



Ministry of Tourism, Arts
and Culture



Royal British Columbia Museum and Archives Redevelopment Project

Concept Plan

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EXECUTIVE SUMMARY

The Royal British Columbia Museum Corporation (the “Museum”) has been preserving, protecting and celebrating B.C.’s history and archives for more than 130 years. The *Museum Act* (2003) sets out the purposes, powers and governance of the Museum, establishing it as a Crown corporation, currently reporting to the Ministry of Tourism, Arts and Culture (the “Ministry”). Per the *Museum Act*, the Museum is responsible for the Provincial Museum, the Provincial Archives, Helmcken House, Thunderbird Park, Mungo Martin House (Wawadit’la), St. Ann’s Schoolhouse and the Netherlands Centennial Carillon.

In order to protect the irreplaceable collection held by the Museum and ensure that the Museum is able to fulfill its mandate for future generations, it is imperative that the Museum facilities are renewed to protect and preserve the collective history of B.C. This irreplaceable collection of more than seven million objects spanning 500 million years includes such critical items as the entire original Emily Carr collection, cryogenically preserved tissue and DNA samples, substantial fossil collections, the Douglas Treaties, the Royal Commission appointing James Douglas Governor of British Columbia, Captain James Cook Tapa catalogue, a historical map collection and early photographic records of the province as well as the Archives’ vast holdings that preserve the recorded history of B.C. and provide a valuable resource.

The majority of the Museum buildings are rated as high seismic risk, requiring urgent repair or replacement, and the overall facility condition of the portfolio is fair to poor. The Museum is also facing inadequate storage capacity and an inability to safely house its collections, specimens and archival materials.

The purpose of this Concept Plan is to establish the need for investing in the Royal BC Museum and Archives Redevelopment Project (the “Project”) by demonstrating rationale for the redevelopment; reviewing service delivery alternatives; and providing a preliminary assessment of options for implementation. Project objectives and assessment criteria were established to guide the development of this Concept Plan.

Five service delivery options were considered:

- 1) **Status Quo** – The Museum continues to operate at the current location under the existing maintenance and life cycle investment plan, retaining seismic risk;
- 2) **Replace on New Site** – Development of a new museum and collections storage on a new site in Victoria;
- 3) **Replace on Existing Site** – Development of a new museum and collections storage on the existing site;



- 4) **Revitalize** – Revitalization of the existing site to provide expanded program space and, where economically feasible, building renovations to address seismic and environmental risks and facility conditions; where not economically feasible, building demolition and replacement.
- 5) **Repair** – Renovation of existing facilities to address seismic risk, environmental risk and facility conditions.

A multi criteria analysis (“MCA”) process was used to provide a framework for evaluating both quantitative and qualitative factors, and presents the advantages and disadvantages of each option in a form that can be easily assimilated by decision-makers. A detailed qualitative assessment of each of the options was conducted. A high-level assessment of the Project’s risks was also undertaken, in consideration of each of the service delivery options. Program, site and economic risk categories were examined.

The results of the service delivery assessment favour Option 2 (Replace on New Site) and Option 3 (Replace on Existing Site) as the preferred service delivery options for further analysis in the business case. These options best meet the Project objectives and have the lowest risk exposure at this point in time and planning.

Based on the program space requirements, preliminary capital cost estimates for each option were developed. The estimates are supported by a class “D minus” cost estimate prepared for the Ministry by SSA Quantity Surveyors. The preliminary capital cost estimate for the preferred options range from \$526 to \$580 million, including Project risk. It is anticipated that project funding would be sourced from a combination of philanthropic campaign, the federal government and the Province.

Based on the assessment summarized in this Concept Plan, it is requested that the Province approve operating funding in the amount of \$3.85 million over fiscal 2018/19 and 2019/20 to support development of a detailed business case, based on the preferred service delivery options.



1 PURPOSE AND APPROACH

1.1 PURPOSE

The purpose of this Concept Plan is to establish the need for investing in the Project, to review service delivery alternatives, and to provide a preliminary assessment of options for implementation.

Specifically, the Concept Plan establishes the opportunity and need for further investigation; assesses delivery options and demonstrates why Options 2 (Replace on New Site) and 3 (Replace on Existing Site) are the preferred options; and recommends next steps in the development process.

All information presented in this Concept Plan will be subject to further development and refinement following an indication of available funding for the next planning phase, a more detailed investigation of associated cost and benefits, and updated requirements through the business case phase.

The Concept Plan includes the following sections:

- a) **Rationale for Redevelopment** – Defines the need and provides context for investing in the Project.
- b) **Service Delivery and Scope** – Identifies and assesses high-level service delivery alternatives for the Project that are intended to satisfy the established need and concludes with a recommended service delivery approach and a preliminary scope.
- c) **Procurement** – Discusses the procurement assessment process as well as potential procurement alternatives for the recommended delivery option based on the characteristics of the Project as presented.
- d) **Funding, Summary and Next Steps** – Identifies potential funding sources for the Project, summarizes the findings of the Concept Plan, and recommends next steps in the project development process.

1.2 APPROACH

The Concept Plan for the Project has been developed by the Ministry, the Museum and Partnerships BC, collectively the Project Team, in response to the findings of a 2018 facility condition report and a 2018 structural seismic assessment report. The Concept Plan:

- Describes the strategic context and current state of the Museum;
- Summarizes the needs associated with the Project;
- Analyzes the different service delivery options to address the needs and recommends the preferred options;



- Identifies procurement options for analysis in the business case; and
- Recommends next steps.



PART A: NEED FOR INVESTMENT

Part A of the Concept Plan provides context for investment in the Project. It describes the need for investment in the Museum's facilities to protect and care for British Columbia's cultural, social, natural and human history collections at the Museum and Archives; explains the history and background of the existing facilities; identifies how the proposed Project addresses that need; and highlights strategic alignments with key stakeholders.

The Museum is renowned as one of Canada's cultural treasures. As British Columbia's provincial Museum, it has a mandate to collect artifacts, documents, archival material and specimens of B.C.'s natural and human history, safeguard them for the future, and share them with the world.

Redevelopment of the Museum will better enable the Museum to meet its mandate by:

- Addressing the seismic, environmental and accessibility deficiencies as well as the associated risks to collections and occupants;
- Better enabling education of the public in B.C.'s rich cultural, social and natural heritage;
- Supporting the Museum in working with Indigenous peoples in repatriation activities to advance reconciliation; and
- Establishing the Museum as a world-class, sustainable museum that contributes economic benefits to British Columbia.

2 BACKGROUND OF THE MUSEUM

The Museum has been preserving, protecting and celebrating B.C.'s history for more than 130 years. The Museum was founded in 1886 and the Archives in 1894. In 2003, these two organizations integrated as a Crown corporation to become British Columbia's combined provincial Museum and Archives.

In 1913, the Government of B.C. proclaimed the *Museum Act*, giving the Museum formal operating authority and defining its objectives:

- To secure and preserve specimens illustrating the natural history of the province;
- To collect anthropological material relating to the Indigenous peoples of the province; and
- To obtain information respecting the natural sciences, relating particularly to the natural history of the province, and diffuse knowledge regarding the same.

The Museum is recognized across Canada and around the world as the premiere cultural institution preserving B.C.'s natural and human history and offers a one-of-a-kind experience for visitors, students,



researchers and academics from across the globe. The Museum collects and cares for artifacts, documents and specimens of B.C.'s human and natural history. Through research, exhibits and learning programs, the Museum strives to broaden understanding about the province and the Indigenous communities in B.C. with the more than 700,000 annual onsite visitors, and the close to two million who explore their website each year.

The irreplaceable collection held by the Museum consists of more than seven million objects spanning 500 million years, including plants, animals, fossils and geological specimens, and archaeological and historical artifacts from the earliest days of human habitation in the province. Vast holdings of maps, charts and architectural plans, photographs, paintings, drawings, prints, audio tapes, film and newspapers that preserve the recorded history of B.C. and provide a valuable resource for the future are cared for by the Archives.

The land on which the Museum and Archives stand is the traditional territory of the Lekwungen peoples, today represented by the Songhees and Xwsepsum (Esquimalt) Nations. It stands at the heart of Victoria's historic downtown waterfront on the Inner Harbour, bookmarked by the B.C. Legislature to the west and the Empress Hotel to the north.

Unfortunately, the Museum is at risk. The facilities have not been significantly renovated nor have they kept pace with modern storage and display requirements therefore putting the preservation of priceless artifacts at risk. The aging facilities, growing collections, and limited resources have created urgent challenges for today.

2.1 ECONOMIC IMPACT AND FUNDING MODEL

The Museum undertakes bi-annual examinations of its fiscal operations to determine its economic impact on Victoria, Southern Vancouver Island (SVI), and the economy of B.C. as a whole. The economic impacts of interest are measured by considering both the Museum expenditures and the spending of visitors who were attracted to the local SVI region mainly to see a Museum exhibition.

The most recent report from the fiscal year ending March 31, 2017¹, shows a significant economic impact generated for both the SVI region and the economy of B.C. as a whole. The combined economic impacts from expenditures and spending by visitors attracted to SVI are estimated to have generated:

- \$47.4 million in Gross Domestic Product (GDP) for B.C., capable of supporting 841 jobs in the various affected industries (or 764 full-time equivalent (FTE) jobs, as many tourism-related jobs are not full-time); and

¹ The Economic Impacts of the Royal BC Museum Operations for the Fiscal Period April 1, 2016 to March 31, 2017, C.E. Wetton Associates, Victoria BC



- \$25.9 million GDP benefits for the SVI region from combined Museum and visitor expenditures, capable of supporting 543 local area jobs (equivalent to 466 FTE jobs).

The economic analysis was based on the \$50.3 million of spending in the SVI region, plus the \$21.8 million annual salary and operating cost expenditures of the Museum for fiscal 2016/17. Of the approximately 700,000 annual visitors, 43,710 visitors were predominantly attracted to SVI to see a Museum exhibit. Further detail can be found in the full report, attached as Appendix A [Economic Impact Report].

2.1.1 Visitors

Visitor volume is a key indicator of effective and attractive services. The visitor numbers presented in Table 1 below are inclusive of:

- Paid attendance: tickets sold; membership sales and visits;
- Complimentary ticketed attendance;
- School groups, visits to the Archives, tours, courses, lectures, and people attending private events in gallery-rented space;
- Visits to public programming events and events hosted by third parties; and
- IMAX Victoria Theatre visits (combined Museum/IMAX tickets are counted as a single visit to the Museum).

The targets for visitors to the Museum for 2018/19 and forward take into account market research conducted annually with Museum members and the public as part of the exhibition planning process.

The primary factors for forecasting visitors, and ultimately revenue, are the types and topics of featured touring exhibitions - the more popular the exhibition, the larger visitor draw it generates. The table below outlines annual total visitor numbers and revenues, along with the associated feature exhibitions.



Table 1: Museum Visitor and Revenue Information by Fiscal Year

	2015/16	2016/17	2017/18	2018/19 (forecast)	2019/20 (forecast)
Visitors					
Temporary Feature Exhibition	<i>Gold Rush! Eldorado in B.C.</i>	<i>Mammoths: Giants of the Ice Age</i>	<i>Family: Bonds and Belong / Terry Fox: Running to the Heart of Canada</i>	<i>Egypt: The Time of the Pharaohs</i>	<i>Maya: The Great Jaguar Rises</i>
Museum Visitors	473,571	468,813	400,253	408,000	392,000
IMAX Visitors	344,472	350,495	310,476	322,000	308,000
Total Visitors²	791,738	770,279	710,729	730,000	700,000
Revenues (\$,000s)³					
Provincial Operation Contributions	11,813	11,866	11,866	11,866	11,866
Museum Admissions	4,539	5,709	4,836	6,031 ⁴	5,400
Property Leases ⁵	869	923	833	905	905
Programs	492	667	679	611	620
Philanthropy, Grants and Donations ⁶	1,605	2,076	1,900	2,256	1,245
Deferred Capital Contributions	631	624	597	656	667
Total Annual Revenue	19,948	21,866	20,711	22,325	20,703

For comparison, the Royal Alberta Museum in Edmonton and the Manitoba Museum in Winnipeg (both provincial museums) attract 250,000 and 300,000 annual visitors respectively. In contrast with a comparable B.C. family attraction, the Telus World of Science in Vancouver attracts almost 750,000 visitors annually.

² Total visitors are net of Museum/IMAX combination tickets.

³ Revenues do not reflect operational grant funding provided by the Province of B.C.

⁴ Revenues are forecasted to increase with blockbuster exhibitions (e.g. Mammoths and Egypt) as admission tickets are on average \$4.00/person more.

⁵ This includes revenues sourced from commercial partners as outlined in section 2.1.3.

⁶ Revenue forecast fluctuates as donation requirements are not budgeted and are determined year by year. Final requirements for 18/19 and 19/20 have not yet been finalized.



2.1.2 Funding Model

Revenue from Museum operations includes admission fees, memberships, and leasing and licensing revenues as noted above in Table 1. Non-operational revenues include Government of B.C. grant funding that flows through the Ministry, donated collections and artifacts, sponsorships, and non-provincial grants and donations received to offset operational and program expenditures incurred in the same fiscal year.

The Museum is working to increase operational revenue by diversifying its streams of self-generated revenue, including:

- Hosting feature exhibitions (developed in-house and loaned) that draw local and international audiences;
- Implementing business strategies for commercial opportunities, and enhancing community spaces to generate revenue through the delivery of a Learning Centre, venue rentals, and special events like the Night Shift series and the Food Truck Festival;
- Pursuing new sources of research funding;
- Increasing philanthropic investment, including income from donations and grants; and
- Increasing revenue by offering new online products.

2.1.3 Commercial Partners and Service Providers

The Museum has several business partners that operate within the precinct and contribute to the Museum's revenues including IMAX Victoria, donations provided by the Royal BC Museum Foundation, and Sequoia Coastal Coffee among others. In addition, the Museum contracts with numerous service providers to maintain both their facilities and their site, from regular maintenance and janitorial services through to the provision of security and landscaping services.

Appendix B [Commercial Partners and Service Providers] outlines all of the Museum's current commercial partners and their service providers, and identifies the nature of their contractual agreements.

3 EXISTING MUSEUM FACILITIES

The collections and archives at the Museum are one-of-a kind, treasured by the people of B.C., visitors and scientists. However, the buildings have not kept up with the needs of the Museum and its duty to protect and care for the collections and archives for which it is responsible. As the facilities have not had any substantial renovations since they were built more than 50 years ago, today they pose a serious risk to not only to the collections and archives, but also to the more than 700,000 visitors each year.

Significant investment is required to meet modern day best practices and building, accessibility and seismic standards to protect against environmental degradation. In addition, the facilities do not meet



current building code requirements for seismic resistance, putting all users and Museum collections, specimens and archival materials at risk.

This section highlights key areas in the Museum's operation that demonstrate how the shortcomings of the existing facilities are impeding the Museum's ability to:

- Preserve and protect B.C.'s heritage;
- Educate the public about B.C.'s rich cultural, social and natural history; and
- Provide sustained economic benefits.

3.1 THE MUSEUM PRECINCT

The Museum is unique in many ways, and occupies a key position on Victoria's Inner Harbour. Originally constructed in 1967 as a federal/provincial centennial project, this location played, and continues to play, a critical part in Victoria's history as a capital city, its infrastructure development, and population growth.

The Museum Precinct is approximately 2.6 hectares, including the designated Provincial Heritage Site of Thunderbird Park. There are currently 10 facilities and structures within the Museum Precinct of varying age and purpose. The facilities and structures identified on the following site plan are explained below.



Figure 1: Museum Precinct Site Plan



1) Exhibitions Hall

The core of the precinct is the Exhibitions Hall. Built in 1967 as a federal/provincial centennial project, this three-storey building serves both public and private functions and houses the exhibition galleries along with a small amount of office space.

2) Netherlands Carillon Tower

The landmark Netherlands Carillon Tower, situated near the Belleville Street and Government Street intersection, was gifted to the Museum, also in 1967, by British Columbia's Dutch community to commemorate Canada's centennial.

3) Fannin Building

The 14-storey Fannin Building, located to the west of the Exhibitions Hall, houses the majority of the Museum’s permanent collection of artifacts and specimens, laboratory and research facilities, and administrative offices. It was built in 1968.

4) Archives Building

Also constructed in 1968, the Archives Building provides storage for B.C.’s historical documents, including maps and paintings (among them, the world’s largest and most comprehensive Emily Carr collection), as well as offices and a public reference room. A native plant garden is located in the sunken water court to the north of the Archives and grows B.C.’s largest collection of native plants, including rare species.

5) IMAX Theatre and Lobby

In 1997, the National Geographic IMAX Theatre (IMAX Victoria) and current Museum lobby were constructed, connecting the Exhibitions Hall and the Fannin Building, and replacing the original public lobby.

6) Other buildings on-site

There are four other buildings on the site:

- Helmcken House is one of the oldest houses in B.C. located on its original site and foundation. It was constructed in 1852 and houses historical and household artifacts.
- St. Ann’s Schoolhouse, built in 1844, is one of the oldest public structures in B.C.
- Mungo Martin House (Wawadit’la), opened in 1953, is located in Thunderbird Park and is an authentic Kwakiutl house portraying First Nations tradition. Thunderbird Park, which encompasses the northeast corner of the precinct, was designated as a Provincial Heritage Site in 1941.
- The final building is the Glenshiel seniors’ residence, located on the southeast corner, and originally bought by the Province in the 1970s for Museum expansion. The residence is operated by B.C. Housing through a long-term lease (to 2062) and was therefore not considered in the re-planning of the Museum Precinct.

The three main buildings, including additions, account for the majority of the total built area of the Museum Precinct, and are broken down as follows:

Table 2: Building Areas

Building	Area (m ²)	Opened
Exhibition Hall	17,020	1967
Fannin Tower	8,032	1968
Archives Building	3,926	1969



3.2 FACILITY ASSESSMENT

The Museum is mandated to protect and preserve the collections and archives of the Government of British Columbia through the *Museum Act*. The Museum is facing inadequate capacity for storage and an inability to safely house its collections, specimens and archival materials. The needs of the Exhibition Hall, Fannin Building and Archives have shifted dramatically from what was envisioned over 50 years ago when the buildings were designed.

To facilitate the planning for redevelopment, the Ministry and the Museum jointly undertook a structural and non-structural seismic assessment as well as a facility condition analysis, with final reports presented in May 2018. The results show that the majority of the buildings are rated as high seismic risk, requiring immediate repair or replacement, and the overall facility condition of the portfolio is fair to poor.

The findings of these assessments are described below.

3.2.1 Structural Seismic Assessment

A comprehensive structural seismic assessment of the buildings and structures on the Museum Precinct (excluding the Glenshiel) was completed by WSP Canada Inc. to assess their seismic capacity relative to current building code requirements. The report is attached as Appendix C [Structural Seismic Assessment]. The assessment also included a flood mitigation assessment, a geotechnical assessment, and concrete material testing results.

The following are the findings of the analysis:

- Each of the structures was found to be seismically deficient and is recommended to be upgraded or replaced, with the highest priority buildings being the Archives, Fannin Tower, Exhibition Hall and Lobby, IMAX and the Netherlands Carillon;
- The Museum faces significant flooding risk due to a failure of local water conveyance infrastructure (e.g., water mains, storm and sanitary lines) during a seismic event.

3.2.2 Non-Structural Seismic Assessment

Non-structural building elements were assessed to determine the seismic vulnerability of operational and functional components (e.g., unrestrained furnishings, shelving, glass, tiles) in eight buildings (excluding the Glenshiel and Carillon Tower) to identify high risk elements and priorities for mitigation. Over the course of the assessment, the Helmcken House, Archives Building, Fannin Tower, Exhibition Hall and Museum Lobby generated priority items with risk factors that require upgrading.

Examples of risk elements and unrestrained items across the portfolio include items such as free-standing lockers, windows, equipment and shelving, as well as plumbing and light fixtures. There were



also less obvious, but high risk components that require upgrading, namely exterior doors that lacked seismic isolation, unrestrained glazing and two gas supply lines that lacked seismic isolation valves.

While not specifically addressed in the report, the exhibits throughout the Exhibit Hall and Lobby (e.g., Old Town, woolly mammoth, totem poles) are additional unrestrained items that require consideration for seismic restraint as they present a risk to the public visiting the Museum.

The full non-structural seismic assessment is attached as Appendix D [Non-Structural Seismic Assessment].

3.2.3 Facility Condition Assessment

The Facility Condition Assessment Report, attached as Appendix E [Facility Condition Assessment] and prepared by VFA, looked at the current conditions, anticipated capital renewal, and a non-structural seismic analysis. The report concluded that the majority of the facility conditions can be attributed to beyond useful life issues. As the major assets and their systems on the site are all of similar vintage (1967 – 1969), it is expected that similar systems for each asset are reaching end of life at the same time. VFA's standard FCI rating system is described below.

Table 3: Facility Condition Index Ratings

Rating	Description
FCI less than 0.05	Excellent
FCI between 0.05 and 0.15	Very Good
FCI between 0.16 and 0.35	Good
FCI between 0.35 and 0.6	Fair
FCI greater than 0.6	Poor

Table 4 presents a summary of both the seismic and facility condition assessments for the entirety of the Museum's portfolio.

Table 4: Facility Assessment Summary

Building	Structural Seismic Capacity ⁷	Facility Condition Index (FCI) ⁸
Archives	5%	0.55 – Fair
Fannin Tower	6%	0.61 – Poor
Exhibition Hall	25%	0.47 – Fair
Museum Lobby	40%	0.22 – Good
IMAX	20%	Included in Exhibition Hall FCI
Helmcken House	<i>See Note below</i>	0.54 – Fair
Mungo Martin House	<i>See Note below</i>	0.38 – Fair
St. Ann’s Schoolhouse	<i>See Note below</i>	0.61 – Poor
Carillon Tower	5%	0.15 – Very Good
Site (including Totem Poles)	N/A	0.45 - Fair

Note: The structural seismic assessment detailed that Helmcken House, Mungo Martin House and St. Ann’s Schoolhouse lack continuous load paths to transfer seismic (lateral) loads to the foundation system.

3.2.4 Environmental Concerns

Environmental control is the foremost concern of showcasing, preserving and protecting exhibits from degradation. Proper preservation of artifacts is a science, involving environmental factors of light, temperature, relative humidity and particulates (air pollution and pests). Without proper mitigation of these factors in aggregate, artifact and archival material deterioration is increased.

Within the Exhibition Hall, four main galleries are used to showcase the collection: the First Peoples Gallery, the Becoming BC Gallery (Modern History Gallery), the Natural History Gallery, and the temporary exhibition gallery. Two of these four galleries have been upgraded to satisfy current environmental control requirements to achieve the required ASHRAE Class AA Standard for museums; however, exhibits in the remaining galleries are at risk of expedited environmental damage and further degradation.

⁷ The structural seismic capacity represents the limiting component of a structure’s lateral load resistance system (LLRS). The capacity/demand ratio equals 100% or more when the capacity of all the components of the LLRS meets the required seismic demand of the structure.

⁸ FCI is as of August 2018



The existing heating, ventilation and air-conditioning systems (HVAC) currently servicing the Archives and Fannin buildings are out-dated (the current equipment was installed in 1967/1968), beyond their useful life, and do not consistently provide the desired levels of temperature and relative humidity control to adequately protect and preserve the artifacts, specimens, archival records and collections. The existing HVAC system capacity is marginal, and ventilation and energy performance are sub-standard.

To attract touring exhibitions, which are prime drivers of admissions revenue for the Museum, these environmental conditions need to be precise and controllable. The current conditions impact the Museum's ability to attract world-class touring exhibitions as only those exhibitions that both fit into the available space and can tolerate the existing environmental conditions are candidates for presentation at the Museum, leaving larger and more fragile exhibits unable to be accommodated.

Institutions like the Museum that have a primary mandate to collect, preserve and exhibit culturally significant items must meet certain criteria to maintain Category "A" status with the Department of Canadian Heritage. Modern museum HVAC systems support achieving these criteria by allowing the facility to meet the ASHRAE Class AA Standards⁹ through modern controls of the environment and climate conditions. Without achieving these levels of environmental and climate control, the Museum's ability to maintain their Category "A" designation is at risk.

To lose the Category "A" designation would have significant impacts, including affecting the Museum's ability to borrow cultural properties from other institutions or legally hold culturally significant property as defined within the Canadian Cultural Property Export Act. This includes objects of ethnographic material, culture (First Nations), fine art, scientific or technological objects, textual records, graphic records and sound recording - all of which form a substantial part of the Museum collections.

3.2.5 Hazardous Materials

A complete hazardous materials survey has not been completed; however an asbestos assessment review was undertaken. An Asbestos Exposure Control Plan (AECPP) is in place that includes a detailed inventory and risk assessment of all asbestos-containing materials determined to be present within the Museum's buildings. During the course of the facility condition assessment, facility management staff brought to the attention of the assessors that past repairs and renovations of the Exhibition Hall, Fannin and Archives buildings uncovered additional hazardous materials that would require remediation, such as lead paint at various locations within the buildings, galleries and superstructure.

3.2.6 Shipping/Receiving

In the current configuration, the Museum does not have an appropriately sized loading bay and loading dock on its property for semi-trailer use. Delivery trucks are forced to park on public streets to unload or

⁹ Government of Canada, Environmental Controls for Museums, <https://www.canada.ca/en/conservation-institute/environmental-guidelines-museums.html> , David Grattan and Stefan Michalski

load exhibitions, presenting an insurance risk and at times, resulting in concerns from the lending museums.

To transport the exhibition pieces to the temporary exhibition gallery, a service elevator is used from the loading dock. This elevator is insufficient to accommodate movement of large pieces of some of the touring exhibits that the Museum secures, including a dinosaur exhibition that was borrowed from the American Museum of Natural History in New York. In such a situation, the Museum must remove glass panels from its entry to crane the pieces first into the lobby, and then up to the second floor where the touring exhibitions are displayed. The more times these priceless artifacts are handled and moved in unconventional ways, the more risk the Museum assumes.

3.3 SPACE CONSTRAINTS

In addition to the seismic and environmental challenges noted above, the physical space is inadequate for the more than seven million artifacts that comprise the Museum's current collection. The vast majority of the permanent collection is housed in the Fannin and Archives buildings, in storage conditions far below industry standards for the priceless B.C. collections. The Museum is currently only able to display 0.01 per cent of its collection.

Because of its severe space constraints, the Museum's paintings vault, which houses numerous, invaluable original paintings including the Emily Carr collection, is in the basement, below both sea level and water conveyance infrastructure, putting the collections at risk during seismic activity or a flood.

3.3.1 Fannin Building

Lack of purpose-built space restricts research and learning opportunities. The rolling storage units that cover most of the floor space of the Fannin Building (all but the second and tenth floors, which are office space) leave desks and research spaces relegated to isolated areas of the building. This results in work spaces with limited access, poor air circulation and poor heating. Barriers are often in place to prevent natural light from entering the rooms and work spaces due to the sensitive nature of the surrounding collections.

3.3.2 Archives

In the Archives Building, a three-storey storage system has been assembled inside of a two-storey building to manage a portion of the archival documents that the Museum maintains. The remainder of the collection, encompassing thousands of boxes, is stored off-site at Cube Global Storage and Access Record Storage. The majority of the archived documents are available to both public and private researchers. Retrieval of materials stored on-site is convenient and timely, while off-site retrieval can take between two and five days, impacting the level of service the Museum can offer researchers.

3.3.3 Exhibition Hall Lobby

The space constraints in the Lobby challenge the Museum to provide new opportunities for the sharing of its expertise and knowledge. The Lobby feels more like a movie theatre than a museum and does not lend itself to flexibility in admissions. Currently, the Museum is not able to sell admission tickets to view a single exhibit as the galleries cannot be isolated from one another.

The Exhibition Hall is also segregated from the research areas of the Museum. Integrating the galleries with functional research space would allow the Museum to share the award-winning research conducted on-site with the public. A “behind the scenes” area of learning would provide a learning opportunity for visitors to observe the ongoing, high quality work of the Museum’s research staff.

3.3.4 Off-Site Storage

The Museum collections have long outgrown the available storage space at the Museum Precinct, necessitating expensive, off-site storage. To accommodate the continuously growing collection of artifacts and archival documents, additional space is presently leased through two storage space providers: approximately 1,300 square metres of warehouse space at [REDACTED] is leased for artifacts including large and over-height objects, such as totem poles; and a lease agreement was signed in August 2012 with [REDACTED] to provide a cool storage vault (5°C) and frozen storage space (at -25°C) for up to 30 over-height pallets, to preserve the Museum and Archives collections, including at-risk media. The combined annual cost was [REDACTED] for the fiscal year ended March 31, 2018.¹⁰

3.4 MUSEUM SUPPORT OF TRUTH AND RECONCILIATION AND REPATRIATION

3.4.1 Support of Truth and Reconciliation

The Truth and Reconciliation Commission of Canada (TRC) was officially established in June 2008 to document the history and impacts of the residential schools. The TRC’s final report is the product of the 2008 Canadian legal settlement known as the Indian Residential Schools Settlement Agreement. The agreement created a three-person commission to “redress the legacy of residential schools and advance the process of Canadian reconciliation.” In response, the TRC worked to assemble a repository of evidence to document the residential school legacy, and identify pathways to reconcile the relationship between indigenous communities and settler society.

In June 2015, the TRC released an executive summary of its findings along with 94 “Calls to Action” regarding reconciliation between Canadians and Indigenous peoples. As a result, the Museum released a

¹⁰ Off-site annual storage costs for 2017/18 were: [REDACTED]

formal public response¹¹ that outlined the thematic areas and projects that the Museum would undertake in response to, and aligned with, the TRC's recommendations.

The Museum's response addresses the TRC's goals through projects designed to nurture a relationship of reconciliation and partnership with Indigenous communities. Not every "Call to Action" applies to the role of the Museum, therefore actions of response are those areas where the Museum can make meaningful and purposeful contributions, which include programs and projects aligned with:

- **Education:** The Museum has significant holdings and resources to effectively engage citizens in educational programs concerning First Nations culture and identity. A core component of these programs is the participation of Indigenous communities as both teachers and students.
- **Language:** Over many decades, the Museum has participated with First Nations communities on numerous collaborative language initiatives. Today, the Museum has several ongoing projects that support the use and protection of indigenous languages. Inherited languages of description and reflection colour the means of cultural engagement; the language initiatives of the Museum are therefore some of the most important responses to the TRC.
- **Cultural Engagement:** The creation of knowledge, through its capture, preservation and accessibility, is a fundamental public responsibility of the Museum. Forms of knowledge, with their subjective, overlapping and cross-cultural uses, must occur within a common space of dialogue, discovery and intercultural negotiation and engagement.¹²

4 PROJECT ALIGNMENT

Redevelopment of the Museum Precinct provides an opportunity to address the serious seismic, safety and environmental risks threatening the preservation and protection of B.C.'s heritage. New, purpose-built or seismically upgraded spaces will result in safer, more accessible facilities, better care and protection of the collections and exhibits, increased exhibition and education space, and opportunities for growth bringing economic development.

4.1 PROJECT ALIGNMENT WITH MINISTRY AND MUSEUM MISSION AND GOALS

The Museum brings the stories of B.C. together. The Museum's collections, research and presentations enlighten, stimulate and inspire visitors in person and online. By exploring human and natural history, the

¹¹ The Museum and Archives Official Response,
https://royalbcmuseum.bc.ca/assets/TRC_Projects_August_2016.pdf

¹² <https://royalbcmuseum.bc.ca/visit/events/pole-carving>



Museum advances new knowledge and understanding of B.C., supporting cultural understanding of Indigenous peoples in B.C., and together, providing a dynamic forum for discussion and a place for reflection.

The Project is intended to improve the facilities to showcase, protect and care for the collections and archives to preserve them for generations to come.

The Project will strive to help the Ministry and the Museum to meet their priorities, including:

- Effectively steward the collections: Continue to develop and care for the Museum and Archives collections and ensure the collections and knowledge remain relevant and accessible for audiences now and for generations to come.
- Create dynamic and relevant visitor experiences: Achieve exceptionally high levels of satisfaction from visitors and users throughout the province through temporary exhibitions, renovated core galleries, a new learning centre, programs and events, digital content and publications.
- Increase the Museum's financial stability: Secure long-term financial viability by strengthening the Museum's programming and infrastructure.

4.1.1 Ministry of Tourism, Arts and Culture

The Ministry oversees the Museum and is responsible for prioritizing opportunities for participation in the arts, and supporting and promoting an inclusive society for all of B.C.'s diverse cultures and groups. A key direction from Government is the importance of advancing the Calls to Action of the TRC, and reviewing policies, programs and legislation to determine how to bring the principles of the United Nations Declaration on the Rights of the Indigenous Peoples (UNDRIP) into action in B.C.

The Ministry has established key strategic priorities that the Project will support, as outlined in their Service Plan 2018/19 – 2020/21 and mandate letter and described below:

- Promoting a tourism sector that delivers lasting economic and social benefits to British Columbia;
- Fostering a creative sector that is dynamic, sustainable and reaches its social and economic potential;
- Creating a society that values and embraces diversity and inclusion across all sectors; and
- Supporting the TRC's Call to Action and UNDRIP, and seeking opportunities to support the dialogue and actions needed to create the conditions for reconciliation.



4.1.2 Royal BC Museum

The *Museum Act* (2003) sets out the purposes, powers and governance of the Museum, establishing it as a Crown corporation, currently reporting to the Ministry. Per the *Museum Act*, the Museum is responsible for the Provincial Museum, the Provincial Archives, Helmcken House, Thunderbird Park, Mungo Martin House (Wawadit'la), St. Ann's Schoolhouse and the Netherlands Centennial Carillon. Section 4 of the *Museum Act*¹³ outlines the purposes of the corporation.

The Museum has established key strategic priorities to achieve their vision of a province in which all people respect each other and the environment in which they live. Some of the priorities outlined in their Service Plan 2018/19 – 2020/21 are:

- Address the TRC recommendations in the areas of: Professional development and training for public servants (#57); Education for reconciliation (#62); Museums and archives (#69); Missing children and burial information (#71); and Business and reconciliation (#92).
- Work closely with First Nations to advance cultural reconciliation by supporting Indigenous peoples seeking the return of ancestral remains and cultural objects to their communities.
- Take a leadership role by increasing the Museum's presence across the province with regional outreach – with the goal of making the Museum and Archives more available to all British Columbians by:
 - ♦ Continuing to provide support to other heritage, scientific and cultural institutions with curatorial, scientific and archival expertise;
 - ♦ Acting as a resource for research and the sharing of knowledge about British Columbia, which includes loans of objects and specimens; and
 - ♦ Developing a new Learning Centre, allowing for more engagement on-site and across the province through digital tools and real-time access.
- Offer unique visitor experiences, both on-site and online, by offering relevant and engaging exhibitions and educational programs.

4.2 PROJECT BENEFITS

Numerous benefits would be realized through the Project, having positive impacts for the public, the Museum, the Ministry and broader government. These benefits include:

- Safer and more accessible facilities for students, staff and the public;

¹³ *Museum Act* 2003: http://www.bclaws.ca/civix/document/id/complete/statreg/03012_01



- Purpose-built space for proper preservation, protection and care of the collections and archives;
- Improved access to the Museum and Archives collections and exhibitions for all users, both in-person and remotely;
- Greater opportunities to work collaboratively with Indigenous peoples to advance repatriation with cooperative management of Indigenous cultural collections, intangible cultural heritage, and ancestral remains;
- Appropriate exhibition space to attract world-class touring exhibits to support economic sustainability;
- An overall enhanced visitor experience in viewing B.C.'s valuable heritage; and
- The opportunity to demonstrate sustainability leadership in the built environment.

4.3 PROJECT ECONOMIC BENEFITS

Economic benefits associated with the Project would be anticipated during and after the construction phase, benefiting the ongoing business of the Museum and the provincial economy. As a result of the estimated \$400 million in direct capital construction expenditures, it is anticipated that a redevelopment of the Museum of this size would generate approximately 1700 direct jobs during design and construction and 980 jobs associated with supplier industries¹⁴.

4.4 SUMMARY OF STRATEGIC ALIGNMENTS

The Museum plays a unique role in B.C. that crosses sectors including tourism, arts and culture, education, post-secondary education, and environment and climate change. The table below presents a summary of strategic alignments of the Project with key stakeholders.

Table 5: Summary of Strategic Alignments

Stakeholder	Mandate and Stated Goals	Project Alignment
Government of B.C.	<ul style="list-style-type: none"> • Implement UNDRIP and TRC Calls to Action 	<ul style="list-style-type: none"> • Incorporates Indigenous world view and knowledge in the storage, conservation and display of Indigenous collections. • Provides for a more respectful way to honour the ancestral remains and objects for future repatriation.

¹⁴ Projections provided by BC Statistics, September 2018



Stakeholder	Mandate and Stated Goals	Project Alignment
	<ul style="list-style-type: none"> A strong, sustainable economy 	<ul style="list-style-type: none"> Creates a sacred, safe and inclusive space for Indigenous and other cultural groups to conduct ceremonies or offerings. Enables the manner in which collections are stored to support ongoing treaty negotiations. Supports tourism through enhanced exhibition spaces; contributes to the provincial economy; and drives revenue generation resulting in local and provincial jobs and returns.
Ministry of Tourism, Arts and Culture	<ul style="list-style-type: none"> A tourism sector that delivers lasting economic and social benefits to B.C. A creative sector that is dynamic, sustainable and reaches its full social and economic potential A society that embraces diversity and inclusion across all its sectors 	<ul style="list-style-type: none"> Supports a sustainable cultural economy by providing enhanced opportunities to showcase B.C.'s natural and human history. Contributes to a strong and vibrant social fabric through research and family-friendly public programs. Increases physical access to the site and intellectual access to the collections for all visitors to the Museum and Archives, and remotely through enhanced digital access.
Royal BC Museum	<ul style="list-style-type: none"> Increase financial sustainability Create dynamic and relevant visitor experiences Effectively protect, care for and steward the collections and archives 	<ul style="list-style-type: none"> Enhanced exhibition space will allow the Museum to showcase more of its remarkable collection and to attract world-class exhibitions that cannot currently be accommodated, driving increased ticket sales. Renewed exhibitions, enhanced learning spaces, and collections that are freely accessible. New and revamped exhibits relevant to a modern and inclusive society to reflect the values of UNDRIP and the TRC. Resolve seismic, environmental and flood risks that put the collections and archives at risk, and ensure the collections are preserved and protected for future generations to come.
Ministry of Citizens' Services	<ul style="list-style-type: none"> Government services are more convenient and accessible. 	<ul style="list-style-type: none"> Improved accessibility for all British Columbians through revamped physical, digital and intellectual access. Energy and GHG performance in vertical infrastructure.



Stakeholder	Mandate and Stated Goals	Project Alignment
Ministry of Education	<ul style="list-style-type: none"> Implement the new Indigenous peoples history curriculum, develop full-course offerings in Aboriginal languages, and educational Calls to Action from the TRC 	<ul style="list-style-type: none"> Enhanced programming will align with the new provincial curriculum with a focus on Indigenous peoples' exhibits and archives. Provide new opportunities for schools and other community groups to engage in interactive learning experiences with the Museum.
Ministry of Advanced Education, Skills and Training	<ul style="list-style-type: none"> Support education and research for students across B.C. 	<ul style="list-style-type: none"> Enhanced digital access to exhibits and research space will increase educational opportunities for post-secondary students, faculty and researchers across the province, the country and internationally.
Ministry of Forests, Lands and Natural Resource Operations and Rural Development	<ul style="list-style-type: none"> Reconciliation with Indigenous peoples 	<ul style="list-style-type: none"> Museum is the main repository for archaeological materials that are recovered by permit. Project supports the provision of appropriate space to allow this collection to grow. Supports the commitment to work closely with Indigenous peoples to ensure a stronger voice in the stewardship of cultural resources.
Ministry of Finance	<ul style="list-style-type: none"> Capital Asset Management Framework (CAMF): To establish best practices in capital asset management across the public sector 	<ul style="list-style-type: none"> In following the guidelines of CAMF by bringing forward this Concept Plan, the Ministry and the Museum continue to adhere to best practices in capital asset management.
Tourism Victoria	<ul style="list-style-type: none"> Generate demand to our must-visit destination with an emphasis to drive revenue 	<ul style="list-style-type: none"> Revitalized museum facilities will encourage new and returning visitors to Victoria. Enhanced exhibit space will allow the Museum to showcase more of its remarkable collection to attract world-class exhibits that cannot currently be accommodated, attracting increased tourists.
City of Victoria	<ul style="list-style-type: none"> Promote Victoria as a unique destination for arts and culture Invest in making downtown Victoria welcoming, amenity-rich, and vibrant 	<ul style="list-style-type: none"> New and refreshed exhibition galleries will make the Museum a relevant and engaging experience for residents and tourists alike. Promotes a cultural opportunity unique to Victoria, and enhances the downtown environment.



PART B: SERVICE DELIVERY AND SCOPE OF PROJECT

Part B describes key aspects of delivering the Project that are consistent with the Project’s goals and objectives identified in Part A. This section reviews the service delivery options considered and presents the resulting recommended physical scope of the preferred delivery option.

This section concludes that the service delivery options best suited to meeting the goals and objectives of the Project are the design and construction of a new facility and collections storage either on the existing Museum site or on a new site. The total project cost associated with these options is estimated at approximately \$526 to \$580 million, based on a Class “D minus” estimate with an accuracy of +/-30%.

5 SERVICE DELIVERY ASSESSMENT

5.1 PROJECT OBJECTIVES

The following objectives and assessment criteria were established for the Project:

Table 6: Project Objectives

Project Objective	Criteria
Preserve and protect B.C.’s heritage by providing a safe and accessible facility	<ul style="list-style-type: none"> ▪ Museum facilities effectively care for, preserve and protect B.C.’s collections and archives from environmental degradation, seismic risk and flood.
	<ul style="list-style-type: none"> ▪ Museum facilities are safe and accessible for students, staff and public use.
Educate the public about B.C.’s rich cultural, social and natural history	<ul style="list-style-type: none"> ▪ Museum provides exceptional and wide-reaching research and learning opportunities about B.C.’s cultural, social and natural history.
	<ul style="list-style-type: none"> ▪ Increased exhibition and education space supports an enriched visitor experience, providing access to the Museum’s working environment, ongoing research, collections storage and archive materials.
Advance Truth and Reconciliation and United Nations Declaration on the Rights of Indigenous Peoples	<ul style="list-style-type: none"> ▪ Museum demonstrates commitment to the TRC Calls to Action and UNDRIP.
	<ul style="list-style-type: none"> ▪ Museum works collaboratively with Indigenous peoples to advance repatriation and cooperative management of Indigenous cultural collections, intangible cultural heritage, and ancestral remains in its care.



Project Objective	Criteria
Create a world class and sustainable provincial asset that drives the economy	<ul style="list-style-type: none"> ▪ Project supports continuity of operations throughout construction and drives future revenue generation opportunities.
	<ul style="list-style-type: none"> ▪ Project leverages non-provincial funding opportunities to support redevelopment.

5.2 SERVICE DELIVERY OPTIONS

Five service delivery options were considered:

- 1) **Status Quo** – The Museum continues to operate at the current location under the existing maintenance and life cycle investment plan, retaining seismic risk.
- 2) **Replace on New Site** – Development of a new museum and collections storage on a new site in Victoria.
- 3) **Replace on Existing Site** – Development of a new museum and collections storage on the existing site
- 4) **Revitalize** – Revitalization of the existing site to provide expanded program space and, where economically feasible, building renovations to address seismic and environmental risks and facility conditions; where not economically feasible, building demolition and replacement.
- 5) **Repair** – Renovation of existing facilities to address seismic risk, environmental risk and facility conditions.

Options 2 through 5 would include life safety improvements and seismic upgrades for Helmcken House, St. Ann’s Schoolhouse, the Netherlands Carillon Tower, [REDACTED], and the totem poles in Thunderbird Park, along with implementation of a flood mitigation strategy for the site. Given the smaller size of these facilities, they are included in the budget but are not being examined in detail in this Concept Plan.

5.3 SERVICE DELIVERY MULTIPLE CRITERIA ANALYSIS

The MCA process provides a framework for evaluating both quantitative and qualitative factors, and presents the advantages and disadvantages of each option in a form that can be easily assimilated by decision-makers.

The assessment framework of the qualitative criteria requires judgment 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 7 was used to assess how well each option achieves the stated objectives.

Table 7: MCA Assessment Framework

X	✓	✓✓	✓✓✓
Does not satisfy the project objective and criteria.	Minimally effective in satisfying the project objective and criteria.	Somewhat effective in satisfying the project objective and criteria.	Extremely effective in satisfying the project objective and criteria.

5.4 MULTIPLE CRITERIA ANALYSIS RESULTS

The results of the MCA assessment of the five service delivery options are summarized in Table 8. For the detailed qualitative assessment of each of the options, see Appendix F [MCA Assessment].

Table 8: Summary of Options, MCA Results

Project Objectives and Criteria	Option 1 Status Quo	Option 2 Replace on New Site	Option 3 Replace on Existing Site	Option 4 Revitalize	Option 5 Repair
OBJECTIVE 1: Preserve and protect B.C.'s heritage by providing a safe and accessible facility					
a) Museum facilities effectively care for, preserve and protect B.C.'s collections and archives from environmental degradation, seismic risk and flood.	✓	✓✓✓	✓✓✓	✓✓	✓✓
b) Museum facilities are safe and accessible for students, staff and public use.	✓	✓✓✓	✓✓✓	✓✓	✓✓
OBJECTIVE 2: Educate the public about B.C.s rich cultural, social and natural history					
a) Museum provides exceptional and wide-reaching research and learning opportunities about B.C.'s cultural, social and natural history.	✓	✓✓✓	✓✓✓	✓✓✓	✓
b) Increased physical access to the Museum's working environment, including research, collections storage and archive material	X	✓✓	✓✓✓	✓✓✓	X
OBJECTIVE 3: Advance Truth and Reconciliation and UNDRIP					

Project Objectives and Criteria	Option 1 Status Quo	Option 2 Replace on New Site	Option 3 Replace on Existing Site	Option 4 Revitalize	Option 5 Repair
a) Museum demonstrates commitment to the TRC Calls to Action and UNDRIP.	✓	✓✓✓	✓✓✓	✓✓✓	✓
b) Museum works collaboratively with Indigenous peoples to advance repatriation and cooperative management of Indigenous cultural collections, intangible cultural heritage and ancestral remains in its care.	✓	✓✓	✓✓✓	✓✓✓	✓✓
OBJECTIVE 4: Create a world-class and sustainable provincial asset that drives the economy					
a) Project supports continuity of operations throughout construction and drives future revenue generation opportunities.	✓✓	✓✓✓	✓	✓✓	✓
b) Project leverages non-provincial funding opportunities to support redevelopment.	✓	✓✓✓	✓✓✓	✓✓✓	✓✓

The results of the MCA identify Options 2, 3 and 4 as being highly comparable in best achieving the Project objectives. Options 1 and 5 are minimally effective in satisfying the Project objectives and criteria.

With deferred maintenance the only work assumed to be undertaken with Option 1 (Status Quo), it minimally satisfies the Project objectives as it does not address any of the safety, accessibility or seismic liabilities of the existing buildings.

Option 2 (Replace on a New Site), and Option 3 (Replace on Existing Site) best achieve the Project objectives. Both options provide new and expanded space, designed to modern museum standards including seismic, safety and environmental control, as well as the best opportunity for a successful philanthropic campaign and federal funding support. Additionally, Option 2 allows the Museum to remain fully open throughout the development and construction process, while Option 3 may have some restrictions necessary to facilitate the construction.

Option 4 (Revitalize) achieves many of the same objectives as Option 2 and 3; however, with invasive seismic upgrades in the exhibition hall, and the Fannin and Archives buildings likely being demolished and rebuilt, continuity of operations for the Museum and their commercial partners would be extremely



complicated to facilitate. Most of the buildings would be closed for significant durations (e.g. years) during development and construction.

Option 5 (Repair) minimally addresses the Project objectives as it would only address building code, environmental controls and seismic upgrades. Without building new space, there is less potential to attract large philanthropic donations or federal funding.

5.5 PRELIMINARY RISK ASSESSMENT

A high-level assessment of the Project's risks was undertaken, in consideration of each of the service delivery options. This qualitative assessment included an analysis of risks in three categories that could have an impact on the overall success of the Project:

- Program Delivery – risks that put the Museum's ability to achieve their mandate and service plan in jeopardy;
- Site – viability of the current or future site, and the impact on business operations of the Museum or their commercial partners; and
- Economic Factors – fiscal harm to the region, province or cost of the project.

Individual risks associated with each category were identified and then described in terms of cause and consequence. Wherever possible, controls and mitigating strategies were identified for the risks under consideration. The detailed risk matrix is attached as Appendix G [Service Delivery Options Risk Matrix]. The summary below presents the severity of each risk associated with each of the service delivery options.

Table 9: Summary of Preliminary Risk Assessment

Risk Name	Risk Description	Option 1 Status Quo	Option 2 Replace on New Site	Option 3 Replace on Existing Site	Option 4 Revitalize	Option 5 Repair
Program Risks						
Ability to accommodate Collection and Archives	Inability of the Museum to meet its mandate to collect and safeguard BC's history for the future	High	Low	Low	Low	High
Protection of Collection and Archives	Pieces of the Museum's collection and	High	Low	Low	Low	Medium

Risk Name	Risk Description	Option 1 Status Quo	Option 2 Replace on New Site	Option 3 Replace on Existing Site	Option 4 Revitalize	Option 5 Repair
	archives are damaged or lost due to building deficiencies					
Safety of visitors, students and staff	Safety of visitors, students or staff is compromised due to aging facilities	High	Low	Low	Low	Medium
Site Risks						
Viability of Site (New)	Appropriate land cannot be secured to support the Museum's ongoing operations in the downtown Victoria region	Low	High	Low	Low	Low
Viability of Site (Existing)	Design and functionality are compromised by site limitations	Low	Low	High	High	Medium
Hazardous Materials Abatement and Environmental Remediation	Release of airborne contaminants during construction result in mandated closure of the museum	High	Low	Medium	High	High
Impact on Museum Operations	Selected service delivery option results in extended closure of the museum	Low	Low	High	High	High

Risk Name	Risk Description	Option 1 Status Quo	Option 2 Replace on New Site	Option 3 Replace on Existing Site	Option 4 Revitalize	Option 5 Repair
Impact on other Precinct Businesses	Selected service delivery option results in extended closure of the museum	Low	Low	High	High	High
Economic Risks						
Estimated Closure Time (years)	Exhibition Hall	0	0	1 ¹⁵	3	3
	IMAX	0	0	4	1	1
	Archives	0	0	4	3	1
Market Capacity	Insufficient market capacity	Low	High	High	High	Medium
Tourism	Construction negatively impacts tourism in Victoria	Low	Low	High	High	High
Funding Sources	Lack of non-provincial funding sources	Low	Medium	Medium	High	High
Life Expectancy	Life expectancy of buildings not proportional to investment	High	Low	Low	Medium	High

Of the service delivery options that best meet the project objectives (Options 2, 3 and 4), Option 4 is assessed to have the greatest risk. Option 3 has less risk than Option 4 at this early planning phase, and Option 2 has the least risk (under the assumption that a (appropriate) new site can be secured).

While Option 4 satisfactorily achieves many of the Project objectives, revitalization of the existing site poses the greatest risk of the options. Planning around the IMAX and aiming for continuity of operations during major renovations, seismic upgrades and hazardous materials abatement could result in compromised design and less efficient use of the site, while exposing visitors, staff and collections to a

¹⁵ The Exhibition Hall remaining open in Option 3 assumes the new building is oriented to Government Street and construction would entail intermittent closures for up to 1-year. If the Museum were oriented to Belleville Street, the Exhibition Hall would likely be closed for 4-years to allow for construction.

greater degree of risk. With a significant renovation component, the opportunity for a capital philanthropy campaign to attract private donors and federal funding over new construction is reduced.

A more detailed risk analysis, including quantification of risks associated with procurement options, will be completed at the business case phase.

5.6 SITE ASSESSMENT

Further analysis will be required in the business case to evaluate the viability of phasing on the existing site and securing of a new site to accommodate the Project. A preliminary search for alternate available sites was undertaken and was limited in focus to available land near the existing Museum Precinct. The initial search identified one potential site that may be suitable given the zoning and size requirements of the Museum: [REDACTED]. Other potentially suitable sites in the downtown core are extremely limited, not currently being marketed or not immediately available.

In May 2011, the City approved a new comprehensive development zone within the Museum Precinct that allows a mixed-use development of up to 90,000 m² of commercial exhibit, office, restaurant, retail and theatre uses. Potential commercial development opportunities exist should a portion of the precinct be freed of buildings in the redevelopment. This land could potentially be sold to offset the capital cost of the Project, or redeveloped for a future income stream to offset Museum operating costs. Any land development opportunities would be analyzed during the business case development.

5.7 SERVICE DELIVERY RECOMMENDATION

The results of the service delivery assessment favour Option 2 (Replace on New Site) and Option 3 (Replace on Existing Site) as the preferred service delivery options for further analysis in the business case. These options best meet the Project objectives with the least risk exposure.

5.8 SPACE AND COST ESTIMATES

In accordance with the preferred service delivery options, preliminary space requirements were determined based on an assessment of the needs identified in Part A. Those space requirements are reflected in the Museum's functional program that was developed in March of 2013, by Praxis Architects and Walt Crimm and Associates.

5.8.1 Functional Program

A functional program is a pre-design document that describes the functional requirements for the various program components to be included within the scope of a project. In 2013, the Museum developed a functional program for the anticipated redevelopment of their site. The existing buildings comprise approximately 29,000 m² and in 2013 that area was forecasted to grow to 32,600 m² to accommodate growth in critical areas such as exhibits, archives, programs and public spaces.



The growth anticipated in 2013 did not, however, take into consideration new and revamped spaces required to meet the Museum's mandate for UNDRIP and the TRC Calls to Action, or enhanced collections spaces to increase physical accessibility – on the site and through digital access. IMAX Victoria is also not included as it is a separate business managed by a commercial partner, nor does the program yet reflect current provincial initiatives such as expanding delivery of childcare spaces.

5.8.2 Preliminary Cost Estimates

To cost each of the service delivery options, order of magnitude capital cost estimates were developed for three main categories: construction costs, collections and exhibits, and other owner's costs associated with delivery of the Project (including risk).

Based on the program space requirements identified in the 2013 functional program, preliminary capital construction cost estimates were developed for the Ministry, by SSA Quantity Surveyors (SSA). These class "D minus" estimates include both hard and soft construction costs to a +/- 30 per cent level of accuracy. SSA also developed the required phasing and construction schedules for each option provided the associated escalation projections (refer to Appendix H [Class 'D' Cost Estimate] for the full report).

The Museum developed high-level and comprehensive estimates for project costs associated with the collections and exhibits. These costs are inclusive of decanting, moving, temporary storage (fit-out, lease and security) and new exhibition design and fit-out. The build-up and assumptions are attached as Appendix I [Collections and Exhibits Estimated Costs].

The final category includes an allowance for all other owner's costs associated with delivery of the Project. This includes costs associated with project management, procurement, implementation and an owner's reserve to cover associated project risks. Partnerships BC developed this allowance based upon precedent projects of similar size and cost.

The summary costs associated with each option are presented in Table 10 below. Each cost would be further refined in the business case development to provide a greater level of accuracy.



Table 10: Service Delivery Option Cost Estimate Summary

Description	Cost (Thousand \$)				
	Option 1 Status Quo	Option 2 Replace on New Site	Option 3 Replace on Existing Site	Option 4 Revitalize	Option 5 Repair
Construction Schedule ¹⁶	3 years	3.5 years	4 years	6 years	7 years
Construction Costs (includes hard and soft construction costs, contingency and irrevocable GST)	46,159 ¹⁷	315,350	329,844	369,828	440,067
Escalation ¹⁸	12,180	94,513	102,674	129,517	152,807
Sub-total Construction Costs	58,340	409,863	432,518	499,345	592,874
Owner's Costs:					
Collections and Exhibits (includes decanting, moving, temporary storage and new exhibition design and fit-out)	N/A	73,388	102,283	85,488	93,898
Allowance for project management, procurement and implementation, risks	N/A	43,367	45,324	50,681	52,100
Total Project Cost (rounded)	58,340	526,618	580,125	635,513	738,872

Costs associated with the purchase of land have not been included, as they would only apply to the acquisition of private land. The purchase price of a new site may also be offset by the sale of existing lands.

The Museum has efficiently managed their capital maintenance budget over the years; the budget however has been inadequate to keep up with the maintenance demands of buildings that are more than 50-years old. This has resulted in the accrual of more than \$46 million of deferred maintenance that remains outstanding for the Museum should the Project not proceed and is reflected in Option 1 (Status

¹⁶ Construction schedules for Option 1 is assumed to start January 2020; Options 2, 3 and 4 are assumed to start in July 2021; Option 5 is assumed to start in January 2021.

¹⁷ The Status Quo construction costs are provided from the VFA Crosstab report dated September 25, 2018 and are the sum of the costs associated with addressing critical deferred maintenance, building code deficiencies and non-structural seismic vulnerabilities. No structural seismic vulnerabilities are included in this cost.

¹⁸ Each option is escalated to the mid-point of construction based on its respective schedule. Detailed explanation of schedule, escalation and phasing can be found in the QS Report in Appendix H.

Quo) costs. Investment in capital maintenance is required to address this significant level of unfunded deferred maintenance over the next three years.

Costs associated with phasing to enable construction are included, as referenced in Appendix H [Class 'D' Cost Estimate]. Options 3, 4 and 5 all require phasing to accommodate construction and renovations on the existing site.

The costs noted in the table above support the recommendation that replacement on the existing site or a new site proceed to further analysis in the business case.

As a full business case is developed, the following factors will be further addressed:

- Updated functional program;
- Develop an indicative design;
- A Class C capital cost estimate resulting from additional program and design investigations;
- Creation of a risk register and quantification of the risk components of the owner's reserve;
- Operating costs for the proposed new facility;
- Calculation of ongoing whole life building costs such as facilities management, plant maintenance and life cycle costs;
- Viability of replacement on a new site, including associated purchase and disposition costs; and
- Project management, procurement and implementation costs.

PART C: PROCUREMENT

This section describes the procurement options to be analysed in the business case and the broad risks associated with the Project.

This section concludes that, given the unique features of the Project and the possible risk transfer, the procurement options to be further analyzed in the business plan phase are traditional design-bid-build procurement, as well as alternative partnership approaches both with and without private financing options (e.g. design-build and design-build-finance-maintain).

6 PROCUREMENT OPTIONS

The procurement analysis will be based on a practical, project-specific assessment of a full range of viable options to determine which procurement model provides the best value for money while serving the public interest. The analysis will consider and assess:

- The demonstrated capacity and experience of both the local industry and the project owner in the range of available procurement methods; and
- The project owner's capability to ensure delivery of the project scope, on schedule and within the available funding envelope.

The main characteristics of the proposed Project, including anticipated scope, cost and complexity of delivery, were reviewed in consideration of procurement approaches to be analyzed in subsequent planning phases.

While Option 2 (Replace on New Site) is complex in the nature and size of the building(s) to be constructed, it would not be subject to the complications associated with building on an occupied site. Assuming an appropriate site could be found, construction would not impact ongoing operations until the point in time when exhibits and the collection need to be transferred to the new museum.

The design and construction of Option 3 (Replace on Existing Site) would be complex by the nature and size of the building(s) to be constructed. It would also be further complicated by both the desire to maintain continuity of operations during construction and the need to integrate the new facility seamlessly with existing, retained facilities within the precinct.

Delivery of Options 4 (Revitalize) and 5 (Repair) would be highly complex, requiring thoughtful phasing of the work to accommodate construction of new building(s) that will seamlessly link to existing, retained facilities within the precinct. Maintaining continuity of operations during construction would further add to the complexity of the Project, which is reflected in the extended construction schedules and associated costs.



Given the characteristics of the two preferred options, the business case would assess traditional design-bid-build procurement, as well as partnership approaches both with and without private financing options (e.g. design-build and design-build-finance-maintain). Should Options 4 or 5 need to be assessed in the business case, delivery through construction management would also be considered as a viable and appropriate procurement model.

In the business case, qualitative procurement objectives would be developed, reflecting the stated objectives of the Project as well as procurement objectives of the Province, and may include:

- Achieving value for money through a robust competitive selection process;
- Providing opportunities to incent design innovations that result in reduced capital costs while enabling continuity of operations;
- Seeking efficiencies in the Museum's operating budget (e.g., efficient management of the Museum's multiple service provider contracts);
- Minimizing administrative requirements over the contract period;
- Ensuring the owner has control over the facility's design and operating decisions; and
- Achieving an efficient and enforceable risk transfer during the construction period, particularly with respect to price and schedule.

Detailed financial modelling will also be undertaken during the business case phase to confirm which procurement model will generate anticipated value for this Project by comparing the risk-adjusted costs of each procurement model. For a description of procurement models that could be analyzed in the business case, please refer to Appendix J [Procurement Models].



PART D: FUNDING SUMMARY AND NEXT STEPS

This section provides a high-level estimate of funding required for the Project and identifies possible funding partners.

7 FUNDING

Funding for this Project is anticipated to be provided by a combination of philanthropic campaign, federal and provincial government funding.

This concept plan is intended for Treasury Board consideration for approval of business case funding and notional allocation in the Province's 10-year capital plan.

7.1 ROYAL BC MUSEUM FUNDRAISING

The Museum is committed to launching a successful fundraising campaign in support of the Project with the goal of raising ██████████ in philanthropic and sponsorship funding. As substantial donors often direct their funds to tangible elements of a project (e.g. an auditorium or exhibition hall), this range reflects the degree of commitment the Museum feels it can achieve in accordance with the variety in service delivery options presented in this Concept Plan. For instance, should the Project proceed as a new build option, the Museum anticipates a much greater degree of donor interest than they would achieve with the repair option, given the nature of the work. It is worth noting that the Museum raises over \$1 million in annual donations without initiating a major campaign as they would for the Project.

The philanthropic and sponsorship funds would be collected in full by service commencement (or opening day). To demonstrate progress in this capital fundraising campaign, the Museum will provide a combination of letters of donor commitment with identified payment schedules and quarterly updates outlining the funds collected.

Milestones would be developed for the campaign to ensure sufficient funds are raised. In the event that the capital fundraising campaign does not reach its target, the project scope could be reviewed at these milestones to determine if modifications are necessary to deliver the Project within budget rather than seeking additional funding from either level of government.

7.2 FEDERAL FUNDING SOURCES

Based on other museum projects recently constructed in Canada (namely the Royal Alberta Museum and the Museum of Human Rights), the Project would target ██████████ of the funding to be sourced from the Federal Government.



A number of potential federal funding sources have been identified, including the Canada Cultural Spaces Fund and the Disaster Mitigation and Adaptation Fund. Applications would be coordinated through the Ministry and the Museum, under the Province's guidance, to maximize the federal funding dollars available to the project. During the business case phase, the Ministry would investigate all potential federal funding sources that may be available for the Project.

8 SUMMARY, SCHEDULE, GOVERNANCE AND NEXT STEPS

8.1 SUMMARY AND RECOMMENDATION

With this Concept Plan, the Ministry, the Museum and Partnerships BC have:

- Highlighted the need for investment in the Royal BC Museum;
- Summarized key benefits of the Project;
- Demonstrated how the preferred delivery options are the best means to address seismic and environmental risk, and facility obsolescence impacting the Museum's ability to care for and protect the rich cultural heritage of British Columbia;
- Determined a preliminary space program;
- Provided a preliminary cost estimate for the Project; and
- Articulated procurement approaches to be considered for detailed analysis during the business case phase.

Based on the assessment summarized in this Concept Plan, it is recommended that the Province approve operating funding in the amount of \$3.85 million to fund the cost of producing a detailed business case to further assess Option 2 (Replace on New Site) and Option 3 (Replace on Existing Site), including refinement of the functional program to reflect updated requirements and development of an indicative design.

The business case would consider a range for the total project cost based on the preliminary cost estimates of between \$526 million and \$580 million, including the owner's reserve. These total project costs do not include the cost of land. Should a site be required, the business case will explore identifying options and estimated costs to secure a site for delivery of the Project.

8.2 PROJECT SCHEDULE

Key project activities and their associated durations are presented below. It is anticipated that construction start could be reached approximately 2.5 years after commencing the business case phase,



provided that any exhibits, collections and archive materials that require temporary relocation are transferred in advance of the construction start.

Table 11: Preliminary Project Schedule

Key Activities	Approximate Duration
Treasury Board Approval to proceed to Business Case	1 – 3 months
Business Case Development	10 months
Treasury Board Approval of Business Case	2 months
Develop Documentation and Procurement/Tender	18 months
Treasury Board Approval of Contract	2 months
Construction	42 - 48 months

8.3 PROJECT GOVERNANCE

This concept plan was developed under the authority of senior government representatives, including the Deputy Minister of Tourism, Arts and Culture, the Deputy Minister of Citizens' Services, and the Chief Executive Officer of the Museum.

A clear and effective governance structure will be critical to the success of the Project, with its many stakeholders and program complexities. Governance provides a “set of structures, systems and processes around the project that assure the effective delivery of the project through to full utilization and benefits realization by the business”¹⁹.

The main governance body for the Project would be a Project Executive Board, which would have approval authority for all aspects of the planning, procurement and implementation phases. The Project Executive Board would appoint a Chief Project Officer who is the individual responsible for executing the Project Executive Board's direction.

The Chief Project Officer will manage two key streams of work during the planning and procurement phase: the owner's technical team, which includes staff, and the architect and engineering team supported by specialized consultants as required; and the procurement management team, which includes commercial and legal advisors.

8.4 NEXT STEPS

The recommended next step for the Project is development of a detailed business case which will incorporate and address government priorities and policies (eg. community benefits).

¹⁹ “Project Governance, Determining Just How Much is Enough?”, Catherine Daw, Project Times, February 2006.



The scope of the detailed business case will include:

- Updating the Museum's detailed functional program;
- Establishing an indicative design for the Project;
- Developing a class "C" cost estimate;
- Procuring any additional advisors that may be required to support the development of the business case (e.g., architects, engineers)
- Conduct a needs assessment of future commercial partners (e.g. IMAX Victoria, Sequoia Coastal Coffee)
- Undertaking a procurement analysis, including risk assessment, and describing a preferred procurement approach;
- Recommending a project procurement and implementation strategy;
- Establishing the Project Executive Board's terms of reference for business case development;
- Retaining a Chief Project Officer; and
- Drafting a procurement communications strategy.

APPENDIX A: MUSEUM ECONOMIC IMPACT REPORT

Attached as a separate document.



APPENDIX B: COMMERCIAL PARTNERS AND SERVICE PROVIDERS

REDACTED



APPENDIX C: STRUCTURAL SEISMIC ASSESSMENT REPORT

Attached as a separate document.



APPENDIX D: NON-STRUCTURAL SEISMIC ASSESSMENT REPORT

Attached as a separate document.



APPENDIX E: FACILITY CONDITION ASSESSMENT REPORT

Attached as a separate report.



APPENDIX F: DETAILED MCA ASSESSMENT

Attached as a separate document.



APPENDIX G: SERVICE DELIVERY OPTIONS RISK ASSESSMENT

Attached as a separate document.



APPENDIX H: CLASS D CONSTRUCTION COST ESTIMATE

Attached as a separate document.



APPENDIX I: COLLECTIONS AND EXHIBIT COST ESTIMATE

Attached as a separate document.



APPENDIX J: PROCUREMENT MODELS

The procurement options identified for further analysis in the Museum Business Case (including both public finance and public/private finance options) include:

Public Finance Options

- Design Bid Build:

Using a Design Bid Build (DBB) model, the owner would engage a full consultant team including an architect and engineers to develop a detailed design (working drawings) for the facility. Once the working drawings were completed, a tender call for a construction contract would be issued. The contractor with the lowest qualified price would be selected and an industry standard, fixed-price construction contract would be used. The contractor would take responsibility for constructing the building in accordance with the specifications and tender drawing developed for the owner by the consultant team. The owner would remain responsible for errors and omissions and would make monthly progress payments to the contractor. Once the building is complete, the owner would take possession and maintain and operate the asset for its lifespan.

- Construction Management:

In a Construction Management (CM) arrangement, the owner would hire a construction manager to assist with the planning and management of the project, and engage a full consultant team including an architect and engineers to develop a detailed design (working drawings) for the proposed facility. Once specifications and tender drawings were complete, the construction manager would tender a stipulated sum construction contract or a series of tender packages. The lowest qualified price (or prices) would be selected for each tender package and industry standard fixed-price construction contracts would be used. The construction manager would manage and coordinate the contractors to complete their respective contracts and deliver the building in accordance with the specifications and tender drawing developed for the owner by the consultant team. Once the building is complete, the owner would take possession and maintain and operate the asset for its lifespan.

- Design Build:

The Design Build (DB) model is a two-stage partnership procurement model. The first stage entails a request for qualifications (RFQ) whereby respondent teams submit qualifications to be evaluated by the owner. The evaluation process results in a shortlist of proponents who would then be invited to participate in the second stage, a request for proposals (RFP).



Under a DB model, the owner would engage an architect to develop an indicative design for the facility. The owner would then conduct the two-stage procurement to select a design build team to undertake the detailed design and construction of the facility, based primarily upon the performance-based specifications prepared by the owner's compliance team. The successful team would enter into a fixed price contract with payments made by the owner at specific progress milestones (which could be monthly). Under this model, design and construction risk is transferred to the design builder, while the owner retains ongoing maintenance and life cycle risks.

Public/Private Finance Options

- Design Build Finance:

In addition to the characteristics described under the DB model, the Design Build Finance (DBF) approach involves the successful design build team entering into a fixed price contract with partial progress payments being made by the owner during construction. The balance of the construction payments would be made through partial short-term financing provided by the design builder. This partial short-term financing in the DBF model provides the owner with liquid security to better ensure design builder performance in its obligations. This security warrants that the design builder has enough "skin in the game" to provide appropriate incentive to effectively and appropriately meet its obligations. An added benefit of DBF is the due diligence and oversight applied by construction finance lenders during the design and construction phase to ensure that the design builder's deliverables and obligations are being met, and/or that appropriate remedial actions are taken if progress falls behind schedule.

- Design Build Finance Maintain:

The DBFM model is a two-stage partnership procurement model. The first stage is an RFQ whereby respondent teams submit qualifications, which are evaluated by the owner. This evaluation results in a shortlist of proponents who are then invited to submit proposals to the second stage of the process, the RFP. At the RFP stage, the owner would seek proposals to design, build, partially finance and maintain the facility. Similar to the DB model, the owner would engage a full consultant team including an architect and engineers to develop an indicative design and performance specifications for the facility.

Under a DBFM structure, the owner would enter into an agreement with the private partner who would be required to design, build, partially finance and maintain the facility over the specified term of the agreement. The facility maintenance scope assumed to be included in the DBFM model would be modified to include prevailing labour requirements of the owner, and consistent with other PPP projects recently implemented in the province.

Performance payments would be made monthly to the private partner over the life of the agreement at a fixed rate determined at contract close. These payments consist of progress payments during construction, and annual service payments, which only commence once the asset is completed to the owner's satisfaction. To ensure that the private partner receives full payment, it must meet defined and measurable performance and availability standards on a continuous basis. The inclusion of private sector equity and external financiers as required in a performance-based contract provides greater assurance of a long-term commitment and due diligence to the project that results in a degree of owner-type behaviour from the private sector.

Note: Integrated Project Delivery (IPD) has not been identified as a potential procurement method due to the following;

- The proposed Project is a relatively complex assembly of differing building conditions (e.g. research labs to environmentally conditioned exhibition spaces) where specifications driving performance outcomes must be defined well in advance of detailed design. This added level of complexity drives the need for a procurement process that is known to the Province and broadly understood by the construction marketplace to be successful;
- The Province of British Columbia (and specifically the Project Team) has little or no experience in the analysis and application of the IPD procurement method or the use of IPD contracts;
- The recently developed Canadian Construction Document Committee IPD contract has not been extensively reviewed by the Ministry of Finance, nor has it been tested on a large provincial project. The risks and benefits associated with its use in a provincial context are unknown; and.
- The majority of the British Columbia contracting community (particularly on Vancouver Island) has little or no knowledge in the application of the IPD method. This lack of experience would limit the availability of B.C.-based contractors bidding on the Project.