risk management, between the ministry and the contractor.	✓	✓	✓✓✓	✓✓	✓✓✓✓
3. Cost Certainty within Budget:					
▪ Level of cost certainty provided by the model; and ▪ The Project is managed within the approved budget.	✓	X	✓✓✓	✓✓	✓✓✓
4. Schedule:					
▪ Impact on total schedule; and ▪ Impact on schedule certainty.	✓	✓	✓✓✓	✓✓	✓✓✓✓
5. Effective Stakeholder Engagement:					
▪ Opportunities for meaningful dialogue with the stakeholders in design and construction.	✓✓✓✓	✓✓✓✓	✓✓	✓✓✓	✓✓

Refer to Appendix C-1 - *Qualitative Procurement Options Assessment MCA Report* for more detailed information.

11 QUALITATIVE ANALYSIS OF PROCUREMENT OPTION RECOMMENDATION

11.1 PHASE I – TEMPORARY TERMINAL

Based on the discrete scopes of work required for Phase I, a multi-phased approach for managing the renovation and expansion to the Steamship building, renovation to the Black Ball building, and marine work to replace the Steamship wharf will be required. Contractors with different skill sets will be required, specifically marine works and building renovations. In addition, the existing heritage building component along with the potential for hazardous materials abatement are unique aspects of this phase requiring specialized expertise. Issuing dedicated contract packages geared to their respective areas of expertise becomes possible in the CM model and generates schedule efficiency. Therefore, the CM model is recommended for Phase I.

11.2 PHASE II – NEW CONSOLIDATED PRECLEARANCE FACILITY

Based on the outcomes of the MCA, the DB and DBF models best meet the procurement objectives. While the CM and DBB models outperformed both DB and DBF with regards to effective stakeholder engagement, they were outperformed by the other options on all other objectives. While the PDB model somewhat to adequately meets the procurement objectives, it was overall outperformed by the DB and DBF models on all procurement objectives except for effective stakeholder engagement. With the PDB model being an alternative approach to procuring Phase II under a DB agreement, it is not recommended to further analyze PDB as the DB and DBF models achieve a better outcome overall with the same form of contract.

As a result, the DB and DBF models are both recommended to proceed to the quantitative analysis for Phase II.

12 MARKET SOUNDING

In July 2022, a series of market sounding interviews were undertaken by the ministry and Infrastructure BC. The objectives of the market sounding exercise were to:

- provide information about the Project to the market and raise market awareness and interest in the Project; and
- Obtain feedback on:
    - pursuit of the Project interest depending on procurement model;
    - phasing of the Project;
    - estimated construction schedule;
    - site constraints;
    - potential Project risks, both general and site specific;
    - capacity, availability, and capability of the construction workforce;
    - application of mass timber;
    - implications of potential labour agreement assignments;
    - application of using National Building code seismic requirements; and
    - potential of other market commitments/conditions and their impact on the Project.

The responses to the market sounding provided informative insight into current market conditions and determining interest in the Project. The following list presents the key recommendations to the ministry based on feedback from the market sounding participants:

- all participants agreed a CM procurement model is most appropriate for Phase I with some participants expressing interest in bundling both Phase I and Phase II as a CM or PDB model. The main benefit of these models includes early contractor involvement and opportunity for collaboration between the owner and contractor;
- the CM, DB, and DBF delivery models allow for early engagement, collaboration, and appropriate risk transfer. There was also a high-level of interest in a progressive or modified approach compared to more traditional procurement methods. The PDB model was proposed by some participants as a viable alternative to a DB model to lower risk and costs during the pursuit phase. While at this stage of planning, market interest seems high, the PDB model could be a viable

approach in lieu of a DB model if this changes. Participants agreed that a DBB model is not appropriate for Phase II;

- both Phases require an adequate amount of planning work to be completed, specifically related to pre-site work (inspections, permitting), security protocol and logistics around working in a constrained site. It is important for the market to understand site conditions related to contaminated and hazardous material. Early stakeholder engagement, working closely with the contractor, is key for this Project, and the owner should consider a collaborative procurement model like CM, DB, or DBF to allow for early contractor involvement to mitigate these key concerns and risks;
- the 15-month construction schedule for Phase I and the 30-month construction schedule for Phase 2 are reasonable. Depending on the delivery model there is an opportunity for schedule advantages;
- participants had no concern with placing and managing the course of construction insurance, only citing that cost of insurance is increasing and becoming expensive. As such, insurance cost estimates should be carefully reviewed, and sufficient contingencies carried to account for volatility in the market;
- participants had no concern with mass timber application on the Project, encouraging early involvement in the design development process to source material accordingly and manage long-lead times;
- achieving the CleanBC targets for Better Buildings was understood and participants suggested that work to meet the targets be priced appropriately;
- participants were largely unfamiliar with the new seismic requirements in the National Building Code but were agreeable to complying and recommended that the owner ensure cost implications are considered;
- the market is currently facing long lead-times and volatile pricing for materials. Participants are mitigating these issues through early planning and pricing strategies; and
- as the market continues to be busy, all participants are generally interested in the Project given the current timelines (Phase I beginning construction in 2023). Timing and visibility of when the Project progresses to market is important for participants to plan accordingly and continue to garner interest.

13 QUANTITATIVE ANALYSIS OF PROCUREMENT OPTIONS

13.1 METHODOLOGY – VALUE TO TAXPAYERS

The evaluation of procurement options is primarily concerned with identifying the method of delivering a project that will result in the greatest value for taxpayers' dollars on both a quantitative and qualitative basis.

For the Project, a value for money (VFM) analysis was carried out to compare the DB with CM and DBF with CM procurement options. Value for taxpayers' dollars is established by calculating and comparing the total nominal costs[19] of the Project under both procurement options. Quantitative value for taxpayers' dollars is achieved when a particular procurement method is best able to support the objectives of a project within established affordability or funding constraints. The quantitative benefits combined with the qualitative benefits and market sounding input outlined in the previous sections provide the basis for making an informed decision on the preferred procurement method.

The quantitative assessment of the Project is consistent with Infrastructure BC's methodology as applied to other major provincial infrastructure projects.

13.2 MODELLING ASSUMPTIONS

There are several assumptions used in the quantitative assessment. The following sections summarize the key assumptions used in the modelling work conducted for this Business Case.

13.2.1 Schedule Assumptions

Table 14 summarizes the key schedule assumptions for each procurement option under consideration.

[19] Nominal costs are as-spent including escalation.

Table 9: Summary of Key Schedule Assumptions

Assumptions	DB with CM		DBF with CM	
	Start	Duration (mths)	Start	Duration (mths)
Business Case Approval	**Apr 2023**	**1**	**Apr 2023**	**1**
Phase I – Temporary Terminal	**Jul 2023**	**16**	**Jul 2023**	**16**
Design	July 2023	6	July 2023	6
Tender	Dec 2023	3	Dec 2023	3
Renovation/Construction	Mar 2024	7	Mar 2024	7
Phase II – New Terminal	**Jul 2023**	**47**	**Jul 2023**	**49**
Procurement	Jul 2023	15	Jul 2023	17
Deconstruction[20]	Oct 2024	2	Dec 2024	2
Design & Construction	Oct 2024	32	Dec 2024	32

13.2.2 Construction Costs

Table 15 identifies the non-risk-adjusted construction costs of the Project for the two procurement options.

Table 10: Construction Cost Summary (Real, $000's, Non-Risk-Adjusted)

Cost	DB with CM	DBF with CM
Total Non-Risk-Adjusted Construction Cost – Phase I	[redacted]	[redacted]
Total Non-Risk-Adjusted Construction Cost – Phase II	[redacted]	[redacted]
Total	[redacted]	[redacted]

13.2.3 Construction Escalation

The construction inflation (or escalation) has been estimated by the QS and is shown in Table 16 below. The escalation rates shown are applicable to all delivery models.

[20] Deconstruction to be included in the DB scope to maximize opportunities on approach to site works.

Table 11: Construction Period Escalation

Year	Escalation Rate
2022[21]	9.0%
2023	9.0%
2024	8.0%
2025	7.0%
2026	7.0%
2027 onward	7.0%

Refer to section 11 in Appendix B-5 - *Quantity Surveyor Report* for additional information.

13.2.4 Insurance

Under all procurement options considered, it was assumed that placement of insurance for the Project would be placed by the Design-Builder including course of construction insurance. The ministry and its Procurement, Contracts and Risk Management Branch (RMB) provided an estimated premium of [redacted] million in real terms[22], incurred at the start of construction, for the Project. The estimate includes approximately [redacted] for Phase I and [redacted] million for Phase II.

13.2.5 Financing Assumptions

The table below summarizes some of the key assumptions used in the DBF model. A number of the assumptions are described in more detail in the Appendix C-3 - *Financial Model Report*. The modelled financing plan for the Project is financed with a substantial completion payment (SCP) bridge loan facility initially followed by progress payments once the level of private financing achieves 30% of the total capital costs.

For modeling purposes, the level of private financing is 30% drawn up-front with the ministry's contributions for the remaining 70% during the construction period to provide adequate protection for construction period risks.

[21] Indexation date: November 1, 2022.

[22] Estimate dated August 2022.

Table 12: DBF Financing Options

Financing Assumptions	
Structure	
Authority Progress Payments (Provincial IDCs)	70%
SCP Bridge Loan	30%
SCP Bridge Loan Facility	
Base Swap Rate	3.16%
Credit Spread	1.25%
Swap Spread	0.10%
All in Rate	**4.51%**
Provincial Cost of Borrowing - Long Term Rate	[redacted]

Detailed analysis related to the key considerations around the level of private financing is available in Appendix C-4 - *Level of Private Finance Report*.

13.2.6 Planning, Procurement, and Implementation Costs

The ministry will incur project management costs associated with the procurement, construction, commissioning, and transition of the Project. The project management budget covers advisory services related to program and design services, engineering services, procurement management, contract administration, and a contingency. Table 18 summarizes the procurement and implementation costs under each procurement option.

Table 13: Procurement and Implementation Costs (nominal $000s)

	DB with CM	DBF with CM
Ministry's Internal Costs	[redacted]	[redacted]
Ministry's External Costs	[redacted]	[redacted]
Total	[redacted]	[redacted]

13.2.7 Partial Compensation

Under both procurement options, it is anticipated that partial compensation will be offered. It will be provided to unsuccessful proponents who have submitted compliant proposals during the RFP stage of

the Competitive Selection Process. Partial compensation of [redacted] million will be paid to each of the unsuccessful proponents for a total partial compensation cost of [redacted] million[23].

13.2.8 Bid Development Costs and SPV Costs

The Design-Builder will incur bid development costs under both the DB and the DBF models. These costs are estimated to be [redacted] million and [redacted] million in nominal terms under the DB and the DBF[24] models respectively. The bid development costs are incurred with the first invoice under the contract. DB and DBF models bid development costs are recovered through reimbursement of consulting costs as well as success fees to cover the risk of participating in the procurement process and are traditionally based on winning one third of the procurements the bidders participate in.

In addition, under the DBF option, the Design-Builder would incur general and administration costs to administer the Project Agreement (PA). These costs are captured under the Special Purpose Vehicle (SPV) and are estimated to be [redacted] in real terms during implementation.

[23] Assuming three responsive proposals.

[24] Based on past project experience, the intensity of the DBF is assumed to be 25% more than a DB pursuit.

14 RISK ANALYSIS AND QUANTIFICATION

Every successful project must consider and manage risk. Risk management is defined as the actions, or planned actions, which impact the probability and consequences of a risk event to ensure that the level of risk assumed falls within an acceptable limit for the Project Team. The goal of any form of partnership model is to allocate project risks to the party best able to manage them at a reasonable cost to the Project. An efficient allocation of risk between the public and private sector participants will ultimately lead to an optimal project price and optimal value for money for taxpayers.

14.1 RISK METHODOLOGY

The ministry undertook a comprehensive analysis of Project-specific risks. This analysis was conducted in accordance with Infrastructure BC's risk management guidance, developed with RMB in conjunction with the Enterprise-Wide Risk Management approach. It incorporates both qualitative and quantitative elements, as discussed throughout this section.

The Project's risk matrix will continue to be updated through the procurement process.

14.2 RISK ASSESSMENT

A number of risk categories associated with the Project that could have an impact on the overall cost of the Project were assessed in detail. Risks within each category (e.g., approval, procurement, design, and construction) were identified and then described in terms of cause and consequence. Wherever possible, existing controls and mitigating strategies were identified for the Project risks under consideration.

Table 19 outlines the allocation of risks between the ministry and the Design-Builder under the two procurement options.

Table 14: Summary Risk Allocation Matrix

Risk Category	Allocation of Risk DB with CM		Allocation of Risk DBF with CM	
	Design-Builder	Ministry	Design-Builder	Ministry
Design	✓		✓	
Construction	✓		✓	
Renovation and Abatement[25]		✓		✓
Force Majeure/Relief Events		✓		✓
Change in Law		✓		✓
Scope Changes by ministry		✓		✓

14.3 RISK QUANTIFICATION

Those Project risks that were deemed to be readily quantifiable and material were assigned an expected dollar value according to Infrastructure BC's risk management guidance. In total, [redacted] Project risks were quantified and incorporated into the financial model.

14.3.1 Incorporation into the Financial Analysis

For each procurement option, an amount of transferred and retained risk was added to the financial model. In this analysis, the 67th percentile of total risk was added to the model.

14.3.2 Monte Carlo Analysis

To test the robustness of the quantification work conducted on the Project risks described above, a Monte Carlo analysis was conducted on the quantified risks, both those expected to be transferred to the private sector, and those risks expected to be retained by the ministry under each procurement method. A Monte Carlo analysis is essentially an elaborate sensitivity analysis that tests the impacts of different inputs on the values of the Project risks. The analysis was performed on the total capital risks of the Project. The analysis was then split into two sections: transferred risks and retained risks.

14.3.3 Monte Carlo Results

The results of the Monte Carlo risk analysis are provided in Table 20: Summary of Risk Allocation Matrix.

[25] Applicable to Phase I only.

Table 15: Summary of Risk Values (Real, $000's at 67th percentile)

Financial Model Risk	DB with CM	DBF with CM
Capital Risk		
Risks retained by the ministry.	[redacted]	[redacted]
Risks retained by the ministry (Phase I)	[redacted]	[redacted]
Risks retained by the ministry (Phase II)	[redacted]	[redacted]
Transferred risk added to the construction contract by the Contractor.	[redacted]	[redacted]
Total	[redacted]	[redacted]

Note: Totals may not add up due to rounding.

Refer to Appendix C-5 - *Risk Report* for more information on the methodology used to consider the Project's risk, risk process, and quantification results.

15 MODELING RESULTS

15.1 VALUE FOR MONEY

The different timing, risk, and financing cost assumptions of each procurement model were compared on a nominal basis. The results of the VFM assessment are summarized in Table 21.

Table 16: Value for Money Analysis Summary (nominal, $000)

Project Costs	DB with CM	DBF with CM
Total Construction Progress Payments (including private finance costs and transferred risks)	[redacted]	[redacted]
Completion Payments (assumes [redacted]%)	[redacted]	[redacted]
Total Contractor Costs (Phase 2)	[redacted]	[redacted]
Phase 1 Costs	[redacted]	[redacted]
Ministry Costs (Procurement and Implementation)	[redacted]	[redacted]
Retained Risk	[redacted]	[redacted]
Provincial Interest During Construction (IDC)	[redacted]	[redacted]
Total Ministry Costs	[redacted]	[redacted]
Total Risk-Adjusted Costs for VFM	[redacted]	[redacted]
Value for Money – DB with CM minus DBF with CM		[redacted] **(3.9%)**

Note: totals may not add up due to rounding

15.2 SENSITIVITY ANALYSIS

15.2.1 Sensitivity Analysis on Escalation

To test the impacts of changes in some of the key assumptions listed above on the quantitative VFM results, sensitivity analysis was conducted on escalation. The escalation assumptions provided by the QS are described in section 13.2.3. Table 22 shows the effect of change on the escalation assumptions.

Table 17: Escalation Sensitivity Analysis (Nominal, $000s)

Escalation Rate	Value for Money
Capital Cost Escalation Rate +1%	[redacted] (-4.1%)
Capital Cost Escalation Rate: Base Case	[redacted] (-3.9%)
Capital Cost Escalation Rate: -1%	[redacted] (-3.8%)

With all other things being equal, as the escalation rate increases, VFM for the DB model increases.

15.2.2 Sensitivity Analysis on Interest Rate

To test the impact of a change in the long-term debt interest rate on the quantitative VFM proposition of the DB versus the DBF model, the modeling results were re-calculated assuming an interest rate half a per cent and one per cent higher, and half a per cent lower than the base interest rate. The results of this sensitivity analysis are summarized in Table 23.

Table 18: Interest Rate Sensitivity Analysis ($000s)

Interest Rate	Value for Money
Interest Rate +1%	[redacted] (-4.4%)
Interest Rate +0.5%	[redacted] (-4.2%)
Interest Rate: 4.51% Base Case	[redacted] (-3.9%)
Interest Rate -0.5%	[redacted] (-3.7%)

16 RECOMMENDED PROCUREMENT OPTION

The Project Team conducted a qualitative and quantitative analysis of the procurement options in accordance with the CAMF methodology to determine the preferred procurement options. This section concludes that the recommended procurement option for the Project is a CM model for Phase I and a DB model for Phase II as explained in the following sub-sections.

16.1 RECOMMENDED PROCUREMENT OPTION FOR PHASE I

As discussed in section 9.1 above, which outlines the key elements of the scope in relation to the procurement options considered, the Project Team recommends that Phase I be delivered using a CM model.

16.2 RECOMMENDED PROCUREMENT OPTION FOR PHASE II

The purpose of the procurement options analysis is to identify the procurement option offering the best overall value to taxpayers. However, as value for money includes both qualitative and quantitative elements, it is possible that the procurement option with the lowest nominal cost may not necessarily be the preferred option. Table 24 below summarizes the qualitative and quantitative components of the analysis for both procurement options.

Table 19: Qualitative and Quantitative Factors Considered in the Assessment

Procurement Objectives and Cost	DB	DBF
Design Optimization & Functionality	✓✓✓✓	✓✓✓✓
Optimizing Risk Management and Allocation	✓✓✓	✓✓✓✓
Cost Certainty within Budget	✓✓✓	✓✓✓
Schedule	✓✓✓	✓✓✓✓
Effective Stakeholder Engagement	✓✓	✓✓
Nominal Costs ($,000)[26]	[redacted]	[redacted]

In the qualitative analysis, the DBF procurement option was equal to the DB on all the evaluation criteria except where the DBF was ranked higher for schedule and optimizing risk management and allocation. Based upon the quantitative analysis, the DB model outperforms the DBF by providing [redacted] of VFM. A key consideration of the analysis is to assess the qualitative and quantitative benefits of the risk optimization and schedule risk transfer between the options. While qualitatively the DBF model optimizes risk transfer through additional project oversight (e.g., lenders) when compared to a DB model, its

[26] Includes Phase 1.

quantitative benefits are marginal and do not offset the impact of the longer procurement schedule (i.e., two months). Bringing border security facilities up to modern standards, including meeting the objectives of the LRMA for USCBP to transition to preclearance is not driven by a schedule requirement to meet a specific substantial completion date. Therefore, anchoring the schedule risk transfer under a DBF model does not provide a qualitative benefit and adds financing costs to Phase II of the Project. Under a DB model, managing the risks of total schedule performance is supported by the ministry's ability to seek liquidated damages for late completion. In addition, based on the size of Phase II and market sounding feedback, the DBF model poses a risk to robust competition due to the complexities during procurement and the financing component for contractors.

In view of the qualitative and quantitative assessment above, the recommended procurement option is the DB model for Phase II.

PART D – PROCUREMENT PLAN AND FUNDING ANALYSIS

This section describes the plan to execute the procurement and implementation of the Project, including the governance structure and details on the Project's funding.

17 PROJECT DELIVERY STRUCTURE

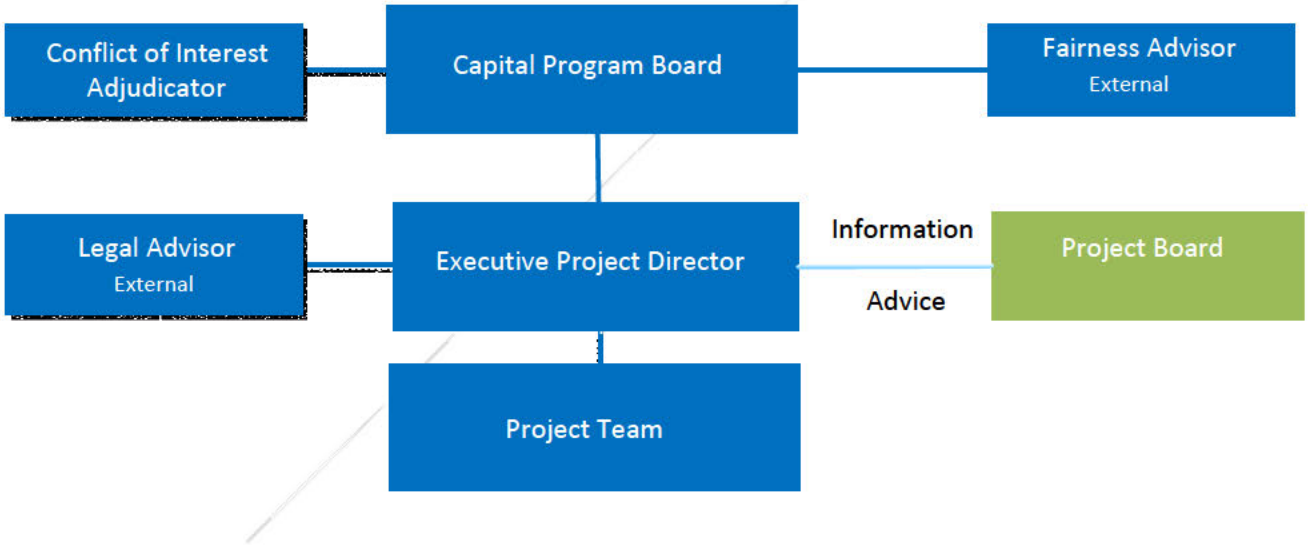
The Project will be delivered by the ministry, and in alignment with the BCTFA mandate to:

- provide cost effective and flexible delivery for assigned major projects;
- apply strong and consistent risk management, project, and financial processes and control; and
- be accountable and ensure proper reporting.

17.1 PROJECT GOVERNANCE

A ministry's Capital Program Board will be accountable for delivery within the approved project parameters for this Project. The ministry's Executive Project Director will be responsible for providing regular status reporting to the Project Board. A high-level governance structure for the Project is shown in Figure 11.

Figure 11: Project Governance



17.2 RECOMMENDED PROCUREMENT PROCESSES

17.2.1 Phase I Construction Management RFP and Associated Tenders

Under the recommended procurement model for Phase I, the ministry would procure a Construction Manager through a single stage RFP process to support the planning and management of Phase I.

The RFP package would include Phase I design drawings for the Temporary Terminal, mandatory and evaluated criteria, proposed contractual arrangements, and schedules. Upon conclusion of the RFP evaluation, the highest scoring proponent will be the Preferred Proponent. The Project Team will work with the Preferred Proponent to execute the contract.

Once the Temporary Terminal drawings are completed, the construction manager would then procure the Phase I works through one or more tender packages. The lowest qualified price (or prices) would be selected, and an industry standard fixed-price construction contract would be used. The construction contractor would take responsibility for constructing the Temporary Terminal to the specifications detailed in the design drawings.

17.2.2 Phase II Request for Qualifications (RFQ)

The RFQ is the first stage in the Competitive Selection Process. The RFQ would include a description of the Project, proposed contractual arrangements, budget information and schedules. The ministry would evaluate the responses and based on the respondent teams' experience, qualifications, capacity, and capability to design and construct the Project, shortlist up to three proponents to be invited to submit proposals in the next stage. The purpose of the RFQ stage is to shortlist the most qualified respondent teams based on the criteria to proceed to the RFP stage.

17.2.3 Phase II Request for Proposals (RFP)

The RFP is the second stage in the procurement process. The RFP package would include a detailed description of the Project, the draft Design-Build Agreement (DBA) including technical specifications, proposal submission requirements, a mandatory price ceiling, and details on how the proposals would be evaluated.

The ministry will evaluate the RFP proposals. It is expected that the RFP evaluation for the Project will include technical and financial submission requirements. The majority of the technical and financial submissions will be required to substantially satisfy the provisions set out in the RFP, including the DBA, with certain design elements that will be scored.

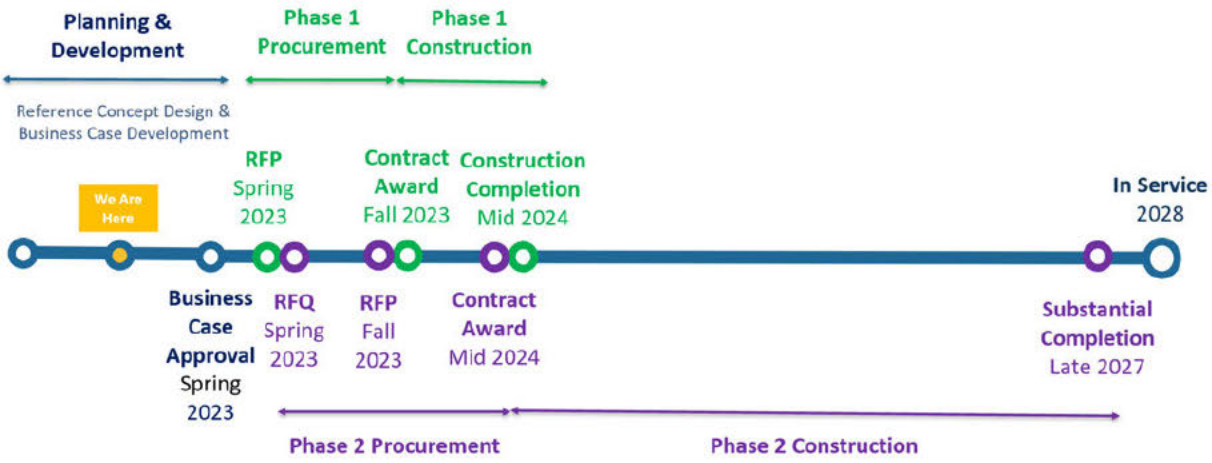
Upon conclusion of the RFP evaluation, the highest scoring proponent will be the Preferred Proponent. The Project Team will work with the Preferred Proponent to finalize the DBA and reach contract execution.

17.3 PROJECT SCHEDULE

Figure 12 illustrates the anticipated procurement and design and construction periods for both Phase I and Phase II of the Project, assuming a CM model for Phase I and a DB model for Phase II. This schedule assumes:

- Treasury Board approval is received, and an announcement is made in spring 2023;
- RFP issuance for Phase I is planned for spring 2023, immediately following Treasury Board approval and the announcement of the Project, and with an awarded contract(s) for construction by fall 2023;
- construction works for Phase I will begin in fall 2023, with a target substantial completion by mid 2024;
- RFQ issuance for Phase II is planned for spring 2023, immediately following Treasury Board approval and the announcement of the Project, and with a proponent shortlist expected by summer 2023;
- RFP issuance is planned for fall 2023, with a Preferred Proponent selected and a contract awarded by mid 2024; and
- construction works for Phase II will begin in 2024, with a target substantial completion by late 2027.

Figure 12: Anticipated Project Delivery Schedule



17.4 INDIGENOUS GROUPS ENGAGEMENT

The ministry will continue to engage with Indigenous groups with identified interests in the Project area and will develop an Indigenous Relations Management Plan (IRMP) that encompasses all aspects of the Project and meets the requirements of the ministry's CAF. A key component of the IRMP will be to

determine Indigenous requirements to inform procurement. The IRMP will be in alignment with the Indigenous groups' cultural, economic and employment interests, and the existing benefits agreement.

17.5 STAKEHOLDER AND PUBLIC ENGAGEMENT

The ministry will develop and implement a new stakeholder engagement and communications strategy for major milestones including Project approval, procurement, terminal design planning and the launch of construction. Once a successful proponent is chosen and construction commences, the contractor will be responsible for hiring stakeholder engagement and communications resources who will lead stakeholder engagement and communications work with support and collaboration from ministry staff. The ministry remains committed to maintaining a high level of transparency during the procurement phase by ensuring all competitive selection documents and milestone updates are posted publicly.

17.6 PROJECT PERFORMANCE MEASUREMENT

Performance measurement is the process by which completed projects are measured to determine whether the Project's intended objectives and expected benefits have been realized. The Project Team has developed an evaluation framework in Table 25 that includes specific performance measures for each Project objective. A detailed performance measurement plan will be developed through the delivery phase of the Project.

Table 25: Project Objectives and Performance Measures

Project Objectives	Performance Measure	Method of Measurement
Affordability & Delivery	Deliver the Project within the approved budget.	Comparison of actual to approved budget.
	Deliver the project within approved schedule.	Comparison of actual to approved schedule.
Terminal Safety, Security, and Operational Capacity	Terminal is compliant with modern border crossing requirements.	Preclearance model achieved under the Canadian and United States Agreement on Land, Rail, Marine, and Air Transport (LRMA).
	Improve international commercial goods processing through the Terminal.	Designation of the facility as an official commercial goods processing facility by CBSA.
Support Local and Regional Economic Development	Project will create jobs and apprenticeships during construction, as well as employment of underrepresented	Labour reports during construction period, including number of apprenticeships and

Project Objectives	Performance Measure	Method of Measurement
	groups including Indigenous peoples, women, and people with disabilities.	underrepresented groups that are employed as part of the Project.
Support the Environment Through Sustainable and Adapted Design	Terminal contributes to climate change mitigation through implementation of energy efficient building systems and meeting CleanBC goals.	Exceeds LEED Gold requirements and net zero carbon.
	Facility construction mitigates environmental impacts by incorporating sustainable and renewable building materials and providing allowances for future fuels.	Use of mass timber in the facility.
	Project is constructed in accordance with state of the art and adapted design standards.	Meets all regulatory requirements and engineering standards.
Support the Community and Urban Landscape of Victoria's Inner Harbour	Project will consider the City's input on the Belleville Street frontage development and public amenities.	Belleville Street frontage supports the City's Official Community Plan.

18 FUNDING

18.1 POTENTIAL SOURCES OF FUNDS

The Government of Canada is working closely with province's, municipalities, and Indigenous groups in recognition of the unique needs if each community to build infrastructure that will improve the quality of life for all Canadians. The ministry values its longstanding partnership with the federal government in funding public infrastructure.

The Province has engaged with the Government of Canada and has consistently indicated that the Project is one of BC's top infrastructure priorities. The Belleville Terminal is considered an international land border crossing, which is federal jurisdiction, and one of the main reasons for investing in the Project is to align with the LRMA agreement that the Government of Canada made with the US. The Project will also be designated by CBSA for commercial processing and continue to benefit the regional, provincial, and national economies.

To date, no partnership funding has been secured with the Government of Canada, and the Project is being funded solely by the Province. The ministry has applied to the Government of Canada requesting approximately [redacted] in National Trade Corridor Funding for the CBSA commercial goods processing facility component of the Project. The Province also intends to submit a request for Investing in Canada Infrastructure Program (ICIP) funding.

Given that both operators are international, private for-profit companies that will benefit significantly from a new preclearance terminal, the Province expects them to make a capital contribution to the Project. The ministry is currently working closely with both operators to determine what their contribution will be to move the Project forward.

18.2 PROJECT CASH FLOWS

The total capital Project cost estimate is $303.9 million. The estimated cash flow by fiscal year is outlined in Table 26. Further details on the costs for the Project are provided in Appendix B-5 – *Quantity Surveyor Report* and Appendix B-8 – *Capital Cost Memo.*

Table 26: Summary of Project Capital Cash Flow ($000's)

Capital Costs ($ million, nominal dollars)	2023	2024	2025	2026	2027	2028	Total
Contractor's Construction Cost							
Design and Construction			[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Transferred Risks			[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Owner's Cost							
Project Management & Staff Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Phase I - Temporary Facility		[redacted]	[redacted]				[redacted]
Retained Risks and Contingencies		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Provincial IDC			[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Capital Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	**303.90**

PART E – RECOMMENDATION

The Business Case demonstrates the need for the Project to address border security and processing challenges as well as aging infrastructure associated with the current Belleville Terminal. It also demonstrates how the Project strengthens the current and future economic contribution to southern Vancouver Island's tourism industry, supports Reconciliation with Indigenous peoples, and aligns with CleanBC's objectives of energy efficiency, climate resiliency, and active transportation. The Business Case recommends proceeding with the Project at an estimated total cost of $303.9 million using the recommended procurement models for Phase I (Construction Management) and II (Design Build).