



INVITATION TO TENDER

FOR

**BLACKOUT CURTAINS FOR GREENHOUSES B1&B2
Building 21
Project: CEF14-A576**

**CENTRAL EXPERIMENTAL FARM (CEF)
Agriculture and Agri-Food Canada (AAFC)
K.W. Neatby Building
960 Carling Avenue
Ottawa, Ontario K1A 0C6**

SOLICITATION 14-1284

**CLOSING: Tuesday February 24, 2015 at 02:00 p.m.
Eastern Standard Time (EST)**

TABLE OF CONTENTS

SPECIAL INSTRUCTIONS TO BIDDERS

- SI01 Bid Documents
- SI02 Enquiries during the Solicitation Period
- SI03 Site Visit
- SI04 Revision of Bid
- SI05 Bid Results
- SI06 Bid Validity Period
- SI07 Construction Documents
- SI08 Personnel Security Requirements

INSTRUCTIONS TO BIDDERS

- IB01 Completion of Bid
- IB02 Identity or Legal Capacity of the Bidder
- IB03 Applicable Taxes
- IB04 Tax to Be Included
- IB05 Capital Development and Redevelopment Charges
- IB06 Registry and Pre-qualification of Floating Plant
- IB07 Listing of Subcontractors and Suppliers
- IB08 Bid Security Requirements
- IB09 Submission of Bid
- IB10 Revision of Bid
- IB11 Acceptance of Bid
- IB12 Bid Costs
- IB13 Compliance with Applicable Laws
- IB14 Approval of Alternative Materials
- IB15 Income Tax Requirement
- IB16 Contingency Fees
- IB17 Status of the Bidder

CONTRACT DOCUMENTS (CD)

GENERAL CONDITIONS FOR MINOR WORKS

INSURANCE TERMS

BID AND ACCEPTANCE FORM

SECURITY REQUIREMENTS CHECK LIST (SRCL)

DRAWINGS AND SPECIFICATIONS

SPECIAL INSTRUCTIONS TO BIDDERS

SI01 BID DOCUMENTS

- 1) The following are the bid documents:
 - (a) Special Instructions to Bidders;
 - (b) Instructions to Bidders;
 - (c) General Conditions for Minor Works;
 - (d) Insurance Terms;
 - (e) Drawings and Specifications;
 - (f) Bid and Acceptance Form and related Appendix(s); and
 - (g) Any amendment issued prior to solicitation closing.

Canada reserves the right to revise or amend the Bid Documents prior to the date set for opening bids. Such revisions or amendments, if any, will be announced by an addendum or addenda to the documents.

Submission of a bid constitutes acknowledgement that the Bidder has read and agrees to be bound by these documents.

SI02 ENQUIRIES DURING THE SOLICITATION PERIOD

- 1) Enquiries regarding this bid must be submitted in writing to the Contracting Officer. The Contracting Officer for the purpose of this bid is:

Jean-Pierre Simard
Senior Contracts Officer
Agriculture and Agri-Food Canada
K.W. Neatby Building, Room 1127
960 Carling Avenue
Ottawa, Ontario K1A 0C6
613-759-6157
Jean-pierre.simard@agr.gc.ca

- 2) Except for the approval of alternative materials as described in IB14 of the INSTRUCTIONS TO BIDDERS, enquiries should be received no later than five (5) calendar days prior to the date set for solicitation closing to allow sufficient time to provide a response. Enquiries received after that time may not result in an answer being provided.
- 3) To ensure consistency and quality of the information provided to Bidders, the Contracting Officer shall examine the content of the enquiry and shall decide whether or not to issue an amendment.
- 4) All enquiries and other communications related to this bid sent throughout the solicitation period are to be directed ONLY to the Contracting Officer. Non-compliance with this requirement during the solicitation period can, for that reason alone, result in disqualification of a bid.

SI03 SITE VISIT

- 1) Due to the nature of the work, there will be no site visit.

SI04 REVISION OF BID

- 1) A bid may be revised by letter in accordance with IB10 of the INSTRUCTIONS TO BIDDERS.

SIOS BID RESULTS

- 1) Following solicitation closing, bidders may ask the results of the bid opening by calling the CEF at Telephone No. (613) 759-6157.

SI06 BID VALIDITY PERIOD

- 1) Canada reserves the right to seek an extension to the bid validity period prescribed in Clause 4 of the BID AND ACCEPTANCE FORM. Upon notification in writing from Canada, Bidders shall have the option to either accept or reject the proposed extension.

SI07 CONSTRUCTION DOCUMENTS

- 1) The successful contractor will be provided with one paper copy of the sealed and signed drawings, the specifications and the amendments upon acceptance of the offer. Additional copies, up to a maximum of (1), will be provided free of charge upon request by the Contractor. Obtaining more copies shall be the responsibility of the Contractor including costs.

SI08 PERSONNEL SECURITY REQUIREMENTS

- 1) The Successful Bidder's personnel, as well as any subcontractor and its personnel, who are required to perform any part of the work pursuant to the subsequent contract must meet the following contract security requirements: RELIABILITY STATUS REQUIRED

Personnel who are required to perform any part of the work must EACH hold a valid personnel security screening at the level of RELIABILITY STATUS, granted or approved by Agriculture and Agri-Food Canada. Until the security screening of the personnel has been completed satisfactorily by Agriculture and Agri-Food Canada, the Contractor/Subcontractor personnel MAY NOT perform contract work. Each of the proposed staff must complete "Security Clearance Form" (TBS 330-23E) upon request from Canada.

INSTRUCTIONS TO BIDDERS

IB01 Completion of Bid

- 1) The bid shall be:
 - (a) submitted on the BID AND ACCEPTANCE FORM provided by AAFC or on a clear and legible reproduced copy of such BID AND ACCEPTANCE FORM that must be identical in content and format to the BID AND ACCEPTANCE FORM provided by AAFC;
 - (b) based on the Bid Documents listed in the SPECIAL INSTRUCTIONS TO BIDDERS;
 - (c) correctly completed in all respects;
 - (d) signed, with an original signature, by a duly authorized representative of the Bidder; and
 - (e) accompanied by any other document or documents specified elsewhere in the solicitation where it is stipulated that said documents are to accompany the bid.

- 2) Subject to paragraph 6) of IB11, any alteration to the pre-printed or pre-typed sections of the BID AND ACCEPTANCE FORM, or any condition or qualification placed upon the bid shall be cause for disqualification. Alterations, corrections, changes or erasures made to statements or figures entered on the BID AND ACCEPTANCE FORM by the Bidder shall be initialed by the person or persons signing the bid. Initials shall be original(s). Alterations, corrections, changes or erasures that are not initialed shall be deemed void and without effect.

- 3) Unless otherwise noted elsewhere in the Bid Documents, facsimile copies of bids are not acceptable.

IB02 Identity or Legal Capacity of the Bidder

- 1) In order to confirm the authority of the person or persons signing the bid or to establish the legal capacity under which the Bidder proposes to enter into Contract, any Bidder who carries on business in other than its own personal name shall, if requested by Canada, provide satisfactory proof of:
 - (a) such signing authority; and
 - (b) the legal capacity under which it carries on business; prior to contract award. Proof of signing authority may be in the form of a certified copy of a resolution naming the signatory(ies) that is (are) authorized to sign this bid on behalf of the corporation or partnership. Proof of legal capacity may be in the form of a copy of the articles of incorporation or the registration of the business name of a sole proprietor or partnership.

IB03 Applicable Taxes

- 1) Bidders are not to include any amounts for Applicable Taxes (Goods and Services Tax (GST), Harmonized Sales Tax (HST) or Quebec Sales Tax (QST), whichever is applicable. Any amount levied in respect of Applicable Taxes shall be billed as a separate item in a progress claim submitted by the Contractor, and shall be paid to the Contractor in addition to the amount approved by Canada for work performed under the Contract. The Contractor shall be required to remit the appropriate amount to the appropriate tax authority in accordance with the applicable legislation.

IB04 Tax to Be Included

- 1) The Contractor is not entitled to use Canada's exemptions from any tax, such as provincial sales taxes, unless otherwise specified by law. The Contractor must pay applicable provincial sales tax, ancillary taxes, and any commodity tax, on taxable goods or services used or consumed in the performance of the Contract (in accordance with applicable legislation), including for material incorporated into real property.

IB05 Capital Development and Redevelopment Charges

- 1) For the purposes of GC1.5 in the General Conditions of the Contract, only fees or charges directly related to the processing and issuing of building permits shall be included. The Bidder shall not include any monies in the bid amount for special municipal development, redevelopment or other fees or charges which a municipal authority may seek as a prerequisite to the issuance of building permits.

IB06 Registry and Pre-qualification of Floating Plant

- 1) Dredges or other floating plant to be used in the performance of the Work must be of Canadian registry. For dredges or other floating plant that are not of Canadian make or manufacture, the Bidder must obtain a certificate of qualification from Industry Canada and this certificate must accompany the bid. Plant so qualified by Industry Canada may be accepted on this project.

IB07 Listing of Subcontractors and Suppliers

- 1) Notwithstanding any list of Subcontractors that the Bidder may be required to submit as part of the bid, the Bidder submitting the lowest acceptable bid shall, within 48 hours of receipt of a notice to do so, submit all information requested in the said notice including the names of Subcontractors and Suppliers for the part or parts of the Work listed. Failure to do so may result in the disqualification of its bid.

IB08 Bid Security Requirements

- 1) **NO** bid security is required for this solicitation notice.

IB09 Submission of Bid

- 1) The BID AND ACCEPTANCE FORM, duly completed, shall be enclosed and sealed in an envelope provided by the Bidder, and shall be addressed and submitted to the office designated on the Front Page of the BID AND ACCEPTANCE FORM for the receipt of bids. The bid must be received on or before the date and time set for solicitation closing.
- 2) Unless otherwise specified in the SPECIAL INSTRUCTIONS TO BIDDERS:
 - (a) the bid shall be in Canadian currency;
 - (b) exchange rate fluctuation protection is not offered; and
 - (c) any request for exchange rate fluctuation protection shall not be considered.
- 3) Prior to submitting the bid, the Bidder shall ensure that the following information is clearly printed or typed on the face of the bid envelope:
 - (a) Solicitation/File Number;
 - (b) Name of Bidder;
 - (c) Return address; and
 - (d) Closing Date and Time.
- 4) Subject to paragraph 6) of IB11, failure to comply with paragraphs 1), 2) and 3) of IB09 shall render the bid liable to disqualification. Timely and correct delivery of bids is the sole responsibility of the Bidder.

IB10 Revision of Bid

- 1) A bid submitted in accordance with these instructions may be revised by letter provided the revision is received at the office designated for the receipt of bids, on or before the date and time set for the closing of the bid. The letter shall:
 - (a) be on the Bidder's letterhead or bear a signature that identifies the Bidder;

- (b) for the lump sum portion of a bid, clearly identify the amount of the current revision. The total aggregate sum of all revisions submitted, including the current revision, shall be shown separately; and
 - (c) for the Price Per Unit portion of a bid, clearly identify the change(s) in the Price(s) per Unit and the specific item(s) to which each change applies. If a revision is to be applied to a specific item that was previously amended then, in addition to the amount of the current revision, the total aggregate sum of all revisions submitted, including the current revision, for that item shall be shown separately.
- 2) A letter submitted to confirm an earlier revision shall be clearly identified as "CONFIRMATION ONLY" for each contemplated change.
 - 3) Failure to comply with any of the above provisions shall result in the rejection of the non-compliant revision(s) only. The bid shall be evaluated based on the original bid submitted and all other compliant revision(s).

IB11 Acceptance of Bid

- 1) Canada may accept any bid, whether it is the lowest or not, or may reject any or all bids.
- 2) Without limiting the generality of paragraph 1) of IB11, Canada may reject a bid if any of the following circumstances is present:
 - (a) the Bidder, or any employee or subcontractor included as part of the bid, has been convicted under section 121 ("Frauds on the government" & "Contractor subscribing to election fund"), 124 ("Selling or purchasing office"), 380 ("Fraud committed against Her Majesty") or 418 ("Selling defective stores to Her Majesty") of the Criminal Code of Canada; or under paragraph 80(1)(d) ("False entry, certificate of return"), subsection 80 (2) ("Fraud against Her Majesty") or Section 154.01 ("Fraud against Her Majesty") of the *Financial Administration Act*;
 - (b) the Bidder's bidding privileges are suspended or are in the process of being suspended;
 - (c) the bidding privileges of any employee or subcontractor included as part of the bid are suspended or are in the process of being suspended, which suspension or pending suspension would render that employee or subcontractor ineligible to bid on the Work, or the portion of the Work the employee or subcontractor is to perform;
 - (d) with respect to current or prior transactions with Canada:
 - (i) the Bidder is bankrupt or if, for whatever reason, its activities are rendered inoperable for an extended period;
 - (ii) evidence, satisfactory to Canada, of fraud, bribery, fraudulent misrepresentation or failure to comply with any law protecting individuals against any manner of discrimination, has been received with respect to the Bidder, any of its employees or any subcontractor included as part of its bid;
 - (iii) Canada has exercised, or intends to exercise, the contractual remedy of taking the work out of the contractor's hands with respect to a contract with the Bidder, any of its employees or any subcontractor included as part of its bid; or
 - (iv) Canada determines that the Bidder's performance on other contracts is sufficiently poor to jeopardize the successful completion of the requirement being bid on.

- 3) In assessing the Bidder's performance on other contracts pursuant to subparagraph 2)(d)(iv) of IB11, Canada may consider, but not be limited to, such matters as:
 - (a) the quality of workmanship in performing the Work;
 - (b) the timeliness of completion of the Work;
 - (c) the overall management of the Work and its effect on the level of effort demanded of the department and its representative; and
 - (d) the completeness and effectiveness of the Contractor's safety program during the performance of the Work.
- 4) Without limiting the generality of paragraphs 1), 2) and 3) of IB11, Canada may reject any bid based on an unfavourable assessment of the:
 - (a) adequacy of the bid price to permit the work to be carried out and, in the case of a bid providing prices per unit or a combination of lump sum and prices per unit, whether each such price reasonably reflects the cost of performing the part of the work to which that price applies;
 - (b) Bidder's ability to provide the necessary management structure, skilled personnel, experience and equipment to perform competently the work under the Contract; and
 - (c) Bidder's performance on other contracts.
- 5) If Canada intends to reject a bid pursuant to a provision of paragraphs 1), 2), 3) or 4) of IB11, other than subparagraph 2)(b) of IB11, Canada shall so inform the Bidder and provide the Bidder ten (10) days within which to make representations, prior to making a final decision on the bid rejection.
- 6) Canada may waive informalities and minor irregularities in bids received if Canada determines that the variation of the bid from the exact requirements set out in the Bid Documents can be corrected or waived without being prejudicial to other Bidders.

IB12 Bid Costs

- 1) No payment will be made for costs incurred in the preparation and submission of a bid in response to the bid solicitation. Costs associated with preparing and submitting a bid, as well as any costs incurred by the Bidder associated with the evaluation of the bid, are the sole responsibility of the Bidder.

IB13 Compliance with Applicable Laws

- 1) By submission of a bid, the Bidder certifies that the Bidder has the legal capacity to enter into a contract and is in possession of all valid licences, permits, registrations, certificates, declarations, filings, or other authorizations necessary to comply with all federal, provincial and municipal laws and regulations applicable to the submission of the bid and entry into any ensuing contract for the performance of the work.
- 2) For the purpose of validating the certification in paragraph 1) of IB13, a Bidder shall, if requested, provide a copy of every valid licence, permit, registration, certificate, declaration, filing or other authorization listed in the request, and shall provide such documentation within the time limit(s) set out in the said request.
- 3) Failure to comply with the requirements of paragraph 2) of IB13 shall result in disqualification of the bid.

IB14 Approval of Alternative Materials

- 1) When materials are specified by trade names or trademarks, or by manufacturers' or suppliers' names, the bid shall be based on use of the named materials. During the bid period, alternative materials may be considered provided full technical data is received in writing by the Contracting Officer at least 10 calendar days prior to the bid closing date.

IB15 Income Tax Requirement

- 1) Payments made under applicable contracts must be reported by Canada for taxation purposes. To comply with this requirement, the successful bidder shall provide to Canada immediately upon award: its legal name; address; and Revenue Canada identifier (SIN, BN, GST/HST, T2N number) as is applicable.

IB16 Contingency Fees

- 1) The Bidder declares that the Bidder has not, directly or indirectly, paid or agreed to pay, and will not, directly or indirectly, pay a contingency fee to any individual for the solicitation, negotiation or obtaining of the contract if the payment of the fee would require the individual to file a return under section 5 of the *Lobbying Act*.

IB17 Status of the Bidder

- 1) The Bidder declares that the Bidder has not been convicted of an offence, other than an offence for which a pardon has been granted, under section 121, 124 or 418 of the *Criminal Code*.

CONTRACT DOCUMENTS (CD)

1. The following are the contract documents:
 - a) Contract Page(s) when signed by Canada;
 - b) Duly completed Bid and Acceptance Form and any Appendices attached thereto;
 - c) Drawings and Specifications;
 - d) General Conditions for Minor Works;
 - e) Insurance Terms;
 - f) Any amendment issued or any allowable bid revision received before the date and time set or solicitation closing;
 - g) Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and
 - h) Any amendment or variation of the contract documents that is made in accordance with the General Conditions.

2. The language of the contract documents is the language of the Bid and Acceptance Form submitted.

GENERAL CONDITIONS FOR MINOR WORKS

TABLE OF CONTENTS

GC1 GENERAL PROVISIONS

- GC 1.1 Definitions
- GC 1.2 Contract Documents
- GC 1.3 Assignment
- GC 1.4 Subcontracting
- GC 1.5 Laws, Permits and Taxes
- GC 1.6 Former Public Office Holders
- GC 1.7 Status of the Contractor
- GC 1.8 Contingency Fees
- GC 1.9 Disclosure of Basic Information

GC2 ADMINISTRATION OF THE CONTRACT

- GC 2.1 Departmental Representative's Rights and Obligations
- GC 2.2 Contractor's Superintendent and Workers
- GC 2.3 Records to be Kept by the Contractor
- GC 2.4 Notices

GC3 EXECUTION OF THE WORK

- GC 3.1 Material, Plant and Real Property Become the Property of Canada
- GC 3.2 Cooperation With Other Contractors
- GC 3.3 Use of the Work and Cleanup of Site
- GC 3.4 Warranty and Rectification of Defects

GC4 PROTECTION, HEALTH AND SAFETY

- GC 4.1 Material, Plant and Real Property Supplied by Canada
- GC 4.2 Construction Safety

GC5 TERMS OF PAYMENT

- GC 5.1 Definitions
- GC 5.2 Payment- General Provisions
- GC 5.3 Progress Payments
- GC 5.4 Interest on Overdue Accounts
- GC 5.5 Payment in the Event of Termination
- GC 5.6 Final Completion
- GC 5.7 Determination of Price
- GC 5.8 Claims Against and Obligations of the Contractor or Subcontractor

GC6 CHANGES IN THE WORK

- GC 6.1 Changes in the Work
- GC 6.2 Changes in Subsurface Conditions and Delays by Canada
- GC 6.3 Extension of Time

GC7 DEFAULT, SUSPENSION OR TERMINATION OF CONTRACT

- GC 7.1 Taking the Work Out of the Contractor's Hands
- GC 7.2 Effect of Taking the Work Out of the Contractor's Hands
- GC 7.3 Suspension of the Contract
- GC 7.4 Termination of the Contract

GC8 DISPUTE RESOLUTION

GC9 INDEMNIFICATION AND INSURANCE

- GC 9.1 Indemnification
- GC 9.2 Insurance Contracts
- GC 9.3 Insurance Proceeds

GC1 GENERAL PROVISIONS

GC1.1 Definitions

- "Applicable Taxes" means the Goods and Services Tax (GST), the Harmonized Sales Tax (HST), and any provincial tax, by law, payable by Canada such as, the Quebec Sales Tax (QST) as of April 1, 2013.
- "Canada", "Her Majesty" means Her Majesty, the Queen in right of Canada;
- "Contract" means the contract documents referred to as such therein and every other document specified or referred to in any of them as forming part of the Contract, all as amended by agreement of the parties;
- "Contractor" means a person, with whom Canada enters into a Contract to do the Work;
- "Departmental Representative" means the person designated in the Contract, or by written notice to the Contractor, to act as the Departmental Representative for the purposes of the Contract, and includes a person, designated and authorized in writing by the Departmental Representative to the Contractor;
- "Material" includes all commodities, articles, machinery, equipment, fixtures and things required to be furnished in accordance with the Contract for incorporation into the Work;
- "Person" includes, unless there is an express stipulation in the Contract to the contrary, any partnership, proprietorship, firm, joint venture, consortium or corporation;
- "Plant" includes all tools, implements, machinery, vehicles, structures, equipment, articles and things that are necessary for the performance of the Contract, other than Material and those tools customarily provided by a trades person in practicing a trade;
- "Work" means everything that is necessary to be done, furnished or delivered by the Contractor to perform the Contract in accordance with the Contract Documents;

GC1.2 Contract Documents

1. In interpreting the Contract, in the event of discrepancies or conflicts between anything in the Drawings and Specifications or Scope of Work and the General Conditions, the General Conditions govern.
2. In interpreting the Drawings and Specifications, in the event of discrepancies or conflicts between:
 - (a) the Drawings and Specifications, the Specifications govern;
 - (b) the Drawings, the Drawings with the largest scale govern; and
 - (c) figured dimensions and scaled dimensions, the figured dimensions govern.

GC1.3 Assignment

1. This Contract shall not be assigned without the written consent of Canada.

GC1.4 Subcontracting

1. The Contractor shall:
 - (a) not subcontract the whole or any part of the Work without the written consent of the Departmental Representative except for subcontracts specified in the Contract; and
 - (b) ensure that all subcontracts entered into at any tier shall incorporate all the terms and conditions of the Contract that can reasonably be applied thereto.

GC1.5 Laws, Permits and Taxes

1. The Contractor shall comply with all legislative and regulatory provisions whether federal, provincial, territorial or municipal applicable to the performance of the Work and shall require compliance therewith by all of its subcontractors and suppliers at any tier as if the Work were being performed for an owner other than Canada.
2. Unless otherwise provided for in the Contract, the Contractor shall obtain all permits and hold all certificates and licenses required for the performance of the Work.
3. Applicable Taxes will be paid by Canada at time when a progress payment is being made. It

is the sole responsibility of the Contractor to charge Applicable Taxes at the correct rate in accordance with applicable legislation. The Contractor agrees to remit to appropriate tax authorities any amounts of Applicable Taxes paid or due.

4. The Contractor is not entitled to use Canada's exemptions from any tax, such as provincial sales taxes, unless otherwise specified by law. The Contractor must pay applicable provincial sales tax, ancillary taxes, and any commodity tax, on taxable goods or services used or consumed in the performance of the Contract (in accordance with applicable legislation), including for material incorporated into real property.

GC1.6 Former Public Office Holders

1. No former public office holder who is not in compliance with the post-employment provisions of the Conflict of Interest and Post-Employment Code for Public Office Holders shall derive a direct benefit from the Contract.

GC1.7 Status of the Contractor

1. The Contractor is engaged as an independent Contractor for the sole purpose of performing the Work. Neither the Contractor nor any of its personnel is engaged as an employee, servant or agent of Canada. The Contractor is responsible for all deductions and remittances required by law in relation to its employees including those required for Canada or Quebec Pension Plans, employment insurance, workers' compensation, and income tax.
2. The Contractor declares that the Contractor has not been convicted of an offence, other than an offence for which a pardon has been granted, under section 121, 124 or 418 of the Criminal Code.

GC1.8 Contingency Fees

1. The Contractor declares that the Contractor has not, directly or indirectly, paid or agreed to pay, and will not, directly or indirectly, pay a contingency fee to any individual for the solicitation, negotiation or obtaining of the contract if the payment of the fee would require the individual to file a return under section 5 of the *Lobbying Act*.

GC1.9 Disclosure of Basic Information

1. The Contractor consents, in the case of a contract that has a value in excess of \$10,000, to the public disclosure of basic information, other than information described in any of paragraphs 20(1)(a) to (d) of the *Access to Information Act*, relating to the contract.

GC2 ADMINISTRATION OF THE CONTRACT

GC2.1 Departmental Representative's Rights and Obligations

1. The Departmental Representative shall:
 - (a) have access to the Work at all times;
 - (b) decide questions regarding what has been done or what the Contractor is required to do; (c) decide questions regarding the acceptability of the quality or quantity of any Labour, Plant or Material used or consumed in the execution of the Work; and
 - (d) decide questions regarding the timing and scheduling of the Work.

GC2.2 Contractor's Superintendent and Workers

1. The Contractor shall keep a competent superintendent and capable and skilled workers on the site of the Work at all times during the progress of the Work. If, in the opinion of the Departmental Representative, the superintendent or the workers are deemed to be unacceptable because of incompetence, improper conduct or security risk, they shall be removed from the site of the Work and replaced forthwith.

GC2.3 Records to be kept by the Contractor

1. The Contractor shall maintain and keep intact complete records relating to the Work together with all tender calls, quotations, contracts, correspondence, invoices and any payment of fees or other compensation for the solicitation, negotiating or obtaining of the contract until the expiration of two (2) years after the date that a Certificate of Completion is issued or the final invoice is paid if no Certificate of Completion is issued. The Contractor shall, upon request from the Departmental Representative, make said records available for copy, audit or inspection to any person(s) acting on behalf of Canada.
2. The Contractor shall cause all Subcontractors, and all other Persons or entities directly or indirectly involved with the Work, to comply with the requirements of GC 2.3.1.

GC2.4 Notices

1. Any notice shall be in writing and may be delivered by hand, by courier, by registered or regular mail, or by facsimile or other electronic means that provides a paper record of the text of the notice. The notice shall be addressed to the party for whom it is intended at the address in the Contract or at the last address from which the sender has received notice in accordance with this section. Any notice shall be deemed to be effective on the day it is received at that address or four (4) days after being sent, whichever is the earlier.

GC3 EXECUTION OF THE WORK

GC3.1 Material, Plant, and Real Property Become the Property of Canada

1. All Material and Plant used or consumed for the purposes of the Work shall be the property of Canada. The Material and Plant shall be used only for the purposes of the Work, and shall not be removed from the site of the Work until so approved by the Departmental Representative.
2. The Contractor shall be liable for all loss or damage to Material or Plant that is the property of Canada by virtue of this section.

GC3.2 Cooperation with Other Contractors

1. The Contractor shall cooperate fully with other contractors or workers sent onto the site of the Work by the Departmental Representative.
2. If, at the time the Contract was executed: the Contractor could not have reasonably foreseen the sending of other contractors or workers onto the site of the Work; and, the Contractor incurs extra costs in complying with GC 3.2.1; and, the Contractor gives written notice of claim for the extra costs within ten (10) days from the date upon which the other contractors or workers were sent onto the site of the Work; then, Canada shall pay an additional amount to the Contractor, calculated pursuant to GC 5.7.

GC3.3 Use of the Work and Cleanup of Site

1. The Contractor shall maintain the site of the Work in a tidy condition and free from the accumulation of waste material throughout the duration of the Contract.
2. Before the Departmental Representative issues the Certificate of Completion or approves payment of the final invoice, the Contractor shall remove all materials, tools, construction machinery, equipment, waste products and debris from the site of the Work.
3. Where the Work affects occupied portions of a building, the Contractor shall ensure continuity of all building services and shall ensure safe access for all persons requiring access to said building.

GC 3.4 Warranty and Rectification of Defects

1. Without restricting any warranty or guarantee implied or imposed by law or any extended warranty specified in the Contract, the Contractor shall, upon notice from the Departmental Representative and at its own expense, rectify all defects which appear in the Work within twelve (12) months from the date of issuance of the Certificate of Completion pursuant to GC 5.6.1, or from the date of the negotiable instrument issued as final payment if a Certificate of Completion is not issued, whichever is applicable.
2. The notice referred to in GC 3.4.1 shall be in writing and shall include the number of days within which the defect or fault is to be rectified.
3. The Contractor shall transfer and assign, to Canada, any subcontractor, manufacturer or supplier extended warranties or guarantees implied or imposed by law or contained in the contract documents covering periods beyond the twelve (12) months stipulated above. Extended warranties or guarantees referred to herein shall not extend the twelve (12) month period whereby the Contractor must rectify and make good any defect or fault that appears in the work or comes to the attention of Canada.

GC 4 PROTECTION, HEALTH AND SAFETY

GC 4.1 Material, Plant and Real Property Supplied by Canada

1. The Contractor, having care, custody and control of the Work and its site, shall be responsible for any loss or damage, excluding reasonable wear and tear, to any property of Canada arising out of the performance of the Work whether or not such loss arises from causes beyond the Contractor's control.

GC 4.2 Construction Safety

1. The Contractor, having care, custody and control of the Work and its site, shall be responsible for any loss or site of the Work and for initiating, maintaining and supervising all safety inspections, precautions and programs in connection with the performance of the Work in accordance with the health and safety legislation in force in the Province where the Work is being performed.

GC5 TERMS OF PAYMENT

GC5.1 Definitions

For the purposes of this section:

- Payment Period means a period of thirty (30) days or such other longer period as may be agreed between the Contractor and the Departmental Representative.
- An amount is Due and Payable when it is due and payable by Canada to the Contractor in accordance with the terms of the Contract.
- An amount is Overdue when it remains unpaid after the day upon which it is due and payable.
- Date of Payment means the date of the negotiable instrument of an amount due and payable by the Receiver General for Canada.
- Fixed Price Arrangement means that part of the Contract that prescribes a lump sum as payment for performance of the Work to which it relates.
- Unit Price Arrangement means that part of the Contract that prescribes the product of a Price Per Unit multiplied by a number of Units of Measurement of a Class as payment for performance of the Work to which it relates.
- Price Table means the table set out in the BID AND ACCEPTANCE FORM.
- Bank Rate means the rate of interest established from time to time by the Bank of Canada as the minimum rate at which the Bank of Canada makes short term advances to members of the Canadian Payments Association.

- Average Bank Rate means the simple arithmetic mean of the Bank Rates in effect at 4:00 pm Eastern Time each day during the calendar month which immediately precedes the calendar month in which payment is made.
- Duration of the Work means the number of calendar days required to complete the Work, commencing on the first day following receipt by the Contractor of the fully executed Contract and ending the day on which the Departmental Representative verifies that the Work has been satisfactorily completed.

GC5.2 Payment- General Provisions

1. It is a condition precedent to Canada's obligation under GC 5.3.5 that the Contractor has made and delivered to the Departmental Representative, a statutory declaration as described in GC 5.2.2.
2. A statutory declaration in a form acceptable to Canada shall contain a declaration that the Contractor has complied with all lawful obligations with respect to workers and that all lawful obligations towards Subcontractors and Suppliers in respect of the Work under the Contract have been fully discharged.
3. A payment by Canada pursuant to this section shall not be construed as evidence that the Work is satisfactory or in accordance with the Contract.
4. Delay in making payment by Canada under the Contract shall not constitute a breach of Contract.
5. Without limiting any right of setoff or deduction given or implied by law or elsewhere in the Contract, Canada may retain from amounts payable to the Contractor under the Contract, any amount payable to Canada by the Contractor under the Contract or any other current contract.
6. No additional payment shall be made for delays where the cause of the delay was under the control of the Contractor.
7. Except as provided for in these General Conditions, the amount payable to the Contractor under the Contract shall not be increased or decreased by reason of any increase or decrease in cost of the Work brought about by any increase in the cost of Labour, Plant or Material.
8. In the event of a change, including a new imposition or repeal of any tax, customs or other duty, charge, or any similar imposition that is imposed under sales or excise tax legislation of the Government of Canada or any Provincial or Territorial legislation, affects the cost of the Work to the Contractor, and occurs after the date of submission by the Contractor of the Contractor's bid, the contract amount shall be adjusted by an amount equal to the increased or decreased cost to the Contractor, which amount shall be determined through a detailed examination of the Contractor's records.
9. It is a term of every contract providing for the payment of any money by Her Majesty that payment under that contract is subject to there being an appropriation for the particular service for the fiscal year in which any commitment under that contract would come in course of payment. Section 40, *Financial Administration Act*, R. S., 1985, c. F-11, s. 40.

GC5.3 Progress Payments

1. Where the duration of the Work is greater than thirty (30) days, the Contractor shall be entitled to receive monthly progress payments upon submitting a progress claim in a form approved by the Departmental Representative. Where the duration of the Work is less than thirty (30) days, the Contractor shall submit a progress claim after the Work is complete.
2. On the expiration of a Payment Period, the Contractor shall deliver to the Departmental Representative:

- (a) a written progress claim that fully describes any part of the Work that has been satisfactorily completed and any Material that was delivered to the site of the Work but not incorporated into the Work during the Payment Period for which the progress claim relates;
 - (b) a completed and signed statutory declaration as described in GC 5.2.2; and
 - (c) in the case of the initial progress claim and the request for final payment, satisfactory evidence of compliance with workers compensation legislation that is applicable to the place of the Work.
 3. Not later than ten (10) days after receipt of a progress claim properly submitted in accordance with GC 5.3.2, the Departmental Representative shall issue a progress report, a copy of which shall be given to the Contractor.
 4. A progress report shall indicate the value of the part of the Work and Material described in the progress claim that, in the opinion of Canada:
 - (a) is in accordance with the Contract; and
 - (b) was not included in any other progress report related to the Contract.
 5. Not later than thirty (30) days after the receipt by the Departmental Representative of a properly submitted progress claim and supporting documentation, Canada shall make a progress payment to the Contractor in an amount that is equal to one of the following:
 - (a) 90 percent of the value that is indicated in the progress report; or
 - (b) If the Departmental Representative is satisfied that the Work is substantially complete and is acceptable for use by Canada, 100 percent of the value of the Work and Material that is in accordance with the Contract, less amounts previously paid for under the Contract, less the amount equal to the estimated cost of completing the Work and the estimated cost of rectifying defects and faults in the Work as determined by the Departmental Representative; or
 - (c) If the Departmental Representative is satisfied that the Work is complete, 100 percent of the value of the Work that is in accordance with the Contract less amounts previously paid for under the Contract;
- plus Applicable Taxes and less the aggregate of any amounts payable to or costs and damages claimed by Canada or by a Claimant against the Contractor.
6. The Departmental Representative reserves the right to increase or decrease the quantities submitted by the Contractor if there is a disagreement between the Contractor's invoiced quantities and the quantities shown in the records maintained at the site of the Work.
 7. Subject to GC 5.3.8, GC 5.3.9 and GC 5.3.10, the Departmental Representative and the Contractor may, by an agreement in writing, amend a Price Per Unit as set out in the Price Table for any Class of Labour, Plant or Material provided the Certificate of Measurement shows that the Authorized Quantity of the Class of Labour, Plant or Material actually performed, used or supplied by the Contractor in performing the Work is:
 - (a) less than 85 percent of the Estimated Total Quantity; or
 - (b) in excess of 115 percent of the Estimated Total Quantity.
 8. In no event shall the total amount of an Item set out in the Price Table that has been amended pursuant to GC 5.3.7 (a) exceed the amount that would have been Payable to the Contractor had the Estimated Total Quantity actually been performed, used, or supplied.
 9. An amendment that is made necessary by GC 5.3.7 (b) shall apply only to the quantities that are in excess of 115 percent.
 10. Where the Departmental Representative and the Contractor fail to agree on the amount of any adjustment to a Price Per Unit as contemplated by GC 5.3.7, the amended Price Per Unit shall be determined in accordance with GC 5.7.

GC5.4 Interest on Overdue Accounts

1. Canada shall be liable to pay, to the Contractor, simple interest at the Average Bank Rate plus 3 percent per annum on any amount that is Overdue. The interest shall apply from the date such amount becomes Overdue until the day prior to the Date of Payment inclusively.
2. Interest shall be paid to the Contractor without demand on Overdue payments, except, in respect to amounts which are less than fifteen (15) days Overdue, in which case, no interest shall be paid unless the Contractor so demands.
3. Canada shall not be liable to pay interest where Canada is not responsible for the delay in paying the Contractor.

GC5.5 Payment in the Event of Termination

1. If the Contract is terminated pursuant to GC 7.4, Canada shall pay the Contractor:
 - (a) an amount, as agreed upon by the Contractor and the Departmental Representative, for all Labour, Plant and Material performed, used or supplied by the Contractor as at the date of termination plus:
 - (i) any fully supported termination costs incurred by the Contractor, less
 - (ii) any amounts payable to or costs and damages claimed by Canada or by a Claimant, against the Contractor; or
 - (b) failing such an agreement, an amount calculated in accordance with GC 5.7.2.

GC5.6 Final Completion

1. A Certificate of Completion shall be issued to the Contractor on the date on which the Work has been completed and the Contractor has complied with the Contract and all orders and directions made pursuant thereto, all to the satisfaction of the Departmental Representative.
2. Where the Contract is, in whole or in part, a Unit Price Arrangement, the Departmental Representative shall, at the same time as the issuance of the Certificate of Completion, issue a Certificate of Measurement setting out the Authorized Quantities used or employed in respect of the classes and units set out in the Price Table under the BID AND ACCEPTANCE FORM and any subsequent amendments thereto, such certificate to be binding upon the Contractor and Canada.

GC5.7 Determination of Price

1. By mutual agreement:
 - (a) where a Lump Sum Arrangement applies to the Contract or a part thereof, the price of any change shall be the aggregate estimated cost of Labour, Plant and Material that is required for the change as agreed upon in writing by the Contractor and Canada, and include an allowance for overhead, margin and the risk of undertaking the work within the stipulated amount;
 - (b) where a Unit Price Arrangement applies to the Contract or a part thereof, the Contractor and Canada may, by agreement in writing, add Items, Units of Measurement, Estimated Total Quantities and Price Per Units to the Price Table;
 - (c) a Price Per Unit referred to in GC 5.7.1 (b) shall be determined on the basis of the aggregate estimated cost of Labour, Plant and Material that is required for the additional Item as agreed upon by the Contractor and Canada, and include an allowance for overhead, margin and the risk of undertaking the work;
 - (d) to facilitate approval of the price of the additional Item, the Contractor shall submit a cost estimate breakdown identifying, as a minimum, the estimated cost of Labour, Plant, Material, each subcontract amount, and the amount of the appropriate percentage allowance;
 - (e) if no agreement can be reached as contemplated in GC5.7.1 (a), the price shall be determined in accordance with GC 5.7.2; and

- (f) if no agreement can be reached as contemplated in GC 5.7.1 (b) and GC 5.7.1 (c), the Departmental Representative shall determine the Class and the Unit of Measurement of the Item of Labour, Plant or Material and the Price Per Unit shall be determined in accordance with GC 5.7.2.

2. Following Completion of the Additional Work

- (a) Where it is not possible to predetermine, or where there is failure to agree upon the price of a change in the Work, the price of the change shall be equal to the aggregate of:
 - (i) all reasonable and proper amounts actually expended or legally payable by the Contractor in respect of the Labour, Plant and Material that fall within one of the classes of expenditure described in GC 5.7.2(b), that are directly attributable to the performance of the Contract; plus
 - (ii) an allowance for profit and all other expenditures or costs equal to 10 percent of the sum of the amounts referred to in GC 5.7.2 (a)(i); plus
 - (iii) interest, if any, paid by the Contractor on the amounts determined under GC 5.7.2 (a)(i) and (ii), calculated in accordance with GC 5.4.
- (b) The cost of Labour, Plant and Material referred to in GC 5.7.2 (a) shall be limited to the following categories of expenditure:
 - (i) payments to Subcontractors and suppliers;
 - (ii) wages, salaries and traveling expenses of employees of the Contractor located at the site of the Work and that portion of wages, salaries, bonuses, living and traveling expenses of personnel of the Contractor generally employed at the head office or at a general office of the Contractor provided they are actually and properly engaged on the Work under the Contract;
 - (iii) assessments payable under any statutory authority relating to workers' compensation, employment insurance, pension plan or holidays with pay, provincial health or insurance plans, environmental reviews, and GST/HST collection costs;
 - (iv) rent that is paid for Plant, or an amount equivalent to the said rent if the Plant is owned by the Contractor, that is necessary for and used in the performance of the Work, if the rent or the equivalent amount is reasonable and use of that Plant had been approved by the Departmental Representative;
 - (v) payments for maintaining and operating Plant necessary for and used in the performance of the Work, and payments for effecting repairs thereto that, in the opinion of the Departmental Representative, are necessary for the proper performance of the Contract, other than payments for any repairs to the Plant arising out of defects existing before its allocation to the Work;
 - (vi) payments for Material that is necessary for and incorporated in the Work, or that is necessary for and consumed in the performance of the Contract;
 - (vii) payments for preparation, delivery, handling, erection, installation, inspection, protection and removal of the Plant and Material necessary for and used in the performance of the Contract; and
 - (viii) any other payments made by the Contractor with the approval of the Departmental Representative that are necessary for the performance of the Contract in accordance with the Contract Documents.

GC5.8 Claims Against and Obligations of the Contractor or Subcontractor

- 1. The Contractor shall ensure that all its lawful obligations arising out of the performance of the Work are discharged and satisfied at least as often as the Contract requires Canada to pay the Contractor. The Contractor shall provide the Departmental Representative with a Statutory Declaration, as referred to in GC 5.2.2. If any third party claims and outstanding obligations exist under the Contract, a Statutory Declaration shall also be accompanied by letter documentation that clearly identifies the existence and condition of any third party disputed claims and outstanding obligations.

2. In order to discharge lawful obligations of and satisfy lawful claims against the Contractor or a Subcontractor arising out of the performance of the Work, Canada may:
 - (a) pay an amount from money that is due and payable to the Contractor pursuant to the Contract directly to the claimant against the Contractor or the Subcontractor; or
 - (b) withhold from any amount that is due and payable to the Contractor pursuant to the Contract the full amount of the claim or any portion thereof. Monies withheld for this purpose shall not be subject to any interest payment in the event such claims are rejected.
3. The amount referred to in GC 5.8.2 (a) shall be that amount which the Contractor would have been obliged to pay to such claimant had the provisions of the Provincial or Territorial lien legislation, or in the province of Quebec, the law relating to mortgage, been applicable to the Work. Any such claimant need not comply with the provisions of such legislation setting out the steps by way of notice, registration, or otherwise as might have been necessary to preserve or perfect any claim for lien or mortgage which the claimant might have had.
4. For the purposes of GC 5.8, a claim shall be considered lawful when it is so determined:
 - (a) by a court of competent jurisdiction;
 - (b) by an arbitrator duly appointed to arbitrate the said claim; or
 - (c) by written notice delivered to the Departmental Representative and signed by the Contractor authorizing payment of the said claim(s).
5. A payment made pursuant to GC 5.8.2 is, to the extent of the payment, a discharge of Canada's liability to the Contractor under the Contract and may be deducted from any amount payable to the Contractor under the Contract.
6. GC 5.8.2 shall only apply to claims and obligations where:
 - (a) the notification of which has set forth the amount claimed to be owing and the person who by Contract is primarily liable;
 - (b) the notification or a copy of the notification was received by the Departmental Representative in writing before final payment is made to the Contractor and within one hundred and twenty (120) days of the date on which the claimant:
 - (i) should have been paid in full under the claimant's Contract with the Contractor or Subcontractor where the claim is for money that was lawfully required to be held back from the claimant; or
 - (ii) performed the last of the labour or furnished the last of the Plant or Material pursuant to the claimant's Contract with the Contractor or Subcontractor where the claim is not for money referred to in GC 5.8.6 (b)(i); and
 - (c) the proceedings to determine the right to payment for the claim shall have commenced within one year from the date that the notice referred to in GC 5.8.6 (b) was received by the Department Representative.
7. The Departmental Representative shall inform the Contractor in writing of receipt of any notification of claim and of the intention of Canada to withhold funds pursuant to GC 5.8.2. The Contractor may, at any time thereafter and until payment is made to the claimant, post with Canada, security in the form of a Claimant's Payment Bond acceptable to Canada and in an amount equal to the value of the said claim. Upon receipt of such security Canada shall release to the Contractor any funds which would be otherwise payable to the Contractor, that were withheld pursuant to the provisions of GC 5.8.2.

GC6 CHANGES IN THE WORK

GC6.1 Changes in the Work

1. Canada shall have the right to order additional Work, dispense with, or change the whole or any part of the Work described in the Drawings and Specifications or Scope of the Work.

2. The Departmental Representative shall decide whether anything done or not done as a result of directions given under GC 6.1.1 has increased or decreased the cost of the Work to the Contractor and where the cost of the Work has increased or decreased, the amount payable under the Contract shall be increased or decreased by an amount calculated in accordance with GC5.7.
3. Any change in the terms of the Contract, other than changes that may be ordered by Canada or the Departmental Representative pursuant to GC 6.1.1, may be made only by agreement in writing between Canada and the Contractor.

GC6.2 Changes in Subsurface Conditions and Delays by Canada

1. No extra payment shall be made to the Contractor for any extra expense, loss or damage for any reason unless Canada shall certify that such extra expense, loss or damage is directly attributable to:
 - (a) a substantial difference between the subsurface conditions as indicated in the Drawings and Specifications or Scope of Work and the actual conditions found at the site of the Work; or
 - (b) the neglect or delay by Canada, occurring after the date of award of the Contract:
 - (i) in providing any information or the doing of any act which Canada is required expressly by the Contract to do or as required by a known custom of the trade; or
 - (ii) in suspending the Work pursuant to GC 7.3.
2. The Contractor shall, within ten (10) days immediately after encountering such subsurface conditions or such neglect or delay, give written notice to the Departmental Representative of a claim for such extra expense, loss or damage. Failure to provide such written notice shall render the claim null and void.
3. The amount of any extra payment made under this section shall be calculated in accordance with GC5.7.
4. If, in the opinion of the Departmental Representative, any difference in subsurface conditions referred to in GC 6.2.1 results in a savings to the Contractor, the amount of said savings shall be deducted from the Contract Amount owing to the Contractor.

GC6.3 Extension of Time

1. Upon written application by the Contractor made before the date fixed for the completion of the Work, Canada may extend the time for completion of the Work if, in the opinion of Canada causes beyond the control of the Contractor have delayed its completion.
2. If the Contractor does not complete the Work by the day fixed for its completion, but completes it thereafter, the Contractor shall:
 - (a) pay all Canada's inspection costs relating to the Work incurred after the stipulated completion date; and
 - (b) compensate Canada for any loss or damage resulting from the failure by the Contractor to complete the Work by the completion date fixed by the Contract.

Unless, in the opinion of Canada, such delay was due to causes beyond the control of the Contractor or it is in the public interest to waive the whole or any part of the payment.

GC7 DEFAULT, SUSPENSION OR TERMINATION OF CONTRACT

GC7.1 Taking the Work Out of the Contractor's Hands

1. By giving notice in writing to the Contractor, Canada may take all or any part of the Work out of the Contractor's hands, and may employ such means as Canada sees fit to have the Work completed if the Contractor:

- (a) fails to remedy any delay in the commencement or default in the execution of the Work to the satisfaction of the Departmental Representative within six (6) days of Canada giving written notice to the Contractor to do so;
 - (b) defaults in the completion of any part of the Work within the time fixed by the Contract for its completion;
 - (c) becomes insolvent or commits an act of bankruptcy and has neither made a proposal to its creditors nor filed a notice of intention to make such a proposal pursuant to the Bankruptcy and Insolvency Act;
 - (d) abandons the Work;
 - (e) makes an assignment contrary to GC 1.3; and or
 - (f) otherwise fails to observe or perform any of the provisions of the Contract.
2. If the whole or any part of the Work is taken out of the Contractor's hands, the Contractor's right to any further payment that is due or accruing due under the Contract is extinguished.
 3. The Contractor shall be liable to pay Canada, upon demand, an amount that is equal to the sum of all losses and damages incurred or sustained by Canada in respect of the Contractor's failure to complete the Work.
 4. If the whole or any part of the Work that is taken out of the Contractor's hands pursuant to GC 7.1.1 is completed by Canada, the Departmental Representative shall calculate the amount, if any, of the holdback or progress claims that had accrued and was due prior to the date on which the Work was taken out of the Contractor's hands.
 5. If it is determined that there is an amount that is not required for the purposes of having the Work performed or of compensating Canada for any other loss or damage incurred or sustained by reason of the Contractor's default, Canada may then pay the Contractor the amount determined not to be required pursuant to GC 7.1.4.

GC7.2 Effect of Taking the Work Out of the Contractor's Hands

1. The taking of the Work or part thereof out of the Contractor's hands pursuant to GC 7.1.1 does not operate so as to relieve or discharge the Contractor from any obligations under the Contract or imposed upon the Contractor by law except the obligation to complete the performance of that part of the Work that was taken out of the Contractor's hands.
2. All Plant and Material and the interest of the Contractor in all real property, licenses, powers and privileges acquired, used, provided or consumed by the Contractor under the Contract shall continue to be the property of Canada without compensation to the Contractor.
3. When the Departmental Representative certifies that any Plant, Material or any interest of the Contractor referred to in GC 7.2, is no longer required for the purpose of the Work, or that it is not in the interests of Canada to retain that Plant, Material or interest, it shall revert to the Contractor.

GC7.3 Suspension of the Contract

1. Canada may, upon giving notice in writing to the Contractor, suspend the performance of the Work at any time. The Contractor shall comply with such notice immediately, subject to any conditions that may be stipulated in the notice.
2. If Canada suspends the Work for thirty (30) days or less the Contractor shall, subject to its remedy under GC 5.7, complete the Work when called upon to do so. If Canada suspends the Work for a period in excess of thirty (30) days, the Contractor may request that Canada terminate the Contract pursuant to GC 7.4.
3. It is the responsibility of the Contractor to mitigate all costs during the suspension period.

GC7.4 Termination of the Contract

1. Canada may terminate the Contract at any time by giving notice of termination in writing to the Contractor and upon receipt of such notice the Contractor shall cease all operations in performance of the Contract, subject to any conditions that may be stipulated in the notice.
2. Termination under GC 7.4.1 shall not relieve the Contractor of any legal or contractual obligations other than that portion of Work that remains to be completed at the time of the termination.
3. Payment, in event of termination under this subsection, shall be made pursuant to the provision of GC5.5.

GC8 DISPUTE RESOLUTION

1. The Contractor may, within 10 days after the communication to the Contractor of any decision or direction referred to in GC2.1 (b) and GC6.1, protest that decision or direction.
2. A protest referred to in GC8.1 shall be in writing, contain full reasons for the protest, be signed by the Contractor and be given to Canada.
3. If the Contractor gives a protest pursuant to GC8.2, any compliance by the Contractor with the decision or direction that was protested shall not be construed as an admission by the Contractor of the correctness of that decision or direction, or prevent the Contractor from taking whatever action the Contractor considers appropriate in the circumstances.
4. The giving of a protest by the Contractor pursuant to GC8.2 shall not relieve the Contractor from complying with the decision or direction that is the subject of the protest.
5. Subject to GC8.6, the Contractor shall take any action referred to in GC8.3 within 3 months after the date of the Certificate of Completion referred to in GC5.6 and not afterwards, except where it is otherwise provided by law.
6. The Contractor shall take any action referred to in GC8.3 resulting from a direction under GC3.4, within 3 months after the expiry of a warranty or guarantee period and not afterwards, except where it is otherwise provided by law.
7. Subject to GC8.8, if Canada determines that the Contractor's protest is justified, Canada shall pay the Contractor the cost of the additional labour, Plant and Material necessarily incurred by the Contractor in carrying out the protested decision or direction.
8. Costs referred to in GC8.7 shall be calculated in accordance with GC5.7.

GC9 INDEMNIFICATION AND INSURANCE

GC9.1 Indemnification

1. The Contractor shall indemnify and save harmless Canada, its servants, agents and all those for whom Canada may be, in law, responsible, from and against all claims, demands, losses, damages, costs and legal proceedings by whomever made, sustained, brought or prosecuted, and in any manner based upon, occasioned by or attributed to the activities of the Contractor, the Contractor's employees, agents or persons for whom the Contractor is, in law, responsible for the performance or purported performance of the Contract, including an infringement or alleged infringement of a patent of invention or any other kind of intellectual property.
2. For the purpose of GC 9.1.1, activities include any act improperly carried out and any omission or delay in carrying out an act.
3. The Contractor's liability to indemnify or reimburse Canada under the Contract shall not affect or prejudice Canada from exercising any rights available to Canada at law or in equity.

GC9.2 Insurance Contracts

1. The Contractor shall, at the Contractor's expense, obtain and maintain insurance contracts in respect of the work and shall provide evidence thereof to Canada in accordance with the requirements of the INSURANCE TERMS.
2. The insurance contracts referred to in GC 9.2.1 shall:
 - (a) be in a form, of the nature, in the amounts, for the periods and containing the terms and conditions specified in INSURANCE TERMS; and
 - (b) provide for the payment of claims under such insurance contracts in accordance with GC9.3.

GC9.3 Insurance Proceeds

1. In the case of a claim payable under a Builders Risk/Installation (All Risks) insurance contract maintained by the Contractor pursuant to GC 9.2, the proceeds of the claim shall be paid directly to Canada, and
 - (a) the monies so paid shall be held by Canada for the purposes of the Contract, or
 - (b) if Canada elects, shall be retained by Canada, in which event they vest in Canada absolutely.
2. In the case of a claim payable under a General Liability insurance contract maintained by the Contractor pursuant to GC 9.2, the proceeds of the claim shall be paid by the insurer directly to the claimant.
3. If an election is made pursuant to GC 9.3.1, Canada may cause an audit to be made of the accounts of the Contractor and of Canada in respect of the part of the work that was lost, damaged or destroyed for the purpose of establishing the difference, if any, between:
 - (a) the aggregate of the amount of the loss or damage suffered or sustained by Canada, including any costs incurred in respect of the clearing and cleaning of the Work and its site and any other amount that is payable by the Contractor to Canada under the Contract, minus any monies retained pursuant to GC 9.3.1 (b); and
 - (b) the aggregate of the amounts payable by Canada to the Contractor pursuant to the Contract up to the date of the loss or damage.
4. A difference that is established pursuant to GC 9.3.3 shall be paid forthwith by the party who is determined by the audit to be the debtor to the party who is determined by the audit to be the creditor.
5. When payment of a deficiency has been made pursuant to GC 9.3.4, all rights and obligations of Canada and the Contractor under the Contract shall, with respect only to the part of the work that was the subject of the audit referred to in GC 9.3.3, be deemed to have been expended and discharged.
6. If an election is not made pursuant to GC 9.3.1 (b), the Contractor shall, subject to GC 9.3.7, clear and clean the work and its site and restore and replace the part of the work that was lost, damaged or destroyed at the Contractor's expense as if that part of the work had not yet been performed.
7. When the Contractor clears and cleans the Work and its site and restores and replaces the work referred to in GC 9.3.6, Canada shall pay the Contractor out of the monies referred to in GC 9.3.1 so far as they will thereon to extend.
8. Subject to GC 9.3.7, payment by Canada pursuant to GC 9.3.7 shall be made in accordance with the Contract but the amount of each payment shall be 100 percent of the amount claimed notwithstanding GC 5.3 a) and b).

INSURANCE TERMS

IN1 GENERAL

- IN1.1 Worker's Compensation
- IN1.2 Indemnification
- IN1.3 Proof of Insurance
- IN1.4 Insured
- IN1.5 Payment of Deductible

IN2 COMMERCIAL GENERAL LIABILITY

- IN2.1 Scope of Policy
- IN2.2 Period of Insurance

IN3 AUTOMOBILE INSURANCE

- IN3.1 Scope of Policy

IN1 GENERAL

IN1.1 Worker's Compensation

- 1) The Contractor shall provide and maintain Worker's Compensation Insurance in accordance with the legal requirements of the Province or Territory where the work is being carried out.

IN1.2 Indemnification

- 1) The insurance required by the provisions of these Insurance Terms shall in no way limit the Contractor's responsibility under the Indemnification clause of the General Conditions of the contract. Any additional coverage the Contractor may deem necessary to fulfill his obligations under the aforesaid clause shall be at his own discretion and expense.

IN1.3 Proof of Insurance

- 1) Before commencement of the Work, and within thirty (30) days after acceptance of its bid, the Contractor shall deposit with Canada a CERTIFICATE OF INSURANCE (form AAFC I AAC5314) available upon request.
- 2) Upon request by Canada, the Contractor shall provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the provisions contained herein.

IN1.4 Insured

- 1) Each policy shall insure the Contractor and shall include Her Majesty the Queen in right of Canada, represented by the Minister of Agriculture & Agri-Food Canada as an additional Insured, with respect to liability arising out of the operations of the contractor with regard to the work.

IN1.5 Payment of Deductible

- 1) The payment of monies up to the deductible amount made in satisfaction of a claim shall be borne by the Contractor.

IN2 COMMERCIAL GENERAL LIABILITY

IN2.1 Scope of Policy

- 1) The insurance coverage provided shall not be less than that provided by IBC Form 2100, as amended from time to time, and shall have:
 - (a) an Each Occurrence Limit of not less than \$1,000,000.00 ;

- (b) a Products/Completed Operations Aggregate Limit of not less than \$1,000,000.00; and
 - (c) a General Aggregate Limit of not less than \$2,000,000.00 Per policy year, if the policy is subject to such a limit.
- 2) The policy shall either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto:
- (a) Blasting.
 - (b) Pile driving and caisson work.
 - (c) Underpinning.
 - (d) Removal or weakening of support of any building or land whether such support be natural or otherwise if the work is performed by the insured contractor.
 - (e) Asbestos.
 - (f) Non-owned Automobile Policy.

IN2.2 Period of Insurance

- 1) Unless otherwise directed in writing by Canada, or, otherwise stipulated elsewhere herein, the policy required herein shall be in force and be maintained from the date of contract award until the day of issue of the Certificate of Completion except that the coverage for Completed Operations Liability shall, in any event, be maintained for a period of at least six (6) years beyond the date of the CERTIFICATE OF COMPLETION.

IN3 AUTOMOBILE INSURANCE

IN3.1 Scope of Policy

- 1) Automobile Liability Insurance in respect of licensed vehicles shall have limits of not less than one million dollars inclusive per occurrence for bodily injury, death, and damage to property.



BID AND ACCEPTANCE FORM (BA)

BA01 IDENTIFICATION

Blackout Curtains for Greenhouses B1&B2
CEF Ottawa, Building 21
Solicitation # 14-1284
Project: CEF14-A576

BA02 BUSINESS NAME AND ADDRESS OF BIDDER

Name: _____

Address: _____

Telephone: _____

Email: _____

Fax: _____

PBN: _____

BA03 THE OFFER

The Bidder offers to Her Majesty the Queen in right of Canada to perform and complete the Work for the above named project in accordance with the Bid Documents for the **Total Bid Amount** of \$ _____ excluding Applicable Taxes.
(amount in numbers)

BA04 BID VALIDITY PERIOD

The bid shall not be withdrawn for a period of 30 days following the date of solicitation closing.

BA05 ACCEPTANCE AND CONTRACT

Upon acceptance of the Contractor's offer by Canada, a binding Contract shall be formed between Canada and the Contractor. The documents forming the Contract shall be the contract documents identified in Contract Documents (CD).

BA06 CONSTRUCTION TIME

The Contractor shall perform and complete the Work within **10 weeks** from the date of notification of acceptance of the offer.

BA07 SIGNATURE

Name and title of person authorized to sign on behalf of Bidder (Type or print)

Signature

Date



**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 AAFC	2. Branch or Directorate / Direction générale ou Direction CBM
3. a) Subcontract Number / Numéro du contrat de sous-traitance N/A	3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant N/A

4. Brief Description of Work / Brève description du travail
**Blackout Curtains for Greenhouses B1&B2, building 21, CEF Ottawa.
 Rideaux d'obscurcissement pour les serres B1&B2, édifie 21, FEC Ottawa.**

5. a) Will the supplier require access to Controlled Goods? / Le fournisseur aura-t-il accès à des marchandises contrôlées?
 No / Non 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?
 No / Non 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)
 No / Non 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.
 No / Non 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?
 No / Non 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 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 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: Specify country(ies): / Préciser le(s) pays: <input type="checkbox"/>	Restricted to: / Limité à: Specify country(ies): / Préciser le(s) pays: <input type="checkbox"/>	Restricted to: / Limité à: Specify country(ies): / Préciser le(s) pays: <input type="checkbox"/>

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 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"/>



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 / Non Yes / 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 / Non Yes / 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 / Non Yes / Oui
If Yes, will unscreened personnel be escorted?
Dans l'affirmative, le personnel en question sera-t-il escorté? No / Non Yes / 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 / Non Yes / 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 / Non Yes / 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 / Non Yes / 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 / Non Yes / 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 / Non Yes / Oui



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 / PROTÉGÉ			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 / PROTÉGÉ			CONFIDENTIAL / CONFIDENTIEL	SECRET	TOP SECRET / TRÈS SECRET		
											A	B	C					
Information / Assets / Renseignements / Biens / Production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IT Media / Support TI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IT Link / Lien électronique	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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).



Contract Number / Numéro du contrat 14-1284
Security Classification / Classification de sécurité Unclassified

PART D - AUTHORIZATION / PARTIE D - AUTORISATION

13. Organization Project Authority / Chargé de projet de l'organisme			
Name (print) - Nom (en lettres moulées)		Title – Titre	Signature
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel	Date
14. Organization Security Authority / Responsable de la sécurité de l'organisme			
Name (print) - Nom (en lettres moulées)		Title – Titre	Signature
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel	Date
15. Are there additional instructions (e.g. Security Guide, Security Classification Guide) attached? Des instructions supplémentaires (p. ex. Guide de sécurité, Guide de classification de la sécurité) sont-elles jointes?			<input type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui
16. Procurement Officer / Agent d'approvisionnement			
Name (print) - Nom (en lettres moulées) Jean-Pierre Simard		Title – Titre Senior Contracts Officer	Signature
Telephone No. - N° de téléphone 613 759-6157	Facsimile No. - N° de télécopieur 613 759-7005	E-mail address - Adresse courriel jean-pierre.simard@agr.gc.ca	Date
17. Contracting Security Authority / Autorité contractante en matière de sécurité			
Name (print) - Nom (en lettres moulées)		Title – Titre	Signature
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel	Date



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada

DRAWINGS AND SPECIFICATIONS

#14-1284

FOR

BLACKOUT CURTAINS FOR GREENHOUSES B1 & B2

Building 21

Project: CEF14-A576

CENTRAL EXPERIMENTAL FARM (CEF)

Agriculture and Agri-Food Canada (AAFC)

960 Carling Avenue

Ottawa, Ontario K1A 0C6

TABLE OF CONTENTS

SPECIFICATIONS

	Number of page
DIVISION 01 – General Requirements	
SECTION 01 00 10 General Instructions	8
SECTION 01 35 30 Health and Safety Requirements	3
DIVISION 13 – Special Construction	
SECTION 13 34 13.13 Greenhouse Specialties	5

DRAWINGS

GH1	Greenhouse Blackout System for Compartments C2 & C4
GH2	Greenhouse Blackout System for Compartments B1 + B2
GH3	Greenhouse Blackout System for Compartments B1 + B2 (Bay 1)
GH4	Greenhouse Blackout System for Compartments B1 + B2 (Bay 2)

Part 1 General

1.1 MINIMUM STANDARDS

- .1 Materials shall be new and work shall conform to the minimum applicable standards of the Canadian General Standards Board, the Canadian Standards Association, the National Building Code of Canada 2010 (NBC) and all applicable Provincial and Municipal codes. In the case of conflict or discrepancy the most stringent requirement shall apply.

1.2 SHOP DRAWINGS

- .1 Submit for the Departmental Representative's review, five (5) copies of each shop drawing.
- .2 The review is for the sole purpose of ascertaining conformance with the general design concept, and does not mean approval of the design details inherent in the shop drawings, responsibility for which shall remain with the Contractor. Such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of his responsibility for meeting all requirements of the Contract Documents.
- .3 Do not commence manufacture or order materials before shop drawings are reviewed.

1.3 SAMPLES

- .1 Samples: examples of materials, equipment, quality, finishes, workmanship.
- .2 Where colour, pattern or texture is criterion, submit full range of samples.
- .3 Reviewed and accepted samples will become standard of workmanship and material against which installed work will be verified.

1.4 PRODUCT DATA

- .1 Product data: manufacturers catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products.
- .2 Submit five (5) copies of product data.
- .3 Delete information not applicable to project.
- .4 Cross-reference product data information to applicable portions of Contract Documents.

1.5 TAXES

- .1 Pay all taxes properly levied by law (including Federal, Provincial and Municipal).

1.6 FEES, PERMITS AND CERTIFICATES

- .1 Pay all fees and obtain all permits. Provide authorities with plans and information for acceptance certificates. Provide inspection certificates as evidence that work conforms to requirements of Authority having jurisdiction.

1.7 FIRE SAFETY REQUIREMENTS

- .1 Comply with the National Building Code of Canada 2010 (NBC) for fire safety in construction and the National Fire Code of Canada 2010 (NFC) for fire prevention, fire fighting and life safety in building in use.
- .2 Comply with Human Resources Development Canada (HRDC), Fire Commissioner of Canada (FCC) standards:
 - .1 No. 301: Standard for Construction Operations.
 - .2 No. 302: Standard for Welding and Cutting.
 - .3 No. 374: Fire Protection Standard for General Storage (Indoor and Outdoor).
 - .4 Available from Fire Protection Engineering Services, Labour Program, HRDC
 - .5 Retain all fire safety documents and standards on site.
- .3 Welding and cutting:
 - .1 Before welding, soldering, grinding and/or cutting work, obtain a permit from the Fire Prevention Unit as directed by the Departmental Representative. Store flammable liquids in approved CSA containers inspected by the Fire Prevention Unit. No open flame shall be used unless authorized by the Fire Prevention Unit.
 - .2 At least 48 hours prior to commencing cutting, welding or soldering procedure, provide to Departmental Representative:
 - .1 Notice of intent, indicating devices affected, time and duration of isolation or bypass.
 - .2 Completed welding permit as defined in FC 302.
 - .3 Return welding permit to Departmental Representative immediately upon completion of procedures for which permit was issued.
 - .3 A fire watcher as described in FC 302 shall be assigned when welding or cutting operations are carried out in areas where combustible materials within 10m may be ignited by conduction or radiation.
 - .4 Where work requires interruption of fire alarms or fire suppression, extinguishing or protection systems:
 - .1 Provide watchman service as described in FC 301; In general, watchman service is defined as an individual conversant with Fire Emergency Procedures, performing fire picket duty within an unprotected and unoccupied (no workers) area once per hour.
 - .2 Retain services of manufacturer for fire protection systems on daily basis or as approved by FCC, to isolate and protect all devices relating to:
 - .1 modification of fire alarms, fire suppression, extinguishing or protection systems; and/or

.2 cutting, welding, soldering or other construction activities which might activate fire protection systems.

.5 Immediately upon completion of work, restore fire protection systems to normal operation and verify that all devices are fully operational.

.6 Inform fire alarm system monitoring agency and local Fire Department immediately prior to isolation and immediately upon restoration of normal operation.

1.8 FIELD QUALITY CONTROL

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

.2 Permit employees registered in Provincial apprenticeship program to perform specific tasks only if under direct supervision of qualified licensed workers.

.3 Determine permitted activities and tasks by apprentices, based on level of training attended and demonstration of ability to perform specific duties.

1.9 HAZARDOUS MATERIALS

.1 Comply with the requirements of the Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and the provision of Material Safety Data Sheets (MSDS) acceptable to Human Resources Development Canada, Labour Program.

.2 For work in occupied buildings give the Departmental Representative 48 hours notice for work involving designated substances (Ontario Bill 208), hazardous substances (Canada Labour Code Part II Section 10), and before painting, caulking, or using adhesives.

1.10 TEMPORARY UTILITIES

.1 Existing services required for work may be used by the Contractor without charge. Ensure capacity is adequate prior to imposing additional loads. Connect and disconnect at own expense and responsibility.

.2 Connect to existing power supply in accordance with Canadian Electrical Code.

.3 Notify the Departmental Representative and utility companies of intended interruption of services, obtain requisite permission.

.4 Give the Departmental Representative 48 hours notice related to each necessary interruption of any mechanical or electrical service throughout the course of the work. Keep duration of these interruptions to a minimum. Carry out all interruptions after normal working hours of the occupants, preferably on weekends.

1.11 REMOVED MATERIALS

.1 Unless otherwise specified, materials for removal become the Contractor's property and shall be taken from site. Note: existing motors and shades to be forwarded to AAFC.

1.12 PROTECTION

.1 **Protect finished work against damage until take-over.** Damages caused by Contractor to be repaired/ replaced to satisfaction of AAFC.

- .2 Protect adjacent work against the spread of dust and dirt beyond the work areas.
- .3 Protect operatives and other users of site from all hazards.

1.13 USE OF SITE AND FACILITIES

- .1 Execute work with least possible interference or disturbance to the normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated. Refer to article 1.32 Scheduling below for work that must be done during "off hours".
- .2 Maintain existing services to building and provide for personnel and vehicle access.
- .3 Where security is reduced by work provides temporary means to maintain security.
- .4 Where elevators, dumbwaiters, conveyors or escalators exist Contractor may use these at Departmental Representative's discretion. Protect from damage, safety hazards and overloading of existing equipment.
- .5 Sanitary facilities will be assigned for Contractor's personnel. Others shall not be used. Keep facilities clean.
- .6 Closures: Protect work temporarily until permanent enclosures completed.

1.14 SITE STORAGE

- .1 The Departmental Representative will assign storage space which shall be equipped and maintained by the Contractor.
- .2 Do not unreasonably encumber site with materials or equipment.
- .3 Move stored products or equipment which interferes with operations of Building System Technician or other contractors.
- .4 Obtain and pay for use of additional storage or work areas needed for operations.

1.15 CUT, PATCH and MAKE GOOD

- .1 Cut existing surfaces as required to accommodate new work.
- .2 Remove all items so shown or specified.
- .3 Patch and make good surfaces cut, damaged or disturbed, to Departmental Representative's approval. Match existing material, colour, finish and texture.
- .4 Install firestops and smoke seals in accordance with "ULC-S115-05 – Standard Method of Fire Test of Firestop Systems", around pipe, ductwork, cables and other objects penetrating fire separations to provide fire resistance not less than the fire resistance rating of surrounding floor, ceiling and wall assembly.

1.16 SLEEVES, HANGERS AND INSERTS

- .1 Co-ordinates setting and packing of sleeves and supply and installation of hangers and inserts. Obtain Departmental Representative's approval before cutting into structure.

1.17 EXAMINATION

- .1 Examine site and conditions likely to affect work and be familiar and conversant with existing conditions.

1.18 SIGNS

- .1 Provide common-use signs related to traffic control, information, instruction, use of equipment, public safety devices, and etcetera, in both official languages or by the use of commonly-understood graphic symbols to the Departmental Representative's approval.
- .2 No advertising will be permitted on this project.

1.19 ACCESS AND EGRESS

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

1.20 SCAFFOLDS AND WORK PLATFORMS

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

1.21 PUBLIC WAY PROTECTION

- .1 Designs, erect and maintain hoarding and covered pedestrian walkways to support all loads including stairs, runways, ramps or ladders, independent of finished surfaces and in accordance with relevant municipal, provincial and other regulations.

1.22 OPERATIONS AND MAINTENANCE MANUALS

- .1 Submit to Departmental Representative four (4) copies of approved Operations Data and Maintenance Manual in both official languages, compiled as follows:
 - .1 Bind data in vinyl hard cover 3 "D" ring type loose leaf binders for 212 x 275!mm size paper. Binders must not exceed 75!mm thick or be more than 2/3 full.
 - .2 Enclose title sheet labelled "Operation Data and Maintenance Manual," project name, date and list of contents. Project name must appear on binder face and spine.
 - .3 Organize contents into applicable sections of work to parallel project specifications breakdown. Mark each section by labelled tabs protected with celluloid covers fastened to hard paper dividing sheets.
- .2 Include following information plus data specified.
 - .1 Maintenance instructions for finished surface and materials.
 - .2 Copy of hardware and paint schedules.

- .3 Description: Operation of the equipment and systems defining start-up, shut-down and emergency procedures, and any fixed or adjustable set points that affect the efficiency of the operation. Include nameplate information such as make, size, capacity and serial number.
- .4 Maintenance: Use clear drawings, diagrams or manufacturers' literature which specifically apply and detail the following:
 - .1 lubrication products and schedules.
 - .2 trouble shooting procedures.
 - .3 adjustment techniques.
 - .4 operational checks.
 - .5 Suppliers names, addresses and telephone numbers and components supplied by them must be included in this section. Components must be identified by a description and manufacturers part number.
- .5 Guarantees showing:
 - .1 Name and address of projects.
 - .2 Guarantee commencement date (date of Interim Certificate of Completion).
 - .3 Duration of guarantee.
 - .4 Clear indication of what is being guaranteed and what remedial action will be taken under guarantee.
 - .5 Signature and seal of Guarantor.
- .6 Additional material used in project listed under various Sections showing name of manufacturer and source of supply.
- .3 Spare parts: List all recommended spares to be maintained on site to ensure optimum efficiency. List all special tools appropriate to unique application. All parts/tools detailed must be identified as to manufacturer, manufacturer part number and supplier (including address).
- .4 Include one complete set of final shop drawings (bound separately) indicating corrections and changes made during fabrication and installation.

1.23 RECORDS

- .1 As work progresses, maintain accurate records to show deviations from contract drawings. Just prior to Departmental Representative's inspection for issuance of final certificate of completion, supply to the Departmental Representative one (1) set of white prints with all deviations neatly inked in. The Departmental Representative will provide two sets of clean white prints for this purpose.

1.24 GUARANTEES AND WARRANTIES

- .1 Before completion of work collect all manufacturer's guarantees and warranties and deposit with Departmental Representative.

1.25 CLEAN UP

- .1 Clean up work area as work progresses. At the end of each work period and more often if ordered by the Departmental Representative, remove debris from site, neatly stack material for use, and clean up generally.
- .2 Upon completion removes scaffolding, temporary protection and surplus materials. Make good defects noted at this stage.
- .3 Clean manufactured articles in accordance with manufacturer's directions.
- .4 Clean areas under contract to a condition at least equal to that previously existing and to approval of Departmental Representative.

1.26 SECURITY CLEARANCES

- .1 All personnel employed on this project will be subject to security check. Obtain requisite clearance, as instructed, for each individual required to enter the premises.
- .2 Personnel will be checked daily at start of work shift and given a pass which must be worn at all times. Pass must be returned at end of work shift and personnel checked out.

1.27 SECURITY ESCORT

- .1 All personnel employed on this project shall be escorted when executing work in non-public areas during normal working hours. Personnel shall be escorted in all areas after normal working hours.
- .2 Submit an escort request to Departmental Representative at least 14 days before the service is needed. For requests submitted within the time mentioned above, the costs of the security escort will be paid for by the Departmental Representative. The cost incurred by a late request will be charged to the Contractor.
- .3 Any escort request may be cancelled free of charge if notification of cancellation is given at least 4 hours before the scheduled time of the escort. The cost incurred by a late cancellation will be charged to the Contractor.
- .4 The calculation of costs will be based on the average hourly rate of a security officer for a minimum of eight hours per day for a late service request and of four hours for late cancellations.

1.28 BUILDING SMOKING ENVIRONMENT

- .1 Smoking is not permitted in the Building. Obey smoking restrictions on building property.

1.29 SCHEDULING

- .1 On award of contract submit bar chart construction schedule for work, indicating anticipated progress stages within time of completion. When schedule has been reviewed by the Departmental Representative, take necessary measures to complete work within scheduled time. Do not change schedule without notifying Departmental Representative.
- .2 Carry out work during "regular hour" Monday to Friday from 07:00 to 18:00 hours and on Saturdays, Sundays and statutory holidays.

- .3 Carry out interior painting in occupied areas during "off hours" Monday to Friday from 18:00 to 07:00 hours and on Saturdays, Sundays, and statutory holidays. Thoroughly ventilate areas painted during "off hours".
- .4 Give the Departmental Representative 48 hours notice for work to be carried out during "off hours".

1.30 COST BREAKDOWN

- .1 Before submitting first progress claim submit breakdown of Contract Amount in detail as directed by Departmental Representative and aggregating the Contract Amount. After approval by Departmental Representative cost breakdown will be used as the basis of progress payments.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

1.1
Safety
Regulations

- .1 The Contractor shall comply with the latest edition and amending regulations of the following documents, and in the case of conflicts between documents, the more stringent rule shall apply:
 - .1 *The Occupational Health and Safety Act – Revised Statutes of Ontario, Revised Regulation 851/90, amended to O. Reg 488/01.*
 - .2 *Hazardous Projects Act and the Canada Labour Code, most recent edition.*
 - .3 *Occupational Health and Safety Regulation for Construction Projects, Revised Statutes of Ontario, Regulation 213-91 as amended by O.Reg.527/00.*
 - .4 *The Workplace Safety and Insurance Act, 1997 as amended by 1997,c.26, Sched.; 1998, c. 36; 1999, c.6, s. 67; 2000, c. 26, Sched. I; 2001, c. 9, Sched. I, s. 4; 2002, c.8, Sched. P, s.8; 2002, c. 18, Sched. J, s. 5.*
 - .5 *Ontario Building Code Act S.O. 1992, c. 23, and Ontario Regulation 403/97 as amended to O. Reg. 220/02.*
 - .6 *The Ontario Fire Code, O. Reg. 388/97 as amended by 315/01.*
 - .7 Regulation 447 - Environmental Protection Act.
 - .8 *Workplace Safety and Insurance Board, Regulation 1101, First Aid Requirements.*
 - .9 *National Building Code 1995, Part 8: Safety Measures at Construction and Demolition Sites.*
 - .10 Ensure no part of work is subjected to a load which will endanger its safety or will cause permanent deformation.

1.2
Temporary
Stairs, Hoists,
Scaffold, etc.

- .1 Furnish and maintain all equipment such as stairs, ladders, ramps, scaffolds, swing stages, hoists, runways, derricks, chutes, elevators, etc., as required for proper execution of work.
- .2 Construct and maintain scaffolding in rigid, secure and safe manner. Erect scaffolding independent of walls. Remove promptly when no longer required.
- .3 Provide all necessary temporary barricades, fencing, guardrails, night lights, overhead protection and barriers as necessary for the work.
- .4 Where such structures are of a complicated nature, employ the services of a Registered Professional Engineer to design such scaffolding, framework, or other temporary supports.

1.3
Fall Protection

- .1 Comply with Occupational Health and Safety Act and Regulations for Construction Projects, Section 26, as described herein but not limited too:
 - .1 Fall protection will be required when a worker is exposed to a fall of more than 3 metres.
 - .2 Fall protection shall be in the form of:
 - a. Guardrail system
 - b. Travel restraint system
 - c. Fall restricting system
 - d. Fall arrest system

- .3 The components of any system listed above shall be designed by a professional engineer in accordance with good engineering practice, and shall meet the requirements of any of the National Standards of Canada that are applicable.
- .2 A wood guardrail system shall consist of a top rail, intermediate rail, and a toe board. The top rail shall be located at least 0.9m but no more than 1.1m above the surface on which the system is installed. The toe board shall extend at least 89mm above the surface on which the system is installed. The maximum distance between two adjacent posts of the guardrail system shall be 2.4m. Wood shall be SPF construction grade quality or better. Members shall be at least 38mm by 89mm. Members to resist prescribed point loads.
- .3 A travel restraint system shall consist of a full body harness (with adequate attachment points) or a safety belt. The full body harness or safety belt shall be attached by a lifeline or lanyard to a fixed support able to resist the prescribed static and dynamic forces.
- .4 A fall restrict system shall consist of assembly of components attached to a fixed support able to resist the prescribed static and dynamic forces. Worker's free fall distance must not exceed 0.6m.
- .5 A fall arrest system shall consist of a full body harness with adequate attachment points and a lanyard equipped with a shock absorber. The fall arrest system shall be attached by a lifeline or lanyard to a fixed support able to resist the prescribed static and dynamic forces. The fall arrest system shall be arranged so that a worker cannot hit the ground or an object or level below the work. The worker who falls shall not be subjected to a fall arrest force greater than 8 kilonewtons.
- .1 Enforce use of CSA approved hardhats and safety boots for all entering or working on construction site.
- .2 The Contractor shall remove from the site any persons not observing or complying with safety requirements.
- .3 The Contractor will report to the Departmental Representative, and jurisdictional authorities, any accident or incident involving the Contractor, the Departmental Representative's staff, or the public; personnel and/or property, arising from the Contractor's execution of the work.
- .4 The Contractor will include all provisions of the Contract in so far as they are pertinent in any agreement with Sub-contractors, and hold all Sub-contractors equally responsible for safe work performance.
- .5 Delays in the progress of the Work arising out of infractions of legislation or Contract health and safety requirements are the responsibility of the Contractor.
- .6 Provide and maintain adequate lighting where workmen or public may be subject to hazards and in all working areas.
- .7 Comply with the requirements of the Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials, and regarding labelling and the provision of material safety data sheets.
- .8 In addition to the requirements of the Occupational Health and Safety Act, and Regulations for Construction Projects, provide temporary safeguards and protection against:
- .1 Accident or injury to any workmen or other persons on the site, adjacent work and property, roads and walks.

1.4
Safety and
Security
Requirements

- .2 Damage to any part of the work and to any adjoining or adjacent structure, properties, pavements, walks, services, and other similar items by frost, weather, overloading, and any other cause resulting from the execution of the work.
- .9 Make good with material identical with existing and adjoining surfaces any damage resulting from the execution of the work to any part of the work or any buildings, pavements, landscaping, poles, hydrants, services, etc., on or surrounding the site.
- .10 Fire extinguisher must be on hand at all times when propane torch or other flame/heat producing device is being used. Hot Work Permit to be completed by Contractor 48 hours to any flame work. Hot Work permit issued by AAFC.
- .11 Adhere to Departmental Representative's site specific Health and Safety policies, as applicable, which include the following:
 - .1 Use of hard hats and safety boots
 - .2 WHMIS: training, staff awareness of chemicals on site, emergency plan
- .12 The Contractor shall be responsible to insure that all individual accessing the roof is properly trained in Fall Arrest and Fall Protection as required by the Ministry of Labour of Ontario. Anyone not in possession of a certification card should not be allowed on the roof.
- .13 The Contractor shall abide by all Workplace Health and Safety regulations. Should the Contractor, in the opinion of the Departmental Representative, fail to meet those regulations, ONE written warning will be given to the Contractor. Further non-compliance will be written in the inspection report and result in the notification of the Ministry of Labour by the Departmental Representative.
- .14 The Contractor shall provide, in writing, a company safety plan and a site specific safety plan PRIOR to commencing any work. Safety Plan to be reviewed and approved by AAFC prior to commencing any work.

END OF SECTION

PART 1 General

1.1 SECTION INCLUDES

Work of this Section includes, but is not limited to, the following:

- .1 Blackout curtains, independently motorized in roof areas of each of the greenhouse compartment. Blackout curtains, independently motorized for wall areas, as shown on drawings,
- .2 Greenhouse computer control system modifications to the existing Argus control system to accommodate blackout systems,
- .3 Computer low voltage installation to accommodate blackout systems,
- .4 Electrical conduit, cable and wiring devices to connect shade motor controllers to existing Argus control panels.

1.2 RELATED SECTIONS

Other Specification Sections that relate directly to Work of this Section include, but are not limited to:

- .1 Division 01 – General Requirements.

1.3 REFERENCES

- .1 Ontario Building Code (OBC) 2012,
- .2 National Building Code 2010 and referenced applicable standards,
- .3 Canadian Electrical Code, CSA C22.1-12.

1.4 SUBMITTALS

- .1 Product Data: Submit manufacturer's product data, installation instructions, use limitations and recommendations for each product and system used. Provide manufacturer's certifications stating that products and systems comply with requirements. List and describe features of control systems, performances and operating characteristics.
- .2 As-Built Drawings: Revise shop drawings and resubmit as-built drawings making use of field set marked up by site foreman. Collect and add as-built drawings from all suppliers.
- .3 Manuals: Provide Operation and Maintenance Manuals listing operating and maintenance instructions, emergency instructions, safety considerations, parts listings, exploded views, parts sources and circuit diagrams. Include list of all operating components and details.

1.5 SHOP DRAWINGS

- .1 Shop Drawings: Submit shop drawings for fabrication and installation of the greenhouse blackout systems, sealed by a professional engineer licensed in Ontario, including; Plans, Elevations, Sections. Show and provide details of support members or other support provision for blackout system curtains, motors, drive lines and return pulleys.
- .2 Clearly indicate on all equipment shop drawings voltage, (phases), and Amperage draw.

1.6 SAMPLES

- .1 Samples: Provide samples of cloth. Minimum size of samples, 200mm by 200mm, as appropriate.

1.7 QUALIFICATIONS

- .1 Supplier demonstrates to have at least 3 projects of blackout system projects similar in scope and complexity in the last 5 years.

1.8 LEED REQUIREMENTS

- .1 Not used

1.9 DESIGN CRITERIA

- .1 Lateral Bracing: Shade motors shall be adequately braced against lateral movement.

1.10 DELIVERY, STORAGE AND HANDLING

- .1 Protect materials during delivery, storage and handling to comply with manufacturers' directions and as required to prevent damage and deterioration. Store all greenhouse components, away from rain, snow and condensing conditions.

PART 2 Products**2.1 MATERIALS**

- .1 Steel
 - .1 Steel supports, drive lines, motor supports, return pulley supports, of hot dip galvanized steel.

2.2 COMPONENTS

- .1 Aluminum
 - .1 Extrusions, including roll tubes, Alloy 6061 T6 or 6063 T5.
- .2 Fasteners
 - .1 Fasteners: 300 Series Stainless Steel
- .3 Flashing and Sealing
 - .1 Blackout curtains to be installed with perimeter seals to reduce light by a minimum of 99.9%, measured throughout the compartment.
- .4 Shade Curtains and Light Control Curtains
 - .1 Where shown on drawings, greenhouse compartments shall be provided with flat blackout systems in the roof areas, suspended from or sliding on stainless steel guide wires.
 - .2 Supply new shade motors, mechanisms and supports.
 - .3 Where shown on drawings, greenhouse compartments shall be provided with side wall and gable end wall roll-up blackout cloth, from sill height to the perimeter of the roof blackout cloth. Leading edge tube to be weighted to provide positive cloth travel with air movement in compartment.
 - .4 Fixed perimeter seals are required at all edges of roof and vertical panels.
 - .5 Horizontal blackout cloth to be two layer white, black and porous cloth, fire retardant, >99.9% shade value and 70% of energy saving. UV stable in greenhouse applications. Standard of acceptance: Ludvig Svensson Obscura 10075 FR WB+B.

- .6 Vertical blackout cloth to be reflective cloth suitable for rollup applications, fire retardant, <0.1% light transmission and 70% energy saving. UV stable in greenhouse applications. Standard of acceptance: Ludvig Svensson Obscura 10075 R FR W.
 - .7 Drive motor in roof areas: 208V-3 Phase gear motor, maximum 5 RPM, self-locking double worm gear, complete with built in limit switches. Supply complete with side mounting plate and chain couplings to bolt to 25mm galvanized pipe drive shaft.
 - .8 Drive motor for vertical blackout systems: tube motor, for use with 50mm aluminum pipe, 120V-1 Phase, complete with built in limit switches. Tube motor to be water proof suitable for outdoor application. Supply complete with installation hardware
 - .9 Drive tube: 50mm outside diameter aluminum shaft.
 - .10 Drive cables: 3mm 7x19 stainless steel aircraft cable.
 - .11 Return pulleys: 75mm diameter with ball bearings, supplied complete with mounting bracket.
 - .12 Support Wires: 2mm stainless steel wire.
 - .13 Leading edge tube: 19mm diameter galvanized steel tube.
 - .14 Roof cloth shall be hemmed to prevent fraying.
 - .15 Supply new motors with pre-wired control relay boxes with integral disconnect means.
- .5 Computer Control Modifications
- .1 GH functions (each of 2 compartments):
 - 1 Roof blackout system = 1 proportional OP 120/208V3Ph
(1 output module existing in each compartment – reconfigure for blackout function).
 - 5 Vertical roll-up blackout curtains = 5 proportional OP 120V1Ph
(2 output modules existing in each compartment – reconfigure for blackout function).
 - .2 Direct electrician how to make Argus control system panel modifications required to provide direct feeds to the new pre-wired control relay boxes with integral disconnect means for each roof blackout motor and each vertical blackout motor control relay box.
- .6 Electrical Work
- .1 Disconnect existing motors to be replaced.
 - .2 Reconnect branch circuit connections from Zone Argus control panel to new pre-wired control relay boxes with integral disconnect means for roof blackout motors.
 - .3 Disconnect existing vertical shade curtains to be replaced.
 - .4 Reconnect branch circuit connections from Zone Argus control panel to new pre-wired control relay boxes with integral disconnect means for vertical blackout motors.
 - .5 Provide new conduit, cable and wiring devices to make connections to pre-wired control relay boxes with integral disconnect means for new vertical blackout motors.
 - .6 Make panel modifications in the existing Argus control panels required to provide direct feeds to the new pre-wired control relay boxes with integral disconnect

means for each roof blackout motor and each vertical blackout motor control relay box.

3. Execution

3.1 PREPARATION

- .1 Examine areas and conditions where blackout system is to be installed. Notify Departmental Representative in writing of conditions detrimental to proper and timely installation of work.
- .2 Coordinate and furnish fasteners, clamps, installation diagrams, templates and directions for installation of blackout systems. Coordinate delivery of these items to the site.
- .3 Dissimilar metals: where aluminum surfaces come in contact with ferrous metals, concrete or other incompatible materials, keep aluminum surfaces from direct contact using appropriate galvanic barriers.

3.2 INSTALLATION OF BLACKOUT SYSTEMS

- .1 Install blackout systems and related components in accordance with manufacturers' written instructions and final reviewed shop drawings and erection drawings.

3.3 INSTALLATION OF EQUIPMENT

- .1 General
 - .1 Install equipment in accordance with manufacturers' installation instructions and recognized industry practices to insure intended function. Equipment listed in this section shall be installed by the blackout system contractor.
 - .2 Examine the supporting structure and substrate for dimensions and tolerances, materials conditions, and support before beginning the installation. Do not proceed until unsatisfactory conditions in affected areas have been corrected.
 - .3 All services entering the greenhouse must penetrate through service panels and are to be sealed with escutcheons to maintain the integrity of the room envelope. Do not puncture or make any opening of any kind, of any size in the glass glazing of the greenhouses.
 - .4 The General Contractor shall obtain written permission of the Departmental Representative for any significant modification. The General Contractor is responsible of all changes in his work or that of trades caused by his modifications.
- .2 Blackout systems
 - .1 Install blackout systems as shown on drawings and as per manufacturer's recommendations.
 - .2 Ensure that blackout cloth does not interfere with any components and is free of movement at all time.
- .3 Labelling and Identification
 - .1 Identification text and numbering scheme to match computer points and zone description.

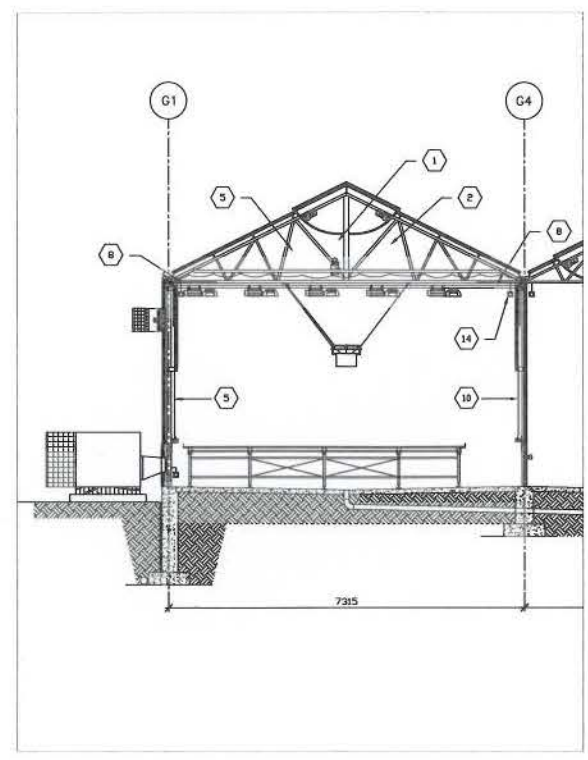
3.4 COMMISSIONING, STARTUP AND INSTRUCTION

- .1 Adjust blackout system for smooth operation and full closure.
- .2 Adjust blackout motor limit switches.
- .3 Provide user instruction and instruction for maintenance personnel in blackout components, equipment and systems and their integrated operation.

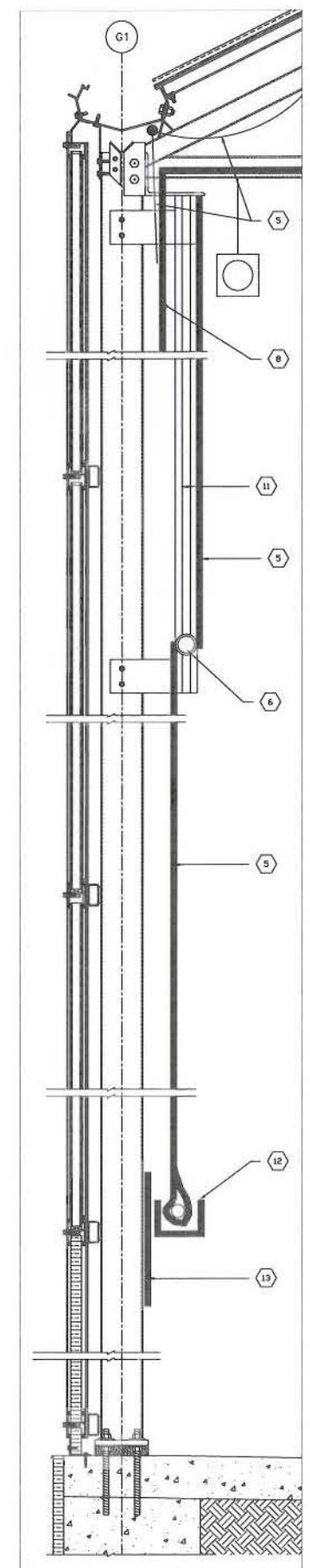
3.5 ADJUSTING AND CLEANING

- .1 General: after retrofit is complete, perform cleaning required due to the performance of this work.
- .2 Repair all marred or scratched surfaces of factory finished equipment, using finish materials furnished by the manufacturer.

END OF SECTION



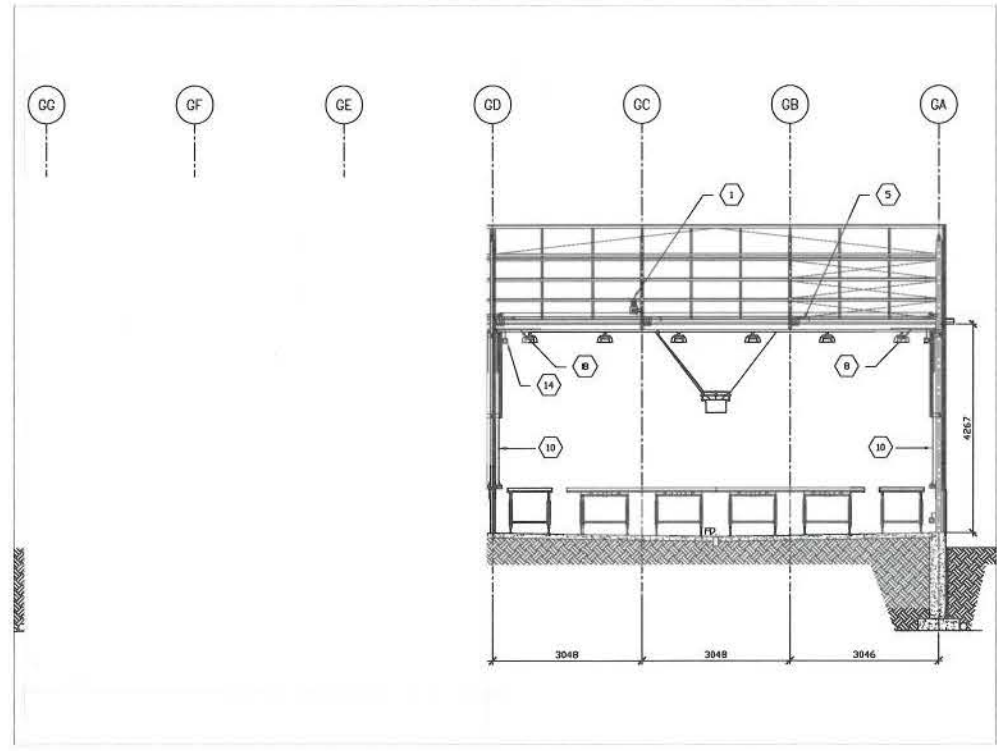
CROSS SECTION 1:50 3 GH1



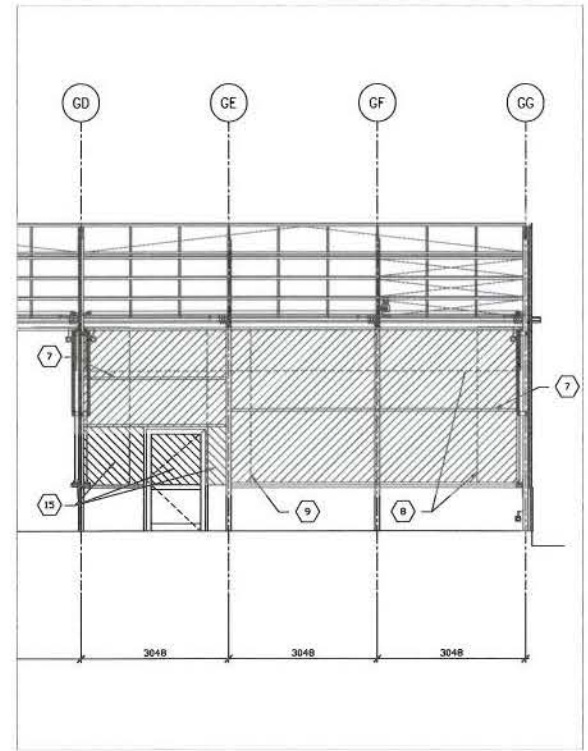
WALL SECTION 1:5 6 GH1

- KEYED NOTES:
- 1- EXISTING GEAR MOTOR FOR HORIZONTAL SHADE TO REMAIN
 - 2- EXISTING DRIVE SHFT TO REMAIN
 - 3- EXISTING DRIVE CABLE TO REMAIN
 - 4- EXISTING STAINLESS STEEL SUPPORT CABLE @ 400mm c/c
 - 5- REPLACE EXISTING SHADE CLOTH WITH BLACKOUT CLOTH
 - 6- EXISTING TUBE MOTOR FOR VERTICAL SHADE TO REMAIN
 - 7- NEW TUBE MOTOR FOR VERTICAL SHADE
 - 8- 450mm WIDE CORNER POCKET
 - 9- 300mm WIDE POCKET
 - 10- NEW BLACKOUT CLOTH
 - 11- EXISTING BLUZE RAL TO REMAIN
 - 12- NEW POCKET
 - 13- NEW FIBER BLACKOUT CLOTH
 - 14- RELOCATE EXISTING HEAT PIPE TO ACCOMMODATE THE NEW BLACKOUT
 - 15- VELCRO PANEL

NOTE:
- RELOCATE THE ELECTRICAL BOXES AT THE COLUMNS & THE SILLS AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF THE NEW BLACKOUT CURTAINS



LONGITUDINAL SECTION 1:50 4 GH1



INTERNAL ELEVATION AT B1 1:50 5 GH1

revisions	description	date
1	Issued for Review	Aug 17/14

A	drawn no.	A
C	location drawing no.	B
	drawing no.	C
	sheet no.	

project project

CENTRAL EXPERIMENTAL FARM INTEGRATED GROWTH FACILITY
OTTAWA, ONTARIO

drawing GREENHOUSE BLACKOUT SYSTEM FOR COMPARTMENTS C2 & C4

designed	A. TURKENTITSCH	comp
date	2014/08/17	
drawn	A. EID	designé
date	2014/08/17	
revised	A. TURKENTITSCH	assuré
date	2014/08/17	
approved	A. TURKENTITSCH	approuvé
date	2014/08/17	

Tender: _____

Project Manager: _____

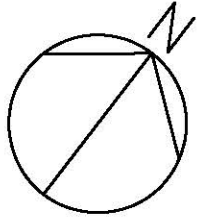
Administrateur de projet: _____

drawing no. _____

no. du dessin: _____

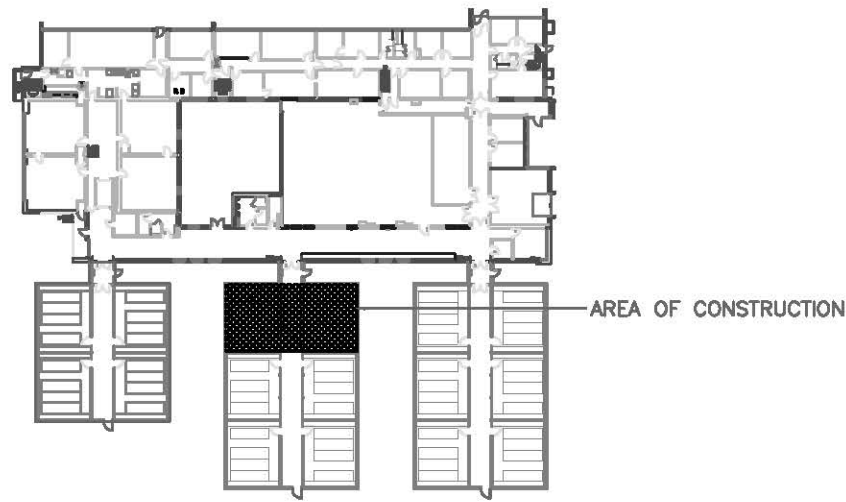
GH1

GENERAL NOTES

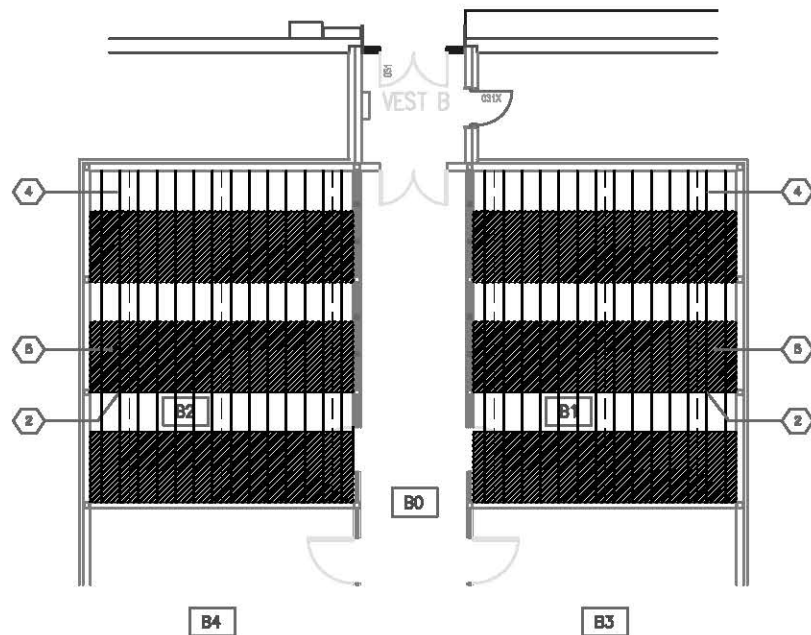


- KEYED NOTES:**
- 1 - NEW GEAR MOTOR FOR HORIZONTAL SHADE TO REMAIN
 - 2 - EXISTING DRIVE SHAFT TO REMAIN
 - 3 - EXISTING DRIVE SHAFT TO REMAIN
 - 4 - EXISTING STAINLESS STEEL SUPPORT CABLE @ 600MM C/C
 - 5 - REPLACE EXISTING SHADE CLOTH WITH BLACKOUT CLOTH
 - 6 - NEW TUBE MOTOR FOR VERTICAL SHADE
 - 7 - NEW TUBE MOTOR FOR VERTICAL SHADE
 - 8 - 450mm WIDE CORNER POCKET
 - 9 - 800mm WIDE POCKET
 - 10 - NEW BLACKOUT CLOTH
 - 11 - EXISTING GUIDE RAIL TO REMAIN
 - 12 - NEW POCKET
 - 13 - NEW FIXED BLACKOUT CLOTH
 - 14 - VELCRO PANEL
 - 15 - POSITIVE PRESSURE FAN. BLACKOUT CLOTH TO BE CUT WITH OPENING FOR AIR FLOW. FIXED TO CUT HOLE IS LARGER BLACKOUT CLOTH, 50MM LARGER ON EACH SIDE, SECURED AT TOP TO PROVIDE BLACKOUT CONDITION.

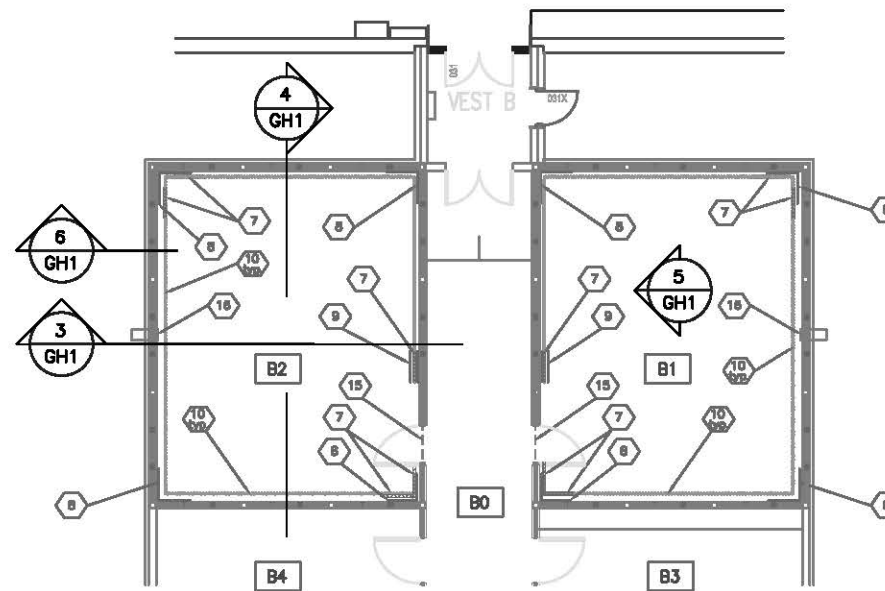
- NOTES:**
- 1) RELOCATE THE ELECTRICAL BOXES AT THE COLUMNS @ THE SILLS AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF THE NEW BLACKOUT CURTAINS.
 - 2) FORWARD EXISTING MOTORS, SHADES, EXISTING PARTS NOT REQUIRED TO AAFIC.
 - 3) NEW BLACKOUT BLINDS TO BE FULLY INTEGRATED WITH EXISTING 'ARBUS' CONTROL SYSTEM.
 - 4) EXISTING CONDITIONS:
 - BAY 'B1' - CEILING SHADE
 - BAY 'B2' - CEILING SHADE
 - 5) THE GREENHOUSE BEDS WILL BE REMOVED AT TIME OF BLACKOUT BLINDS INSTALLATION.
 - 6) SITE VERIFICATION, REVIEW WITH AAFIC & SIGN-OFF OF SHADE PARTS REQUIRED PRIOR TO ORDERING ALL MATERIALS.
 - 7) GREENHOUSE BED FRAMES TO REMAIN IN PLACE DURING INSTALLATION OF BLACK-OUT BLINDS. SIZE OF BED FRAMES ARE: END FRAMES (2) 900MM (37.0") WIDE X 6710MM (227') LONG X 760MM (29.9") HIGH. INTERIOR BED FRAMES (4) 900MM (37.0") WIDE X 6790MM (197') LONG X 760MM (29.9") HIGH.



1 PLAN - BUILDING 21
GH2 NTS



2 PLAN - HORIZONTAL BLACKOUT SYSTEM, BAYS B1 & B2
GH2 SCALE 1 : 5



3 PLAN - VERTICAL BLACKOUT SYSTEM, BAYS B1 & B2
GH2 SCALE 1 : 5

NO.	REVISIONS	DATE

CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AGAINST EXISTING CONDITIONS, & REPORT ANY CHANGES OR DISCREPANCIES TO PROJECT OFFICER BEFORE PROCEEDING WITH WORK.

CENTRAL EXPERIMENTAL FARM INTEGRATED GROWTH FACILITY
OTTAWA, ON

GREENHOUSE BLACKOUT SYSTEM FOR COMPARTMENTS B1 + B2

C.E.F. INTEGRATED SERVICES

CENTRAL EXPERIMENTAL FARM

GH2

GENERAL NOTES

Blank area for general notes.

NO. REVISIONS	DATE
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CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING CONSTRUCTION, & REPORT ANY DISCREPANCY OR DISCREPANCIES TO PROJECT OFFICER BEFORE PROCEEDING WITH WORK.

CENTRAL EXPERIMENTAL FARM INTEGRATED GROWTH FACILITY
OTTAWA, ON

GREENHOUSE BLACKOUT SYSTEM FOR COMPARTMENTS B1 + B2

C.E.F. INTEGRATED SERVICES

CENTRAL EXPERIMENTAL FARM

DATE:	
SCALE:	N.T.S.
DRAWN BY:	D.C.
CHECKED BY:	
DATE:	

GH3



Bay 1 - North Elevation



Bay 1 - West Elevation



Bay 1 - East Elevation



Bay 1 - South Elevation

GENERAL NOTES

Blank area for general notes.

NO. REVISIONS	DATE
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CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK, & REPORT ANY DISCREPANCY OR DISCREPANCY TO PROJECT OFFICER BEFORE PROCEEDING WITH WORK.

CENTRAL EXPERIMENTAL FARM INTEGRATED GROWTH FACILITY
OTTAWA, ON

GREENHOUSE BLACKOUT SYSTEM FOR COMPARTMENTS B1 + B2

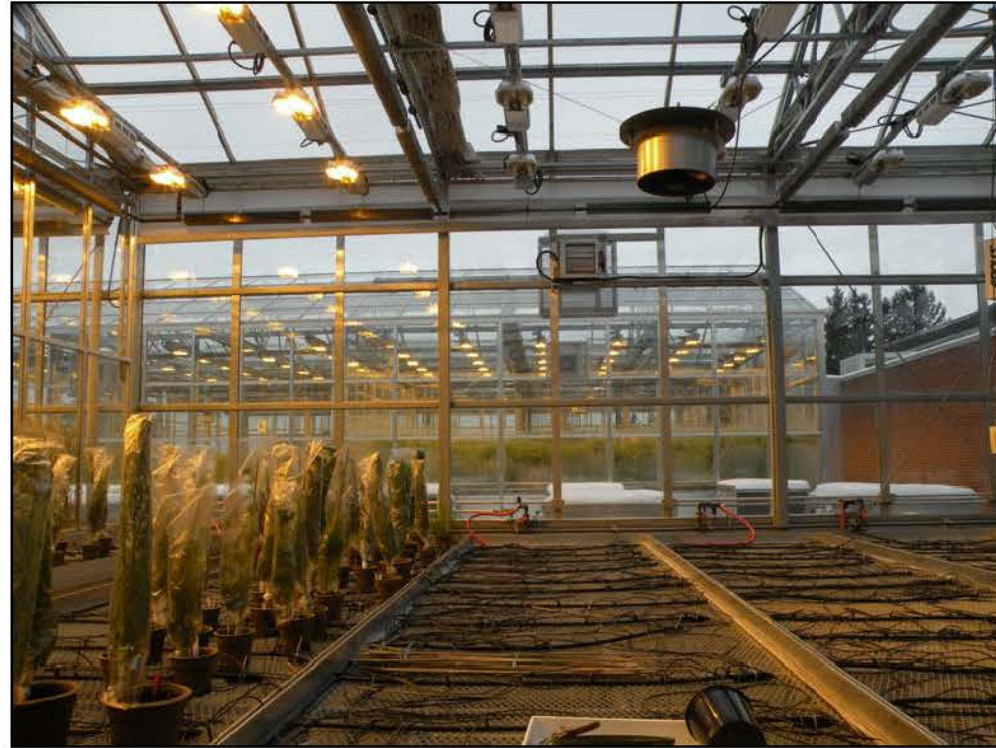
C.E.F. INTEGRATED SERVICES

CENTRAL EXPERIMENTAL FARM

DATE: _____	PROJECT NO.: _____
DRAWN BY: N.T.S.	GH4
CHECKED BY: D.C.	
DATE: _____	
SCALE: _____	



Bay 2 - North Elevation



Bay 2 - West Elevation



Bay 2 - East Elevation



Bay 2 - South Elevation