

PROJECT BRIEF (PB)

Project Description (PD)

- PD1 Proejct Information
- PD2 PWGSC Project Team
- PD3 Description of Project
 - Purpose of Project
 - Project History Synopsis
 - Detailed Scope of Work
 - Site Conditions
 - Implementation Strategy
 - Consultant Access to Site
- PD4 Budget
- PD5 Schedule
- PD6 Existing Documentation

Project Administration and Governance (PA)

- PA1 General Project Objectives
 - Design Principles
 - Sustainable Development
 - Code Compliance
 - Risk Management
 - Health and Safety
 - PWGSC Standards and Procedures
 - Coordiantion with PWGSC
 - Coordination with Sub-Consultants
 - Lines of Communication
 - Media
 - Meetings
 - Project Response Time
 - Submission, Reviews and Approvals
 - Roles and Responsibilites
- PA 2 Issues
 - Major Cost Issues
 - Major Time Issues
 - Major Operational Issues

Requird Services (RS)

- RS1 Pre-Design Service
- RS2 Schematic Design
- RS8 Estimating and Cost Planning
- RS9 Sustainable Development Strategies and Reports

Project Brief (PB)

PD Project Description

PD 1 Project Information

- | | | |
|-----|--|---|
| 1.1 | PWGSC Project Title: | Pre Design – Proposed Health Centre of Excellence |
| 1.2 | Facility Name and Location of Project: | Health Centre of Excellence, Dorchester Penitentiary, Dorchester, New Brunswick |
| 1.3 | PWGSC Project Number: | R.101386.001 |
| 1.4 | Client Department: | Correctional Service Canada |

PD 2 PWGSC Project Team (available after award)

- | | | |
|------|-------------------------|--------|
| 2.1 | PWGSC Project Manager: | Phone: |
| 2.2 | Senior Project Manager: | Phone: |
| 2.3 | Design Manager (RTL): | Phone: |
| 2.4 | Senior Design Manager: | Phone: |
| 2.5 | Property Manager: | Phone: |
| 2.6 | Project Leader: | Phone: |
| 2.7 | Interior Designer: | Phone: |
| 2.8 | Architecture Resource: | Phone: |
| 2.9 | Civil Resource: | Phone: |
| 2.10 | Structural Resource: | Phone: |
| 2.11 | Mechanical Resource: | Phone: |
| 2.12 | Electrical Resource: | Phone: |
| 2.13 | Landscape Resource: | Phone: |

PD3 Description of Project

3.1 Purpose of the Project

- .1 By operation of the *Corrections and Conditional Release Act (CCRA)*, federal offenders are to be provided with essential health care and to have reasonable access to non-essential health care.
- .2 There have been longstanding challenges with deficient infrastructure that interferes with the delivery of health services in Correctional Service of Canada (CSC) facilities. The Regional Treatment Centre (Shepody Healing Center) in the Atlantic Region is particularly challenging and is prioritized for replacement.
- .3 To that end, Correctional Service Canada (CSC) is working with Public Works and Government Services Canada (PWGSC) to develop a project for the design and construction of an exemplary health care facility; a “**Health Centre of Excellence (HCoE)**”.
- .4 It is estimated that the Health Centre of Excellence (HCoE) will have 155 beds and provide gender-neutral in-patient health care to all patients.
- .5 The Consultant will provide a broad range of architectural, engineering, planning, and other specialized services to deliver preliminary project development (pre-design) in achieving a coordinated, digitally-enabled, and integrated approach to the design and development of the HCoE.



Figure 1: Dorchester Penitentiary Complex

- .6 This undertaking requires the development and creation of a **Pre-Design** package for a forward thinking, gender neutral, and universally accessible health care facility serving the needs of patients in Canada. This project is under the stewardship of

Correctional Service Canada (CSC) with the support of Public Works Government Services Canada (PWGSC).

- .7 The purpose of this tender is to commission a comprehensive pre-design package for the new health care facility, which would be located on Dorchester Penitentiary grounds in Dorchester, New Brunswick, and which would replace the existing Shepody Healing Centre.
- .8 The expected end result of this undertaking is a state-of-the-art health care facility where the design team, through design excellence, collaboration, and holistic design, would produce a purpose built, innovative and therapeutic environment that offers to patients, staff, and visitors a real chance to heal, work, and learn. It will serve as a model for a visionary and modern approach to the delivery of health care for federally sentenced persons.
- .9 Dorchester Penitentiary is called a "Complex", as it houses medium and minimum security level inmates, as well as a multilevel Regional Treatment Centre (also known as Shepody Healing Centre). The current Shepody Healing Centre accommodates inmates from different security levels (minimum, medium, and maximum security) and health care needs (such as: mental health, acute and chronic care, etc.). Inmate access to resources (for example: chaplaincy, Indigenous services, occupational development, social programs, and institution food services, etc.) is a holistic approach.
- .10 The project, from inception to construction, would be carried-out in phases with associated project deliverables within each phase.
- .11 The first phase would consist of pre-design services including, but not necessarily limited to: functional programming and planning.
- .12 The second phase would carry the project into design and construction based on the findings, recommendations, and endorsements of the initial phase.
- .13 Activities under this initial commission will be:

- .1 Pre-Design Services**

In general, this phase would consist of functional programming, general planning, feasibility studies, and site options analysis. Under this stream, the Consultant would:

- .1 Work with PWGSC and the client CSC to develop and document all of the requirements for the HCoE – site investigations and planning, functional programming, site and building space requirements, operation and maintenance, etc. CSC has recently completed a Master Plan of the Institution so the Consultant is expected to become familiar with the existing CSC documents, review, validate and expand when applicable. The

Consultant is required to produce investigations and reports, functional programming documents, feasibility studies, space and design requirements, maintenance requirements and options, a schematic facilities site demonstration plan complete to a level of understanding of the functional and operational requirements and a construction implementation strategy plan as well as full costing and a critical path schedule. All of this information is required for CSC and PWGSC to properly plan and implement the proposed HCoE site plan.

- .2 Analyse the requirements, identify, and evaluate constraints and opportunities, including coordinating and facilitating workshops with various stakeholder groups, to make recommendations regarding accommodations, security, environmental sustainability, circulation, connectivity(in both building systems and CSC correctional program operations), movement, parking, relationship with the rest of the Dorchester Penitentiary complex, material management, staff, patients and visitor experience, landscaping opportunities, public art, connection to nature, et cetera.
- .3 Produce a functional program and a general planning scheme.
- .4 Develop three distinctly different and viable site development feasibility options with class "D" estimates. These options will be presented at a workshop in order to inform and assist the decision making process for CSC to selecting a preferred option to bring forward to the schematic design phase (for key decision making point see Figure 2).

3.2 Schematic Design Services

- .1 Site development planning and building design are multi-disciplinary services that are to be delivered through a collaborative approach. The site development planning shall be coordinated by the Landscape Architect on behalf of the Consultant. While each discipline remains responsible for the technical details of the site components that fall within their specific area of expertise, the Landscape Architect has the added responsibility for the integration of site development under a cohesive vision. See PR 1.3.3.3 for more information.

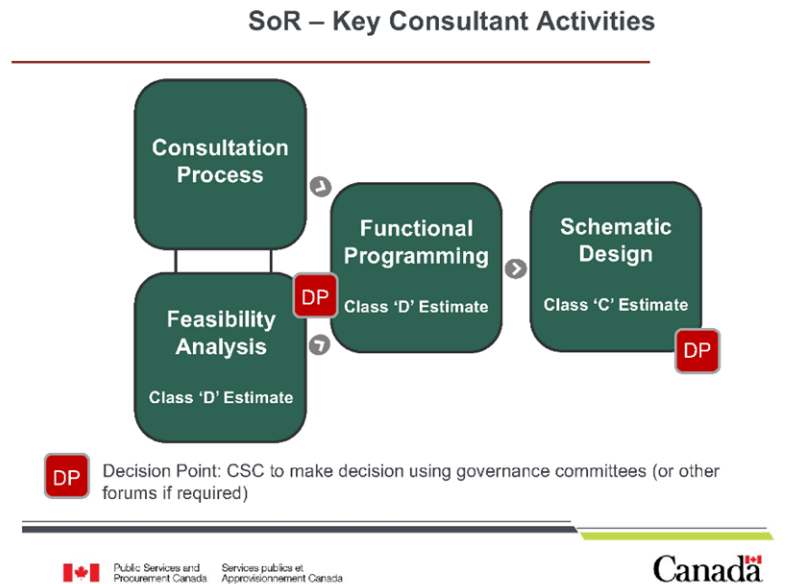


Figure 2: CSC Decision Points

3.3 Project History Synopsis

- .1 Correctional Service Canada (CSC) has a need to update and modernize its current health care facilities to better address the health care needs of federally sentenced offenders.
- .2 The **Health Centre of Excellence (HCoE)** will serve as a model for a visionary and model approach to the delivery of health care for federally sentenced persons. It will be located in Dorchester, New Brunswick. This new facility replaces the existing Shepody Healing Centre. As a first step, CSC engaged Public Works Government Services Canada (PWGSC) to support them in developing an internal strategic planning framework which includes a long-term vision for the project. This would be used as a foundational piece from which to develop this important project.
- .3 The approach undertaken was based on a holistic collaboration of groups from both CSC and PWGSC, working together to develop a strategic planning framework and developing a new vision that can be used in adopting a modern, innovative and integrated approach to health care in a correctional setting. CSC's mandate and overall mission shall be adhered to while taking on a creative approach.
- .4 A core team was established consisting of project management, functional programming and technical design expertise, and health care professionals from both CSC and PWGSC.

-
- .5 PWGSC engaged a private Consultant to facilitate a collaborative visioning workshop where management and staff in the fields of health care and correctional operations came together with PWGSC project management to discuss their visions for this project as to the site and building design for the new Health Centre of Excellence facility. The core team visited the Dorchester, NB facility for discussions with staff and patients. The team also considered the published examples of a number of case studies in Canada, the United States, Denmark, and Norway.
- .6 The two statements, established during the visioning session are as follows:
- **Vision Statement:** *To lead in correctional health care excellence and innovations.*
 - **Mission Statement:** *To advance innovative treatment and healing to incarcerated individuals through bold and transformative holistic care.*
- .7 In addition, the vision statement and mission statement are to be regarded as 'living' and may in future be revised pending further evaluation and analysis by the design Consultants of the facility, the functional program, and CSC's engagement with internal and external stakeholders.

3.4 Detailed Scope of Work

- .1 The Consultants for this project are to provide full pre-design and schematic design services. This section is to be read in conjunction with the attached Required Services (RS) document, which explains the level of effort required for each section. Both documents represent the total scope of work.

Project specific requirements include:

.2 RS1 Pre-Design

.1 Initiation and Orientation

- .1 This phase addresses activities associated with contract start-up, management and information exchange. The purpose of this phase is to provide the Consultant with direction and the information necessary to proceed with the work.
- .2 After contract award, the Departmental Representative would provide the Consultant with the reference documents for review. The Consultant must be familiar with these documents before the contract start-up meeting.
- .3 A contract start-up meeting, estimated at one (1) day, would be conducted at the Moncton PWGSC office and would include a discussion with the Departmental Representative of general issues, a preliminary exchange of information, an explanation of the objectives of the contract, the Consultant's

methodology and Project Schedule.

- .4 Following the Consultant's preliminary review of the documents made available by PWGSC, the Consultant must communicate preliminary findings and obtain, from the Departmental Representative, any additional information necessary for a complete evaluation.
- .5 Deliverables include but are not limited to:
 - .1 The Consultant must provide a Project Schedule in Microsoft Project format (and provide .pdf copy) using the critical path method to identify critical durations and time sensitive deliverables.
 - .2 This would be a living document that must be maintained by the Consultant throughout the duration of the contract. Dates of deliverables must be clearly identified and the schedule would be used to track progress and issue payments. An updated schedule must be submitted at the beginning of each RS stage, as well as when deemed necessary to communicate any schedule delay.
 - .3 Provide a summary report of findings and identify any gaps in PWGSC provided information.
 - .4 Develop a Table of Contents for all deliverables and for the final Pre-Design and Clinical Functional Programming reports for CSC and PWGSC review and comments.
 - .5 Draft Report – (CSC and PWGSC review)
 - .6 Final Report – (CSC and PWGSC review)

.2 Consultation Process

- .1 The Consultant would carry out a consultation process in collaboration with CSC and PWGSC which includes the acquisition, organization, management and effective use of input from key groups:
 - .1 CSC Health Services Representatives, CSC Women Sector Representatives, CSC RHQ and NHQ Representatives;
 - .2 CSC Institution level, such as: Correctional Patients, staff, administrators;
 - .3 CSC Operations and Programs, such as: Parole and Program Officers, Indigenous Services, Chaplaincy;
 - .4 Users and Patients.
- .2 It is a requirement that the Consultant create a plan and schedule for stakeholder involvement/consultation and the pre-design phase, which would be reviewed by CSC and PWGSC before approval.

.3 Deliverables include but are not limited to:

.1 Consultation Plan will:

- .1 Evaluate consultations of the various groups;
- .2 Demonstrate that the various groups and stakeholder involvement in the facility's design and development would be met throughout the project, and can be documented;
- .3 Address CSC's strategic directions related to engagement and person-centred care.
- .4 Draft Report – (CSC and PWGSC Review)
- .5 Final Report – (CSC and PWGSC Review)

.3 Health Care Model and Integration to Campus

- .1 Ensure that the health care model is safe, responsive to patient need and accommodation requirements – enables patient access to interdisciplinary resources, and improves the patient's health care experience and their health outcomes.
- .2 Provide in-depth engagement with administration, health care professionals, non-medical staff, community leaders, aboriginal initiatives directorate, regional ethno-cultural advisory, patients and academics and must incorporate best practices and lessons learned from national and international health care models.
- .3 Identify targets/goals for delivery of health care for the various patient populations (i.e., acute psychiatric and intermediate mental health care, psychiatric care, continuing health care for elderly and patients with complex health care issues) while enabling transitional care.
- .4 Identify health care requirements. Once the requirements are identified, research must be done to express how these requirements would be met through the work of this planning and programming Project.
- .5 Ensure adherence to CSC's overall mission and mandate.
- .6 Deliverables include but are not limited to:
 - .1 A calculation of the numbers and working time (# of hours) of staff currently in each group, including non-clinical support staff.

- .2 A summary of health care requirements assessment with suggestions and option on how the health care requirements will be met.
- .3 A general description of health care equipment and accommodation requirements for patient groups.
- .4 A summary of strategies to consider for integration of services efficiently between the correctional and health care facilities.
- .5 Any non-clinical staff requirements (parking lot implications, administration offices, waiting rooms, maintenance staff, storage, food services (supply, distribution, cafeteria size implications, etc.) affected.
- .6 Site circulation and use, connectivity with the correctional facilities and other items.
- .7 Any research, educational or teaching initiatives (current or planned) which may require space planning.
- .8 IT connectivity and information sharing within the complex, to other CSC regional healthcare centres, regional hospitals (e.g. Moncton and Halifax), universities (national and international) and CSC mainframe in Ottawa.
- .9 Identify maintenance requirement. Description of who, the number of staff, and cost to achieve safe operation of the health care facility.
- .10 Draft Report – (CSC and PWGSC Review)
- .11 Final Report – (CSC and PWGSC Review)

.4 Functional Programming

- .1 Functional Programming work translates operational and functional requirements into both present and future spatial characteristics and physical requirements for the project.
- .2 The Consultant must analyse the existing operations and physical spaces to document the current situation and address identified issues and proposed changes.
- .3 Research innovative national and international models and strategies.
- .4 The functional programming work shall move into a detailed exploration of the

-
- data collected in the previous analysis and deliverables. This work would involve all team members in consultation with administration and project stakeholders to determine the functional requirements and adjacencies of the various patient populations included.
- .5 The Consultant should be cognisant of *CSC Accommodation Guidelines* (latest edition) and the *Technical Criteria for Correctional Institutions* (latest edition), however, for the proposed Facility, the consultant team is not bound to these documents. CSC is looking for a better model that considers security and health care.
 - .6 At the beginning of this work, a plan and schedule would be submitted to show dates for Deliverables of the Functional Programming for approval by PWGSC.
 - .7 The Consultant must meet with the institution representatives and targeted users, conduct on-site evaluations in order to gather information on the current operations.
 - .8 This includes, but is not limited to: understanding the operations of each of the all functional groups, identifying the gaps between the present operational capabilities and future requirements, identifying issues, opportunities and highlighting anticipated changes.
 - .9 The Consultant must determine the possible impacts of proposed changes and identify strategies to address issues, e.g. changes to operations, facilities and/or resource levels. Each strategy must be evaluated in terms of its effectiveness, its impact on operations and/or facilities, cost and associated risks.
 - .10 Deliverables include but are not limited to:
 - .1 An Executive Summary, as part of the Functional Program report.
 - .2 A Functional Program report, for additional information please see PR 1.6 Existing Document No.5: Functional Program Framework, 5pp.
 - .3 A Class D Cost Estimate prepared using all available research information and data collected in previous analysis. The Class D estimate shall also include a factor for contingencies (calculated in collaboration with the team's project manager and PWGSC) and an escalation allowance.
 - .4 Block (bubble) and Stacking Diagrams showing the clinical departments and their ideal adjacencies, colour-coded to represent different areas. These sketches should also show recommended patient and staff workflow/traffic/connections/exit/entrance possibilities (both vertical and

horizontal movement) diagrammatically. The orientation of these block and stacking diagrams shall be consistently depicted. These sketches shall provide a visual summary of the architectural and landscape architectural expressions of the Site Planning and Programming in enough detail and substance to serve as the basis for Schematic Design. Any special volumetric requirements are to be noted on these sketches.

- .5 A summary of any urban and rural planning, regulatory or community issues affecting the Project.
- .6 A summary of who will provide the building operation and maintenance, and how much it will cost to ensure uninterrupted safety, security, and operation of the health care facility. Whether the building, life safety, and security systems are operated independently or connected to the Dorchester Institution.
- .7 The Consultant team would make a formal presentation to the project team and stakeholders at the end of the Functional Programming phase.
- .8 The Consultant Team would incorporate review comments/suggestions into a "final" report. They would have one week to incorporate these review comments/suggestions into the FINAL report submission.
- .9 Draft Report – (CSC and PWGSC Review)
- .10 Final Report – (CSC and PWGSC Review)

.5 Site Development Options Feasibility Analysis

- .1 CSC has reference documents such as the Dorchester Institution Master Plan that took multiple years to complete, and the data was formed based on interviews with the Institution Stakeholders. The Master Plan has valuable information that could facilitate a holistic understanding of the Dorchester Institution.
- .2 In parallel with the consultation activities, the Consultant would undertake a site analysis of the Dorchester Penitentiary property to identify potential locations for the facility on the site. All location options would be considered, in order to inform decision making:
 - .1 **Renovating Existing Building:** The adequacy of the existing building would be assessed as part of this exercise, to determine whether a fit-up of the building is a viable option. This work would be informed in part by the results of a Building Condition Report, commissioned by PWGSC and that would be provided to the Consultant.

- .1 The Dorchester Institution Master Plan included findings if the existing building were to be renovated. The Consultant is expected to be familiar with the existing documents available for reference, and determine whether to build upon some of the relevant background information to facilitate the process.
 - .2 **Building New Inside modified/expanded Perimeter Walls:** CSC has constructed many Living Units across Canada within the past ten years facing the challenge of site constrains within the security fence. These builds could offer some ideas on different ways to open the security site while maintaining secure circulation and movement.
 - .3 **Building New Outside the Perimeter Walls:** the Consultant would identify piece(s) of lands outside the perimeter walls where the facility could be built. For sites identified outside the walls, the Consultant would perform additional investigation work such as geotechnical investigations, topographical surveys and environmental site assessments, in order to minimize the risks of selecting an area that is unsuitable to construction.
- .1 While the Dorchester Institution covers a large piece of property, the Consultant is expected to consider the HCoE operation in relation to the Dorchester Institution. The inmates maintaining access to the correctional programs, such as chaplaincy, gym, employability skills training, etc, that forms an integrated approach to the offender rehabilitation.



Figure 3: Dorchester Penitentiary Property Boundaries

- .2 Further to this work, the Consultant will develop one site development plan and design feasibility study unique to each of the different site options considered above.

- .3 Results will be presented in a Site Development Options Feasibility Report, which will describe each design option, advantages and disadvantages, opportunities and threats, and risks evaluation, provide an indicative class D cost estimate for each site development option and make a recommendation based on a set of defined criteria.
- .4 The Consultant will facilitate a workshop with PWGSC and CSC representatives to present the site development options. The Consultant should plan for a full day for this meeting.
- .5 The Consultant would analyze the existing site plan and the zoning plan, circulation plan and security feature plan developed. This work would include a briefing meeting at the institution. The Consultant should plan for a full day for this meeting.
- .6 The Consultant must do a visual analysis and desktop review of existing materials such as reports, plans and details. Covered at a minimum should be the: context at a local, regional and national levels; site zoning (functional and temporal); circulation (inmate, staff, visitor, vehicular traffic, parking, etc.); site security features (such as perimeter and interior fences, no man's land, buffer zones, patrol roads, movement control posts, cameras, towers, etc.); the topography, grading and drainage; geo-technical elements including depth of bedrock, seismic and soil structure;; climatic conditions; view corridors and view sheds and current sense of place and character. In addition must be an evaluation of the capacity of the site to meeting key GoC initiatives for sustainability and accessibility; and the capacity for future expansion as to potential opportunities, limitations and constraints.
- .7 As part of the scope of this contract, the Consultant should plan to be on site for a sufficient number of days to undertake this activity.
- .8 The Consultant must review the Building Condition Report (BCR) to determine the adequacy of the existing site services including, but not limited to, electrical distribution, natural gas, steam, water distribution, waste removal, sanitary sewer and storm water management whether these items are on-site or part of the municipal utilities and local and regional grids.
- .9 In some cases, if the BCR is in an incomplete format, Consultant is expected to spend the extra effort required to verify existing conditions of site services only and identify new gaps not indicated on the BCR.
- .10 The Consultant may need to be on site to review the existing fire alarm and electronic security systems in order to confirm the existing systems capacity and capability to add new distributions, as well as compatibility to integrate newer technologies.

- .11 The Consultant must identify site issues that would be addressed in the Facility Development Plan. These issues may include modifications to operational zoning or circulation patterns, upgrades to site utilities (underground and above ground) and any other items essential for site optimization. The Technical Criteria for Correctional Institutions (latest edition) sections SP-Site and SU-Site Utilities are provided as reference for the site analysis.
- .12 The Consultant team will collaborate, review and integrate findings by environmental Consultants to prepare appropriate Archaeological and Environmental evaluations of the selected site. All reports and recommendations, including schedules and cost estimates, will account for environmental considerations.
- .1 The Consultant must evaluate environmental impacts of the project on the property and surrounding areas. Environmental studies shall summarize findings, identifying constraints, limitations, and proposed mitigations.
 - .2 The Consultant will collect field data (e.g. archaeological survey) to confirm any assumptions made regarding Cultural/Heritage Resource Impact Assessment for the selected location. Cultural/Heritage resource management recommendations and mitigation measures will be incorporated into the environmental site assessment report.
 - .3 The Consultant must consider and evaluate contaminated sites present on the property. Placement of the facility will need to consider the impact of construction on a contaminated site and associated remediation activities.
 - .4 Upon final site selection for the facility, perform a complete environmental site assessment to Government of Canada regulations. Conduct and coordinate with PWGSC Environmental Services all sampling and permitting activities. Coordinate with other authorities having jurisdiction as applicable.
 - .5 The Consultant and PWGSC will review and discuss assessment information needed to undertake the work and determine/ identify any additional information to be collected following site selection.
 - .6 The Consultant will submit detailed cost estimate with the identified scope for review by PWGSC.
 - .7 The Consultant shall obtain any permission(s) required prior to conducting any sampling, surveys and/or investigations for the assessment.
- .13 For the selected site, confirm the scope of the proposed sub-surface geotechnical investigation with the Departmental Representative.

-
- .1 Conduct and coordinate geotechnical investigation of the selected site and any access way to it. Survey must capture any elements that could be considered a risk to the location and HCoE's construction.
 - .2 The Consultant and PWGSC will review and discuss survey information needed to undertake the work and determine/ identify any additional information to be collected following site selection.
 - .3 The Consultant will submit a cost estimate with the identified scope for review by PWGSC.
 - .4 The Consultant shall obtain any permission(s) required prior to conducting the above surveys.
 - .5 The survey data would be used by the Consultant in the production of conceptual/preliminary design drawings as required in this assignment.
 - .6 The Consultant will provide all survey data files and prepare a drawing showing the topographic and structure details obtained from the survey to the Departmental Representative. These will become the property of Canada.
- .14 For the selected site, confirm the scope of the proposed topographic survey with the Departmental Representative.
- .1 Conduct and coordinate topographic survey of the selected site and any access road to it. Survey must capture the right of way limits and any critical adjacency items and land parcels that could be considered a risk to the location and HCoE's construction.
 - .2 The Consultant and PWGSC will review and discuss survey information needed to undertake the work and determine/ identify any additional information to be collected following site selection.
 - .3 The Consultant will submit a cost estimate with the identified scope for review by PWGSC.
 - .4 The Consultant shall obtain any permission(s) required prior to conducting the above surveys.
 - .5 The survey data would be used by the Consultant in the production of conceptual/preliminary design drawings as required in this assignment.
 - .6 The Consultant will provide all survey data files and prepare a drawing showing the topographic and structure details obtained from the survey to the Departmental Representative. These will become the property of Canada.
- .15 The Consultant must analyse and propose implementation strategies and delivery methods (e.g. design-bid-built, design-built, construction management, etc.) in the evaluation of options. Prepare Critical Path Method schedules in graphic format. Consideration must be given to the site planning exercise and any decommissioning and/or environmental clean-up. In addition, it is imperative that ongoing site operations sustain least disruption as possible. Develop the schedule and make final recommendations on implementation strategy and delivery method for the selected option.

.16 The Consultant must analyse and propose environmental sustainability strategies and opportunities, including social and economic considerations (e.g. social health and wellness, environment, energy and greenhouse gas reduction, economic lifecycle, long term value, etc.). An evaluation of the capacity of the site in meeting key Government of Canada initiatives for sustainability and the capacity for future expansion opportunities, limitations and constraints must also be included.

.17 Deliverables include but are not limited to:

- .1 The Consultant must summarize the findings and recommendations in a Site Analysis Report. CSC and PWGSC would review this deliverable at 33%, 66% and 99% completion and CSC and PWGSC would provide consolidated comments at those stage. The final report must be included in the final pre-design report as an appendix. The report must document the analysis in a series of site drawings and descriptive text.
- .2 The Site Analysis Report must be approved by the Departmental Representative and CSC Project Team before proceeding with the Schematic Design.
- .3 33%, 66%, 99% and Final Report – Site Options Feasibility Report.

.3 RS2 Schematic Design

1. Upon CSC selection of a preferred site development option, and in order to inform the decision making process, develop three (3) distinctly different site development and building design concepts as part of the Schematic Design process (RS 2).
 - .1 All concepts must fully meet the operational and functional program requirements of the site development and building design program and represent healing-conducive, innovative and sustainable (social, environmental and economic) options.
 - .2 Each concept to include drawings, plans, sketches, and narratives to fully illustrate the design intent and philosophy, sense of place and character.
 - .3 Include Electronic Security Systems (ESS) in the Schematic design submission. The Consultant's ESS Specialist will need to consult with CSC Technical Expert during the design process to coordinate CSC specifications and standards on the required electronic security systems, which may include but not limited to;
 1. Perimeter security

-
2. Operator Control Post Station (Graphical User Interface Display console)
 3. Internal CCTV cameras and viewing stations
 4. Cell Call- Nurse Call
 5. Security Patrol systems
 6. Personal Portable Alarms System
 7. Intercom system
 8. Communication (radio consoles)
 9. Public address
 10. Door control
- .4 Each concept should include site and building operation and maintenance requirements, in order to compare and contrast the different options. Include cost estimates.
- .5 Clearly identify the sustainable design features considering various elements of each options that may include but not limited to, health and wellness, environment, climate resiliency, energy savings, energy efficiency, self-sustaining facility, materials, water, indoor air quality, operations and maintenance, etc.
- .6 Each concept to include Class 'C' estimate and anticipated schedule for completion.
- .7 Document the advantages and disadvantages of each concept.
2. The Consultant will provide recommendations of one site development and building design concept for further development in the design development phase – recommendation to include justification for why it was selected.
 3. The consultant is requested to develop a weighted evaluation criteria list in consultation and the approval of CSC and PWGSC, Each option is then evaluated against the evaluation criteria. The selection of the preferred option is by CSC and PWGSC. This may be a hybrid version combining features of the other options to form a preferred option.
 4. The Consultant will be required to do a presentation of the site development and building design concept and recommendations to CSC and PWGSC.
 5. For additional information see RS 2 Schematic Design in the Required Services document.
 6. Deliverables include but are not limited to:
 1. The Consultant will revise the schematic design concepts, estimates, and schedules based on input from CSC and PWGSC, see Required Services, RS 2 Schematic Design.

3.5 Site Conditions

- .1 In general, there are no site conditions that should affect how the Consultant performs the required services.
- .2 The Consultant shall at all times comply with the current edition of the National Building Code and the applicable Provincial Building Code Electrical, Construction, National Energy Code, Fire Codes, Acts, Standards and Guidelines & CSA B-651 2018 standard. Additionally, at all times comply with Provincial Health & Safety Acts, and Regulations, in addition to the requirements of Canada Occupational Safety and Health Regulations, and Canada Labour Code.

3.6 Implementation Strategy **(Issues/Constraints/Challenges/Opportunities/Training)**

- .1 The optimal implementation strategy for this project will be developed by the successful proponent as part of this commission.

3.7 Consultant Access to the Site

- .1 For general access the Consultant would be required to conduct site related work Monday to Friday between 8:00am and 4:00pm. All other access times would be determined by consultation with the Departmental Representative. The Consultant shall pre-arrange dates & times for site access at least 72 hours in advance.
- .2 The Consultant must comply with the provisions of the:
 - (a) Security Requirements Check List and security guide which would be attached to the contract.
 - (b) Industrial Security Manual (Latest Edition).

PD4 Budget

- .1 The Class 'D' and 'C' construction cost estimate for this project will be developed by the successful proponent as part of this commission.

PD5 Schedule

- .1 This project deals solely with pre-design services, i.e. functional programs, options analysis, feasibility studies, building condition reports, et cetera.
- .2 The Consultant contract deliverables and durations are as follows. The items should not be construed as successive, nor aggregate.

-
- .3 The successful Consultant will provide a detailed project schedule clearly illustrating the entire delivery strategy, depicting efficient coordination of tasks and resources, to achieve completion of work on time and permit effective monitoring of work progress in relation to established milestones.
 - .4 The Consultant will provide a detailed schedule for these activities and deliverables. The Required Services can be done simultaneously.

RS1.1 Initiation and Orientation	12 weeks
RS1.2 Consultation Process	15 weeks
RS1.3 Health Care Model and Integration to Campus	48 weeks
RS1.4 Feasibility Analysis and Site Development Options	64 weeks
RS1.5 Functional Program	37 weeks
RS2.0 Schematic Design and Class 'C' Estimate	30 weeks

PD6 Existing Documentation to be Made Available

Note: Documentation will be made available to the successful proponent. Requests for information during the solicitation period will be provided on a "need to know" basis only.

Disclaimer: Documentation will be available only in the language it was written. The information contained in the documentation may be outdated and is offered "as is" for informational purposes.

- .1 Existing Document No.1: Correctional Service Canada, Health Centre of Excellence, Strategic Planning Session, Gatineau, QC, March 4 & 5, 2019, 57pp.
- .2 Existing Document No.2: Correctional Service Canada, Health Centre of Excellence (Dorchester, New Brunswick), Executive Summary: Creating the Vision, 2pp.
- .3 Existing Document No.3: Correctional Service Canada, Health Centre of Excellence: The Vision for the Future, 92 pp.
- .4 Existing Document No.4: CSC Technical Criteria Document
- .5 Existing Document No.5: CSC Accommodation Guidelines
- .6 Existing Document No.6: Dorchester Penitentiary Master Plan

- .7 Existing Document No.7: TBS Greening Government Strategy: targets for all construction projects.
- .8 Existing Document No.8: CSC's Green Building Design Checklist V2.0
- .9 Existing Document No.9: Sustainable Development Strategy (Latest Version), prepared by Correctional Services Canada.
- .10 Existing Document No.10: Commissioner's Directive, Environmental Protection and Sustainable Development (CD 318)
 - (a) ISD 318-2 – Energy and Water Conservation
 - (b) ISD 318-4 – Environmental Management of Halocarbons
 - (c) ISD 318-6 – Management of Wastewater and Wastewater Treatment Systems
 - (d) ISD 318-7 – Environmental Management of Waste
 - (e) ISD 318-8 – Environmental Management of Petroleum Storage Tank Systems
 - (f) GL 318-10 – Drinking Water Quality Management
 - (g) ISD 318-11 – Federal Environmental Assessment of Projects
- .11 Existing Document No.11: Electronic Security System Specifications – relevant to the project

PA Project Administration and Governance

PA1 General Project Objectives

Each request for proposal will elaborate on the specific objectives for individual projects, however, the following broader government objectives will apply to all solicitations:

1.1 Design Principles – General

- .1 PWGSC expects the Consultant to maintain a high standard of engineering design, based upon recognized industry design principles. All design elements, planning, and engineering, must be fully coordinated and consistent in adherence to good design principles.
- .2 The level of quality is to be consistent with Government of Canada policies and guidelines as well as all other similar designed works performed for the Government of Canada.
- .3 The projects are to be implemented in a sustainable environmentally responsible manner.
- .4 Quality of materials and construction methods shall be commensurate with the type of infrastructure required and the budget. Avoid experimental materials. Take into account the total life-cycle costing of the infrastructure
- .5 Design for maximum flexibility to meet immediate and future requirements.

1.2 Sustainable Development

The Federal Sustainable Development Strategy 2019-2022 (FSDS) sets out the Government of Canada's environmental sustainability priorities, establishes goals and targets, and identifies responsible departments.

The Greening Government Goal, of the FSDS, is of particular interest to real property work. It states that: "The Government of Canada will transition to low-carbon, climate-resilient, and green operations". Targets and short-term milestones include:

- Target – Waste diversion: Divert at least 90% (by weight) of all construction and demolition waste from landfills (strive to achieve 100% by 2030)
- Target – Adaptation to climate change: By 2022, departments have developed measures to reduce climate changes risks to assets, services and operations.
- Target – Net zero-carbon ready buildings: by 2022. All new federal buildings (including build-to-lease and public-private partnerships), starting at the latest in 2022, should be constructed to be net-zero carbon.

The main goal of CSC's Sustainable Development Strategy (SDS) 2018-2020 is to "*Reduce greenhouse gas emissions (GHG) and promote conservation of energy and water from CSC operations*". There are two commitments CSC has set out to achieve:

- Reduce GHG emissions that are responsible for global warming and climate change; and
- Reduce waste and water consumption to help preserve the quality of natural ecosystems.

1.3 Code Compliance

- .1 Codes, regulations, by laws and decisions of "authorities having jurisdiction" will be observed. In cases of overlap, the most stringent will apply. The Consultant shall identify other jurisdictions appropriate to the project.

1.4 Risk Management

- .1 A risk management strategy is crucial for PWGSC Project Management and integrates project planning into procurement planning. All the stakeholders of a project will be an integral part of the risk management strategy, culminating in an integrated product team. Specific services required for project delivery are outlined in Required Services and the level of effort, if required, will be noted in the solicitation.

1.5 Health and Safety

1. Public Works and Government Services Canada (PWGSC), recognizes the responsibility to ensure the health and safety of all persons on Crown construction projects and the entitlement of both federal employees and private sector workers to the full protection afforded them by occupational health and safety regulations.
2. In keeping with the responsibility and in order to enhance health and safety protection for all individuals on federal construction sites, PWGSC voluntarily complies with the applicable provincial/territorial construction health and safety acts and regulations, in addition to the related Canada Occupational Safety and Health Regulations.
3. Prior to commencement of Work, develop written Health and Safety Plan specific to the Work. Implement, maintain, and enforce Plan for entire duration of Work and until final demobilization from site.
4. Health and Safety Plan shall include the following components:
 - .1 List of health risks and safety hazards identified by hazard assessment.
 - a. **These must include the risks and hazards of contracting and spreading COVID-19 disease.**
 - .2 Control measures used to mitigate risks and hazards identified.

a. These must include precautions and mitigations related to the hazard of contracting and spreading COVID-19 disease.

- .3 On-site Contingency and Emergency Response Plan as specified below.
- .4 On-site Communication Plan as specified below.

5. On-site Contingency and Emergency Response Plan shall include:

- .1 Operational procedures, evacuation measures and communication process to be implemented in the event of an emergency.
- .2 Evacuation Plan: prior to entering the Work Site confirm escape routes, marshalling areas, and location of firefighting equipment.
- .3 Emergency Contacts: name and telephone number of officials from:
 - a. Departmental Representative.
 - b. Pertinent Federal and Provincial Departments and Authorities having jurisdiction.
 - c. Local emergency resource organizations.
 - d. Harmonize Plan with Facility's Emergency Response and Evacuation Plan. Departmental Representative will provide pertinent data including name of PWGSC and Facility Management contacts.

6. On-site Communication Plan:

- .1 Procedures for sharing of work related safety information to Sub Consultants, including emergency and evacuation measures.
- .2 List of critical work activities to be communicated with Facility Manager which have a risk of endangering health and safety of Facility users.

7. Address all activities of the Work including those of sub Consultants

8. Review Health and Safety Plan regularly during the Work. Update as conditions warrant to address emerging risks and hazards, such as whenever a new sub Consultant arrives at Work Site.

9. Departmental Representative will respond in writing, where deficiencies or concerns are noted and may request re-submission of the Plan with correction of deficiencies or concerns.

1.6 PWGSC Standards and Procedures

- .1 For standards relating to the service provisions required, please refer to the document "Doing Business with PWGSC Documentation and Deliverables Manual".

1.7 Coordination with PWGSC

- .1 The Project Manager assigned to the project is the Departmental Representative.

- .2 The Departmental Representative is directly concerned with the project and responsible for its progress.
- .3 The Departmental Representative is the liaison between the Consultant, Public Works and Government Services Canada and the Client Departments.
- .4 Public Works and Government Services Canada administers the project and exercises continuing control over the Consultant's work during all phases of development. Unless directed otherwise by the Departmental Representative, the Consultant obtains all Federal requirements and approvals necessary for the work. The Consultant shall:
 - A. Carry out services in accordance with approved documents and directions given by the Departmental Representative.
 - B. Prior to starting any project, obtain the Departmental Representative's approval of sub-Consultant(s).
 - C. Ensure all communications carry the PWGSC's Project Title, Project Number and File Number.
 - D. Advise the Departmental Representative of any changes that may affect schedule or budget or are inconsistent with instructions or written approvals previously given. The Consultant shall detail the extent and reasons for the changes and obtain written approval before proceeding.
 - E. When client requested changes, site factors, or other issues, alter the scope of work or add to the cost of the project, and/or the cost of services, request approval of the Departmental Representative prior to incorporation in the design. Be advised that, in general, Architectural/Engineering services provided to PWGSC must be complete in that they identify any issues that will have a significant impact on the project. This will provide a surprise-free environment, which will enhance the success of project implementation.

1.8 Coordination with Sub-Consultants

- .1 The Consultant shall:
 - A. Throughout all stages of the Project, coordinate and assume responsibility for the work of any sub-Consultants and specialists retained by the Consultant or provided by PWGSC.
 - B. Ensure clear, accurate and ongoing communication of concept, budget, and scheduling issues (including changes) as they relate to the responsibilities of all sub-Consultants and specialists from initial base building reviews to post construction reports.
 - C. Ensure Sub-Consultants provide adequate site inspection services and attend all required meetings.

1.9 Lines of Communication

- .1 Correspond only with the Departmental Representative at the times and in the manner dictated by the Departmental Representative. The Consultant shall not communicate with the client department unless so authorized in writing by the Departmental Representative.

1.10 Media

- .1 The Consultant shall not respond to requests for project related information or questions from the media. Such inquiries are to be directed to the Departmental Representative.

1.11 Meetings

- .1 The Departmental Representative shall arrange meetings every 2 weeks, and face to face workshops and presentations, or as agreed relative to project scope and phase of work, for all members of project team, including representatives from:
 - .1 Client Department
 - .2 Public Works and Government Services Canada
 - .3 Consultants
- .2 During the Covid-19 pandemic, it is expected that virtual video-conferences or arrangements are made to accommodate a safe environment as per the restrictions.
- .3 The Consultant shall chair the meetings, record the issues and decisions and prepare and distribute minutes within 48 hours of the meeting.

1.12 Project Response Time

- .1 It is a requirement that the prime Consultant and their proposed sub Consultants should be personally available to attend meetings within a maximum of 48 hours, in the locality of the place of the work and to respond to inquiries within a maximum of 24 hours of the Departmental Representative's request, from the date of the award of the Consultant call-up until final inspection and turnover.
- .2 The Consultant must demonstrate the availability of adequate resources to deliver the scope of services.

1.13 Submissions, Reviews and Approvals

- .1 Work in progress may be reviewed by the Departmental Representative as well as; but not limited to, the following:

.1 PWGSC in-house services

- .1 Submission Format: reports, drawings and specifications
- .2 Submission Schedule: Submissions are reviewed at a time to be arranged with 10 days' notice when completed work has been forwarded to the Departmental Representative.
- .3 Expected Turnaround Time: 2 weeks
- .4 Number of Submissions: until approval has been received

.2 Design review committee – client CSC

- .1 Submission Format: reports, drawings and specifications, and oral presentations
- .2 Submission Schedule: Submissions are reviewed at a time to be arranged with 10 days' notice
- .3 Expected Turnaround Time: 4 weeks
- .4 Number of Submissions: until approval has been received

1.14 Roles and Responsibilities

Departmental Representative

- .1 The PWGSC Departmental Representative or assigned Departmental Representative, as determined on a project by project basis, has overall responsibility for the progress of the project, including management, administration and coordination of the activities as set out in this Document.
- .2 PWGSC will review all respects of the Consultant Team's work on a continuing basis to determine the validity and completeness of the information provided. In the event PWGSC may identify areas of concern including errors and omissions as well as areas of inadequate detail or areas that require further explanation, the Consultant Team shall re-examine the documents provided and make such revisions as are subsequently agreed to be necessary and/or provide ample acceptable evidence that such corrections or amendments are unnecessary.
- .3 At the end of the contract, a Consultant Performance Evaluation Report Form (CPERF) will be prepared. Consultants with unsatisfactory reports may be prevented from participation in future proposals until PWGSC is assured that relevant corrective steps have been taken.

Consultant

- .1 Be responsible for the assembling and engagement of the complete design team required, to carry out the work in a conscientious and professional manner.

- .2 Be responsible for gathering, identifying and documenting the needs of the client department and incorporating those needs into the required project deliverables.
- .3 Establish and maintain, throughout the duration of each project, a team capable of effectively delivering the services described in this document.
- .4 Deliver the project within the time frame and assigned budget in accordance with the approved plan.
- .5 Coordinate project requirements with any other current and planned projects work that may be underway.
- .6 No acceptance by PWGSC, whether expressed or implied, shall be deemed to relieve the Consultant, of professional or technical responsibility for the correctness or completeness of any element of the project.

PA2 Issues

2.1 Major Cost Issues

- .1 Issue: Budget Limitations
- .2 Effective cost estimating and cost control is of prime importance and shall be provided by qualified personnel. The cost estimates shall be submitted in elemental cost analysis format. The standard of acceptance for this format is the current issue of the elemental cost analysis format issued by the Canadian Institute of Quantity Surveyors.

2.2 Major Time Issues

- .1 Issue: Out of Service Time Frame
- .2 It is imperative that the out of service time frame for the various projects as a result of construction be minimized as much as possible. Program operations and time frames will govern the particular allotted time frame for construction through the identified request for proposal.

2.3 Major Operational Issues

- .1 Issue: Adjacent Programs and On-Site Planned Projects
- .2 Minimize impact of any ongoing adjacent programs and applicable on-site planned projects is mandatory and therefore design decisions must be sensitive to this requirement. Additional factors recognized as affecting adjacent programs are the following: reliability of systems and equipment, redundancy to ensure continued operation and prolonged commissioning issues.

RS Required Services

Required Services – RS

Architectural	Required
Landscape Architecture	Required
Civil Engineering	Required
Mechanical Engineering	Required
Electrical Engineering	Required
Structural Engineering	Required
Sustainability Specialist	Required
Cost Planner and Estimating Specialists	Required
IT Security Systems Specialist	Required

RS 1 Pre-Design Services (REQUIRED)

1.1 Initiation and Orientation

See Project Brief

1.2 Consultation Process

See Project Brief

1.3 Health Care Model and Integration to Campus

See Project Brief

1.4 Feasibility Analysis and Site Development Options

See Project Brief see notes below

.1 Intent

.1 Feasibility Study:

A report which outlines the research and subsequent analysis to determine the viability and practicality of a project. A feasibility study analyzes economic, financial, market, regulatory, environmental, sustainability and technical issues. The purpose at this stage is to: investigate and analyze site conditions, including soil conditions, zoning, bylaws, traffic reports, service capacities, base building support systems, special purpose support systems etc. and to provide recommendations.

.2 Options Analysis:

A design test (in schematic form) for the feasibility study recommendations to determine that the recommendations can be accommodated in a minimum of three (3) distinctly different options.

.2 Scope and Deliverables

.1 Feasibility Study:

- .1 Analyze the project requirements/program;
- .2 Review pre-existing reports, including any prepared by other consultants, and verify the content;
- .3 Review all available existing material related to the facility;
- .4 Visit the building/site, investigate and analyze the availability and capacity of existing building services needed for the project, including renewable energy;
- .5 Investigate the requirements for the particular facility, including existing and new technologies;
- .6 Investigate and report on all applicable codes, regulations standards, including (but not limited to): National Building Code, Canada Labour Code, Model National Energy Code, NFPA;
- .7 Evaluate and report on existing facilities including: condition of; building envelope, mechanical, fire alarm, electronic security systems, electrical and structural systems, functional adaptability, code compliance, hazardous and non-hazardous waste deficiencies and life expectancy;
- .8 Identify and verify all authorities having jurisdiction over the project;
- .9 Establish a policy for this project to minimize environmental impacts consistent with the project objectives and economic constraints, and consider impacts of the application of the Canadian Environmental Assessment Act (CEAA); and
- .10 Prepare recommendations on the feasibility of the project with a written identification of the problems, conflicts or other perceived information/clarifying assumptions for the acknowledgment of the Departmental Representative.

.2 Options Analysis but not limited to:

- .1 Test the feasibility study recommendations on a minimum of three (3) options, schematic (sketch) only;
- .2 Bubble and flow diagrams;
- .3 Adjacencies and functional relationships;
- .4 Horizontal and vertical stacking relationships;
- .5 Site/Building orientation and options for renewable energy and
- .6 Indication of the preferred option.
- .7 Prepare Class 'D' Order of Magnitude Cost (for each option).
- .8 Report on recommended option;

1.5 Functional Program

See Project Brief and see notes below

.1 Intent

.1 Functional Requirements/Programming:

A written statement which describes client requirements for various design criteria including design objectives, site requirements and constraints, spatial requirements and relationships, building systems overview, and future expandability. The purpose of this stage is to describe the requirements which a building/facility must satisfy in order to support end user activities.

.2 This process seeks to answer the following questions:

What is the nature and scope of the problem?

What information is required to develop a proper built solution to the problem?

How much and what type of space is needed?

What space will be needed in the next 25 to 30 years to continue to operate efficiently?

How can sustainability be addressed at this stage?

.2 Scope and Deliverables

.1 In preparing a functional program, the consultant's main task is to examine the client's world in detail so as to define the clients' needs and objectives.

These requirements will establish criteria for evaluating potential design solutions and other strategic alternatives. The consultant must understand:

.1 The impacts of a building's occupants and processes on the built environment;

.2 The social and environmental impacts of the building's program on the community;

.3 The planning impacts of its function on the local infrastructure.

.2 To prepare a functional program, consultants shall identify, research, and observe the users of the proposed building / facility and their work activities, including:

.1 Perform Research and information gathering through information sessions with employees, focus group sessions etc. to discuss:

.1 Function-by-function, room-by-room, or branch by branch activity plans;

.2 Staffing plans (current/future);

.3 Office standards;

.4 Special purpose space;

.5 Support space;

- .6 Storage requirements.
 - .7 The volume of activity planned for specific facility components,
 - .8 Flow patterns (proximity / circulation).
- .3 The consultant shall then develop approximate floor areas and technical requirements for the proposed facility, including:
- .1 Details of the space, facility, or of the workstations;
 - .2 Special facility equipment or furniture configurations;
 - .3 Environmental criteria
- .4 The final Functional Requirements/Programming report may include (but not be limited to):
- .1 The client's philosophy, values, goals, and desired "image";
 - .2 Site requirements, such as parking, circulation orientation.
 - .3 "Bubble" diagrams and flow diagrams;
 - .4 Notes of issues that may affect project design/completion
 - .5 Explicit space requirements for the future building (facility), including:
 - .1 Definition of the activities which will take place in each space in the building usually expressed in "room data sheets" showing;
 - .2 The function, name and size of each space;
 - .3 The functional relationships of the room to other spaces;
 - .4 Furniture and equipment;
 - .5 Finishes to all surfaces;
 - .6 Mechanical and electrical requirements;
 - .7 Special technical / communication requirements;
- .5 Sketch (schematic) design options;
- .6 Other requirements including:
- .1 Regulatory issues such as zoning and building code requirements;
 - .2 Other requirements from Authorities having Jurisdiction;
 - .3 Community goals and concerns;
 - .4 Ecological and environmental concerns;
- .7 The consultant is to submit: a draft report and a final report as required in the project brief.
- .8 The final program document will include a full description of the work required in each space as well as an understanding of the required fire alarm network, electronic security systems integration to the existing MCCP, Mechanical and Electrical solutions. This data will form the basis for development of the Schematic Design.

1.6 Implementation Strategy and Schedule

.1 Intent

The purpose of this work is to prepare, an implementation strategy and or project schedule to meet the project goals and objectives at the pre-design stage.

.2 Scope and Deliverables

The consultant shall provide an implementation strategy and schedule including but not limited to:

- .1 A report, that outlines all activities, milestones and deliverables required for the effective delivery of the project including time frames for submissions, reviews and acceptances.
- .2 Prepare a project Time Plan (Project Schedule) that identifies, in a graphic format such as Critical Path Method (CPM), all major activities and important milestones.
- .3 The Implementation Strategy and Schedule may include known elements such as:
 - .1 Space acquisition strategy, building master plan;
 - .2 Decommissioning and environmental clean-up strategy;
 - .3 Major move milestones and swing space requirements;
 - .4 Construction strategy & implementation methods.
- .4 Advise the Departmental Representative of any risk issues that may affect schedule or are inconsistent with instructions or written acceptances previously given.
- .5 Submit the Implementation Strategy and Schedule for review. Revise as required. Resubmit for final acceptance.
- .6 The final accepted schedule will become the "Baseline" schedule to monitor project progress.
- .7 Throughout the project, monitor critical path and deadlines for submissions, revisions and acceptances. Submit progress reports at agreed times identifying completed deliverables, slippage and upcoming activities.

RS 2 SCHEMATIC DESIGN (REQUIRED)

.1 Intent

To translate the project requirements into viable options in the most economical, and environmentally sustainable manner. To explore the design options and analyze them with respect to the priorities and program objectives previously identified. Out of this process, one option will be recommended to proceed to Design Development.

.2 Scope and Deliverables:

- .1 Obtain written approval from the Departmental Representative for development of selected options base on the analysis of the Project Brief or from a completed RS-1 process.
- .2 Consultant will develop design options exploring possible technical and environmental strategies which are viable and which have potential for development;
- .3 Analyze each solution with regard to the project goals including cost and schedule;
- .4 Write a preliminary project-description report outlining the various major components and major systems for the various options;
- .5 Each discipline will begin reviews of applicable statutes, regulations, codes and by-laws as appropriate for this stage of design.
- .6 Produce a class 'C' cost estimate for the various options; *Class 'C' Estimate: to be in elemental cost analysis format latest edition issued by the Canadian Institute of Quantity Surveyors and based on a comprehensive list of requirements and assumptions, including a full description of the preferred schematic design option, construction/design experience, and market conditions; Class C estimates are developed during the NPMS Schematic Design Phase.*
- .7 Produce an implementation schedule, including alternative procurement and construction strategies for the various options;
- .8 Recommend one option for further development with all supporting background and technical justifications;
- .9 Consultant Team members are to participate in Design Review meetings as requested by the Departmental Representative.

.3 Detailed Description

- .1 Architectural Drawings:
 - .1 Provide schematic site plan showing proposed building outlines, orientation, main accesses and traffic patterns;
 - .2 Provide schematic building plans of alternatives showing relative disposition of main accommodation areas, circulation patterns, numbers of floors, etc.;
 - .3 Provide sketch elevations and sections indicating the basic design approach and aesthetic philosophy;

- .4 Provide sketch perspectives or massing studies;
 - .5 Calculate outside gross building areas and summary of main accommodation areas required and proposed;
 - .6 Indicate horizontal and vertical space relationships.
- .2 Structural Drawings:
- .1 Propose alternate structural systems including foundation methods, explanatory sketches, etc. and a copy of the site report on which the design is based;
 - .2 Review seismic report, if available. Provide analysis and recommendations.
- .3 Mechanical:
- .1 The schematic design submission shall include a description of general mechanical requirements and function for the project.
 - .2 Identify any unique or specialized equipment required by the subject facility. Incorporate in the submission a schedule of requirements and identify the mechanical building services to be provided.
 - .3 Explain in the concept submission the manner in which the proposed mechanical systems correlate with user requirements.
 - .4 Identify location of entry point into the building of all mechanical services into the building.
 - .5 Identify the general area and location required for mechanical rooms,
 - .6 Carry out preliminary energy analysis on system alternatives.
 - .7 Establish an energy budget for the building and compare it to energy consumption of other similar buildings. Total energy consumed in the building shall be expressed in kWh/m².
 - .8 Submit a preliminary energy analysis.
- .4 Fire and Life Safety Systems:
- .1 Show proposed fire protection system in the early design.
 - .2 Prepare schematic site plan showing the fire protection network and equipment.
 - .3 Identify the capacity of the existing system as well as its capability to integrate a new system.
 - .4 Prepare schematic floor plans complete with locations of fire protection equipment and distribution network plan to the MCCP.
- .5 Electrical:
- .1 Show proposed basic electrical systems of significance to the early design.
 - .2 Identify any unique or specialized equipment required by the subject facility
 - .3 Prepare schematic site plan showing location of service entrances.
 - .4 Prepare schematic Floor plans complete with locations of major electrical equipment and distribution centres.

-
- .5 Provide an electrical design synopsis, describing the electrical work in sufficient detail for assessment by the Department. Include feasibility of proposed systems complete with estimated loads.
 - .6 Electronic Security Systems:
 - .1 Prepare a Pre-Design Report (PDR). PDR must include: all Owner Project Requirements. Results of analysis and site condition assessment, including all items relating to the electrical and security systems, and technical justification. Written identification of the problems, conflicts or other perceived information / clarifying assumptions. A preliminary Basis of Design, including analysis of the related code and standards.
 - .2 Develop an outline specification for all systems and principle components and equipment, including manufacturers literature for principal equipment and system components proposed for use in the project.
 - .3 Submit a list of equipment. Analysis of the selected equipment with schematics and calculations sufficient to justify the economy of the selected system.
 - .4 Describe the ESS control schematics and sequence of operation.
 - .5 The ESS Specialist must work closely with CSC Security Electronics Authority to outline the commissioning requirements regarding the ESS including both systems verification and training.
 - .6 ESS Specifications will be available to awarded Consultant.
 - .7 Building Code Analysis:
 - .1 The building shall conform to the latest edition of the National Building Code and the National Fire Code, and Correctional Service Technical Criteria Document (TCD).
 - .8 Civil:
 - .1 Provide Schematic Design Drawings
 - .2 Site plan showing proposed works, existing infrastructure, existing and proposed services and fit within surrounding site context, connections to public utilities.
 - .3 Transportation facilities including vehicle access and circulation as well as planned pedestrian routes, sidewalks, crosswalks.
 - .4 Show options for access, parking, site municipal services including water supply, sanitary and storm sewer servicing.
 - .5 Coordinate building service locations with Mechanical and Electrical.
 - .6 Description of the options with recommendation of preferred solution;
 - .7 Plan to incorporate the recommendations of decisions for the CEAA (prepared by others), if required/requested
 - .8 Complete all site investigations and data collection including but not limited to geotechnical investigation and topographic survey.

.9 Commissioning:

- .1 Define Commissioning Requirements at each stage of design.

.10 Sustainable Development:

- .1 Design and evaluate Schematic Design Options exploring positive environment strategies.

.11 Specifications:

- .1 Prepare preliminary outline of NMS specification sections indicating main building components and any options for use of "Green" components and systems.

.12 Cost Plan:

- .1 Prepare preliminary cost plan from the selected schematic design;
- .2 Provide advice and recommendations on project planning in order to achieve the most cost effective project sequence;
- .3 Identify potential risks and make recommendations into minimize negative cost impacts; and/or
- .4 Identify, forecast and analyze project-related issues including possible market shortages and potential price fluctuations.

.13 Cost Estimate:

- .1 Prepare "class C" cost estimates;
- .2 Quantify design and construction costs, contingencies and risks;
- .3 Prepare and investigate costing alternatives to assist in the identification of the most cost-effective design and/or construction approach;
- .4 Investigate and report on life-cycle costs;
- .5 Document all unit pricing, analysis, and valuation

.14 Time Plan (Schedule):

- .1 Prepare project master schedule;
- .2 Identify potential risks to schedule;

RS 8 ESTIMATING AND COST PLANNING (ALL STAGES) (REQUIRED)

8.1 Cost Estimate Definitions

The current Treasury Board (TB) classification definitions are as follows:

- .1 An **Indicative Estimate**: is an estimate that is not sufficiently accurate to warrant TB acceptance as a cost objective and provides a rough cost projection used for budget planning purposes in the early stages of concept development of a project. It is usually based: on an operational statement of requirement (SOR), a market assessment of products and technological availability that would meet the requirement and other considerations such as implementation, life cycle costs and operational savings.

Indicative Estimates are used to seek [Preliminary Project Acceptance \(PPA\)](#) and Lease Project Acceptance (LPA).

- .2 A **Substantive Estimate** is one of high quality and reliability and is based on:

- .1 Detailed system and component design, design adaptation, work plans and drawings for components, construction or assembly, and installation. It includes site acquisition, preparation and any special requirements estimates. Contingency funding requirements must be justified based on line-by-line risk assessments, including market factors, industrial capability and labour considerations;

- .2 All significant and identifiable deliverables, as well as the costs of the government's contribution to employee benefit plans (20 percent of all salaries charged to the project);

- .3 All agreed objectives, including those resulting from procurement review; and,

- .4 Market assessment, where acquisition is through lease, lease purchase or capital lease. The provisional allowance for fit-up or special tailoring requirements will be subject to review and possible revision at the contract acceptance stage.

- .5 Substantive Estimates are used to seek [Effective Project Acceptance \(EPA\)](#)

- .3 **Real Property Branch (RPB) Estimating Process:**

For complex or sizeable projects, five categories of estimates are prepared in RPB. The process begins with the development of an initial estimate that is further developed during the early phases of the project. It is recommended that Public Works and Government Services Canada (PWGSC) Cost Planners be involved in preparing overall project budgets

for funding submissions, particularly for projects that are more complex than general-purpose office or warehouse space. Estimates should generally differentiate between base building and fit-up costs, as well as all site, PWGSC, consulting, other contracts and risk potential costs.

- .4 **Broad Cost Projection:** based on historical data from similar projects, indicates a budget for resources to develop a project up to PPA as well whether or not total project costs are expected to exceed \$1 million. This is not a construction estimate.
- .5 **Class 'D' (Indicative) Estimate:** to be in unit cost analysis format (such as cost per m² or other measurement unit) based upon a comprehensive list of project requirements (i.e. scope) and assumptions; the Class D estimate is evolved throughout the phases of the Project Identification Stage, finally being incorporated into the cash flows in the Analysis Phase; for more complex projects such as laboratories, elemental cost analysis and the input of specific disciplines may be required; *the Class D Indicative estimates developed during the National Project Management System (NPMS) Feasibility Phase shall be revisited with cost planners in the Analysis Phase before finalizing.*
- .6 **Class 'C' Estimate:** to be in elemental cost analysis format latest edition issued by the Canadian Institute of Quantity Surveyors and based on a comprehensive list of requirements and assumptions, including a full description of the preferred schematic design option, construction/design experience, and market conditions; *Class C estimates are developed during the NPMS Schematic Design Phase*
- .7 **Class 'B' (Substantive) Estimate:** to be in elemental cost analysis format latest edition issued by the Canadian Institute of Quantity Surveyors and based on design development drawings and outline specifications, which include the design of all major systems and subsystems, as well as the results of all site/installation investigations; *Class B estimates are developed during the NPMS Design Development Phase;*
- .8 **Class 'A' (Pre-Tender) Estimate:** to be in both elemental cost analysis format as well as trade divisional format latest edition issued by the Canadian Institute of Quantity Surveyors and based on completed construction drawings and specifications prepared prior to calling competitive tenders. The Class 'A' Estimate is generally expected to be within 5% to 10% of the actual contract award price for new construction. Tendering risks should be included in the project risk plan and costed accordingly. The accuracy of Class 'A' estimates can be influenced by many factors, including complexity of project, volatile market, remote locations, tight schedules, and unclear contract documents; *Class 'A'*

estimates are prepared during the NPMS Implementation Phase and can be a more accurate Substantive Estimate, depending on the complexity of the project;

8.2 Cost Specialist:

- .1 Delivering projects on time and within budget is a high priority. A fully qualified cost estimating, cost planning and cost control resource(s), referred to herein as the Cost Specialist, with a demonstrated record of successful cost management on construction projects may be required. This Cost Specialist will be conversant with all aspects of construction cost estimating during the design stages including the use of Elemental Cost Analysis, Risk Analysis, Life Cycle Costing and Value Engineering/Management techniques.
- .2 The purpose of cost planning and cost control is to assist in the accomplishment of project cost objectives. It is a continuous and interactive process involving planning, action, measurement, evaluation and revision.
- .3 For projects budgeted at more than \$1,000,000 construction value, the "Cost Specialist" shall hold one of three designations:
 - a) PQS (Professional Quantity Surveyor) or
 - b) CEC (Construction Estimator Certified) or
 - c) "Gold Seal Certified Estimator
- .4 For projects budgeted at more than \$5,000,000 construction value, an independent cost consulting firm shall be hired to perform the Cost Planning/Estimating functions.
- .5 Cost Plan presentation format: The link shown is to the NPMS system which gives the required forms and formats.
<http://www.tpsgc-PWGSC.gc.ca/biens-property/sngp-npms/conn-know/couts-cost/definition-eng.html>
- .6 When an estimate, at any stage, is presented for PWGSC review it must be covered by a "sign-off" sheet encompassing the names and signatures of all those sub consultants who contributed to the estimate. The submitting cost specialist will also verify, by signature, that the estimate has been coordinated, to properly contain all required elements relevant to the "class" of the submission.

8.3 Scope and Deliverables

- .1 The Cost Specialist shall provide an interactive cost consulting service from the commencement of project design through to construction completion and subsequent evaluation, including the preparation of complete estimates for all construction trades, escalation, inflation and contingency costs.
- .2 The Cost Specialist shall provide to PWGSC and the Consultant, a cost advising, and cost Monitoring / reporting service.

- .3 The Cost Specialist shall attend all relevant project and production meetings throughout the design phases and be prepared to present and defend the estimates directly to the Departmental Representative.

8.4 Exception Report

- .1 The Cost Specialist is to provide cost monitoring, timely identification and early warning of all changes that affect or potentially affect the estimated construction costs of the project.
- .2 If the estimate significantly falls short of or exceeds the Construction Cost Limit due to such changes, the Cost Specialist with the Consultant team shall fully advise the Departmental Representative. The Cost Specialist with the Consultant team shall submit to PWGSC proposed alternative design solutions.
- .3 An Exception Report will include sufficient description and cost detail to clearly identify:
 - .1 Scope Change: Identifying the nature, reason and total cost impact of all identified and potential project scope changes affecting Construction Cost Estimate.
 - .2 Cost Overruns and Under runs: Identifying the nature, the reason and the total cost impact of all identified and potential cost variations.
 - .3 Options Enabling a return to the Construction Cost Estimate: Identifying the nature and potential cost effects of all identified options proposed, in order to return the project within the Construction Cost Estimate

8.5 Responsibilities to PWGSC

- .1 PWGSC will review all respects of the Cost Specialist's work on a continuing basis to determine the validity and completeness of the information provided. In the event PWGSC may identify areas of concern including errors and omissions as well as areas of inadequate detail or areas that require further explanation, the Cost Specialist shall re-examine the estimates provided and make such revisions as are subsequently agreed to be necessary and/or provide ample acceptable evidence that such corrections or amendments are unnecessary.

8.6 No Action Abrogates Consultant's Responsibilities

- .1 No acceptance by PWGSC/TC, whether expressed or implied, shall be deemed to relieve the Cost Specialist, or the Consultant, of professional or technical responsibility for the estimates and cost reports.
- .2 Neither does acceptance of an estimate by PWGSC/TC in any way abrogate the Consultant Team's responsibility to maintain the specified Construction Cost Limit throughout the life of the project, or the requirement to redesign should the lowest acceptable bid differ significantly (more than 10% above) the accepted Class A estimate, unless and until the Departmental Representative indicates otherwise in writing.

RS 9 Sustainable Development Strategies and Reports (ALL STAGES) **(REQUIRED)**

9.1 Intent

- .1 The purpose is to research and investigate a wide range of strategies to achieve sustainability including; but, not limited to:
 - .1 Recycling and reuse of materials, systems, equipment;
 - .2 Procurement of "green" materials;
 - .3 Energy reduction and management;
 - .4 Water management
 - .5 Waste reduction and management;
 - .6 Life-cycle costing, cost benefit analysis;
 - .7 Integrated Design process.
 - .8 Review applicable recommendations identified in the Energy Performance report for this site, if available.

9.2 Scope and Deliverables

- .1 The consultant shall research and investigate sustainable development strategies and make recommendations.
- .2 Investigate and identify potential "green" building materials and products for the project including sourcing (i.e. In order to meet government objectives sole source maybe necessary). Verify with client department. Revise as required and submit for acceptance.
- .3 Investigate and analyze potential to meet or exceed the latest Energy Code in the jurisdiction, by 30% to 50%.
- .4 Make recommendations for an Energy Reduction and Management plan.
- .5 Investigate and analyze potential to increasing energy efficiency, and strategies to decrease water run-off.
- .6 Develop a non-hazardous and hazardous waste reduction and management plan. Make recommendations, verify with client department. Revise as required. Obtain acceptance.
- .7 Based on the recommendations perform a cost / benefit and life-cycle costing analysis for the Sustainability Strategy for the project.
- .8 Develop Operating and Maintenance Cost estimates and opinions.
- .9 Submit the Sustainability Strategy for review, in a report.
- .10 Submit energy and water conservation technologies and innovations options for the new construction.
- .11 Revise as required.
- .12 Resubmit for final acceptance.
- .13 Submit calculations, analysis, mapping, and narratives to demonstrate how the concept design options will meet Net Zero-Carbon. Investigate and identify strategies and options.
- .14 Identify what Federal and Provincial Regulations will be triggered as a result of this new construction.
- .15 Identify documents, process, timeline, and options if an assessment will be required in the design phase.