



Architectural & Engineering Services

TERMS OF REFERENCE

Expansion and Redevelopment of the Emerson Port of Entry

For:
Canada Border Services Agency
Emerson, Manitoba

PWGSC Project R.06843 I.001



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I PROJECT DESCRIPTION

I.1 GENERAL

I.1.1 PURPOSE

1. Public Works & Government Services Canada (PWGSC) requires the services of an architectural firm, acting as prime consultant together with a multi-disciplinary team of sub-consultants for the provision of service required for this project.
2. The Canada Border Services Agency (CBSA) requires expansion and redevelopment of the existing facilities at the port of entry at Emerson, Manitoba to accommodate increased volumes of traffic.
3. The project involves construction of 3 new commercial vehicle lanes, new PIL (Primary Inspection Line) booths, a new canopy above the PIL booths, renovations (for bus processing and other spaces) and an addition to the existing Commercial building, PIL booth replacement Lane #6.

I.1.2 THE PWGSC GENERAL PROCEDURES AND STANDARDS DOCUMENT (GP&S)

- .1 The Terms of Reference (TOR) document must be used in conjunction with the GP&S, as the two documents are complimentary.
- .2 The TOR describes project-specific requirements, services and deliverables while the GP&S document outlines with minimum standards and procedures common to all projects.
- .3 In the case of a conflict between the two documents, the requirements of the TOR override the GP&S Document.

I.1.3 PROJECT INFORMATION

Project Information	
Project Title:	Facility Redevelopment and Expansion
Project Address:	CBSA Port of Entry, Emerson, Manitoba
Solicitation Number:	
CBSA Team Leader:	Ray Gregoire. P.Eng.
PWGSC Project Number:	R.068431.001
PWGSC Contracting Officer:	TBD
PWGSC Project Manager:	James Hutchings

I.2 BACKGROUND INFORMATION

I.2.1 NEED & GOALS

1. On February 4, 2011, the Prime Minister of Canada and the President of the United States (US) issued *Beyond the Border: A Shared Vision for Perimeter Security and Economic Competitiveness*. This Declaration established a new long-term partnership built upon a perimeter approach to security and economic competitiveness. Collaboratively, Canada and the US developed a joint *Beyond the Border Action Plan (Action Plan)* to realize this goal which commits to making significant investments in physical infrastructure at key land border crossings to relieve congestion and expedite the movement of traffic across the border. In the Action Plan, Canada and the US, commit to make significant investments in physical infrastructure at key crossings to relieve congestion and



- expedite the movement of traffic across the border - specifically highlighting the Lacolle, Lansdowne, Emerson and North Portal Ports of Entry (POE). In the Federal budget announced in March, 2013, the government unveiled to the public a five-year plan call Beyond the Border Action Plan to improve those border facilities.
2. The Emerson Port of Entry is the primary border crossing between Canada and the United States in Manitoba. The crossing operates 24 hours per day, seven days per week and is the only Designated Commercial Office at the land border in Manitoba. It connects Highway 75 in Canada to Interstate 29 in the United States of America through the US Port of Pembina, North Dakota. It is the fifth busiest crossing in terms of two-way trade; it processed \$17.2 billion in 2010. The commodities processed consist primarily of agricultural machinery, tools, swine, vegetables, and vehicle parts.
 3. In recent years, the volume of traffic during peak periods has outpaced the capacity of the infrastructure resulting in significant border delays for both commercial carriers and the travelling Public. In the Year 2012 some 536,670 Autos/trucks passed through CBSA's Emerson border crossing.
 4. The Province of Manitoba and the State of North Dakota undertook a bi-national study to prepare a long-term plan of infrastructure and service improvements, in both Canada and the United States, to serve current and forecasted traffic at this location.
 5. The existing CBSA facilities were constructed in 1998. Survey information and a geotechnical report prepared for the existing facility project will be made available to the Consultant. No As-Built drawings for the existing facility are available.

I.2.2 USER DEPARTMENT

- .1 The User Department referred to throughout the TOR is the Canada Border Services Agency (CBSA)
- .2 The CBSA Mission
 - .1 CBSA is the federal government agency responsible for providing integrated border services that support national security and public safety priorities and facilitate the free flow of persons and goods, including animals and plants that meet all requirements under the program legislation.
 - .2 The Canada Border Services Agency works to ensure Canada's security and prosperity by managing the access of people and goods to and from Canada.

I.2.3 EXISTING CONDITIONS

- .1 The main characteristics of the site are:
 - .1 Manitoba Provincial Highway 75 (4 lane divided highway)
 - .2 Commercial Examination Building (East side of Highway 75)
 - .3 Travellers Building (West side of Highway 75)
 - .4 6 PIL booths between the 2 main buildings, and an overhead link above the PIL booths connecting the buildings.
 - .5 An approx 2Ha (20,000sm) paved area to the east of the commercial building, which includes 70 staff parking stalls (with power), stalls for commercial vehicle parking, dedicated space for large scale imaging inspection of commercial vehicles, and a seized vehicle compound.



- .6 A combined pumphouse/water reservoir building to the south of the commercial building.
- .7 A 91sm single storey PWGSC storage garage located at the southeast corner of the paved area.
- .2 The Red River is approximately 350m from the CBSA site. A walking trail follows the river. The trail path is to be considered in the design.
- .3 The site is in the Red River floodplain. This site is subject to flooding. (Refer to appended site plan showing extent of flooding limits). The Manitoba Water Stewardship Board established the Flood Protection Level (FPL) to be 796' in the area of the Emerson POE. The design elevation for the new by-pass lanes on the American side of the border is 795'.

1.2.4 CONSTRAINTS AND CHALLENGES

- .1 This project is the Canadian commitment to an international agreement to upgrade the Emerson Port of Entry. Co-ordination with North Dakota Dept of Transportation NDDOT and their design consultants will be required to co-ordinate key requirements such as road location, road elevation, scheduling etc.
- .2 The Province of Manitoba Dept of Highways is planning upgrades and modifications to highway #75 and in particular the intersection of Hwy #200 and Hwy #75, located to the north of the Port of Entry. Co-ordination with the Manitoba Department of Highways and their design consultants will be required to co-ordinate key requirements such as road location, road elevation, scheduling etc.
- .3 Providing the new program requirements while working within the confines of the existing site will be a key challenge.
- .4 Providing the new commercial by-pass lanes and other new site requirements, while maintaining other existing site requirements (staff parking, truck parking, imaging area, maintenance garage, seized vehicle compound) will be a challenge.
- .5 The existing border crossing operations must be continuously operational on a 24/7 basis. Planning and phasing will be required including provision of temporary services is necessary to ensure the Port of Emerson is fully operational throughout the term of the project.
- .6 The Consultant shall initiate and co-ordinate the site design requirements pertinent to the management of flood risks. This will involve liasing and coordination with Provincial and American stakeholders.
- .7 The Consultant will be required to become familiar with the project site and obtain local information as required.
- .8 The Consultant will be required to obtain security clearances for all his/her firm's personnel as well as any sub-consultants to visit the project site for reasons, such as: site reviews, attendance for site design meetings, etc. Security clearance checks may include credit checks.
- .9 All site visits must be arranged through the Departmental Representative.
- .10 Mitigation measures as required to keep environmental conditions under control during all phases of the work.
- .11 The project scope must be tailored to meet the User Department's budget. Diligent cost estimating and cost control is required. Value engineering will be conducted throughout the project. Innovation is sought to meet the requirements.
- .12 Consultant's key personnel must be available to respond to inquiries within 24 hours.
- .13 Consultant's key personnel must be available to respond to emergencies within 1 hour.



I.2.5 HAZARDOUS MATERIALS

- .1 No hazardous materials have been identified at this site through various audits of this facility.

I.2.6 PROJECT DELIVERY APPROACH

- .1 This project will use a traditional design-bid-build approach.
- .2 Up to two separate tender packages will be required for this project as follows:
 - .1 Civil Engineering work (roadwork, site utilities)
 - .2 Commercial Building addition and alterations, PIL booths, canopy
- .3 The Consultant shall prepare each tender package and ensure full co-ordination of the work of all disciplines.

I.3 SUMMARY OF DESIGN WORK

I.3.1 SITE WORK

- .1 Three new dedicated Canada-bound commercial traffic lanes located on the east side of the existing commercial building and extending from the US-Canada border to new commercial PIL booths. The lanes will converge to a single lane, and re-connect with northbound HWY 75. One of the 3 dedicated incoming lanes will accommodate the Free and Secure Trade (FAST) traffic. This lane will be dedicated for use by vehicles registered with the FAST program which is a commercial clearance initiative designed to ensure safety and security while expediting legitimate trade across the Canada-U.S. border. One lane shall serve as an oversized vehicle lane and shall be sized accordingly. The FAST lane and PIL booth/canopy must be costed separately, from the remaining lanes and PIL booths.
- .2 Relocation or modification of site parking as required to accommodate the new development.
- .3 Relocation of the following site elements as required to accommodate the new development (if space restrictions apply, elements can be relocated to the northernmost portion of Parcel A, Plan 37076):
 - .1 Seized vehicle compound
 - .2 PWGSC storage garage
 - .3 VACIS storage Building
- .4 Modifications to all existing site elements affected by or related to the work including utility infrastructure, lighting, site electrical components, site drainage, sidewalks, curbs and landscape components. Consider re-using existing roadways and parking where feasible.
- .5 Site area for a large scale mobile imaging system (with drive-through access) to scan commercial vehicles. The site area must allow for (the largest area requirement of either):
 - .1 The existing mobile imaging system (including equipment and exclusion zone)
 - .2 A future mobile LSI system (including equipment and exclusion zone)
 - .3 A future fixed LSI (including equipment and exclusion zone)
- .6 The site area for all of the systems listed above must be provided for and indicated on the site plan. Complete requirements for the imaging systems will be provided.
- .7 Parking for 20 commercial (semi-trailer) vehicles. Stalls must have drive-through access. Refer to appendix for information on design vehicle size.
- .8 For landscaping work, incorporate the principles of biodiversity by design and xeriscaping



I.3.2 BUILDING AND BUILDING ALTERATION WORK

- .1 New bi-level PIL (Primary Inspection Lane) booths for each of the new commercial by-pass lanes. PIL booth design to be based on design provided by CBSA, however, the Consultant will be required to make improvements to the design, based on input received from CBSA. Improvements may include:
 - .1 Upgrading insulation value of wall panels,
 - .2 Improving heating and cooling to suit local conditions.
 - .3 Revisions to improve ergonomic operation.
 - .4 Eliminating 'blind spots' ie providing unobstructed visual access from the booth attendant to see inbound vehicles.
- .2 A protective canopy above the new commercial PIL booths to provide protection from the elements. Canopy design to mitigate vehicle noise.
- .3 An addition to the east side of the commercial building, including relocation of existing 4 loading bays, to accommodate the following program requirements:
 - .1 Approx 320sm additional warehouse space
 - .2 Approx 100sm new bus processing area, located inside the western portion of the existing Commercial building, including new transaction counter, new exterior entrance ramp, new exterior window and new unisex public washroom. Other optional locations for the bus processing area are to be considered.
 - .3 Relocation of existing rooms impacted by the creation of the new bus processing room
 - .4 Replacement of the existing PIL booth in Lane #6 to a bi-level PIL booth.

I.3.3 DETAILED REQUIREMENTS AND DESIGN CRITERIA

- .1 Incorporate detailed requirements and design criteria appended to this T.O.R.

I.4 OBJECTIVES

I.4.1 GENERAL GOALS

- .1 Include the following provisions;
 - .1 Match design and materials of existing facility.
- .2 Provide construction phasing, including temporary facilities, temporary access routes, barricades, and hoarding as required to ensure that the CBSA operations are not adversely affected during the construction stage.
 - .1 Identify site preparation requirements, including safety isolation of the construction site as required, as well as required contractor lay down areas;
- .3 Ensure the design is efficient and cost effective considering both initial cost and operation & maintenance costs over a life cycle of 75 years

I.4.2 DESIGN PERFORMANCE

- .1 Provide a site development plan and facility that:
 - .1 Responds to the operational and functional needs of CBSA.
 - .2 Meets or exceeds the requirements of the National Building Code.
 - .3 Will endure and remain serviceable for its unique purpose by:
 - .1 Incorporating suitable high quality materials into the design that are of a quality, durable and are constructed with the good industry practice;



- .2 Employing advanced systems and technologies to support contemporary operating requirements with capacity for growth and change;
 - .3 Fully integrating all components and systems, including architectural, structural, mechanical, electrical, IT, multimedia, and security design; and
 - .4 Providing convenient access to visitors while respecting security requirements.
- .2 The building must:
- .1 Provide a healthy and safe working environment that meets or exceeds all codes for fire, health, and life safety, including the Canada Labour Code, that fully supports optimum work productivity;
 - .2 Fully integrate and optimize the performance of components and systems;
 - .3 Embody contemporary sustainable design and application principles and is implemented in an environmentally responsible manner;
 - .4 Be designed for ease of maintenance, with systems that can be accessed and easily repaired and / or replaced during the building's life cycle;
 - .5 Provide physical security for occupants.
 - .6 Provide integration with CBSA systems for security and information IT/MM services.

I.4.3 HERITAGE : N/A

I.4.4 ENVIRONMENTAL/SUSTAINABLE DEVELOPMENT

- .1 CBSA is committed to sustainable development and has developed a sustainable development strategy (SDS).
 - .1 <http://www.cbsa-asfc.gc.ca/agency-agence/reports-rapports/sds-sdd/sds-sdd-14-17-eng.html>
- .2 Review the RETScreen report to guide design.
- .3 Review the CBSA SDS and identify opportunities to incorporate sustainable design. Opportunities and requirements include:
 - .1 Upgrades to building insulation values to minimize HVAC requirements and CO2 emissions
 - .2 Rainwater harvesting
 - .3 Management of stormwater run-off,
 - .4 Indigenous plants
 - .5 CBSA prohibits the use of ozone depleting chemicals in refrigerants, cooling systems, insulating foams and fire control equipment;
 - .6 Water consumption must be minimized using water saving devices and appliances;
 - .7 Environmental impact of materials should be considered throughout both product and facility life cycles, including source and eventual disposal
 - .8 Management of construction and demolition waste
- .4 The Commercial Building has an existing Energy Management Control System and automated fault detection system which optimizes energy performance. Integrate the design of all new mechanical, electrical, fire and security components with the existing EMCS.
- .5 Use sustainable design principles to achieve a minimum environmental building performance rating of Green Globes NC – 3 Globes (55%). Certification may not be sought, however, the consultant must provide an analysis of the proposed design and construction plans and amendments at all stages of the project design development phase. Confirm that the Green Globes points being pursued are attainable, or work with the design team and construction manager to alter the plans to ensure that the pursued Green Globes points will be achieved



- .6 Use the Athena® Sustainable Material Institute's Ecocalculator to assess alternatives at the schematic design phase, for environmental impacts.
- .7 Ensure that the building is at least 35% more energy efficient than the Model National Energy Code for buildings.

I.4.5 PROJECT DELIVERY

- .1 The design must be tailored to the project budget.
- .2 Services shall be delivered as per key milestones indicated in the project schedule.
- .3 Ensure that each Consultant team member understands the project requirements, for seamless delivery of the required services.
- .4 Ensure co-ordination of services with other consultants hired by PWGSC.
- .5 Provide a quality management plan that includes rigorous quality reviews.
- .6 Provide a continuous risk management program; address the risks associated specifically with this project.

I.5 SUMMARY OF SERVICES AND QUALIFICATIONS

I.5.1 GENERAL SERVICES

- .1 The prime consultant will provide a consulting team that must include the following:
 - .1 Architect
 - .2 Civil Engineer
 - .3 Structural Engineer
 - .4 Mechanical Engineer
 - .5 Electrical Engineer (with expertise in security systems)
 - .6 Transportation Engineering Specialist
 - .7 Landscape Architect
 - .8 Cost Estimator
 - .9 Sustainable Design Specialist*

*The Consultant is required to have expertise in sustainable design, having experience in sustainable development and environmental protection. The Consultant team must include a sustainable design specialist, either a Green Globes Professional, or LEED AP certified professional familiar with equivalent Green Globes NC. The sustainable design specialist must be prepared to work in a cross disciplinary fashion and participate in the integrated delivery approach.

- .2 The Consultant team must be capable of providing the following services:

Architectural Services	Civil Engineering
Structural Engineering	Mechanical Engineering
Electrical Engineering	Commissioning
Project Scheduling	Cost Estimating and cost control
Risk Management	Sustainable Design
Hazardous Waste Management	
- .3 Up to 75 hours of full time resident site supervision to provide field review services during paving work.



1.6 SCHEDULE

1.6.1 GENERAL

- .1 Deliver the project to be ready for occupancy in accordance with the project milestone dates below.
- .2 Prepare a Project Schedule, in accordance with the milestone list.

1.6.2 ANTICIPATED MILESTONE DATES

Project Phase	Milestone Completion Date
Consultant Contract Award	March 30, 2015
Construction Documents completion	October 2015
Tender and Construction contract award	December, 2015
Commissioning Completion	January 2017
Substantial Completion/Owner move-in	March 2017
Achieved Final Certificate of Completion	June 2017
Warranty Phase completion	June 2017

1.7 COST

1.7.1 CONSTRUCTION BUDGET

- .1 The primary construction budget for this project is \$6,720,000 and does not include FAST program components, Project Management fees, administration costs, Consultant fees, Risk Allowance, Escalation or GST and is in 'Budget-Year (Current)' dollars.
- .2 There is a secondary construction budget for this project of \$1,200,000 for FAST program components and does not include Project Management fees, administration costs, Consultant fees, Risk Allowance, Escalation or GST and is in 'Budget-Year (Current)' dollars.
- .3 When submitting construction cost estimates, the Consultant shall identify costing for any work related to the construction of the 3rd incoming commercial lane dedicated to the FAST program, including cost of paving, PIL booth, utility connections, etc.

1.7.2 ANTICIPATED CONSTRUCTION COST (NOT INCL FAST PROGRAM)

- .1 The construction cost (excluding GST), is anticipated at this time to be as follows:

Estimated Construction Cost (not incl FAST program)	Budget-Year \$
New Pavement and pavement structures	\$ 1,000,000
New PIL Booths	\$ 1,000,000
New Canopy over Commercial PIL booths	\$ 750,000
Addition and renovations to Commercial Building	\$ 3,000,000
Utility Connections	\$ 250,000



Contingency	\$ 720,000
Total	\$ 6,720,000

1.7.3 ANTICIPATED CONSTRUCTION COST (FAST PROGRAM)

.1 The construction cost (excluding GST), is anticipated at this time to be as follows:

Estimated Construction Cost (FAST program)	Budget-Year \$
New Pavement and pavement structures	\$ 400,000
New PIL Booth	\$ 300,000
New Canopy over PIL booth	\$ 200,000
Utility Connections	\$ 100,000
Contingency	\$ 200,000
Total	\$ 1,200,000

1.8 EXISTING DOCUMENTATION

1.8.1 DRAWINGS AVAILABLE FOR THE CONSULTANT

- .1 There are no 'As-built' drawings for the existing facility. However, the following original tender drawings (in AutoCad format) are available. The Consultant will be responsible for verifying the accuracy of the information provided.
- .2 Emerson Land Border Crossing Facility, as follows:
 - .1 Civil drawings C-101 to C-110 prepared by A. Dean Gould Engineer & Associates
 - .2 Architectural Drawings A-001 to A-501 prepared by IKOY Architects dated July 30, 1998
 - .3 Structural Drawings W-S1 to W-S14 prepared by ADI Limited dated August 18, 1998
 - .4 Mechanical Drawings W-M1 to W-M10 prepared by ADI Limited dated August 18, 1998
 - .5 Electrical Drawings W-E1 to W-E11 prepared by ADI Limited dated August 18, 1998
- .3 Relocate Tractor Storage (ie Maintenance Storage Garage)
 - .1 Electrical drawing E1 prepared by PWGSC dated Sept 2000
 - .2 Structural Drawings W-S1 to W-S2 prepared by PWGSC dated Sept 2000
- .4 Water Storage and Pumphouse Building
 - .1 Civil Drawings W-C1 Site Plan and Underground services prepared by PWGSC dated Jan 2001
 - .2 Electrical Drawings WE-1 Site Plan, Lighting and Power prepared by PWGSC dated Jan 2001
- .5 Site plan showing flood limits
 - .1 Drawing LA06

1.8.2 REPORTS AVAILABLE FOR THE CONSULTANT

- .1 Geotechnical Report – “Soils Investigation Emerson Land Border Facility” prepared by Hardy BBT Limited, dated October 1990
- .2 Correspondence from Agra Earth and Environmental to ADI Limited re: Emerson Land Border Crossing Facility, Geotechnical Recommendations for Lateral Pile Capacity, dated July 13, 1998



- .3 Pembina-Emerson Port of Entry Transportation Study prepared by Gannett Fleming Consulting, dated December 2012
- .4 Traffic Operations Report, prepared by KLJ Engineering, dated May 2014
- .5 Pavement Design Recommendation, dated November 2013
- .6 Pembina border Crossing Preliminary Layout (Site Plan), prepared by KLJ Engineering, dated April 18, 2014
- .7 Level III – Comprehensive Energy Audit prepared by SNC Lavalin dated March 2013
- .8 RETscreen – currently being prepared; will be made available when complete.

1.8.3 DISCLAIMER

- .1 Reference information will be available in the language in which it is written.
- .2 The documentation may be unreliable and is offered, “as is” for the information of the Consultant.

1.9 CODES, ACTS, STANDARDS, REGULATIONS

1.9.1 GENERAL

- .1 A listing of Codes, Acts, Standards and Guidelines potentially applicable to this project are contained in the GP&S Document.
- .2 The Authorities Having Jurisdiction (AHJ) on this project are:
 - .1 The local AHJs;
 - .2 Treasury Board of Canada.
- .3 The Consultant must identify, analyze and design the project in accordance with the requirements of all AHJs and all applicable Codes, Acts, Standards and Guidelines and Legislation.
 - .1 The applicability of various Codes, Acts, Standards and Guidelines listed in the GP&S document arise out of direct and indirect references in documents which apply to Federal buildings, such as the Canada Labour Code.
 - .2 The consultant team must be fully versed with the legislation and requirements that are unique to Federal Government buildings in Canada.
 - .3 The consultant team must be fully versed with the legislation and requirements that are unique to Federal Government projects tendered through Public Works & Government Services Canada.
- .4 All applicable environmental regulations, including but not limited to:
 - .1 Halocarbons-containing equipment: Decommissioning, design and installation of halocarbon-containing systems must be completed in accordance with the Federal Halocarbons Regulations, 2003 under the Canadian Environmental Protection Act 1999. CBSA requires an inventory of all halocarbons containing equipment decommissioned and installed.
- .5 Petroleum product storage tanks: Decommissioning, design and installation of petroleum product storage tank systems must be completed in accordance with the [Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations](#) under the *Canadian Environmental Protection Act 1999*. CBSA requires an inventory of all petroleum product storage tanks decommissioned and installed, including specifications and as-built designs.



2 REQUIRED SERVICES

2.1 GENERAL REQUIREMENTS

2.1.1 SERVICES

- .1 Schematic Design Service
- .2 Design Development Service
- .3 Design Service; to provide construction documents for review at 50%, 99%, 100% completion stages
- .4 Tender Services - to assist the Departmental Representative
- .5 Construction Support Service
- .6 Post Construction Service

2.2 PROJECT REVIEW AND APPROVAL

2.2.1 GENERAL

- .1 Comply with all applicable laws and regulatory requirements as required by the General Conditions of the Contract.

2.2.2 FEDERAL GOVERNMENT

- .1 The federal authorities having jurisdiction over this project are:
 - .1 CBSA for functional design, fire protection, IT and security systems;
 - .2 Environment Canada for environmental regulations;
 - .3 PWGSC
 - .4 Treasury Board of Canada

2.2.3 PWGSC REVIEWS, APPROVALS AND PRESENTATIONS

- .1 Senior Management Approval
 - .1 The project is subject to approval by senior managers of CBSA and PWGSC. These authorities are responsible for final decisions on the project.
 - .2 These authorities may require an oral presentation at the schematic design phase.
- .2 Project delivery team approval
 - .1 This includes both the PWGSC Professional & Technical Team reviews and User approval.
 - .1 The purpose of this review is technical quality assurance.
 - .2 All submissions will be reviewed.
 - .3 Expected turnaround time is 10 days.
 - .4 For each review, provide three copies of deliverables.

2.2.4 MUNICIPAL AUTHORITIES

- .1 The federal government generally defers to municipal authorities for specific regulations, standards and inspections but in areas of conflict, the more stringent authority prevails.
- .2 Municipal authority review
 - .1 The purpose of this review is information and awareness;
 - .2 Submit construction documents as required to obtain municipal approval.

2.3 CO-ORDINATION WITH OTHER STAKEHOLDERS



- .1 The USA (Government Services Agency, GSA North Dakota Transportation Agency and the US Customs and Border Protection Agency) are in the process of planning improvements to on the US side of the Emerson POE, including construction of the commercial by pass lanes which will connect to the bypass lanes which form part of this project.
- .2 The Govt of Manitoba is planning to carry out major upgrades to Provincial Highway #75 (HWY 75).
- .3 During the design phase, the Consultant shall participate in up to 4 co-ordination meetings with other stakeholders.

2.4 PRE-DESIGN SERVICE

2.4.1 GENERAL

- .1 The Consultant Team will review and analyze all available project information, consult with the Departmental Representative, and deliver a comprehensive Pre-Design Report.

2.4.2 SCOPE AND ACTIVITIES

- .1 The Consultant shall:
 - .1 Visit the project site, analyze site conditions, document any conditions that will impact project delivery & design and report the results to the Departmental Representative;
 - .2 Meet with CBSA representatives to discuss and identify all functional requirements
- .3 Review:
 - .1 All existing reports, documents and material related to the project, including the functional program and the requirements identified in the TOR,
 - .2 Potential for environmental impacts and application of the Canadian Environmental Assessment (CEA) Act,
 - .3 Information available on existing facilities, including:
 - .1 Construction documents of existing structures
 - .2 Geotechnical reports and surveys
 - .3 Building shell, including superstructure, exterior enclosure, roofing, etc.;
 - .4 Interiors, including interior construction, stairs, interior finishes, etc.;
 - .5 Services, including conveying (elevators, escalators), plumbing, HVAC, fire protection, electrical, telecommunications, building automation, etc.;
 - .6 Equipment and furnishings;
 - .7 Special construction and demolition, including heritage structures, hazardous materials abatement etc.;
- .4 Analyse:
 - .1 All the program information and project requirements to identify any conflicts, gaps, or potential additional work and indicate the impact on project scope, schedule and costs;
 - .2 Capacity of all site utilities to support the new requirements
 - .3 All existing information relating to this project and compare with site conditions, including existing grades and required flood protection;
 - .4 Sustainable design opportunities, strategies, budgets (i.e. energy, water, waste, etc.) and achievable targets for Green Globes certification
 - .5 Base building requirements for Information Services, Multi-media, Security and requirements to confirm design standards;



.5 Identify:

.1 All additional information that will be required to deliver the project including

.1 Geotechnical investigation

.2 Survey information;

If additional geotechnical and survey information is required, advise Departmental Representative. Arrange for geotechnical investigation and survey. Costs will be paid by the Departmental Representative as a disbursement.

.2 All authorities having jurisdiction (AHJ) over the project and applicable codes, regulations and standards that apply; and

.3 Any conflicts that will need to be addressed with respect to scope, quality, schedule, cost. Validate and update the details of CBSA functional requirements;

.4 Any upgrades required to existing site services that are required to support new requirements.

.5 Any adjustments required to the budget, risk analysis and schedule, including allowances for reviews and approvals for each stage of the project life cycle.

2.4.3 DELIVERABLES

.1 The Consultant shall:

.1 Prepare and submit a Pre-Design Report, for review and acceptance by the Departmental Representative and revise as required.

.1 Refer to the GP&S Document for contents and report content.

.2 Provide the class D estimate, which will become the Construction Cost Plan and must include projected escalation costs to the completion of the project

.3 Provide an updated milestone project schedule

2.5 SCHEMATIC DESIGN SERVICE

2.5.1 GENERAL

.1 The Consultant Team will review and analyze all available project information, consult with the Departmental Representative, and deliver a comprehensive Schematic Design Report that includes 3 viable site development options.

2.5.2 DELIVERABLES

.1 The Consultant shall:

.1 Prepare and submit a Schematic Design Report, for review and acceptance by the Departmental Representative and revise as required.

.1 Refer to the GP&S Document for contents and report content.

.2 Schematic Site Development Options:

.1 Prepare a minimum of three (3) viable site development options to meet the functional and technical requirements for the project;

.2 Analyse and develop each option with regard to the project goals including cost and schedule for each design option. Identify advantages and disadvantages of each option. Recommend an option and provide reasoning.



- .3 Develop each Design Option in sufficient detail to clearly indicate all key elements in the design, including:
 - .1 Impact on and connection to existing service utilities.
 - .2 Impact on and connection to existing base building systems
 - .3 Conformance with NBC. Identify modifications required to the existing building layout and systems to conform with NBC.
 - .4 Adequate manoeuvring space and turning radii for the design vehicle are provided. Provide pedestrian and vehicle flow diagram and validate traffic flows are functional and safe in all aspect
 - .5 Identify temporary facilities or alternate means possible required to maintain Port operational during construction at all times.
 - .6 Identify contractor laydown area
 - .4 Update the sustainable design strategy;
 - .5 Update the budget, schedule and risk analysis and identify any conflicts that will need to be addressed with respect to scope, quality, schedule, cost,;
 - .6 Prepare a Class 'C' Cost Estimate for each option.
 - .7 Out of this process one option (or a hybrid of the options presented) will be selected as the basis to proceed to Design Development. The Departmental Representative, in consultation with CBSA and other stakeholders shall select the preferred option to be further developed.
- .3 Provide an updated milestone project schedule

2.6 DESIGN DEVELOPMENT SERVICE

2.6.1 GENERAL

- .1 Further develop the option selected for refinement at the completion of Schematic Design.
- .2 Prepare the Design Development documents, which consist of drawings and other documents to describe the scope, quality and cost of the project in sufficient detail to facilitate design approval, confirm code compliance and obtain authorization to prepare the construction documents.

2.6.2 SCOPE AND ACTIVITIES

- .1 The Consultant shall:
 - .1 Further develop the selected schematic design option and expand the intent for each design discipline to complete the Design for this project,
 - .1 Develop sub-system options for various disciplines, for example, chiller options for mechanical systems;
 - .2 Present / submit the design for review and approval to committees, review groups and authorities having jurisdiction as required,
 - .3 Prepare a class 'B' cost estimate, update the schedule and the risk analysis and identify any conflicts that will need to be addressed with respect to scope, quality, schedule, cost,
 - .4 Continue to review all applicable statutes, regulations and by-laws in relation to the design of the project and conduct a detailed code analysis;
 - .5 Analyse the constructability of the project and advise on the construction phasing process and duration,



- .6 Develop outline specifications for all systems and principle components and equipment, including manufacturers literature for principal equipment and system components proposed for use in the project,
- .7 Update the sustainable design strategy and report on sustainability targets.
- .8 Provide a waste diversion assessment of the waste materials from the project site in a spreadsheet format.
 - .1 This shall be incorporated into the Construction/Demolition Waste Management and Disposal NMS specifications.
- .9 Coordinate multi-disciplinary approach to, sustainability, program design, site design, building design and commissioning;

2.6.3 DELIVERABLES

- .1 The Consultant shall:
 - .1 Prepare and submit the Design Development Report, for review and acceptance by the Departmental Representative.
 - .1 Refer to the GP&S Document for contents and report content.
 - .2 Provide an outline Specification.
 - .3 Provide a Class "B" cost estimate representing the increased level of design detail now available.
 - .1 Use detailed costs, i.e. measured quantities with minimal allowances or lump sums.
 - .2 Include escalation rates projected through to the implementation of the project.
 - .3 After acceptance, the Class B estimate shall become the updated Construction Cost Plan.
 - .4 Provide a preliminary Commissioning Plan.
 - .5 Schedule
 - .1 Provide updated milestone project schedule including allowances for reviews and approvals for each stage of the project life cycle;
 - .6 Risk Analysis
 - .1 Updated report on any deviations that may affect cost or schedule and recommend corrective measures,
- .2 Updated Project Log

2.7 DESIGN SERVICES

2.7.1 GENERAL

- .1 The objective of this stage is to translate the Preliminary Phase findings into construction drawings and specifications for the purpose of tendering.
- .2 The Consultant must obtain written authorization from the Departmental Representative before proceeding with Construction Documents.
- .3 Prepare up to 2 tender packages; co-ordinate with all disciplines.

2.7.2 SCOPE AND ACTIVITIES

- .1 Create construction documents in accordance with the General P&S Document,
 - .1 Design according to the budget and schedule,
 - .1 Non-compliances will require revisions to the contract documents.
 - .2 Update the cost estimates



- .1 Provide a cost breakdown by unit rate and/or trade for review of bids and comparison with the successful Contractor's cost breakdown.
- .3 Update the project schedule
- .4 Establish a quality control process for the construction and contract administration stage
- .2 The Consultant shall:
 - .1 Participate in review, stakeholder co-ordination and Value Engineering sessions;
 - .2 Update the sustainable design strategy and report on sustainability targets.
 - .3 Prepare preliminary phasing strategy;
 - .4 Finalize Implementation Plan noting all project constraints;
 - .5 Coordinate the work of various disciplines, including scope changes required to remain within budget;
 - .6 In consultation with Departmental Representative, approve construction materials, processes and specifications considering sustainability and commissioning;
 - .7 Apply a process of continuing cost control, with increasing level of detail during production of contract/construction documents;
 - .1 At each review, prepare an up-to-date estimate demonstrating compliance with the Construction Cost Plan,
 - .2 Non-compliances will require revisions to the contract documents,
 - .8 Prepare a Class A cost estimate at the pre-tender phase, using 100% measured quantities;
 - .1 Provide a cost breakdown by trade for review of bids and comparison with the successful Contractor's cost breakdown.
 - .9 Provide written response to PWGSC comments at 50%, 99% and 100% completion review stages and integrate comments into final construction documents;
 - .10 Participate in the risk management process;
 - .11 Update Project Log tracking approved major decisions;
 - .12 Update the schedule;
 - .13 Establish quality control process for construction and contract administration phase;
 - .14 Provide commissioning specifications, PI/PV forms, training plans and integrated systems testing; include PI/PV forms within applicable sub-sections of the specifications.

2.7.3 DELIVERABLES

- .1 50% complete Construction Documents.
 - .1 A Class "B" Estimate
 - .2 An updated project schedule
 - .3 Construction Drawings
 - .1 Drawings should reflect 50% completeness with all Plan, Elevation, Details, and Sections shown.
 - .4 Specifications
 - .1 Index to specifications
 - .2 Draft Division I including draft Commissioning Sections.
- .2 Final Construction Documents, fully coordinated as if ready for tender.
 - .1 This submission incorporates all revisions required by the review of the previous submission.
 - .2 The Consultant shall submit documents to the PWGSC Departmental Representative.



- .3 The submittal shall include:
 - .1 A Class “A” Estimate
 - .2 An updated project schedule
 - .3 Construction Drawings
 - .1 Drawings shall be complete without any unfinished details.
 - .4 Complete Specifications.
 - .1 Specifications should be complete with all sections and thoroughly coordinated with the Drawings.
 - .5 Provide written response to PWGSC comments of previous submittal.
- .3 Final (100%) Construction Documents ready for tendering.
 - .1 This submission incorporates all revisions required by the review of the previous submission.
 - .2 The Consultant shall submit documents to the Departmental Representative, local municipality, or any other Authority having jurisdiction.:
 - .3 The submittal shall include:
 - .1 Signed and sealed documents.
 - .2 An updated Class ‘A’ cost estimate.
 - .3 An updated project schedule
 - .4 Construction Drawings & Specifications
 - .1 As per the P&S Document.
 - .5 Response to PWGSC written comments of previous submittal
 - .6 Advise the Departmental Representative of all issues raised by other officials and all Consultants’ responses.
 - .4 The Consultant must confirm in writing that:
 - .1 The documents are ready to be issued for tender;
 - .2 The checklist in the GP&S Document has been reviewed in concert with the requirements of the Consultant Agreement; and
 - .3 A full review and coordination of the Contract Documents are complete and in accordance with professional standard of care.

2.8 TENDER SERVICES

2.8.1 GENERAL

- .1 The object of this phase is to support the Departmental Representative with the tender.
- .2 The Contract Authority for this project is the Real Property Contracting branch (RPC) of PWGSC.

2.8.2 SCOPE AND ACTIVITIES

- .1 When requested, the Consultant will be required to;
 - .1 Provide the Departmental Representative with information required by bidders to interpret construction documents.
 - .2 Prepare addenda, in response to all questions within two (2) business days during the bidding period and submit to Departmental Representative,
 - .3 Attend pre-tender site visits,
 - .4 If PWGSC decides to re-tender the project, or any specific tender package, provide full services to the Departmental Representative,



- .5 During Bid Review and Analysis, assist the Departmental Representative, as required, by analyzing and reconciling any differences between pre-tender estimates and submitted bids.

2.9 CONSTRUCTION SUPPORT SERVICE

2.9.1 GENERAL

- .1 The object of this phase is to support the Departmental Representative with the construction phase and ensure the quality, budget and schedule of the project.

2.9.2 SCOPE AND ACTIVITIES

- .1 The Consultant shall:
 - .1 Share all project information with PWGSC.
 - .1 All material specifications, mixes and test results shall be turned over to the Departmental Representative for future maintenance by PWGSC and others
 - .2 This service is required for each construction package developed.
 - .2 For General Services:
 - .1 Provide 1 hard copy and 1 electronic copy of reviewed shop drawings.
 - .2 Prepare record drawings and specifications based on Contractor's as-builts;
 - .3 Update Project Log tracking approved major decisions, including those impacting project scope, budget and schedule,
 - .4 Prepare and issue a communications protocol and a shop drawing review protocol in consultation with the Departmental Representative
 - .5 Update sustainability documentation to reflect changes during construction,
 - .3 For Site Visits:
 - .1 Provide bi-weekly field reviews and as required to fulfil the Consultant's professional obligations to monitor the construction activities throughout the construction period and keep *Departmental Representative* informed of work progress,
 - .1 Reject unsatisfactory work,
 - .2 Provide written reports.
 - .4 For Construction & contract administration:
 - .1 Provide Time Management Report, based on Contractor's submissions and on-site performance
 - .2 Provide additional drawings to clarify, interpret or supplement Construction Documents,
 - .3 Interpret contract documents as required,
 - .4 Assist the Departmental Representative to prepare Certificate of Substantial Completion and provide sign-off,
 - .5 Arrange construction meetings, update Master Schedule, obtain detailed cost breakdown from the contractor, ensure compliance with labour laws and bylaws, , provide construction inspection services, provide clarifications, measure work, provide detail drawings and examine shop drawings, monitor training,
 - .6 Review work at regular intervals to determine conformity with the contract documents and keep Departmental Representative informed of work progress,
 - .7 Review and comment on various documents such as Contractor's Progress Claims and updated schedules,
 - .8 Monitor performance of the Contractor,



- .9 Offer timely technical advice time on all disputes and claims between PWGSC and the Contractor,
- .10 Conduct inspections and reject unsatisfactory work,
- .11 Authorize special tests, inspections and minor works that do not impact project cost and schedule,
- .12 Furnish supplemental instructions to the Contractor with reasonable promptness or in accordance with a schedule for such instructions agreed to by PWGSC and the Contractor,
- .13 Determine the amounts owing to the Contractor based on work progress, and certify payments to the Contractor and
- .14 Provide Post-Construction Evaluation report.
- .5 Permits
 - .1 Assist the Contractor and provide required documentation in order to obtain the building permit.
- .6 For cost services:
 - .1 Assist the Construction team with cost management advice, if requested;
 - .2 Evaluate change orders; claims, work completed and cash flow.
 - .3 After issue of contract provide details for evaluating the project's cost performance and
- .7 For Scheduling Services:
 - .1 Review contractor's monthly schedule report; report findings and recommendations to the PWGSC for further discussion with the Contractor.
- .8 For Changes to the work:
 - .1 Assist the Departmental Representative to prepare CCN's and COs, to be issued by the Departmental Representative.
- .9 Assist the Departmental Representative to prepare Certificate of Final Completion and provide sign-off.

2.10 RESIDENT SITE REPRESENTATIVE SERVICE

2.10.1 GENERAL

- .1 The purpose of this phase is to have an on-site representative of the Consultant during construction (paving only).

2.10.2 SCOPE AND SERVICES

- .1 Provide resident site representative to provide inspection, coordination and monitoring during the construction work (paving only)
- .2 Maintain daily records of all construction work placed that includes:
 - .1 Weather conditions, particularly unusual weather relative to construction activities in progress,
 - .2 Major material and equipment deliveries,
 - .3 Daily activities and major work done,
 - .4 Start, stop or completion of activities,
 - .5 Presence of inspection and testing firms, tests taken, results,
 - .6 Unusual site conditions experienced,
 - .7 Significant developments, remarks,
 - .8 Special visitors on-site,
 - .9 Authorities given [to](#) Contractor to undertake certain or hazardous works,



- .10 Environmental incidents,
- .11 Reports, instructions from Appropriate Authorities Response Actions,
- .12 Stop work requests by PWGSC
- .3 Inspect all phases of the work in progress for compliance with the tender documents.
- .4 Reject unsatisfactory work,
- .5 Verify quantities of materials received
- .6 The Resident Site representatives shall attend all job-site meetings.
- .7 Stop the work, or give orders to protect the safety of the workers or Crown property in Emergencies.
- .8 Provide information regarding job conditions to the Departmental Representative that may impact the project scope, schedule or budget.
- .9 Notify the Departmental Representative of any potential change orders.
- .10 Provide evaluation of Change Orders.
- .11 Prepare CCN's and COs, to be issued by the Departmental Representative.
- .12 Convey the Consultant's instructions regarding the required standards of workmanship to the Contractor
- .13 Communicate formally with the Contractor in writing via memorandum.
- .14 Accompany PWGSC representatives on inspections
- .15 Prepare weekly reports for the Departmental Representative that includes:
 - .1 Progress relative to schedule,
 - .2 Major activities commencing or completed during the week; main activities now in progress,
 - .3 Major deliveries of materials and / or equipment,
 - .4 Difficulties which may cause delays in completion,
 - .5 Materials and labour needed immediately,
 - .6 Cost estimates of work completed and materials delivered (cost plus contracts),
 - .7 Outstanding information or action required by Consultant or PWGSC,
 - .8 Work force,
 - .9 Weather,
 - .10 Remarks,
 - .11 Accidents on-site,
 - .12 Life safety or building hazards caused by the work, the or his agents.
- .16 Maintain Site Records that include:
 - .1 Contract and Tender Documents updated with all changes.
 - .2 Approved Shop Drawings,
 - .3 Approved Samples,
 - .4 Site Instructions,
 - .5 Contemplated Change Orders,
 - .6 Change Orders,
 - .7 Memoranda,
 - .8 Test and Deficiency Reports,
 - .9 Updated Progress schedule
 - .10 Correspondence and Minutes of Meeting,



- .11 Names, addresses, telephone numbers of PWGSC representatives, Consultant, Contractors, and sub-trades key personnel associated with the contract, including home telephone numbers in case of emergencies.
- .17 Follow approved protocol for the security and protection of documents and information held on-site.
- .18 Review monthly the accuracy of as-built marked up drawings kept by the Contractor and report any discrepancies or deficiencies to the Consultant.
- .19 Report if materials and equipment are being incorporated into the project prior to approval of relative shop drawings or samples.
- .20 Assist in the preparation of all deficiency, interim, preliminary, and final reports in collaboration with PWGSC and Consultant representatives.
- .21 Examine all site conditions and methods to be used by the Contractor undertaking hazardous operations
- .22 Inspect the areas where hazardous work is under way to ensure that the Contractor is maintaining the agreed safety standards
- .23 The Resident Site representatives shall not:
 - .1 Authorize deviations from the contract documents,
 - .2 Approve shop drawings or samples,
 - .3 Provide Advice in any matter without obtaining guidance from Departmental Representative.
 - .4 Accept any work or portions of,
 - .5 Enter into the area of responsibility of the Contractor's Field Superintendent,
 - .6 Stop the work unless convinced that an emergency exists as noted above.

2.10.3 DELIVERABLES

- .1 Weekly written reports
- .2 Memorandum issued to the Contractor.
- .3 Other reports or surveys as may be requested by the Departmental Representative.
- .4 A copy of the Site Representatives Daily log

2.11 COMMISSIONING SERVICE

2.11.1 GENERAL

- .1 The purpose of the Commissioning Service is to ensure that a fully functioning project is delivered to the Client.

2.11.2 SCOPE AND SERVICES

- .1 Integrated and comprehensive commissioning for the project in accordance with the requirements in the GP&S document and CAN/CSA Z320-11 Building Commissioning.
- .2 The project will be accepted and the Certificate of Substantial Completion will be issued only after:
 - .1 Successful completion of integrated systems tests, life safety support systems tests and after meeting all requirements of the authority having jurisdiction
 - .2 All test certificates, commissioning reports and commissioning documentation have been approved by the Departmental Representative
- .3 During the Design Phase:
 - .1 Develop the commissioning plan;
 - .2 Include all project-specific commissioning activities



- .3 Specify commissioning requirements
- .4 Include project specific component verification (CV) and Performance verification (PVT) sheets. ,

- .4 During the Construction Phase:
 - .1 Monitor and report on contract commissioning activities,
 - .2 Review and certify verification sheets as they are completed by the contractor,
 - .3 Review commissioning schedule
 - .4 Witness all component, system and integrated systems tests,
 - .5 Review and comment on commissioning test results,
 - .6 Provide advice and recommendations for fine tuning,
 - .7 Finalize the Design Intent Report and Client / Users O&M Manual to reflect as-commissioned operation and maintenance of each system,

2.11.3 DELIVERABLES

- .1 Commissioning Plan,
- .2 Commissioning Specifications in Div 01,
- .3 Project specific CV Sheets to be executed by the Contractor,
- .4 Project specific PVT Sheets to be executed by the Contractor,
- .5 Reviewed and Accepted Commissioning (Evaluation) Report.

2.12 POST CONSTRUCTION SERVICE

2.12.1 GENERAL

- .1 The purpose of this phase is to support the Departmental Representative in obtaining all final documents required for project close out.

2.12.2 SCOPE AND ACTIVITIES

- .1 Project Close-out Services
 - .1 Revise documentation to reflect all changes, revisions and adjustments after completion of commissioning
 - .2 Prepare record drawings and specifications based on Contractor's as-builts;
 - .3 Prepare and submit Final Certificate of Completion and final records.
 - .4 Review the Operations and Maintenance Manual.
 - .5 Review the integrated Commissioning Manual.
 - .6 Participate in Lessons Learned workshops if requested
- .2 Warranty Services
 - .1 Monitor and certify rectification of deficiencies before expiry of warranties
 - .2 Monitor environmental and life safety system checks to be carried out by Contractor/O&M staff before expiration of warranties
 - .3 Sign off on the Final Completion of the construction contract,
 - .4 Participate in warranty inspections with *Departmental Representative* and Contractor
 - .5 Provide warranty deficiency list,
 - .6 Provide Final Warranty Review report.

2.12.3 DELIVERABLES

- .1 Warranty Deficiency List
- .2 Final Certificate



- .3 As-Built and Record Drawings and As-Built Specifications.
- .4 Comments to O&M Manual
- .5 Signed final Commissioning Manual
- .6 Sign-off on Warranty



3 PROJECT ADMINISTRATION

3.1 GENERAL REQUIREMENTS

3.1.1 PWGSC PROCEDURES AND STANDARDS

- .1 In addition to adhering to the general project administration requirements contained in section 2 of the GP&S document, the Consultant shall comply with the project specific requirements in this section.

3.1.2 LANGUAGE

- .1 No variation

3.1.3 MEDIA

- .1 No variation

3.1.4 PROJECT MANAGEMENT

- .1 No variation

3.1.5 LINES OF COMMUNICATION

- .1 No variation

3.1.6 CONSULTANT RESPONSIBILITIES

- .1 No variation

3.1.7 PWGSC RESPONSIBILITIES

- .1 No variation

3.1.8 USER DEPARTMENT RESPONSIBILITIES

- .1 No variation

3.1.9 REVIEW AND APPROVAL BY PROVINCIAL AND MUNICIPAL AUTHORITIES

- .1 No variation

3.1.10 BUILDING PERMITS AND OCCUPANCY PERMITS

- .1 No variation

3.1.11 TECHNICAL AND FUNCTIONAL REVIEWS

- .1 No variation

3.2 MEETINGS

- .1 General
 - .1 Except as indicated below, endeavour to hold all meetings as Green Meetings (i.e. teleconferences, video conferences, Electronic copies of documents where possible or double-sided hard copies, etc.)
 - .2 The Consultant must ensure that all key personnel are personally available to attend meetings as required and respond to inquiries promptly.
- .2 Pre-Design Meetings:
 - .1 Meetings during the Pre-Design Phase will be as follows:
 - .1 Bi-weekly teleconferences;
 - .2 A one day meeting in Winnipeg (to be scheduled shortly after contract award);
- .3 Design Meetings:
 - .1 Meetings during the Design Phase will be as follows:
 - .1 Bi-weekly teleconferences;
 - .2 A one day workshop in Winnipeg;



- .4 Construction Meetings:
 - .1 Meetings during the Construction Phase will be arranged monthly through the duration of the project. Meetings will be as follows:
 - .1 Bi-weekly teleconferences;
- .5 The Consultant will be responsible for:
 - .1 Preparing minutes of meetings,
 - .2 Forwarding minutes to the Departmental Representative,
 - .3 These meetings are for the accurate exchange of information,
 - .4 All requests and decisions taken must follow the formal lines of communications.
- .6 If additional meetings involving travel are required, they will be reimbursable for time and travel disbursements; however, any additional trips must be approved in advance by PWGSC. Disbursements will be reimbursed at cost without markup.

3.3 SITE VISITS

- .1 Fees shall include all accommodation and travel costs related to site visits to fulfill professional obligations, including verification of existing conditions, attendance at a mandatory site visit for bidders, field review services (including reviews at substantial and final inspection), commissioning services, and resident site representative services outlined in this TOR.