



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 356-2015**

**INSTALLATION OF UNDERGROUND TRAFFIC SIGNALS SERVICES AND  
ASSOCIATED WORKS**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 INSTALLATION OF UNDERGROUND TRAFFIC SIGNALS SERVICES AND ASSOCIATED WORKS

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 16:00 Winnipeg time, April 24, 2015.

B2.2 Bids determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.

B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. ENQUIRIES**

B3.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.

B3.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.

B3.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B3.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

### **B4. CONFIDENTIALITY**

B4.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:

- (a) was known to the Bidder before receipt hereof; or
- (b) becomes publicly known other than through the Bidder; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B4.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Bid Opportunity to the media or any member of the public without the prior written authorization of the Contract Administrator.

### **B5. ADDENDA**

B5.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.

- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>
- B5.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B6. SUBSTITUTES**

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
  - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
  - (c) identify any anticipated cost or time savings that may be associated with the substitute;
  - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
  - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B6.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.

- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B16.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.6 deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B16.1(a).

## **B7. BID COMPONENTS**

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices;
  - (c) Bid Security
    - (i) Form G1: Bid Bond and Agreement to Bond, or  
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or  
a certified cheque or draft;
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.
- B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B16.1(a).
- B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.8 Bids shall be submitted to:
- The City of Winnipeg  
Corporate Finance Department  
Materials Management Division  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1

## **B8. BID**

- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
- (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.

B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B8.4 Paragraph 12 of Form A: Bid shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
- (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B8.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B10. DISCLOSURE**

B10.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B10.2 The Persons are:

- (a) N/A

## **B11. QUALIFICATION**

### **B11.1 The Bidder shall:**

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.

### **B11.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:**

- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>

### **B11.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:**

- (a) have successfully carried out work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
- (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba);

### **B11.4 Further to B11.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:**

- (a) a copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Certificate of Recognition (COR) Program administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
- (b) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
- (c) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>.)

### **B11.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.**

### **B11.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.**

## **B12. BID SECURITY**

### **B12.1 The Bidder shall provide bid security in the form of:**

- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in



Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or

- (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or
- (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.

B12.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.

B12.1.2 All signatures on bid securities shall be original.

B12.1.3 The Bidder shall sign the Bid Bond.

B12.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.

B12.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.

B12.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B12.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.

B12.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.

B12.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Bid Opportunity.

### **B13. OPENING OF BIDS AND RELEASE OF INFORMATION**

B13.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.

B13.1.1 Bidders or their representatives may attend.

B13.1.2 Bids determined by the Manager of Materials, or his/her designate, to not include the bid security specified in B12 will not be read out.

B13.2 Following the Submission Deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>

B13.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>

B13.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

#### **B14. IRREVOCABLE BID**

- B14.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.
- B14.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid.

#### **B15. WITHDRAWAL OF BIDS**

- B15.1 A Bidder may withdraw his/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B15.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B15.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B15.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
  - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
  - (c) if the notice has been given by any one of the persons specified in B15.1.3(b), declare the Bid withdrawn.
- B15.2 A Bidder who withdraws his/her Bid after the Submission Deadline but before his/her Bid has been released or has lapsed as provided for in B14.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

#### **B16. EVALUATION OF BIDS**

- B16.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity, or acceptable deviation there from (pass/fail);
  - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B11 (pass/fail);
  - (c) Total Bid Price;
  - (d) economic analysis of any approved alternative pursuant to B6.
- B16.2 Further to B16.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B16.3 Further to B16.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is responsible and qualified.
- B16.4 Further to B16.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

B16.4.1 Further to B16.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

**B17. AWARD OF CONTRACT**

B17.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B17.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.

B17.2.1 Without limiting the generality of B17.2, the City will have no obligation to award a Contract where:

- (a) the prices exceed the available City funds for the Work;
- (b) the prices are materially in excess of the prices received for similar work in the past;
- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
- (d) only one Bid is received; or
- (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.

B17.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B16.

B17.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

## PART C - GENERAL CONDITIONS

### C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at [http://www.winnipeg.ca/matmgt/gen\\_cond.stm](http://www.winnipeg.ca/matmgt/gen_cond.stm)
- C0.2 A reference in the Bid Opportunity to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Construction*.

## PART D - SUPPLEMENTAL CONDITIONS

### GENERAL

#### D1. GENERAL CONDITIONS

D1.1 In addition to the *General Conditions for Construction*, these Supplemental Conditions are applicable to the Work of the Contract.

#### D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of the construction, repair, and removal of concrete bases and service boxes, installation and repair of underground plastic conduit, saw cutting and sealing of concrete for vehicle detector loops. Other related works will include Pavement Cuts and Restoration, Miscellaneous Slab Cuts and Restoration, Curb Cuts and Restoration; Boulevard Restorations, Curb Ramp Installation, Installation of Detectable Warning Surface Tiles in the City of Winnipeg.

D2.2 Further to C7, if at any time during the twelve (12) month period following the award of the Contract, the City requires additional quantities of the Contract items, the City may request the Contractor to supply up to one-hundred percent (100%) additional quantities as extra Work at the unit prices set out in the Contract. The Contractor may decline to supply the additional quantities without penalty. See Appendix A - History of Quantities & Totals.

#### D3. DEFINITIONS

D3.1 When used in this Bid Opportunity:

- (a) "**As-Built**" means drawing which illustrates the geographic location of modified and installed Traffic Signal Infrastructure, including all required and associated dimensioning ;
- (b) "**Location**" means one Signalized Intersection or one flashing Pedestrian Corridor. A location shall consist of all associated Signal Infrastructure as noted on either a Signalized Intersection, or Pedestrian Corridor City of Winnipeg Traffic Signal construction drawing.
- (c) "**Loop(s)**" means intrusive vehicular detector cut into pavement, that is, concrete, asphalt or composite concrete and asphalt roadway as defined in CW 3620 of the City of Winnipeg Standard Construction Specifications.
- (d) "**Overtime Occasion**" means "requested Work during the weekend period of 18:00 hours Friday to 06:00 hours Monday, the weekday period of 18:00 to 06:00 the following weekday, or any portion of a holiday, when the Contractor, as directed by the City, is obliged to provide overtime service. Overtime will not apply when cutting loops on weekends.
- (e) "**Traffic Signals Branch**" means the branch of the City of Winnipeg Public Works Department responsible for the design, operation, maintenance and installation of Traffic Signal devices.

#### D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:

Michael Cantor P. Eng., PTOE  
Traffic Signal Engineer

Telephone No. 204 986-2619

Facsimile No. 204 772-6306

D4.2 Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D4.3 Bids Submissions must be submitted to the address in B7.8

**D5. CONTRACTOR'S SUPERVISOR**

D5.1 At the pre-construction meeting, the Contractor shall identify his/her designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

**D6. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE**

D6.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.

D6.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

D6.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;

- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
- (b) the Contract, all deliverables produced or developed; and
- (c) any statement of fact or opinion regarding any aspect of the Contract.

D6.4 A Contractor who violates any provision of D6 may be determined to be in breach of Contract.

**D7. NOTICES**

D7.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

D7.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D7.3, D7.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the facsimile number identified in D4.1.

D7.3 Notwithstanding C21, all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:

The City of Winnipeg  
Chief Financial Officer

Facsimile No.: 204 949-1174

D7.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:

The City of Winnipeg  
Legal Services Department  
Attn: Director of Legal Services

Facsimile No.: 204 947-9155

D7.5 **Bids Submissions** must be submitted to the address in B7.8

## **D8. FURNISHING OF DOCUMENTS**

- D8.1 Upon award of the Contract, the Contractor will be provided with five (5) complete sets of the Bid Opportunity. If the Contractor requires additional sets of the Bid Opportunity, they will be supplied to him/her at cost.

## **SUBMISSIONS**

### **D9. AUTHORITY TO CARRY ON BUSINESS**

- D9.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

### **D10. SAFE WORK PLAN**

- D10.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D10.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

### **D11. INSURANCE**

- D11.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
  - (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence.
  - (c) an all risks Installation Floater carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.
- D11.2 Deductibles shall be borne by the Contractor.
- D11.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D11.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

## **D12. PERFORMANCE SECURITY**

- D12.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:
- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
  - (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
  - (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.
- D12.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.
- D12.2 If the bid security provided in his/her Bid was not a certified cheque or draft pursuant to B12.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

## **D13. SUBCONTRACTOR LIST**

- D13.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the General Conditions for the return of the executed Contract.

## **SCHEDULE OF WORK**

### **D14. COMMENCEMENT**

- D14.1 The Contractor shall not commence any Work until he/she is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.
- D14.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
    - (i) evidence of authority to carry on business specified in D9;
    - (ii) evidence of the workers compensation coverage specified in C6.15;
    - (iii) the Safe Work Plan specified in D10;
    - (iv) evidence of the insurance specified in D11;
    - (v) the performance security specified in D12; and
    - (vi) the Subcontractor list specified in D13.
  - (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.
- D14.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.

### **D15. SUBSTANTIAL PERFORMANCE**

- D15.1 The Contractor shall achieve Substantial Performance by October 30, 2015 .



D15.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D15.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

## **D16. TOTAL PERFORMANCE**

D16.1 The Contractor shall achieve Total Performance by November 27, 2015.

D16.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D16.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

## **D17. LIQUIDATED DAMAGES**

D17.1 A liquidated damage amount of five hundred dollars (\$500.00) per location shall be assessed, if the Contract Administrator finds work that is not in accordance to the Specifications and this work has been previously noted by the Contractor as being complete.

D17.2 A liquidated damage amount of two hundred fifty (\$250.00) additional dollars shall apply for each additional calendar day required to remedy the work deficiency to meet the Specifications. The time to complete the remediation shall start according to the date and time the Contract Administrator provides the written notification to the Contractor.

(a) Example 1:

- (i) Contract Administrator sends notification that work is deficient on May 14, 2015 at 10:00AM. Contractor remediates deficiencies on May 15, 2015 at 11:00AM
- (ii) Initial five hundred dollars (\$500.00) applies on the notification of deficiency plus (+) two hundred fifty dollars (\$250.00) due to work remediation not being completed within one calendar day.

(b) Example 2:

- (i) Contract Administrator sends notification that work is deficient at two locations on May 19, 2015 at 11:00AM. There are two pole base deficiencies at each location. Contractor repairs first location on May 19, 2015 at 1:00PM and second location on May 21, 2015 at 2:00PM
- (ii) Initial five hundred dollars (\$500.00) applies twice due to two locations with deficiencies. Second location was complete in over two calendar days and a five hundred dollar (\$500.00) liquidated damage applies. The first location was completed within one day therefore no additional liquidated damages apply.

D17.3 The amount specified for liquidated damages in D17.1 and D17.2 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not remedy the deficiency.

D17.4 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

## **CONTROL OF WORK**

### **D18. JOB MEETINGS**

- D18.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.
- D18.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

### **D19. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

- D19.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

### **D20. RESPONSIBILITY FOR MATERIALS**

- D20.1 The Contractor will be responsible for all forms and templates issued by the City for use of the Contractor. The Contractor must return all forms and templates in a clean and undamaged condition before the Certificate of Total Performance will be issued
- D20.2 The Contractor is responsible for all materials after receiving them from the City of Winnipeg Stores. He shall provide location and amount of usage for each item. All unused materials (float) will be returned to the City of Winnipeg no later than the date of Certificate of Total Performance. The Certificate of Total Performance cannot be issued until a reconciliation of material is made and approved by the Contractor Administrator.

### **D21. CONSTRUCTION CREWS**

- D21.1 Further to Clause C6.20 of the General Conditions, the Work of this Contract is to be coordinated with the Work of street construction contractors in various areas of the City. The Contractor shall make available at least two separate fully equipped and manned construction crews to meet schedule requirements.

### **D22. RECORDING “AS BUILT” SIGNALS PLANT INFORMATION**

The Contractor shall be available to provide information on location of signals underground conduit duct lines. The Contractor will receive a set of drawings to record information. The Contractor will either mark up the drawings or spray paint the surface for location of the underground duct lines when Contract Administrator is present.

### **D23. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS**

- D23.1 Further to B11.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B11.4.

### **D24. CLEARANCES**

- D24.1 The Contractor shall be responsible for underground clearances of any underground work required by the Contract Administrator for work done according to this specification.

**D25. PROVISION OF OVERTIME SERVICES**

- D25.1 Further to C12.3, the Contractor shall be obliged to provide the City of Winnipeg with services relating to this Contract during "overtime" periods, as and when instructed to do so by the Contract Administrator.
- D25.2 The City shall call upon the Contractor for overtime services only on infrequent occasions. Overtime "occasions" shall be limited only to those circumstances where the City has no reasonable alternative save overtime, to expedite progress of other capital construction projects, to deal with emergency conditions and to meet critical deadlines.
- D25.3 The Contract Administrator or his designate shall provide the Contractor with twenty-four (24) hours or more advance notice, whenever possible, of the requirement for overtime services. The Contractor shall be prepared to provide overtime services so long as notice is given no later than the end of the Workday immediately prior to the overtime "occasion".
- D25.4 Following said notice of overtime service requirement being given by the City to the Contractor, the Contractor shall arrange to provide all material, equipment, supervision and labour as is required to undertake the specified overtime Works, and to provide such service at the time(s) as may be specified by the City.
- D25.5 The Contractor shall be compensated by the City for every "occasion" during which the Contractor is instructed to provide said overtime services. An "occasion" shall be defined as a time period not to exceed 4 hours, during which "occasion" the Contractor provides said overtime services. Any "occasion" for which the Contractor has been instructed to provide overtime service, and provides manpower, supervision, equipment and material on-Site to do the required Works, shall be paid for by the City even should the required Works be unable to be carried out by reason of inclement weather, or suspension or postponement of Works by the City.
- D25.6 The overtime period shall be determined to begin at the pre-determined time, or when the Contractor's workforces and required vehicles, equipment and material are at the Work Site and are fully prepared to commence the required Works, and shall end at the time when the Contractor's workforces are dismissed by the City. In the event the overtime period exceeds 4 hours in duration, during any one 24-hour non-Working Day, two (2) or more separate "occasions" shall be awarded.
- D25.7 The Contractor shall be paid at the following rates, based on the manpower resource agreed to by the City for any specific "occasion", and the subsequent provision of said manpower by the Contractor to the designated field Site:

<u>Total Number of Contractor's Workers Provided On-Site, Including Supervisor</u>	<u>Compensation Rate</u>
1 to 3 worker(s)	\$200.00 / "occasion"
Each additional worker	\$50.00 each / "occasion"

- D25.8 The Contractor will be paid for the overtime "occasion" as per D25.7 and for the all the underground works that were completed during overtime.
- D25.9 In the event the overtime period exceeds 4 hours in duration, during any one 24-hour holiday, two (2) or more separate "occasions" shall be awarded and paid for at the "overtime" rate schedule specified.

## **D26. PROTECTION OF EXISTING TREES**

- D26.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing boulevard trees within the limits of the construction area. The same provisions shall be applied to trees that may be affected on private property.
- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.
  - (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 1" X 4" X 8' (25 x 100 x 2400mm) wood planks, or suitably protected as approved by the Contract Administrator.
  - (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems, whether public or private. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
  - (d) Operation of equipment within the dripline of all trees shall be kept to the minimum required to perform the Work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
  - (e) Work on-Site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.
- D26.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator as directed by the City Forester or his designate.
- D26.3 No separate measurement or payment will be made for the protection of trees. The Contractor will be responsible for any costs associated with tree repair, removal, damage, etc.
- D26.4 Elm trees cannot be trimmed between April 1 and July 31, inclusive.

## **D27. PROTECTION OF THE SURVEY INFRASTRUCTURE**

- D27.1 Notwithstanding clause 3.14 of the General Requirements CW 1130-R2:
- D27.2 Further to C6.26 (g), at least 72 hours prior to the commencement of the On-Site Work the Contractor shall contact the City of Winnipeg, Geomatics Services Branch at 918-1360 (8:00 am to 4:00 pm Monday to Friday excluding holidays) to obtain underground clearance. Geomatics Services will locate and mark all known outline survey monuments and geodetic control monuments and confirm the physical condition of those monuments upon completion of construction, at no cost to the Contractor.
- D27.3 Where a survey post, bar or control monument lies in the line of the proposed Work and must be disturbed, the Contractor shall provide the Contract Administrator with 48 hours' notice to permit referencing for future replacement, at no cost to the Contractor. Failure to provide the specified notice shall result in the Contractor paying for all costs associated with replacing or relocating the disturbed outline survey monuments and geodetic control monuments.
- D27.4 Outline survey monuments and geodetic control monuments at or adjacent to the Site, not in the line of the proposed construction that are damaged or disturbed by the Contractor shall be replaced or relocated by the City or its agent and all associated costs shall be paid for by the Contractor. Contractors must ensure their landscaping and other subcontractors are aware of this clearance procedure.
- D27.5 Where possible, amounts owed to the City in accordance with the above will be deducted from any payments to be made by the City to the Contractor.

## **D28. TRAFFIC CONTROL**

- D28.1 Further to Clause 3.7 of the General Requirements CW 1130-R2: The Manual of Temporary Traffic Control in Work Areas on City Streets is available, for a fee, from the Customer Services Division of the Public Works Department at 107-1155 Pacific Avenue. This document is also available online and can be viewed or downloaded from:  
[http://www.winnipeg.ca/publicworks/InformationAndResources/TrafficControl/manual\\_of\\_temp\\_traffic\\_control.asp](http://www.winnipeg.ca/publicworks/InformationAndResources/TrafficControl/manual_of_temp_traffic_control.asp)
- D28.2 Where directed, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions, such as manholes and drop-offs, to the satisfaction of the Contract Administrator. No measurement for payment will be made for this Work.
- D28.3 Further to Clause General Requirements CW 1130-R2:
- (a) All Work Sites shall be signed in accordance with the Manual of Temporary Traffic Control. If the Contractor ("Agency" in the manual) cannot sign with their own staff then they shall make arrangements with a sub-contractor to place all temporary regulatory signs. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by the sub-contractor in connection with the Works undertaken by the Contractor. The sub-contractor must be listed in Form J: sub-contractors.
  - (b) The costs associated with hooding and/or temporary removal and replacement of parking meters at, and for, the Contractor's own convenience shall be the responsibility of the Contractor.

## **D29. AUTHORIZED WORK ON PRIVATE PROPERTY**

- D29.1 This clause is strictly for Work on private property that is authorized and paid for by the City. Damages to private property are handled through the City's Risk Management Division, Claims Branch. Settlement of such damages will not be negotiated or arbitrated by the Contract Administrator on behalf of the Owner or Contractor.
- D29.2 Further to C6.26, the Contractor shall confine his Works to the right-of-way or easements. Where Work is required to be done on private property the Contract Administrator will authorize such Work in writing after obtaining the written permission of the property owner.
- D29.3 The Contractor shall limit his operations to the minimum area necessary for undertaking the private property Work and shall be responsible for all damages outside the limits of the authorized Work, resulting from Work on private property. Particular care shall be taken to prevent damage to buildings, walkways, trees and plants.

## **D30. TEMPORARY RELOCATION OF AFFECTED STRUCTURES**

- D30.1 The Contractor shall, have temporarily relocated any portable structure such as benches, mail boxes, news boxes, waste bins, vending machines, etc., which will interfere with the construction of the Work. The Contractor will identify and notify the owners of the portable structures to have them removed or moved. Following the completion of the applicable Work, the Contractor shall notify the owners that the portable structures may be replaced. These relocations shall be considered incidental to the associated Works and no separate measurement for payment will be made.

## **MEASUREMENT AND PAYMENT**

### **D31. PAYMENT**

- D31.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

## **WARRANTY**

### **D32. WARRANTY**

- D32.1 Notwithstanding C13.2, the warranty period shall begin on the date of Substantial Performance and shall expire one (1) year thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D32.2 Notwithstanding C13.2 or D32.1, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Substantial Performance if:
- (a) a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.
- D32.2.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

**FORM H1: PERFORMANCE BOND**  
(See D12)

KNOW ALL MEN BY THESE PRESENTS THAT

\_\_\_\_\_ ,  
(hereinafter called the "Principal"), and

\_\_\_\_\_ ,  
(hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), in the sum of

\_\_\_\_\_ dollars (\$\_\_\_\_\_)

of lawful money of Canada to be paid to the Obligee, or its successors or assigns, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has entered into a written contract with the Obligee for

BID OPPORTUNITY NO. 356-2015

**INSTALLATION OF UNDERGROUND TRAFFIC SIGNALS SERVICES AND  
ASSOCIATED WORKS**

which is by reference made part hereof and is hereinafter referred to as the "Contract".

NOW THEREFORE the condition of the above obligation is such that if the Principal shall:

- (a) carry out and perform the Contract and every part thereof in the manner and within the times set forth in the Contract and in accordance with the terms and conditions specified in the Contract;
- (b) perform the Work in a good, proper, workmanlike manner;
- (c) make all the payments whether to the Obligee or to others as therein provided;
- (d) in every other respect comply with the conditions and perform the covenants contained in the Contract; and
- (e) indemnify and save harmless the Obligee against and from all loss, costs, damages, claims, and demands of every description as set forth in the Contract, and from all penalties, assessments, claims, actions for loss, damages or compensation whether arising under "The Workers Compensation Act", or any other Act or otherwise arising out of or in any way connected with the performance or non-performance of the Contract or any part thereof during the term of the Contract and the warranty period provided for therein;

THEN THIS OBLIGATION SHALL BE VOID, but otherwise shall remain in full force and effect. The Surety shall not, however, be liable for a greater sum than the sum specified above.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable as Principal, and that nothing of any kind or matter whatsoever that will not discharge the Principal shall operate as a discharge or release of liability of the Surety, any law or usage relating to the liability of Sureties to the contrary notwithstanding.

IN WITNESS WHEREOF the Principal and Surety have signed and sealed this bond the

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ .

**SIGNED AND SEALED**  
in the presence of:

\_\_\_\_\_  
(Witness as to Principal if no seal)

\_\_\_\_\_  
(Name of Principal)

Per: \_\_\_\_\_ (Seal)

Per: \_\_\_\_\_

\_\_\_\_\_  
(Name of Surety)

By: \_\_\_\_\_ (Seal)  
(Attorney-in-Fact)



**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT  
(PERFORMANCE SECURITY)**  
(See D12)

\_\_\_\_\_  
(Date)

The City of Winnipeg  
Legal Services Department  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 356-2015

**INSTALLATION OF UNDERGROUND TRAFFIC SIGNALS SERVICES AND  
ASSOCIATED WORKS**

Pursuant to the request of and for the account of our customer,

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

WE HEREBY ESTABLISH in your favour our irrevocable Standby Letter of Credit for a sum not exceeding  
in the aggregate

\_\_\_\_\_  
\_\_\_\_\_ Canadian dollars.

This Standby Letter of Credit may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you. It is understood that we are obligated under this Standby Letter of Credit for the payment of monies only and we hereby agree that we shall honour your demand for payment without inquiring whether you have a right as between yourself and our customer to make such demand and without recognizing any claim of our customer or objection by the customer to payment by us.

The amount of this Standby Letter of Credit may be reduced from time to time only by amounts drawn upon it by you or by formal notice in writing given to us by you if you desire such reduction or are willing that it be made.

Partial drawings are permitted.

We engage with you that all demands for payment made within the terms and currency of this Standby Letter of Credit will be duly honoured if presented to us at:

\_\_\_\_\_  
(Address)

and we confirm and hereby undertake to ensure that all demands for payment will be duly honoured by us.

All demands for payment shall specifically state that they are drawn under this Standby Letter of Credit.

Subject to the condition hereinafter set forth, this Standby Letter of Credit will expire on

\_\_\_\_\_  
(Date)

It is a condition of this Standby Letter of Credit that it shall be deemed to be automatically extended from year to year without amendment from the present or any future expiry date, unless at least 30 days prior to the present or any future expiry date, we notify you in writing that we elect not to consider this Standby Letter of Credit to be renewable for any additional period.

This Standby Letter of Credit may not be revoked or amended without your prior written approval.

This credit is subject to the Uniform Customs and Practice for Documentary Credit (2007 Revision), International Chamber of Commerce Publication Number 600.

\_\_\_\_\_  
(Name of bank or financial institution)

Per: \_\_\_\_\_  
(Authorized Signing Officer)

Per: \_\_\_\_\_  
(Authorized Signing Officer)



## **PART E - SPECIFICATIONS**

### **GENERAL**

#### **E1. APPLICABLE SPECIFICATIONS AND DRAWINGS**

- E1.1 These Specifications shall apply to the Work.
- E1.2 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Spec/Default.stm>
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.

#### **E2. SPECIFICATION AND DRAWINGS**

- (a) SD - Drawings
- (i) SD – 226A – Monolithic Concrete Median Slab
  - (ii) SD – 226B – Safety Median
  - (iii) SD – 227A – Concrete Median Slab
  - (iv) SD – 227C – Monolithic Concrete Bullnose
  - (v) SD – 228A – Concrete Sidewalk
  - (vi) SD – 228B – Monolithic Curb and Sidewalk
  - (vii) SD – 229A – Curb Ramp Layout for Intersections
  - (viii) SD – 229AA – Detectable Warning Surface Tile in Curb Ramps for Intersections, Layout Option 1
  - (ix) SD – 229AE – Curb Ramp for Pedestrian Corridor with a Traffic Control Device
  - (x) SD – 229AF – Detectable Warning Surface Tile Orientation for Offset Intersections
  - (xi) SD – 229BB – Detectable Warning Surface Tile in Curb Ramps for Medians
  - (xii) SD – 229C – Curb Ramp for Concrete Pavement
  - (xiii) SD – 229D – Curb Ramp for Asphalt Overlay
  - (xiv) SD – 229E – Curb Ramp Depressed Curb
  - (xv) SD – 243 – Sodding Details
- (b) Appendix A – History of Traffic Signals Quantities and Total
- (c) Drawing NO.1 Bike Detector Loops

#### **E3. MATERIALS**

- E3.1 Master anchor bolt templates and Oversized D top rings are provided by the City shall be used by the Contractor for all bases constructed under the provisions of this specification.
- E3.2 When using anchor bolt templates and top rings for pouring concrete they both must be oiled (both inside and out) for ease of removal and cleaning. Following the removal of anchor bolt template and top ring, they both must be cleaned immediately.
- E3.3 The templates shall be suitably cleaned by the Contractor at the end of the Contract and be returned to the City. The template shall be cleaned free of concrete residue and any other debris and returned to the City in a "like-new" condition.

- E3.4 In the event of loss or damage to materials supplied by the City, the cost of replacement materials shall be borne by the Contractor.
- E3.5 The Contractor shall contact the City of Winnipeg Stores Foreman to coordinate the pickup of the materials. Prior to pickup of the materials the Contractor will be required to obtain specific account information from the Traffic Signals Branch.

Public Works Stores  
Attn: Stores Foreman  
1277 Pacific Avenue  
Winnipeg, MB R3E 1G7  
Phone: 204.794.4333

- E3.6 If requested by the Contract Administrator, the Contractor shall submit in writing an account for all materials supplied by the City, showing in detail all materials drawn from the City's stores, quantities used at each work location, and materials on hand.
- E3.7 The City will issue the Contractor a "float" quantity of the above noted City-supplied materials, for the purpose of expediting the daily work progress.
- E3.8 The Contractor shall be obliged to requisition and withdraw those items which are City supplied material on the basis of the estimated quantity needed for a particular job.
- E3.9 The Contractor shall account for the quantities of materials drawn to the satisfaction of the City. Any overdraw of materials in excess of required quantities shall be credited or returned to the City. At the end of the Contract, all surplus materials shall be returned to the City.

#### **E4. SAW CUTTING AND SEALING FOR BIKE DETECTOR LOOPS**

- E4.1 Description
- (a) Saw Cut and seal vehicle detector loops in accordance to E2(c)
  - (b) Inform the Contract Administrator a minimum of 24 hours before undertaking saw cutting operations.
  - (c) Cut street pavement or sidewalk with a maximum blade diameter of sixty-one (61) centimetres to ensure minimum damage to curbs for cuts leading to the lead-in conduit. Join corner cuts and intersecting cuts so that the wire loop placed in the cut is required to turn through 45 degree angles at the corners. Corner cross cuts shall be placed 250 mm ± 25 mm below the apex where the extended cuts would join if continued, in accordance with SD-330 and SD-332. To ensure the integrity of the concrete, at no time shall intersecting cuts be less than 115 mm ± 10 mm of the apex of that corner.
  - (d) When sawing through a construction or expansion joint, saw cut the home run cut perpendicular to joint(s). Construction joints shall not be used as part of the sawn loop. When sawing cuts parallel to construction or expansion joints, saw cut a minimum of 300mm from the joint.
  - (e) Drill a hole in the street pavement for the installation of the lead-in conduit for the detector loop array so that the lower extremity of the drilled hole shall come out in the vicinity of the lower corner of the pavement. Excavate at the pavement edge to meet the hole drilled through the pavement. The specified diameter conduit shall be pushed upwards through the hole in the pavement. The conduit shall be cut and left 5 mm below the pavement surface.
  - (f) Standby while others install loop wire in the sawn loop.
  - (g) Standby while others seal the loop detector lead-in conduit, with oakum prior to installation of sealant.

- (h) Polyurethane Detector Loop Sealant (Q-Seal 290S) shall be used to seal the loop
- (i) Remain at the work site until others have completed testing of the electrical integrity of the wire loop.

## **E5. SERVICE BOX PRE-CAST 36"**

### **E5.1 Description**

- (a) Installation
  - (i) Install Pre-Cast Service Box in grass boulevards/medians, and hard surfaced medians where the width between curbs is less than 0.5 m or as shown on the Drawings or as directed by the Contract Administrator.
  - (ii) Fill bottom of excavation with compacted limestone base course material to set precast service box to grade.
  - (iii) Install Pre-Cast Service Box on top of the compacted granular fill material to pavement, sidewalk or boulevard finish grade.
  - (iv) All conduits must be bundled into a group in the centre of the Pre-Cast Service Box. Install plastic plugs prior to back fill.
  - (v) Backfill around Pre-Cast Service Box exterior. Back fill shall conform to requirements of SD-342
  - (vi) Pre-Cast Service box shall meet grade such sidewalk or boulevard given by Contract Administrator

## **E6. SUPPLY AND INSTALL DETECTABLE WARNING SURFACE TILES**

### **E6.1 Description**

- (a) This specification covers the supply and installation of detectable warning surface tiles in sidewalk ramps and multi-use path ramps.

### **E6.2 Materials**

- (a) Acceptable Detectable Warning Surface Tile product is:
  - (i) 610 x 1220mm (2'x 4') Cast in Place (Federal Yellow).
- (b) Detectable warning surface tiles shall be federal Yellow (USA); or safety Yellow (Canada)
- (c) Detectable warning surface tiles shall be cast in place type with ribs. (Anchored type is not allowed)
- (d) Truncated domes on detectable warning surface tiles shall be in accordance with ADA Accessibility Guidelines (ADAAG).

### **E6.3 Construction Methods**

- (a) Selection of Layout Options
  - (i) Select the appropriate design layout for detectable warning surface tiles according to the following prioritized order:
  - (ii) Layout Option One – Install detectable warning surface tiles in accordance with SD-229A and SD-229AA.

### **E6.4 General**

- (a) Construct curb ramps, sidewalk ramps and multi-use paths in accordance with the referenced Standard Construction Specifications and Standard Details.
- (b) Detectable warning surface tile shall not be placed at private approaches or alleys.
- (c) All curb ramps opposite each other shall have the same width.
- (d) Construct the lip of the depressed curb in accordance with SD-229E.

- (e) Construct ramp slopes in accordance with SD-229C and SD-229D. Use a ramp slope with preference for a slope as close to 5% maximum as possible.
- (f) Construct flare and curb taper slopes according to the following:
  - (i) If the curb taper is within a grassed area, construct the curb taper 900mm in length.
  - (ii) When the flare and curb taper are in a full width sidewalk and the sidewalk area at the top of the ramp is <1500mm in width, construct the flare and curb taper at 5% slope to allow safe passage for wheelchairs in this area.
  - (iii) When the flare and curb taper are in a full width sidewalk and the sidewalk area at the top of the ramp is  $\geq$  1500mm in width, construct the flare and curb taper at 10% slope.
- (g) Install the detectable warning surface tile in accordance with E6.8
- (h) Trim the corner of the tile at curb radii in accordance with SD-229AA.
- (i) Install the detectable warning surface tiles as shown on the referenced drawings or as directed by the Contract Administrator.
- (j) Orient the detectable warning surface tiles perpendicular to the crossing direction.
- (k) Locate gratings, access covers and other appurtenances outside of the sidewalk ramps, depressed curbs, rest areas, and gutters in front of the depressed curbs, as directed by the Contact Administrator.

#### E6.5 Medians and Refuge Islands

- (a) Where the distance from back of curb to back of curb is 1.32m or greater, install one detectable warning surface tile 50mm from the back of each curb.
- (b) Where the distance from back of curb to back of curb is less than 1.32m, place the tiles 50mm from the back of curb and cut the tile(s) to fill the remaining area between the curbs.

#### E6.6 2.0m Wide Depressed Curb for Multi-use Paths

- (a) Construct a curb ramp with a 2.0m depressed curb at high volume collector and regional street intersections in accordance with SD-229E, in accordance with Public Works Department guidelines and as directed by the Contract Administrator.
- (b) Construct the concrete ramp 2.0m wide and a minimum of 1.50m deep from back of curb.
- (c) Construct the curb ramp in accordance with SD-229C and SD-229D.
- (d) Install one 610mm x 1220mm tile centered to the 2.0m wide depressed curb. The part of the tile nearest the curb must be 50mm from the back of curb similar to tile placement in SD-229AA.

#### E6.7 3.5m Wide Depressed Curb for Multi-use Paths

- (a) Construct a curb ramp with a 3.5m depressed curb at low volume collector and residential street intersections in accordance with SD-229E, in accordance with Public Work Department guidelines and as directed by the Contact Administrator.
- (b) Construct the concrete ramp 3.5m wide and a minimum of 1.50m deep from back of curb.
- (c) Construct the curb ramp in accordance with SD-229C and SD-229D.
- (d) Install two (2) tiles in each concrete ramp, one (1) on each side for each direction. Place the short edge of each tile 150mm from the edge of the concrete ramp, with both tiles in line with each other transversely across the concrete ramp. The tile(s) nearest the curb must be 50mm from back of curb similar to tile placement in SD-229AA.
- (e) Saw cut the middle of the concrete slab, perpendicular to the curb and to a depth of D/4. Cut additional saw cuts as directed by the Contract Administrator.

#### E6.8 Installation Instructions

- (a) Installation Instructions for Cast In Place Inline Dome Detectable/Tactile Warning Surface Tile

- (i) During Cast In Place Detectable/Tactile Warning Surface Tile installation procedures, ensure adequate safety guidelines are in place and that they are in accordance with the applicable industry and government standards.
- (ii) The specifications of the structural embedment flange system and related materials shall be in strict accordance with the contract documents and the guidelines set by their respective manufacturers. Do not set Cast In Place tiles in asphaltic concrete.
- (iii) The physical characteristics of the concrete shall be consistent with the contract specifications. An overly wet mix will cause the tile to float. Under these conditions, suitable weights such as 2 concrete blocks or sandbags (12 kg) shall be placed on each tile.
- (iv) Prior to placement of the Cast In Place Detectable/Tactile Warning Surface Tile system, the contract drawings shall be reviewed.
- (v) Pour and finish the concrete using typical mason's tools, however, 12 kg weights, and a large non-marring rubber mallet are specific to the installation of the Cast In Place Detectable/Tactile Warning Surface Tile system. A vibrating mechanism can be employed, if desired. The vibrating unit should be fixed to a soft base such as wood, at least 300mm square.
- (vi) The factory-installed plastic sheeting must remain in place during the entire installation process to prevent the splashing of concrete onto the finished surface of the tile. Remove the plastic sheeting after the concrete has set.
- (vii) When preparing to set the tile, it is important that NO concrete be removed in the area to accept the tile. It is imperative that the installation technique eliminates any air voids under the tile. Holes in the tile perimeter allow air to escape during the installation process. Concrete will flow through the large holes in each embedment flange on the underside of the tile. This will lock the tile solidly into the cured concrete.
- (viii) Drill additional 6mm vent holes in the ribs under the tile as required to help seat the tile in the concrete.
- (ix) The concrete shall be poured and finished true and smooth to the required dimensions and slope prior to the tile placement. The tile shall be placed in accordance with the contract drawings.
- (x) The Cast In Place Detectable/Tactile Warning Surface Tiles shall be tamped (or vibrated) into the fresh concrete to ensure that the surface of the truncated domes are flush to the adjacent concrete surface. Embedment of the tile so the top of the truncated domes are flush with the adjacent concrete will reduce the possibility of damage due to snow clearing operations. The embedment process should not be accomplished by stepping on the tile as this may cause uneven setting which can result in air voids under the tile surface.
- (xi) While concrete is workable, a 3/8" radius edging tool shall be used to create a finished edge of concrete, a steel trowel shall then be used to finish the concrete around the tile's perimeter.
- (xii) During and after the tile installation and the concrete curing stage, it is imperative that there is no walking, leaning or external force placed on the tile that may rock the tile causing a void between the underside of tile and concrete.
- (xiii) Following tile placement, review installation tolerances to contract drawings and adjust tile before the concrete sets. Two suitable weights of 12kg each shall be placed on each tile as necessary to ensure solid contact of the underside of tile to concrete.
- (xiv) If required, individual tiles can be bolted together using ¼ inch or equivalent hardware. This can help to ensure that adjacent tiles are flush to each other during the installation process. Tape or caulking can be placed on the underside of the bolted butt joint to ensure that concrete does not rise up between the tiles during installation. Any protective plastic wrap which was peeled back to facilitate bolting or cutting, should be replaced and taped to ensure that the tile surface remains free of concrete during the installation process.



- (xv) Following the concrete curing stage, protective plastic wrap is to be removed from the tile surface by cutting the plastic with a sharp knife, tight to the concrete/tile interface. If concrete bled under the plastic, a soft brass wire brush will clean the residue without damage to the tile surface.
- (xvi) Tiles can be cut using a continuous rim diamond blade in a circular saw or mini-grinder. Use of a straightedge to guide the cut is advisable where appropriate.
- (xvii) Bolt 300mm x 300mm tiles together prior to placing in plastic concrete. This ensures that the surface of the tiles are flush with each other.

## **E7. RESTORATIONS**

### **E7.1 Street Pavement Restorations**

- (a) Restore Concrete street pavement in accordance with Section 9 of CW 3230, except as follows:
  - (i) Remove as much concrete pavement as necessary to facilitate adequate room for installation of traffic signals appurtenances. The removal area shall be uniform, rectangular and parallel to the nearest edge or joint. If the area left is less than 1000mm in width to the nearest joint or edge, remove all concrete to the nearest joint or edge.
  - (ii) Restore concrete and asphalt pavement to match adjacent existing concrete and asphalt pavement depths respectively
- (b) Restore asphalt pavement in accordance with Section 9.4 of CW 3410

### **E7.2 Miscellaneous Slabs Restoration**

- (a) Restore miscellaneous concrete slabs in accordance with Section 3 of CW 3235, except as follows:
  - (i) Remove as much concrete pavement as necessary to facilitate adequate room for installation of traffic signals appurtenances. The removal area shall be uniform, rectangular and parallel to the nearest edge or joint. If the area left is less than 600mm in width to the nearest joint or edge, remove all concrete to the nearest joint or edge.
  - (ii) Match existing adjacent miscellaneous slab style, including but not limited to medians, sidewalks, monolithic curb and sidewalk, and bullnoses.
  - (iii) Restore asphalt sidewalk or multi-use path in accordance with Section 9.4 of CW 3410.
  - (iv) Restore sidewalks comprised of paving stones, or paving stones on a lean concrete base in accordance with Section 9 of CW 3335.
  - (v) Restore precast concrete pavers to match existing adjacent paving stone colour and style.

### **E7.3 Concrete Curb Restoration**

- (a) Restore concrete curb in accordance with Section 3 of CW 3240, except as follows:
  - (i) Remove only as much concrete pavement as necessary to facilitate adequate room for installation of traffic signals appurtenances. If the area necessary is within 600 mm of a joint, increase the removal area to encompass the joint.
  - (ii) Match existing adjacent curb style, including but not limited to barrier, modified barrier, curb and gutter, curb ramp, and splash strips

### **E7.4 Boulevard Restoration**

- (a) Top Soil and Finish Grading
  - (i) Preparation of the finished topsoil surface shall be completed in accordance with Specification of CW 3540.

- (ii) To prevent the formation of depressions or water pockets, the Contractor shall smooth out any undulations or irregularities in the topsoil surface resulting from fertilizing, seeding, rolling or other operations.
- (b) Sodding
  - (i) The Contract Administrator will measure the area with the Contractor and they will have two weeks to complete the topsoil and sod.
  - (ii) The Contractor shall not commence sodding operations until the finished topsoil surface has been inspected and approved by the Contract Administrator.
  - (iii) The Contractor shall provide the Contract Administrator with a minimum of two working days' notice for inspection of the finished topsoil surface.
  - (iv) Preparation of the finished sod shall be completed in accordance with Specification of CW 3510

## **E8. MEASUREMENT AND PAYMENT**

### **E8.1 Soft Dig for Conduit**

- (a) Soft Dig for conduits will be measured on an hourly basis and paid for at the Contract Unit Price per hour for "Soft Dig". The number of hours to be paid will be the total number of hours of soft dig for conduit accepted by the Contract Administrator.
- (b) Soft Dig for conduits shall include standby time approved by the Contract Administrator.
- (c) No measurement or payment shall be made for exposure lines by hand shovel

### **E8.2 Detectable Warning Surface**

- (a) Detectable Warning Surface will be paid for at the Contract Unit Price for "Detectable Warning Surface Tiles" measured by the Contract Administrator from The City of Winnipeg Traffic Signal Department
- (b) Price shall be payment in full for performing all operations herein described and all other items incidental to the work included or referenced in this Bid Opportunity.

Detectable Warning Surface Tiles:

- (i) 610mm x 1220mm tiles

### **E8.3 Curb Ramp Installation**

- (a) The concrete sidewalk ramp and the concrete ramp for multi-use paths will be paid as a unit under the Contract Unit Price "Curb Ramp Installation".

### **E8.4 Street Pavement Restoration**

- (a) Concrete and Asphalt Pavement Restoration will be measured on an area bases and paid for at the Contract Unit Price per square metre for "Street Pavement Restoration". The area to be paid for will be the total numbers of square metres of pavement restored in accordance with this specification, accepted and measured by the Contract Administrator.
- (b) All costs for base preparation, tack coat, reinforcing steel, drilled dowels and tier bars, and concrete slabs and/or asphalt pavement of various depths, mill and fill, asphalt overlay and all other work associated with concrete and /or asphalt pavement restoration will be included in the item of work "Street Pavement Restorations"

### **E8.5 Miscellaneous Slabs Restoration**

- (a) Miscellaneous Slabs Restoration will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Miscellaneous Slabs Restoration". The area to be paid for will be the total number of square metres of medians, sidewalks, monolithic curb and sidewalk, and bullnoses restored in accordance with this specification, accepted and measured by the Contract Administrator.

- (b) All costs for base preparation, tack coat, reinforcing steel, drilled tie bars, precast concrete pavers, and concrete and/or asphalt pavement and all other work associated with miscellaneous slabs restoration, will be included in the item of work for "Miscellaneous Slab Restoration"

#### E8.6 Concrete Curb Restoration

- (a) Concrete Curb Restoration will be measured on a length basis and paid for at the Contract Unit Price per linear metre for "Concrete Curb Restoration". The length to be paid for will be the total number of metres of barrier curb, modified barrier curb, curb and gutter, lip curb, safety curb, or splash strips restored in accordance with this specification accepted and measured by the Contract Administrator.
- (b) All costs for reinforcing steel, drilled tie bars, curb of various types and all other work associated with concrete curb restoration, will be included in the item of work, "Concrete Curb Restoration"

#### E8.7 Boulevard Restoration

- (a) Supply, placement and maintenance of topsoil, finish grading and sod will be paid for at the Contract Unit price per square metre under "Boulevard Restoration".

#### E8.8 Service Box Pre-Cast 36"

- (a) Installation of Service Boxes shall be measured on a unit basis and paid for at the Contract Unit Price per unit for "Items of Work" listed below. The number of units to be paid for shall be the total number of Service Boxes installed in accordance with this specification, accepted and measured by the Contract Administrator.
  - (i) Service Box Pre-Cast 36"

#### E8.9 Installation of Conduit into Hydro Service Pedestal

- (a) Where conduit installed under this Specification is terminated at an existing Hydro Service Pedestal, the Contractor shall contact Hydro utility at least 48 hours prior to starting the work, explain the work involvement to the Hydro and obtain the permission of Hydro to undertake the works. Conduits to be installed into Hydro Service Pedestal shall be made by coring, not by drilling, nor by breaking with a jack-hammer or similar device.
- (b) Installation of conduit into Hydro Service Pedestal will be paid for at the Contract Unit Price for "Conduit – into Hydro Service Pedestal".

#### E8.10 Bike Detector Loop

- (a) Saw cutting and Sealing for Bike Detector Loops shall be measured on a length basis and paid for at the Contract Unit price per metre for "Bike Detector Loop". The length to be paid for shall be the number of metres cut in place and sealed in accordance with the specification E4, accepted and measured by the Contract Administrator.
- (b) Measurements of saw cutting and sealing includes the length of saw cuts within which the loop and lead-in wired are installed.
- (c) No measurement or payments shall be made for the installation of the first detector lead-in conduit for each detector loop array.

### E9. QUALITY MANAGEMENT

#### E9.1 Quality Control

- (a) All workmanship and all materials furnished and supplied under this Specification are subject to the close and systematic inspection and testing by the Contract Administrator including all operations from the selection and production of materials through to final acceptance of the Work.
- (b) The Contractor shall be wholly responsible for the control of all operations incidental thereto notwithstanding any inspection or approval that may have been previously given.

- (c) The Contract Administrator reserves the right to reject any materials or works which are not in accordance with the requirements of this Specification.
- (d) The Contractor shall be responsible for making a thorough inspection of materials to be supplied under this Contract. All material shall be free of surface imperfections and other defects.
- (e) Contractor is advised that, further to C11.7, events of defective Work may be considered an event of default in accordance with C18

#### E9.2 Quality Assurance

- (a) The Contract Administrator will undertake quality assurance testing and inspecting in accordance with the Specification CW3620
- (b) If, in the opinion of the Contract Administrator, the installation of Traffic Signals is not in accordance with this Specification, the Work will be deemed as deficiencies and will be subject to Liquidated Damages D17.
- (c) The Contractor shall be wholly responsible for the control of all operations incidental thereto notwithstanding any inspection or approval that may have been previously given.