

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Travaux publics et Services gouvernementaux
Canada
Place Bonaventure, portail Sud-Est
800, rue de La Gauchetière Ouest
7 ième étage
Montréal
Québec
H5A 1L6
FAX pour soumissions: (514) 496-3822

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet Agrandissement St-Bernard de Lacoll	
Solicitation No. - N° de l'invitation EF937-141432/A	Date 2013-10-21
Client Reference No. - N° de référence du client R.064261.800	
GETS Reference No. - N° de référence de SEAG PW-\$MTC-015-12454	
File No. - N° de dossier MTC-3-36289 (015)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-12-09	
Time Zone Fuseau horaire Heure Normale du l'Est HNE	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Desmarais, Jacques	Buyer Id - Id de l'acheteur mtc015
Telephone No. - N° de téléphone (514) 496-3408 ()	FAX No. - N° de FAX (514) 496-3822
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: MINISTERE DES TRAVAUX PUBLICS ET SERVICES GOUVERNEMENTAUX CANADA 800 RUE DE LA GAUCHETIERE O. PL.BONAVENTURE PORTAIL S-E,BUR.7300 MONTREAL Québec H5A 1L6 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Delivery Required - Livraison exigée .	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

Issuing Office - Bureau de distribution

Travaux publics et Services gouvernementaux Canada
Place Bonaventure, portail Sud-Est
800, rue de La Gauchetière Ouest
7 ième étage
Montréal
Québec
H5A 1L6

Solicitation No. - N° de l'invitation

EF937-141432/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

mtc015

Client Ref. No. - N° de réf. du client

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

R.064261.800

MTC-3-36289

REQUEST FOR PROPOSALS
(One phase procedure)

**REQUEST FOR PROPOSALS FOR ARCHITECTURAL MULTIDISCIPLINARY SERVICES
REQUIRED AS PART THE PROJECT OF EXPANSION AND REDEVELOPMENT OF THE
BORDER CROSSING FACILITY**

St.Bernard de Lacolle, Quebec

For information :
Jacques Desmarais
Supply specialist
Tel: (514) 496-3408
Fax: (514) 496-3822
E-mail : jacques.desmarais@tpsgc-pwgsc.gc.ca

(Refer to PDF file)



Travaux publics et
Services gouvernementaux
Canada

Public Works and
Government Services
Canada

REQUEST FOR PROPOSALS

(One phase procedure)

REQUEST FOR PROPOSALS FOR ARCHITECTURAL MULTIDISCIPLINARY
SERVICES REQUIRED AS PART THE PROJECT OF EXPANSION AND
REDEVELOPMENT OF THE BORDER CROSSING FACILITY

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Public Works and Government Services Canada
Quebec Region

October 2013

**THIS PROCUREMENT CONTAINS A SECURITY REQUIREMENT
REQUEST FOR PROPOSAL (RFP)**

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SUPPLEMENTARY INSTRUCTIONS TO PROPONENTS (SI)

SI1 INTRODUCTION

1. Public Works and Government Services Canada (PWGSC) intends to retain an individual consulting firm or joint venture to provide the professional services for the project as set out in this Request for Proposal (RFP).
2. This is a single phase selection process. The nature of the services required and strict time frames to implement this project do not allow sufficient time to conduct the usual two phases selection process.
3. Proponents responding to this RFP are requested to submit a full and complete proposal. The proposal will cover not only the qualifications, experience and organization of the proposed Consultant Team, but also the detailed approach to the work, and the pricing and terms offered. A combination of the technical and price of services submissions will constitute the proposal.

SI2 PROPOSAL DOCUMENTS

1. All instructions, general terms, conditions and clauses identified in the RFP by number, date and title, are hereby incorporated by reference into and form part of this solicitation and any resultant contract.

All instructions, general terms, conditions and clauses identified in the RFP by number, date and title, are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

2. The following are the proposal documents:
 - (a) Supplementary Instructions to Proponents (SI);
R1410T (2013-06-27), General Instructions to Proponents (GI);
Submission Requirements and Evaluation (SRE);
 - (b) the general terms, conditions and clauses, as amended, identified in the Agreement clause;
 - (c) Project Brief / Terms of Reference;
 - (d) the document entitled "Doing Business with Québec Region";

- (e) the **Security Requirements Check List (SRCL)**;
 - (f) any amendment to the solicitation document issued prior to the date set for receipt of proposals; and
 - (g) the proposal, Declaration/Certifications Form and Price Proposal Form.
3. Submission of a proposal constitutes acknowledgment that the Proponent has read and agrees to be bound by these documents.

SI3 QUESTIONS OR REQUEST FOR CLARIFICATION

Questions or requests for clarification during the solicitation period must be submitted in writing to the Contracting Authority named on the RFP - Page 1 as early as possible. Enquiries should be received no later than seven [7] working days prior to the closing date identified on the front page of the Request for Proposal. Enquiries received after that date may not be answered prior to the closing date of the solicitation.

SI4 CANADA'S TRADE AGREEMENTS

This procurement is subject to the provisions of the North American Free Trade Agreement (NAFTA), the World Trade Organization - Agreement on Government Procurement (WTO-AGP).

SI5 CERTIFICATIONS

1. Code of Conduct and Certifications - Related Documentation

By submitting a proposal, the Proponent certifies that the Proponent and its affiliates are in compliance with the provisions as stated in Section GI1 Code of Conduct and Certifications - Proposal of R1410T (2013-06-27) General Instructions to Proponents (GI). The related documentation therein required will assist Canada in confirming that the certifications are true.

2. Federal Contractors Program for Employment Equity - Proposal Certification

By submitting a proposal, the Proponent certifies that the Proponent, and any of the Proponent's members if the Proponent is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list

(http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Human Resources and Skills Development Canada (HRSDC) - Labour's website.

Canada will have the right to declare a proposal non-responsive if the Proponent, or any member of the Proponent if the Proponent is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

Canada will also have the right to terminate the Agreement for default if a Consultant, or any member of the Consultant if the Consultant is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list during the period of the Agreement.

The Proponent must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification (see Appendix B - Declaration/Certifications Form), before contract award. If the Proponent is a Joint Venture, the Proponent must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

SI6 SECURITY REQUIREMENT

1. At the date of bid closing, the following conditions must be met:
 - (a) the Proponent must hold a valid organization security clearance as indicated in Supplementary Conditions SC1;
 - (b) the Proponent's proposed individuals requiring access to classified or protected information, assets or sensitive work site(s) must meet the security requirement as indicated in Supplementary Conditions SC1;
 - (c) the Proponent must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites.;
2. For additional information on security requirements, proponents should consult the "Security Requirements for PWGSC Bid Solicitations - Instructions for Bidders" (<http://www.tpsgc-pwgsc.gc.ca/app-acq/lc-pl/lc-pl-eng.html#a31>) document on the Departmental Standard Procurement Documents website.

SI7 - OPTIONNAL PROPONENTS' CONFERENCE

An optionnal proponents' conference will be held at St. Bernard de Lacolle Border Crossing, Autoroute 15, on November 19th 2013. The conference will begin at 10 o'clock.

Meet at the entrance north of the existing commercial building door.

The scope of the requirement outlined in the bid solicitation will be reviewed during the conference and questions will be answered. Although the conference is not mandatory, It is recommended that bidders who intend to submit a bid attend or send a representative.

Proponents are requested to communicate with the Contracting Authority before the conference to confirm attendance (maximum three persons.)

Proponents who do not attend or send a representative will not be given an alternative appointment but they will not be precluded from submitting a proposal.

Any clarifications or changes to the bid solicitation resulting from the proponents' conference will be included as an amendment to the bid solicitation. Bidders who do not attend will not be precluded from submitting a bid.

Contracting Authority:
Jacques Desmarais
Supply Specialist
Tel: 514-496-3408
Fax: 514-496-3822
E-mail: jacques.desmarais@pwgsc-tpsgc.gc.ca

SI8 - WEBSITES

The connection to some of the Web sites in the RFP is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Employment Equity Act

<http://laws.justice.gc.ca/en/E-5.401/index.html>

Federal Contractors Program (FCP)

http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/index.shtml

Certificate of Commitment to Implement Employment Equity form LAB 1168

<http://www.servicecanada.gc.ca/cgi-bin/search/eforms/index.cgi?app=profile&form=lab1168&dept=sc&lang=e>

Code of Conduct for Procurement

<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

Consent to a Criminal Record Verification (PWGSC-TPSGC 229 form)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>

Lobbying Act

<http://laws-lois.justice.gc.ca/eng/acts/L-12.4/?noCookie>

Contracts Canada

<https://buyandsell.gc.ca/>

Supplier Registration Information

<https://srisupplier.contractscanada.gc.ca>

Consultant Performance Evaluation Report Form

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913-1.pdf>

Canadian economic sanctions

<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

National Joint Council (NJC) Travel Directive

<http://www.njc-cnm.gc.ca/directive/travel-voyage/index-eng.php>

TERMS, CONDITIONS AND CLAUSES

AGREEMENT

1. The Consultant understands and agrees that upon acceptance of the offer by Canada, a binding Agreement shall be formed between Canada and the Consultant and the documents forming the Agreement shall be the following:
 - (a) the Front Page and this Agreement clause;
 - (b) the General Terms, Conditions and Clauses, as amended, identified as:
 - R1210D (2013-06-27), General Condition (GC) 1 - General Provisions
 - R1215D (2011-05-16), General Condition (GC) 2 - Administration of the Contract
 - R1220D (2011-05-16), General Condition (GC) 3 - Consultant Services
 - R1225D (2012-07-16), General Condition (GC) 4 - Intellectual Property
 - R1230D (2012-07-16), General Condition (GC) 5 - Terms of Payment
 - R1235D (2011-05-16), General Condition (GC) 6 - Changes
 - R1240D (2011-05-16), General Condition (GC) 7 - Taking the Services Out of the Consultant's Hands, Suspension or Termination
 - R1245D (2012-07-16), General Condition (GC) 8 - Dispute Resolution
 - R1250D (2012-07-16), General Condition (GC) 9 - Indemnification and Insurance
 - Supplementary Conditions
 - Agreement Particulars
 - (c) Project Brief / Terms of Reference;
 - (d) the document entitled "Doing Business with Quebec Region";
 - (e) the Security Requirements Check List (SRCL);**
 - (f) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
 - (g) the proposal, the Declaration/Certifications Form and the Price Proposal Form.
2. The documents identified above by title, number and date are hereby incorporated by reference into and form part of this Agreement, as though expressly set out herein, subject to any other express terms and conditions herein contained.

The documents identified above by title, number and date are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

3. If there is a discrepancy between the wording of any documents that appear on the following list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.
- (a) any amendment or variation in the Agreement that is made in accordance with the terms and conditions of the Agreement;
 - (b) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
 - (c) this Agreement clause;
 - (d) Supplementary Conditions;
 - (e) General Terms, Conditions and Clauses;
 - (f) Agreement Particulars;
 - (g) Project Brief / Terms of Reference;
 - (h) the document entitled "Doing Business with Quebec Region";
 - (i) the document entitled "**Security Requirement Check List**";
 - (j) the proposal.

SUPPLEMENTARY CONDITIONS (SC)

SC1 SECURITY REQUIREMENT

1. The following security requirement (SRCL and related clauses) applies and form part of the Agreement.

SECURITY REQUIREMENT FOR CANADIAN SUPPLIER:

PWGSC FILE # EF937-1414321.

The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer, hold a valid Designated Organization Screening (DOS), issued by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC).

2. The Contractor/Offeror personnel requiring access to **PROTECTED** information, assets or sensitive work site(s) must **EACH** hold a valid **RELIABILITY STATUS**, granted or approved by CISD/PWGSC. Until the security screening of the Contractor personnel required by this Contract has been completed satisfactorily by the CISD, PWGSC, the Contractor personnel **MAY NOT ENTER** sites without **an escort**.
3. The Contractor/Offeror **MUST NOT** remove any **PROTECTED** information or assets from the identified work site(s), and the Contractor/Offeror must ensure that its personnel are made aware of and comply with this restriction.
4. Subcontracts which contain security requirements are **NOT** to be awarded without the prior written permission of CISD/PWGSC.
5. The Contractor/Offeror must comply with the provisions of the:
 - a) *Security Requirements Check List* and Security Guide (if applicable), attached at Appendix E;
 - b) *Industrial Security Manual* (Latest Edition).

.SC2 LANGUAGE REQUIREMENTS

1. Communication between Canada and the Consultant shall be in the language of choice of the Consultant Team, which shall be deemed to be the language of the Consultant's proposal.
2. The Consultant's services during construction tender call (such as addenda preparation, tenderers' briefing meetings, technical answers to questions by bidders) shall be provided expeditiously in both languages, as necessary.
3. The Consultant's services during construction shall be provided in the language of choice of the Contractor. The successful Contractor will be asked to commit to one or other of Canada's official languages upon award of the Construction Contract and, thereafter construction and contract administration services will be conducted in the language chosen by the Contractor.
4. Other required services in both of Canada's official languages (such as construction documentation) are described in detail in the Project Brief.
5. The Consultant Team, including the Prime Consultant, Sub-Consultants and Specialists Consultants shall ensure that the services being provided in either language shall be to a professional standard.

SC3 FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - DEFAULT BY THE CONSULTANT

The Consultant understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Consultant and HRSDC-Labour, the AIEE must remain valid during the entire period of the contract. If the AIEE becomes invalid, the name of the Consultant will be added to the "FCP Limited Eligibility to Bid" list. The imposition of such a sanction by HRSDC will constitute the Consultant in default as per the terms of the contract.

AGREEMENT PARTICULARS

The Agreement Particulars will be issued at time of award of contract and will identify the fee to be paid to the Consultant for the services determined in the Price Proposal Form.

SUBMISSION REQUIREMENTS AND EVALUATION OF PROPOSALS

SRE 1	General Information
SRE 2	Requests for Proposals
SRE 3	Submission Requirements and Evaluation
SRE 4	Price of Services
SRE 5	Total Score
SRE 6	Submission Requirements – Checklist

SUBMISSION REQUIREMENTS AND EVALUATION

SRE 1 GENERAL INFORMATION

1.1 Reference to the Selection Procedure

An Overview of the Selection Procedure can be found in R1410T of the General Instructions to Proponents (GI 3).

1.2 Calculation of Total Score

For this project, the Total Score will be established as follows:

Technical rating x 90% =	Technical score (points)
<u>Price rating x 10%</u> =	<u>Price score (points)</u>
Total Score =	Maximum of 100 points

SRE 2 REQUESTS FOR PROPOSALS

2.1 Requirements for Proposal Format

The following proposal format information should be taken into account when preparing the proposal:

- Submit one (1) bound original plus five (5) bound copies of the proposal;
- Paper size should be 216 mm x 279 mm (8.5" x 11");
- Minimum font size: 11-point Times New Roman or equivalent;
- Minimum margin width: 12-mm left, right, top and bottom;
- Double-sided submissions are preferred;
- One (1) "page" means one side of a sheet of paper;
- 279-mm x 432-mm (11" x 17") fold-out sheets for spreadsheets, organization charts, etc. will be counted as two pages for each side;
- The order of the proposals should follow the order established in the Request for Proposal SRE section.

2.2 Specific Requirements for Proposal Format

The maximum number of pages (including text and tables) to be submitted for the Rated Requirements under SRE 3.2 is thirty (30) pages.

The following is not included in the maximum number of pages indicated above:

- Cover letter
- Team Identification (Appendix A)
- Declaration/Certifications Form (Appendix B)
- Code of Conduct certifications
- Front page of RFP
- Front page of revision(s) to the RFP
- Price Proposal Form (Appendix C)

Consequence of non-compliance: Any pages that exceed the above maximum number of pages and any other attachments will be removed from the proposal and will not be forwarded to the PWGSC Evaluation Board members for evaluation.

SRE 3 SUBMISSION REQUIREMENTS AND EVALUATION

3.1 MANDATORY REQUIREMENTS

Failure to meet the mandatory requirements will render the proposal non-responsive and no further evaluation will be carried out.

3.1.1 Licensing, Certification or Authorization

The Proponent must be an architectural firm with LEED certification that is authorized to provide the necessary professional services to the full extent that may be required under provincial or territorial law in the province of Quebec

The Sub-consultants involved in the project must be engineering firms and certified consultants in order to provide the required professional services to the full extent that may be required by provincial or territorial law in the province of Quebec.

3.1.2 Consultant Team Identification

The consultant team members to be identified are the following:

Proponent (Prime Consultant) – LEED-certified architect

Senior sub-consultants / specialists – Mechanical, electrical, structural and civil engineers

If the Proponent proposes to provide multidisciplinary services that might otherwise be performed by a sub-consultant, this should be specified here.

Information required: Name of firm; names of key personnel to be assigned to the project; and the prime consultant's current licence, certification or authorization and/or how the prime consultant intends to meet the licensing requirements of the province or territory in which the project will be delivered. In the case of a joint venture, indicate the current or proposed legal status of the joint venture (refer to section GI 9 entitled "Limitation of Submissions" in R1410T – General Instructions to Proponents).

An example of an acceptable standard format for submitting the team identification information is provided in Appendix A.

3.1.3 Declaration/Certifications Form

Proponents must complete, sign and submit the following:

- Appendix B, Declaration/Certifications Form, as requested

3.1.4 Code of Conduct Certifications

Bidders who are incorporated, including those bidding as a joint venture, must provide with their bid or promptly thereafter a complete list of names of all individuals who are currently directors of the bidder. Bidders bidding as a sole proprietorship, including those bidding as a joint venture, must provide the name of the owner with their bid or promptly thereafter. Bidders bidding as an incorporated firm, general partnership, enterprise or unincorporated association do not need to provide lists of names. If the required names have not been received by the time the evaluation of bids is completed, Canada will inform the bidder of the time frame within which the information must be provided. Failure to comply will render the bid non-responsive. Providing the required names is a mandatory requirement for contract award

3.2 RATED REQUIREMENTS

3.2.1 Achievements of Proponent on Projects

Describe the Proponent's accomplishments, achievements and experience as prime consultant on projects.

Present three (3) projects. Select three (3) projects undertaken within the last ten years. Joint venture submissions are not to exceed the maximum number of projects. Only the first three projects submitted in order will be looked at and all others will be given no consideration, as if they had not been submitted.

Information that should be supplied:

- Clear explanation of how this project is comparable or relevant to the project covered by the RFP;
- Brief project description and intent. Narrative portions must include a discussion of the design philosophy/approach followed to achieve the intent and solve design problems;
- Budget control and management, i.e., contract price and final construction cost; explain variations;
- Project schedule control and management, i.e., initial schedule and revised schedule; explain variations;
Client references: Names, addresses and telephone and fax numbers of clients whose names have been provided as references in respect of execution of projects. References may be checked;
- Names of key persons responsible for carrying out the project;
- Awards of excellence received.

3.2.2 Achievements of Key Sub-Consultants and Specialists on Projects

Describe the accomplishments, achievements and experience either as prime consultant or in a sub-consultant capacity on projects. If the bidder proposes to provide multidisciplinary services, which might otherwise be performed by a sub-consultant, this should be specified here.

Present three (3) projects. Select three (3) projects undertaken over the past ten years per key sub-consultant or specialist. Only the first three projects submitted in order (per sub-consultant or specialist) will be looked at and all others will be given no consideration, as if they had not been submitted.

Information that should be supplied:

- Clear explanation of how this project is comparable or relevant to the project covered by the RFP;
- Brief project description and intent. Narrative portions must include a discussion of the design philosophy/approach followed to achieve the intent and solve design problems;
- Budget control and management;
- Project schedule control and management;
- Client references: Names, addresses and telephone and fax numbers of clients whose names have been provided as references in respect of execution of projects. References may be checked;
- Names of key persons responsible for carrying out the project;
- Awards of excellence received.

3.2.3 Achievements of Key Personnel on Projects

Describe the experience and performance of key personnel to be assigned to this project regardless of their past association with the current proponent's firm. This is an opportunity to highlight team members' strengths, past responsibilities, commitments and achievements.

Information that should be supplied for each key employee:

- Professional certification;
- Accomplishments, achievements and awards;
- Relevant experience, expertise and number of years of experience;
- Individual's duties, responsibilities and degree of involvement in previous projects.

3.2.4 Understanding of the Project

The proponent should demonstrate his/her understanding of the goals of the project in addition to the functional and technical requirements, constraints and issues that will shape the end product.

Information that should be supplied:

- Functional and technical requirements;
- Overall goals (federal identity, sustainable development, special characteristics);
- Relationship between this assignment and other previous studies completed for PWGSC;
- Significant issues, challenges and constraints;
- Project schedule and cost. Review schedule and cost information and assess risk management elements that may affect the project;
- Client/user's philosophies and values.

3.2.5 Scope of Services

The proponent should demonstrate capability to provide the services, meet project challenges and provide an action plan.

Information that should be supplied:

- Scope of Services, including a detailed list of services;
- Work Plan, including a detailed description of tasks and deliverables;
- Project schedule: Proposed schedule for providing the main services in pre-determined phases;
- Risk Management Strategy.

3.2.6 Management of Services

The Proponent should describe how he/she proposes to provide the services and meet the constraints; how the services will be managed to ensure continuing and consistent control as well as production and communication efficiency; how the team will be organized and how it will fit

within the existing structure of the firms; and how the team will be managed. The proponent must also identify the sub-consultants and specialists required to complete the consultant's team.

If the Proponent proposes to provide multidisciplinary services that might otherwise be performed by a sub-consultant, this should be specified here.

Information that should be supplied:

- Confirm the membership of the full project team, including the names of the consultant, sub-consultants and specialists and their duties and responsibilities in the project;
- Organization chart indicating position titles and names (consultant's team); and joint venture business plan, team members and their responsibilities, if applicable;
- Provision made for backup employees;
- Profiles of key positions (specific assignments and responsibilities);
- Outline of an action plan for providing services along with implementation strategies and sequence of main activities;
- Reporting relationships;
- Communication strategies;
- Response times: Demonstrate how the response time requirements will be met.

3.2.7 Design Philosophy, Approach and Methodology

The Proponent should elaborate on aspects of the project considered to be a major challenge which will illustrate the design philosophy, approach and methodology. This is an opportunity for the Proponent to state the overall design philosophy of the project team, as well as the approach to resolving design issues and, in particular, to focus on the unique aspects of the current project.

Information that should be supplied:

- Design philosophy, approach and methodology;
- Describe the major challenges and how your team approach will be applied to those particular challenges.

3.3 EVALUATION AND RATING

In the first instance, price envelopes will remain sealed and only the technical components of proposals deemed responsive will be reviewed, evaluated and rated by a PWGSC Evaluation Board in accordance with the following to establish Technical Ratings:

Criterion	Weighting Factor	Rating	Weighted Rating
Achievements of Proponent on projects	2.0	0 - 10	0 - 20
Achievements of key sub-consultants and specialists	1.0	0 - 10	0 - 10
Achievements of key personnel	1.5	0 - 10	0 - 15
Understanding of the project	1.5	0 - 10	0 - 15
Scope of services	1.0	0 - 10	0 - 10
Management of services	1.0	0 - 10	0 - 10
Design philosophy, approach and methodology	2.0	0 - 10	0 - 20
Technical Score	10.0		0 - 100

Generic Evaluation Table

PWGSC Evaluation Board members will evaluate the strengths and weaknesses of the Proponent's bid on the basis of the evaluation criteria and will rate each criterion with an even number (0, 2, 4, 6, 8 or 10) using the generic evaluation table below.

	INADEQUATE	WEAK	ADEQUATE	FULLY SATISFACTORY	STRONG
Did not submit information that 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	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 easily be corrected	No significant weaknesses	No weaknesses apparent
	Proponent lacks qualifications and experience	Proponent does not possess the requisite minimum qualifications and experience	Proponent has requisite minimum qualifications and experience	Proponent is qualified and experienced	Proponent is highly qualified and experienced
	Team proposed is not likely to be able to meet requirements	Team does not cover all components or overall experience is weak	Team covers all components and will likely meet requirements	Team covers all components; some members have worked together successfully	Strong team; has worked together successfully 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 are directly related to this requirement
	Extremely poor; insufficient to meet performance requirements	Little capability to meet performance requirements	Minimum acceptable capability; should meet minimum performance requirements	Satisfactory capability; should ensure effective results	Superior capability; should ensure very effective results

To be considered further, proponents **must** achieve a minimum Technical Rating of fifty (50) points out of the hundred (100) points available, as specified above.

No further consideration will be given to proponents not obtaining the pass mark of fifty (50) points.

SRE 4 – PRICE OF SERVICES

All price proposal envelopes corresponding to responsive proposals that have obtained the pass mark of fifty (50) points will be opened upon completion of the technical evaluation. An average price will be determined by adding all of the price proposals together and dividing the total by the number of price proposals that were opened.

All price proposals that are more than twenty-five percent (25%) above the average price will be set aside and receive no further consideration.

The remaining price proposals will be rated as follows:

1. The lowest price proposal receives a Price Rating of 100.
2. The second, third, fourth and fifth lowest price proposals receive Price Ratings of 80, 60, 40 and 20 respectively. All other price proposals receive a Price Rating of 0.
3. On the rare occasion where two (or more) price proposals are identical, these price proposals will receive the same rating and the corresponding number of following ratings is skipped.

The Price Rating is multiplied by the applicable percentage to establish the Price Score.

SRE 5 – TOTAL SCORE

Total Scores will be established in accordance with the following:

Rating	Possible Range	% of Total Score	Score (points)
Technical Score	0 - 100	90	0 - 90
Price Score	0 - 100	10	0 - 10
Total Score		100	0 - 100

The proponent 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 proponent submitting the lower price for the services will be selected.

SRE 6 – SUBMISSION REQUIREMENTS – CHECKLIST

The following list of documents and forms is provided to help the Proponent prepare a complete submission. The Proponent is responsible for meeting all submission requirements.

Please follow the detailed instructions in Section GI 16 – Submission of Proposals in R1410T – General Instructions to Proponents. Proponents may choose to introduce their submissions with a cover letter.

- ☐ Team Identification List – See model list in Appendix A;
- ☐ Declaration/Certifications Form (form in Appendix B) completed and signed;
- ☐ Code of Conduct Certifications along with list of directors/owners;
- ☐ Proposal: one (1) signed original plus five (5) bound copies;
- ☐ Front page of RFP completed and signed;
- ☐ Front page of any solicitation amendment completed and signed.

In a separate envelope:

**Price Proposal Form – One form completed and submitted
in a separate envelope**

Project Brief

This Project Brief is divided into two sections:

- **Project Description**
- **Description of Services**
 - Project Administration
 - Services required
 - Additional services

For standards relating to provision of the services described herein, please refer to the document “Doing Business with Quebec Region.” The standards in “Doing Business with Quebec Region” must be adhered to in conjunction with this Scope of Services.

Project Description

PD 1 Project Information

Public Works and Government Services Canada (PWGSC) intends to retain a firm of architects for the provision of the services required for this project.

- 1.1 PWGSC project title:** Expansion and Redevelopment of the St. Bernard de Lacolle Border Crossing Facility
- 1.2 Project address:** Highway 15, St. Bernard de Lacolle, Quebec
- 1.3 PWGSC Project Number:** R.064261.800
- 1.4 Client/user:** Canada Border Services Agency (CBSA)

PD 2 Project Identification

Intent: Provide a summary of the key project information

2.1 Description

The St. Bernard de Lacolle Border Crossing Facility is located in Lacolle, Quebec, near the border with the United States. Of all the border crossing facilities between Canada and the United States, it is the sixth largest in terms of its commercial section and the fifth largest in terms of its traveller section.

The border crossing facility consists of a set of buildings that includes the following, starting at the border: one-storey commercial and travellers booths; a two-storey traveller operations

building; a one- and two-storey commercial and bus operations building; a one- and two-storey duty-free store; a one- and two-storey Canadian Food Inspection Agency building; a one-storey building containing public restrooms and an emergency generator; a one-storey filtration plant; and a one-storey wastewater treatment plant.

A new commercial building is currently planned and construction is scheduled to begin in 2014.

Overall, the project consists in the upgrading, expansion and redevelopment of the St. Bernard de Lacolle border crossing facility.

2.2 Cost

The estimated cost of construction is \$30,000,000 (before taxes) for all work packages in the project.

2.3 Schedule

- On-site consultant: January 2014
- The delivery date for the submission of plans and specifications for all of the work packages or the final work package is January 2015 or earlier.
- The date of interim acceptance of the work is scheduled for February 2017.

PD 3 PROJECT BACKGROUND

On February 4, 2011, the Prime Minister of Canada and the President of the United States issued a declaration entitled “Beyond the Border: A Shared Vision for Perimeter Security and Economic Competitiveness.” This declaration established a new long-term partnership based on a perimeter-based approach for border security and economic competitiveness.

Canada and the United States jointly developed the Beyond the Border Action Plan to achieve this objective, which includes a commitment to make substantial investments in the physical infrastructure of land border crossings in order to relieve congestion and speed up cross-border traffic. Special attention was to be given to the Lacolle, Lansdowne, Emerson and North Portal ports of entry (POEs).

In the federal budget announced in March 2013, the government made public a five-year action plan called the Beyond the Border Action Plan to improve these border facilities. These facilities are border crossings with a high volume of traffic. More specifically, the government stated that the Lacolle project would begin this year and take about three years to complete.

The Lacolle Border Crossing facilities were renovated between 1995 and 1997. Budget restrictions at the time put limits on the available budget for addressing changing requirements. Consequently, the border crossing facility is under-sized and had to cope with operational

pressures from the time it opened. The facility needs to be expanded and upgraded in order to provide the support infrastructure required for the inspection mandate.

The following statistics and facts support the need to upgrade the Lacolle border crossing facility:

- Prior to the signing of the North American Free Trade Agreement (NAFTA) in 1994, Lacolle handled about 30,000 commercial vehicles per year;
- Last year, Lacolle handled nearly 300,000 commercial vehicles and 21 million travellers;
- In addition to already being Canada's fourth busiest border crossing for commercial vehicles, Lacolle continues to see an increasing volume of commercial vehicles. The number of commercial shipments passing through Lacolle has increased by 9% since 2006–2007;
- Lacolle also reported a 17% increase in the volume of travellers in the 2010–2011 fiscal year, compared with the same period in 2005–2006;
- Because of the restricted perimeter of the existing site, there are currently about 15 to 20 border crossing facility staff working in a facility rented from the local community.

The renovation, upgrading and expansion of the Lacolle border crossing facility will provide the CBSA with the infrastructure it needs to effectively meet its operational requirements, to continue providing excellent service for travellers and commercial traffic and to boost border security.

PD 4 EXISTING DOCUMENTATION

4.1 Access to documentation for Proponents (See Appendix F)

- Document Appendix 1
- Document Appendix 8
- Document Appendix 9
- Document Appendix 10
- Document Appendix 11

4.2 Existing Documentation - To be made available for successful Proponent

- Functional and technical program in pdf format, dated May 27, 2010 (for reference purposes only);
- Architectural, electrical, mechanical, structural and civil engineering plans of the existing facilities will be submitted in paper, pdf or CAD format, depending on availability;
- Wastewater treatment plant report and any other available reports relevant to the project.
- Additional information provided by the CBSA.

PD 5 PROGRAM

The scope of the work described below and the budget must be validated by the consultant at the start of his/her assignment.

It is possible that work will be carried out under one (1) or more than one separate contract, depending on the method selected when the documents are prepared. The selected consultant must take this possibility into account in his/her submission and plan for the preparation of more than one (1) set of documents for the bid solicitation and for work to be done separately. See also section 5.1.3 Constraints and Challenges below.

The work covered under this mandate is identified in the following proposed list of work packages, which is not a complete list (see Appendix 1):

Package 1: Partial or total demolition of the existing bus processing centre and construction of a new building for the bus processing centre. Plan for all related civil engineering work (including, without being limited to, electrical, plumbing, mechanical and other types of work). Plan for traffic simulations in order to verify the impact on the entire site;

Package 2: Partial or total demolition of existing travellers booths, partial or total construction of these booths, including the existing NEXUS line, possible addition of another NEXUS line and related civil engineering work. The activities in this package may include preparations for the three (3) fit-up options described in Section 5.1.4.

Plan for all related civil engineering work (including, without being limited to, electrical, plumbing, mechanical and other types of work). Plan for traffic simulations in order to verify the impact on the entire site;

Package 3: Renovation and enlargement (if necessary) of the building for traveller operations;

Package 4: Renovation and enlargement (if necessary) of office areas in the former commercial building;

Package 5: Enlargement of the inspection area and the secondary inspection parking area. Plan for all related civil engineering work (including, without being limited to, electrical, plumbing, mechanical and other types of work). Plan for traffic simulations in order to verify the impact on the entire site;

Package 6: Renovation and enlargement of firearms storage rooms. These rooms are located on the second floor of the traveller operations building and in the basement of the commercial operations building. In both cases, the rooms have to be enlarged, and in the specific case of the traveller operations building, the room must be enlarged and refitted so that the locker room is separated from the duty firearms storage room;

Package 7: This package includes a series of tasks that involve necessary maintenance of and improvements to the existing facilities before the work planned in other work packages of this project can be carried out. The consultant will be expected to identify these tasks, determine the proportion of this work that is attributable to this project and incorporate it into the documents that the consultant is preparing for the purposes of the project. For example, the consultant could verify and incorporate the work concerned for the following: fire pumps, potable water, presence of artesian wells in the new fit-up, connections to the emergency system, potential impact on wastewater treatment, lightning protection, potential addition of direct digital control (DDC) points, and repointing work on the heritage building, etc. Also plan to carry out studies to optimize the entire road network and parking areas on the site.

Constraints and Challenges

5.1.1: Provision must be made in the planning to ensure that operations are maintained throughout the project. Some services may have to be provided outside office hours and on weekends.

5.1.2: Some of the work will be carried out under the continuous supervision of security guards. Delays may arise because it will be necessary to set up reception and movement procedures for persons moving about within the site and travelling to and from the site.

5.1.3: The consultant must submit to the client for approval an optimum sequence for the phased completion of the work. Note that the work may be carried out under a single call for tenders or under more than one call for tenders, depending on the separate contracts. The bid documents will be prepared accordingly.

5.1.4: At the start of the mandate, the consultant must prepare three (3) proposals for the fit-up plan for the entire border crossing facility that show the relationship between the 15 traveller booths and the various lots, parking areas (cars, trucks, over-size trucks, buses) and optimum traffic flows, with consideration given to reasonable costs and maximum functionality.

Option #1 must show the installation of 15 new booths modelled on the sketches in Appendices #8, #9 and #10. The location of the booths will have to be determined, keeping in mind that they are to be moved further north from their current location in order to reduce the waiting line for the United States.

Option #2 will involve keeping and/or replacing the existing booths (make provision for replacing temporary booths 8 and 9 with permanent booths) and setting up two (2) lines of booths. Use the sketch shown in Appendix #11 as a model. Note that there will be two Nexus lanes.

Option #3 will involve submitting a proposal of the consultant's own inspiration that meets all of the requirements.

For each proposal, please clearly indicate the following:

- estimated costs;
- advantages/disadvantages;
- optimum work sequence (by phases and combinations of packages) to ensure the maintenance of continuous operations;
- Projected schedule (either combinations of packages and/or individual packages);
- Temporary measures to facilitate the maintenance of continuous operations;
- Changes made necessary by site improvement options (for example, take into account land levels and parking areas for cars, trucks, over-size trucks and buses) and for the purposes of optimizing all of the traffic lanes and especially the movements of duty vehicles returning to the CFIA operations building. Currently these vehicles must cross CBSA operational areas and wait for long periods before being allowed to pass through;
- Impact on services and existing facilities.

5.1.5: The proposal to be developed will be the one chosen by the client. For the purposes of this proposal, please provide all of the services described in the Required Services and Additional Services section of the Request for Proposals.

PD 6 PROJECT OBJECTIVES

Intent: Outline the project objectives.

Standard elements:

- Quality
- Sustainable development
- Code compliance
- Risk management
- Schedule control
- Cost efficiency
- Waste management
- Occupational health and safety

6.1 Quality

6.1.1 Design Principles – General

The Department expects the consultant to maintain a high standard of engineering design based on recognized contemporary design principles. All design elements, planning and engineering must be fully coordinated and consistent in adherence to proven design principles.

The level of quality is to be consistent with that of other Government of Canada buildings.

The project is to be implemented in an environmentally responsible manner.

The quality of materials and construction methods must be appropriate for the type of building and the budget. Avoid using experimental materials and take the service life of the building into account.

Operating costs must be kept to a minimum and reflect the projected operating costs in the cost plan. This is to be achieved through compliance with the Energy Budget, selection of equipment requiring the minimum of operating personnel, and building finishes for easy maintenance, etc.

The character, overall configuration, scale and materials of this project must be compatible with its surrounding context.

The design must allow for a maximum of flexibility in the immediate and future use of the space.

The project must take into account and incorporate environmental considerations from the beginning. To that end, the Consultant will:

- 1) In the case of all new construction: Incorporate LEED principles, Silver-level certification (Note that LEED registration will not be required) in the design and the construction;
- 2) In the case of any renovations of the existing buildings: Incorporate Green Globes Principles, Level Three (3);
- 3) Where possible, incorporate the principles set out in the 2030 Carbon Neutral Challenge.

A description of the project, broken down by components, and an estimate for each building component and an energy simulation must be introduced as soon as possible into the design process. These principles will be used to assess the design options that have the potential to reduce overall costs.

It is important to understand that we wish to creatively address requirements within the parameters of available budgets, given that the border crossing facility must remain operational throughout the project.

6.1.2 Design Principles – Specific

Standard elements

- Project Description by Element (PDE)
 - Based on Construction Specifications Institute (CSI) Practice FF/180 and structured according to the ASTM E 1557 – UNIFORMAT II standard for the classification of building components;
- Estimate by building component
 - Structured according to the ASTM E 1557 – UNIFORMAT II standard. This estimate must contain analytical parameters (unit costs, ratios, percentages, etc.) to facilitate the cost analysis;
- Project planning must take into account higher-level security measures specific to this type of building. Also to be taken into consideration is the fact that the building must remain operational throughout the period of the work. The client/user will be the best resource for determining these requirements.

6.2 Sustainable Development

The Government of Canada has begun a series of initiatives to ensure that sustainable development principles are built into the policy of all federal organizations. Public Works and Government Services Canada (PWGSC), like all federal departments, is required to have a Sustainable Development Strategy (SDS). The Real Property Branch of PWGSC has developed a strategic plan that sets out principles, goals and actions for integrating sustainable development

principles into its policies and operations. The Branch has established the following sustainable development goals to address the issues of management, leadership and operation.

6.3 Waste Management

The Construction, Renovation and Demolition (CRD) Non-hazardous Solid Waste Management Protocol, to which the Real Property Branch (RPB) is bound, provides direction on the undertaking of non-hazardous solid waste management actions for CRD projects. The protocol is designed to meet the requirements of federal and provincial policies and the objectives of the (RPB) Sustainable Development Strategy (SDS) as these relate to non-hazardous solid waste generated in CRD projects.

For all Real Property projects where the area exceeds 2,000 m², a solid waste management program must be implemented. This requirement exists by regulation in the province of Ontario and by policy for the rest of Canada. For projects where the area is less than 2,000 m², a preliminary evaluation of the economic feasibility of a waste management program must be carried out.

The results from the RPB CRD waste management pilot projects have been very positive. Based on these results and results obtained from similar projects that have been completed by other organizations, the following can be said:

- Approximately 50% to 95% of the waste generated during CRD projects can be diverted from landfill through reduction, reuse and recycling initiatives;
- Approximately 40,000 tonnes of waste are produced for every billion dollars spent on construction projects;
- Contractors and project managers must plan for extra project time when implementing CRD waste diversion initiatives. However, added labour hourly costs can be recuperated and a savings of up to 30% of the waste management costs (approximately 10% of the total project budget) can be achieved through reduced tipping fees, avoided haulage costs, and the sale of reusable and recyclable materials.

6.4 Code Compliance

Codes, regulations, bylaws and decisions of “authorities having jurisdiction” will be observed. In cases of overlap of regulatory provisions, the most stringent will apply. The Consultant shall identify other jurisdictions appropriate to the project.

The Engineering Services division of Fire Prevention Services of the Human Resources and Skills Development Canada, Labour Program must be involved in the project design phase from

the beginning. These services represent the competent Authority in terms of construction and fire safety codes.

6.5 Risk Management

A risk management strategy is essential in managing PWGSC projects. A risk management strategy combines project planning and procurement planning. All the stakeholders of the project will be an integral part of the risk management strategy. These groups will establish an integrated production team. Specific services required for project delivery are outlined in Required Services.

6.6 Occupational Health and Safety

PWGSC recognizes that it is required to safeguard the health and safety of all persons working on government construction projects. It also recognizes that federal and public-sector employees are entitled to the full protection provided under workplace health and safety regulations.

To fulfil this responsibility and improve health and safety protection for all individuals on federal construction sites, PWGSC will voluntarily comply with the applicable provincial/territorial construction health and safety acts and regulations, in addition to the related *Canada Occupational Safety and Health Regulations*.

At the very start of the process, the PWGSC Project Manager will give the Prime Consultant specification section 01 35 30 – Health and Safety from PWGSC, Quebec Region, and a general list of specific clauses. The list must be adapted by the project team, and the pertinent specific clauses must be incorporated into the project specifications.

PD 7 ISSUES

7.1 Major Cost Issues

Issue: Quality of Estimate
Cost Control Strategy:

Effective cost estimating and cost control is of prime importance and must be provided by professional quantity surveyors. The Class C and Class B cost estimates must 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 must be submitted in trade cost breakdown format. Cost estimates must include a summary as well as a full backup showing items of work, quantities, unit prices and amounts.

7.2 Major Time Issues

Issue: Compliance with the schedule

Schedule Control Strategy:

The drawing up of the schedule in MS Project format and regular monitoring of the schedule are an integral part of the consultant's responsibilities.

7.3 Major Safety Issues

Issue: Compliance with safety requirements

Safety Control Strategy:

All consultants involved in the project must comply with the security level and requirements for this project. The security requirements will be provided by the client/user.

PD 8 CONSULTANT SERVICES

The consultant team for this project must be able to provide the following services:

Urban design	Sustainable development
Architecture	Lighting design
Mechanical engineering	Colours
Electrical engineering	Security
Structural engineering	Electronic security engineer
Civil engineering	Communications
Landscape architecture	Graphic design
Commissioning	Geotechnical engineering
Scheduling	Interior air quality, monitoring and warning system
Interior design	Traffic engineering.
Schedule control	Fire protection
Cost control	Signage
Risk management	Environmental protection
Waste management	
Restoration	

DESCRIPTION OF SERVICES

PA 1 PROJECT ADMINISTRATION

PURPOSE

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

1.1 PWGSC Project Management

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

The Project Manager is the Departmental officer directly concerned with the project and responsible for its progress. The Project Manager is the liaison between the Consultant, Public Works and Government Services Canada and the client departments.

Public Works and Government Services Canada administers the project and exercises continuing control over the Consultant's work during all phases of development. Unless directed otherwise by the Project Manager, the Consultant must meet all federal requirements and obtain all federal approvals necessary for the work.

1.2 General Project Deliverables

Where deliverables and submissions include summaries, reports, drawings, plans or schedules, six (6) hard copies shall be provided and one (1) electronic copy shall be provided unless otherwise specified.

1.3 Lines of Communication

Unless otherwise arranged with the Project Manager, the Consultant shall communicate with the Project Manager only. There shall be no direct official contact between client departments and the Consultant.

During construction tender call, Public Works and Government Services Canada conducts all correspondence with bidders and makes the contract award.

1.4 Media

The Consultant shall not respond to requests for project related information or questions from the media. Such inquiries are to be directed to the Project Manager.

1.5 Meetings

Twice a month during the project development period and the work performance period, the project manager must hold meetings to be attended by all project team members and representatives of the following:

- Client department;
- Public Works and Government Services Canada; and
- Consultants.

The Consultant shall attend the meetings, record the issues and decisions and prepare and distribute minutes within 72 hours following the meetings. The meetings may be held in Montreal or Lacolle.

1.6 Project Response Time

It is a requirement of this project that the key personnel of the successful proponent and sub-consultants or specialist firms be personally available to attend meetings or respond to inquiries on one (1) day's notice.

1.7 Submissions, Reviews and Approvals

Work in progress is to be reviewed by the Project Manager as well as by the following:

Internal PWGSC Services

- ☐ Submission format: report, drawings and specifications, and an oral presentation, if necessary;
- ☐ Submission schedule: Submissions are to be reviewed at an agreed time with two (2) days' advance notice once the completed work has been sent to the Project Manager;
- ☐ Expected turnaround time: 1 to 2 weeks;
- ☐ Number of submissions: two (2): 50% and 99%.

Design Review Committee – Client

- ☐ Submission format: report, drawings and specifications, and an oral presentation, if necessary;
- ☐ Submission schedule: Submissions are to be reviewed at an agreed time with two (2) days' advance notice once the completed work has been sent to the Project Manager;
- ☐ Expected turnaround time: 1 to 2 weeks;
- ☐ Number of submissions: two (2): 50% and 99%.

Labour Canada – Fire Protection

- ☐ Submission format: report, drawings and specifications, and an oral presentation, if necessary;
- ☐ Submission schedule: Submissions are to be reviewed at an agreed time with two (2) days' advance notice once the completed work has been sent to the Project Manager;
- ☐ Expected turnaround time: 1 to 2 weeks;
- ☐ Number of submissions: two (2): 50% and 99%.

Chart of Reviews and Approvals	PWGSC		Canada Border Services Agency		Fire Prevention Service			
	R	A	R	A	R	A	R	A
RS1 Analysis of Project Brief								
Project Scope of Services Report		x		x				
Class D cost estimate		x		x				
Annotated LEED, Green Globes, etc. checklist								
Action Plan for Sustainable Development with schedule		x		x				
RS2 - Concept Design								
Design options	x		x		x			
Recommended design option		x		x	x			
Class C Estimate(s)		x		x				
Annotated LEED, Green Globes, etc. checklist		x		x				
Total cost analysis	x		x					
Code review	x				x			
Project Description by Elements	x							
RS3 Design Development								
Design development documents		x						
Class B Estimate(s)		x		x				
Total cost analysis	x		x					
Code review	x				x			
Annotated LEED, Green Globes, etc. checklist		x						
HVAC operational diagrams		x						
Project Description by Elements	x							
RS4 Construction Documents/Tender Call								
50% Construction Drawings		x			x			
99% Construction Drawings and Specifications		x			x			
Class A Estimate(s)		x		x				
Final tender documents at 100%		x						
Code review								
Annotated LEED, Green Globes, etc. checklist								
Total cost analysis	x		x					

R - Review

A = Approve

AP 1.8 OFFICIAL LANGUAGES

This project requires services in both official languages. Refer to the Supplementary Condition section entitled “Language Requirements” (SC2) in this Request for Proposal.

REQUIRED SERVICES

RS 1 ANALYSIS OF PROJECT REQUIREMENTS

1.1 INTENT

To ensure that the consultant has reviewed and integrated all the project requirements, identified and evaluated conflicts or problems, provided alternative strategies, presented and received approval on a Project scope, delivery process, schedule and estimates required to deliver a cohesive quality project. These approved documents will become the Project Scope of Services and will be utilized throughout the project to guide delivery.

1.2 GENERAL

Scope of Work:

- Visit the building/site and verify the availability and capacity of services needed for the project.
- Attend project start-up meeting.
- Analyze the project requirements/program.
- Review all available existing material related to the project.
- Review the proposed project schedule for verification that all milestone dates are achievable.
- Review the cost plan/budget for verification that the costs are realistic and achievable.
- Identify and verify all authorities having jurisdiction over the project.
- Draw up a list of applicable codes, regulations and standards, including (without being limited to) the following: National Building Code, Canada Labour Code, National Energy Code of Canada for Buildings, National Fire Protection Association (NFPA) requirements, Quebec *Regulation respecting occupational health and safety*, Canadian Electrical Code; and CSA-Z462 – Workplace Electrical Safety and CSA 282 – Emergency Electrical Power Supply for Buildings standards.
- Establish a policy for minimizing environmental impacts consistent with the project objectives and economic constraints.
- Review potential for environmental impacts and application of the *Canadian Environmental Assessment Act* (CEA).
- Plan subsequent steps in the development of the project by organizing coordination (charette) meetings and other specific meetings for the stakeholders and specialists concerned.
- Incorporate LEED, Green Globes, and if possible, 2030 Carbon Neutral Challenge principles into the design and construction and place special emphasis on energy efficiency. LEED certification is not required.

1.3 DELIVERABLES

- Report on existing base building system elements including their condition, deficiencies and life expectancy.
- Confirmed or adjusted project cost and schedule;
- Written identification of the problems, conflicts or other perceived information/clarifying assumptions for the acknowledgment of the Project Manager;
- Description of proposed components;
- D estimate, construction budget, indicated in this RFP;
- Code review;
- Submission of an action plan for sustainable development applicable to the project, along with a schedule;
- Report on all applicable codes, regulations, standards and authorities having jurisdiction;
- Overview of potential strategies to be considered for the purposes of the project and an annotated LEED, Green Globes and 2030 Carbon Neutral Challenge checklist for project credits;
- Submission of an action plan for sustainable development applicable to the project, along with a schedule;
- Provide the project manager with the requirements for geotechnical studies for the building design. The consultant must also provide the project manager with the number and location of drill holes and the necessary information to be included in the geotechnical study that will be prepared for the purposes of another mandate. This study will then be submitted to the consultant for continued work on the design.

RS 2 DESIGN STUDIES

2.1 INTENT

To translate the project requirements into space parameters, explore design options, and analyze them against previously identified priorities and program objectives. Following this process, one option will be recommended to proceed to Design Development.

2.2 GENERAL

Scope of Work:

- Present design options which are viable and have potential for development.
- Analyze each solution with regard to the project goals including the cost analysis of the project and schedule.
- Recommend one option for further development with all supporting background and technical rationales.
- Hold coordination meetings (charettes) to develop environmentally friendly choices and design decisions.
- Update LEED, Green Globes and 2030 Carbon Neutral Challenge procedures.
- Update the code review.

2.3 DETAILS

2.3.1 Architectural Drawings:

- Site plan showing proposed locations of buildings/facilities and their orientation, main access points and traffic patterns;
- Schematic building plans of alternatives showing relative disposition of main accommodation areas, circulation patterns, numbers of floors, etc;
- Sketch elevations and sections indicating the basic design approach and aesthetic philosophy;
- Sketch perspectives or massing studies;
- Outside gross building/facility areas and summary of main accommodation areas required and proposed;
- Horizontal and vertical space relationships;
- Traffic simulations.

2.3.2 Structural Drawings:

- Proposed or alternative structural systems, including foundation methods and explanatory sketches, and a copy of the site report on which the design is based.

2.3.3 Mechanical Drawings:

The concept submission shall include a description of specific mechanical requirements and function for each area (or room) in the building/facility. Incorporate in the submission a schedule of requirements listing all rooms and identify the mechanical building services to be provided.

- Explain in the concept submission the manner in which the proposed mechanical systems correlate with user requirements.
- Identify the volume of outdoor air to be supplied per person.
- Identify the supply air delivery rate to occupied spaces.
- Determine whether full-time operating staff will be needed for operation of any of the mechanical equipment. Differentiate between staff needed because of code requirements and staff needed because of the nature and size of the facility.
- Identify location of entry point into the building of all mechanical services into the building.
- Identify the area (square metres) to be provided for mechanical rooms.
- Identify location of mechanical rooms in the building.
- Analysis of alternative mechanical schemes at the conceptual design stage shall reveal energy consumption of building systems, operating and maintenance costs on a month-by-month basis for a time span of one year. Accordingly the estimated energy, operating and maintenance costs shall be used in life cycle cost analyses in order to determine the most beneficial mechanical systems option. Life cycle cost analyses shall be based on a projected building life of 25 years.
- Carry out an energy analysis of each mechanical system option.
- Establish an energy budget for the building/facilities and compare it to energy consumption of other similar buildings/facilities. Total energy consumed in the building shall be expressed in kWh/m².
- Identify the type of boilers to be used (i.e. cast iron sectional, fire tube, etc.) and provide an economic and technical explanation of the reason for the type of boiler to be used.
- List of non-Canadian products and materials proposed for the project with written justification.

2.3.4 Electrical Drawings:

- Proposed basic electrical systems of significance to the early design;
- Site plan showing location of service entrances;
- Distribution diagram showing single line diagrams to distribution centres;
- Floor plans complete with locations of major electrical equipment and distribution centres;
- Arrangement of lighting fixtures (interior and exterior);
- Location of power outlets ;
- Ceiling distribution systems for lighting, power and telecommunications;
- List of standard PWGSC details to be utilized;
- Telephone rooms, conduits and telecommunications cable systems requirements and layout;
- Provide an electrical design synopsis, describing the electrical work in sufficient detail for assessment and approval by the Department. Include feasibility and economic studies of proposed systems complete with cost figures and loads;

- List of non-Canadian products and materials proposed for the project with written rationale.

2.3.5 Commissioning:

- Define Commissioning Requirements.
- Identify (if required) the area (square metres) to be provided for maintenance personnel, including storage and workshops for mechanical, electrical and housekeeping.
- Define project archives.

2.3.6 Sustainable Development:

- Develop and evaluate design options incorporating environmental protection strategies;
- Environmental assessment and Screening Report (to include comment on all the design options) under the *Canadian Environmental Assessment Act*;
- Incorporate LEED, Green Globes and 2030 Carbon Neutral Challenge principles in the design and construction and place particular emphasis on energy efficiency while keeping within the available budget. LEED certification is not required.

2.4 DELIVERABLES

To supply the following:

- Concept Design drawings.
- Description of the options with recommendation of preferred solution.
- Class 'C' Cost Estimate, including methodology of the estimate, assumptions made, costing alternatives and life cycle costs.
- Report on deviation from schedule and recommended corrective measures or updated time line.
- Preliminary analysis report of current applicable codes, standards, acts and regulations.
- Preliminary outline specification in Unifomat II format indicating the main electrical and mechanical components;
- Description of building structural elements along with design data (capacities, performance, pre-design, etc.) structured according to a “project description by elements” for all disciplines;
- Studies and analysis reports on overall costs relative to the major electrical and mechanical systems and the building envelope;
- Analysis report on maintenance costs for the assessed options;
- Annotated update of the project checklist, if applicable;
- Updated code review;
- Traffic simulations;
- Update of the LEED, Green Globes and 2030 Carbon Neutral Challenge checklist for project credits.

RS 3 DESIGN DEVELOPMENT

3.1 INTENT

To further develop one of the options presented at the Concept Design stage. The Design Development documents consist of drawings and other documents describing the size and character of the entire project as to architectural, structural, mechanical and electrical systems, materials and such other elements as may be appropriate.

3.2 GENERAL

Scope of Work:

- Obtain written approval from Project Manager for the development of one of the proposed Design Concept options.
- If any alterations are demanded, document all required changes, analyze the impact on all project components, and resubmit for approval if required.
- Expand and clarify the Concept Design intent for each design discipline.
- Present the design materials to the client, to the design review or other committees, as indicated by the Project Manager.
- Present the design to the government or local authorities where required.
- Analyze the constructability of the project and advise on the construction process and duration.
- Based on all material available at the time, prepare a milestone schedule for consideration with special attention to the impact on tenants.
- Continue to review all applicable statutes, regulations, codes and by-laws in relation to the design of the project.
- Provide a list and draft specification sections of all NMS sections to be used. Submit outline specifications for all systems and principal components and equipment. Provide in the outline specifications manufacturers' literature about principal equipment and system components proposed for use in this project.
- Hold coordination meetings (charettes) to develop environmentally friendly choices and design decisions.
- Update the LEED, Green Globes and 2030 Carbon Neutral Challenge processes.
- Update the code review.
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3.3 DETAILS

Scope of Work:

3.3.1 Architectural Drawings:

- Site plan showing the buildings and existing or proposed environmental elements, including:
Traffic patterns:
Pedestrian

Private vehicles

Public transportation

Service roads.

Traffic simulations.

☐ Parking:

employees

visitors

service vehicle parking and loading areas.

☐ Grading:

Existing and proposed grade elevations.

☐ Landscaping:

Main planting and grassed areas. Where possible show the location of underground utilities in relation to proposed plantings. Indicate the purpose of the plantings, such as windbreaks, screens or erosion control.

☐ Cross Sections:

Prepare cross sections through the site to show the relationship of existing buildings to proposed ground elevations and plantings, to illustrate the three-dimensional aspects of the site. Include simple perspective sketches of main features if necessary.

- Floor plans of each floor showing all accommodation required, including all necessary circulation areas (with travel route and distance to designated exits), stairs, elevators, etc., and ancillary spaces anticipated for service use. Define areas relating to fall-out shelter space. Indicate building grids, modules, etc., and key dimensions.

- Furniture and Equipment plans.

- Elevations of exterior building facades showing all doors and windows accurately sized and projected from the floor plans and sections. Indicate clear floor and ceiling levels and any concealed roof levels.

- Cross Sections through the building(s) to show floor levels, room heights, inner corridor or court elevations, etc.

- Detail Sections of walls or special design features requiring illustration and explanation of this stage, including fireproofing methods.

3.3.2 Structural Drawings:

- Drawings indicating the proposed structural framing system, type of foundation, construction materials, details of retaining walls and exterior finishing, and other significant or unusual details proposed. Drawings may be separate or incorporated on the architectural drawings. Include a copy of the site report on which the design is based.

3.3.3 Mechanical Drawings:

- Site Plan showing service entrances for water supply, sanitary and storm drains and connections to public utility services, including all key invert elevations.

- Drawings showing preliminary sizing of ventilation, cooling and heating systems showing locations, and all major equipment layouts in mechanical rooms.
 - Drawings of plumbing system, showing routing and sizing of major lines and location of pumping and other equipment where required.
 - Drawings of the fire protection systems showing major components.
 - Produce preliminary designs based on the approved concept. Update the energy analysis and energy budget established at the concept design stage.
 - Update the schedule of requirements.
 - Provide information on all internal and external energy loads in sufficient detail to determine the compatibility of the proposal with existing services, approved concept and energy budget.
 - Analysis of selected equipment and plant with schematics and calculations sufficient to justify the economy of the selected systems.
 - Describe the mechanical systems to be provided and the components of each system.
- Describe the perceived operation of the mechanical systems.
- Explain what operating staff will be needed to operate the building systems and the expected functions of the operation staff.
 - Describe the building systems control architecture. Provide preliminary EMCS network architecture, mechanical control schematics, and sequence of operation.
 - Explain what acoustical and sound control measures are to be included in the design.
 - Describe the renewable energy sources selected and their installation and operating mode, attach process flow diagrams for the heating, ventilation, and air conditioning, and provide calculations to illustrate the economic benefits of the selected systems.

3.3.4 Electrical Drawings:

- Provide drawings showing advanced development of the following:
 - ☐ Single line diagram of the power circuits with their metering and protection, including:
 1. Complete rating of equipment;
 2. Ratios and connections of CTs and PTs;
 3. Description of relays when used;
 4. Maximum short circuit levels on which design is based;
 5. Identification and size of services;
 6. Connected load and estimated maximum demand on each load centre.
 - ☐ Electrical plans with:
 7. Floor elevations and room identification;
 8. Legend of all symbols used;
 9. Circuit numbers at outlets and control switching identified;
 10. All conduit and wire sizes except for minimum sizes, which should be given in the specification;
 11. A panel schedule with loadings for each panel;
 12. Telephone conduits system layout for ceiling/floor distribution.
 - ☐ Riser diagrams for lighting, power, telephone and telecommunication cable systems, fire alarm and other systems.

- ☐ Elementary control diagrams for each system.
- ☐ Schedule for motor and controls.
- ☐ Complete lighting layout and fixture schedule clearly indicating methods of circuiting, switching and fixture mounting.
- ☐ Electric heating layout and schedule.
- Provide the following data:
 - ☐ Total connected load.
 - ☐ Maximum demand and diversity factors.
 - ☐ Sizing of standby load.
 - ☐ Short-circuit requirements and calculations showing the ratings of equipment used.

3.3.5 Commissioning

- Define operational requirements.
- Define Commissioning Requirements.
- Prepare a commissioning Brief describing major commissioning activities for mechanical, electrical and integrated system testing.
- Define and establish project-specific archives.

3.4 DELIVERABLES:

- Floor plans including all disciplines showing all floor elements and services to detail necessary to make all design decisions and to substantially estimate the cost of the project.
- Two (2) building sections.
- Demolition plans.
- Architectural, structural, engineering, millwork and finishing details to determine choice of materials and finishes.
- Reflected ceiling plans.
- Elevations.
- Three-dimensional models of the site and building /facilities as required.
- Finishes and colour schemes.
- Description of building components with design data structured according to a project description by element
- Final total cost analysis studies and reports applied to major electrical and mechanical (HVAC) systems and the building envelope.
- Maintenance cost analysis report for evaluated options.
- Updated code review.
- Operating diagrams for heating, ventilation and air conditioning systems, including selected renewable energy sources.
- Traffic simulations.
 - ☐ Outline specifications for all systems and principal components or equipment.
 - ☐ Class B cost estimate.
 - ☐ Preliminary construction schedule including long-term delivery items.
- ☐ Fire Protection Engineer's report, including requirements, strategies or interventions to protect the building and its occupants.
- ☐ Project dossier detailing the basic assumptions of the project and the rationale for all major decisions.
- ☐ Commissioning Plan.

RS 4 CONSTRUCTION DOCUMENTS

4.1 INTENT

To prepare drawings and specifications setting forth in detail the requirements for the construction and final cost estimate of the project.

- 50% indicates substantial technical development of the project, that is, architectural and engineering plans, details, schedules and specifications are 50% completed.
- 99% is the submission of complete construction documents ready for tender call and submission to local authorities for pre-permit purposes.
- Develop a project-specific Systems Operations Manual (SOM).
- Final submission incorporates all revisions required in the 99% version and is intended to provide PWGSC with complete construction documents for tender call.

4.2 GENERAL

Activities are similar in the two stages; completeness of the project development should reflect the stage of a submission.

Scope of Work:

- Obtain Project Manager's approval for Design Development submissions (50%, 99% and final).
 - ☐ Confirm format of drawings and specifications.
 - ☐ Clarify special procedures (i.e., phased construction).
 - ☐ Submit drawings and specifications at the required stages (50%, 99% and final).
 - ☐ Provide written response to all review comments and incorporate them into construction documents where required.
 - ☐ Advise as to progress of cost estimates and submit updated cost estimates as project develops.
 - ☐ Update project schedule.
 - ☐ Prepare a final Class A estimate.
 - ☐ Review specifications regarding materials and construction processes and confirm that they meet sustainable development objectives.
- Update the annotated LEED, Green Globes and 2030 Carbon Neutral Challenge checklist for the project
- Final total cost analysis studies and reports applied to major electrical and mechanical (HVAC) systems and the building envelope.
- Submission of construction waste management plan.

4.3 DETAILS

Scope of Work:

4.3.1 Technical and Production Meetings

- Production of construction documents will be reviewed during the meetings arranged by the Project Manager and the Consultant.

- Representatives of client department(s) and PWGSC support staff will be present as arranged by the Project Manager.
- The Consultant shall ensure that his or her staff and the sub-consultant representatives attend the technical and production meetings as required.
- The Consultant shall arrange to provide all necessary data, progress prints, etc.
- The Consultant shall prepare minutes of the meetings and distribute copies to all participants.

4.3.2 Progress Review

- As work progresses on construction drawings, submit drawings, schedules, details, pertinent design data, and updated cost plans and project schedules as required.

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4.3.2.1 Mechanical:

1. Flow diagrams, system layouts, equipment selections and sizes, floor plan layouts showing major equipment.
2. All major ductwork sized and shown on drawings, including layout of all major mechanical and transformer rooms.
3. EMCS network architecture, mechanical control schematics, sequence of operation for each mechanical system, electrical control schematics, DDC input/output point schedules.
4. Commissioning plan in accordance with CP.3.
5. Update the building load calculation, energy analysis and energy budget.
6. Submit at the stipulated progress submission all calculations for mechanical design and equipment selection. These calculations shall be bound in a three-ring binder and indexed.

4.3.2.2 Electrical:

Based on the status of the project, provide drawings containing more detailed information on:

1. Single-line diagram of the power circuits with their metering and protection, including:
 - a. Complete rating of equipment; ratios and connections of CTs and PTs;
 - b. Description of relays when used;
 - c. Maximum short-circuit levels on which design is based;
 - d. Identification and size of services;
 - e. Connected load and estimated maximum demand on each load centre.
2. Electrical plans will include (**depending on project**):
 - a. Floor elevations and room identification;
 - b. Legend of all symbols used;
 - c. Circuit numbers at outlets and control switching identified;
 - d. All conduit and wire sizes except for maximum sizes which should be given in the specification;
 - e. A panel schedule with loadings for each panel;
 - f. Telephone conduits system layout for ceiling/floor distribution;
 - g. Riser diagrams for lighting, power, telephone and telecommunication cable systems, fire alarm and other systems;

- h. Elementary control diagrams for each system.
- i. Schedule for motor and controls.
- j. Complete lighting layout and fixture schedule clearly indicating methods of circuiting, switching and fixture mounting.
- k. Electric heating layout and schedule.

3. Provide the following data:

- a. Total connected load.
 - b. Maximum demand and diversity factors.
 - c. Sizing of standby load.
 - d. Short-circuit requirements and calculations showing the ratings of equipment used.
 - e. Voltage drop.
- Calculations submitted will not necessarily be reviewed. They are required for record purposes and in certain instances to assist in the understanding and interpretation of designs. Calculations shall be submitted in a format that is legible, neat and easily understandable.
 - Specifications and an index of specifications. Use the latest version of the NMS. Use PWGSC-specific sections, if applicable.

4.3.2.3 Architectural Drawings:

- Complete drawings showing the extent of the interventions and their location on the site.

4.3.2.4 Structural Drawings:

- Complete drawings showing the extent of the interventions and their location on the site.

4.4 DELIVERABLES

Deliverables are similar in the two stages; completeness of the project development should reflect the stage of a submission.

4.4.1 99% Submission:

- Complete specification and working drawings (paper and PDF formats).
 - 99% Commissioning Plan and Systems Operations Manual.
 - One copy of the complete colour schedules, including textures, sheens, super-graphics, colour chips and material samples.
 - One copy of site information, soil investigation report, borehole logs, etc.
 - One copy of support data, studies, calculations, etc., required by PWGSC Engineering disciplines for final checking and record.
 - One copy of updated Cost Plan and Project Schedule.
 - Updated code review.
 - Total cost analysis studies and reports applied to major electrical and mechanical systems and the building envelope.
 - Maintenance cost analysis report for evaluated options.
- ☐

4.4.2 Final Submission:

- This submission incorporates all revisions required by the review of the 99% submission.
- Provide the following:

- ☐ Complete set of the working drawings (paper, PDF and DWG formats).
- ☐ Complete sets of specifications (paper, PDF and DWG formats).
- ☐ Class A estimate.
- ☐ Complete Commissioning Plan.
- ☐ Complete Systems Operations Manual.
- ☐ Complete set of original Colour Schedule.
- ☐ One set of soil investigation reports with amendments if any.
- ☐ One set of designated substance survey reports.
- As a safeguard against loss or damage to the originals, retain a complete set of drawings in reproducible form and one copy of the specifications

Inspection Authorities Submission

- Submit and obtain approval for plans and specifications required by inspection authorities prior to tender call, in accordance with the guidelines set out in the “Doing Business” document.
- Submit a CD containing all the electronic files of drawings for all disciplines to permit verification of application of the PWGSC CADD Standard.

RS 5 TENDER CALL, BID EVALUATION AND CONSTRUCTION CONTRACT AWARD

5.1 INTENT

To obtain and evaluate bids from qualified contractors to construct the project as per the tender documents, to award the construction contract according to government regulations, including Federal Standard Rules of Practice for Bid Depositories.

5.2 GENERAL

Scope of Work:

- Attend briefing meetings for bidders.
- Prepare addenda based on questions raised during the meetings, for distribution by the Project Manager.
- Provide the Project Manager with all information required by bidders to fully interpret the construction documents. The Project Manager will issue the resulting addenda to all participants.
 - ☐ Keep full notes of all enquiries made during the bidding period and submit same to the Project Manager at the end of this period, for PWGSC records.
 - ☐ Assist in tender evaluation by providing advice on the following:
 - 1.The completeness of bid documents in all respects.
 - 2.The technical aspects of the bids.
 - 3.The effect of alternatives and qualifications that may have been included in the tender.
 - 4.The bidders' ability to undertake the full scope of work.
 - 5.The availability of adequate equipment to carry out the work.
 - ☐ If PWGSC decides to re-tender the project, provide the Project Manager with advice and assistance.
 - ☐ Revise and amend, at your own expense, the construction documents to bring the cost of the work within the limits stipulated.
 - ☐ Determine and report any cost and schedule impacts caused by the invitation to tender or contract addenda.

5.3 DELIVERABLES

- ☐ Originals of drawings and specifications.
- ☐ Electronic copies of drawings and specifications in keeping with the guidelines set out in the document "Doing Business."
- ☐ Addenda where needed.
- ☐ Changes to the documents, if re-tendering is necessary.
- ☐ Updated cost estimate or project schedule.

RS 6 CONSTRUCTION AND CONTRACT ADMINISTRATION

6.1 INTENT

To implement the project in compliance with the Contract Documents and to direct and monitor all necessary or requested changes to the scope of work during construction.

6.2 GENERAL

Scope of Work:

- ☐ During the implementation of the project, act on PWGSC's behalf to the extent provided in this document.
- ☐ Carry out the review of the work at appropriate intervals to determine if the work is in compliance with the contract documents.
- ☐ Keep PWGSC informed of the progress and quality of the work and report any defects or deficiencies in the work observed during the course of the site review.
- ☐ Ensure compliance with the commissioning plan and update plan as necessary.
- ☐ Determine the amounts owing to the Contractor based on the progress of the work and certify payments to the contractor.
- ☐ Interpret the requirements of the Contract Documents.
- ☐ Provide cost advice during construction.
- ☐ Advise the Project Manager of all possible changes to the scope of work during project implementation.
- ☐ Review the documents submitted by the Contractor.
- ☐ Prepare and justify change orders to be issued by the Departmental Representative.
- ☐ Indicate any changes or material/equipment substitutions on record documents.
- ☐ During the twelve (12)-month warranty period, investigate all defects and alleged defects and issue instructions to the Contractor.
- ☐ Prepare and post Systems Operating Instructions.
- ☐ Finalize the Systems Operations Manual.
- ☐ Conduct a final warranty review.
- Monitor construction in relation to the technical applications for the LEED, Green Globes and the 2030 Carbon Neutral Challenge checklist.
- Approve the building materials and systems in accordance with the green criteria required in the tender documents.
- Carry out quality control of the work to ensure it meets the required performance under the Sustainable Development Strategy.
- Follow up on the construction waste management plan.
- Conduct commissioning verification during the construction period for all disciplines.

6.3 DETAILS

Scope of Work:

6.3.1 Construction Meetings

- Immediately after contract award arrange a briefing meeting with the Contractor and the Departmental Representatives. Prepare minutes of the meeting and distribute copies to all participants and to other persons as approved by the Project Manager.
- Call job meetings as often as required (at least every two weeks), commencing with the construction briefing meeting. The meetings should include the job superintendent, Inspector of Construction, main sub-subcontractors, affected sub-consultants and Government Services representatives as necessary. Prepare minutes of the meetings and distribute copies to all participants. The Project Manager may invite client departments to attend any of these meetings.

6.3.2 Project Schedule

- As soon as possible after contract award, obtain the Project Schedule with detailed commissioning components shown separately, and ensure proper distribution.
- Make sure that the construction work is carried out according to the approved schedule, take the necessary steps to ensure that the schedule is maintained and submit a detailed report to the Department concerning any delays.
- Keep accurate records of causes of delays.
- Make every effort to assist the Contractor to avoid delays.

6.3.3 Time Extensions

- Only the Department may approve a request for Time Extensions. The Project Manager will provide a written authorization.

6.3.4 Cost Breakdown

- Obtain from the Contractor a detailed cost breakdown on the standard PWGSC form and submit it to the Department with the first progress claim.

6.3.5 Subcontractor Changes

- The Contractor is required to use the sub-contractors listed on the tender form unless the Department authorizes a change. Changes are only considered when they involve no increase in cost. Review all requests for changes of subcontractors and submit recommendations to the Project Manager.

- When subcontractors have not been listed on the above-mentioned form, obtain the list from the Contractor not later than ten (10) working days after date of award.

6.3.6 Labour Requirements

- The Contractor is bound by the contract to maintain competent and suitable workers throughout the project, comply with Labour Canada workforce conditions, and inform the Department of any labour situations that appear to require corrective action by the Department.

- The Consultant must ensure that a copy of the workforce conditions for the contract is posted in a conspicuous place on site.

6.3.7 Compliance with Municipal Bylaws

- Ensure that the construction complies with applicable municipal by-laws and regulations.
- Matters that concern Labour Canada shall be referred to the Engineer.

6.3.8 Construction Safety

- All construction projects that are occupied by federal employees during construction are subject to the *Canada Occupational Safety and Health Act* and Regulations as administered by Health Canada.
- Fire safety provisions during construction must comply with FC Standards 301 and 302, administered by the Fire Commissioner of Canada.
- The Contractor must also comply with the provincial and municipal safety laws and regulations, and with any instructions issued by the officers of these authorities having jurisdiction relating to construction safety.
- Ensure the Contractor is mandated to provide all required coordination, isolation, protection and reinstatement of the fire protection and suppression systems throughout construction. Notify the Property Manager each time the fire protection and suppression systems are bypassed and advise of estimated reinstatement time. Check that the Contractor is mandated to provide Watchman Service as defined in FC 301.

6.3.9 Site Visits

- Provide non-resident construction inspection services. Ensure compliance with contract documents.
- Provide services of qualified personnel (**at least one intermediate technician**) who are fully aware of the technical and administrative requirements of the project.
- Establish a written understanding with contractors as to what stages or aspects of the work are to be inspected prior to being covered up.
- Assess quality of work and identify in writing to the Contractor and to the Department all defects and deficiencies observed at the time of such inspections.
- Inspect materials and prefabricated assemblies and components at their source or assembly plant, as necessary for the progress of the project.
- Any lists of deficiencies, instructions or clarifications shall be issued in writing to PWGSC.

6.3.10 Clarifications

- Provide clarifications concerning plans and specifications or site conditions, as required, to prevent the project from being delayed.

6.3.11 Progress Reports

- Provide the Department with weekly reports on the progress of the work.

6.3.12 Work Measurement

- If the work is based on unit prices, measure and record the quantities for verification of monthly progress claims and the Final Certificate of Measurement.
- When a contemplated change notice is to be issued based on unit prices, keep an accurate account of the work. Record the dimensions and quantities.

6.3.13 Detail Drawings

- Provide the Department with detail drawings when required to clarify, interpret or supplement the construction documents.

6.3.14 Shop Drawings

- On completion of the project, forward three (3) copies of reviewed shop drawings to the Department. Ensure that shop drawings include the project number and are recorded in sequence.
- Verify the number of copies of shop drawings required. Additional copies may be needed for client departments.
- Make sure that the shop drawings are stamped “Checked and Certified Correct for Construction” by the Contractor and stamped “Reviewed” by the Consultant, before they are returned to the Contractor.
- Expedite the processing of shop drawings.

6.3.15 Inspection and Testing

- Prior to tender, provide the Department with specified and recommended list of tests to be undertaken, including on-site and factory testing.
- Ensure that all testing is detailed within the Commissioning Plan.
- Once the contract is awarded, assist the Departmental Representative in briefing the testing firm on required services, distribution of reports, communication lines, etc.
- Review all test reports and take the necessary action with the Contractor when work fails to comply with contract documents.
- Immediately notify the Project Manager when tests fail to meet project requirements and when corrective work will affect the project schedule.
- Assist the Departmental Representative in evaluating the accuracy of the testing firm's invoices for services performed.

6.3.16 Training

- Prior to tender, provide Department with recommended list of training to be undertaken.
- Verify that all training is detailed in the Commissioning Plan.

6.3.17 Construction Changes

- The Consultant does not have the authority to change the work or the price of the Contract.
- Changes which affect the project cost or the concept design must be approved by the Department.
- Upon Departmental approval, obtain detailed quotations from the Contractor. Review prices and promptly forward recommendations to the Department.

- The Department will issue Consultant-prepared Change Orders to the Contractor, with a copy for the Consultant.
- All changes, including those not affecting the cost of the project, must be covered by Change Orders.
- The practice of "trade offs" is not allowed.

6.3.18 Contractor's Progress Claims

- Each month the Contractor submits a progress claim (request for progress payment) for work and materials as per the requirements of the construction documents.
- The claims are made by completing the following forms where applicable:
 - ☐ Request for Progress Payment.
 - ☐ Cost Breakdown for Unit and/or combined Price Contract.
 - ☐ Cost Breakdown for Fixed Price Contract.
 - ☐ Statutory Declaration Progress Claim.
- Review and sign designated forms and promptly forward claims to the Department for processing.
- Submit with each progress claim:
 - ☐ Updated schedule of the progress of the work;
 - ☐ Detailed photographs of the progress of the work.

6.3.19 Materials on Site

- The Contractor may submit a claim for the payment of materials on site but not yet incorporated in work.
- Materials must be stored in a secure place designated by the Department.
- Detailed list of materials with supplier's invoice showing price of each item must accompany claim; the Consultant must check the list.
- Items shall be listed separately on progress payment forms after the break-down list and total.
- As material is incorporated in the work, the cost of this material must be added to the appropriate breakdown list and removed from the list of materials.

6.3.20 Acceptance Board

- The Consultant must inform the Department once satisfied that the project is substantially completed. The Consultant shall ensure that his or her representative, the sub-consultant representative, the resident on-site reviewer, the Contractor and major sub-trades representatives form part of the Project Acceptance Board and attend all meetings as organized by the Department.

6.3.21 Interim Inspection

- The Acceptance Board shall inspect the work and list all unacceptable and incomplete work on a designated form. The Board shall accept work from the Contractor subject to the deficiencies and uncompleted work which have been listed and priced.

6.3.22 Interim Certificates

- Payment requires completion and signing, by the parties concerned, of the following documents:

- 1.Certificate of Substantial Performance
- 2.Cost Breakdown for Fixed Price Contract
- 3.Cost Breakdown for Unit and/or combined Price Contract
- 4.Inspection and Acceptance
- 5.Statutory Declaration - Certificate of Substantial Performance
- 6.Workman's Compensation Clearance Certificate.

- Verify that all items are correctly specified and that completed documents and any supporting documents have been submitted to the Department for processing.

6.3.23 Building Occupation

- The Department or the client department may occupy the building after the date of interim acceptance by the Acceptance Board. The acceptance date is normally that of the Certificate of Substantial Performance issued to the Contractor. As of the acceptance date, the Contractor may cancel the Contract Insurance, and the Department or the client department (as applicable) assumes responsibility for:

- Security of the work;
- Fuel and utility charges;
- Proper operation and use of equipment installed in the project;
- General maintenance and cleaning of the work;
- Maintenance of the site (except any landscaping maintenance covered by the contract).

6.3.24 Operation and Maintenance Data Manual

- Operation and Maintenance Data Manual: [3] sets of each volume produced by the Contractor in accordance with section [01730][01732] [01007] of project specification, verified for completeness, relevance and format by the Architectural, Mechanical and Electrical Consultants, and submitted to the PWGSC Project Manager prior to interim acceptance or the actual start of operation and the instruction period, whichever occurs sooner. The Contractor must retain one copy of each volume for its records and its own use during the instruction period.

6.3.25 Instructions for Operating Personnel

- Make arrangements and ensure that the Department's operating personnel is properly instructed on the operation of all services and systems using the final manuals as reference.
- The Consultant must provide training sessions, as required, on the subject of design intent and systems operations. Utilize systems operations manual for training sessions.

6.3.26 Keys

- Ensure that all keys and safe combinations are delivered to the Department and/or client department as applicable.

6.3.27 Final Inspection

- The Consultant is required to inform the Department when it is satisfied that all work under the contract has been completed, including correction of the deficiency items listed on the Inspection and Acceptance form as a result of the interim inspection. The Department reconvenes the Acceptance Board which makes a final inspection of the project. If everything is satisfactory, the Board issues final acceptance of the project to the Contractor.

6.3.28 Certificate of Completion (Final)

- The final payment requires completion and signing, by the parties concerned, of the following documents:
 - 1.Certificate of Completion (Final)
 - 2.Cost Breakdown for Fixed Price Contract
 - 3.Inspection and Acceptance
 - 4.Statutory Declaration – Certificate of Completion (Final)
 - 5.Cost Breakdown for Unit and/or Combined Price Contract
 - 6.Workmen's Compensation Clearance Certificate.
 - 7.Hydro certificate.
- Verify that all items are correctly specified and that completed documents and any supporting documents have been submitted to the Department for processing.

6.3.29 Take-over

- The official take-over of the project or parts of the project, from the Contractor, is established by the PWGSC Project Team, which includes the Consultant and the client department. The date of the Certificate of Substantial Performance and the date of the Certificate of Completion (Final) signifies commencement of the twelve (12)-month warranty period for work completed on the date of each certificate in accordance with the General Conditions of the Contract.
- Provide the Department with the original copy of contractor warranties for all materials and work covered by an extended warranty or guarantee, according to the conditions of the specifications. Verify their completeness and extent of coverage.

6.3.30 As-Built and Record Drawings and As-Built Specifications

- Following take-over, obtain a marked-up hard copy of the as-built drawings showing:
 - ☐ Deviations in construction from the original Contract Documents, including changes shown on as-built drawings and changes resulting from change orders or from on-site instructions.
- Check and verify all as-built records for completeness and accuracy and submit to PWGSC.
- Produce record drawings (as-built) by incorporating information on the finished work into project drawings.
- Submit Record Drawings and Specifications in number and format required by the Consultant Agreement within eight [8] weeks of final acceptance.
- Provide a complete set of the final shop drawings.

6.4 DELIVERABLES

- ☐ Written reports from site visits including the names of the persons involved.
- ☐ Written reports on the progress of the work and on the project cost at the end of each month.
- Additional detail drawings when required to clarify, interpret or supplement the Contract Documents.
- As-built drawings
- Interim or final certificates.
- Debrief of commissioning activities.
- As-built records.
- Warranty deficiency list.
- Report on final warranty review.
- As-built drawings on CD (PDF and DWG format) in keeping with the PWGSC CADD Standard for each discipline.
- As-built drawings (vellum paper format) for each discipline.
- List of spare parts for the units and equipment incorporated in the project.

RS 7 COMMISSIONING

As a member of the Project Team, the PWGSC Commissioning Manager represents the Owner's and User's interests, and is responsible for overseeing all commissioning activities during the development, implementation and post-construction stages of the project.

Throughout this stage, the Consultant and the Consultant's representatives on site will work closely with the PWGSC Commissioning Manager, PWGSC and the Contractor to carry out the commissioning activities and to create useful, well integrated drawings, reports and manuals, in compliance with the Contract Documents.

7.1 INTENT

- To define the operational and performance requirements of the Owner and User.
- To ensure that the responsibility for meeting these requirements and demonstrating compliance is defined in the design and contract documents.
- To ensure that appropriate start-up and checkout procedures are employed for components and sub-systems, including meaningful documentation for and certification of quality control reports and techniques under the normal or enhanced basic services and contractual procedures.
- To ensure that the final product meets the specified requirements and the criteria set out in the Investment Analysis Report (IAR).
- To document the operations, maintenance and management requirements, and transfer the completed works to qualified facility operators.
- To minimize the life-cycle operating and maintenance costs.
- To verify that the Department's functional requirements are correctly interpreted during the design stage and that the building systems operate consistently at peak efficiencies under all normal load conditions and within the specified energy budget.

7.2 GENERAL

Scope of Work:

- Provide complete documentation on the Operations and Maintenance (O&M) requirements.
- Prepare Systems Operations Manual (SOM) and Preventive Maintenance Support System (PMSS)/MMS documentation.
- Coordinate staffing and service contracts, and arrange for spare parts and special equipment.
- Ensure that the contents of the O&M Manual are in accordance with CP.4 operating and maintenance (O&M) manuals.
- Carry out various checks and tests to determine if the new equipment and systems function in accordance with the contract documents.
- Identify the responsibilities of the Contractor and sub-contractors with regard to commissioning, performance verification (PV) and testing.
- Plan the Performance Verification activities, develop the installation checklists and PV report forms, and prepare a detailed verification schedule for the Contractor. Maintain detailed development reports and review with the Contractor for special systems.

- PV inspection forms must be completed for all the components, subsystems and systems, and a final performance verification report must be submitted to the Commissioning Manager.
- Prepare a training plan for the O&M staff to be trained on the operations of the new facilities. The training plan must address short-term and long-term requirements and incorporate hard-copy and audiovisual techniques.
- Provide documentation showing that the requirements for LEED Silver and 3 Green Globes, as well as the 2030 Carbon Neutral Challenge, if applicable, have been met.
- The work may need to be performed in separate phases or work packages. The Consultant must take this into account in its bid and plan commissioning activities accordingly, for calls for tender and work to be done separately.

7.3 DETAILS

Scope of Work:

7.3.1 Analysis of Project Requirements and Design Development

O&M (General)

- Submit an O&M report showing how the design will meet project O&M requirements, including the following:
 - 1.Space requirements for O&M staff (offices, lockers, kitchen, showers, and washrooms) flow of people and supplies, storage for special tools, spare parts, and maintenance materials.
 - 2.Cleaning (janitor closets, receptacle for vacuum, equipment supply and storage).
 - 3.Capacity of the facility to change in response to program changes over its life expectancy.
 - 4.Spare equipment, extra material and redundancies needed to operate and maintain this facility over its life expectancy.
 - 5.System selection based on life cycle cost analysis considering energy, maintenance and operational cost.
 - 6.Occupancy during construction.
 - 7.Phased construction program.
 - 8.Help the Commissioning Manager prepare a preliminary O&M budget containing a detailed breakdown of various items with the assessment of systems selection.
 - 9.Evaluation of the following aspects:
 - i.- staffing & skill requirements to operate and maintain the facility;
 - ii.– the required service contracts: elevators, water treatment, control of emergency generators, fire safety, security, etc.).
 - 10.Information to be included in the Building Management Plan regarding operational management requirements. The report is submitted at the end of Stage 1 and updated at the end of Stage 2. Respond to PWGSC comments in writing before proceeding to the next stage.

O&M Manuals and Systems Operations Manual (SOM)

- Complete design intent and prepare SOM. Submit the report at the end of the design development stage. Provide review comments and conditions for accepting preliminary O&M Manual.

Design submissions

- Ensure that all review comments are addressed to the satisfaction of the Commissioning Manager.

7.3.2 Construction Documents and Tender Calls

O&M (General)

1. In consultation with the PWGSC Commissioning Manager, continue the assessment which started during the design stage with respect to O&M concerns including staffing, redundancies, spare equipment and extra material, services contracts, preventive maintenance, equipment identification, O&M facilities and O&M budgets. Ensure all review comments provided by the Commissioning Manager are addressed.
2. Incorporate design and performance intent in the construction documents and identify anticipated performance outputs in PV forms.
3. Identify the responsibilities of the Contractor and the sub-contractors with respect to the commissioning, PV and testing.

O&M (SOM) Manuals

4. Provide all design intents, sequence of operation, etc., for the SOM.
5. Provide emergency start-up/operations/shut-down procedures.
6. Provide Single Line Diagrams of all systems.
7. Provide PMSS/MMS inventory lists and Valve Schedule.
8. Provide service contract lists.
9. Provide shop drawing lists.

Commissioning Specification

1. Use PWGSC master specification for commissioning as the basis for the project specifications for commissioning. Complete design information required in the PV report forms.
2. Specify detailed PV procedures and output, documents, scheduling and reporting requirements.
3. Identify and include in specification all tests to be conducted at manufacturer's plant, on site during construction, installation and commissioning work, and during the operation phase.
4. Develop training package for O&M personnel and include in specification as required.

"PMSS/MMS" Specification

1. Use PWGSC Master Specification for the identification of equipment and inventory in conjunction with the PMSS/MMS. Provide PMSS/MMS coding and system nomenclature on tender documents. Coordinate with existing building equipment inventories.

Submission Requirements

- 1.The Commissioning Plan is submitted at the end of the design phase and is updated and resubmitted at the end of each stage of the working documents. The Consultant and the PWGSC Commissioning Manager work together to update the Commissioning Plan. The Prime Consultant and the Commissioning Manager work together to update the Commissioning Plan.
- 2.The commissioning specifications are submitted at the end of the 50% working drawing stage, and updated and resubmitted at each subsequent stage of the working documents.
- 3.The SOM is submitted at the end of the 50% working drawing stage, and is updated and resubmitted during subsequent stages of the working documents.
- 4.Respond to all PWGSC comments in writing at each stage.

7.3.3 Construction/Installation

- Three (3) months before substantial completion, assemble, review and approve all commissioning documentation, including checklists, PV report forms, PV procedures, instruments to be used, and instrument calibration, and incorporate relevant data from reviewed shop drawings and installed component data.
- Assemble all certified test results and incorporate into the O&M Manuals.
- Review the selected test instruments which are to be calibrated less than three (3) months prior to substantial completion.
- In consultation with the Contractor, select the test instruments that will be used during commissioning.
- The Prime Consultant must:
 - 1.Check the Contractor's compliance with the contract documents.
 - 2.Witness and certify tests conducted before concealment and start-up,
 3. Verify that each system is completed, safe to operate and ready for start-up;
 - 4.Ensure that all deficiencies have been rectified and acknowledge that the components and systems are ready for operation in the commissioning phase.
- Manuals
 - 5.Revise the SOM as construction progresses, ensuring that it reflects the installed systems. Submit the information to the Commissioning Manager for use in updating copies of the manuals.
 - 6.The Prime Consultant is required to review and approve the O&M Manuals submitted by the Contractor.
 - 7.Submit all manuals to the Commissioning Manager for review and acceptance. The maintenance manual must be in accordance with CP-4 standard.
- Training
 - 8.Co-operate with the Commissioning Manager in making necessary arrangements to enable O&M staff to familiarize themselves with the work site. Prepare training material in accordance with CP-5 standard.

7.3.4 Commissioning Phase:

- Submit a list of the technical staff required to conduct all performance and verification tests for approval by the PWGSC Commissioning Manager prior to the start of testing.

- ☐ Manuals

1. Review the O&M Manuals until they are finalized (100% complete) and submit comments to the PWGSC Commissioning Manager for approval. The manuals must reflect all modifications made to the project.

- ☐ Spare parts

2. Finalize the delivery of all the spare parts requirements for all projects and assist the PWGSC Commissioning Manager in identifying additional parts not listed in the construction documents.

- ☐ Performance Verification

3. Make sure that the components, subsystems and systems are tested in accordance with the provisions set out in the contract documents and that all systems meet design intent.

4. Witness all tests and PV procedures and certify same.

5. Provide solutions during the PV process with respect to any variances from the design parameters.

6. In consultation with the Commissioning Manager, order the Contractor to correct all the deficiencies identified and recorded during the PV and adjust or alter the systems to achieve the design parameters.

7. In consultation with the Commissioning Manager and the Project Manager, recommend take-over of the building, after successful completion of the life safety compliance testing, subject to outstanding deficiencies or deferred tests during the operational phase.

- ☐ Coordinate the training of O&M personnel and conduct training sessions.

- ☐ Review all PMSS/MMS nomenclature, devices and submissions prepared by the Contractor. Ensure on site implementation of PMSS/MMS labelling system.

- ☐ Prior to Interim Acceptance of the building, debrief the Project Manager and the Commissioning Manager on the commissioning process, including training, problems, required changes to systems (with costs) which are outside the Contractor's responsibility but are deemed necessary to meet project requirements, commissioning procedures and other information, lessons learned and suggestions for future projects. Submit a report to the Commissioning Manager. Repeat this process when 80% occupancy is achieved.

Please note that start-up and test and balancing (TAB) are construction activities and do not form part of the Commissioning Phase.

7.3.5 Post-construction (Operation)

- Make recommended revisions to documentation to reflect all changes, modifications, revisions and adjustments as finally set upon completion of commissioning.

- ☐ Develop an occupant's comments/complaints audit system.

- ☐ Witness completion of Performance Verification and review reports.

- ☐ Monitor environmental and life safety system checks, which must be carried out by the contractor or O&M staff prior to the expiration of warranties.

☐ Identify and monitor all deficiencies to be rectified by the Contractor prior to the expiration of warranties.

7.4 STANDARDS

Operating and Maintenance (O&M) Manuals

☐ The contents & organization of the manuals must be in accordance with CP.4: Operating & Maintenance Manuals. (This document is available from PWGSC.)

Training of O&M Personnel

☐ The requirements and the delivery of training for O&M Personnel must be in accordance with CP.5: Training of O&M Personnel.

Performance Verification Procedures

☐ The extent of performance verification procedures must be in accordance with PWGSC generic manuals: MC.5 performance verification report forms and MC.6 performance verification procedures.

PWGSC Preventive Maintenance Support System (PMSS) standards 6.17 (to be known in future as Maintenance Management System [MMS]).

The Consultant is required to use the PWGSC "PMSS" or "MMS" standard maintenance package and equipment identification nomenclature.

RS 8 RISK MANAGEMENT

RS 8.1 Intent

Throughout the project life cycle, the Consultant must assist the Project Manager in identifying risks. See “Doing Business with A&ES” for risk management “Definitions” and “Checklist.”

RS 8.2 General

Scope of Work

Risk Management Process

- Identify risk events based on past experience and using proposed checklist or other available lists;
- Qualify/quantify probability of risk event (Low, Medium, High) and impact (Low, Medium, High);
- Prioritize risk events (i.e. concentrate efforts on risk events with High probability and Medium to High impact);
- Develop risk response (i.e. evaluate alternatives for mitigation. This is the real added-value of risk management); and
- Implement risk mitigation measures.

ADDITIONAL SERVICES

AS 1 FUNCTIONAL PROGRAMMING

ANALYSIS OF FUNCTIONAL REQUIREMENTS – *Develop options to identify the most effective and efficient one by completing these deliverables:*

- Detailed inventory and data collection;
- Inventory of existing support space and use profiles of buildings, parking areas and other spaces at the border crossing;
- Analysis of functional requirements of users of buildings and other spaces at border crossing;
- Report on grouping/optimization of space and proposed phases (work packages);
- Analysis and development of scenarios to determine the best implementation strategy (e.g., number of phases and optimal way of grouping them);
- Business case outlining the most effective and efficient option.
- Provide an analysis of the project-specific technical conditions and constraints;
- Prepare the project statement of requirements and present two (2) different options/scenarios as mentioned in PD 5, with estimates and deadlines to be incorporated as part of the regular services under the present contract;
- Contribute to resolving variances between established requirements and constraints;
- Prepare a statement of functional and technical requirements in keeping with the client's needs.

The Consultant must provide a report which shall incorporate, without being limited thereto, the following points related to development of the project phases (work packages):

Client profile:

- The Department's mandate and mission;
- The Department's strategic direction and vision in relation to space fit-up;
- Forecast requirements for resources, fixed/mobile population/users;
- Impact of strategic direction on space/phases;
- Current capitalization;
- Organizational structure.

Space requirements:

- Terms of reference for implementation of the phased construction of the border crossing, amount of space, medium- and long-term allocation of existing space;
- Verification of technical data sheets furnished by the client.

Criteria related to project, site, construction and facilities:

- Use and occupancy;

- Hours of operation;
- Adaptability and expandability;
- Security of operations and buildings (access controls for building, public areas, offices, parking);
- Site (flow of users, peak period requirements, accessibility, quality requirements);
- Maintenance and service life;
- Space guidelines (goal of occupancy);
- Internal relationships between occupants and facilities within buildings;
- Relationship of activities with the exterior;
- Quantitative tables (summary of space requirements, traffic areas and critical dimensions);
- Horizontal and vertical traffic principles, accessibility, entrances/exits for premises;
- Level of quality and aesthetics;
- Soundproofing and visual privacy;
- Special requirements with respect to architecture, structure, mechanical systems, electricity; telephones-information technology, fire protection;
- Analysis of local regulations (federal, provincial and municipal) pertaining to fit-up implementation for the project.

AS 2 RESIDENT SITE INSPECTION SERVICES

2.1 Description of Services

The purpose of resident site services is to ensure the presence of a full-time representative of the Consultant on site to coordinate inspections and testing with the other consultants, inspect and monitor all aspects of the work during construction of the facilities, and liaise with the Contractor, Public Works and Government Services Canada and other agencies as appropriate to the work. More than one person may be required to cover the construction hours.

The Consultant's Resident Site Representative is responsible for providing resident inspection services full-time (including overtime hours) for all aspects of the project and for maintaining daily records of all construction work in progress. The Resident Site Representative ensures ongoing communication between the PWGSC Property Manager, the Project Manager, design agencies, the Contractor, the Regional Fire Commissioner and the provincial Department of Labour.

The Resident Site Representative reports directly to the Consultant.

The Resident Site Representative must become thoroughly familiar with the contract documents, the National Building Code and all Fire Commissioner of Canada Standards for Construction Operations (including FC No. 301 dated June 1982 and the Standard for Welding and Cutting FC No. 302 dated June 1982). The Representative must also be familiar with all provincial and municipal standards for the health and safety of construction workers.

The Resident Site Representative must become thoroughly familiar with the requirements of the Consultant's Project Brief and the project responsibilities of others relating to his or her services.

NOTE: In addition to the normal site services required of the Consultant, a number of hours of ongoing site inspection are to be performed. In coordination with PWGSC, the Consultant must plan the optimal use of these hours, according to work site requirements and the Contractor's schedule. PWGSC may terminate the ongoing site inspection services at any time.

The Consultant must submit the name and résumé of the person who will perform the site inspection services to PWGSC for approval.

2.2 Specific Duties and Responsibilities

The Resident Site Representative must provide full-time resident inspection, coordination and monitoring during the construction period and will report to the Consultant. The Departmental Representative may delegate additional responsibilities to the Site Representative, subject to the Consultant's agreement.

The Site Representative is required to maintain daily records of all construction work assigned and ensure ongoing communication between the PWGSC Property Manager, the Project Manager, the Regional Fire Commissioner, the Prime Consultant, the Contractor, the appropriate Public Works and Government Services representative, and the consultants.

The Site Representative will coordinate the activities of an assistant approved by PWGSC and will provide this person with the necessary instructions.

In case of emergencies, the Resident Site Representative is empowered to stop the work, or give orders to protect the safety of the workers or Crown property.

2.3 Inspection and Reporting

The Consultant's Resident Site Representative must inspect all phases of the work in progress, for the purpose of bringing to the attention of the Contractor, after checking with the Consultant, and the Departmental Representative any discrepancies between the work, the contract documents and accepted construction procedures. The Site Representative must keep a daily log of such inspections and issue a weekly written report to the Consultant for distribution, in the form specified. The Representative must also prepare any other reports or studies requested by the Project Manager through the Consultant.

2.4 Interpretation of Contract Documents

Interpretation of the construction documents is the responsibility of the Consultant. The latter may, however, ask the Resident Site Representative to provide information concerning job conditions and to relay day-to-day instructions to the Contractor.

The Site Representative must help the Consultant and inform it of any anticipated problems which may delay the progress of the work. The method for relaying such information shall be determined by the Consultant.

2.5 Changes in the Work

The Site Representative may not authorize or order any change in the work which could constitute a change in the value of the contract, except as delegated by the Departmental Representative.

The Consultant may ask the Resident Site Representative to assist in evaluating changes in the work where a knowledge of job conditions is required.

2.6 Communication and Liaison

The Site Representative must:

1. Provide the contractors with instructions regarding the required standards of workmanship.
2. Identify poor workmanship or work that does not adhere to the drawings and specifications, confer with the Consultant about these findings and obtain the Consultant's guidance. The matter must also be brought to the attention of the Contractor's superintendent. Although informal discussions with sub-trade superintendents are usually permissible (only with the agreement of

the Contractor), the Resident Site Representative should not deal directly with foremen or trades people or interfere with the progress of the work.

3. Communicate formally with the Contractor through memoranda only. The Site Representative must immediately send copies of any such documents to PWGSC and the Consultant.

4. Contact the Consultant immediately when it is apparent that information or action is required of the Consultant (e.g., general instructions, clarifications, sample of shop drawing approvals, requisitions, contemplated change orders, site instructions, details, drawings, etc.).

5. Accompany PWGSC representatives on inspections and report the requirements, comments or instructions issued by PWGSC personnel to the Consultant. The Resident Site Representative should encourage these persons to submit their requirements, comments or instructions in writing.

6. Consider and evaluate any suggestions or modifications to the documents put forward by the Contractor and immediately report these to the Consultant with comments.

7. Ensure that PWGSC and the Consultant are notified promptly when key pieces and/or components of materials and equipment are delivered, so that these parties can arrange for the appropriate personnel to have an opportunity to inspect same prior to installation.

The Site Representative must examine, schedule and approve in writing all temporary or permanent connections into any of the buildings' systems prior to the work being done. The Site Representative must also provide advance forecasts and advise the Property Manager of any interruption of normal building services with a minimum of twenty-four (24) hours' notice prior to the work being undertaken, where this work cannot be done during silent hours.

2.7 Daily Log

The Site Representative must keep a daily log to record the following information:

1. Weather conditions, particularly unusual weather relative to construction activities in progress;
2. Key material and equipment deliveries;
3. Daily activities and major work done;
4. Start, stop or completion of activities;
5. Presence of inspection and testing firm personnel, tests performed, results, etc;
6. Unusual site conditions;
7. Significant developments, remarks, etc.;
8. Special visitors on site;
9. Authorities given to the Contractor to undertake certain work or hazardous work;
10. Environmental incidents;
11. Reports and instructions from appropriate authorities regarding emergency response actions.

NB: This log is the personal property of the Site Representative. Copies of the logbook, certified as copies, are to be provided to PWGSC and the Consultant at the end of the project.

2.8 Weekly Records

The Resident Site Representative is required to prepare weekly reports for the Consultant in the specified format:

1. Progress of work relative to schedule;
2. major activities started or completed during the week; main activities in progress;

3. main deliveries of materials and/or equipment;
4. difficulties encountered which may cause delays in completion;
5. materials and labour needed immediately;
6. cost estimates for work completed and materials delivered (for cost plus contracts);
7. any outstanding information or action required by the Consultant or by PWGSC;
8. work force;
9. weather conditions;
10. comments;
11. accidents on site;
12. life safety or building hazards caused by the work, the Contractor or its agents.

2.9 Site Records

The Resident Site Representative must maintain orderly and updated files at the site, for the use of PWGSC, the Consultant and his/herself, including the following documents:

1. contract documents and tender documents;
2. approved shop drawings;
3. approved samples;
4. samples;
5. site instructions;
6. contemplated change orders;
7. change orders;
8. memoranda;
9. test and deficiency reports;
10. correspondence and minutes of meetings;
11. Names, addresses and telephone numbers of client representatives, Consultant representatives and of all contractors and key trade personnel involved in the contract, including home telephone numbers in case of emergencies.

In addition, the Site Representative must maintain an updated progress schedule.

A reproduction of the original contract drawings must be carefully preserved and kept up to date with all addenda, change orders, site instructions, details and as-built conditions issued subsequent to the award of the contract.

2.10 Inspection of the Work

The Resident Site Representative must carry out monitoring and spot checks of the work to determine whether the work, materials and equipment conform to the Contract Documents and supplementary conditions. The Consultant's Site Representative must advise the Contractor of any deficiencies or unapproved deviations via memorandum and immediately inform the Consultant and PWGSC's Construction Superintendent of any delays or refusal on the part of the Contractor to correct same.

The Site Representative will arrange for the architectural, structural, mechanical, electrical and other consultants to make timely inspections as required by the Prime Consultant's contract with respect to the progress of the work.

The Site Representative must also report if materials and equipment are being incorporated into the project prior to approval of relevant shop drawings or samples.

The Representative must help prepare all interim, preliminary and final deficiency reports, in collaboration with PWGSC representatives and Consultant representatives.

The Site Representative is also responsible for the measurement of all work to be performed on a unit-cost basis.

2.11 Site meetings

The Site Representative must attend all job-site meetings.

2.12 Inspection and Testing

The Site Representative must see that the tests and inspections required in the construction documents are conducted, and should observe these tests and record the results in the daily log.

The Consultant should be notified if the test results do not meet the specified requirements, or if the Contractor does not have tests undertaken as required.

2.13 Emergencies

In the case of an emergency where the safety of persons or property is concerned, or work is endangered by the actions of the Contractor, , the Site Representative must immediately notify the Contractor and follow up with written notice of the possible hazard, in order to safeguard the interests of PWGSC. Furthermore, if necessary, the Site Representative will stop the work or order that corrective measures be implemented and contact the Consultant without delay to obtain further instructions.

2.14 Limitations

The Site Representative shall not:

- 1.authorize deviations from the Contract Documents;
- 2.conduct tests;
- 3.approve shop drawings or samples;
- 4.advise the user-client on any matter without obtaining guidance from the Consultant;
- 5.accept any work or portions of the building;
- 6.encroach on the area of responsibility of the Contractor's field superintendent;
- 7.stop the work unless convinced that an emergency exists, as noted above.

2.15 Hazardous Construction Operations

It is the Site Representative's responsibility to examine all site conditions and methods to be used by the Contractor in undertaking hazardous operations.

The Site Representative will authorize the Contractor in writing to carry out hazardous operations, when fully satisfied that all necessary precautions and measures have been taken by the Contractor to protect the safety of the workers and of building occupants as well as to protect Crown property. This written authorization must be countersigned by the Contractor to acknowledge that the latter is aware of the Site Representative's instructions and requirements, and both parties will retain copies of this authorization which they have signed.

The Site Representative will inspect the areas where hazardous work is under way to verify and confirm that the Contractor is maintaining the agreed safety standards. Any infractions may result in the Representative stopping the work. All infractions and work stoppages ordered shall be reported in writing and verbally to the Consultant and PWGSC's Construction Superintendent.

2.16 Building Security

Special precautions must be taken at all times to prevent unauthorized access to the building. The Site Representative must verify that all openings and means of access constructed by the Contractor are firmly secured when the Contractor leaves the site.

The Site Representative will liaise closely with the Contractor and PWGSC's Construction Superintendent regarding all security and/or safety problems that may arise due to the Contractor's operations.

AS 3 BILINGUAL CONSTRUCTION DOCUMENTS

Construction documents shall be submitted in both official languages as required.

Official language requirements:

- The Consultant must prepare all construction documents in Canada's two official languages.
- Both official languages are considered to be on an equal footing and neither shall be considered a translation of the other.
- The Consultant is responsible for the accuracy and comprehensiveness of the texts, as well as consistency within documents.
- It is standard practice to produce a single set of drawings (originals) with written information in both languages, along with separate written documents in each language for tendering, record drawings, and O&M documentation.

AS 4 SUSTAINABLE DEVELOPMENT

Sustainable Development and the Government

Since 1987, the Government of Canada has implemented a series of initiatives to ensure that sustainable development principles are built into the policy of all federal organizations. All federal departments were required to implement a Sustainable Development Strategy (SDS) by December 1997 and they are required to update their SDS every three years and report annually on progress toward sustainable development.

Public Works and Government Services Canada (PWGSC)

On April 2, 1996, the Department's Business Board approved a general approach and guiding principles for the development and implementation of the PWGSC Sustainable Development Strategy.

PWGSC's Real Property Branch (RPB) has developed its own strategy and is in the process of developing regional action plans. The strategy sets out principles, goals and actions for integrating sustainable development principles into RPB policies and operations. These goals and principles are outlined below.

RPB Sustainable Development Principles

- 1 To sustain our natural resources, by ensuring sustainable use of renewable resources and efficient use of nonrenewable resources.
- 2 To protect the health of Canadians and of ecosystems, by managing the risks associated with toxic substances, by protecting representative areas, and by developing effective warning and adaptive response capability to both natural and human-caused disasters.
- 3 To meet our international obligations, by contributing to the protection of the ozone layer, the reduction of greenhouse gas emissions, and the conservation of biodiversity.
- 4 To improve our quality of life and well-being, by fostering improved productivity through environmental efficiency, and by supporting innovation towards sustainable development.

RPB Goals

The Real Property Branch has taken these principles into account in its mandate and has established the following sustainable development goals to address the issues of management, leadership and operation:

- 1 The RPB will integrate a comprehensive Environment Management System into its overall management framework to demonstrate due diligence and to ensure that environmental performance is achieved and sustained according to established objectives.
- 2 THE RPB will continue to provide environmental leadership, through

A) Research, development and transfer of cost-effective and timely means of meeting environmental requirement and of achieving RPB sustainable development goals and client's objectives; and;

B) Communication of knowledge to promote sustainable development.

3 The RPB will reiterate its priority to meet or exceed applicable environmental statutes, regulations and policies; and pursue a pollution prevention approach in all aspects of its operations. In support of the above, RPB will continue the development and implementation of best practices with a special focus on the following operational issues:

1. Management of toxic and hazardous substances and waste
2. Management of ozone-depleting substances
3. Reduction of non-hazardous solid waste
4. Energy and water efficiency in facilities
5. Contaminated sites management
6. Management of activities on land and in marine or freshwater environments
7. Environmental activities

Real Property Branch Operational Goals

Goal 3.1: Management of toxic and hazardous substances and waste

The Real Property Branch (RPB) will continue its efforts to prevent, reduce and, where possible, eliminate the impacts of toxic or hazardous substances and waste on human health.

Design consequences

* Handling of polychlorinated biphenyls (PCBs) when replacing electric lighting equipment

- * Specification of environmentally sound building materials
- * Specification of low maintenance systems and finishes
- * Landscaping approach designed to evacuate storm water

Goal 3.2: Management of ozone-depleting substances

RPB will phase out the use of ozone-depleting substances to meet the deadlines set forth in the 1987 “Montreal Protocol on Ozone Depleting Substances” and its subsequent amendments:

Design consequences

- * Reduction or elimination of ozone-depleting substances

Goal 3.3: Reduction of non-hazardous solid waste

RPB will:

- * reduce the amount of office solid waste sent to landfill by 50% (with 1988 as the base year) by the year 2000;
- * facilitate the reduction of construction, renovation and demolition waste.

Design consequences

- * Provision of equipment to promote waste recycling programs
- * Specification of renewable, recycled content, durable and maintainable materials
- * Conscious design and construction planning to minimize construction and demolition waste

Goal 3.4: Energy and water efficiency in facilities

RPB will:

- * contribute to the use and promotion of more efficient, environmentally friendly alternative sources of energy to heat, cool, ventilate and provide lighting and power facilities. It will also promote the efficient use of water;

- * reduce greenhouse gas emissions in order to meet Canada's commitments under the Kyoto Protocol.

Design consequences:

- * Improve building energy efficiency
- * Higher energy performance standards and use of clean and renewable energy sources
- * Specification of low embodied energy (total energy used in developing, extracting, manufacturing, and transporting a product) building materials
- * Use of low water consumption fixtures and landscaping practices that favour water conservation.

Goal 3.5: Contaminated Site Management

RPB will contribute to the prevention, reduction and, where possible, the elimination of negative impacts of contaminated sites on humans and the environment.

Goal 3.6: Management of activities on land and in marine or freshwater environments

RPB will contribute to the prevention, reduction and, where possible, the elimination of negative impacts on humans and the environment in their land and marine/freshwater activities.

Design consequences

- * Greater understanding of the impacts of building construction and site operation
- * Landscaping strategies which enhance site ecology
- * Construction practices which reduce environmental impacts and construction waste

Goal 3.7: Environmental management

RPB will complete and implement an Environmental Management System (EMS) that will:

- * support the integration of environmental issues into the RPB management framework;
- * facilitate the harmonization of environmental issues with RPB clients and tenants.

Design consequences

- * Improved coordination of design team and increased communication among all parties
- * Improved metering and reporting to facilitate the auditing and reporting process
- * Comprehensive, reliable and visible environmental strategies

Approach

- * The approach of this environmental component is to view the built environment and the natural environment as integral and interdependent. It is an attempt to address building and environmental concerns in a holistic manner.
- * Within this context, the role of management in the development process takes on special significance. Like the natural environment, a facility is more than the sum of its parts. It is a system. A facility can boast many “green” features, but unless there is an overall vision and skilled people to carry out the plan, it falls short. An “environmental vision” and a team approach are crucial to sustainable building. This approach involves team members educated in green building practices and open lines of communication between team members. The role of management in the three stages of building, (design, construction and operations) is crucial in establishing a vision statement that embraces sustainable principles and an integrated building approach. The management of project activities ensures that team members use a multidisciplinary approach in which the interrelated impacts of design, systems and materials are recognized.
- * The environmental component of the project brief is based on the premise that many sustainable development solutions can be achieved through a low-tech approach. Sustainable development can be attained through careful orientation of a building with respect to sun, wind and land and careful selection of materials.
- * Although specific environmental problems require special attention (such as ozone depletion), this document is an attempt to change attitudes as well as address specific environmental problems. A “pollution prevention” approach is adopted rather than a focus on “damage control.” The approach is organized around seven environmental issues: project management, air, water, land, materials, energy and waste. It provides a means of reviewing RPB sustainable development goals in relation to the project brief

components: Concept/Design Submission, Working Document Submission (at 33%, 66% and 99% stages) and Contract Supervision.

* This document has a checklist format which allows the Consultant to systematically address each issue. The Consultant should draft its environmental strategy, in written or graphic form, by addressing the checklist items provided below.

* Finally this document is based on a “best effort” approach to environmental sustainability. At a minimum, PWGSC will attempt to provide its federal clients with facilities that are as “green” as can be.

ISSUE: PROJECT MANAGEMENT

GOAL Improved coordination of design team and communication among all parties. Improved metering and reporting to facilitate the auditing and reporting process. Comprehensible, reliable and visible environmental strategies.

* The role of management in the building process takes on special significance. An “environmental vision” and a team approach are crucial to sustainable building. This involves team members educated in green building practices and open lines of communications between team members. Management of the project activities ensures that team members use a multidisciplinary approach in which the interrelated impacts of design, systems and materials are recognized.

* The checklist is a management tool which allows each point to be addressed in the environmental strategy.

CONCEPT AND DESIGN SUBMISSIONS

Include an Environmental Coordinator in the Project Team.

Note: The coordinator could be a sub-consultant or a team member assigned this role. Include documentation on the environmental project coordinator’s qualifications.

* Identify potential opportunities for the use of green technologies, implementation strategies, methods or procedures for making cost-effective environmentally responsible contributions related to office space provision or its use.

* Determine cost effective means of using environmentally friendly technologies in the base building, lease fit-up and facility operations or maintenance.

* In keeping with the lines of communication protocol, the Consultant is required to meet with the member of the PWGSC Project Team responsible for environmental issues, in order to:

- determine whether or not coordination of environmental aspects of the design will be handled by an environmental specialist sub-consultant reporting to the Consultant;
- review the requirements for the environmental component of the concept design;
- present for review the environmental component of the concept design.

* The submission requirements for the environmental component of the concept design include an environmental strategy consisting of:

- An indication of the primary opportunities that the project offers for environmental conservation
- An indication of the primary areas where effort will be expended to achieve environmental conservation,
- An indication of the macro decisions made with respect to environmental conservation,
- An indication of the alternatives to those macro decisions which have been considered and rejected, including why they were rejected.
- This submission will be presented to the design review committee as part of a total concept submission.

* Obtain formal approval from PWGSC for the environmental component of the concept and design submission

WORKING DOCUMENT SUBMISSIONS

* In keeping with the lines of communication protocol, the Consultant is to meet with member of the PWGSC Project Team responsible for environmental issues in order to:

- present for review and approval the environment component of the working documents at the 50% and 99% stages;

* Incorporate the latest versions of the environmental sections of the NMS.

* The Contractor is required to provide the Consultant with an environmental protection plan.

CONTRACT SUPERVISION

* The Environmental Coordinator will table a follow-up of the Environmental Strategy as a separate agenda item for the project meeting.

* The Contractor is required to provide the Consultant with an environmental protection plan for the construction process.

* The Consultant and the Contractor are required to ensure that all sub-contractors are made aware of the environmental objectives of this project.

ISSUE: **AIR**

GOAL Management of toxic and hazardous substances and waste
Management of ozone-depleting substances
Provide healthy and comfortable indoor air

CONCEPT AND DESIGN SUBMISSIONS

* Plan ventilation cycles that allow a maximum amount of outdoor air to be drawn in to flush out the building in the morning.

* Review existing documents on stack emission levels.

* Implement stack designs that minimize emissions.

* Design facilities that minimize the potential for growth of pathogenic bacteria and fungi in standing water in the ventilation system; design to MD 15000 and ASHRAE recommendations for prevention of standing water.

* Design ventilation system to eliminate loose mineral fibres

* Establish mechanical design criteria to control carbon dioxide levels. Minimize the use of duct liners. Configure conduits for optimal air filtration performance.

* Locate photocopiers in areas served by air handling units so as to remove toner and ink vapours from the building.

* Identify materials whose off-gassing (VOC) levels are known and that will be used in large quantities in the renovation work, and indicate the proposed treatment to reduce off-gassing from the installed materials.

* Specify heating and cooling facilities, such as hot water systems, that are unlikely to spread dust and contaminants within the building.

- * Design humidification and condensate recovery systems that minimize the amount of moisture in ducts and do not contribute to contamination of duct liners.
- * Locate and design cooling towers to prevent the release of spray containing microbes and treatment chemicals within the building and to prevent emissions to exterior public areas.
- * List locations where CFCs and HCFCs will be removed during the renovations.
- * Do not use blown-in foam plastic insulation containing ozone depleting CFCs.
- * Investigate the possibility of replacing in-service equipment with equipment that does not use ozone depleting substances.
- * Design sealed replacement refrigeration equipment that will ensure zero leakage of gas to the atmosphere.
- * Coordinate planning considerations related to interior air movement.
- * In studies provide for means of minimizing noise.
- * Locate air supply vents as close to workstations as possible.
- * Review the existing data and determine the types and levels of pollution that may be associated with outdoor air. These data may be taken into account in designing outdoor air handling systems and in selecting materials for the building's exterior envelope.
- * Provide air locks and pressurize the building to prevent the infiltration of contaminants from outdoor sources.
- * Study types of plantings (indoors and outdoors) that are capable of absorbing toxic substances from the air.
- * Design a facility with optimal which air quality and circulation are optimal. Explore the possibility of exceeding the number of air changes per hour required by the code.
- * Include in studies approaches permitting the use of outdoor air as a free cooling source where feasible.

* Address indoor air quality issues and apply the recommendations to building design studies.

* Indicate how the interior and exterior landscaping concept can contribute to environmental solutions.

For example, providing shaded areas adjacent to the building can reduce solar radiation striking the building in the summer and allow solar penetration in the winter.

WORKING DOCUMENT SUBMISSIONS

- * Fit-up and furnishing are to incorporate products with low VOC emissions. Material containing vinyl, nylons, polyester, plastics, imitation leather, plywood and particle board off-gas the most, while metal and untreated natural fibres including cotton, wool, jute and silk off-gas the least.
- * Specify interior partitions with smooth finishes, reducing the effect of amount of surface area and hence the potential for those materials to act as a sink for air emissions within the building. Interior partitions form the largest single area within the building having a capacity to absorb these emissions.
- * Design building interiors to minimize open shelving and take measures to reduce surfaces that can absorb and re-emit indoor air pollutants.
- * Minimize bacteria growth within the building by undertaking the following:
 - Mineral fibres: Minimize the use of fibrous liners inside HVAC ducts. Avoid using suspended ceilings as return air plenums and duct returns. Avoid the use of un-contained mineral fibre materials.
- * Optimize ventilation effectiveness by undertaking the following:
 - Eliminate short circuiting and dead air zones. Locate return air openings in proximity to copy machines.
 - Optimize air intake locations: isolate intakes from sources of hazardous air contaminants and nuisance air contaminants. Locate intakes to avoid “re-entrainment” of exhaust air.
- * Reduce noise within the building by undertaking the following:

- Utilize low noise generating equipment. Lower equipment noise in rooms. Block flanking sound paths and isolate plumbing noise. Design HVAC systems and associated equipment for low NC rating.

* - Provide noise reduction at source. Design silent telephone systems.
Minimize noise transmission.

- Provide acoustic partitions.

- Provide appropriate acoustic treatment at ceilings, doors and sidelights.

* **Indicate whether renovation materials have been reviewed from the standpoint of their potential for off-gassing and their effects on IAQ and, where applicable, whether such materials have been excluded from/limited in scope of use in the working documents. Select building materials with positive IAQ ratings.**

* Determine whether materials used in the building exterior are exposed [to stack emissions] [to sulphur dioxide] [to salty air]. Select pollution resistant materials.

* Review contemplated construction sequences to ensure that the occurrences of major events causing dust within the building during construction are minimized.

* Specify environmentally responsible products such as:

- Paints which do not contain mercury, lead, hexavalent chromium or cadmium compounds, water-based paints with reduced volatile, preservative and solvent content and reduced VOC emissions. Consider paints recommended by the Environmental Choice Program and paints which carry the EchoLogo label or equivalent. Paints merit special consideration as they are single largest contributor to internal VOC emissions;

- Adhesives and glues with low emissions during curing;

- Carpets which have low VOC emissions by warranty and no CFC content in the carpet backing. Consider carpets that do not have latex backing. Carpets composed of natural materials off-gas the least, carpet laid with tackless strip installation off-gas half as much as glue-down installations. Underpadding made from natural materials or from recycled automobile tires off-gas the least;

;

- Gypsum wallboard compound that is free of asbestos.

- Consider caulking materials, solvents, adhesives, finishes, retardants, sealers and waxes with low VOC emissions. For indoor use, acrylic and latex caulking are preferred.

* Specify materials with reduced formaldehyde content.

- * Specify materials with anti-microbial treatment, especially for applications where the materials will be exposed to elevated moisture levels.
- * Avoid the use of varnish, furniture polish, oil finish and liquid floor wax (poor IAQ characteristics). Water-based varnish is preferred over urethane varnish. Selected natural waxes are preferred over oil finishes.
- * Consider whether or not Material Safety Data Sheets (MSDS) can be utilized as a reliable means of monitoring the amounts of VOCs in materials that are accepted in design.

CONTRACT SUPERVISION

- * The Consultant must submit a flushing strategy for the building to the Department for approval.
- * Review construction practices to ensure that workers are protected from dust.
 - * Review construction practices to ensure that worker exposure to fumes, which may contribute to environmental sensitivities, is minimized. Ensure that workers wear carbon face masks or respirators when applying paints and other coverings. Provide temporary ventilation as required for the products utilized.
 - * Review construction practices to minimize the impacts of construction dust on adjacent properties. Surrounding sites could be adversely impacted by dust generated from exposed soil, dust from sandblasting activities and overspray from sealants and paints utilized on the outside of the building.
- * Shop drawing review is to include, as appropriate, test results from ASTM D51116, Guide for Small Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials Products, and Material Safety Data Sheets.

ISSUE: **WATER**

GOAL Reduction of impacts on marine/freshwater activities
 Water efficiency in facilities

CONCEPT AND DESIGN SUBMISSIONS

- * Collect data indicating current water use at facility (including Equipment use, landscaping activities, etc.) and volumes for each type of use; provide water audit details to PWGSC.
- * List undertakings to reduce water consumption, and the estimated rate of reduction for each measure.
- * Consider the possibility of requiring separation of grey water from sanitary sewage.
- * Consider the possibility of storing rainwater for landscape irrigation use.
- * Determine the direction of parking lot runoff and possible effects.
- * Consider specifying plumbing fixtures with low water consumption.
- * Determine whether it is necessary to use direct digital meters to track water consumption for analysis purposes.
- * Design landscaping so as to minimize water consumption.
- * Perform water quality tests on samples of standing water and take any necessary corrective action if the lead concentration in the test tubes exceeds the allowable levels set out in the Guidelines for Canadian Drinking Water Quality.

WORKING DOCUMENT SUBMISSIONS

- * As part of the water use efficiency program, install meters or other systems capable of tracking water consumption throughout the building.

CONTRACT SUPERVISION

- * Review construction methods with a view to minimizing the impacts on nearby water bodies, water reservoirs and sewer systems.
- * Ensure that no polluting substances are released into water bodies.

ISSUE: LAND

GOAL Reduction or elimination of soil contamination and erosion caused by human activities

Management of toxic and hazardous substances

CONCEPT AND DESIGN SUBMISSIONS

- * Check whether there are any fuel storage tanks on the property and whether such tanks were present in the past. If so, determine whether the site is contaminated with petroleum products. Reports can be obtained from PWGSC as required.
- * Review the site file to determine whether hazardous materials may be present. Reports may be obtained from PWGSC as required.
- * Develop a landscaping design plan that minimizes erosion.

WORKING DOCUMENT SUBMISSIONS

- * Review types of plantings with a view to minimizing pesticide use.
- * Prioritize the use of plantings that are capable of limiting soil erosion.

CONTRACT SUPERVISION

- * Review the construction methods to check that measures to minimize or reduce erosion during construction have been included.

ISSUE: **ENERGY**

GOAL Energy efficient facilities

CONCEPT AND DESIGN SUBMISSIONS

- * Study ways to reduce energy consumption at the renovation studies stage. Indicate measures that are considered to be innovative or to exceed normal requirements.
- * Install high light reflectance ceilings.

* Design glazing and all building envelope components with a view to minimizing energy requirements in the building.

* Maximize natural lighting:

- Design partition layout and partitions to maximize interior day lighting.
- Consider design alternatives that maximize the penetration of day lighting into the building interior.

- * Design lighting to minimize energy requirements.

- * Provide lighting with optimum colour rendering index. Consider electronic ballasts, design lighting to minimize disability terminals, facilitate occupant control of amount and direction of light at their work station

- * Use direct lighting for work areas, where possible.

- * Provide for lighting control:
 - according to the intensity of natural lighting,
 - according to occupancy,
 - using an intelligent lighting control system.

- * Utilize energy efficient motors where possible.

- * Indicate what alternative heating sources have been considered. Indicate whether or not ground source/geothermal, solar or other renewable energy sources have been considered.

- * Study natural energy sources such as sunlight (solar collectors) and geothermal energy (thermopumps).

- * Indicate instances in the design where it has been considered cost effective and desirable to exceed existing energy standards in system design.

- * Organize electrical service to permit metering of energy use by category: cooling, pumping, fans and heating.

- * Study the use of direct digital control devices for central and zoned systems.
 - All meters must be connected to the direct digital control system.

- * Consider whether or not energy consumption can be reduced by capturing solar energy:
 - Consider glazing location and building configuration.
 - Consider ventilation heat recovery.

- * Meet or exceed standards and National Energy Code for Buildings; carry out energy analyses to ensure compliance.

- * In studies provide for measures enabling occupants to help reduce energy consumption.
- * Study the possibility of using an indirect evaporative cooling system.
- * Review the logs in which stack emissions data are recorded, if consideration is being given to using the existing heating systems in the renovation project.
- * Explore the possibility of using zoned heating when selecting coils and terminal equipment.
- * Consider the use of plantings near the building that will block sunlight in summer but permit optimization of natural lighting in winter.
- * Provide bicycle racks.

WORKING DOCUMENT SUBMISSIONS

- * Confirm that the concept design will meet the established energy consumption level or ensure even higher energy efficiency.
- * Study the possibility of requiring that fuel efficient motors be used in the main pieces of equipment.

ISSUE MATERIALS

GOAL Conservation of renewable and nonrenewable resources
Application of 3R concepts (reduce, reuse, recycle) for reduction of waste

CONCEPT AND DESIGN SUBMISSIONS

- * Consider measures to reduce the amount of materials used in the project.
- * Check and specify which materials and equipment are to be removed and reused in the renovations.
- * Check and indicate which materials and equipment are to be removed and recycled.

- * Propose contractual means of ensuring that recyclable materials and equipment are recycled.

WORKING DOCUMENT SUBMISSIONS

- * Specify materials that do not contribute to environmental sensitivities and do not contain hazardous substances.
- * Specify materials with recycled content, or materials meeting Ecologo standards or equivalent for recycled content. Do not specify recycled materials where data indicates that recycled content or recycled product has potential to compromise IAQ.
- * Specify (when viable choices exist) materials with low embodied energy.
- * Propose initiatives to incorporate low energy embodied materials as substitutes for material which would normally be specified.
- * Specify durable materials with low maintenance finishes.
- * Explore the possibility of using inert materials for landscaping:
 - Consider utilizing recycled materials.
 - Design heavy/light traffic areas and areas for pedestrians.
- * Review the materials considered in the studies and specify that no materials derived from nonrenewable resources will be used in the renovations. Do not specify materials derived from nonrenewable resources.
- * Utilize sections of the NMS in which environmentally responsible measures have been incorporated.
- * The Consultant must explain the rationale for the use of materials by referring to recycled content, embodied energy, durability, etc.

CONTRACT SUPERVISION

- * Meet with subcontractor and installers to ensure that all materials installed meet environmental objectives.

ISSUE **WASTE**

GOAL Toxic and hazardous waste management.
Elimination of waste by increasing reduction, reuse and recycling

CONCEPT AND DESIGN SUBMISSIONS

- * Indicate whether responsibility for supervising asbestos removal work, as provided for in the project, will be assigned to a sub-consultant specialist who reports to the Consultant.
- * Review the asbestos removal work provided for in the contract and the options for removing the asbestos contained in the exterior walls.
- * Propose an asbestos removal plan.
- * Verify the actual and potential conditions of exposure to lead-bearing paint and make recommendations for dealing with the situation and prepare recommendations in this regard.
- * Design the fit-up of interior spaces to facilitate the recycling of paper, which accounts for the largest volume of waste generated by building operations.
- * Specify waste chutes to facilitate centralized collection of recyclables.
- * Provide equipment for cardboard recycling.
- * If a cafeteria is included in the plans, provide organic waste recycling equipment.
- * Provide a plan for the removal of construction materials, including source separation and specify the removal methods to be used.
- * Identify oversized materials that need to be removed and the proposed recycling methods.
- * Propose a means of reducing the amount of construction waste sent to landfill.
Prepare a list of the waste materials requiring source separation on site.
- * Consider demolition work as work involving the removal of recyclable materials. Revenue-generating recyclable material must be recovered during demolition and recycled. Recycle architectural materials such as ferrous and non-ferrous materials, doors, demountable partitions, cupboards, interior trims, tracks and blinds, carpets, windows, limestone, bricks,

speed tile and mechanical items such as equipment, wiring, receptacles, switches, power poles, conduit and lighting fixtures.

- * Consider giving the Contractor permission to sell recyclable materials on site.
- * List the recycled materials proposed for use in the renovations; include only materials that can be substituted for materials that would normally be specified.
- * Reducing the amount of material used is the primary concern with regard to waste. If less material is used, less waste will be generated subsequently.

WORKING DOCUMENT SUBMISSIONS

- * Use the terms “disassembly” and “recycling” rather than “demolition”.
- * Provide a room for the storage of recyclable materials.
- * Provide areas for source separation of compost materials.
- * Study the possibility of selling on site recovered materials that will not be reused.
- * List the materials that will not be recycled and indicate the approximate volumes.
- * Consult NMS Section 01 35 41 - Waste Management And Disposal.

CONTRACT SUPERVISION

- * Check the methods used by the Contractor to dispose of paints, solvents and pressure treated wood waste and include them in reporting.
- * Construction waste must be separated on site according to type and recycling potential.
- * Working documents must contain measures for ensuring that site personnel are familiar with the waste recycling objectives and must indicate that properly identified waste recovery bins are available to all subcontractors.
- * Indicate the extent to which recycling objectives are attained.

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. Prime Consultant (Proponent - Architect):

Firm or Joint Venture Name:

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

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II. Key Sub Consultants / Specialists:

Mechanical Engineer

Firm Name:

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

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Electrical Engineer

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

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Structural Engineer

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

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Civil Engineer

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

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APPENDIX B - DECLARATION/CERTIFICATIONS FORM

Project Title:

Name of Proponent:

Street Address:

Mailing Address:

Proponent's Proposed Site or premises Requiring Safeguard Measures (refer to SI? Security Requirement):

Address:

Street Number / Street Name, Unit / Suite / Apartment Number

City, Province, Territory

Postal Code

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 such request by Canada will also render the proposal non-responsive or will constitute a default under the contract.

For further information on the Federal Contractors Program for Employment Equity visit HRSDC-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 HRSDC-Labour.

OR

- () A5.2. The Proponent certifies having submitted the Agreement to Implement Employment Equity (LAB1168) to HRSDC-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 HRSDC-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 to Proponents)

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 with FPS, proponents must provide the information required below before contract award.

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.

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 ()

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

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, PWGSC contact will be with the following person:_____.

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

E-mail: _____

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

APPENDIX C - PRICE PROPOSAL FORM

INSTRUCTIONS: Complete this Price Proposal Form and submit in a **separate sealed envelope** with the Name of Proponent, Name of Project, PWGSC Solicitation Number, and the words "PRICE PROPOSAL FORM" typed on the outside of the envelope. Price Proposals are not to include GST/HST.

PROPOSERS SHALL NOT ALTER THIS FORM

Project Title:

Name of Proponent:

The following will form part of the evaluation process:

REQUIRED SERVICES

- ♦ **Percentage Fee** (R1230D (2012-07-16), GC 5 - Terms of Payment)

Firm Percentage Fee of _____%

Indicative Estimate of Construction Cost (Class D): X \$ 30,000,000

1) ESTIMATED TOTAL PERCENTAGE FEE \$ _____

The actual percentage fee for Required Services will recognize the variability of the Construction Cost Estimate as the project develops (refer to formula specified in GC 5.2 Fee Arrangement(s) for Services). Payments will be made as specified in GC 5.4 Payments for Services.

- ♦ **Fixed Fee** (R1230D (2012-07-16), GC 5 - Terms of Payment)

SERVICES	FIXED FEE
AS 1 FUNCTIONAL PROGRAMMING	\$.....
AS 2 RESIDENT SITE INSPECTION SERVICES	\$.....
AS 4 SUSTAINABLE DEVELOPMENT	<u>\$.....</u>

2) MAXIMUM FIXED FEES \$.....

APPENDIX C - PRICE PROPOSAL FORM (CONT'D)

Time Based Fees (R1230D (2012-07-16), GC 5 - Terms of Payment)

AS 2 RESIDENT SITE INSPECTION SERVICES *	ESTIMATED HOURS Column A	HOURLY RATES** Column B	TIME BASED FEE Columns Ax B
<p>In addition to the basic inspection services on site under the contract, we expect a maximum number of hours that will be used depending on the complexity of the work and in coordination with the contractor's schedule.</p> <p>To provide these services the consultant will use an Intermediate Architectural Technician. According to the progress of the work, the addition of auxiliary staff (e.g. mechanical, electrical or structural) will be considered. Scheduled hours will cover all staff involved, which requires optimal planning.</p> <p>In RS4 stage the consultant will provide for approval, the resume of the person(s) that will ensure this service, the planned schedule and the forecast fees related thereto.</p>	1520	\$.....	\$.....
3) MAXIMUM TIME BASED FEES			\$.....

*Payment will be based on actual hours spent. Travel time and/or expenses will not be reimbursed separately.

** All inclusive hourly rate is applicable to both normal working hours and any other shift work as required.

APPENDIX C - PRICE PROPOSAL FORM (CONT'D)

TOTAL COST OF SERVICES FOR PROPOSAL EVALUATION PURPOSES

1) Total Percentage Fees		\$.....
2) Total Fixed Fees		\$.....
3) Total Time Based Fee	+	<u>\$.....</u>
Total Evaluated Fee		\$.....

The following will NOT form part of the evaluation process

Canada may accept or reject any of the following fees, disbursements and/or hourly rates. Canada reserves the right to negotiate on these fees, disbursements and/or hourly rates.

i.e. OTHER ADDITIONAL SERVICES

DISBURSEMENTS

At cost without allowance for mark-up or profit, supported by invoices/receipts - see clause R1230D (2012-07-16), GC 5 - Terms of Payment, section GC5.12

Disbursements:

Miscellaneous disbursements for the coordination and administration of the mandate..... \$..75,000.....

Disbursements for different expert reports and additional studies \$..75,000.....

MAXIMUM AMOUNT FOR DISBURSEMENTS \$..150,000...

END OF PRICE PROPOSAL FORM

APPENDIX D – DOING BUSINESS WITH QUEBEC REGION

APPENDIX E – SECURITY REQUIREMENTS CHECK LIST

APPENDIX F – EXISTING DOCUMENTATION

- Document Appendix 1
- Document Appendix 8
- Document Appendix 9
- Document Appendix 10
- Document Appendix 11



Travaux publics et
Services gouvernementaux
Canada

Public Works and
Government Services
Canada

Canada



Faire Affaire Région du Québec

Services d'architecture et de génie
1^{er} mai 2013



www.tpsgc-pwgsc.gc.ca

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SECTION 1 INTRODUCTION

Le présent document doit être utilisé de pair avec le Cadre de référence (Énoncé de projet, Demande de propositions, Mandat ou autres), les deux documents étant complémentaires. Le Cadre de référence présente les exigences propres à un projet tandis que ce sont plutôt des renseignements communs à l'ensemble des projets qui figurent au présent document. En cas de contradiction entre les deux documents, les exigences du Cadre de référence l'emportent sur celles du présent document.

L'Expert-conseil doit vérifier auprès du gestionnaire de projet si ce document est à jour. La version mise à jour la plus récente est celle qui s'applique au projet.

SECTION 2 NORME NATIONALE CDAO DE TPSGC

Les dessins doivent être conformes à la Norme nationale CDAO, **version régionale pour le Québec**, de Travaux publics et Services gouvernementaux Canada (TPSGC) et à la norme CSA B78.3 de l'Association canadienne de normalisation.

Veuillez consulter le site suivant :

<http://www.tpsgc-pwgsc.gc.ca/biens-property/cdao-cadd/index-fra.html>

Version régionale :

<http://www.tpsgc-pwgsc.gc.ca/cdao-cadd/index-fra.html>

Les liens ci-dessus sont donnés sous réserve de modifications. L'expert-conseil doit vérifier auprès du gestionnaire de projet pour s'assurer que le lien ainsi que les renseignements auxquels il mène sont à jour et pertinents en ce qui concerne la Norme nationale CDAO de TPSGC **pour la région du Québec**.

SECTION 3 GUIDE DE RÉDACTION DES DOCUMENTS DE CONSTRUCTION DE TPSGC

3.1 Objectif

Le présent document a pour objectif d'énoncer les principes directeurs régissant la rédaction de documents de construction (soit le devis, les dessins et les addenda) pour Travaux publics et Services gouvernementaux Canada (TPSGC).

Les dessins, le devis et les addenda doivent être complets et précis afin que l'entrepreneur puisse préparer une soumission sans se fier aux conjectures. La pratique courante pour la rédaction des documents relatifs aux contrats de construction nécessite ce qui suit :

- les dessins représentent le moyen graphique d'illustrer le travail à effectuer, dans la mesure où ils indiquent la forme, la dimension, l'emplacement, la quantité de matériaux et la relation entre les composants de l'édifice;
- le devis comprend les descriptions écrites des matériaux et des procédés de construction quant à la qualité, à la couleur, au motif, au rendement et aux caractéristiques des exigences relatives aux matériaux, à l'installation et à la qualité du travail;
- les addenda sont des modifications apportées aux documents de construction ou aux procédures de soumission, lesquels addenda sont publiés durant le processus de soumission.

3.2 Principes relatifs aux documents contractuels de TPSGC

Les documents contractuels de TPSGC sont fondés sur les principes usuels des marchés publics. TPSGC n'utilise pas les documents du Comité canadien des documents de construction (CCDC).

Le Cadre de référence est établi et communiqué par TPSGC, de même que les autres documents contractuels et soumissions connexes. Vous pouvez consulter les clauses à titre informatif à l'adresse suivante : <http://ccua-sacc.tpsgc-pwgsc.gc.ca/pub/tmtc-fra.jsp>
Les questions devraient être adressées au gestionnaire de projet.

3.3 Assurance de la qualité

Les experts-conseils doivent exécuter leurs propres processus de contrôle de la qualité et doivent réviser, corriger et coordonner (entre les spécialités) leurs documents avant de les envoyer à TPSGC.

DEVIS

1 Devis directeur national

Le Devis directeur national (DDN) est un devis directeur de la construction disponible dans les deux langues officielles divisé en 48 parties et utilisé dans le cadre d'une vaste gamme de projets de construction ou de rénovation. Pour préparer le devis de projet, l'expert-conseil doit se fonder sur l'édition actuelle du DDN, en conformité avec le Guide d'utilisation du DDN.

L'expert-conseil doit assumer la responsabilité première en ce qui a trait au contenu et doit modifier, corriger et compléter le DDN au besoin afin de produire un devis de projet approprié et exempt de contradiction et d'ambiguïté.

2 Organisation du devis

Les sections à portée restreinte décrivant des unités de travail uniques sont préférables dans le contexte de travaux plus complexes, tandis que les sections à portée étendue conviennent mieux aux travaux moins complexes. Utiliser soit le format de page du DDN 1/3 – 2/3, soit le format pleine page de Devis de construction Canada.

Commencer chaque section sur une nouvelle page et indiquer le numéro de projet de TPSGC, le titre de la section, le numéro de la section et le numéro de la page sur chaque page. La date du devis, le titre du projet et le nom de l'expert-conseil ne doivent cependant pas y figurer.

3 Terminologie

Utiliser l'expression «Représentant Ministériel» (ou «représentant du Ministère») plutôt que ingénieur, TPSGC, propriétaire, expert-conseil ou architecte. «Représentant Ministériel» ou «Représentant du Ministère» s'entend de la personne désignée dans le contrat ou au moyen d'un avis écrit donné à l'entrepreneur pour agir en tant que représentant du Ministère dans le cadre du contrat. Il peut s'agir d'une personne désignée et autorisée par écrit par le représentant du Ministère pour l'entrepreneur.

Les notes comme « vérification sur place », « selon les instructions », « pour correspondre à ce qui existe », « exemple », « égal à », « équivalent à » et « à déterminer sur place par le représentant du Ministère » ne devraient pas faire partie du devis parce qu'elles favorisent l'imprécision et l'inflation des prix de soumission. Le devis doit en effet permettre aux soumissionnaires de calculer toutes les quantités et de présenter une proposition précise. Pour des cas d'exception, s'il est impossible de déterminer les quantités (p. ex. les fissures à réparer), présenter une estimation aux fins de la soumission (prix unitaires). S'assurer que la terminologie utilisée dans l'ensemble du devis est cohérente et qu'elle est conforme à celle des documents normalisés applicables relatifs aux marchés de construction.

4 Dimensions

Les dimensions doivent être exprimées uniquement au moyen des valeurs du système métrique (pas de cotation double).

5 Normes

Comme les références figurant au DDN ne sont pas nécessairement à jour, il incombe à l'expert-conseil de veiller à ce que le devis de projet soit fondé sur la dernière édition applicable de toutes les références citées. Voici une liste de quelques sites Web qui contiennent les publications les plus à jour de normes relatives aux références dans le contexte de devis de construction.

- Normes de l'Association canadienne de normalisation (CSA) : <http://www.csa.ca>
- Normes de l'Office des normes générales du Canada (ONGC) : <http://www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-fra.html>
- Normes de l'American National Standards Institute (ANSI) : <http://www.ansi.org> (en anglais seulement)
- Normes de ASTM International : <http://www.astm.org> (en anglais seulement)
- Normes des Laboratoires des assureurs du Canada (ULC) : <http://www.ulc.ca> (en anglais seulement)
- Référence générale à des normes : <http://www.techstreet.com/>

Le site Web du DDN (<http://www.tpsgc-pwgsc.gc.ca/biens-property/ddn-nms/index-fra.html>) contient également des liens vers d'autres documents de référence dans le DDN, à partir de la rubrique Liens.

6 Désignation des matériaux

La pratique qui consiste à préciser les noms commerciaux, les numéros de modèles, etc., va à l'encontre de la politique du Ministère, sauf dans des circonstances particulières. La méthode de désignation des matériaux utilisés doit être appliquée en fonction de normes reconnues, comme celles établies par l'Association canadienne du gaz (ACG), l'Office des normes générales du Canada (ONGC), l'Association canadienne de normalisation (CSA) et les Laboratoires des assureurs du Canada (ULC) ou par des associations commerciales comme l'Association canadienne des entrepreneurs en couverture (ACEC) et l'Association canadienne de terrazzo, tuile et marbre (ACTTM). Il faut se conformer aux normes canadiennes dans la mesure du possible.

Si la méthode susmentionnée ne peut être utilisée et en l'absence de normes, désigner les matériaux au moyen d'appellations non restrictives et non commerciales en matière de « prescription » et de « rendement ».

En cas de circonstances exceptionnelles ou justifiées, ou encore en l'absence de normes et lorsqu'il est impossible de désigner les matériaux au moyen d'une appellation non restrictive et non commerciale en matière de « prescription » et de « rendement », indiquer le nom commercial. Inclure tous les matériaux connus acceptables pour les travaux prévus et, en ce qui a trait à l'équipement, indiquer les renseignements par type et par numéro de modèle.

Produits acceptables – Utiliser le format de paragraphe ci-dessous.

Produits acceptables :

1. Modèle [] de l'entreprise ABC.
2. Modèle [] de l'entreprise DEF.
3. Modèle [] de l'entreprise GHI.
4. Matériaux ou produits de remplacement : approuvés par addenda conformément aux Instructions aux soumissionnaires.

Subsidiairement, inclure ce qui suit à la Partie 1 des sections du devis dans lesquelles des marques de commerce sont mentionnées :

Matériaux ou produits acceptables : Lorsque des matériaux ou des produits sont prescrits par leur marque de commerce, consulter les « Instructions aux soumissionnaires » afin de connaître la marche à suivre concernant la demande d'approbation de matériaux ou de produits de remplacement.

Il est possible de recourir à des matériaux différents de ceux précisés durant la période de soumission. Cependant, il incombera à l'expert-conseil d'examiner et d'évaluer toutes les demandes d'approbation visant des matériaux de remplacement.

Le terme « fabricants acceptables » ne doit pas être utilisé dans la mesure où la concurrence s'en trouve restreinte et parce qu'un tel terme ne permet pas de garantir que les matériaux ou les produits en question seront acceptables. La liste des mots et expressions à éviter figure dans le guide d'utilisation du DDN.

Fournisseur unique : Il est possible de recourir à des fournisseurs uniques pour les matériaux et les travaux ayant trait aux systèmes exclusifs (p.ex. systèmes d'alarme incendie, systèmes de gestion de l'énergie SGE). Une justification devra être fournie dans ce contexte.

La formulation relative aux fournisseurs uniques devrait se lire comme suit dans la Partie 1 :

« Entrepreneur désigné

- 1 Retenir les services de [] pour réaliser les travaux prévus dans la présente section. »

La formulation relative aux fournisseurs uniques pour les Systèmes de Gestion de l'Énergie (SGE) devrait se lire comme suit dans la Partie 1 :

« Entrepreneur désigné

- Retenir les services de [] ou de son représentant autorisé pour réaliser les travaux relatifs à toutes les sections des SGE. »

et dans la Partie 2 en tant que Matériaux

- 1 Un système [] est actuellement installé dans l'immeuble. Tous les matériaux doivent être choisis de façon à en garantir la compatibilité avec le système [] existant.

La formulation relative aux fournisseurs uniques de matériaux (p. ex. systèmes d'alarme incendie) devrait se lire comme suit dans la Partie 2 :

Produits acceptables

- 1 Les seuls produits acceptables sont []. »

Avant d'inscrire le fournisseur unique pour les matériaux ou les travaux, l'expert-conseil doit en obtenir l'approbation du gestionnaire de projet.

7 Prix unitaires

Les prix unitaires sont utilisés lorsque la quantité ne peut être estimée avec précision (p. ex. travaux de terrassement). Ils exigent l'approbation préalable du gestionnaire de projet.

Formulation à utiliser :

[Les travaux relatifs à la présente section] ou [définir les travaux particuliers au besoin, comme le dérochement] seront rémunérés selon les quantités réelles calculées sur place et les prix unitaires indiqués dans le formulaire de soumission et d'acceptation.

Dans chaque section applicable du DDN, remplacer le paragraphe intitulé « Calcul du paiement » par « Prix unitaires ».

Pour visualiser un exemple de tableau de prix unitaire, se référer à l'appendice 1 du Formulaire de soumission et d'acceptation.

8 Allocations en espèces

Les documents de construction devraient être complets et faire état de l'ensemble des exigences visant les travaux précisés au contrat. Les allocations en espèces ne doivent être utilisées que dans des circonstances particulières (p. ex. entreprises de services publics, municipalités) lorsqu'aucune autre méthode de désignation n'est appropriée. Obtenir l'approbation préalable du gestionnaire de projet avant d'intégrer les allocations en espèces, et utiliser ensuite la « section 01 21 00 – allocations » du DDN afin de préciser ce critère.

9 Garanties

La pratique de TPSGC consiste à obtenir une garantie de 12 mois et à éviter les garanties prolongées de plus de 24 mois. Lorsqu'il est nécessaire de prolonger la période de garantie au-delà des 12 mois prévus dans les conditions générales du contrat, utiliser la formulation dans la Partie 1 des sections techniques applicables, sous le titre « Garantie prolongée » :

- « En ce qui a trait aux travaux de la présente section [____], la période de garantie de 12 mois est prolongée à 24 mois. »
- Si la garantie prolongée doit s'appliquer à une partie du devis en particulier, modifier l'énoncé précédent comme suit : « En ce qui a trait à la section [____], la période de garantie de 12 mois est prolongée à [____] mois. »

Supprimer toutes les références aux garanties des fabricants.

10 Étendue des travaux

Aucun paragraphe intitulé « Étendue des travaux » ne doit être inclus.

11 Paragraphes « Résumé » et « Contenu de la section » dans la Partie 1 – Généralités

Ne pas utiliser les expressions « Résumé » et « Contenu de la section ».

12 Sections connexes

Dans chaque section du devis au point 1.1, Sections connexes, coordonner la liste des annexes et sections connexes. S'assurer de coordonner les renvois aux diverses sections du devis et qu'il n'y a pas de références à des sections ou à des annexes qui n'existent pas.

13 Table des matières

Dresser la liste des plans et des sections du devis en indiquant correctement le nombre de pages, le nom des sections et le titre des dessins selon le format illustré à l'Annexe C.

14 Exigences régionales

L'expert-conseil devrait communiquer avec le gestionnaire de projet pour connaître les exigences régionales concernant la Division 01 ou d'autres formes abrégées de devis pouvant être nécessaires. Par exemple, dans la région du Québec, on doit nécessairement utiliser la *Section 01 11 01 – Informations générales sur les travaux*.

15 Santé et sécurité

Tous les devis de projet doivent comprendre la Section 01 35 29.06 – Santé et sécurité. Vérifier auprès du gestionnaire de projet s'il y a des directives afin de répondre aux exigences régionales.

16 Rapport sur les substances désignées

Ajouter la Section 01 14 25 – Rapport sur les substances désignées.

17 Rapports d'étude sur le sous-sol

Les rapports d'étude sur le sous-sol doivent être intégrés après la Section 31 et le paragraphe suivant doit y être ajouté :

Rapports d'étude sur le sous-sol

1. Les rapports d'étude sur le sous-sol sont compris dans le devis à la suite de la présente section.

Le gestionnaire de projet donnera d'autres directives s'il juge qu'il n'est pas pratique d'inclure les rapports d'étude sur le sous-sol.

Lorsque des documents de soumission doivent être produits dans les deux langues officielles, les rapports d'étude sur le sous-sol doivent être bilingues.

En plus des rapports d'étude sur le sous-sol qu'il faut fournir, les renseignements sur les fondations doivent être inclus dans les dessins des fondations tel qu'il est prévu au Code national du bâtiment du Canada de 2005 (Division C, Partie 2, 2.2.4.6).

18 Expérience et qualifications

Supprimer les exigences relatives à l'expérience et aux qualifications dans les sections du devis.

19 Préqualification et soumissions préalables à l'adjudication

Le devis ne doit pas imposer à l'entrepreneur ni au sous-traitant des exigences obligatoires en matière de préqualification ou de soumissions préalables à l'adjudication qui pourraient devenir une condition d'adjudication du contrat. S'il y a lieu d'exiger un processus de préqualification ou des soumissions préalables à l'adjudication, il faut communiquer avec le gestionnaire de projet.

Il ne doit pas y avoir de référence aux certificats, aux transcriptions ou aux numéros de permis d'un entrepreneur ou d'un sous-traitant visé par la soumission.

20 Questions de passation de marché

Le devis permet de décrire la qualité d'exécution et la qualité des travaux. Les questions de passation de marché ne doivent pas faire partie du devis. La Division 00 du DDN n'est pas utilisée dans le cadre des projets de TPSGC.

Supprimer toutes les références faites dans le devis aux éléments suivants :

- Instructions générales à l'intention des soumissionnaires
- Conditions générales
- Documents du CCDC
- Ordre de priorité des documents
- Clauses de sécurité
- Modalités de paiement ou retenue
- Processus d'appel d'offres
- Exigences de garantie
- Exigences relatives aux assurances
- Établissement des prix de rechange et individuel
- Visite des lieux (obligatoire ou facultative)
- Mainlevée du droit de rétention et retenues pour vices cachés

DESSINS

1 Cartouches d'inscription

Utiliser le cartouche d'inscription de TPSGC pour réaliser les dessins et les esquisses (y compris les addenda).

2 Dimensions

Les dimensions doivent être exprimées seulement au moyen des valeurs du système métrique (pas de cotation double).

3 Appellations commerciales

Les appellations commerciales ne doivent pas figurer sur les dessins. Voir la Section 3, Devis, 6. « Désignation des matériaux » pour connaître la façon de désigner les matériaux selon leur appellation commerciale.

4 Notes du devis

Les notes du devis ne doivent pas figurer sur les dessins.

5 Terminologie

Utiliser l'expression «Représentant Ministériel» (ou « représentant du Ministère ») plutôt que ingénieur, TPSGC, propriétaire, expert-conseil ou architecte. «Représentant Ministériel» ou « Représentant du Ministère » s'entend de la personne désignée dans le contrat ou au moyen d'un avis écrit donné à l'entrepreneur pour agir en tant que représentant du Ministère dans le cadre du contrat. Il peut s'agir d'une personne désignée et autorisée par écrit par le représentant du Ministère pour l'entrepreneur.

Les notes comme « vérification sur place », « selon les instructions », « pour correspondre à ce qui existe », « exemple », « égal à », « équivalent à » et « à déterminer sur place par le représentant du Ministère » ne devraient pas apparaître sur les dessins car elles favorisent l'imprécision et l'inflation des prix de soumission. Les dessins doivent permettre aux soumissionnaires de calculer toutes les quantités et de présenter une soumission précise. Pour les cas d'exception, où il est impossible de déterminer les quantités (p. ex. les fissures à réparer), se référer aux indications de la section 3, Devis, 3 Terminologie.

6 Renseignements à inclure

Les dessins devraient indiquer les quantités et la configuration relatives au projet ainsi que les dimensions et le détail de la façon dont le projet est structuré. Il ne devrait pas y avoir de références à des travaux ultérieurs et ou de renseignements qui sont prévus pour être modifiés au moyen d'un futur addenda. L'étendue des travaux devrait être clairement précisée et les éléments qui ne sont pas visés par le contrat devraient être éliminés ou fort peu nombreux.

- 7 Numérotation des dessins :** Il faut attribuer aux différentes séries de dessins des numéros en fonction du type de dessin et de la discipline visée selon les exigences de la Norme nationale CDAO de TPSGC.
À l'étape de conception du projet, chaque émission et chaque examen doivent être indiqués dans la zone de notes du titre du dessin. Toutefois, au moment de la rédaction des documents de construction, toutes les notes de révision devraient être supprimées.
- 8 Exigences de présentation :** Les dessins doivent être présentés en séries comportant les dessins pertinents de génie civil, d'architecture, de structure, de mécanique et d'électricité, dans cet ordre. Tous les dessins devraient être réalisés selon les mêmes dimensions normalisées.
- 9 Impression :** Impression à l'encre noire sur papier blanc. Communiquer avec le gestionnaire de projet pour connaître la dimension des imprimés à présenter aux fins d'examen.
- 10 Reliure :** Agrafer ou relier les imprimés de façon qu'ils forment des séries. Lorsque les présentations comptent plus de vingt feuilles, les dessins pour chacune des disciplines peuvent être reliés séparément pour en faciliter la manipulation et la consultation.
- 11 Légendes :** Fournir une légende des symboles, des abréviations, des références, etc., sur la première page de chaque série de dessins ou, lorsqu'il s'agit d'importantes séries de dessins, immédiatement après la page de titre et les pages d'index.
- 12 Nomenclatures :** Lorsque les nomenclatures couvrent des feuilles entières, il faut les placer sur le dessus de chaque série de dessins pour en faciliter la consultation. *Voir la norme ONGC 33-GP-7, Présentation de dessins d'architecture, où sont précisées les règles à cet égard.*
- 13 Nord :** Sur tous les plans, il faut indiquer où se trouve le nord. Il faut orienter tous les plans de la même façon pour faciliter le recoupement. Dans la mesure du possible, les plans devraient être dessinés de façon que le nord corresponde au haut de la feuille.
- 14 Symboles utilisés dans les dessins :** Utiliser les conventions généralement acceptées et comprises par les membres des différents corps de métier et se conformer à celles utilisées dans les publications de TPSGC.



ADDENDA

1 Présentation

Le format des addenda doit correspondre à celui présenté à l'Annexe B. Il ne doit pas comporter de renseignements personnalisés.

Chaque page de l'addenda (y compris les pièces jointes) doit être numérotée de manière séquentielle. Toutes les pages doivent comporter le numéro de projet de TPSGC et le bon numéro d'addenda. Les esquisses doivent être présentées selon le format de TPSGC et doivent être signées et scellées.

Les renseignements sur l'expert-conseil (nom, adresse, n° de téléphone, n° de projet) ne devraient pas apparaître dans l'addenda ni dans les pièces jointes (à l'exception des esquisses).

2 Contenu

Chaque élément devrait faire référence à un paragraphe réel du devis ou à une note ou un détail figurant sur les dessins. Le style explicatif n'est pas acceptable.

DOCUMENTS POUR APPELS D'OFFRES

1 Traduction

Au besoin, toute la documentation comprise dans les documents relatifs aux contrats de construction devra être présentée dans les deux langues officielles.

S'assurer que les documents en français et en anglais sont équivalents à tous les égards. Il ne peut y avoir aucun énoncé disant qu'une version l'emporte sur l'autre.

2 L'expert-conseil doit fournir ce qui suit :

- Pour chaque présentation de documents de construction, une liste de vérification pour la soumission de documents de construction remplie et signée. Consulter l'Annexe A à ce sujet.
- Les devis originaux imprimés au recto sur du papier bond blanc de 216 mm x 280 mm.
- Une table des matières conforme au modèle présenté à l'Annexe C.
- Un addenda (si nécessaire) conforme au modèle présenté à l'Annexe B (publié par TPSGC).
- Les dessins originaux reproductibles, scellés et signés par le responsable de la conception.
- Les renseignements relatifs à la soumission, c'est-à-dire :
 - La description de toutes les unités et des quantités estimées à intégrer dans le tableau des prix unitaires.
 - La liste des domaines de spécialité importants, y compris les coûts. TPSGC déterminera ensuite le cas échéant, les domaines de spécialité qui feront l'objet d'une soumission par l'intermédiaire du bureau de dépôt des soumissions.
 - Système électronique d'appels d'offres du gouvernement (SEAOG) : Les experts-conseils doivent fournir une copie électronique conforme de la version finale des documents (dessins et devis) sur un ou plusieurs CD-ROM en fichiers de format de document portable (PDF), sans protection par mot de passe ni restrictions en matière d'impression. La copie électronique des dessins et du devis pour fins de soumission et de construction doivent comporter le sceau et la signature des professionnels pour chaque discipline. Voir les Annexes D et E à ce sujet.

3 TPSGC doit fournir ce qui suit

- Instructions générales et particulières à l'intention des soumissionnaires
- Formulaire de soumission et d'acceptation
- Documents normalisés relatifs au contrat de construction

SECTION 4 CATÉGORIES D'ESTIMATION DE COÛTS DE CONSTRUCTION UTILISÉES PAR TPSGC

DESCRIPTION DES CATÉGORIES D'ESTIMATION DE COÛTS UTILISÉES PAR TPSGC POUR ÉVALUER LES COÛTS DE CONSTRUCTION DES PROJETS IMMOBILIERS

Estimation de catégorie D (estimation indicative) :

Fondée sur un énoncé complet des exigences et sur une description sommaire des solutions potentielles, cette estimation donne une idée du coût final du projet et permet de classer les différentes options envisagées.

Soumettre les estimations de coûts de catégorie D dans un format conforme à la dernière version de l'analyse des coûts par élément publiée par l'Institut canadien des économistes en construction. Indiquer le coût au m² en fonction des données statistiques de l'industrie actuellement disponibles pour le type de bâtiment et l'emplacement pertinents. Joindre également un résumé et fournir le détail complet des éléments de travail, des quantités, des prix unitaires, des allocations et des hypothèses.

Le niveau de précision d'une estimation de catégorie D doit être tel que la réserve pour éventualités ne dépasse pas les 20 %.

Estimation de catégorie C :

Cette estimation est fondée sur une liste complète des exigences et des hypothèses, dont une description détaillée de l'option de conception privilégiée, des conditions du marché et de l'expérience en matière de construction et de conception. Elle doit suffire à prendre de bonnes décisions d'investissement.

Soumettre les estimations de coûts de catégorie C dans un format conforme à la dernière version de l'analyse des coûts par élément publiée par l'Institut canadien des économistes en construction. Indiquer le coût au m² en fonction des données statistiques de l'industrie actuellement disponibles pour le type de bâtiment et l'emplacement pertinents. Joindre également un résumé et fournir le détail complet des éléments de travail, des quantités, des prix unitaires, des allocations et des hypothèses.

Le niveau de précision d'une estimation de catégorie C doit être tel que la réserve pour éventualités ne dépasse pas les 15 %.

Estimation de catégorie B (estimation fondée) :

Cette estimation est fondée sur les dessins de l'avant-projet et sur le devis préliminaire, ce qui comprend la conception de tous les principaux systèmes et sous-systèmes ainsi que les résultats des études du terrain et des installations. Elle doit permettre d'établir des objectifs réalistes en matière de coûts et doit suffire à obtenir l'approbation finale du projet.

Soumettre les estimations de coûts de catégorie B dans un format conforme à la dernière version de l'analyse des coûts par élément publiée par l'Institut canadien des économistes en construction. Joindre également un résumé et fournir le détail complet des éléments de travail, des quantités, des prix unitaires, des allocations et des hypothèses.

Le niveau de précision d'une estimation de catégorie B doit être tel que la réserve pour éventualités ne dépasse pas les 10 %.

Estimation de catégorie A (estimation préalable à l'appel d'offres) :

Cette estimation est fondée sur les dessins et le devis de construction définitifs, élaborés avant l'appel d'offres concurrentiel. Elle doit permettre de comparer et de négocier les moindres détails des offres présentées par les entrepreneurs.

Soumettre les estimations de coûts de catégorie A en respectant la dernière version du format d'analyse des coûts par élément et du format commercial, publiés par l'Institut canadien des économistes en construction. Joindre également un résumé et fournir le détail complet des éléments de travail, des quantités, des prix unitaires, des allocations et des hypothèses.

Le niveau de précision d'une estimation de catégorie A doit être tel que la réserve pour éventualités ne dépasse pas les 5 %.

SECTION 5 GESTION DU CALENDRIER

1 Gestion, planification et contrôle du calendrier

L'expert en gestion, planification et contrôle du calendrier (expert conseil en ordonnancement) créera un système de planification et de contrôle (système de contrôle) permettant de planifier, d'ordonnancer et de suivre le projet, puis de rendre compte de son avancement. Il rédigera également un rapport sur la gestion, la planification et le contrôle du calendrier (rapport d'étape). L'élaboration et le suivi du calendrier de projet requièrent la participation conséquente d'un agent d'ordonnancement possédant les compétences et l'expérience nécessaires.

L'expert conseil en ordonnancement respectera les pratiques exemplaires de l'industrie en matière d'élaboration et de mise à jour des calendriers, conformément à ce que préconise le Project Management Institute (PMI).

Les systèmes de contrôle de TPSGC fonctionnent actuellement au moyen des logiciels Primavera Suite et MicroSoft Project. Tout logiciel utilisé par l'expert-conseil doit être entièrement intégré à ces programmes à l'aide d'une des nombreuses suites logicielles disponibles sur le marché.

1.1 Conception de calendriers

Les calendriers de projet servent de guide à la réalisation du projet et indiquent également à l'équipe de projet le moment où les activités doivent avoir lieu. Ils sont fondés sur des techniques de réseau et utilisent la méthode du chemin critique.

Voici ce dont il faut tenir compte dans la conception d'un système de contrôle :

1. le degré de précision nécessaire au contrôle et à l'établissement de rapports;
2. le cycle d'établissement des rapports (les rapports sont produits mensuellement et en fonction de ce qui est précisé dans le cadre de référence; cet aspect concerne également les rapports sur les exceptions);
3. la durée du projet, indiquée en nombre de jours;
4. les éléments nécessaires à l'établissement de rapports dans le cadre du Plan de communication des équipes de projets;
5. la nomenclature et la structure de codification à respecter pour l'appellation et le compte rendu des activités, des calendriers et des rapports.

1.2 Élaboration de calendriers

Afin de suivre et de signaler l'avancement du projet et aussi de faciliter l'examen du calendrier, il est important d'établir une norme visant l'ensemble des calendriers et des rapports produits. Il faut ainsi uniformiser la structure de répartition du travail, la détermination des jalons, l'appellation des activités, les extrants inscrits au calendrier de même que le format et l'orientation du papier.

Structure de répartition du travail

Dans l'élaboration du calendrier, l'expert-conseil doit appliquer les normes et les pratiques de TPSGC. Les deux exigences de base concernent le Système national de gestion de projet (SNGP) et la structure de répartition du travail (SRT), laquelle vient appuyer les niveaux 1 à 4 du SNGP.

La SRT comprend plusieurs niveaux :

- Niveau 1 Titre du projet (SNGP)
- Niveau 2 Étape du projet (SNGP)
- Niveau 3 Phase du projet (SNGP)
- Niveau 4 Processus nécessaires au respect des jalons établis relativement aux produits livrables et aux points de vérification (SNGP)
- Niveau 5 Sous-processus et produits livrables à l'appui du niveau 4
- Niveau 6 Activités particulières (liste de tâches)

Si les projets ne comporteront pas nécessairement tous la totalité des étapes, des phases et des processus indiqués dans le SNGP, leur structure demeure néanmoins identique.

Jalons principaux et secondaires

Les produits livrables et les points de vérification du SNGP constituent les principaux jalons, lesquels sont nécessaires à l'élaboration de tout calendrier. Ces jalons sont utilisés pour les rapports de gestion au sein de TPSGC et permettent de suivre l'avancement du projet à l'aide de l'analyse des écarts. Les résultats des processus (niveau 4) et les résultats des sous-processus (niveau 5) constituent les jalons secondaires et servent également dans le cadre de l'analyse des écarts.

Par ailleurs, un code est attribué à chaque jalon puis utilisé dans le cadre des rapports de situation et des rapports de gestion.

Les jalons doivent avoir une durée zéro, et ils servent à évaluer l'avancement du projet.

Les jalons peuvent également représenter des contraintes externes, comme la réalisation d'une activité qui ne s'inscrit pas dans le cadre du projet tout en ayant une incidence sur celui-ci.

Activités

La conception de toutes les activités doit se faire en fonction des objectifs du projet, de son étendue ainsi que des jalons principaux et secondaires. Elle doit en outre tenir compte des réunions avec l'équipe de projet et nécessite que l'agent d'ordonnancement ait une parfaite compréhension du projet et de ses processus.

Fractionner les éléments du projet en composants plus petits et plus faciles à gérer, ce qui permettra d'organiser et de définir l'étendue globale des travaux relativement aux niveaux 5 et 6. Ces composants doivent pouvoir être planifiés, exprimés en coûts, suivis et contrôlés. En procédant ainsi, il sera possible de dresser la liste des activités du projet.

Chaque activité constitue un élément de travail distinct dont la responsabilité revient à une seule personne.

Le travail à accomplir pour chacune d'entre elles sera décrit à l'aide de propositions verbales (p. ex. Examiner le rapport d'avant-projet).

La durée des activités ne doit pas être supérieure à 2 cycles de mise à jour, sauf si elles n'ont pas encore été intégrées à une « séquence d'activités ».

Chaque activité sera inscrite au niveau 6 de la SRT et se verra attribuer un code pour les rapports de situation et les rapports de gestion.

Enfin, les activités ainsi créées seront liées les unes aux autres dans les calendriers de projet.

Logique de projet

Une fois la SRT, les jalons et la liste des activités élaborés, il est alors possible de lier ces éléments de façon logique en commençant par le jalon que constitue le lancement du projet. Le lien entre chaque activité et chaque jalon doit être logique et fondé sur un rapport de type « fin à début » (FD), « fin à fin » (FF), « début à début » (DD) ou « début à fin » (DF). Il ne doit pas y avoir d'activité ou de jalon à durée indéterminée.

Privilégier le rapport de type « fin à début ».

Dans l'élaboration des rapports, éviter d'utiliser les décalages temporels et les contraintes au lieu des activités et de la logique.

Durée des activités

La durée d'une activité (en nombre de jours) correspond au délai jugé nécessaire à la réalisation d'une tâche.

Il faut tenir compte du nombre de ressources nécessaires et disponibles pour accomplir une activité (p. ex. la disponibilité des monteurs de charpentes durant un « boom de la construction »). S'assurer en outre de tenir compte d'autres facteurs tels que le type ou le niveau de compétence des ressources disponibles, le nombre d'heures de travail possible, les conditions météorologiques, etc.

Ce processus permettra de créer plusieurs listes et calendriers différents qui seront intégrés au rapport d'étape.

Liste des activités

La liste des activités définit l'ensemble des activités et jalons nécessaires à la réalisation du projet intégral.

Liste des jalons

La liste des jalons définit tous les jalons principaux et secondaires dans le cadre d'un projet.

Calendrier principal

Le calendrier principal oriente l'établissement de rapports à l'intention de la direction relativement aux niveaux 4 et 5 de la SRT. Il indique en outre les principales activités et les jalons clés tirés du calendrier détaillé. Il est également possible d'intégrer les prévisions des flux de trésorerie au niveau 5 de la SRT afin de suivre le plan des dépenses.

Calendrier détaillé du projet

Le calendrier détaillé doit comporter assez de renseignements (jusqu'aux niveaux 6 et 7 de la SRT) pour permettre de suivre et de contrôler l'avancement du projet. Il est en outre suffisamment précis pour garantir une planification et un contrôle adéquats.

1.3 Examen et approbation du calendrier

Une fois que l'agent d'ordonnancement a défini et codé correctement l'ensemble des activités, il faut les classer dans un ordre logique, puis fixer leur durée. L'agent d'ordonnancement pourra ensuite analyser le calendrier pour vérifier si les dates des jalons correspondent bien aux exigences contractuelles, pour ensuite le modifier au besoin en jouant sur les durées, le niveau des ressources ou la logique.

Une fois le calendrier détaillé correctement préparé, l'agent d'ordonnancement le présentera à l'équipe de projet afin qu'elle l'approuve et s'en serve comme base de référence. Il se peut que de nombreuses modifications soient apportées avant que le calendrier n'obtienne l'approbation de l'équipe et qu'il réponde enfin aux exigences contractuelles.

La version définitive doit être copiée et sauvegardée à titre de base de référence pour qu'il soit possible de surveiller les écarts, lesquels seront ensuite mentionnés dans les rapports.

1.4 Suivi et contrôle du calendrier

Une fois que le calendrier est établi comme base de référence, il peut être mieux suivi et contrôlé, et il est alors possible de produire des rapports.

Le suivi s'effectue en comparant le degré d'achèvement des activités de référence (exprimé en pourcentage) et les dates des jalons avec les dates réelles et prévues. On peut ainsi repérer les écarts, noter les retards possibles, les questions non résolues ou les préoccupations, puis proposer des solutions (sous forme de rapports) qui permettront de traiter les problèmes graves liés à la planification et à l'ordonnancement.

Pendant toute la durée du projet et dès les premières étapes, analyser toutes les activités qui sont sur le point de commencer, en cours ou achevées, puis établir des rapports en la matière.

Les nombreux rapports qui découleront de l'analyse du calendrier de référence seront intégrés au rapport de gestion du calendrier dans la section Services requis (SR).

Rapport d'étape

Le rapport d'étape indique l'état d'avancement de chaque activité à la date de sa publication. Il signale toute modification passée ou future de la logique, fait état des prévisions relatives à l'avancement et à l'achèvement, et indique en outre les dates de début et de fin réelles de toutes les activités ayant fait l'objet d'un suivi.

Le rapport d'étape comprend les éléments suivants :

Un compte rendu qui détaille le travail accompli jusque là, compare l'avancement des activités avec le calendrier planifié et présente les prévisions actuelles. Ce compte rendu devrait en outre résumer les progrès accomplis jusque là en justifiant les écarts et les retards réels ou probables. Il doit également décrire les mesures à prendre pour combler les retards et résoudre les problèmes afin de respecter le calendrier détaillé et les chemins critiques.

Le compte rendu commence par un énoncé de l'état général du projet, puis il passe en revue les retards et les problèmes potentiels, évalue le bon déroulement du projet, signale les retards éventuels, les questions et les préoccupations non réglées, et indique les solutions permettant de remédier aux graves problèmes de planification et d'ordonnancement.

Un rapport sur les écarts qui comprend les documents d'ordonnancement connexes, donne le détail des tâches accomplies jusque là et compare l'avancement du travail avec le calendrier prévu. Ce rapport devrait en outre résumer les progrès accomplis jusque là en justifiant les écarts et les retards réels ou probables. Il doit également décrire les mesures à prendre pour combler les retards et résoudre les problèmes afin de respecter le calendrier détaillé et les chemins critiques.

Un rapport d'évaluation du déroulement du projet qui indique toutes les activités et les jalons dont la marge totale est négative, nulle ou de cinq jours maximum afin de pouvoir repérer facilement les chemins critiques ou quasi critiques dans l'ensemble du projet.

Les pièces jointes suivantes doivent également figurer au rapport d'étape : le diagramme de la SRT, les listes des activités, les listes des jalons, les calendriers principaux et le calendrier détaillé du projet.

Rapport sur les exceptions

L'agent d'ordonnancement doit assurer un suivi et un contrôle permanents; il doit repérer rapidement les problèmes imprévus ou critiques susceptibles d'avoir une incidence sur le projet, puis en informer les personnes concernées.

En cas de problèmes imprévus ou critiques, l'agent d'ordonnancement informera le gestionnaire de projet et proposera des solutions de rechange en présentant un rapport sur les exceptions.

Ce rapport sera suffisamment détaillé pour permettre de définir clairement les éléments suivants :

1. Modification de l'étendue du projet : établir la nature, la raison et l'incidence globale de toutes les modifications qui ont été ou qui seront probablement apportées à l'étendue et qui ont une incidence sur le projet.

2. Retard ou avancement des échéances : déterminer la nature, la raison et l'incidence globale de toutes les variations de durée qui ont été repérées ou qui sont susceptibles de se produire.
3. Solutions de retour vers la base de référence du projet : déterminer la nature et l'incidence probable de toutes les solutions proposées pour ramener le projet à sa durée de référence.

1.5 Émissions courantes

Pour chaque étape d'émission de documents ou pour chaque produit livrable, fournir un rapport d'étape complet et à jour. Le contenu de ce rapport variera en fonction des exigences et de la phase de projet concernée. Habituellement, un rapport d'étape comporte les éléments suivants :

1. un résumé;
2. un compte rendu;
3. un rapport sur les écarts;
4. un rapport d'évaluation du déroulement du projet;
5. un rapport sur les exceptions (selon le cas);
6. un diagramme de la structure de répartition du travail;
7. une liste des activités;
8. une liste des jalons;
9. le calendrier principal et les prévisions relatives aux flux de trésorerie;
10. le calendrier de projet détaillé (diagramme à flèches ou diagrammes à barres).

1.6 Extrants inscrits au calendrier et formats des rapports

Le format et l'orientation du papier sont de simples suggestions et ne jouent pas de rôle particulier. Le format peut varier en fonction des renseignements et du nombre de colonnes nécessaires.

Rapport d'étape

Format du papier :	lettre
Orientation du papier :	portrait
Format du titre :	titre du projet, type de rapport, date d'impression, date des données, bloc de révision
Corps du texte :	le texte du rapport doit respecter le format des autres rapports rédigés au sein du ministère des Approvisionnements et Services (MAS).
Colonnes des rapports sur les écarts :	Code de l'activité, Nom de l'activité, Date de fin prévue, Date de révision prévue, Écart, Variance, Degré d'achèvement (en %)
Colonnes des rapports d'évaluation du déroulement du projet :	Code de l'activité, Nom de l'activité, Durée, Date de début, Date de fin, Degré d'achèvement (en %), Marge totale

Rapport sur les exceptions

Format du papier :	lettre
Orientation du papier :	portrait
Format du titre :	titre du projet, type de rapport, date d'impression, date des données, révision
Corps du texte :	le texte doit respecter le format des autres rapports rédigés
au sein du MAS	
Format du papier :	lettre
Orientation du papier :	paysage
Format du titre :	titre du projet, type de rapport, date d'impression, date des données, révision
Colonnes :	Code de l'activité, Nom de l'activité, Durée, Temps restant, Date de début, Date de fin, Marge totale

Structure de répartition du travail (arborescence) :

Format du papier :	lettre
Orientation du papier :	portrait
Colonnes :	Code de la SRT, Nom de la SRT, Durée, Estimation des coûts, Dates de début et de fin
Format du bas de page :	titre du projet, type de rapport, date d'impression, date des données, bloc de révision

Liste des activités

Format du papier :	lettre
Orientation du papier :	portrait
Colonnes :	Code de l'activité, Nom de l'activité, Date de début, Date de fin, Activité précédente, Activité suivante
Format du bas de page :	titre du projet, type de rapport, date d'impression, date des données, bloc de révision

Trier par Début anticipé, par Fin anticipée, puis par Code d'activité et terminer avec la SRT.

Liste des jalons

Format du papier :	lettre
Orientation du papier :	portrait
Format du bas de page :	titre du projet, type de rapport, date d'impression, date des données, bloc de révision
Colonnes :	Code de l'activité, Nom de l'activité, Date de début, Date de fin

Trier par Début anticipé, par Fin anticipée, puis par Code d'activité et ne pas inclure la SRT.

Calendrier principal (diagramme à barres)

Format du papier :	format tabloïde (11 po sur 17 po)
Orientation du papier :	paysage
Format du bas de page :	titre du projet, type de rapport, date d'impression, date des données, bloc de révision
Colonnes :	Code de l'activité, Nom de l'activité, Durée, Degré d'achèvement (en %), Date de début, Date de fin, Marge totale

Trier par Début anticipé, par Fin anticipée, puis par Code d'activité et terminer avec la SRT.

Calendriers détaillés de projet (diagramme à barres)

Format du papier :	format tabloïde (11 po sur 17 po)
Orientation du papier :	paysage
Format du bas de page :	titre du projet, type de rapport, date d'impression, date des données, bloc de révision
Colonnes :	Code de l'activité, Nom de l'activité, Durée, Degré d'achèvement (en %), Date de début, Date de fin, Marge totale

Trier par Début anticipé, par Fin anticipée, puis par Code d'activité et terminer avec la SRT.

SECTION 6 GESTION DES RISQUES

6.1 DÉFINITIONS

Plan d'achat : Demande formelle d'autorisation de conclure un marché et comprenant 1) l'estimation de coût de l'exigence (y compris les allocations en espèces et les allocations prévues pour la conception, l'estimation et l'inflation), 2) les imprévus et 3) le montant prévu pour les modifications.

Allocations : Les ressources additionnelles comprises dans une estimation doivent couvrir le coût des exigences connues mais non définies relatives à une activité individuelle, à un lot de travail, à un compte ou à un compte auxiliaire : les allocations pour la conception, pour l'estimation et pour l'inflation et toutes autres allocations spécifiquement identifiées font partie intégrante d'une estimation de coût.

Allocations en espèces : montant spécifique à utiliser pour un service ou pour un lot de travail précis.

- **Allocation en espèces - construction :** ressources additionnelles comprises dans une estimation pour couvrir les coûts des exigences connues mais non définies dont la probabilité de réalisation est élevée. Cette allocation est indiquée spécifiquement dans une estimation de coût.
- **Allocation en espèces - expert-conseil :** services additionnels inclus dans une estimation pour couvrir le coût des exigences connues mais non définies dont la probabilité de réalisation est élevée. Cette allocation est indiquée spécifiquement dans une estimation de coût.

Allocation de risques : Valeur pécuniaire prévue pour les événements de risques occasionnés par la complexité du projet, les conditions du marché, la compétitivité et la synchronisation du projet; il est probable qu'il y aura des imprévus, mais ils ne font pas partie intégrante des estimations de coût.

Modifications projetées : Il s'agit principalement de l'autorisation préalable d'une autorité chargée des modifications jusqu'à un certain niveau. Les modifications individuelles au contrat apportées par cette autorité doivent quand même être approuvées par le bon niveau d'autorité. Le nombre total des modifications projetées à une estimation de coût pour un projet est désigné comme étant la sommation de la valeur pécuniaire prévue pour les événements de risques dont on prévoit la réalisation pendant la durée du projet.

Gestion des risques : L'art et la science d'identifier et d'analyser les facteurs de risques et d'y faire face pendant toute la durée du projet et dans le meilleur intérêt de ses objectifs. (PMBOK).

Événement de risques : Un incident singulier susceptible d'avoir un impact positif ou négatif sur le projet (p. ex. : la livraison tardive d'une pièce d'équipement constitue un « événement de risque » susceptible d'entraîner des retards au calendrier des travaux).

Probabilité : La vraisemblance qu'un événement va se produire (c.-à-d. faible, moyenne, forte).

Impact : Le résultat positif ou négatif d'un événement sur un projet (p. ex. : un retard au calendrier des travaux découlant de la livraison tardive d'une pièce d'équipement peut avoir un impact très négatif sur un projet; ou un accès accru à un chantier de construction grâce au départ hâtif des occupants d'un espace à bureaux peut avoir un impact positif sur un projet). L'impact d'événements de risques individuels peut être qualifié de faible, moyen ou élevé, ou peut être quantifié en termes de temps, de coût (immédiat ou de mise en service (E&E)) ou de performance.

Risque élevé* : Un projet (ou élément de projet) peut être considéré à risque élevé si l'une ou plusieurs situations dangereuses interviennent de façon marquée et empêcheraient probablement la réalisation des objectifs du projet si on ne les atténuaient pas.

Risque moyen* : Un projet (ou élément de projet) peut être considéré à risque moyen si l'une ou plusieurs situations dangereuses existent, mais ont été atténuées au point où une bonne planification des ressources et une gestion rigoureuse du risque devraient empêcher toute répercussion négative importante sur la réalisation des objectifs du projet.

Risque faible* : Un projet (ou élément de projet) devrait être considéré à risque faible s'il n'existe pas de situations dangereuses ou si ces dernières ont été réduites au point où un contrôle courant de la gestion du projet devrait pouvoir empêcher toute répercussion négative sur la réalisation des objectifs du projet.

* conformément au Manuel du Secrétariat du Conseil du Trésor, Chapitre 2-2, La gestion des projets.

VPP : Valeur pécuniaire prévue d'un événement de risque (c.-à-d. coût supplémentaire ou économie pour le projet si l'événement de risque se produit).

6.2 LISTE DE CONTRÔLE DE LA GESTION DES RISQUES

La probabilité, l'impact, le risque global, la réaction vis-à-vis du risque et l'allocation pour le risque doivent être déterminés pour chacun des articles suivants :

Ressources externes à l'équipe de gestion du projet

- Ressources de planification et rendement
 - erreurs et omissions
 - faible précision des estimations (allocations)
 - insuffisance de données
 - niveau de l'assurance-responsabilité
 - possibilité d'une mauvaise interprétation ou compréhension des documents
 - planification de l'inexpérience
- Ressources de construction requises et rendement
 - niveau de l'assurance-responsabilité
 - méthodes de conception par rapport aux méthodes d'exécution
 - pertinence des méthodes d'exécution à concevoir
 - problèmes de mise en service (difficultés de démarrage / rotation de l'équipement)
 - stratégie de construction de l'entrepreneur
 - réputation de l'entrepreneur
 - stabilité financière de l'entrepreneur
 - inexpérience de l'entrepreneur
 - ressources obtenues moins compétentes que souhaitées
 - disponibilité / pertinence / rendement des ressources

Réalisation de l'étendue du projet

- Réalisation des exigences prescrites
 - précision des exigences du client en termes de coûts / calendrier / rendement / qualité et aptitude à composer avec le milieu existant
 - priorités conflictuelles du client
 - faible niveau de connaissance du client
- Exigences indéterminées du client
 - exigences du client incomplètes relativement aux coûts / calendrier / rendement / qualité et aptitude à composer avec le milieu existant
 - conditions de travail restreintes
 - possibilités de changements / impact positif
- Exigences des intervenants, déterminées et indéterminées
 - faible implication des groupes d'utilisateurs dans l'étendue de la définition
 - interface avec les systèmes existants
 - conditions de travail restreintes
 - besoins opérationnels

Conditions réelles du site / bien / bâtiment

- Environnement physique réel
 - disponibilité / précision des documents de l'ouvrage fini et rapports sur les conditions existantes
 - forte variabilité / faible stabilité des sols
 - possibilité de contamination des sols
 - présence de matières dangereuses
 - disponibilité / accès au site
 - présence d'autres entrepreneurs sur le chantier
 - climat (conditions hivernales, pluie, vent, niveaux de l'eau)

Gouvernement / TPSGC / client / contexte

- Impact sur les aires adjacentes réelles
 - Impact sur les aires adjacentes (terrain / locataires / circulation / exploitation)
- Impact découlant de sources externes
 - poursuites, droits de brevet, délivrance de brevets, etc.
 - impacts politiques, y compris visibilité du projet
 - sensibilités sociales
 - possibilités de grève
 - risques du marché
 - mauvaise presse (couverture médiatique)
- Impact suite à des modifications imprévues à la réglementation
 - législation sur l'environnement et sélection environnementale
 - changements possibles aux lois, codes et règlements
 - octroi de permis municipaux de construction / d'occuper
- Procédures connues
 - pertinence des documents de soumission
 - pertinence du mode d'attribution de marché
 - retards dans le processus d'appel d'offres
 - coordination interne du client
 - processus de l'ordre de modification
- Approbation des plans / révisions de la conception
 - possibilité que des approbations soient exigées par le client, TPSGC, le Conseil du Trésor, le BEEFP, le Commissaire des incendies, le service de police, les services d'urgence, les municipalités, les villes, etc.
 - absence d'analyse des investissements
 - organisation instable / changeante du client
 - bâtiments du patrimoine
 - santé et sécurité
 - possibilité « d'Ordre de suspension des travaux »
 - retards dans la révision de la conception (client / TPSGC / CT / autre)
 - retards dans le processus d'approbation (client / TPSGC / CT / autre)

ANNEXE A –Liste de vérification pour l'émission des documents de construction -TPSGC

Dernière mise à jour : 2011-07-28

Date :		
Titre du projet :	Lieu du projet :	
Numéro du projet :	Numéro du contrat :	
Nom de l'expert-conseil :	Gestionnaire de projet de TPSGC :	
Stade de l'examen : <div style="display: flex; justify-content: space-around;"> 66% 99% 100% </div>		

Sujet	Vérifié par	Commentaires	Suivi
Devis			
1 Devis directeur national			
1a La plus récente édition du DDN a été utilisée.			
2 Organisation du devis			
2a Le format de page 1/3 – 2/3 du DDN ou le format pleine page du Devis de construction Canada a été utilisé.			
2b Chaque section commence sur une nouvelle page et le numéro du projet, le titre de la section, le numéro de la section ainsi que le numéro de la page figurent sur chaque page.			
2c La date du devis et le nom de l'expert-conseil ne sont pas indiqués.			
3 Terminologie			
3a Le terme « représentant du Ministère » ou « Représentant Ministériel » est utilisé au lieu des termes « ingénieur », « TPSGC », « propriétaire », « expert-conseil » ou « architecte ».			
3b Les notes « vérification sur place », « selon les instructions », « pour correspondre à ce qui existe », « exemple », « égal à », « équivalent à » et « à déterminer sur place par » ne sont pas utilisées.			
4 Dimensions			
4a Les dimensions ne sont exprimées qu'avec les valeurs du système métrique.			
5 Normes			
5a L'édition la plus récente de toutes les références citées a été utilisée.			

Sujet	Vérifié par	Commentaires	Suivi
Devis- suite			
6 Désignation des matériaux			
6a La méthode de désignation des matériaux repose sur des normes reconnues. Les appellations commerciales et les numéros de modèle exacts ne sont pas précisés.			
6b Indiquez si des appellations non restrictives et non commerciales sont utilisées pour les « devis descriptifs » et pour les « devis de performance ».			
6c Indiquez si une liste des produits jugés acceptables a été utilisée.			
6d Le terme « fabricants acceptables » n'est pas utilisé.			
6e Indiquez si l'on a eu recours à un fournisseur unique.			
7 Prix unitaires			
7a Les prix unitaires ne sont utilisés que pour les travaux dont l'appréciation est difficile.			
8 Allocations en espèces			
8a Indiquez si des allocations en espèces ont été utilisées.			
9 Garanties			
9a Indiquez si la durée des garanties dépasse 12 ou 24 mois.			
9b Les garanties des fabricants ne sont pas indiquées.			
10 Étendue des travaux			
10 Il n'y a aucun paragraphe intitulé Étendue des travaux dans le document.			
11 Paragraphes « Résumé » et « Contenu de la section »			
11a Dans la Partie 1 de la section, les paragraphes « Résumé » et « Contenu de la section » ne sont pas utilisés.			
12 Sections connexes			
12a La liste des renvois à des annexes et à des sections connexes est juste.			
13 Table des matières			
13a La table des matières présente la liste complète des dessins et des sections du devis avec le bon nombre de pages ainsi que les bons titres de dessins et noms de sections.			

Sujet	Vérifié par	Commentaires	Suivi
Devis- suite			
14 Exigences régionales			
14a Les informations générales sont comprises (Section 01 11 01 pour la région du Québec).			
15 Santé et sécurité			
15a La Section 01 35 29.06 – Santé et sécurité est comprise.			
16 Rapport sur les substances désignées			
16 a La Section 01 14 25 – Rapport sur les substances désignées est comprise.			
17 Rapports d'étude sur le sous-sol			
17a Les rapports d'étude sur le sous-sol sont compris dans la Division 31.			
18 Expérience et qualifications			
18a Les exigences en matière d'expérience et de qualifications ne figurent pas dans les sections du devis.			
19 Préqualification			
19a La soumission ne comprend pas d'exigences obligatoires en matière de préqualification de l'entrepreneur ou du sous-traitant, ni de références à des certificats, à des transcriptions ou à des numéros de permis d'un entrepreneur ou d'un sous-traitant.			
20 Questions de passation de marché			
20a Les questions de passation de marché ne figurent pas dans le devis.			
20b La Division 00 du DDN n'est pas utilisée.			
21 Questions de qualité			
21a Il n'y a aucune clause du devis entre crochets « [] » ou lignes « ____ » indiquant que le devis est incomplet ou qu'il manque des renseignements.			

Sujet	Vérifié par	Commentaires	Suivi
Dessins			
1 Cartouches d'inscription			
1a Le cartouche d'inscription de TPSGC est utilisée.			
1b L'information du projet dans le cartouche est coordonnée entre chaque discipline.			
2 Dimensions			
2a Les dimensions sont exprimées uniquement avec les valeurs du système métrique.			
3 Appellations commerciales			
3a Les appellations commerciales ne sont pas utilisées.			
4 Notes du devis			
4a Il n'y a aucune note relative au devis.			
5 Terminologie			
5a Le terme « représentant du Ministère » ou « Représentant Ministériel » est utilisé au lieu des termes « ingénieur », « TPSGC », « propriétaire », « expert-conseil » ou « architecte ».			
5b Les notes « vérification sur place », « selon les instructions », « pour correspondre à ce qui existe », « exemple », « égal à », « équivalent à » et « à déterminer sur place par » ne sont pas utilisées.			
6 Renseignements à inclure			
6a Les détails du projet liés à la quantité de matériaux, à la configuration, aux dimensions et à la construction sont compris.			
6b Les références faites à des travaux et éléments futurs qui ne sont pas dans le contrat n'apparaissent pas dans le document ou sont mentionnées au minimum et clairement identifiées comme telles.			

Sujet	Vérifié par	Commentaires	Suivi
Dessins- suite			
7 Respect des Normes de TPSGC			
7a Le format électronique des plans respecte les normes courantes CDAO de TPSGC.			
7b Le format électronique des plans et devis, en français et en anglais, respecte la structure de répertoire de TPSGC pour l'affichage électronique des documents de soumissions.			

Je confirme que les plans et le devis de l'ensemble des disciplines ont été rigoureusement examinés et que les points de la liste ci-dessus ont été réglés ou intégrés. Je reconnais et j'accepte que le fait de signer et de certifier que tous les éléments cités ci-dessus ont été réglés engage la responsabilité de mon entreprise. Si, durant la soumission de ces documents ou de la mise en œuvre du projet, il est jugé que les éléments n'ont pas été correctement réglés, mon entreprise aura la responsabilité de résoudre tous les problèmes qui en découlent, à ses frais, et peut obtenir, en tant qu'expert-conseil, une évaluation de rendement non satisfaisante qui pourrait avoir un effet sur la capacité de mon entreprise de passer, dans l'avenir, des marchés avec TPSGC.

Représentant de l'expert-conseil : _____

Nom de l'entreprise : _____

Signature : _____ Date : _____

ANNEXE B – Exemple d'addenda

Dernière mise à jour : 22 avril 2008

ADDENDA N° _____

Numéro du projet : _____

Les modifications suivantes aux documents de soumission entrent en vigueur immédiatement. Le présent addenda fera partie des documents contractuels.

DESSINS

NOTE AU RÉDACTEUR : Indiquer le numéro et le titre du dessin, dresser ensuite la liste des modifications ou indiquer le numéro et la date de révision, puis réimprimer le dessin avec l'addenda.

- 1 A1 Architecture
- .1

DEVIS

NOTE AU RÉDACTEUR : Indiquer le numéro et le titre de la section.

- 1 Section 01 11 01 Information générales sur les travaux

NOTE AU RÉDACTEUR : Dresser la liste des modifications (p. ex. suppression, ajout ou modification) par article ou par paragraphe.

- .1 Supprimer l'article (xx) en entier.
- .2 Se référer au paragraphe (xx.x) et modifier...
- 2 Section 23 05 00 – Exigences générales concernant les résultats des travaux – Mécanique
- .1 Ajouter le nouvel article (x) suivant :

ANNEXE C – Exemple de table des matières

Dernière mise à jour : 22 avril 2008

N° du projet : _____

Table des matières
Page 1 de ____

DEVIS ET DESSINS

DEVIS :

NOTE AU RÉDACTEUR : Dresser la liste des divisions, sections (par numéro et par titre) et indiquer le nombre de pages.

DIVISION	SECTION	NOMBRE DE PAGES
DIVISION 01	01 11 01 Informations générales sur les travaux.....XX
	01 14 25 – Rapport sur les substances désignées.....XX
	01 35 29.06 Santé et sécurité.....XX
DIVISION 23	23 xx xx	
DIVISION 26	26 xx xx	

DESSINS :

NOTE AU RÉDACTEUR : Dresser la liste des dessins par numéro et par titre.

C-1	Génie civil et aménagement paysager
A-1	Architecture
S-1	Structure
M-1	Mécanique
E-1	Électrique

ANNEXE D

MANUEL DE L'UTILISATEUR SUR LA STRUCTURE DU RÉPERTOIRE ET LES CONVENTIONS D'APPELLATION NORMALISÉES DES DOCUMENTS D'APPEL D'OFFRES POUR LA CONSTRUCTION EN FORMAT CD-ROM

Publié par
la Direction de l'attribution des marchés immobiliers

TPSGC

Mai 2005

Dernière mise à jour : le 3 juin 2008

Version 1.0

PRÉFACE

Le gouvernement du Canada (GC) s'est engagé à créer un environnement électronique pour la plupart de ses services. Cet engagement concerne la publication et la diffusion des possibilités de contrats et comprend les demandes de soumissions de construction. Par conséquent, il est désormais nécessaire d'obtenir un exemplaire des dessins et des devis de construction (en format PDF **sans** protection par mot de passe) sur un ou plusieurs CD-ROM afin de faciliter le transfert électronique de ces documents vers le Service électronique d'appels d'offres du gouvernement (SEAOG).

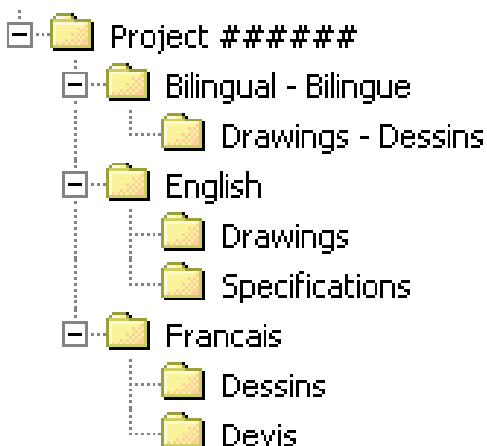
Il s'avère donc nécessaire d'utiliser une structure de répertoire et une convention d'appellation des fichiers communes afin de veiller à ce que les renseignements fournis aux entrepreneurs par voie électronique ou sur copie papier sont conformes aux normes adoptées par les industries de l'immobilier, tant en matière de conception que de construction. Le présent manuel définit la norme que doivent respecter les experts-conseils et les imprimeurs au moment du formatage et de l'organisation de l'information, et ce, que les dessins et devis soient créés par le balayage de documents papier ou enregistrés en format PDF à partir du logiciel d'origine (AutoCAD, NMS Edit, MS-Word, etc.).

Il est important de noter que la procédure décrite dans le présent manuel ne dispense pas les experts-conseils de suivre les normes établies pour la création de dessins et de devis. Le présent guide vise uniquement à fournir une norme pour organiser et nommer les fichiers électroniques qui seront enregistrés sur CD-ROM.

1. STRUCTURE DE RÉPERTOIRE

1.1 Sous-dossiers de 1^{er}, 2^e et 3^e niveaux

Chaque CD-ROM, que ce soit pour la première demande de soumissions (appel d'offres) ou pour une modification (addenda), doit comprendre les éléments suivants de la structure de répertoire :



Il est important de tenir compte des remarques suivantes au sujet de cette structure de répertoire :

- Le dossier « *Projet #####* » constitue le 1^{er} niveau de la structure de répertoire et « *#####* » représente chaque chiffre du numéro de projet. Le numéro de projet doit toujours être utilisé pour nommer le dossier de 1^{er} niveau et il doit toujours être indiqué. Il est possible d'ajouter du texte libre à la suite du numéro de projet, comme par exemple une brève description ou le titre du projet.
- Les dossiers « *Bilingual – Bilingue* », « *English* » et « *Français* » constituent le 2^e niveau de la structure de répertoire. Les dossiers de 2^e niveau **ne peuvent pas** être renommés car le SEAOG utilise ces noms à des fins de validation. La structure doit toujours comporter au moins un des dossiers « *Bilingual – Bilingue* », « *English* » ou « *Français* », et ceux-ci doivent toujours contenir un sous-dossier de 3^e niveau.
- Les dossiers « *Drawings – Dessins* », « *Drawings* », « *Specifications* », « *Dessins* » et « *Devis* » constituent le 3^e niveau de la structure de répertoire. Les dossiers de 3^e niveau **ne peuvent pas** être renommés car le SEAOG utilise ces noms à des fins de validation. Chaque document doit comporter au moins un dossier de 3^e niveau.

IMPORTANT : Les éléments applicables de la structure de répertoire (dossiers des 1^{er}, 2^e et 3^e niveaux) sont obligatoires et ne peuvent pas être modifiés.

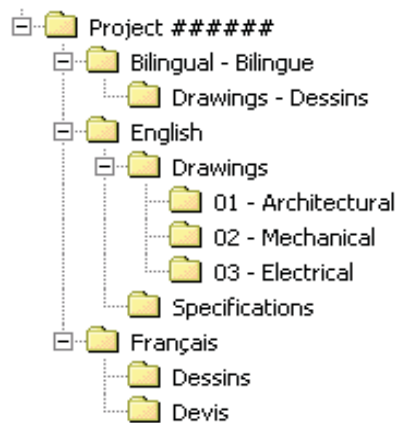
1.2 Sous-dossiers de 4^e niveau pour les dessins

Les dossiers « *Drawings – Dessins* », « *Drawings* » et « *Dessins* » doivent comporter des sous-dossiers de 4^e niveau qui ont été créés pour refléter les différentes disciplines du jeu de dessins.

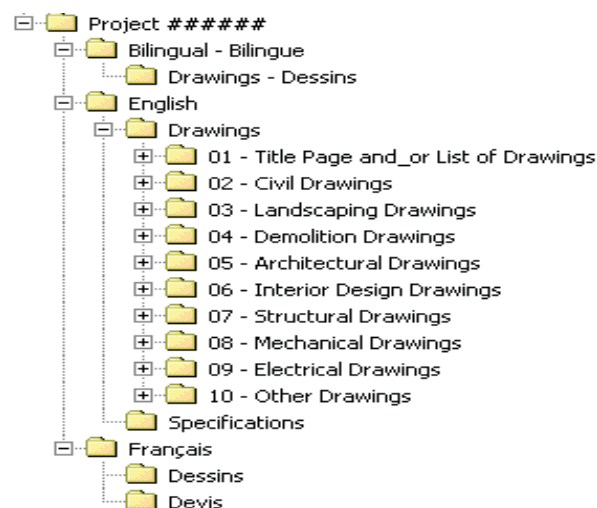
Étant donné que l'ordre d'apparition à l'écran des sous-dossiers détermine également leur ordre d'impression, le nom des sous-dossiers inclus dans les dossiers « *Drawings – Dessins* », « *Drawings* » et « *Dessins* » doit obligatoirement être précédé d'un chiffre.

Remarque : Le premier sous-dossier doit toujours être réservé à la page de titre ou à la liste des dessins, à moins que le premier dessin du jeu ne soit réellement un dessin numéroté relevant d'une discipline particulière.

Exemples de sous-dossiers de 4^e niveau pour les dessins :



ou



1.2.1 Convention d'appellation

Les sous-dossiers de 4^e niveau pour les dessins doivent respecter la convention d'appellation suivante.

Pour les dossiers « *Drawings* » et « *Dessins* » :

- Y

où :

= un numéro à deux chiffres allant de 01 à 99 (le zéro de tête doit être inclus)

Y = le nom du dossier

Exemple : 03 – Mécanique

Pour le dossier « *Drawings – Dessins* » :

- Y - Z

où :

= un numéro à deux chiffres allant de 01 à 99 (le zéro de tête doit être inclus)

Y = le nom anglais du dossier

Z = le nom français du dossier

Exemple : 04 – Electrical – Électricité

Il convient de remarquer que la numérotation des sous-dossiers de 4^e niveau sert uniquement à des fins de classement et ne correspond pas à une discipline particulière. Par exemple, le sous-dossier « *Architectural – Architecture* » pourrait recevoir le numéro 05 lorsqu'un projet comprend déjà quatre autres disciplines ou il pourrait recevoir le numéro 01 dans un autre projet où l'architecture apparaît en premier dans le jeu de dessins.

Il est primordial que l'ordre d'apparition des dessins sur le CD-ROM soit exactement identique à celui du document imprimé. Le SEAOG se conformera aux règles suivantes pour classer les dessins en vue de les afficher à l'écran ou de les imprimer :

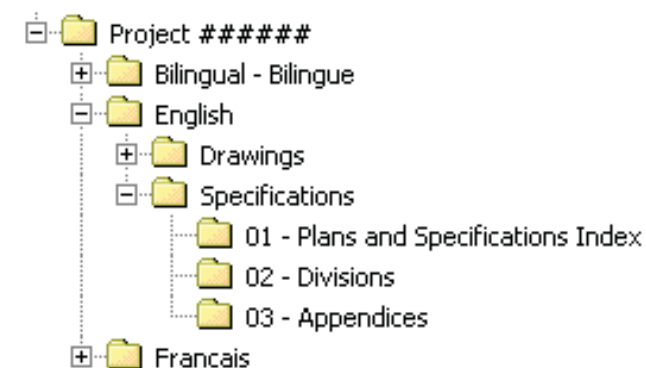
- Le classement alphanumérique s'effectue par ordre croissant.
- L'ordre alphanumérique des sous-dossiers détermine leur ordre d'apparition à l'écran de même que leur ordre d'impression (p. ex. tous les fichiers de dessin en format PDF qui se trouvent dans le sous-dossier 01 seront imprimés par ordre alphanumérique avant les dessins du sous-dossier 02 et ainsi de suite).
- Chaque fichier de dessin en format PDF contenu dans chaque sous-dossier sera également classé par ordre alphanumérique. Cela déterminera son ordre d'apparition à l'écran et son ordre d'impression (p. ex. le Dessin A001 sera imprimé avant le Dessin A002, le Dessin M02 avant le Dessin M03, et ainsi de suite).

1.3 Sous-dossiers de 4^e niveau pour les devis

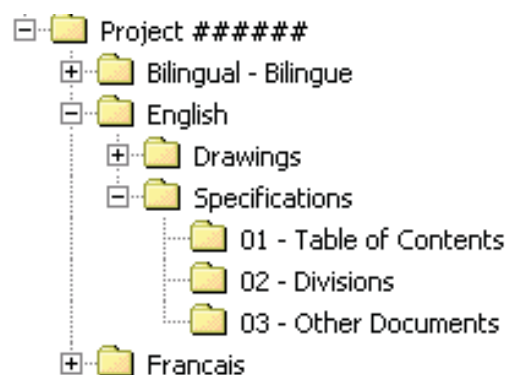
Les dossiers « *Specifications* » et « *Devis* » doivent comprendre des sous-dossiers de 4^e niveau, correspondant aux différents éléments du devis.

Étant donné que l'ordre d'apparition à l'écran des sous-dossiers détermine également leur ordre d'impression, le nom des sous-dossiers figurant dans les dossiers « *Specifications* » et « *Devis* » doit obligatoirement débiter par un chiffre.

Exemples de sous-dossiers de 4^e niveau pour les devis :



ou



1.3.1 Convention d'appellation

Les sous-dossiers de 4^e niveau pour les devis doivent respecter la convention d'appellation décrite ci-dessous.

Pour les dossiers « *Specifications* » et « *Devis* » :

- Y

où :

= un numéro à deux chiffres allant de 01 à 99 (le zéro de tête doit être inclus)
Y = le nom du dossier

Exemple : 02 – Divisions

Il convient de remarquer que la numérotation des sous-dossiers de 4^e niveau sert uniquement au classement et ne correspond pas à une discipline particulière.

Il est primordial que l'ordre d'apparition des éléments du devis sur le CD-ROM soit exactement identique à celui du document imprimé. Le SEAOG se conformera aux règles suivantes pour classer chaque élément du devis en vue de les afficher à l'écran ou de les imprimer :

- Le classement alphanumérique s'effectue par ordre croissant.
- L'ordre alphanumérique des sous-dossiers détermine leur ordre d'apparition à l'écran de même que leur ordre d'impression (p. ex. tous les fichiers de devis en format PDF qui se trouvent dans le sous-dossier 01 seront imprimés par ordre alphanumérique avant les fichiers PDF du sous-dossier 02 et ainsi de suite).
- Tous les fichiers de devis en format PDF contenus dans chaque sous-dossier seront également classés par ordre alphanumérique. Cela déterminera leur ordre d'apparition à l'écran et leur ordre d'impression (p. ex. le fichier Division 01 sera imprimé avant le fichier Division 02, le fichier 01 – Annexe A avant le fichier 02 – Annexe B et ainsi de suite).

2. CONVENTION D'APPELLATION POUR LES FICHIERS PDF

Les dessins, les éléments du devis et tous les autres documents faisant partie du document d'appel d'offres doivent être convertis en PDF (sans protection par mot de passe) en respectant la convention d'appellation décrite ci-dessous. En outre, chaque fichier PDF doit être enregistré dans le bon sous-dossier de la structure de répertoire.

2.1 Dessins

Chaque dessin doit être présenté sur **une seule page** dans un fichier PDF **distinct**. Voici la convention d'appellation des dessins :

X### - Y

où :

- | | |
|-------|---|
| X = | la ou les lettre(s) figurant dans le cartouche du dessin (p. ex. « A » pour Architecture ou « AI » pour Aménagement intérieur) et indiquant la discipline concernée |
| ### = | le numéro figurant dans le cartouche du dessin (composé d'un à trois chiffres) |
| Y = | le titre apparaissant dans le cartouche du dessin (dans le cas des dessins bilingues, le titre anglais et le titre français doivent tous deux apparaître) |

Exemple : A001 – Détails du rez-de-chaussée

Tous les dessins se rapportant à une même discipline et enregistrés dans un même sous-dossier de 4^e niveau doivent comporter la même lettre (p. ex. « A » pour les dessins architecturaux) et être numérotés. Le numéro figurant dans le nom du fichier PDF doit, dans la mesure du possible, correspondre au numéro du dessin (sauf dans les cas où un zéro de tête est nécessaire).

Il est important de tenir compte des remarques suivantes en ce qui concerne les dessins :

- Les fichiers de dessin en format PDF qui se trouvent dans chaque sous-dossier sont classés par ordre alphanumérique à des fins d'affichage et d'impression. Si une discipline particulière comporte plus de 9 dessins, les numéros doivent alors être composés d'au moins deux chiffres. On doit par exemple nommer le premier dessin A01, et non pas A1, afin que le dessin A10 n'apparaisse pas entre les dessins A1 et A2. La même règle s'applique lorsqu'une discipline comporte plus de 99 dessins. Les numéros doivent dans ce cas être composés de trois chiffres (p. ex. M003 au lieu de M03).
- Les fichiers de dessin en format PDF qui se trouvent dans le dossier « *Bilingual – Bilingue* » ne doivent pas figurer à la fois dans les dossiers « *English* » et « *Français* ».
- Les dessins qui n'appartiennent pas à une discipline particulière (p. ex. la page de titre ou la liste des dessins) et qui ne sont pas numérotés seront classés par ordre alphabétique. Bien que cela ne pose aucun problème lorsqu'il n'existe qu'un seul dessin de ce type dans un sous-dossier, cela pourrait altérer le classement si le sous-dossier en comporte plusieurs. Par conséquent, si l'ordre alphabétique des dessins ne correspond pas à l'ordre des copies papier, les dessins doivent être nommés conformément à la convention d'appellation décrite ci-dessous lors de leur conversion en format PDF, afin d'être affichés et imprimés dans le bon ordre.

- Y

où :

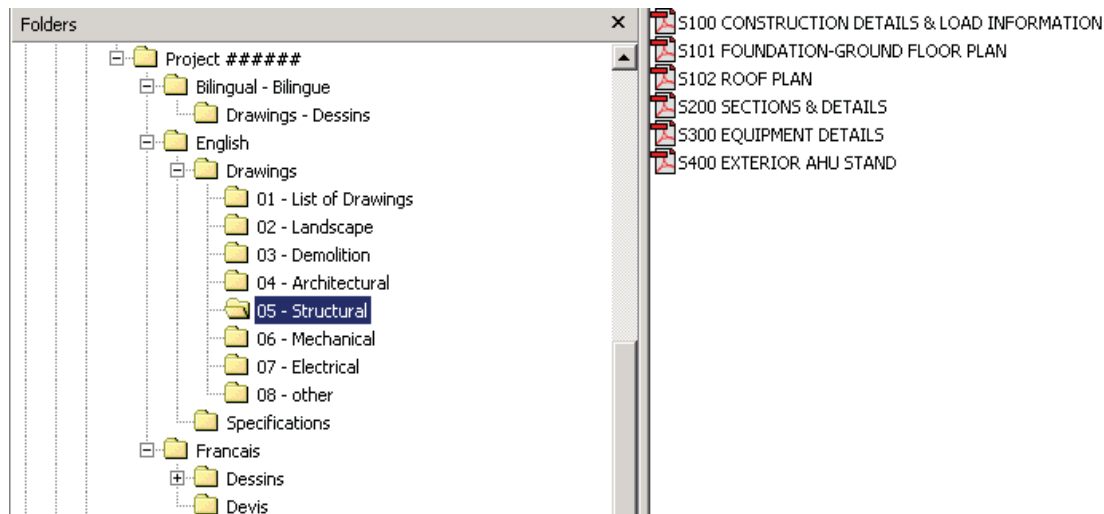
= un numéro à deux chiffres allant de 01 à 99 (le zéro de tête doit être inclus)

Y = le titre du dessin

Exemple : 01 – Page de titre
02 – Liste des dessins

Si les fichiers PDF ne sont pas numérotés, le fichier « *Liste des dessins* » apparaîtra avant le fichier « *Page de titre* » en raison du classement alphabétique.

Exemple d'un sous-dossier de 4^e niveau contenant des dessins :



2.2. Devis

Chaque division du devis doit figurer dans un fichier PDF distinct et toutes les pages de ce fichier doivent avoir le même format (longueur et largeur). L'index des plans et des devis doit lui aussi figurer dans un fichier PDF distinct. Tout autre document inclus dans le devis, par exemple une annexe, doit également figurer dans un fichier PDF distinct.

2.2.1 Documents autres que les divisions du devis

Étant donné que les fichiers PDF enregistrés dans les sous-dossiers du devis sont classés par ordre alphanumérique (et en ordre croissant) à des fins d'affichage et d'impression, tous les fichiers figurant dans les dossiers autres que le sous-dossier « *Divisions* » doivent être numérotés de la façon suivante :

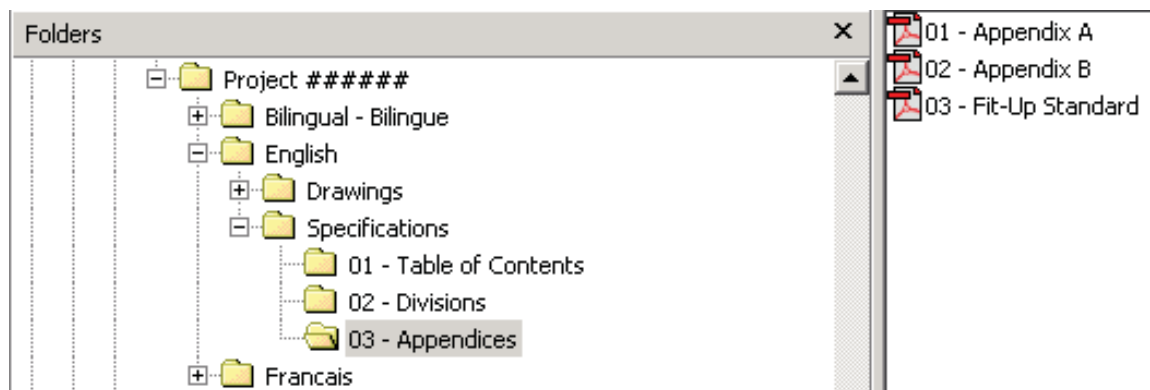
- Y

où :

= un numéro à deux chiffres allant de 01 à 99 (le zéro de tête doit être inclus)
Y = le titre du document

Exemple : 01 – Liste des plans et des sections du devis

Exemple de contenu d'un sous-dossier (autre que le sous-dossier « *Divisions* ») :



2.2.2 Divisions du devis

Les divisions du devis doivent être nommées de la façon suivante :

Division ## - Y

où :

Division ## = le mot « *Division* » suivi d'une espace, puis d'un numéro à deux chiffres allant de 01 à 99 (le zéro de tête doit être inclus)

Y = le nom de la division du devis conformément au **Répertoire normatif**

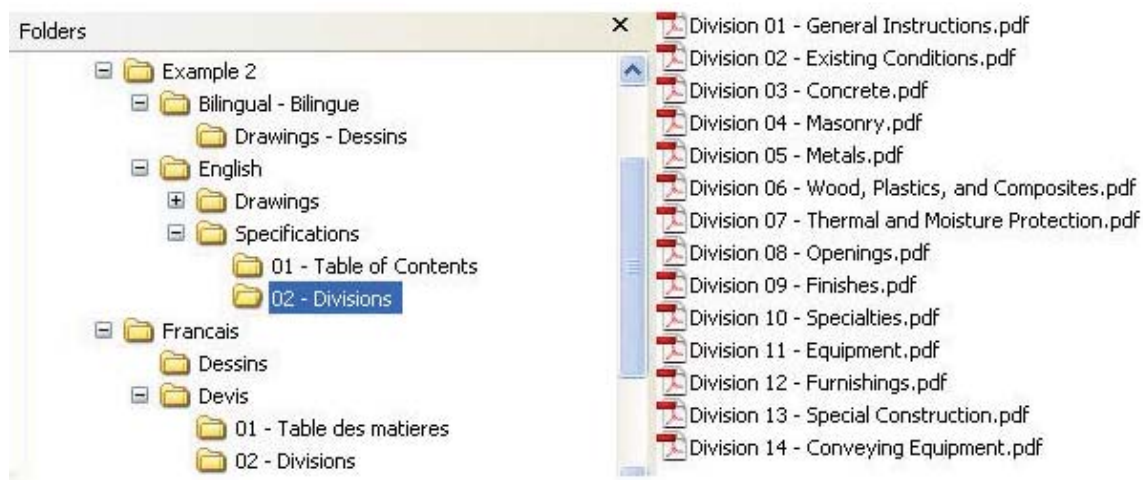
DCC et DSI™

Exemple : Division 05 – Métaux

Il est important de tenir compte des remarques suivantes en ce qui concerne le devis :

- Il **faut respecter** la numérotation des divisions établie par le **Répertoire normatif DCC et DSI™**, même si certaines divisions ne sont pas utilisées dans un projet particulier. Ainsi, la Division 05 sera toujours la Division 05, même si la Division 04 ne figure pas dans le projet.

Exemple du contenu du sous-dossier « *Divisions* » :



3. ÉTIQUETTE DU CD-ROM

Les renseignements suivants doivent figurer sur chaque CD-ROM :

Numéro du projet / Project *Number*

Titre du projet / Project *Title*

Documents d'appel d'offres / Documents for Tender

CD X de/of X

Exemple :

Projet 123456 / Project 123456

Réparation du pont Alexandra / Repair Alexandra Bridge

Documents d'appel d'offres / Documents for Tender

CD 1 de/of 1

ANNEXE E

GUIDE DE RÉFÉRENCE DE BASE SUR LA CONVERSION DES DESSINS DE CONSTRUCTION EN FORMAT DE DOCUMENT PORTABLE (PDF)

Publié par
la Direction de l'attribution des marchés immobiliers
TPSGC
Mai 2005

Dernière mise à jour : 3 mai 2005

Version 1.0

PRÉFACE

Le format de document portable (PDF) est le format standard pour les documents qui sont publiés dans le SEAOG. Il faut donc obtenir des experts-conseils en architecture et en génie une version électronique des dessins et des devis en format PDF pour les appels d'offres relatives à des projets de construction du GC.

Pour obtenir la meilleure qualité en termes de résolution et d'impression, les experts-conseils doivent, dans la mesure du possible, faire en sorte que les fichiers de dessin et de devis en format PDF soient dérivés du logiciel d'origine qui a servi à les créer. On ne peut numériser les dessins que dans des circonstances particulières, par exemple quand le document d'appel d'offres de construction ne comprend aucune version électronique d'un dessin.

Le présent document contient des renseignements de base concernant la conversion de dessins de conception et dessin assistés par ordinateur (CDAO) en format PDF. La création d'un fichier PDF à partir d'un dessin de CDAO est un processus relativement simple une fois que toutes les configurations et tous paramètres sont définis. En fait, la conversion ne devrait pas prendre plus de temps qu'il n'en faut pour créer un fichier de tracé ou pour envoyer un dessin à une imprimante. Le présent guide ne vise pas à traiter de tous les aspects techniques de la conversion, qui peut être effectuée de différentes façons, mais à souligner les points importants du processus et des paramètres des fichiers. En outre, le présent guide ne traite pas de la conversion de devis étant donné que cette conversion n'exige pas de configuration ou de paramètres particuliers.

Les renseignements contenus dans le présent guide de référence ne signifient pas que les experts-conseils n'ont pas à suivre les normes établies en matière de production de dessins et de devis. Le présent guide ne sert qu'à donner des renseignements de base concernant le processus de conversion de dessins et de devis en format PDF en tenant compte du fait qu'il est possible d'obtenir des renseignements techniques détaillés supplémentaires des différents fabricants de logiciels.

1. PILOTES D'IMPRESSION

Adobe Acrobat est fourni avec deux pilotes d'impression différents qui peuvent convertir les dessins de CDAO en fichiers PDF : Acrobat PDF Writer et Acrobat Distiller. Avant de créer un fichier PDF à partir d'un dessin de CDAO, il faut choisir le pilote qui doit être utilisé.

Acrobat PDF Writer est un pilote d'impression non PostScript qui fonctionne mieux avec des documents qui ne contiennent pas de graphiques complexes.

Acrobat Distiller est un pilote d'impression PostScript qui fonctionne mieux avec des documents contenant des remplissages PostScript, des graphiques en format Encapsulated PostScript ou d'autres éléments complexes.

Il est recommandé d'utiliser Acrobat Distiller pour créer des fichiers PDF à partir de dessins d'architecture et de génie en raison de leur taille et de leur nature graphique complexe.

2. CONFIGURATION D'IMPRESSION

Avant de convertir un dessin de CDAO en fichier PDF, il est nécessaire de créer un fichier de configuration d'impression Acrobat pour indiquer le format de papier du fichier PDF. On peut exécuter cette fonction dans le logiciel de CDAO plutôt que d'utiliser un format de papier personnalisé défini pour la fonction Acrobat Distiller. La méthode recommandée est d'ajouter un traceur Adobe PostScript dans le logiciel de CDAO et de définir les paramètres voulus en ce qui a trait à la source de support, au format, à l'échelle et à l'orientation. La configuration peut ensuite être réutilisée pour simplifier le processus de conversion pour des fichiers créés ultérieurement qui utilisent le même format de page.

Bien que cela ne soit pas recommandé, il est également possible de définir un format personnalisé dans Acrobat Distiller, dans le menu *Propriétés*.

3. CRÉATION DE FICHIERS PDF

Une fois la configuration d'impression terminée dans le logiciel de CDAO, lancez Acrobat Distiller et définissez les paramètres voulus dans les sous-menus *Préférences* et *Options de tâche*. Assurez-vous que les dimensions de la page correspondent au format de papier sélectionné dans le logiciel de CDAO pour créer le fichier. Des paramètres particuliers peuvent être enregistrés sous différents noms pour usage ultérieur.

Lorsque l'application Acrobat Distiller est ouverte, assurez-vous que le format de papier voulu s'affiche dans la fenêtre *Options de tâche*. Ensuite, il suffit d'amener le fichier de CDAO dans la boîte de création d'Acrobat Distiller.

Une barre de progression s'affiche pendant la conversion et le nouveau fichier PDF devrait s'ouvrir et s'afficher pour que vous puissiez le vérifier.

4. PARAMÈTRES DES FICHIERS PDF

4.1 Sécurité

Adobe Acrobat comporte des fonctions de sécurité qui permettent de protéger les fichiers en limitant les changements qui peuvent être apportés à ces derniers. Cependant, étant donné que les fichiers seront diffusés dans le SEAOG et qu'ils sont destinés à être imprimés, les fichiers **ne doivent pas** être protégés par un mot de passe et ils **doivent** pouvoir être imprimés.

4.2 Orientation des dessins

Les fichiers de dessin PDF finaux doivent être affichés à l'écran selon l'orientation souhaitée pour la visualisation par les utilisateurs. Pour ce faire, on peut ajuster la configuration du traceur. Si le dessin n'est pas orienté correctement après la conversion, on peut le faire pivoter manuellement dans Adobe Acrobat.

4.3 Type de police

Pour éviter des problèmes au moment de la conversion et pour minimiser le risque d'erreurs d'affichage des caractères, les polices utilisées pour la production de dessins d'exécution doivent être des *polices PostScript ou True Type*.

4.4 Résolution

Étant donné que les fichiers PDF sont destinés à être imprimés, il est important de sélectionner une résolution convenable. Il est recommandé de sélectionner une résolution de 600 points par pouce.

4.5 Échelle

Lorsque vous choisissez l'échelle de traçage dans Adobe, il est important de choisir l'échelle 1:1 pour garantir l'intégrité de l'échelle avec laquelle les dessins ont été créés dans le logiciel de CDAO.

5. NUMÉRISATION

La numérisation n'est pas recommandée et ne devrait être utilisée que si le dessin n'est pas disponible sous forme électronique. Lorsque vous numérisez un dessin, il est important de le faire à la taille réelle du dessin (échelle 1:1) pour veiller à ce que l'échelle reste intacte lors des impressions subséquentes. On recommande d'ouvrir et de vérifier chaque dessin numérisé pour s'assurer que la résolution, l'échelle et les bordures sont de qualité acceptable.

6. LISTE DE VÉRIFICATION FINALE

Une fois que le dessin a été converti en fichier PDF, on vous recommande de l'ouvrir et de vérifier les éléments suivants :

- Le format de papier correspond au format que l'on voulait obtenir lors de la création du document (le format s'affiche dans le coin inférieur gauche du dessin).
- L'orientation de la feuille est bonne.
- Le type et l'épaisseur des lignes, de même que les polices, correspondent à ceux du dessin de CDAO.
- Le fichier PDF est en noir et blanc.
- Chaque dessin est un fichier PDF unique.
- Le fichier PDF n'est pas protégé par un mot de passe et il peut être imprimé.

Si tous les éléments de la liste sont vérifiés, le fichier PDF est utilisable.

7. RENSEIGNEMENTS SUPPLÉMENTAIRES

Pour obtenir de plus amples renseignements sur la création de fichiers PostScript et EPS, veuillez consulter le guide de l'utilisateur du logiciel de CDAO utilisé pour produire les dessins. Pour obtenir de plus amples renseignements sur la création de fichiers PDF, veuillez consulter le guide de l'utilisateur d'Acrobat Distiller ou visitez le site Web d'Adobe à l'adresse suivante : www.adobe.com.

ANNEXE/APPENDIX

E



Government
of Canada

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du Canada

Contract Number / Numéro du contrat
EF937-141432

Security Classification / Classification de sécurité

SECURITY REQUIREMENTS CHECK LIST (SRCL) LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE		
1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine		2. Branch or Directorate / Direction générale ou Direction Comptrollership
3. a) Subcontract Number / Numéro du contrat de sous-traitance		3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant
4. Brief Description of Work / Brève description du travail Design services required for the development of plans and specifications for the Lacotte Expansion and Redevelopment project.		
5. a) Will the supplier require access to Controlled Goods? Le fournisseur aura-t-il accès à des marchandises contrôlées?		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> Yes Oui
5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques?		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> Yes Oui
6. Indicate the type of access required / Indiquer le type d'accès requis		
6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c.) (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c.)		<input type="checkbox"/> No Non <input checked="" type="checkbox"/> Yes Oui
6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé.		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> Yes Oui
6. c) Is this a commercial courier or delivery requirement with no overnight storage? S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit?		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> Yes Oui
7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès		
Canada <input checked="" type="checkbox"/>	NATO / OTAN <input type="checkbox"/>	Foreign / Étranger <input type="checkbox"/>
7. b) Release restrictions / Restrictions relatives à la diffusion		
No release restrictions Aucune restriction relative à la diffusion <input checked="" type="checkbox"/>	All NATO countries Tous les pays de l'OTAN <input type="checkbox"/>	No release restrictions Aucune restriction relative à la diffusion <input type="checkbox"/>
Not releasable À ne pas diffuser <input type="checkbox"/>		
Restricted to: / Limité à: <input type="checkbox"/>	Restricted to: / Limité à: <input type="checkbox"/>	Restricted to: / Limité à: <input type="checkbox"/>
Specify country(ies): / Préciser le(s) pays:	Specify country(ies): / Préciser le(s) pays:	Specify country(ies): / Préciser le(s) pays:
7. c) Level of information / Niveau d'information		
PROTECTED A PROTÉGÉ A <input type="checkbox"/>	NATO UNCLASSIFIED NATO NON CLASSIFIÉ <input type="checkbox"/>	PROTECTED A PROTÉGÉ A <input type="checkbox"/>
PROTECTED B PROTÉGÉ B <input checked="" type="checkbox"/>	NATO RESTRICTED NATO DIFFUSION RESTREINTE <input type="checkbox"/>	PROTECTED B PROTÉGÉ B <input type="checkbox"/>
PROTECTED C PROTÉGÉ C <input type="checkbox"/>	NATO CONFIDENTIAL NATO CONFIDENTIEL <input type="checkbox"/>	PROTECTED C PROTÉGÉ C <input type="checkbox"/>
CONFIDENTIAL CONFIDENTIEL <input type="checkbox"/>	NATO SECRET NATO SECRET <input type="checkbox"/>	CONFIDENTIAL CONFIDENTIEL <input type="checkbox"/>
SECRET SECRET <input type="checkbox"/>	COSMIC TOP SECRET COSMIC TRÈS SECRET <input type="checkbox"/>	SECRET SECRET <input type="checkbox"/>
TOP SECRET TRÈS SECRET <input type="checkbox"/>		TOP SECRET TRÈS SECRET <input type="checkbox"/>
TOP SECRET (SIGINT) TRÈS SECRET (SIGINT) <input type="checkbox"/>		TOP SECRET (SIGINT) TRÈS SECRET (SIGINT) <input type="checkbox"/>

TBS/SCT 350-103(2004/12)

Security Classification / Classification de sécurité

Canada



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PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS? ☒ No ☐ Yes
Non Oui

If Yes, indicate the level of sensitivity:

Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate? ☒ No ☐ Yes
Non Oui

Short Title(s) of material / Titre(s) abrégé(s) du matériel :

Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> RELIABILITY STATUS
COTE DE FIABILITÉ | <input type="checkbox"/> CONFIDENTIAL
CONFIDENTIEL | <input type="checkbox"/> SECRET
SECRET | <input type="checkbox"/> TOP SECRET
TRÈS SECRET |
| <input type="checkbox"/> TOP SECRET - SIGINT
TRÈS SECRET - SIGINT | <input type="checkbox"/> NATO CONFIDENTIAL
NATO CONFIDENTIEL | <input type="checkbox"/> NATO SECRET
NATO SECRET | <input type="checkbox"/> COSMIC TOP SECRET
COSMIC TRÈS SECRET |
| <input type="checkbox"/> SITE ACCESS
ACCÈS AUX EMPLACEMENTS | | | |

Special comments:

Commentaires spéciaux :

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.

REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work?
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail? ☐ No ☒ Yes
Non Oui

If Yes, will unscreened personnel be escorted?
Dans l'affirmative, le personnel en question sera-t-il escorté? ☐ No ☒ Yes
Non Oui

PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises?
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS? ☒ No ☐ Yes
Non Oui

11. b) Will the supplier be required to safeguard COMSEC information or assets?
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC? ☒ No ☐ Yes
Non Oui

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises?
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ? ☒ No ☐ Yes
Non Oui

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data?
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS? ☒ No ☐ Yes
Non Oui

11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency?
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale? ☒ No ☐ Yes
Non Oui

TBS/SCT 350-103(2004/12)

Security Classification / Classification de sécurité

Canada



Government
of Canada

Gouvernement
du Canada

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PART C - (continued) / PARTIE C - (suite)

For users completing the form manually use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.
Les utilisateurs qui remplissent le formulaire manuellement doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form online (via the Internet), the summary chart is automatically populated by your responses to previous questions.
Dans le cas des utilisateurs qui remplissent le formulaire en ligne (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

Category Catégorie	PROTECTED PROTÉGÉE			CLASSIFIED CLASSIFIÉ			NATO				COMSEC					
	A	B	C	CONFIDENTIAL CONFIDENTIEL	SECRET	TOP SECRET TRÈS SECRET	NATO RESTRICTED NATO DIFFUSION RESTREINTE	NATO CONFIDENTIAL NATO CONFIDENTIEL	NATO SECRET	COSMIC TOP SECRET COSMIC TRÈS SECRET	PROTECTED PROTÉGÉE			CONFIDENTIAL CONFIDENTIEL	SECRET	TOP SECRET TRÈS SECRET
											A	B	C			
Information / Assets Renseignements / Biens Production																
IT Media / Support TI																
IT Link / Lien électronique																

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?
La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?

☒ No
Non ☐ Yes
Oui

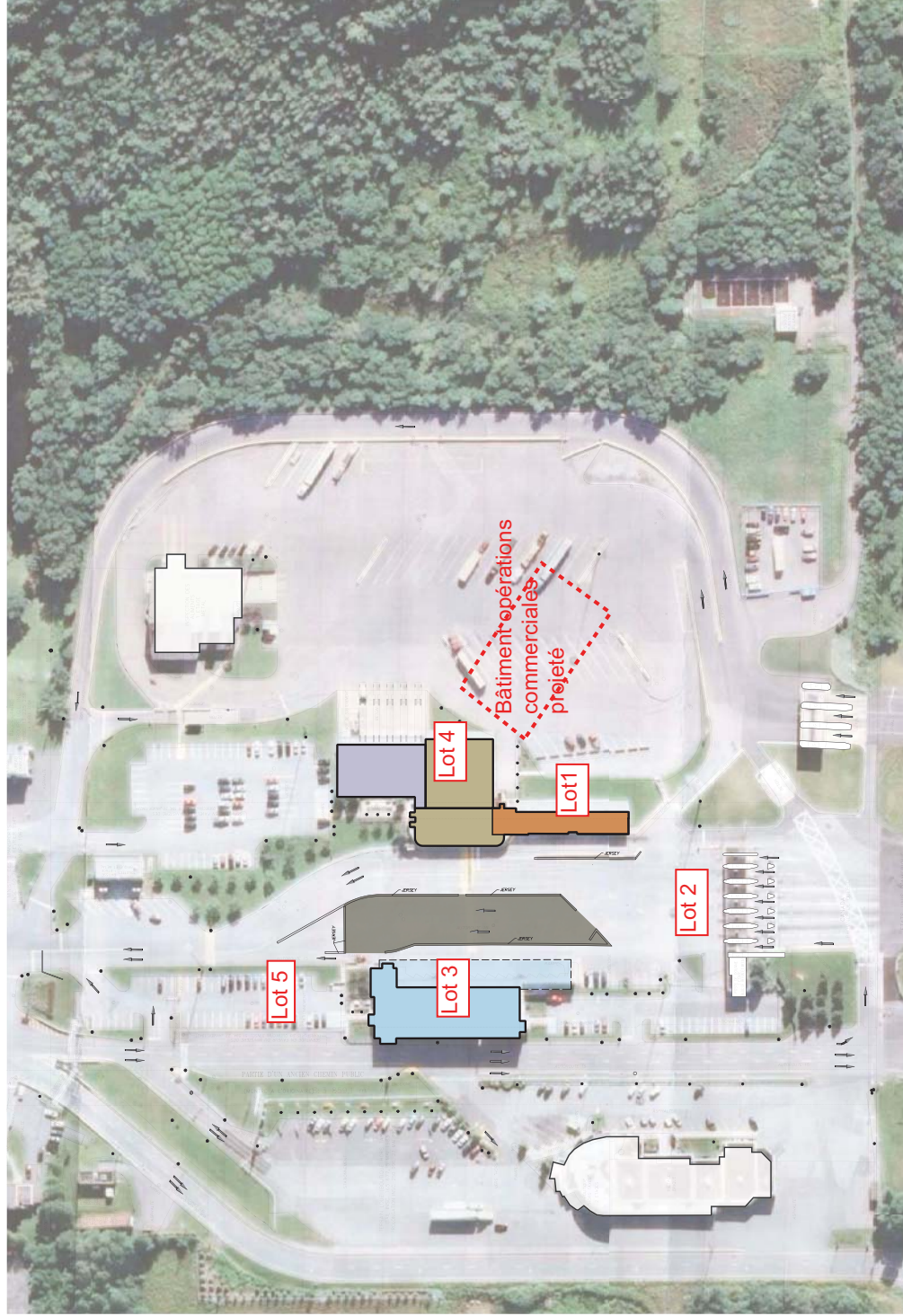
If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".
Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?
La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?

☒ No
Non ☐ Yes
Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).
Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquez qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).

	OPÉRATIONS AUTOCAR
	OPÉRATIONS COMMERCIALES
	OPÉRATIONS COMMERCIALES (QUAIS)
	OPÉRATIONS VOYAGEURS
	INSPECTION SECONDAIRE
	INSPECTION TERTIAIRE

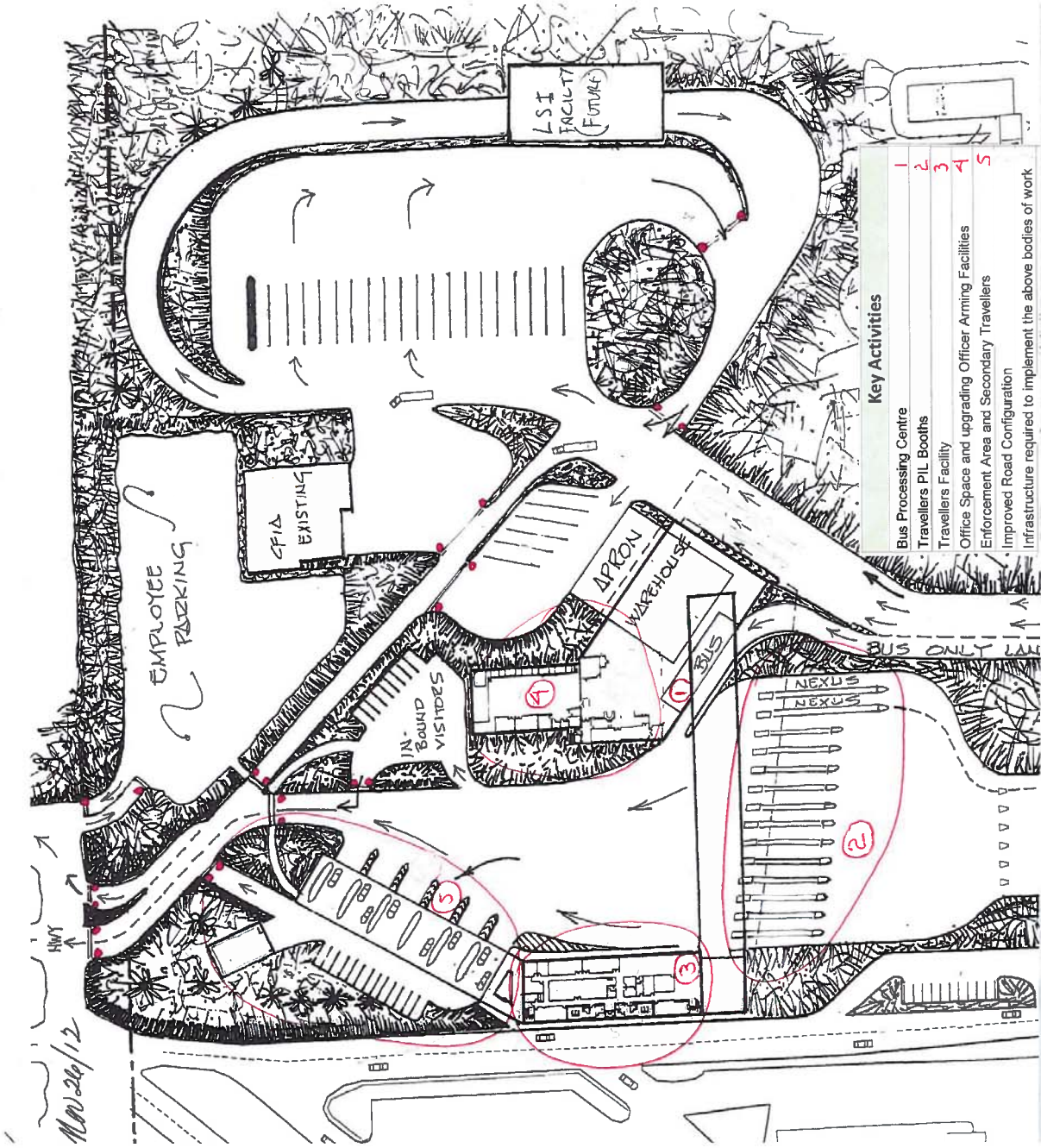


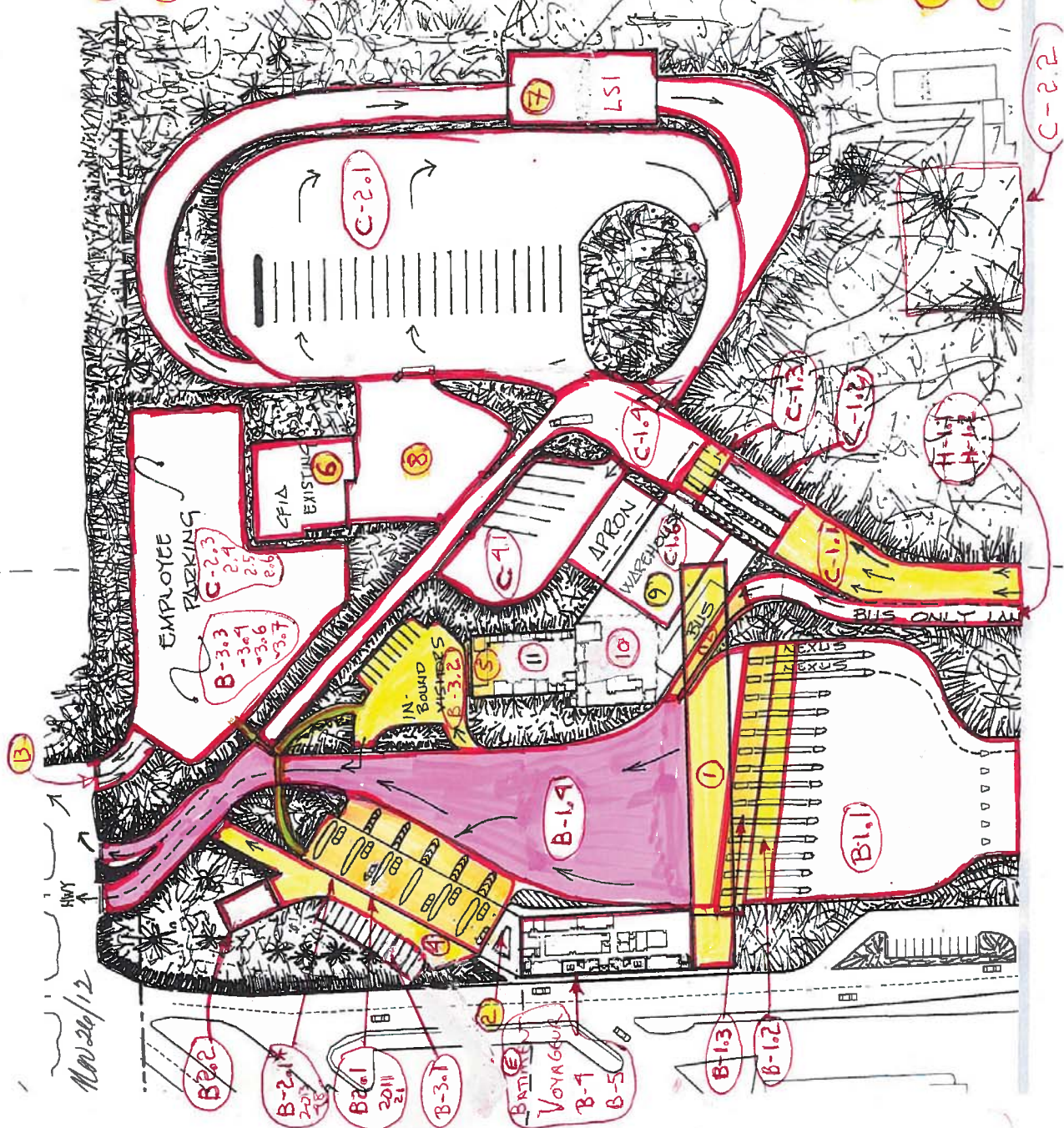
400 Avenue
 270 Place
 3040-200
 Saint-Bernard
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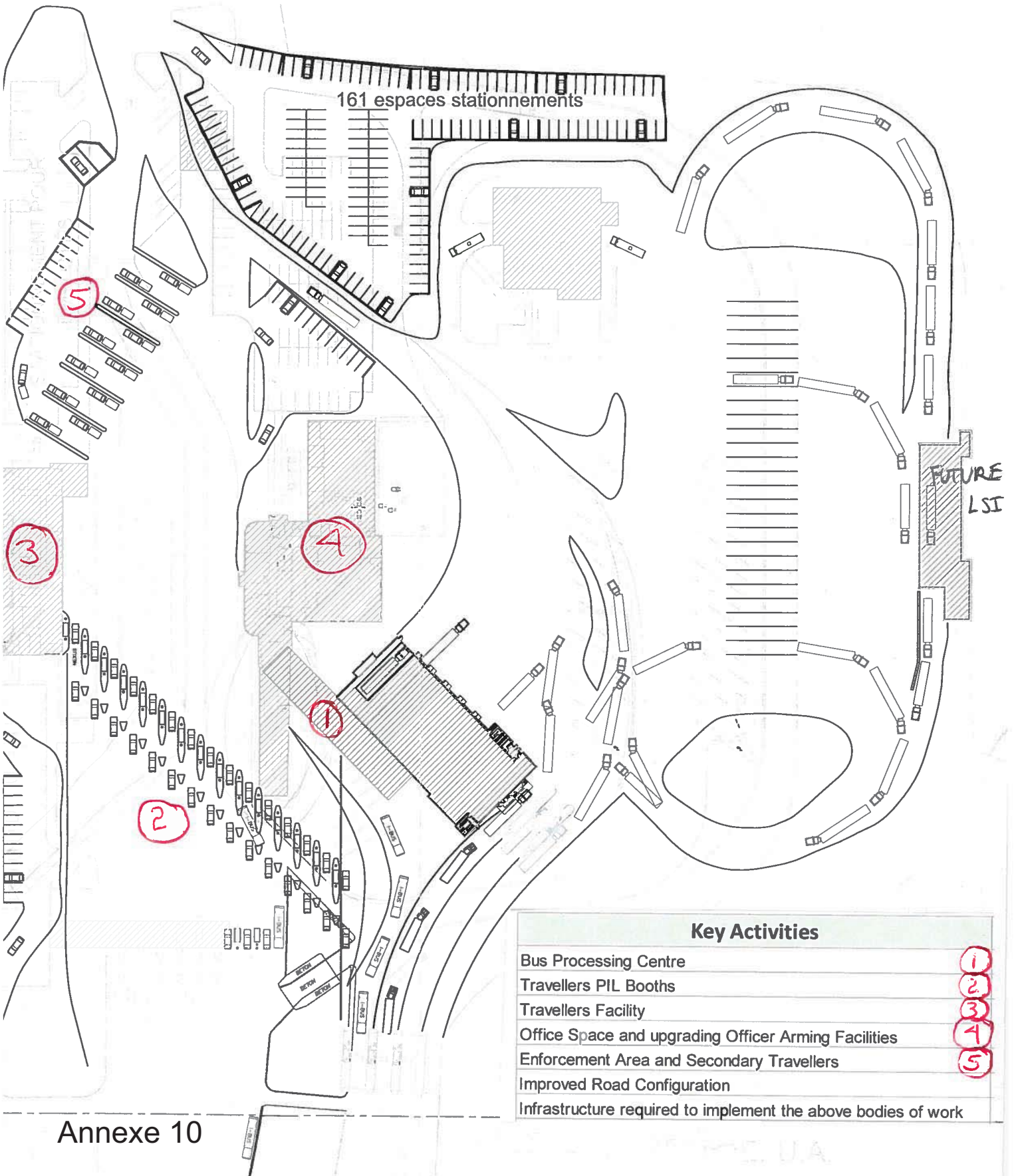
Poste frontalier Saint-Bernard de Lacolle Lacolle

27/05/2010 pas à l'échelle
 implantation existante P00-00





- 1 WALKWAY/PASSERELLE DÉTAILS AD
- 2 ON A BESOIIN UN ROUTE POUR ARRIVER AU STATIONNEMENT, AUTOUR 2 MOINS (SI, ON STATION ICI)
- 3 ~~STATIONNEMENT POUR PAYER / PAYER POUR UTILISER LE SALON DE BAIN SI DANS B. VOYAGE~~
- 4 SORTIE DE 2 MOINS
- 5 PUBLIC TOILETS / TOILETTES PUBLIQUES?
- 6 CFIA →
- 7 LSI FACILITY /
- 8 CFIA STATIONNEMENT
- 9 C-3; C-4, C-6, C-7, C-8
- 10 C-3, C-6, C-7, C-8
- 11 C-6, C-7, C-8
- 12 H-1.3, H-1.4
- 13 VOIE DE STATIONNEMENT



15 GUÉRITES VOYAGEURS SUR 2 LIGNES

