

CSC National Training Academy

CONSTRUCTION
MANAGEMENT RFP

PROJECT BRIEF

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For standards relating to the service provisions herein please refer to the document “Doing Business with A&E Ontario Region”. The standards in “Doing Business with A&E Ontario Region” must be adhered to in conjunction with this scope of services.

DESCRIPTION OF PROJECT

PD 1 PROJECT INFORMATION

Public Services and Procurement Canada (PSPC), on behalf of Correctional Service Canada (CSC), intends to retain the services of a Construction Manager (CM) to renovate the interim CSC National Training Academy

1.1 PSPC Project Title: Interim CSC National Training Academy

1.2 Location of the Project: 443 Union Street West, Kingston, Ontario

1.3 PSPC Project Number: R.090864.001

PD 2 PROJECT IDENTIFICATION

2.1 Purpose of Document

On Behalf of Correctional Service Canada (CSC), Public Services and Procurement Canada (PSPC) has prepared this Request for Proposal to engage the services of a Construction Manager (CM) to provide CM Advisory (CMa) and CM General Contractor (CMc) Services for the *Interim CSC National Training Academy* project and to ensure that the CM has a clear understanding of the project scope, procedures, and performance requirements.

2.2 Project Description

- **Description of Project**

Construction Manager (CM) to provide CM Advisory and CM General Contractor Services for the following two projects: 1. Interim CSC National Training Academy, 2. Firing Range Upgrade. The following is an overview of the projects.

- **Interim CSC National Training Academy:**

The objective of this project is for the interim accommodation of the CSC National Training Academy. It is envisioned that the interim accommodation will be for three years. The interim accommodation requires the following type of spaces: simulation areas, classrooms, food services, and accommodation. The renovation at the Staff College will provide the Learning Centre: simulation areas, classroom spaces, kitchen, and dining hall. The renovation of Westlake Hall will restore the building back to its original accommodation function. The minor renovation of the three houses (Harmony House, Elmhirst House, and Trono Commons House) on the grounds of RHQ will involve updating of the interior layout to become more conducive for shared accommodation. Common functions such as shower will be available on each floor. CSC visualizes renovating Staff College and Westlake Hall in keeping with the overall CSC campus plan.

Simulation Training Area will be constructed to simulate the look and feel of working inside a CSC Institution. Although plumbing in each cell is not functional, fire protection system, electrical outlets and lighting are required to be operational. All finishes and equipment must match the type and finish at the CSC Institution.

Provide sprinklers in the Cell Range. Install sprinkler in each cell. The simulation area requires electronic security as part of the training. Devices for listening and audio recording are required in the simulation areas and then wired to the Observation Room, the Classroom on the 1st floor and an office on the 2nd floor. Classroom Training Spaces consist of structured learning. The Interim Training Academy is to provide training spaces that will maximize the experience and realism of being on the job, where possible.

Simulation Training Areas are located in both exterior and interior of the building. Interior Simulation Training consists of: maximum and medium security cells and ranges, as well as the Principle Entrance Control Post. Inmate exercise yard will be an exterior simulation. Observation Area is next to the Principle Entrance simulation so the trainers can observe and listen into the simulation in action. Provide viewing windows along the corridor and around each simulation area to permit viewing into the Training Areas where possible.

Vehicle movement around the new exterior yard simulation shall be investigated. Designer shall consider safety of the staff and recruits when locating the Yard Simulations.

Special ventilation is required for one cell at the maximum and medium simulation training area. Provide zoned HVAC distribution within simulation training area to allow for flexibility.

- One cell per security level shall be designed for inert training gas control:
 - Inert simulation gas will be used to simulate riot control in inmate occupied area. The ventilation systems should be designed to minimize the spread of tear gas laden air to adjacent area or areas remote from the source.
 - An exhaust system shall exhaust the inert simulation gas directly to the exterior of the building. Mechanical design shall prevent the inert gas from returning into the main building ventilation system.

Provide security electronics at both exterior and interior simulation training area for training purpose. Design, specification, and location of security system components shall be coordinated with the CSC ESS Specialist. It is also suggested that the interior cameras be deployed with open cable trays as conduit is not necessary to protect the wiring. Work on security systems shall include but not limited to the following:

1. Supplementary Intrusion Detection System at Yard Simulation.
 - a. Outdoor cameras and PA.
 - b. Fence Disturbance System– The system is controlled by the trainer switching on/off during the simulation.
 - c. Motion Detection System– The system is controlled by the trainer switching on/off during the simulation.
2. Classroom for briefing
 - a. Video cameras – view meeting tables and other areas in room
 - b. Video monitor – view cameras
 - c. Audio intercept – initiated and monitor authorized recordings
3. Radios
 - a. Main transmitter antenna and amplifiers at the common equipment room.
 - b. Radio channel controls at the MCCP.
 - c. Individual radios
4. Personal Portable Alarms
 - a. Alarm reporting
 - b. Individual transmitters
5. Maximum cells and Medium cells
 - a. Inmate Cell Call System
 - b. Security Patrol System

- c. Door Control System
 - d. Public Address
6. Network Video User Station at the maximum and medium range control post.
- a. Observation cell cameras
 - b. Range cameras (only in a maximum living unit)
 - c. Door and hallway cameras
7. Communications:
- PA system is required at the Maximum and Medium cell range, Training Briefing Room and Control Posts. The radio base station, radios and chargers will be needed. The PPA system would require a receiver and enough PPA units for training. PPA and Radio will need to be integrated into the MCCP.
8. Visitor Screening Simulation / Principle Entrance Control Post:
- At maximum cell range, provide power necessary for the operation of one x-ray machine, one walk thru metal detector, one ion scanner, and one hand held metal detector.
- At the maximum and medium security level simulation area, the respective Control Post has the capability to monitor each cell and the entire range. Provide CCTV cameras as per CSC TCD requirement. For training and instructional purpose, install cameras facing the cell door on both sides of the cell for monitoring of simulation.
- Install audio devices in each cell and at the range for listening and recording of the simulation training. Listening of the simulation training will take place in the Observation Room, one classroom on the first floor, and one of the second floor offices. Recording of the simulation training will occur in either one of these three locations.
- Administration and Office Support Space are typical office function. The spaces should meet barrier-free design requirements and designed to PWGSC fit-up standards.
- At both Staff College and Westlake Hall, energy efficiency and cost saving design is encouraged. Retrofit existing mechanical system to suit the different functional requirements. Except for simulation area, all spaces must meet accessible design requirement.

- **Firing Range Upgrade:**

The following firing ranges require upgrade in order to meet the training curriculum: (1) DND Firing Range at CFB Kingston, (2) Joyceville Institution Firing Range, and (3) Millhaven Institution Firing Range. The Firing Range Upgrade will increase the existing range to 16 lanes and provide a heated area for recruits' training during the winter season.

This project will be divided into two phases: Design Services and Tender & Construction Services. It is tied to the program's funding and delivery schedule commitments, with a completion deadline of March 1st, 2018. This is on a fast-track schedule.

The project requires a multi-disciplinary Project Team with experience in design and construction of correctional facilities and operations. PSPC intends to engage a Consultant to prepare the design and construction documents and provide construction administration for this project through a separate Request For Proposal. The Consultant will engage the Commissioning Manager (CxM) to establish and document CSC's criteria for system function, performance and maintainability, and to verify and document compliance with these criterion throughout design, construction, start-up, initial period of operation, and seasonal testing. PSPC will engage an Environmental Consultant for the Environmental Effects Evaluation (EEE) at the CSC Firing Ranges..

The Construction Manager shall note, Shared Services Canada (SSC) is responsible for the installation of IT Cabling. The consultant and Construction Manager shall incorporate general cabling supporting infrastructure and telecom room requirements in the design only. Physical cables and associated equipment are to be supplied by others. General Cabling Supporting Infrastructure and telecom room requirements will be made available to the successful proponent.

Electronics Security System (ESS) is not the same as SSC or IT at CSC. The Construction Manager is responsible for the installation of cabling and associated equipment relating to ESS. The Design Consultant and CM shall incorporate cabling supporting infrastructure and ESS equipment room requirements in the design. ESS requirements will be made available to the successful proponent.

The Construction Manager is responsible for the supply and installation of the Food Services equipment. Three meals will be served to the CSC recruits each day, seven days a week. The CM shall work in collaboration with the Food Services Consultant and CSC to ensure the kitchen and dining hall design, as well as the equipment installation and commissioning meet the client requirement, applicable codes and standards.

The Construction Manager (CM) shall work in collaboration with the project team and stakeholders, by providing: advisory input during design, procurement of Subcontractors and management of the overall construction of the project until completion.

Please CM for Food Services

2.3 Cost

2.3.1 Estimated Construction Costs

The total Estimated Construction Cost for the project is \$5,000,000, including construction contingencies, excluding HST. The construction cost estimates do not include Administration costs; Project Management fees; Design Consultant or CM fees.

Estimated Construction Cost is in 'Budget-Year (Current)' dollars and it includes General Contractor Services and an allowance for escalation and contingencies.

The Construction Manager will work in collaboration with the consultant on the division of the scope of work into work packages, which are to be delivered by the completion deadline of March 1st, 2018 and their costs.

The Crown will not accept scope creep or cost escalation of selected Proponent's proposal, except in the limited situations as stipulated in the terms of the contract.

2.4 Tentative Schedule

This project must be completed within the time limits; this is a fast-track project. The project completion date shall be scheduled for March 1st, 2018 and will be completed in a single phase, as listed below:

Activities	Duration
CM Contract Award	Baseline
Design, Tender and Construction Services RS 1 Advisory Support Services RS 2 Schedule Management Services RS 3 Cost Management Services RS 4 Risk Management Services RS 5 Scope Control Services RS 6 Quality Control Services RS 7 Health and Safety Planning and Implementation RS 8 Reporting and Project Site Documents RS 9 Tendering the Work RS 10 Commissioning RS 11 Construction Monitoring RS 12 Changes RS 13 Construction General Instruction	13 weeks
TOTAL	13 weeks

This is a single year project that is expected to be awarded in 2017, to both Consultant(s) and CM, and is projected to continue until year 2018. The tendering process will be done by the CM and will be organized as separate tendering packages to accommodate the phasing of the work packages.

The design of the Interim CSC National Training Academy has been developed up to the Design Concept stage. The scope of work for each work packages to be tendered by the CM, are to be developed jointly by the CM and Consultant.

The above time allocations shall take into effect immediately after the award of a contract to the successful proponent. Activity durations are preliminary, and the CM is responsible for verifying and confirming the above schedule dates as part of its scheduling mandate.

PD 3 PROJECT BACKGROUND

3.1 Project History

3.2 Summary of Planning

A Design will be developed by the Consultant Team and this will provide recommendation on the overall planning of the Interim CSC National Training Academy facility. The design will include strategies for providing maximum flexibility and adaptability to facilitate operational needs of CSC.

3.3 Stakeholders

Project Primary Stakeholders are representatives from the following organizations:

- Correctional Service Canada - Client Department / User – Project Leader
- PSPC - Real Property Branch, Professional and Technical Services - Project Manager
- PSPC - Architectural Consultant(s)

3.4 Site characteristics, Challenges

The CM shall:

- Undertake a review of the existing conditions of the site and confirm the services and locates information provided is accurate, and where the work has been identified, ensure safety of the site.

3.5 Federal Objectives

PSPC has developed a Sustainable Building Policy that contains integrated environmental considerations into the building planning, design and construction stages. CSC has a SDS Checklist that the Consultant is encouraged to follow.

This project must be designed and detailed with due diligence to demonstrate that long term considerations have been examined. These considerations pertain to all building systems. Life cycle analysis must be considered in design, detailing and material selection. Durability and ease of maintenance and equipment replacement must be demonstrated throughout the project.

PD 4 EXISTING DOCUMENTATION

4.1 Existing Documentation - Available to all Proponents

- Existing drawings and reports
- 2009 July 17 _ Updated Asbestos Survey by XCG Consultant Ltd.
- 2009 July 17 _ Environmental Conditions and Operations Audit by XCG Consultants Ltd.
- 2005 July 15 _ Designated Substances and Hazardous Materials Survey by XCG Consultant Ltd.
- As built information: CSC Staff College: Archived AutoCAD, as-built PDFs, specifications, photographs, etc.
- Structural Report: Structural Inspection and Assessment, Westlake Hall, 466 Union St., Kingston, ON by AECOM, dated June 2009
- Environmental Report: Updated Asbestos Survey, Westlake Hall, 466 Union St., Kingston, ON by XCG, dated July 17, 2009.
- Fire Protection Report: Asset Evaluation of Fire and Life Safety, Westlake Hall, 466 Union St., Kingston, ON, by J.L. Richards, dated Dec. 2009
- Accessibility Report: Accessibility Audit by PWGSC, Westlake Hall, 466 Union St., Kingston, ON, dated January 2010
- Designated Substances and Hazardous Materials Survey, Westlake Hall, 466 Union St., Kingston, ON, by XCG, dated July 15, 2005.
- Condition Survey, Physical Plant, Westlake Hall, 466 Union St., Kingston, ON by PWGSC, dated 2009.
- Condition Survey: Exterior Elements Condition Survey, Westlake Hall, 466 Union St., Kingston, ON, date Dec. 23, 2009, author unknown.
- Site Drawings, Westlake Hall, 466 Union St., Kingston, ON, by PWGSC, dated 2009 Dec. 18
- Asset Inventory Report, Westlake Hall, 466 Union St., Kingston, ON, date unknown, author unknown
- CPIC
- CSC Technical Criteria
- CSC Accommodation Guidelines
- CSC National Telecommunications Cabling Standard
- CSC Electronics Security System (ESS) Specifications
- CSC Physical Security Commissionaire's Directive
- CSC Sustainable Development Strategy Checklist

4.1.1 Access to Existing Documentation

The existing documentation is available to all proponents and can be obtained electronically on CD from the PSPC Real Property Contracting Office upon request.

4.2 Existing Documentation - To be made available to the Successful Proponent

Upon award, copies of all pertinent documentation will be made available to the CM.

- Geotechnical Report (PSPC, to be completed July 2016).
- Utility Locates and Topo Survey (PSPC, to be completed March 2016).
- Government of Canada Workplace 2.0 Fit-Up Standards
- PWGSC Commissioning Manual (CP.1), latest edition
- Shared Services Canada (SSC) General Cabling Supporting Infrastructure Requirements
- Shared Services Canada (SSC) Statement of Requirements for Telecom Rooms
Add DST is working on the DSS investigation and reports.
- CSC Electronics Security System (ESS) Specifications

4.3 Documentation in Progress (not yet completed, but will be available to the Successful Proponent)

- Designated Substance Survey (to be completed Sept 2017)

4.4 Disclaimer

Reference Information will be available in the language in which it is written. The documentation may be unreliable and is offered, "As is" for the information of the Consultant.

PD 5 PROJECT OBJECTIVES

5.1 Quality

5.1.1 Design Principles – General

- The level of quality is to be consistent with other Government of Canada correctional facilities.
- The project is to be implemented in an environmentally responsible manner, providing a healthy and safe work environment that meets all applicable codes and supports optimum operations.
- Quality of materials, details and construction methods shall be commensurate with the type of building and allocated budget, and take into account the total life-cycling of the building. Experimental materials should be avoided.
- The character, massing, scale, materials of this project will be compatible with its surrounding context.
- Operating costs must be kept to a minimum and reflect the projected operating costs in the cost plan. This is to be achieved by compliance with the energy budget, selection of equipment, requiring the minimum of operating personnel and building finishes for easy maintenance.

5.1.2 Design Principles – Specific

Building Standards: Need to be reviewed by CSC

- The administration office area and its support office space are to comply with the Government of Canada Workplace 2.0 Fit-Up Standards. A copy of the fit-up standards will be made available to the successful proponent.
- Simulation spaces shall comply with CSC TCD. Plumbing is not required to be operational in the simulation space as it will not be used to house inmates. The security and finish of the simulation spaces shall match CSC requirement.
- For commissioning activities and documentation refer to PSPC Commissioning Manual (CP.1), latest edition.
- For ESS commissioning activities and documentation, ESS requirements will be made available to the successful proponent.
- The Telecom Room, Cabling Infrastructure and Conduit Requirements are to comply with the following Shared Services requirements:
 - General Cabling Supporting Infrastructure Requirements
 - Statement of Requirements for Telecom Rooms

Food Services:

- The kitchen operation must be able to feed three groups of 32 recruits for a four months cycle. CSC wishes the Dining Hall have the capacity to seat 96 recruits at a given time. If this is not feasible, a minimum of two groups of 32 must be accommodated at each meal time.
- Kitchen equipment must be sized appropriately to suit CSC operational needs.
- Water and energy conservation measures/equipment and solid waste management must be included in the design.

- Sustainable design must be considered.

5.2 Sustainable Development

The CSC National Training Academy shall be aligned with the Federal Sustainable Development Strategy (FSDS) and federal government's framework for sustainability. Priorities should be given to improve indoor environment quality and performance of the buildings, promote water conservation, reduce energy usage and greenhouse gas emissions, and use durable and low environmental impact materials, finishes and furniture. The consultant team will include a Sustainable Design Specialist to guide this process. Consultant shall follow CSC Sustainable Design Strategy and use CSC SDS Checklist.

5.3 Waste Management

The project will be implemented in an environmentally responsible manner.

The Construction Renovation and Demolition (CRD) waste management practices are to be carried out in line with industry standards to support Federal Sustainable Development Strategy, and at minimum should seek to reuse and/or recycle all possible materials where local services and markets exist, and should ensure that CRD waste management practices meet any provincial regulations, city and/or municipal bylaws concerning CRD waste.

The CM shall work with the Consultant Team to implement a waste management program that complies with applicable provincial regulations and federal policies. For all Real Property Branch projects greater than \$1 million, a solid waste management program must be implemented to maximize reuse and recycling opportunities where the infrastructure exists. This requirement exists by regulation in the province of Ontario for projects greater than 2,000 m² (O. Reg. 102/94 and 103/94) and by policy for the rest of Canada. It is a PSPC best practice to achieve a minimum landfill diversion rate of 75%.

5.4 Code and Standard Compliance

Codes, regulations, by laws and decisions of "authorities having jurisdiction" must be observed. National model codes, acts and standards must be observed. PSPC and CSC Departmental Policies, Directive and Standards must be adhered to. The latest editions of the applicable codes, standards, guidelines, regulations, and by-laws, are to be followed, including but not limited to the following:

1. National Building Code of Canada;
2. National Fire Code of Canada;
3. National Plumbing Code of Canada;
4. Canadian Electrical Code;
5. Canada Labour Code;
6. Treasury Board of Canada Secretariat, Directives and Standards;
7. Canada Occupational Health and Safety Regulations;
8. Environment Canada Codes of Practice;

9. National Energy Code of Canada for Buildings;
10. PSPC Federal Office Building Standards;
11. Government of Canada Workplace 2.0 Fit-up Standards;
12. Canadian Standards Association, Standards and Guidelines;
13. ANSI, ASHRAE, ASTM, AWMAC, FM, MPI, TSSA, ULC Standards;
14. Provincial Codes and Municipal Codes and By-Laws, as applicable;
15. CSC TCD;
16. NFPA Codes and Standards
17. Halocarbon Regulation <http://laws-lois.justice.gc.ca/eng/regulations/sor-2003-289/index.html>

Authorities having jurisdiction shall review the design in order to obtain and apply approvals and permits required for the project. In cases of overlap, the most stringent requirements will apply. Refer to PSPC document “Doing Business with A&E Ontario Region” attached in Appendix D for a minimal list of applicable codes, regulations, standards and guidelines.

5.5 Risk Management

A risk management strategy is crucial for PSPC 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.

5.6 Health and Safety

PSPC 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.

In keeping with the responsibility and in order to enhance health and safety protection for all individuals on federal construction sites, PSPC will voluntarily comply with the applicable provincial/territorial construction health and safety acts and regulations, in addition to the related Canada Occupational Health and Safety Regulations.

The Staff College will be partially occupied by staff as well as for training purpose during the renovation. The adjacent CSC Regional Headquarter Building will be occupied Monday to Friday, and the parking lot will be used by CSC staff and visitors. It is critical that the CM Contractor zone be separated from the public, visitor, and CSC staff.

PD 6 ISSUES

6.1 Major Cost Issues

Effective cost estimating and cost control is of prime importance and shall be provided by professional quantity surveyors. The CM shall advise the Consultant on the cost estimates, as described in RS 3 – Cost Services. The Class ‘C’ and Class ‘B’ 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.

The Class ‘A’ cost estimate shall be submitted in trade cost breakdown format. Cost estimates shall have a summary, plus full back-up showing items of work, quantities, unit prices, and amounts.

6.2 Major Phasing Issues

A single phase approach is being used for the implementation of this project.

The CM services includes:

- RS 1 Advisory Support Services
- RS 2 Schedule Management Services
- RS 3 Cost Management Services
- RS 4 Risk Management Services
- RS 5 Scope Control Services
- RS 6 Quality Control Services
- RS 7 Health and Safety Planning and Implementation
- RS 8 Reporting and Project Site Documents
- RS 9 Tendering the Work
- RS 10 Commissioning
- RS 11 Construction Monitoring
- RS 12 Changes (Notices and Orders)
- RS 13 Construction General Instructions

PD 7 PROJECT DELIVERY APPROACH

7.1 General

1. The CM, in consultation with the Departmental Representative shall:
 - a. Perform the role of CM for the Project respecting the approved scope, quality, budget and schedule; and
 - b. Develop partnership and communication between all members of the project delivery team and stakeholders throughout all phases of the project life.
2. All Services and duties listed and allocated to the CM throughout the Required Services section are:
 - a. The full responsibility of the CM; and
 - b. Are not exhaustive and do not preclude alternative or supplementary approaches as may be suggested by the CM for consideration by the Departmental Representative and vice versa.

7.2 Summary of Personnel and Qualifications

1. The CM shall provide a Construction Management team with the following specialists / subject matter experts:
 - a. Risk Management Specialist;
 - b. Schedule Management Specialist;
 - c. Budgeting Specialist;
 - d. Waste Management Specialist;
 - e. Quantity Surveying Specialist;
 - f. Commissioning Process Manager;
 - g. Construction Manager;
 - h. Deputy Construction Manager
 - i. Construction Site Superintendent;
 - j. Construction Quality Management Specialist.

The CM shall report directly to the PSPC Departmental Representative.

7.3 Project Delivery Objectives and Requisite

1. Under this project delivery approach, responsibility of the CM shall include Advisory and Support services (CMA) and General Contractor (GC/CMc) required services.
 - a. The primary reason for this approach is that a Construction Manager (CM) will provide PSPC with valuable construction advice and the flexibility to implement and coordinate multiple projects and sub-projects and phases and expedite the schedule of completion of the work.
 - b. Having one construction manager to oversee all sub-projects on this project provides advantages of coordination, quality assurance, efficiency and scale.
2. The Construction Manager shall:

- a. Provide Construction Management services, Advisory (CMa) and General Contractor (CMc) Required Services, throughout the project life cycle.
 - i. All Services and duties listed and allocated to the CM throughout the Required Services sections are not exhaustive and do not preclude alternative or supplementary approaches as may be suggested by the CM for consideration by the Departmental Representative and vice versa.
- b. Deliver project according to the Project Milestones, within approved scope, quality, budget and construction cost estimate and schedule. The project milestones are as follows:
 - i. : Design
 - Design Development
 - Contract Documents
 - a. Work Package Submissions at 50%, 99%, & 100%
 - ii. : Tender & Construction
 - Tender Call, Bid Evaluation and Contract Award
 - a. Tender of each Work Package
 - Construction and Contract Administration
 - Commissioning (Building System, ESS Equipment, and Kitchen equipment)
 - Training
 - Closeout
- c. A continuous risk management program to address the risks associated with designing and renovating facilities in an occupied facility,
- d. A quality management plan that includes quality reviews on a construction management project delivery approach, and
- e. Contingency plans to mitigate potential delays arising from logistic and weather related challenges.

7.4 Design Phase

1. For the design phase of this Project, an Architectural and Engineering firm (referred to herein as the Consultant) is being engaged to complete the design and will direct and co-ordinate all phases of the design work for this Project.
2. During design phase,
 - a. Architectural and Engineering services including all cross discipline coordination work has been provided by the Consultant Team.
 - b. The CM shall provide advisory and support services to the design team and provide quality reviews on the constructability of proposed designs and tender ready packages. Written comments shall be submitted before any construction work begins.
3. The Consultant Team will work closely with the CM to develop the design and ensure that all information is made available to the CM. The CM shall provide advice on CM activities:

- a. Construction costs;
- b. Material delivery & construction schedules;
- c. Constructability;
- d. Suitability and availability of materials and components;
- e. Sustainable design, construction, and operation principles and practices;
- f. Risk Management Report.

7.5 Tender & Construction

1. The CM shall provide services as the General Contractor during the construction phase of the project.
 - a. The CM shall provide the Crown with flexibility to implement and coordinate multiple tender packages, and phases and shall expedite the schedule of completion of the Work.
 - b. The CM shall oversee all construction tender packages on the building site and provide coordination, quality assurance and efficiency.
 - c. The CM, in consultation with the Consultant Team and Departmental Representative, will help determine the number of tender packages required for the project. This is to enable the Consultant Team to prepare the tender packages in a timely manner and ensure full co-ordination of the work of all disciplines.

7.6 Tentative Work / Tender Packages

1. The project will be delivered using multiple work and tender packages. The work packages will be determined in consultation with the Consultant during the design phase, and reviewed with the Departmental Representative prior to tender.

DESCRIPTION OF SERVICES

PA1 PROJECT ADMINISTRATION

INTENT

The following administrative requirements apply during all phases of project delivery.

1.1 Departmental Representative

The PSPC Project Manager assigned to the project is the Departmental Representative (DR).

The Departmental Representative is responsible for managing the CM's Contract. The CM reports to the Departmental Representative.

The Departmental Representative is directly concerned with the project and responsible for its progress. The Departmental Representative is the liaison between the CM, the Consultant, and the Client Department.

1.2 Client Department

Correctional Service Canada (CSC) is the Client Department for this project, and will provide design approvals and quality reviews and acceptance. CSC will work closely with the Departmental Representative to define the project requirements, facilitate access to the site and support the Project Team.

1.3 Shared Services Canada (SSC)

Shared Services Canada (SSC) is the government department responsible for all IT cabling. SSC designs, supplies, and installs all IT cabling on this project. The consultant shall incorporate general cabling supporting infrastructure and telecom room requirements in the design only. Physical cables and associated equipment are to be supplied by others (SSC). General Cabling Supporting Infrastructure and telecom room requirements will be made available to the successful proponent. SSC will supply an IT cabling location plan, based on the floor and furniture plans developed by the Consultant, for design of the cabling infrastructure.

1.4 Electronic Security System (ESS)

ESS is a specialized discipline at Correctional Service Canada that provides specific security system services to CSC. ESS is not the same as SSC. Due to the sensitive nature of the information, ESS requirements will be made available to the successful proponent.

1.5 Correspondence

All correspondence related to this project and communication protocol shall be distributed as directed and approved by the Departmental Representative. All communications must carry the Contract name/number, PSPC project title and project number. The date format will be ~~yy-mm-dd~~. All email correspondence must have subject lines with the PSPC project number and wording of subject line must be clear.

1.6 Lines of Communication

Unless otherwise arranged with Departmental Representative, the CM shall communicate directly with the Departmental Representative. The CM will also work in collaboration with the Consultant Team and participate in design meetings to provide constructability advice and recommendations for the construction phasing and tender package sequencing. There shall be no direct official contact between the Client Department and the CM.

1.7 Media

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

1.8 Codes and Standards

The CM shall comply with the latest addition of all statutes, codes, regulations, and by-laws applicable to the design and where necessary, shall review the design with that Public Authorities Having Jurisdiction in order that the consents, approvals, licenses and permits required for the project may be applied for and obtained. Unless otherwise advised federal codes and standards will govern.

The CM shall identify all jurisdictions appropriate to the project.

1.9 Health and Safety

The CM shall abide by the current Occupational Health and Safety Act and Regulations and Environmental Acts and Regulations.

1.10 Sustainable Development

The CM shall be conscious of Sustainable Development Principles, and incorporate them into the project.

1.11 Project Meetings

The CM shall arrange bi-weekly meetings for the Project Team during project implementation at the project site. The Construction Manager, PSPC, the Consultants, representative from CSC, CxM, shall attend the project meetings; CM shall include representatives of key disciplines at the meeting as well as Environmental Consultant when required.

Design Meetings

The Consultant shall chair these meetings and distribute the meeting minutes within 48 hours of the meeting. The CM's Project Manager shall attend these meetings.

Construction Meetings

The CM shall hold construction meetings with Subcontractors, PSPC, CSC, and the Consultant to discuss and coordinate the work and its progress. Prepare and distribute meeting minutes within 48 hours of the meeting, with copies to the Project Team.

Commissioning Meetings

Once commissioning commences, the CM shall attend separate commissioning meetings with Subcontractors, PSPC, CSC, the Consultant and the Commissioning Manager to discuss and coordinate the commissioning of work and its progress. The CxM will prepare and distribute meeting minutes within 48 hours of the meeting, with copies to the Project Team.

1.12 Project Response Time

It is a requirement of this project that the CM and the CM's key personnel and Subcontractors be personally available to attend meetings or respond to inquiries within two (2) days.

1.13 General Project Deliverables

- Where deliverables and submissions are required for this project, they shall be submitted in accordance with this Project Brief.
- For the submission standards and requirements, refer to PSPC document "Doing Business with Public Works and Government Services Canada (PWGSC)" attached as Appendix D.
- Provide a website for the project team to openly share project information.
- Unless otherwise indicated in the Project Brief, provide the number of copies and format as described in the table below:

Submission	No of Hard Copies	No of Digital Copies*	Format
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Written Reports	4	2	Microsoft Word (*.doc)
Spreadsheets and Cash Flows	4	2	Microsoft Excel (*.xls)
Schedules	4	2	Microsoft Project
Shop Drawings	4	2	Auto Cad (*.dwg) or PDF

*Note: Submit file in PDF format on copy via e-mail and another copy on a CD with the other required files.

1.14 Acceptance of CM Deliverables

- While PSPC acknowledges the CM's obligations to meet project requirements, the project delivery process entitles PSPC to review the work. PSPC reserves the right to reject undesirable or unsatisfactory work.
- Acceptances indicate that based on a general review of material for specific issues, the material is considered to comply with governmental and departmental objectives and practices, and that overall project objectives are being satisfied.
- The acceptance does not relieve the CM of responsibility for the work and compliance with the contract.
- PSPC acceptances do not prohibit rejection of work, which is determined to be unsatisfactory at later stages of review.
- Acceptances by the Client / Users Department and other agencies and levels of government must be obtained to supplement PSPC acceptances.

REQUIRED SERVICES

GR 1 GENERAL REQUIREMENTS

1.1 General

All Required Services will be included and covered by the fees identified in the Price Proposal Form.

The Construction Manager shall:

1. Provide CMA Services throughout the project life cycle and respective milestones.
 - a. See Section PD 7.3.2 (b) for project milestones.
2. Counsel PSPC and the Consultant Team by providing Advisory and Support services throughout the Design and Construction/Implementation Phases of the project to achieve a Quality process and outcome to meet or exceeds the Project requirements and expectations.
3. Assist in the development of the overall project concept.
4. In consultation the Departmental Representative develop and maintain a partnership, lines of communication and reporting between all members of the project delivery team and stakeholders throughout the project life cycle.

1.2 Summary of Services

The following is a summary of the project delivery for the Construction Manager contract, including:

1. Subsequent simplified diagrams depict a conventional combined CMA and CMc Services condition with respective Level of Effort and Roles.
2. Level of effort associated with the CMA and CMc Required Services vary with the project delivery life cycle; simplified in diagram below.

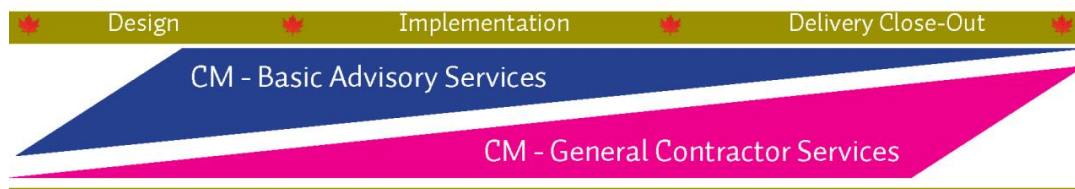


Figure1 Level of Effort

3. Roles of CMA and CMc switch and remain interrelated dependant on the overall project delivery life cycle and construction tender packages; simplified in diagram below.
4. Role switch-over typically occur when the CM implements Work by Own Force and upon initiating or participating in a tender with subsequent contract award by either CM or PSPC.

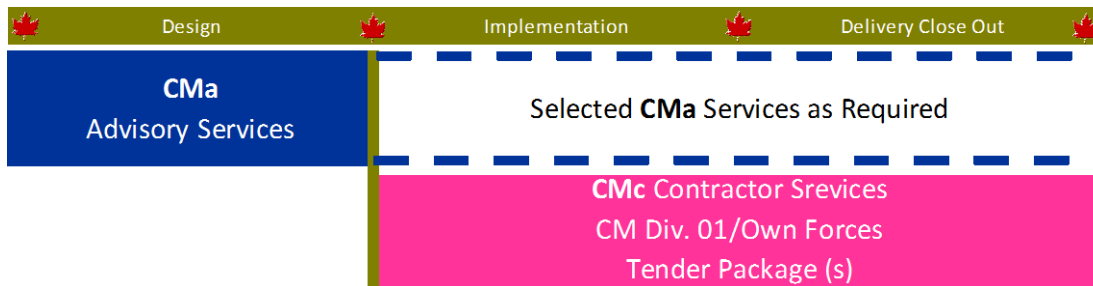


Figure 2 CMA and CMc Roles

5. CMA and CMc roles remain interrelated during construction- Implantation and Delivery Close-Out phases, to address select CMA services such as;
 - a. Preparation of tender package documentation;
 - b. Recommended listing of Sub-Contractors;
 - c. On-going Management and Reporting related to;
 - i. Cost estimating and budgeting;
 - ii. Master and detail schedules updates.
 - iii. Quality management;
 - d. Risk and mitigation input; and
 - e. Commissioning Process – planning, coordination with Commissioning Manager, and implementation.
6. Services required for this project, provided as required in CMA (Advisory Support Services) or CMc (General Contractor Services), are as follows:

RS 1	Advisory Support Services
RS 2	Schedule Management Services
RS 3	Cost Management Services
RS 4	Risk Management Services
RS 5	Scope Control Services
RS 6	Quality Control Services
RS 7	Health and Safety Planning and Implementation
RS 8	Reporting and Project Site Documents
RS 9	Tendering the Work
RS 10	Commissioning
RS 11	Construction Monitoring
RS 12	Changes (Notices and Orders)
RS 13	Construction General Instructions

RS 1 ADVISORY SUPPORT SERVICES

The CM, as expert in matters of construction, counsels PSPC and the Consultant Team by providing advisory and support services throughout the design and construction phases of the project.

1.1 SCOPE AND ACTIVITIES

The CM shall:

1. Analyze and become familiar with all the Project background documents and reports;
2. Review site conditions, with respect to technical and implementation issues affecting this project;
3. Review the program for all potential tender packages included in the project;
4. Prepare a construction schedule;
5. Develop a list of recommended construction trades and tender packages;
6. Prepare estimates for each tender package;
7. Prepare a detailed construction budget;
8. Participate in all integrated design sessions and provide advice on;
 - a. Constructability of the design and details contained in the contract documents,
 - b. Scheduling of the Work, and
 - c. Costing, pricing and bid suitability.
9. Assist in providing liaison and coordination with Government Authorities for various reviews and approvals;
10. Develop and maintain the Project Procedures Manual (PPM) and all documents triggered by the PPM;
11. Advise on construction related matters for the Departmental Representative, the User Department, the Consultant Team and members of the CM's Project Delivery Team;
12. .Effective control measures and management of;
 - a. Project costs and expenditures,
 - b. Project schedule and progress,
 - c. Scope & quality of the Work,
 - d. Change management and change order control, and
 - e. Risk management and claims avoidance.
13. .Mitigate potential conflict and overlap, with respect to;
 - a. The design services performed by the Consultant Team, and
 - b. The work to be performed by the various Sub-Trades.
14. Provide quality control methodologies with respect to;
 - a. Availability and cost comparisons of construction materials,
 - b. Methods of construction and constructability,
 - c. Scope and quality of construction materials and systems,
 - d. Alternative approaches to completing the Work,
 - e. Risk Management,
 - f. Life Cycle Cost analysis,

- g. Sustainability, and
 - h. Value Engineering.
15. Develop procurement strategies and construction implementation phasing;
 16. Determine appropriate construction tender packages;
 17. Determine the potential impact to the Project of applicable labour conditions and availability of materials;
 18. Prepare a Commission Plan and Schedules for commissioning of all operating building components, systems and integrated systems at the appropriate phases of construction, so as to ensure coordinated, effective and efficient building operation (in conformance with the Commissioning Process); (Note: Commissioning Plan and schedule shall include ESS and Kitchen equipment.)
 19. Obtain and administer project guarantees Warrantees and manufacturer's guarantees; and
 20. Provide advice on methods of construction as may be required from time to time by the Consultant Team.

The above listing of Services is neither complete nor exhaustive and the full scope of Advisory Services required shall include the entire content of the TOR, in concert with the terms and General Conditions of the Contract.

1.2 DOCUMENT DELIVERABLES

1. Project Procedures Manual

- a. The CM shall develop a Project Procedures Manual in consultation with the Departmental Representative for the execution of Project activities.
- b. The Manual will provide a description of procedures, roles, responsibilities, levels of authority and the documentation for the execution of the Project, including details of the processes and sample outlines.
- c. The Manual will include the process and methods to:
 - i. Maintain Project records;
 - ii. Implement a quality assurance program;
 - iii. Prepare, update, monitor and maintain the Master Schedule;
 - iv. Update, monitor and maintain the Cost Plan, Progress Payments, Change Orders and Cash Flow;
 - v. Manage communications as directed by the Departmental Representative between Project Delivery Team participants based upon the documented roles, responsibilities and authority of Team members, and maintain a listing of meetings, frequency, type, etc.;
 - vi. Manage correspondence, reports and performance records;
 - vii. Distribute correspondence electronically;
 - viii. Process Shop Drawings;
 - ix. Document the process for reviews and approvals of Tender Package Contracts and change orders; and
 - x. Maintain a decision log during the construction of the project, recording participants, date and place of all decisions affecting schedule, budget, scope, or quality.

2. Project Monitoring and Reporting

- a. Provide a system for documentation and project monitoring and reporting through each stage of project delivery, for review and acceptance by the Departmental Representative. Submit a second copy of all the reports to CSC.
- b. Prepare and submit, at the start of the project, a sample of the report outline for all reports for review by the Departmental Representative. Sample report outline is contained in Part 6 of the GP&S document.
 - i. Resubmit as may be required.
 - ii. The date of issue of the CM Monthly Report shall be established.
 - iii. The structure of the CM Monthly Report shall be used for all subsequent project stages.
- c. Prepare and submit quarterly reports to address:
 - i. Milestone reporting on Estimating and Cost Planning;
 - ii. Updated Project Procedures Manual; and
- d. Prepare and submit monthly progress reports during the Design Development and Construction Document Stages, in an outline approved by the Departmental Representative.
- e. The purpose of the report shall be to review and monitor the progress of the Services by the CM. The report shall:
 - i. Identify the progress of Advisory Support and Construction Support Services;
 - ii. Identify Progress Claims and Payments to date (including change orders) in a form that compares the original budgets for each Tender Package with the expected costs;
 - iii. Identify all instances where the schedule is not being met and identify impact on scheduled completion date;
 1. Outline remedial measures being taken or planned to be undertaken to ensure the scheduled completion date; and
 - iv. Identify any anticipated or potential problems to be addressed.
- f. Prepare and submit monthly reports during construction to address status and variances with respect to schedule, budget, quality, and scope:
 - i. The actual report outline shall be acceptable to the Departmental Representative, and shall provide the following;
 1. An executive summary of key points,
 2. General progress of the Work and modifications to reflect changes in project parameters as may be identified throughout the project life,
 3. Construction Cost Plan Report including an overview of cost issues as outlined in this TOR,
 4. Master Schedule Update and narrative report including an overview of schedule issues as outlined in this TOR,
 - a. Monitor changes to the Master Schedule at least once a month and submit written reports to the Departmental Representative on any deviations or delays from the master schedule, and identify possible remediation measures required to maintain the Master Schedule Completion date.

- b. Monthly reports must identify not only reasons for delay but also offer suggestions, where possible, on how to bring the project back on track.
- 5. Identification of risks and proposed strategies for mitigation, including scope creep as well as quality control outlined in this TOR.
- 6. Waste Management Report as including an overview of Waste Management Strategies for construction,
- 7. Health and Safety status Report, including narrative on the application or adjustment to the CM's Health and Safety Plans as well as any incidents and resulting actions, and
- 8. Commissioning Plan progress report.

RS 2 SCHEDULE MANAGEMENT SERVICES

Planning and scheduling is a continuous interactive process involving planning, action, measurement, evaluations and revision.

Employ an experienced scheduler who is fully conversant with all aspects of project planning, scheduling and construction sequencing. The scheduler will play a major role in the development and monitoring of the project schedule, providing scheduling services from commencement of the award of the Contract, through construction, commissioning, including the warranty period.

Prepare, monitor, update and maintain the overall schedule for the duration of the Project. Following consultation with the Project team, incorporate the sequence and timing of the required basic program decisions, including design time, documentation, bid calls, bid evaluations, subcontract awards and on-site construction activities and commissioning into the schedule.

2.1 SCOPE AND ACTIVITIES

The CM shall also:

1. Revise, monitor and update the preliminary schedule as the project proceeds;
2. Finalize the overall schedule for the approval of the Departmental Representative and estimate the manpower requirements for the Work. Break down the schedule into individual networks and tasks for each package of Work. Indicate the sequence and timing for the construction operations and the milestone completion dates for the Work packages;
3. During the design stage of the services, identify items or processes where long lead times are required and that could jeopardize the schedule. Pre-purchase items and implement procurement methodologies to ensure timely delivery to meet the schedule and cash flow requirements. Assess the risk to the project schedule for late deliveries;
4. Identify and implement methodologies aimed at mitigating and minimizing the impact of construction activities on CSC's operations.
5. Provide advice and recommendations on;
 - a. A procurement strategy for any equipment or materials, which should be pre-ordered to meet the Master Schedule, and
 - b. Means to minimize disruption to PCA during construction.
6. If changes to the Schedule become necessary, indicate the impact and the reasons for such changes and submit proposed amendments to the Departmental Representative for review and acceptance.

2.2 DELIVERABLES

1. Prepare and submit to the Departmental Representative for review and acceptance, a draft Master Schedule (within 14 calendar days of contract award) and maintain the Plan throughout the life of the Project.
 - a. Prepare the Schedule using Microsoft Project to develop detailed network diagrams, with work breakdown structures and Key milestones listings.
 - b. Develop Critical Paths for all key activities, with key milestone dates and lead times for each activity.
 - c. Identify anticipated start and completion dates for all design and construction activities, linked by interdependence on activities that must be completed prior to the start of a subsequent activity.
 - d. Prepare separate schedules for each tender package and incorporated into the Master Schedule.
2. Ensure that the schedule has the capability of tracking changes
3. Submit a copy to CSC.

RS 3 COST MANAGEMENT SERVICES

PSPC manages all funding for the Project, including budgeting, expenditures and Progress Payment approvals.

Provide costing and cost control services for all aspects of the Work, from commencement of contract award through to the completion of the project, including:

- a) At completion of design development and tender documents (50%, 99%, 100%);
- b) Prior to and after award of each tender package;
- c) Monthly during the delivery of the project;
- d) During the warranty period;
- e) When there is project scope change affecting the construction estimates by more than 5%.

Work with the Consultant and the Departmental Representative to come up with the best overall solution to meet the program requirements, estimated construction cost and the schedule. The CM is to establish a cost control program and prepare a projected cash flow for the project, based upon reconciled estimates.

Within the limits of the estimated construction cost, establish estimates for Work packages, as well as make and document assumptions for Work not yet defined. Submit to the Departmental Representative for review. Update and refine the estimates for the approval of the Departmental Representative as the development of the drawings and specifications proceeds.

The intent is to ensure that, at all times during the project, a comprehensive construction estimate is in place, which includes all aspects of the project, even those which are not fully developed and/or which have not yet been assigned to any specific Work package.

The CM's estimator is expected to review all information provided and to visit the site as required throughout the course of project to become familiar with the site conditions, site access and on-site progress.

Incorporate into cost estimating process and cost estimates a broad range of cost techniques, especially the following:

Risk Analysis:

All construction estimates (except the final pretender estimate) shall include and identify design, estimating, inflation escalation and currency exchange allowances as are deemed necessary in light of the current information available.

Life Cycle Costing:

In advising the Consultant of the cost information for alternative materials, methods and systems, use all available information to ensure that the project estimated construction cost (upon which design and construction decisions will be made) is respected.

Cash Flow:

Provide and maintain a cash flow for the Work, based upon the project schedule and the current estimate at each stage. The cash flow is to be updated at each stage of the project. At all times, provide the Departmental Representative and the Consultant all costing estimates, information and assumptions related to the Work.

Prepare Class 'A' cost estimates for each Work package in advance of the tender of that package. Submit a monthly report outlining activities during the previous month, highlighting any areas of concern and new information received, along with forecast and proposed construction estimate revisions. Include, as separate cost categories, the CM's Fixed Fee, Time Based Fee and Percentage Fee.

A typical Master Cost Plan report from the CM will contain:

1. Elemental or other format estimate summary;
2. Estimate back-up detail:
 - Basis for escalation, inflation and contingency calculations;
 - Detailed measurement and pricing.
3. Narrative:
 - Outline description of estimate basis;
 - Description of information obtained and used in the estimate;
 - Listing of notable inclusions;
 - Listing of notable exclusions;
 - Listing of items carrying significant risk.
4. Reconciliation against last submission;
5. Any other relevant information.

Provide a sample of the report to the Departmental Representative for acceptance. Revise as required incorporating comments of the Departmental Representative.

Each monthly report shall be based on the previous report and will provide the Departmental Representative with up to date information on all aspects of the construction estimate and the CM's fees. Indicate all costs committed and expended to date. Identify for each Work package, the original estimate amount, the contract amount, the breakdown and total of approved change orders, estimated amounts on contemplated change orders, the revised contract amount, the total cost anticipated and the cost to complete the project.

Inform the Departmental Representative and Consultant in writing immediately of any issue.
Recommend actions to ensure the project remains within the estimated construction cost.

Provide timely identification and early warning of all changes that affect or potentially affect the construction budget, by identifying issues immediately to Departmental Representative and through the submission of Exception Report as part of the Master Cost Plan. Suggest appropriate mitigating measures including proposed alternative design solutions to bring the project back on budget.

No acceptance or approval by the Departmental Representative, whether expressed or implied shall be deemed to relieve the CM of its professional or technical responsibility for the CM's estimates and monthly reports. Neither does acceptance of an estimate by the Departmental Representative in any way abrogate the CM's responsibility to maintain the estimated construction cost throughout the life of the project and to undertake corrective action should the lowest acceptable bid, for any Work package, differ significantly from the approved estimate.

3.1 SCOPE AND ACTIVITIES

The CM shall:

1. Provide advice and recommendations on;
 - a. Costs related to construction feasibility, availability of materials and labour, time requirements for installation and construction,
 - b. Budget costs of systems, assemblies, equipment, materials and specialty labour,
 - c. Current pricing levels and trends in associated activities relating to the project,
 - d. The selection, availability and pricing of goods and services,
 - e. Insurance and bonding requirements.
2. Provide suggestions and/or alternatives for cost reductions or acceleration of the Construction Schedule if requested by the PSPC Departmental Representative.
 - a. Evaluate costs for alternative materials, construction techniques and installation methods.
3. Revise and refine the initially approved Master Cost Plan as the project progresses, incorporate approved changes as they occur and develop cash flow reports and forecasts as required by the Departmental Representative.
4. Advise of deviations from the Master Cost Plan and obtain written authorization from the Departmental Representative. Seek and report on authorization as per the Departmental Representatives change process.
5. Monitor Project costs and expenditures against the approved Construction Cost Limit and identify variances between actual and budgeted or estimated costs.
 - a. Notify the Departmental Representative in the event that the CM considers that the Construction Cost Estimate will exceed the Construction Cost Limit.
 - b. Provide recommendations for remedial action to maintain and keep the estimates within the Construction Cost Limit.
6. Track costs so that PSPC can manage the budget.

3.2 DELIVERABLES

1. Prepare and submit to the Departmental Representative for review and acceptance, a Master Cost Plan within 14 calendar days of award of contract and maintain the Plan throughout the life of the Project.
 - a. Include all CM projected costs, Construction Cost Estimates and Construction Cost Limits.
 - b. Develop budgets for the work of each work package.
 - i. Prepare tender package budgets as soon as major project requirements have been identified.
 - ii. Update at the milestone review stages for PSPC acceptance.
 - c. Address all costs in Federal Fiscal Year (FY) format (April 01 to March 31 of the following year).
 - d. Prepare estimated costs, (including summary plus full back-up showing items of work, quantities, unit prices and amounts) at:
 - i. The Design Development Stage (Class B); and
 - ii. The time of tendering each tender package (Class A).
2. Prepare and submit, as part of the Master Cost Plan, an Exception Report which will include sufficient description and cost detail to clearly identify:
 - a. Scope Change: Identifying the nature, reason and total cost impact of all identified and potential Project scope changes affecting the estimated construction cost.
 - b. Cost overruns and under runs: Identifying the nature, reason and total cost impact of all identified and potential cost variations.
3. Options enabling a return to the estimated construction cost: Identifying the nature and potential cost effects of all identified options proposed to return the project within estimated construction cost. Update at monthly intervals as agreed with the Departmental Representative.
4. Submit a copy to CSC.

RS 4 RISK MANAGEMENT SERVICES

PSPC's Departmental Representative prepares the Risk Management Plan for the Project. Provide support to the Departmental Representative in identifying risks throughout the project life cycle, and providing input and assessment on the project risk plan. Provide the Departmental Representative written comments on the project risk plan at each stage of the project.

4.1 SCOPE AND SERVICES

The CM shall:

1. Review, comment and advise the Departmental Representative on the risk management plan;
2. Advise on project risks specific to the project and recommend mitigation options to the Departmental Representative.
3. Advise on issues of risk that integrate project planning with procurement planning and construction;
4. Identify and implement methodologies aimed at mitigating and minimizing the impact of construction activities on occupants and user department operations during construction; and
5. Implement a claims avoidance program.
6. Monitor risk as outlined in the risk management plan.

4.2 DELIVERABLES

1. Submit a monthly report on Project Risks to the Departmental Representative.
2. Submit a copy to CSC.

RS 5 SCOPE AND SERVICES

Immediately advise the Departmental Representative of any potential increase or decrease in scope **before** it affects project cost, schedule, or quality.

RS 6 QUALITY CONTROL SERVICES

The responsibility for construction quality control remains with the CM. As part of the CM Advisory and the CM Project Procedures Manual the development and implementation Quality Control Plan (QCP) and application of associated Interrelated Processes such as; Quality Planning (QP), Quality Assurance (QA), and Quality Control (QC), remains with the CM.

The CM's Team shall work to:

1. Adopt project delivery processes such as Risk Management and advising on methods to obtain best value;
2. Ensure that Health, Safety, Security and Sustainable Development requirements are adhered to;
3. Report all site health and safety incidents to Departmental Representative.

Develop a quality management system to ensure that the specified quality standards for the project are achieved.

The Work must meet the design and operational intent and criteria. The CM's continuous adherence, daily, to quality management of the entire construction process throughout all aspects of construction is essential. The significance of this issue cannot be understated. Actively document non-compliance, monitor and follow-up on the Work of all Subcontractors to ensure the construction is realized, as designed. The CM is not to solely rely upon the Consultant to document non-compliance with the design, but rather take a leading role in managing the Subcontractors and their Work, establishing a quality management database to ensure all construction issues, observations and reports are recorded and closed out, completely and correctly, to the approval of the Departmental Representative.

Establish, monitor, update and report on a quality management database specific to this project. Inputs to the database will come from the Departmental Representative, the Consultant team, and CM's team daily site observations. Output from the database will go to Subcontractors, suppliers, as required, the Consultant and the Departmental Representative. All quality issues are to be addressed promptly, to ensure the pace of construction is maintained without the need for rework of the Work.

Provide field engineering quality control services responsible for:

- a) Day-to-day execution of the quality control plan - architectural, mechanical, electrical and structural components and systems;
- b) Working with Subcontractors to explain the nature of the quality control plan and their role in it and ensuring quality workmanship on site;
- c) Maintaining quality records on site including:
 - i. Inspections and tests reports;
 - ii. Non-conformance reports;
 - iii. Corrective actions reports and sign-offs.

- iv. Facilitating quality inspections by the Departmental Representative and Consultant.
- d) Reporting to the CM's project manager on the quality process for the project.

6.1 SCOPE AND SERVICES

1. The CM shall apply quality assurance reviews during the design and construction phases, including participation in reviews of the systems, components, construction tools and techniques of the proposed design.
2. The CM shall be responsible for ensuring that the CM's Subcontractors adhere to:
 - a. Industry standard practices following the requirements of the Construction Documents; and
 - b. Professional conduct in all phases of the project, employing best practices for budget, schedule, quality, and scope management.
3. The CM shall participate in Integrated Design Process (IDP) Workshops.
 - a. The Consultant Team shall facilitate IDP Workshops through the design stage. The CM's Construction Project Manager shall attend IDP workshops for the purpose of providing advice to the Consultant Team on Constructability of various options that the Consultant Team is considering including:
 - i. Selection of materials, building systems and equipment;
 - ii. Constructability; and
 - iii. Coordination between all design disciplines.
4. Review construction drawings and specifications for each tender package at various stages acceptable to the Departmental representative.
 - a. At Design Development milestones; and
 - b. At 50% and 99% stages of construction Documentation associated with each Tender Package
 - i. Some tender packages may require fewer reviews, due to the nature of the work involved.
 - c. Of each Tender Package specific Division 00 and 01.
5. Track quality management actions and results and compile a monthly report.

6.2 DELIVERABLES

1. Submit to the Departmental representative within fourteen (14) calendar days of award of contract a Quality Control Plan (QCP) including, but not limited to:
 - a. Identification and definition of key activities and deliverables;
 - b. Description of internal controls;
 - c. Quality Control methodologies and procedures to be utilized to deliver a quality project that meets the established Standards; and
 - d. Deliverable verification plan.
2. Quarterly Quality Control Plan (QCP) update and Report,
 - a. Including QM planned/actual actions and results.
3. QA reviews

4. Submit a written summary of the design and construction document reviews to the Departmental Representative.
5. Submit a copy to CSC.

RS 7 HEALTH AND SAFETY PLANNING AND IMPLEMENTATION

7.1 SCOPE AND SERVICES

The CM shall be responsible and assume the role of "Constructor" as described in the Occupational Health & Safety Act (Revised Statutes of Ontario, 1990 Chapter O.1, as amended) and the Regulations for Construction projects (213/91 as amended; current edition) for all aspects of the project.

1. Further, the CM shall comply with and enforce the requirements of:
 - a. The National Building Code of Canada (NBC Most Current Edition), Part 8 Safety Measures at Construction and Demolition Sites and Provincial Regulations for Construction Projects;
 - b. The Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials; and labelling and the provision of Material Safety Data Sheets (MSDS).

The Departmental Representative will review CM's Site-specific Health and Safety Plan and provide comments to the CM within five (5) days after receipt of the plan. The CM shall revise the plan as appropriate and resubmit to the Departmental Representative within three (3) days after receipt of comments from the Departmental Representative.

The Departmental Representative's review of the CM's final Health and Safety plan should not be construed as approval and does not reduce the CM's overall responsibility for construction Health and Safety.

When construction operations are underway, provide the following on site personnel:

1. One (1) qualified Site Superintendent; and
2. One (1) Health and Safety Officer, who will be at the site daily to document site conditions, job hazards and provide direction to construction workers or operational personnel on health and safety matters.

7.2 DELIVERABLES

The CM shall:

1. Provide site-specific safety orientation sessions to all workers and visitors, over the duration of the project.
2. Ensure the Health and Safety protection afforded under the Canada Labour Code to all visitors to the site, including workers, staff, Subcontractors and the general public.
3. Provide appropriate safeguards to ensure safe protection and security of materials and holdings on the site.
4. Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

5. Develop and implement a site-specific safety plan for all aspects of this project. The site-specific safety plan shall be based on a preliminary and ongoing hazard assessment of the project to be performed. Update the site-specific safety plan as site conditions or hazards change. Inform all persons on the site daily, in the change of conditions or hazards. Resubmit the updated plan to the Departmental Representative immediately.
6. Develop an on-site Contingency and Emergency Response Plan, which must address standard operating procedures to be implemented during emergency situations.
7. Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
8. Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, local statutes, regulations, and ordinances, and with Site-specific Health and Safety Plan.
9. Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of the project, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction. Advise Departmental Representative verbally and in writing.
10. Ensure applicable items, articles, notices and orders are posted in conspicuous location on Site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Departmental Representative.
11. Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative. Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified. Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.
12. Use powder actuated devices only after receipt of written permission from Departmental representative. Blasting or other use of explosives is not permitted without prior receipt of written instruction by Departmental Representative.

RS 8 REPORTING AND PROJECT SITE DOCUMENTS

8.1 SCOPE AND ACTIVITIES

The CM shall prepare and submit, at the start of the project, a sample of the Construction Management Monthly Report structure for review by the Departmental Representative. Resubmit, as required for approval and acceptance. Submit a copy to CSC.

8.2 DELIVERABLES

1. Construction Management Monthly Reports are to be completed and submitted on the last working day of each month, along with the Request for Progress Payment, and shall include:
 2. Project Schedule update;
 3. Construction Budget report, including detailed change order log, invoicing and payments;
 4. Risk Management update;
 5. Quality management report, including listing of new and outstanding issues;
 6. Health and safety status report, including narrative on the application or adjustment to the site-specific Health and Safety Plan and risk and hazard assessments;
 7. A copy of the Site Superintendent's daily logbook and daily photographs, certified as true copies, as a separate report or volume, recording the following:
 - a. Weather conditions, particularly unusual weather relative to Work in progress,
 - b. Materials and equipment deliveries;
 - c. Daily activities and major Work done through all shifts of Work;
 - d. Start, stop or completion of activities through all shifts of Work;
 - e. Presence of inspection and testing firms, tests taken and results;
 - f. Unusual Site conditions experienced;
 - g. Significant developments, remarks, emails or other correspondence;
 - h. Reports, instructions from appropriate authorities' response actions,
 - i. Strength on-site by each Subcontractor and the CM;
 - j. Safety inspections and reports;
 - k. If work is based on unit prices, measure and record the quantities for verification of monthly progress claims and the Final Certificate of Measurement.
8. The CM shall maintain a decision log during the implementation of the project, recording all decisions affecting the scope, schedule, cost and quality. These records are to be made available to the Departmental Representative at all times.
9. The CM shall maintain project site documents at the project site, on a daily basis, records of all necessary contracts, samples, purchases, materials, equipment, maintenance and operating manuals and instructions, and other Work related documents, including revisions.

RS 9 TENDERING THE WORK

It is understood that the CM will deliver the construction services called for in this Project Brief through Subcontractors. As an independent entity, the CM will select its own Subcontractors. It is most

important that these selection processes are fair, open and transparent and that all qualified Subcontractors have the opportunity to be considered for the construction Work. PSPC believes that competitive bidding and open tendering processes will yield the best value at lowest cost for subcontracted Work.

The CM will:

1. In subcontracting for the construction the CM shall:
 - a. In consultation with the Consultant, coordinate the tender and contract documents packages prepared by the Consultant and that clearly set out the requirements for material and services;
 - b. Using standard construction industry documents, such as CCDC 11 - 1996 (R2006) CM's Qualification Statement, ensure that Subcontractors in trades that are essential to the successful delivery of the Work are pre-qualified prior to being invited to submit tenders;
 - c. Enter into contracts with qualified Subcontractors who submit the lowest-priced compliant tenders;
 - d. Manage Subcontractors and ensure they provide the required services in a manner consistent with the terms and conditions of this Contract and achieve timely delivery of quality services at the lowest cost;
 - e. Establish quality and performance requirements and monitor Subcontractor performance, including quality of deliverables, adherence to schedules and costs;
 - f. Provide for dispute resolution, initiation of subcontract amendments and payments.
2. The CM shall obtain open, fair and competitive bids for the subcontracts required for each portion of the Work in accordance with the following requirements:
 - a. Subcontracts estimated at less than \$25,000 including all applicable taxes, may be single-sourced to qualified suppliers only upon the written approval of the Departmental Representative.
 - b. For subcontracts estimated at less than \$100,000, including all applicable taxes, and upon the written approval of the Departmental Representative, the CM may invite a minimum of three (3) qualified suppliers to submit bids.
 - c. For subcontracts estimated at less than \$100,000, including all applicable taxes, the CM, upon the written agreement of the Departmental Representative, may set aside the requirement to solicit a minimum of three (3) bids if it has demonstrated to the satisfaction of the Departmental Representative, that less than three (3) firms are capable of performing the Work.
 - d. For subcontracts estimated at \$100,000 or more, including all applicable taxes, advertise publicly, in accordance with the following open bidding procedures:
 - i. The public advertisement shall include, at a minimum, a description of the nature of the Work to be performed, information regarding any technical requirements, financial guarantees or other documentation to be provided with the bid, the completion date for the Work, the address of the bid closing location and the final date and time for receiving bids, the identification of a contact point for obtaining bid documents and from which further information may be obtained, the date, time and place of the public opening of the bids.

- ii. Tender documentation shall include all of the public advertisement information, as well as identification of the bid validity period, the criteria for awarding the contract including any factors other than price to be considered in the evaluation of bids, the terms of payment and any other terms or conditions.
 - iii. During the solicitation, the CM shall reply promptly to any request for bid documents or any reasonable request for relevant information made by a supplier participating in the tender. Information provided in response to questions during the tender period must be provided to all bidders.
- 3. The receipt and opening of bids and the awarding of contracts must be consistent with the following:
 - a. Bids must be opened in the presence of at least two representatives of the CM, as well as a representative of Canada, all of whom will act as witnesses to the opening by verifying and signing the Record of Bids received.
 - b. Contracts shall be awarded in accordance with the requirements specified in the notices and bid documentation, and must be submitted by a supplier that complies with the terms and conditions of the bid documents.
 - c. The CM shall, upon request, promptly inform suppliers participating in the bid of decisions on contract awards.
- 4. The CM shall:
 - a. Seek pre-approval from the Departmental Representative for any deviation from the competitive subcontracting process and make the documentation available to PSPC.
 - b. Demonstrate to the Departmental Representative that it has a competitive subcontracting process and a prequalification process, reflecting best industry practices.
- 5. The CM shall analyze the bids received and recommend awards to the Departmental Representative through a trade contract award recommendation. The format of the trade contract award recommendation is the responsibility of the CM, however, at a minimum; the recommendation must include copies of the following documents:
 - a. Prequalification Phase (if applicable) – copies of prequalification documents such as CCDC 11 - 1996 (R2006) CM's Qualification Statement or equivalent, the list of CMs submitting applications for prequalification and the results of the evaluation of prequalification submissions.
 - b. Tender Phase: copies of all bids received, verification (e.g. a time stamp) that bids were received on time prior to the time scheduled for bid closing, a copy of the Record of the bid opening, properly witnessed, a copy of the public notice, or invitation to tender if the Work is valued at under \$100,000, a copy of all solicitation documents, a summary of all tenders received with bid amount breakdowns and totals, verification that bid security (if applicable) was provided with the bid, information on any tender qualifications or disqualifications; and identification of the supplier recommended for contract award.
- 6. When the Departmental Representative approves the expenditure and the procurement process, the CM shall prepare the subcontracts for execution. No award of subcontracts to a Subcontractor can proceed without an approved trade contract award recommendation.
- 7. The CM, and anyone not at arm's length to the CM, shall be ineligible to submit bids for any construction tenders issued for work tendered as part of the CM contract. For further clarity, the CM will be deemed to have a conflict of interest that would prevent it from being eligible to submit bids

for any tenders issued in connection with the project. This does not limit the CM ability to use its own forces when permitted by the Departmental Representative.

8. Canada reserves the right to require the CM to enter into subcontracts for the supply of services or materials with Subcontractors that have been prequalified by Canada for any component of the Work. Any such subcontract shall form part of the Cost of the Work.

RS 10 COMMISSIONING

10.1 Scope and Activities - General

To achieve, verify and document that the performance of the facility and its various systems meet design intent as well as the Client Department's functional and operational needs. These activities and processes extend through all stages of the project from design development to occupancy, operation and post-occupancy. The commissioning process requires coordinated efforts from all members of the commissioning team.

Commissioning is a team effort among all parties involved in the project. It demands full cooperation in all stages of planning, design, construction, installation, activation and performance verification and operation. It also requires clear communications among all parties to achieve understanding of all requirements. This includes full documentation of major decisions and activities.

The Departmental Representative, CSC Specialist, the CM and CM's Commissioning Specialist, the Subcontractors, the Consultants, and the Consultant's Commissioning Manager (CxM) will form the commissioning team. The commissioning team must work together in a collaborative and open manner to successfully complete the commissioning process. The Consultant's CxM and the CM's Commissioning Specialist shall take on a key and leading role in driving the commissioning process to successful completion.

The roles and responsibilities of the commissioning team are listed as follows:

- **Consultant's Commissioning Manager (CxM)**
A qualified professional who represents the Client Department interests to schedule and coordinate all commissioning activities during project delivery stage, as well as post-occupancy commissioning. The CxM is also responsible for the preparation of the Commissioning Plan, the Commissioning Schedule, and the preparation and completion of all applicable commissioning forms which include the Product Information (PI) Forms and Performance Verification (PV) Report Forms for the systems/equipment to be commissioned; review of applicable shop drawings; witnessing of all commissioning testing including startups and functional performance verification testing and post-occupancy testing for the systems/equipment to be commissioned; the timely submission of completed commissioning forms to Departmental Representative for review and approval; preparation and submission of the Final Commissioning Reports. Note: CSC will request ESS commissioning plan and schedule. CSC ESS Specialist will attend the commissioning, verifications and testing. Kitchen equipment will also need to be commissioned.
- **Consultant**
Provides all design information required for commissioning to meet Client Department's functional requirements and maintain design intent of the base building systems, prepares the Design Intent Belief and Commissioning Brief and submits to the Consultant CxM for coordination of the Commissioning Plan. The Consultant will verify that the base building and Client Department's functional and operational requirements are correctly interpreted during the design stage and contract documents, and that the building systems operate consistently at peak efficiencies, under all normal load conditions. The Consultant will manage and liaise with the CxM and incorporate the commissioning requirements and standards into the design and construction contract documents.

- **Departmental Representative**
Overall responsibility of the project delivery including approval of commissioning budget and schedule, resolution of contract disputes, approval of commissioning report and certification of final completion.
- **Construction Manager (CM)**
Ensure the CM's Commissioning Specialist is conducting their roles, responsibilities, and activities effectively to meet scope, time and budget. CM is to report on progress of activities to the Departmental Representative.
- **CM's Commissioning Specialist**
The CM's Commissioning Specialist shall co-ordinate with the Consultant's CxM to arrange personnel, sub-contractor(s) and qualified testing agencies for conducting pre-startup tests, equipment startup and testing, system startup and testing, TAB, functional performance verification, post-occupancy testing, O&M training sessions; submission of shop drawings, test results, as-built drawings and the operating and maintenance (O&M) manuals.

10.2 Scope and Activities - Specific

The CM is to retain an experienced Commissioning Specialist who is conversant in ESS and kitchen equipment operations. The CM's Commissioning Specialist will be directing a commissioning process, or program of activities, for all of the Work that is reasonable and practical. This specialist will document and witness all test results. The CM is to report on the activities of the Commissioning Specialist to the Departmental Representative.

Commissioning is an integral part of all phases of the Work. Commissioning and performance verification is a key element of the project quality management plan and shall be conducted at all stages of the project. Assist the Consultant's CxM to update the Commissioning Plan throughout the project, with input and direction from the Consultant. Commission each phase of the Work and the overall Work and make every effort to reduce the project schedule and estimated construction cost.

The CM and the CM's Commissioning Specialist are responsible for:

1. Ensuring that all required commissioning activities are identified in the project schedule and in construction documents;
2. Ensuring that information on labeling protocols, maintenance data requirements and protocols are relayed to the Subcontractors and related information sessions with stakeholders are scheduled as required;
3. Confirming that Subcontractors' Work is sufficiently complete to warrant inspection and testing, by the Consultant and for scheduling of the required inspections and tests;
4. Developing and implementing a site quality assurance program to minimize delays as a result of poor workmanship or Subcontractor error; to reduce deficiencies and call-backs during warranty periods; to reduce long-term risk arising to stakeholders from poor workmanship;
5. Administrating and managing independent quality control testing as may be required by the Departmental Representative, the Consultant or the CM to confirm the adequacy of a Subcontractor's Work or commissioning reports;

6. Ensuring that all test results, documents, manuals are provided by Subcontractors; monitoring the Consultant review process and reporting to the Departmental Representative on the progress of the commissioning effort;
7. Directing Subcontractors to complete, repair, adjust or rebuild portions of the Work that do not meet the verification standards including monitoring deficiencies and ensuring that they are corrected;
8. Ensuring that seasonal commissioning activities are detailed within the project schedule, are completed on time, and with the proper documentation and or follow-up action;
9. Monitoring and inspecting with the Consultant the Work during its warranty period and during seasonal commissioning activities to ensure defects are corrected. The frequency of monitoring and inspection expected to occur twice during the warranty period - three and eleven months;
10. Ensuring that testing and commissioning of equipment is witnessed and inspected by the Consultant and the required authority;
11. Coordinating the federal, provincial and municipal inspections required for occupancy;
12. Scheduling and following-up on the three and eleven month inspections after the issuance of the Substantial Performance;
13. Undertaking all actions required to close-out subcontracts including final warranty reviews, contract close-outs;
14. Coordinating the training of CSC operational staff and the equipment handovers;
15. Monitoring and reporting to the Departmental Representative on the progress of the commissioning process against the plan;
16. Witness all testing including testing of all components, systems and integrated systems. This includes, but is not limited to, a complete verification of the controls sequence of all systems;
17. Complete and sign-off all verification reports and compile into a comprehensive Commissioning Manual as the project progresses, including Commissioning Manual updates to include seasonal commissioning activities;
18. Organize commissioning meetings at a minimum weekly, preparing agenda, chairing meetings, preparing minutes and distributing them;
19. Provide schedules related to all commissioning activities as well as reporting and monitoring. Present an updated commissioning schedule at all commissioning meetings. Identify any variances and issues to be addressed at those commissioning meetings;
20. Assist in the labeling protocols by gathering all forms dealing with product information from various Subcontractors and reviewing and verifying that the information is correct. The physical labeling requirements are the responsibility of the Subcontractors;
21. Confirm that the Subcontractors' Work is sufficiently complete prior to start up so that inspections are carried out, deficiencies identified by the Consultants and corrected by the Subcontractors;
22. Gather all the start-up reports, reviewing format and content against manufacturer's instructions prior to start-up, ensuring that they reflect the procedures listed in the manufacturer's instructions;
23. Assist the process of developing the testing and performance verification. The Commissioning Specialist will review verification forms and comment on project specificity. All forms will be submitted to the Consultant and Consultant's Commissioning Manager for review and comment. Update the forms as required. During testing, the Commissioning Specialist will record all results and report any variances to the Consultant's Commissioning Manager and Consultant.

RS 11 CONSTRUCTION MONITORING

Monitor the progress of the Work of the Subcontractors on site, coordinate the Work with trades and suppliers, the Departmental Representative and the Consultant, and drive the Work to completion.

1. Maintain competent personnel on site as follows:
 - a. One (1) full-time superintendent, one (1) full-time safety officer, one (1) field engineer (as required), and one (1) commissioning specialist (as required) on site during implementation of the Work to monitor and provide general direction to all those associated with the Work.
2. Identify unacceptable Work early to avoid delays that might arise as a result of required corrections of deficient Work. Ensure that comprehensive quality management processes are followed daily. Ensure that adequate back-up personnel are available;
3. Establish on-site organization and lines of authority in order to carry out the overall plans of the CM and the Departmental Representative;
4. Schedule and conduct progress meetings at which Subcontractors, Departmental Representative, Consultant and CM can discuss jointly such matters as procedures, progress, problems, risks, costs and scheduling;
5. Provide daily monitoring of the schedule as the Work proceeds;
6. Complete the Work according to the accepted construction documents, project schedule and project estimated construction cost;
7. As part of a comprehensive quality management process, provide daily inspection of all aspects of the Work, documenting matters for action or follow-up by Subcontractors, or referral to the Consultant. Ensure the Work is constructed as specified. Use photographs to document issues and their correction;
8. Review the adequacy of the Subcontractors personnel and equipment and availability of material and supplies to meet the schedule. Implement remedial action when requirements of a subcontract or the project schedule are not being met;
9. Prepare and maintain a decision log recording all decisions affecting schedule, construction estimates, scope, or quality, including dates, place, and participants. These records are to be made available to the Departmental Representative at all times;
10. Monitor and document all health and safety matters daily.

RS 12 CHANGES (NOTICES AND ORDERS)

When a change to a subcontract is identified on site, the Consultant will prepare and issue a contemplated change notice (CCN). The Consultant will review the cost estimate provided by the CM and provide recommendations to the Departmental Representative with respect to the fairness and reasonableness of the quotation. The Departmental Representative will be responsible for authorizing the change based on the indicative cost estimate and request that the CM obtain firm pricing on it.

1. The CM shall prepare and submit an indicative cost estimate breakdown for each contemplated change to the Departmental Representative and the Consultant for review and approval before proceeding with the change. The breakdown shall itemize all labour, material, plant and equipment costs estimated by the CM.
2. It is the responsibility of the CM to ensure that all prices included in the CM's breakdown, including the costs and mark-ups of Subcontractors, are fair and reasonable.
3. Labour rates, for all trades, shall be paid in accordance with trade union agreements and with the approval of the Departmental Representative.
4. The costs of all material, plant and equipment must be based on the actual amount paid to suppliers by the CM or Subcontractors and said costs are to include all applicable discounts.
5. The CM's percentage fee of the project estimated construction cost will include for all services and Work associated with changes and shall not be subject to any mark-ups or additional fees.
6. Upon acceptance of the quotation, the CM shall prepare a notice of change and sent it to the Subcontractor and provide a copy to the Consultant and the Departmental Representative.
7. A detailed log of the cost of forecasted final subcontract amounts, change notices and change orders is to be maintained by the CM for all subcontracts, at all times throughout the project.

RS 13 CONSTRUCTION GENERAL INSTRUCTIONS

13.1 CONSTRUCTION WORK

The CM shall:

1. Be responsible for the development, coordination and management of all Work and services included in Division 01;
2. Ensure the provision of all necessary equipment to the project and all other resources required to perform all services;
3. Procure, coordinate, administer and manage all construction Work and contracts;
4. Prepare and execute contracts with the successful Sub-trades so as to:
 - a. Coordinate and manage the respective contracts in an integrated manner to avoid any conflicts between the Work of any of the CM's sub-trades and/or the CM's own forces;
 - b. Coordinate, manage and ensure completion all the Work of each Sub-trade tender package in strict adherence to the accepted drawings and specifications of each tender package, including all addenda and authorized change orders;
 - c. Deliver the Work packages by the agreed upon completion dates;
 - d. Develop and implement a procedure for review, certification, processing and payment of Sub-trades in accordance with the terms and conditions of the CM Contract.
 - e. Schedule and conduct progress meetings at which Sub-trades, PSPC and the CM can jointly discuss such matters as procedures, progress, problems, risks and scheduling;
 - f. Provide timely response to correct issues as they occur.

13.2 SHOP DRAWINGS AND PRODUCT DATA

Submit for the Departmental Representative's review, six (6) copies of each shop drawing and product data.

The review is for the sole purpose of ascertaining conformance with the general design concept, and does not mean approval of the design details inherent in the shop drawings, responsibility for which shall remain with the CM. Such review shall not relieve the CM of responsibility for errors or omissions in the shop drawings or of his responsibility for meeting all requirements of the Contract Documents.

Product data consist of manufacturer's catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products. Cross-reference product data information to applicable portions of Contract Documents.

Do not commence manufacture or order materials before shop drawings and product data are reviewed.

13.3 FEES, PERMITS AND CERTIFICATES

Pay all fees, levies and obtain all permits as required by authorities having jurisdiction. Provide authorities with plans, applications and information as required to obtain permits and acceptance certificates. Provide inspection and completion certificates as evidence that the work conforms to the requirements of Authority having jurisdiction. Only the actual cost of fees or levies will be reimbursed in accordance with the Price Proposal. All works related in obtaining permit or certificates is to be included in the Price Proposal Form.

13.4 FIRE SAFETY REQUIREMENTS

Comply with the National Building Code of Canada (NBC most current) for fire safety in construction and the National Fire Code of Canada (NFC most current) for fire prevention, fire-fighting and life safety in building in use.

Conform to the latest Treasury Board Occupational Safety and Health Manual, and the CSC Fire Commissioner's Directives.

Design and specification of fire protection system shall be coordinated with CSC Fire Safety Department.

Welding and cutting: Before cutting and welding operations commence, issue hot work permits then continuously monitor all welding, soldering, grinding and/or cutting work. Store flammable liquids in approved CSA containers. No open flame shall be used unless permitted and authorized by the CM. Note: noise and smell generating work at the Staff College shall be done after business hours. Notify Departmental Representative at minimum 3 days in advance so there is sufficient time to notify the CSC staff.

At least 48 hours prior to commencing cutting, welding or soldering procedure, advise the Departmental Representative:

1. Notice of intent, indicating devices affected, time and duration of isolation or bypass;
2. Completed welding permit as defined in NFC;
3. Return welding permit to Site Superintendent immediately upon completion of procedures for which permit was issued.

A fire watcher as described in NFC shall be assigned when welding or cutting operations are carried out in areas where combustible materials within 10m may be ignited by conduction or radiation.

Where work requires interruption of fire alarms or fire suppression, extinguishing or protection systems:

1. Provide watchman service as described in NFC; In general, watchman service is defined as an individual conversant with Fire Emergency Procedures, performing fire picket duty within an unprotected and unoccupied (no workers) area once per hour.
2. Retain services of manufacturer for fire protection systems on daily basis or as approved by NFC, to isolate and protect all devices relating to:
 - a. Modification of fire alarms, fire suppression, extinguishing or protection systems; and/or
 - b. Cutting, welding, soldering or other construction activities which might activate fire protection systems.

Immediately upon completion of work, restore fire protection systems to normal operation and verify that all devices are fully operational. Inform fire alarm system monitoring agency and local Fire Department immediately prior to isolation and immediately upon restoration of normal operation.

13.5 FIELD QUALITY CONTROL

Carry out Work using qualified licensed workers or apprentices in accordance with Provincial Act respecting manpower vocational training and qualification.

Permit employees registered in Provincial apprenticeship program to perform specific tasks only if under direct supervision of qualified licensed workers. Determine permitted activities and tasks by apprentices, based on level of training attended and demonstration of ability to perform specific duties.

13.6 HAZARDOUS MATERIALS

Comply with the requirements of the Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials, and regarding labeling and the provision of Material Safety Data Sheets (MSDS).

For work in occupied buildings, give the Departmental Representative 48 hours to 1 week notice for work involving designated substances (O. Reg. 490/09 Designated Substances), hazardous substances, and before painting, caulking, installing carpet or using adhesives.

13.7 TEMPORARY UTILITIES

Provide temporary heating and ventilation as required to facilitate progress of work. Arrange for connection with appropriate utility company for water supply and temporary power and lighting. Provide temporary telephone, fax and data for own use. Pay costs of installation, maintenance and removal.

Give the Departmental Representative one (1) week notice related to each necessary interruption of any mechanical or electrical service throughout the course of the work. Keep duration of these interruptions to a minimum. Carry out all interruptions after normal working hours of the occupants, preferably on weekends.

13.8 PROTECTION

Protect finished work against damage until take-over. Protect adjacent work against the spread of dust and dirt beyond the work areas. Protect operatives and other users of site from all hazards. Protect mobilization area so run-off into existing storm water systems is contained.

Provide dust tight screens or partitions to localize dust-generating activities, and for protection of workers, finished areas of work and public. Maintain and relocate protection until such work is complete.

Provide site fencing to protect public, CSC staff, and visitor movements on the grounds of the Crown's land.

13.9 USE OF SITE AND FACILITIES

Execute Work with least possible interference or disturbance to the normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated. The CM shall install proper site separation and identification.

Where elevators exist, the CM may use these at Departmental Representative's discretion. Protect from damage, safety hazards and overloading of existing equipment.

Provide sanitary facilities as required by Provincial regulation for the expected workforce. Note: the Staff College will be partially occupied during business hours. Sanitary facilities are not available to Contractors. Communicate with Departmental Representative to review the location of the Contractor sanitary facilities; it shall not be near the building front entrance.

Smoking is not permitted on the site. Obey smoking restrictions on building property.

Maintain an office trailer at the site until project completion. Provide and setup site offices for CM's dedicated site staff, meeting area and lunchroom. Office areas are to be secure, clean and quiet (by construction site standards). Each office shall be maintained in clean condition during the progress of the Work and adequately lighted, heated, ventilated and air conditioned space for meetings, filing and plan tables for Contract Documents.

13.10 SITE STORAGE

Provide all required storage space, which shall be equipped and maintained by the CM. Do not unreasonably encumber site with materials or equipment. Move stored products or equipment which interferes with the operations of CSC. Obtain and pay for use of additional storage or work areas needed for operations.

13.11 SIGNS

Provide signs related to traffic control, information, instruction, use of equipment, public safety devices, to the Departmental Representative's approval. No advertising will be permitted on this project.

13.12 ACCESS AND EGRESS

Design, construct and maintain temporary access to and egress from work areas, including stairs, runways, ramps or ladders and scaffolding, independent of finished surfaces and in accordance with relevant municipal, provincial and other regulations.

13.13 SCAFFOLDS AND WORK PLATFORMS

Design, install, and inspect scaffolds and work platforms required for work in accordance with relevant municipal, provincial and other regulations. Provide design drawings, signed and sealed by qualified Professional Engineer licensed in the province of Ontario, where prescribed. Additions or modifications to scaffolding must be approved by Professional Engineer in writing.

13.14 WASTE MANAGEMENT

Comply with the Environmental Protection Act, Ontario Regulations O. Reg. 102/94 and O. Reg. 103/94 for waste management program on construction and demolition projects.

The CM shall:

1. Review the draft waste reduction plan from the Environmental Consultant and submit to the Departmental Representative and Environmental Consultant a final waste reduction work plan for the project.
2. Ensure that the plan is in compliance with PSPC guidelines and meets the requirements of local authorities having jurisdiction;
3. Clearly outline the strategy and methodology for optimizing solid waste diversion from landfill and disposal of toxic or hazardous materials in the most appropriate manner;
4. Include all related schedules outlining expected inventory targets and results required when waste audits are conducted;
5. Include a non-hazardous solid waste reduction program for eliminating waste through reduction, reuse and recycling including:
 - a. Requirements for sorting construction waste on site by types;
 - b. A description of the most practical manner for recycling each individual material.
6. Develop specific procedures for conducting waste management audits on site, including audit objectives, frequency and format;
7. Prepare written monthly reports containing records of waste disposal efforts, including:
 - a. A review of the implementation strategy;
 - b. A review of Subcontractors disposal practices for paints, solvents and pressure treated wood scraps and other similar products or materials.
8. Perform a waste management audit indicating the degree to which recycling objectives are being achieved and recommendations for improvements if objectives are not being met.

13.15 OPERATIONS AND MAINTENANCE MANUALS

Two (2) weeks prior to any scheduled training, submit to Departmental Representative four (4) hard copies and two electronic copies of approved Operations Data and Maintenance Manual compiled as follows:

1. Bind data in vinyl hard cover 3 "D" ring type loose leaf binders for 212 x 275 mm size paper. Binders must not exceed 75 mm thick or be more than 2/3 full.

2. Enclose title sheet labelled "Operation Data and Maintenance Manual", project name, date and list of contents. Project name must appear on binder face and spine.
3. Organize contents into applicable sections of work to parallel project specifications breakdown.
4. Mark each section by labelled tabs protected with celluloid covers fastened to hard paper dividing sheets.

Include following information plus data specified:

1. Maintenance instructions for finished surface and materials;
2. Copies of hardware and paint schedules.
3. Description: Operation of the equipment and systems defining start-up, shut-down an emergency procedures, and any fixed or adjustable set points that affect the efficiency of the operation. Include nameplate information such as make, size, capacity and serial number.
4. Maintenance: Use clear drawings, diagrams or manufacturers' literature which specifically apply and detail the following:
 - a. Lubrication products and schedules;
 - b. Trouble shooting procedures;
 - c. Adjustment techniques;
 - d. Operational checks;
 - e. Supplier's names, addresses and telephone numbers and components supplied by them must be included in this section. Components must be identified by a description and manufacturers part number.
5. Guarantees showing:
 - a. Name and address of projects.
 - b. Guarantee commencement date (date of Interim Certificate of Completion).
 - c. Duration of guarantee.
 - d. Clear indication of what is being guaranteed and what remedial action will be taken under guarantee.
 - e. Signature and seal of Guarantor.
 - f. Additional material used in project listed under various Sections showing name of manufacturer and source of supply.
6. Spare parts: List all recommended spares to be maintained on site to ensure optimum efficiency. List all special tools appropriate to unique application. All parts/tools detailed must be identified as to manufacturer, manufacturer part number and supplier (including address).

Include one complete set of final shop drawings (bound separately) indicating corrections and changes made during fabrication and installation.

As Built drawings and O&M manual shall be converted, where necessary, into Portable Document File (PDF) format permit for viewing using Acrobat reader.

13.16 RECORDS

As work progresses, maintain accurate records to show deviations from Contract drawings. Just prior to Departmental Representative's inspection for issuance of the Certificate of Completion, supply to the

Departmental Representative one (1) electronic copy and two (2) sets of hard copies of the prints with all deviations neatly inked in.

13.17 GUARANTEES AND WARRANTIES

Before completion of Work, collect all manufacturer's guarantees and warranties and deposit with Departmental Representative.

13.18 CONSTRUCTION CLEAN UP

The CM will be responsible for construction cleaning throughout the life of the project, as Work progresses. At the end of each work period, and more often if requested by the Departmental Representative, remove debris from site, neatly stack material for use, and clean up to ensure a safe work environment.

Upon completion remove scaffolding, temporary protection and surplus materials. Make good defects noted at this stage.

Clean areas under contract to a condition at least equal to that previously existing, including building exterior and surrounding site, to the approval of the Departmental Representative.

13.19 SECURITY CLEARANCES

All personnel employed on this project will be subject to security check. Obtain requisite clearance, as instructed, for each individual required to enter the premises.

13.20 SITE SECURITY

CM shall be responsible for security of the entire site until the facility is ready for intended use. Develop a security plan in consultation with the Departmental Representative. Revise plan as required to approval of Departmental Representative. Update plan to meet requirements of Departmental Representative as Project progresses. Be responsible for:

1. Coordination of construction activities and CSC operations;
2. Coordination of Shared Services Canada's cabling Contractor, allowing access to the site to complete their cabling installation work.
3. Access to the site including sign-in procedures and security clearances;
4. Off-hours security including procedures to escort, to lockup, evening and weekend surveillance, fire watches, emergency procedures and responses;
5. All safety issues related to the Work or its site to be performed as required by federal, provincial or municipal regulations;
6. Safeguarding of components to be reused or recycled;
7. Protection of materials, equipment, workmanship and, throughout the implementation of the project, any CSC items installed prior to the building being ready for use;

8. A site protocol to be developed and enforced, including:
 - a. No CDs, radios or tape machines;
 - b. Noise control;
 - c. No parking on site;
 - d. Due regard for the general public's expectations with respect to behaviour, language and dress in public places (all portions of the site are deemed to be public);
 - e. Security restrictions as per CSC regulations and protocols.

Provide emergency response coordination and for responses to site problems during non-working hours. In consultation with the Departmental Representative, establish a list of contacts for responses and communication. In the event of any problems, contact the Departmental Representative immediately. In case of an emergency where the safety of persons or property is concerned, or Work is endangered by the actions of the Subcontractors or other persons, take immediate action. If required, stop Work. In all situations, notify the Departmental Representative. Give immediate written notice to the Subcontractor or other person of the hazard.

13.21 TESTING / SPECIALTY SERVICES

Provide safe working areas and assist with testing procedures, including provisions for materials or services and coordination, as required by testing agency and as authorized by Departmental Representative.

Where tests indicate non-compliance with specifications, CM is to pay for initial test and all subsequent testing of work to verify acceptability of corrected work.

APPENDIX A - TEAM IDENTIFICATION FORMAT

For details on this format, please see SRE in the Request for Proposal.

The Prime Consultant and other members of the Consultant Team shall be, or eligible to be, licensed, certified or otherwise authorized to provide the necessary professional services to the full extent that may be required by provincial or territorial law.

I. Construction Manager (Proponent):

Firm or Joint Venture Name:

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....
.....
.....

II. Key Sub Consultants / Specialists:

Project Manager

Firm Name:

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....
.....

Commissioning Manager

Firm Name:

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....
.....

Cost Estimator

Firm Name:

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....
.....

Scheduling

Firm Name:

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....
.....

Site Superintendent

Firm Name:

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....
.....

Site Safety Office

Firm Name:

Key Individuals and provincial professional licensing status and/or professional accreditation:

.....
.....

APPENDIX B - DECLARATION/CERTIFICATIONS FORM

Project Title:

Name of Proponent:

Street Address:

Mailing Address:

Telephone Number: ()

Fax Number: ()

E-Mail:

Procurement Business Number:

Type of Organization: _____ Sole Proprietorship _____ Partnership _____ Corporation _____ Joint Venture	Size of Organization: Number of Employees _____ Graduate Architects / Professional Engineers _____ Other Professionals _____ Technical Support _____ Other _____
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APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

Remark to Contracting Authority: Insert the Federal Contractors Program for Employment Equity Certification for requirements made on behalf of a Department or Agency subject to the FCP, estimated at **\$1M and above**, Applicable Taxes included (consult Annex 5.1 of the Supply Manual).

Federal Contractors Program for Employment Equity - Certification

I, the Proponent, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a proposal non-responsive, or will declare a consultant in default, if a certification is found to be untrue, whether during the proposal evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Proponent's certifications. Failure to comply with any request or requirement imposed by Canada may render the proposal non-responsive or constitute a default under the contract.

For further information on the Federal Contractors Program for Employment Equity visit Employment and Social Development Canada (ESDC)-Labour's website.

Date: _____(YY/MM/DD) (If left blank, the date will be deemed to be the bid closing date.)

Complete both A and B.

A. Check only one of the following:

- () A1. The Proponent certifies having no work force in Canada.
- () A2. The Proponent certifies being a public sector employer.
- () A3. The Proponent certifies being a federally regulated employer being subject to the *Employment Equity Act*.
- () A4. The Proponent certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).
- () A5. The Proponent has a combined work force in Canada of 100 or more employees; and

APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

- () A5.1. The Proponent certifies already having a valid and current Agreement to Implement Employment Equity (AIEE) in place with ESDC-Labour.

OR

- () A5.2. The Proponent certifies having submitted the Agreement to Implement Employment Equity (LAB1168) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- () B1. The Proponent is not a Joint Venture.

OR

- () B2. The Proponent is a Joint Venture and each member of the Joint Venture must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the General Instructions)

APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

Former Public Servant (FPS) - Certification

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPS, proponents must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of proposals is completed, Canada will inform the Proponent of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the proposal non-responsive.

Definitions

For the purposes of this clause,

"former public servant" is any former member of a department as defined in the *Financial Administration Act*, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- (a) an individual;
- (b) an individual who has incorporated;
- (c) a partnership made of former public servants; or
- (d) a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the *Public Service Superannuation Act* (PSSA), R.S., 1985, c.P-36, and any increases paid pursuant to the *Supplementary Retirement Benefits Act*, R.S., 1985, c.S-24 as it affects the PSSA. It does not include pensions payable pursuant to the *Canadian Forces Superannuation Act*, R.S., 1985, c.C-17, the *Defence Services Pension Continuation Act*, 1970, c.D-3, the *Royal Canadian Mounted Police Pension Continuation Act*, 1970, c.R-10, and the *Royal Canadian Mounted Police Superannuation Act*, R.S., 1985, c.R-11, the *Members of Parliament Retiring Allowances Act*, R.S., 1985, c.M-5, and that portion of pension payable to the *Canada Pension Plan Act*, R.S., 1985, c.C-8.

APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

Former Public Servant in Receipt of a Pension

As per the above definitions, is the Proponent a FPS in receipt of a pension?

YES () NO ()

If so, the Proponent must provide the following information, for all FPS in receipt of a pension, as applicable:

- (a) name of former public servant;
- (b) date of termination of employment or retirement from the Public Service.

By providing this information, proponents agree that the successful Proponent's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

Work Force Adjustment Directive

Is the Proponent a FPS who received a lump sum payment pursuant to the terms of a work force reduction program? YES () NO ()

If so, the Proponent must provide the following information:

- (a) name of former public servant;
- (b) conditions of the lump sum payment incentive;
- (c) date of termination of employment;
- (d) amount of lump sum payment;
- (e) rate of pay on which lump sum payment is based;
- (f) period of lump sum payment including start date, end date and number of weeks;
- (g) number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

Name of Proponent:

DECLARATION:

I, the undersigned, being a principal of the proponent, hereby certify that the information given on this form and in the attached proposal is accurate to the best of my knowledge. If any proposal is submitted by a partnership or joint venture, then the following is required from each component entity.

.....
name signature

.....
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

.....
name signature

.....
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

.....
name signature

.....
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

During proposal evaluation period, PSPC contact will be with the following person: _____.

Telephone Number: () _____ Fax Number: () _____

E-mail: _____

This Appendix "B" should be completed and submitted with the proposal, but may be submitted afterwards as follows: if Appendix "B" is not completed and submitted with the proposal, the Contracting Authority will inform the Proponent of a time frame within which to provide the information. Failure to comply with the request of the Contracting Authority and to provide the certifications within the time frame provided will render the proposal non-responsive.

ANNEX A - BASIS OF PAYMENT

This contract will be paid on a "Percentage of Deliverables Completed" basis.

1. The Basis of Payment of the contract is comprised of the following:

The Advisory and Construction Manager's Percentage Fee; Reimbursement of Construction Costs; and Allowable disbursements.

A. GENERAL

1. All values provided including the Estimated Construction Costs and any increases in construction costs are subject to budget approval.
2. Subject to the terms and conditions of the Agreement, and in consideration for the performance of the Services, Canada shall pay to the Construction Manager a sum of money calculated in accordance with the provisions herein and the Agreement Particulars.
3. The Consultant's fees are only payable when the Construction Manager has performed the Services as determined by the Departmental Representative (DR). Payment in respect of a Service, or part of a Service, is not to be deemed a waiver of Canada's rights of set off at law or under the Agreement for costs or expenses arising from default or negligence of the Construction Manager.
4. The maximum amount payable under the Agreement, including fees and disbursements, shall not exceed the sum specified in the Agreement Particulars, without the prior written authorization of the DR in accordance with the terms of the Agreement.

2. FEES

The Construction Manager's Fee will be paid monthly in arrears for the term of the Contract. The Construction Manager's Fee is based on the aggregate of the following:

(a) ADVISORY SERVICES PERCENTAGE FIXED FEE (TABLE 2)

Payments in respect of the percentage fee arrangement will be made monthly during the performance of the Services, on the basis of the fee submitted and progress as determined by the DR for each of the Services. The total percentage fee will be calculated on the Estimated Construction Costs provided in the Terms of Reference and not subject to adjustment due to variations in the Estimated Construction Cost through the life of the project. Although these draws against the Advisory Services Percentage Fee can be on monthly basis, they are not fixed and their value will vary depending on the progress of the project and the approval of DR. All Required Services specified in the Terms of Reference must be included in and covered by the Advisory Services portion of the contract.

The advisory services required for each Project Stage are detailed in the Terms of Reference. The Project Stages are as follows:

- a. Requirements Analysis Stage
- b. Design Development Stage
- c. Construction Documents Stage
- d. Tender Stage
- e. Construction Stage
- f. Final Completion Stage

The CM is responsible to identify as per the Table 2, under the percentage of their Advisory Services Fees associated to each Project Stage, for payment purposes. The Advisory Services Percentage Fixed Fee will include all costs for provision of advisory services for the duration of the contract including:

- (i) all overhead, administration, mark-up and profit for the Construction Manager's operations, including, but not limited to standard office expenses such as any photocopying, and supplies, taxi charges, computer and software costs, Internet, all telephone and fax, cellular telephones, depreciation, rent and maintenance of office facilities, furniture, office equipment parking. Note: Site office costs are included in the percent construction fee.
- (ii) the actual cost of all personnel employed or contracted by the Construction Manager to deliver the services specified in the Terms of Reference and includes all payroll costs such as salary, statutory holidays, vacations with pay, unemployment insurance premiums and worker's compensation contributions where applicable, pension plan contributions, sick time allowance, medical/dental insurance premiums and any other benefits. *Note: Do not include contracted personnel of sub-trades that will perform the construction;*
- (iii) The salaries, benefits or other compensation for the Construction Manager's officers, directors, principals and support staff;
- (iv) Travel and accommodation costs related to the Work for the duration of the Contract, of the Construction Manager's personnel;
- (v) All other costs which may be considered disbursements unless specifically listed;
- (vi) Any part of the Construction Manager's capital expenses, including interest on the Construction Manager's capital employed for the Work, unless otherwise expressly provided herein;
- (vii) All field personnel such as superintendents, health and safety officers, assistant superintendents, field engineers, commissioning specialists, etc., including vehicles and vehicle expenses

(b) PERCENTAGE CONSTRUCTION FEE (TABLE 3)

The percent construction fee includes:

- (i) The Contractor's percentage mark-up for overhead, profit and general administration costs that are not included in ii (below).
- (ii) The construction, maintenance, operation and/or rental fee(s) of a site field office at the Site, including, but not limited to standard office expenses such as any photocopying, computer costs, Internet, all telephone and fax, cellular telephones, depreciation, rent and maintenance of office facilities, furniture, office equipment and supplies, taxi charges, parking, communication equipment, advertising and publications, long distance phone, bottled water, courier, stamps, software, office supplies and petty cash items.
- (iii) All costs that have not been identified for reimbursement under Annex A: Basis of Payment, Item, 2 (a) Advisory Services, Item 2 (c) Additional Personnel, Item 3 Construction Costs and Item 4 Allowable Disbursements must be included in the Percent Construction Fee.

The percent construction fee will be paid in arrears for each progress claim submitted in accordance with GC5 - Terms of Payment, during the Term of the Contract. The value of the percent construction fee for the payment period will be based on the construction cost of the work actually incurred during that period.

(c) ADDITIONAL PERSONNEL (TABLE 6)

The Contractor must include in the monthly fees sufficient personnel to complete the Work within the time frame stipulated in Construction Time.

However, should Canada determine that, for the purposes of schedule acceleration, additional personnel is required, Canada will have the right to request that the Contractor provide such additional personnel for the performance of the Work or any part or parts thereof. Also, for the purpose of plant shut-down, (after-hour) overtime for additional personnel may be required.

For additional personnel requested by Canada, the Contractor will be reimbursed in accordance with the firm per diem rates (including payroll costs, overhead and profit) quoted in the Pricing Tables for the identified categories of personnel or in accordance with rates which have been negotiated and mutually agreed to

between Canada and the Contractor for personnel that were not pre-identified in the Pricing Tables. Such costs will be payable monthly in arrears.

If additional personnel are required outside of the categories and rates described in the Pricing Tables, the Contractor must provide, on Canada's request, one or more of the following price justifications for Canada's review and acceptance:

- a. a current published price list indicating the percentage discount available to Canada; or
- b. a copy of paid invoices for the like quality and quantity of the services sold to other customers; or
- c. a price breakdown showing the cost of direct labour, direct materials, purchased items, engineering and plant overheads, general and administrative overhead, transportation, etc., and profit; or
- d. price or rate certifications; or
- e. any other supporting documentation as requested by Canada.

3. CONSTRUCTION COSTS (TABLE 1)

- (a) Determination of Construction Cost will be in accordance with Article 5.6 Construction Costs will be reimbursed in accordance with GC5 - Terms of Payment. Construction Costs will include:
 - (i) The actual, reasonable and direct costs of subcontracts;
 - (ii) The actual, reasonable and direct costs incurred by the Contractor, as previously agreed to by Canada in performing the Work, as follows:
 - (A) Materials incorporated into the Work, including costs of transportation;
 - (B) Materials, products, supplies, equipment, temporary services and facilities, including transportation and maintenance thereof, which are consumed in the performance of the Work, and cost less salvage value on such items used, but not consumed, which remain the property of the Contractor;
 - (C) Tools, machinery and equipment, exclusive of hand tools, used in the performance of the Work, whether rented by the Contractor or others, including installation, minor repairs-and replacements, dismantling, removal, transportation and delivery costs thereof;

- (D) Site engineering, as-built drawings, maintenance manuals and all other documents required to be provided before certification of Substantial Performance, as well as commissioning activities;
- (E) Independent inspection and testing services other than those described in the construction documents;
- (F) Temporary services, O & M Manuals, as-builts and engineering drawings;
- (G) Site washrooms other than those furnished by Canada;
- (H) Health and Safety sundries for visitors (hard hats, boots, gloves, goggles, masks, etc.);
- (I) Bilingual Site signage;
- (J) Utility costs, as applicable;
- (K) The cost of safety measures and requirements;
- (L) Cleaning materials supplies, hand tools and consumables;
- (M) Site photos;
- (N) Printing of construction documents;
- (O) Removal and disposal of waste products and debris.

Site Labour Costs (allowance is included within Estimated Construction Cost)

The Contractor must not use its own forces or the forces of a non-arms length entity to provide Trade Work unless the Contractor has been specifically authorized to do so by Canada.

However, the Contractor will be reimbursed for the labour expended by the Contractor's carpenters and general site labourers for any physical construction work related to Construction General Requirements which received prior approval from the Departmental Representative (DR). Site labour costs that have been authorized by the DR will be paid monthly in arrears.

Regardless of the above, Canada may require that the Contractor competitively procure any or all of the construction work, including work that may be completed by the Contractor's own labourers.

- b) Any costs incurred by the Contractor due to failure on the part of the Contractor to exercise reasonable care and diligence in the Contractor's attention to the Work must be borne by the Contractor.

4. ALLOWABLE DISBURSEMENTS

- (a) In addition to the Contractor's Fee, Canada will reimburse at actual cost, without any administrative cost or mark-up for overhead or profit, the following disbursements supported by Invoices/receipts:
 - (i) The cost of the Contractor's insurance and bonding. (All insurance and bonding costs must be identified and submitted up front in Table 3 of Pricing Tables- Annex B. Only costs that are identified in the Pricing Tables submitted by the Bidder will be reimbursable. The amount shown in Section BA03 is considered the upset limit. All cost reimbursements will be made on receipt of proof of actual costs. Under no circumstances will the reimbursement be higher than the upset limit.)
 - (ii) Fees, levies, permits, costs and charges levied by authorities having jurisdiction at the Site; (as described in Fees, Levies and Certifications of the Terms of Reference.)

Travel, if requested in writing by Canada, will be reimbursed in accordance with the National Joint Council Travel Directives without any administrative cost or mark-up for overhead or profit.

ANNEX D - TECHNICAL BID SUBMISSION REQUIREMENTS AND EVALUATION

TECHNICAL BID SUBMISSION REQUIREMENTS AND EVALUATION

1.1 RATED REQUIREMENTS (TECHNICAL SUBMISSION)

In the Technical Submission, the Bidder should demonstrate their understanding of the requirements contained herein and explain how they meet these requirements. Bidders should demonstrate their capability in a thorough, clear and concise manner for carrying out the work.

The Technical Submission should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that the Bidders address and present topics in the order of evaluation criteria under the same headings. To avoid duplication, bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

1.1.1 EXPERIENCE OF THE BIDDER (CONSTRUCTION MANAGEMENT);

Provide two (2) representative reference projects successfully completed by the Bidder and/or joint venture partner within the last ten (10) years relevant to the scope of services required, and the scale and scope of the Project described in this RFP. A similar project is defined as construction of a new Laboratory Building or joint Laboratory and Office building 3000 square meters or greater, where the value of construction was no less than \$12,000,000.00 and the project was delivered through Construction Management. Acceptable similar Laboratories are food, hospital, university, or similar government laboratories. Only the first two (2) projects listed in sequence will receive consideration and any others will receive none as though not included. The following information is to be included for each representative project:

A. Project Relevance:

A brief project description and intention of the project including:

- Total Construction Value and contracts managed
- Start and Completion Dates
- Names of key personnel responsible for the project delivery

Clearly indicate how and why each referenced project is comparable to the subject project of this RFP against the following criteria:

- Nature of Work
- Resource Management
- Complexity, Constraints, and Expectations
- Public and Other Stakeholder Involvement

B. Project Management:

- Budget control and management (i.e. initial contract price & final construction cost with explanation to address variances)
- Schedule control and management (i.e. initial schedule and revised schedule with explanation to address variances)
- Scope, quality and risk management to achieve client's expectations

C. Project Reporting:

- Project reporting requirements.

D. Provide contact information for client references knowledgeable in the representative project and the Bidder's role. The references will only be contacted by the Contracting Authority to confirm submitted material.

Only projects performed by the Bid Firm will be considered unless these entities form part of a joint venture Proponent.

1.1.2 EXPERIENCE OF KEY PERSONNEL OF THE BIDDER

1.1.2.1 TEAM IDENTIFICATION.ANDQUALIFICATIONS

The Construction Management Team to be identified shall include, as a minimum, the following key staffing positions. Please provide resumes for the following key personnel which demonstrate the following requirements:

1. Construction Manager

Demonstrate the Construction Manager has a minimum of fifteen (15) years progressive experience in the construction industry, having worked the last five (5) years in management positions as a Construction Manager of projects similar in size, complexity and scope at a minimum construction value of \$12,000,000.00. Provide academic qualifications and certifications including professional designations and degrees such as P. Eng., Architect, Gold Seal, Occupational Health and Safety Certifications, etc.

2. Project Manager

Demonstrate the Project Manager has a minimum of fifteen (15) years progressive experience in the construction industry, having managed projects of similar size, complexity and scope within the last five (5) years at a minimum construction value of \$12,000,000.00. Provide academic qualifications and certifications including professional designations and degrees such as P. Eng., Architect, PMP, etc.

3. Cost Estimator

Demonstrate the Cost Estimator has a minimum of ten (10) years progressive experience in the construction industry, having produced estimates in the past three (3) years on projects of similar size, complexity and scope with a minimum construction value of \$12,000,000.00. Provide academic qualifications and certifications including professional designations and degrees such as P. Eng., Architect, Quantity Surveyor (PQS), Gold Seal, etc.

4. Scheduler

Demonstrate the Scheduler has a minimum of ten (10) years progressive experience in the construction industry, including the last three (3) years developing and managing schedules using scheduling software such as CMP, PERT, MS Project, etc., on projects of similar size, complexity and scope with a minimum construction value of \$12,000,000.00. Provide academic qualifications and certifications including professional designations and degrees such as P. Eng., Architect, PMP, etc.

5. Site Superintendent

Demonstrate the Site Superintendent has a minimum of fifteen (15) years progressive experience in the construction industry, including the last five (5) years as Site Superintendent on projects of similar size, complexity and scope with a minimum construction value of \$12,000,000.00. Provide academic qualifications and certifications including professional designations and degrees such as P. Eng., Architect, Gold Seal, Occupational Health and Safety Certifications, etc.

6. Site Safety Officer

Demonstrate the Site Safety Officer has a minimum of ten (10) years progressive experience in the construction industry, including the last three (3) years as a Site Safety Officer on projects of similar size, complexity and scope with a minimum construction value of \$12,000,000.00. Provide academic qualifications and certifications including professional designations and degrees such as Gold Seal, CIH, JHSC Certification, etc.

1.1.2.2 EXPERIENCE AND SUITABILITY OF PROPOSED STAFF

Describe the experience and performance of the key personnel to be assigned to this project regardless of their past association with the current Bidder. Information to be provided for each member of the key personnel identified above at 1.1.2.1. This is the opportunity to emphasize the strengths of the individuals on the team, to recognize their past responsibilities, commitments and achievements. Limit resumes to four (4) pages for the Construction Manager and Project Manager. Limit resumes to two (2) pages for other staff.

Experience in the proposed position and number of years of experience in both the proposed position and the construction industry (if not with Bidder firm, specify name of firm).

Role, responsibility and degree of involvement of individual in past projects (especially those identified as reference projects).

1.1.3 UNDERSTANDING THE PROJECT

The Bidder is to demonstrate a good understanding of the goals of the project, the functional/technical requirements, the constraints and issues that will shape the project, including as a minimum:

- A description of the main project goals, including the Client User's functional and technical requirements
- A description of the Construction Management philosophy and methodology to meet the intent of the project and PWGSC's expectations
- A description of approach to deal with significant issues, risks, benefits, challenges and constraints during the project.
- The interests of both internal and external stakeholders
- The expectations of the Client

1.1.4 MANAGEMENT OF SERVICES

The Bidder is to describe how it proposes to effectively perform the services and deliver the work while meeting the project constraints and ensuring consistent control throughout the project. The Bidder should also demonstrate how the team will be organized and managed. Information to be provided as a minimum:

- Provide your Team's organizational chart with all proposed personnel as required to deliver the project in the most cost and time efficient manner. The organizational chart shall identify and show:
 - Proposed team member names and backup as well as their proposed positions for both pre-construction and construction

- stages of the work.
 - o Contractual and reporting relationships with PWGSC, the consultant, the Client, and major external stakeholders.
- Provide a description of the Team organizational chart to describe:
 - o Reporting relationships within the firm, with PWGSC, NRC, the consultant and other stakeholders.
 - o Internal and external communication strategies, including meetings, communication tools, reporting tools and format.
 - o How advice will be provided during the design and tender and construction phases.
 - o Schedule, cost, scope, quality and risk management control and methodology to be applied throughout the delivery of the project.
 - o Tendering methodology.
 - o Commissioning methodology.
 - o Health and Safety philosophy, policy, process and procedural documentation and how it is aligned with the requirements of the project.

1.1.5 WORK PLAN AND METHODOLOGIES

1.1.5.1 The Bidder is to describe how they propose to undertake the assignment to achieve the project objectives through a high level work plan identifying major tasks and application of proven methodology. The Bidder is to provide the following as a minimum:

- A. Cost Management
 - i. Construction Manager's Costs
 - A description of procedures to be put in place to manage the cost of the services to be provided under this assignment.
 - ii. Project Costs
 - A description of cost control and methodology to be applied throughout the delivery of the project.
 - Describe the estimating process the Bidder will use to document the cost of each bid package, and explain how costs will be compared to market conditions.
- B. Time Management (Schedule)
 - i. A description of the schedule control and methodology to be applied throughout the delivery of the project.
- C. Quality Management
 - i. A description of the quality control and quality assurance methodology to be applied throughout the delivery of the project to ensure deliverables meet expectations.
- D. Scope Management (Change Management)

- i. A description of the scope change control methodology to be applied throughout the delivery of the project.
- E. Risk Management
 - i. A description of how the Bidder will support and contribute to the design and construction phases with respect to risk management.
- F. Communications Management
 - i. Provide a description of the internal and external communication strategies, including meetings, communication tools, reporting tools and format.
 - ii. Describe the reporting relationships within the Bidders organization, PWGSC, and the Client.
- G. Resource Management
 - i. Project Team
 - Detail how the Bidder will maintain the key team personnel available to the project for the duration of the work.
 - ii. Site Health and Safety
 - Provide a description of the Health and Safety philosophy, policies, process and procedural documentation and how it is aligned with the requirements of the project.
 - Provide a narrative describing how the Bidder will implement a Site Specific Health & Safety Plan for this project.
- H. Procurement Management
 - i. Trade contracts (tendering strategy)
 - Provide a description of the proposed tendering methodology including a discussion as to how the Bidder would ensure cost effective contracts through competitive tendering.
 - Detail how the Bidder will ensure that qualified contractors will be available to tender and undertake the necessary work compliance with design requirements.
 - ii. Long Delivery Items
 - Provide a description of the mechanism to identify and acquire any long term or limited delivery components necessary for the work.

1.1.5.2 In addition to the above the Bidder is to provide:

- A. A breakdown of work tasks and deliverables. Include a narrative

describing the Work Plan. In the narrative, indicate how the Bidder would address any adjustments to the Work Plan for changes in site conditions or other project impacts.

- B. An initial construction schedule in 'bar chart' format with commentary based on the Terms of Reference, the information disclosed in the RFP and additional reasonable assumptions that anticipates the various issues that may be faced by the Bidder in undertaking the Work. The schedule shall outline activities, sequencing and interdependence of construction activities and work packages backed up with a narrative report describing:
- i. A description as to how the Bidder will coordinate with the design consultant and contribute to the process of aligning the design to meet both cost and schedule constraints.
 - ii. A cost estimating strategy describing the process the Bidder will employ to determine construction costs at each stage of the work as the design progresses. Detail the estimating process the Bidder will use to document the cost of each bid package prior to tender, and explain how costs will be compared to market conditions.
 - iii. A description as to how the Bidder will perform design and construction document reviews and communicate assumptions, risks and constructability review comments to the consultant team and PWGSC at both ongoing basis and at set review intervals.
 - iv. A description of how advisory services will be provided during the design stages.
 - v. A description of the proposed commissioning methodology.

1.2 Evaluation of Rated Requirements

In the first instance, price envelopes will remain sealed and only the Rated Requirements (Technical Submission) of the proposals which are responsive will be reviewed, evaluated and rated by a PWGSC Evaluation Board in accordance with the following to establish Technical Ratings:

To be considered further, bidders must achieve a minimum technical rating of sixty percent (60%) of available points in each specific category and seventy five (75%) points out of the hundred (100) points available as a total technical score. No further consideration will be given to bidders not achieving this criterion.

1.2.1 Evaluation Table

SRE-ID	Description	Available Points	Weight	Minimum Points	Maximum Points
1.1.1	Experience of Bidders	0 to	2.0	12	20
1.1.2	Experience of Key Personnel	0 to	2.0	12	20
1.1.3	Understanding the Project	0 to	1.0	6	10
1.1.4	Management of Services	0 to	2.0	12	20
1.1.5	Work Plan and	0 to	3.0	18	30
	Total Technical Score			75	100

1.2.2 Generic Evaluation Table

WEAK				STRONG	
Did not submit information which could be evaluated	Lacks complete or almost complete understanding of the requirements.	Has some understanding of the requirements but lacks adequate understanding in some areas of the requirements.	Demonstrates a good understanding of the requirements	Demonstrates a very good understanding of the requirements	Demonstrates an excellent understanding of the requirements.
	Weaknesses cannot be corrected	Generally doubtful that weaknesses can be corrected	Weaknesses can be corrected	No significant weaknesses	No apparent weaknesses
	Proponent does not possess qualifications and experience	Proponent lacks qualifications and experience	Proponent has an acceptable level of qualifications and experience	Proponent is qualified and experienced	Proponent is highly qualified and experienced
	Team proposed is not likely able to meet requirements	Team does not cover all components or overall experience is weak	Team covers most components and will likely meet requirements	Team covers all components - some members have worked successfully together	Strong team - has worked successfully together on comparable projects
	Sample projects not related to this requirement	Sample projects generally not related to this requirement	Sample projects generally related to this requirement	Sample projects directly related to this requirement	Leads in sample projects directly related to this requirement
	Extremely poor. Insufficient to meet performance	Little capability to meet performance	Acceptable capability, should ensure adequate	Satisfactory capability, should ensure effective results	Superior capability, should ensure very effective results

Request for Proposal

PRICE BID EVALUATION

All price proposal envelopes corresponding to responsive technical proposals which have achieved a minimum 60% of available points in each category and 75% of total points will be opened upon completion of the technical evaluation.

1. To be declared responsive, a bid must:
 - a. Comply with all the requirements of the bid solicitation; and
 - b. Obtain the required minimum points for each of the technical bid evaluation criteria which are subject to point rating.
2. The price bid must consist of the duly completed Bid and Acceptance Form accompanied by the required bid security. Bids not meeting a) or b) above will be declared non-responsive.
3. Refer to Special Instructions: SI08, for a summary of the evaluation process

TOTAL SCORE

Total Scores will be established in accordance with the following:

Rating	Possible Range	% of Total Score	Score Points
Technical Rating	0 - 100	70	0 - 70
Price Rating	0 - 100	30	0 - 30
Total Score		100	0 - 100

1. The Bidder receiving the highest Total Score is the first entity that the Evaluation Board will recommend for the provision of the required services. In the case of a tie, the Bidder submitting the lower price for the services will be selected.
2. Refer to Special Instructions: SI08, for a summary of the evaluation process.