



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 1001-2015**

**TRANSIT STOP IMPROVEMENTS 2015**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 Transit Stop Improvements 2015

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, December 1, 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. SITE INVESTIGATION**

B3.1 Further to C3.1, the Bidder may view the Site without making an appointment.

### **B4. ENQUIRIES**

B4.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.

B4.2 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.

B4.3 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.

B4.4 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.

B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

### **B5. CONFIDENTIALITY**

B5.1 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.

B5.2 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.

## **B6. ADDENDA**

- B6.1 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.
- B6.2 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.
- B6.2.1 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/>
- B6.2.2 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.
- B6.2.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 7 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B7. SUBSTITUTES**

- B7.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B7.3 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.
- B7.4 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.
- B7.5 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.
- B7.6 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.

- B7.6.1 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.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 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.
- B7.9 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.

## **B8. BID COMPONENTS**

- B8.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices;
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 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.
- B8.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B8.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:
- The City of Winnipeg  
Corporate Finance Department  
Materials Management Division  
185 King Street, Main Floor  
Winnipeg, MB R3B 1J1
- B8.5.1 Samples or other components of the Bid Submission 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 Submission.
- B8.6 Bidders are advised not to include any information/literature except as requested in accordance with B8.1.
- B8.7 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).
- B8.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to 204 949-1178.
- B8.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.
- B8.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

**B9. BID**

- B9.1 The Bidder shall complete Form A: Bid, making all required entries.
- B9.2 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.
- B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.
- B9.3 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.
- B9.4 Paragraph 9 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;
  - (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.
- B9.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B9.4.2 All signatures shall be original.
- B9.5 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.

**B10. PRICES**

- B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B10.1.1 Notwithstanding C12.2.3(c), prices on Form B: Prices shall not include the Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.
- B10.2 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.
- B10.3 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.
- B10.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B11. DISCLOSURE**

B11.1 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.

B11.2 The Persons are:

- (a) N/A

## **B12. QUALIFICATION**

B12.1 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.

B12.2 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>

B12.3 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);

B12.4 Further to B12.3(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/Subcontractors 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/>).

B12.5 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.

B12.6 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.

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

B13.1 Bids will not be opened publicly.

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/bidopp.asp>

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 8 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 for the time period specified in Paragraph 8 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 9 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 9 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.

## **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 B12 (pass/fail);
  - (c) Total Bid Price;
  - (d) economic analysis of any approved alternative pursuant to B7.
- 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.
- B16.4 Further to B16.1(c), the Total Bid Price shall be the lump sum price shown on Form B: Prices.

## **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.
- B17.4 Notwithstanding C4, the City may issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.

**B17.5** The Contract, as defined in C1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

## 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:

- (a) Concrete bases for shelters and signs at
  - (i) NB Osborne at Glasgow
  - (ii) NB Pembina at Crescent Drive
  - (iii) SB Pembina Opp. Plaza Drive
  - (iv) NB Seasons Terminal
  - (v) SB Seasons Terminal.
- (b) Electrical connections for shelters and/or signs at
  - (i) NB Osborne at Glasgow
  - (ii) NB Pembina at Crescent Drive
  - (iii) SB Pembina Opp. Plaza Drive
  - (iv) NB Seasons Terminal

D2.2 The major components of the Work are as follows:

- (a) Supply and Install of Cast In Place concrete base for heated bus shelters
- (b) Supply and Install of Cast In Place concrete foundation for power pedestal base
- (c) Supply and Install of Concrete foundation for Bus Stop Flag
- (d) Supply and Install Unit Paver Inserts for Bus Stops
- (e) Supply and Install of electrical work including new power pedestals
- (f) Supply and Install of electrical works connecting power pedestal to existing Hydro lines

#### **D3. CONTRACT ADMINISTRATOR**

D3.1 The Contract Administrator is McGowan Russell Group Inc., represented by:

Jackie Wilkie

Vice President

825 St. Joseph Street  
Winnipeg, MB R2H 0A8

Telephone No. (204) 956-0396

E-mail Address: [jwilkie@mcgowanrussell.com](mailto:jwilkie@mcgowanrussell.com)

D3.2 At the pre-construction meeting, Jackie Wilkie will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D3.3 Bids Submissions must be submitted to the address in B8.5.

**D4. CONTRACTOR'S SUPERVISOR**

D4.1 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.

**D5. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE**

D5.1 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.

D5.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

D5.3 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.

D5.4 A Contractor who violates any provision of D5 may be determined to be in breach of Contract.

**D6. NOTICES**

D6.1 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.

D6.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D6.3, D6.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the facsimile number identified in D3.1.

D6.3 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

D6.4 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

**D6.5 Bids Submissions must be submitted to the address in B8.5.**

## **SUBMISSIONS**

### **D7. AUTHORITY TO CARRY ON BUSINESS**

D7.1 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.

### **D8. SAFE WORK PLAN**

D8.1 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.

D8.2 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/matmgmt/Safety/default.stm>

### **D9. INSURANCE**

D9.1 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 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) 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.

D9.2 Deductibles shall be borne by the Contractor.

D9.3 The Contractor shall provide the Contract Administrator 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 seven (7) Calendar Days from notification of the award of Contract by Purchase Order.

D9.4 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.

### **D10. PERFORMANCE SECURITY**

D10.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), 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.

D10.1.1 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.

D10.2 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 Purchase Order and prior to the commencement of any Work on the Site.

## **SCHEDULE OF WORK**

### **D11. COMMENCEMENT**

D11.1 The Contractor shall not commence any Work until he/she is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.

D11.2 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 D7;
  - (ii) evidence of the workers compensation coverage specified in C6.15;
  - (iii) the Safe Work Plan specified in D8;
  - (iv) evidence of the insurance specified in D9;
  - (v) the performance security specified in D10;

D11.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.

D11.3.1 If the actual date of award is later than the intended date, the dates specified for Critical Stages, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

### **D12. SUBSTANTIAL PERFORMANCE**

D12.1 The Contractor shall achieve Substantial Performance by April 15, 2016.

D12.2 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.

D12.3 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.

### **D13. TOTAL PERFORMANCE**

D13.1 The Contractor shall achieve Total Performance by May 21, 2016.

D13.2 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.

- D13.3 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.

#### **D14. LIQUIDATED DAMAGES**

- D14.1 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City One Thousand Dollars (\$1000) per Working Day for each and every Working Day following the day fixed herein for Total Performance during which such failure continues.
- D14.2 The amount specified for liquidated damages in D14.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Total Performance by the day fixed herein for same.
- D14.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

#### **CONTROL OF WORK**

##### **D15. JOB MEETINGS**

- D15.1 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.
- D15.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

##### **D16. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

- D16.1 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).

##### **D17. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS**

- D17.1 Further to B12.4, 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 B12.4.

#### **MEASUREMENT AND PAYMENT**

##### **D18. INVOICES**

- D18.1 Further to C12, the Contractor shall submit an invoice for each portion of Work performed to:

Corporate Finance - Accounts Payable  
4th Floor, Administration Building, 510 Main Street  
Winnipeg MB R3B 1B9

Facsimile No.: 204-949-0864

Email: [CityWpgAP@winnipeg.ca](mailto:CityWpgAP@winnipeg.ca)

D18.2 Invoices must clearly indicate, as a minimum:

- (a) the City's purchase order number;
- (b) date of delivery;
- (c) delivery address;
- (d) type and quantity of work performed;
- (e) the amount payable with GST and MRST shown as separate amounts; and
- (f) the Contractor's GST registration number.

D18.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D18.4 Bids Submissions must be submitted to the address in B8.5.

**D19. PAYMENT**

D19.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

**D20. WARRANTY**

D20.1 Warranty is as stated in C13.

**FORM H1: PERFORMANCE BOND**  
(See D10)

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. 1001-2015

TRANSIT STOP IMPROVEMENTS 2015

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)



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*.
- E1.3 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
L1.1	Layout Plan/ Transit Stop Improvements 2015
L1.2	Layout Plan/ Transit Stop Improvements 2015
L2	Details/ Transit Stop Improvements 2015

#### E2. PROTECTION OF EXISTING TREES

- E2.1 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 Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees
  - Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator
  - Excavation shall be performed in a manner that minimizes damage to the existing root systems. 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.
  - Operation of equipment within the dripline of the 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.
  - Work on-site shall be carried out in such a manner as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.
- E2.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his/her designate.
- E2.3 No Separate measurement or payment will be made for the protection of trees.

- E2.4 Except as required in clause E3.1 (c) and E3.1 (e) , Elm trees shall not be pruned at any time between April 1 and July 31.

### **E3. PEDESTRIAN SAFETY AND TRAFFIC MANAGEMENT**

- E3.1 Further to clause 3.7 of CW 1130

- E3.1.1 Intersecting street and private approach access shall be maintained at all times.
- E3.1.2 Should the Contractor be unable to maintain pedestrian or vehicular access to a residence or business, he shall review the planned disruption with the business or residence and the Contract Administrator, and take reasonable measures to minimize the impact. The Contractor shall provide a minimum of 24 hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.
- E3.1.3 Pedestrian Access must be maintained at all times
- E3.1.4 Ambulance/Emergency vehicle access must be maintained at all times.
- E3.1.5 Winnipeg Transit service shall be maintained at all times
- E3.1.6 During the project, a temporary snow fence shall be installed around the excavation area. The Contractor shall be responsible for maintaining the snow fence in a proper Working condition. No measurement for payment shall be made for this Work. Further to C3.1,

### **E4. WATER USED BY CONTRACTOR**

- E4.1 Further to clause 3.7 of CW 1120, the contractor shall pay for all costs, including sewer charges, associated with obtaining water from the City in accordance with the Waterworks and Sewer By-laws.
- E4.1.1 Water for use by the Contractor may be obtained from the City of Winnipeg waterworks system.
- E4.1.2 Should the Contractor wish to obtain water from a City hydrant, he shall make application either in person or by phoning the Permits Clerk at 986-3184 (8:30 am to 4:30 pm Monday to Friday excluding holidays). The Contractor shall advise the Permits Clerk of the hydrant he wishes to use. The Water Services Divisions of the Water and Waste Department will inspect the hydrant to ensure that the location is suitable and that the hydrant is in good working condition. If the requested hydrant is found to be unacceptable, arrangements will be made for the use of an alternate hydrant.
- E4.1.3 When the application has been approved, the Permits Clerk will contact the Contractor and issue the permit. The permit may not be issued the same day the application is made. The Contractor shall obtain the permit for hydrant use from the Customer Services Division of the Public Works Department, 107-1155 Pacific Avenue. Permit fees will be charged in accordance with the latest version of the Waterworks By-law. All water used shall be metered and protected against contamination by the use of approved backflow prevention devices. The City will rent the meter to the Contractor at the rate established by the Waterworks By-law. The Contractor shall provide a lockable box, piping, valves, and backflow prevention equipment in accordance with Waterworks' guidelines. The backflow preventer(s) must be tested by a plumber licensed to test backflow preventer(s). The Permits Clerk can provide a list of licensed plumbers and additional information on the requirements for obtaining a use of hydrant permit.
- E4.1.4 The Contractor shall pay for all water used in accordance with the Waterworks By-law. Sewer charges will not be assessed for water obtained from a hydrant.

### **E5. SITE CONDITION**

- E5.1 The Contractor shall examine the Site and make themselves familiar with the existing conditions (both above and below grade) and nature of Work to be done.

E5.2 Surface and sub-surface conditions shown on the Drawings and included herein are provided for general information and variations there from shall not affect the terms of the Contract.

E5.3 The Contractor shall set all necessary control lines, benchmarks, survey, elevation stakes and layout in accordance with the individual Site conditions and in consultation with the Contract Administrator.

## **E6. SURFACE RESTORATIONS**

E6.1 Further to clause 3.3 of CW 1130, when Total Performance is not achieved in the year the contract is commenced, the Contractor shall temporarily repair any work commenced and not completed to the satisfaction of the Contract Administrator. The Contractor shall maintain the temporary repairs in a safe condition as determined by the Contract Administrator until permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

## **E7. INFRASTRUCTURE SIGNS**

E7.1 The Contractor shall obtain infrastructure signs from the Traffic Services Sign Shop at 421 Osborne Street. The Contractor shall mount each sign securely to a rigid backing material approved by the Contract Administrator. The Contractor shall fasten each sign to a suitable support and erect and maintain one sign at each street as directed by the Contract Administrator. When the Contract Administrator considers the work on the street complete, the Contractor shall remove and dispose of the signs and supports. No measurement for payment will be made for performing all operations herein described and all other items incidental to the work described.

## **E8. EXISTING UNDERGROUND SERVICES**

E8.1 The Contractor's attention is drawn to the existing underground lines or services that may be located in the area of the Work.

E8.2 The Contractor shall take all necessary precautions when performing the Work to ensure that no damage is done to these existing services.

E8.3 No responsibility will be assumed by the City for correctness or completeness of the Drawings, when provided, with respect to the existing utilities, pipes or other objects either underground or on the surface, shall not be liable for the incorrectness and inadequacy thereof. It shall be the responsibility of the Contractor to determine the location of all such utilities, pipes and other objects and to make good any damage done to them.

E8.4 All costs in connection with this item including location of the existing service, repairs to any existing services damaged by the construction operation, etc. shall be included in the unit prices bid for supply and installation of the items included under this Contract.

E8.5 The Contractor will be required to make his own arrangements in connection with the temporary use of lighting, power, gas, sewer, water or other utilities, and pay all costs in connection therewith.

E8.6 All necessary permits, fees and other like expenses as well as the cost of temporary connections to existing facilities shall be arranged and paid for by the Contractor.

## **E9. SAWCUTTING PAVEMENT**

E9.1 At the limits of excavation, the Contractor shall saw cut the existing to produce a clean straight edge when excavated.

E9.2 The cost of saw cutting and disposal of any surplus material shall be included in the unit price bid for Excavation and Removals.

## **E10. BASE COURSE MATERIAL**

- E10.1 This Specification shall supplement Standard Construction Specification CW 3110 and CW 3130.
- E10.2 The Work of this section comprises the furnishing of all labour, equipment and materials required to complete the supply and placing of base course material Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to, the following:
- (a) Supply and Placement of Base Course Material
  - (b) Supply and Placement of Sub-Base
  - (c) Supply and Installation of Separation/Reinforcement Geotextile Fabric
  - (d) Compaction
- E10.3 There will be no separate measurement and payment supply and placement of sub-base. All Work shall be considered incidental to the Supply and Placing of Base Course Material.
- E10.4 There will be no separate measurement and payment for supply and installation of Separation/Reinforcement Geotextile Fabric. All Work shall be considered incidental to the Supply and Placing of Base Course Material.
- E10.5 There will be no separate measurement and payment for compaction. All Work shall be considered incidental to the Supply and Placing of Base Course Material.
- E10.6 All costs in connection with the testing and approval of base courses shall be considered incidental to the Supply and Placing of Base Course Material
- E10.7 Measurement and Payment
- E10.7.1 No separate measurement will be made for Base Course Material. Payment for base course material shall be included in the costs for those items for which base course material is required.

## **E11. CONCRETE FORMWORK**

- E11.1 General
- E11.1.1 Related Work
- (a) E21 Concrete Reinforcement and E22 Cast-in-Place Concrete.
- E11.1.2 Reference Standards
- (a) All concrete formwork is to be done in accordance with CAN/CSA-A23. I-M90 and CAN/CSA-A23.2-M90, except where specified otherwise.
- E11.1.3 Shop Drawings
- (a) Submit Engineered stamped shop drawings for review and approval by Contract Administrator prior to manufacture.
  - (b) Indicate method and schedule of construction, materials, arrangement of joints, ties, shores, liners, and locations or temporary embedded parts.
- E11.2 Materials
- E11.2.1 Formwork lumber: plywood and wood formwork materials conform to SAN3-086-M84.
- E11.2.2 Form ties: removal or snap-off metal ties, fixed or adjustable length, free of devices leaving holes larger than 25mm dia in concrete surface.
- E11.2.3 Form liner:
- (a) Plywood: Douglas Fir to CSA 0121-M1978, concrete form grade, square edge, 19mm thick.

E11.2.4 Formwork release agent: chemically active release agents containing compounds that react with free lime present in concrete to provide water insoluble soaps, preventing concrete from sticking to forms.

### E11.3 Construction Methods

#### E11.3.1 Erection

- (a) Verify lines, levels and dimensions before proceeding with formwork and ensure dimensions agree with drawings.
- (b) Obtain Contract Administrator's approval for use of earth forms.
- (c) Hand trim sides and bottoms and remove loose earth from earth forms before placing concrete.
- (d) Construct forms to produce finished concrete conforming to shape, dimensions, locations and levels indicated within tolerances required by CAN/CSA-A23.1-M90.
- (e) Align form joints and make watertight. Keep form joints to minimum.
- (f) Clean formwork in accordance with CAN/CSA-A23, 1-M90. Only permitted if in good condition.

#### E11.4 Measurement and Payment

E11.4.1 No separate measurement will be made for concrete formwork. Payment for formwork shall be included in the costs for those items for which cast in place concrete is required.

## E12. CAST IN PLACE CONCRETE FOUNDATIONS

### E12.1 General

E12.1.1 The "General Conditions and Supplemental Conditions" of this Specification and all documents listed in the Bid Opportunity shall apply to and govern all phases of the Work hereinafter specified and/or shown on the Drawings.

#### E12.1.2 Scope of Work

- (a) The Work of this section comprises the furnishing of all labour, equipment and materials required to complete the supply and installation of all cast-in-place concrete including but not limited to Concrete Base for Heated Bus Shelters, Concrete Foundation for Bus Stop Flags and Concrete Foundation for Power Pedestal bases as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the following:
  - (i) Excavation including disposal of excess material.
  - (ii) Subgrade Compaction as required.
  - (iii) Compacted Granular fill Work as required.
  - (iv) Supply, erection and removal of all formwork as required.
  - (v) Design of concrete mixes.
  - (vi) Supply, placing and curing of all Landscape Curbs.
  - (vii) Surface preparation and waterproofing of concrete Works.
  - (viii) Cleanup.

#### E12.1.3 Samples

- (a) At least 1 week prior to commencing Work, inform Contract Administrator of proposed source of aggregates and provide access for sampling.

#### E12.1.4 Certificates

- (a) Minimum 1 week prior to starting concrete Work submit (if requested) to Contract Administrator manufacturer's test data and certification by qualified independent inspection and testing laboratory that the following materials will meet specified requirements:

- (i) Portland Cement.
  - (ii) Cement Slurry Bonding Agent.
  - (iii) Admixtures.
  - (iv) Aggregates.
  - (v) Water.
  - (vi) Waterproofing
  - (vii) Emulsified Asphalt.
  - (viii) Epoxy grout.
- (b) Provide certification that plant, equipment, and materials to be used in concrete comply with requirements of CAN/CSA-A23.1-M90 and that mix design is adjusted to prevent alkali aggregate reactivity problems.
- (c) Provide certification that mix proportions selected will produce concrete of specified quality and yield and that strength will comply with CAN/CSA-A23.1-M90 and that mix design is adjusted to prevent alkali aggregate reactivity problems.

E12.1.5 Construction Quality Control and Placement Procedures.

- (a) Submit proposed quality control procedures for Contract Administrator's approval.
- (b) Submit proposed concrete placement procedures for Contract Administrator's approval.

E12.2 Materials

E12.2.1 Portland cement to CAN3-A5-M1983.

E12.2.2 Water to CAN/CSA-A23.1-M90.

E12.2.3 Aggregates to CAN/CSA-A23.1-M90. Coarse aggregates to be normal density.

E12.2.4 Chemical admixtures to CAN3-A266.2-M78. Contract Administrator to approve accelerating or set retarding admixtures during cold and hot weather placing. Use of calcium chloride is not permitted.

E12.2.5 Curing and sealing compound to: CAN/CSA-A23.1-M90, CPD Acrylic cure and seal or equal in accordance with B7 and to ASTM C309-81, Type 1 - chlorinated rubber.

E12.2.6 Pre-moulded joint fillers:

- (a) Bituminous impregnated fibreboard: to ASTM D1751-83.

E12.2.7 Concrete Mixes

- (a) All concrete Work shall be in accordance with CSA A23.1 M94-Concrete Materials and methods of concrete construction.
- (b) Proportion normal density concrete in accordance with CSA A23.1-M94 to give the following properties:
- (c) Concrete for Landscape Curbs
  - (i) Cement: Type 10
  - (ii) Maximum Coarse Aggregate: 20mm
  - (iii) Minimum Compressive Strength at 28 days: 32Mpa
  - (iv) Minimum Cement Content: 340 / kg/ cu.m
  - (v) Maximum Water/ Cement Ratio: 0.45
  - (vi) Class of Exposure: C-2
  - (vii) Maximum Slump: 80mm
  - (viii) Air Content: 6-8%
- (d) Do not change concrete mix without prior approval of Contract Administrator.

E12.3 Construction Methods

#### E12.3.1 Workmanship

- (a) Do all concrete Work in accordance with CAN/CSA-A23.1-M90. All testing of concrete shall be done in accordance with CAN/CSA-A23.2-M90. Obtain Contract Administrator's approval before placing concrete. Provide 3 days notice prior to placing of concrete.
- (b) Pumping of concrete is permitted only after approval of equipment and mix.
- (c) Ensure reinforcement and inserts are not disturbed during concrete placement.
- (d) Do not place load upon new concrete until authorized by Contract Administrator as per City of Winnipeg Standards.

#### E12.3.2 Construction Joints

- (a) Joint Fillers
  - (i) Furnish filler for each joint in a single piece for depth and width required for joint, unless otherwise authorized by Contract Administrator. When more than one piece is required for a joint, fasten abutting ends and hold securely by stapling or other positive fastening.

#### E12.3.3 Finishing of Concrete

- (a) General
  - (i) Finish concrete in accordance with CAN/CSA/A23.1-M90. Float surface with metal float and bring surface to true grade.
- (b) Exposed Foundations
  - (i) All shall be finished by a specialty concrete finishing subcontractor.
  - (ii) The size of finishing crews shall be planned with due regard for the effects of concrete temperatures and atmospheric conditions of the rate of hardening of the concrete.
  - (iii) The elevation of the finished shelter slab shall not vary more than 4mm +/- from the design elevation.
  - (iv) Finish of all items shall be smooth and clean with no pits, chips, bumps or other surface imperfections.

#### E12.3.4 Cleanup and Damage

- (a) Immediately on completion of concrete Work the Contractor shall remove from Site all equipment, timbers, shores, excavated materials, unused concrete, rubbish etc. caused by his operations, and leave the Site clean, level and ready for other Works.
- (b) The Contractor shall be responsible for making good all areas damaged by his operations in connection with this Contract regardless of the limits of the Contract as shown on the Drawings.

#### E12.4 Measurement and Payment

E12.4.1 Cast-in-place Concrete will be measured and paid for at the contract unit price per square meter as follows:

- (a) Supply and Install Concrete Bases for Heated Bus Shelters

E12.4.2 Cast-in-place Concrete will be measured and paid for at the contract unit price per unit as follows:

- (a) Supply and Install Concrete Foundations for Bus Stop Flag
- (b) Supply and Install Concrete Foundations For Bus Stop Totem
- (c) Supply and Install Concrete Foundation for Power Pedestal Base

Measured as specified herein, which price shall be payment in full for completing all operations herein described and all other items incidental to the Work included in this

specification. The area to be paid shall be the total number of square meters in accordance with this Specification and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator.

### **E13. UNIT PAVER INSERT FOR BUS STOP**

E13.1 Further to CW 3330 this specification shall cover the:

- (a) Supply and installation of interlocking paving stones (unit pavers)
- (b) Supply and installation of sand setting bed
- (c) Supply and installation of grout.

E13.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.

E13.3 General

E13.3.1 Store units in a protected location, immediately upon arrival on the Site.

E13.3.2 Remove from Site any units, which have been damaged during transportation and replace.

E13.4 Materials

E13.4.1 Paving Stones on Concrete Sidewalk Base.

- (a) Paving stones shall be Barkman Precast Concrete Pavers as shown on the Construction Drawings and as follows:
  - (i) "Holland Stone" Transit Blue 105 x 210 x 60 mm
  - (ii) "Holland Stone" Natural 105 x 210 x 60mm

Barkman Concrete Ltd.  
909 Gateway Road  
Winnipeg, Manitoba, R3K 3L1  
Contact: Wayne Wiebe  
T (204) 667-3310

E13.4.2 Dry Sand/Cement Mix

- (a) Dry sand/cement mix shall consist of 1 part Portland dry mix to 3 parts sand.

E13.4.3 Bedding Sand

- (a) Bedding sand shall be fine aggregate as specified in Section 5.4.1 of Specification CW 3310, with the exception that the sand shall have a minimum of 30% of the particle larger than 3mm.
- (b) Minimum 13mm depth setting bed

E13.4.4 Filler Sand

- (a) Filler sand shall have a maximum aggregate size of 3mm.

E13.4.5 Grout

- (a) Grout as specified hereinafter shall be used for grouting paving stone and brick in areas indicated on the drawings. The grout shall have a compressive strength of 25 MPA at 28 days, determined on 50 mm cubes stored and tested in accordance with ASTM C109, and shall consist of normal Portland cement, sand and water.
- (b) The water-cement ratio shall be kept in the range of 0.45 to 0.55.
- (c) The grout shall have between 3% and 5% entrained air.
- (d) Acryl-Stik or approved equal in accordance with B7 to be used in grout at approximately 4 litres Acryl-Stik to 3 litres water.

- (e) Admixtures to be used in the grout shall be supplied in accordance with the requirements of the City of Winnipeg Standard CW 3310.
- (f) The grout shall be of a consistency suitable for the application intended as approved by the Contract Administrator.
- (g) The Contractor shall provide the Contract Administrator with a mix design statement certifying the constituent materials and mix proportions that will be used in the grout for approval prior to construction.

#### E13.5 Construction Methods

##### E13.5.1 Excavation

- (a) Excavation shall comply with Specification CW 3110.
- (b) The excavation shall not extend beyond the specified limits of excavation. The limits of excavation shall be taken as a vertical plane not more than 150mm beyond the limits of the proposed paving stone and brick sidewalk, unless otherwise specified on the Drawings or in the Specifications for the Work.
- (c) The sub-grade shall be excavated to the minimum depth shown on Detail SD-240B, unless otherwise directed by the Contract Administrator.

##### E13.5.2 Concrete Sidewalk Base

- (a) The Concrete Sidewalk Base shall be constructed in accordance with Specification CW 3325 and as shown on the drawings.

##### E13.5.3 Preparation of Sand Base

- (a) On top of the concrete sidewalk base, lean mix concrete base and existing areaways a layer of sand shall be placed, depth as indicated on the details.
- (b) The bedding sand layer shall be spread and levelled so that the brick and paving stones when installed are 5mm higher than the finished grade. No more sand shall be spread than can be covered same day by paving stones and brick. The bedding sand layer shall not be compacted prior to laying the paving stones and brick.
- (c) The cost of supplying and placing bedding sand shall be incidental to the installation of the paving stones and brick.
- (d) No paving stones or brick shall be placed until construction of the underlying layers has been approved by the Contract Administrator.

##### E13.5.4 Installation of Paving Stones

- (a) New Paving Stones shall be installed in block out areas on concrete sidewalk.
- (b) Existing stockpiled Paving Stones shall be installed in block out areas on concrete sidewalk in the area indicated on the drawings.
- (c) Contractor to verify the exact dimensions of Interlocking Paving Stones prior to Installation.
  - (i) Install sand bed to depth specified on Drawings.
  - (ii) Do not compact setting bed prior to installation of pavers.
  - (iii) Spread only sufficient area, which can be covered with pavers and brick same day.
  - (iv) Lay pavers and brick on sand bed hand tight.
  - (v)
    - i) Where paving pattern is interrupted by vertical structural elements set into underlying concrete base and/or proposed or existing concrete foundation pads – pavers must be saw cut and fit true and hand tight.
    - ii) Vertical Structural Elements are to be set into underlying concrete base and/or concrete slab foundations prior to installation of pavers.
  - (vi) Commence installation of new stones against block-out to obtain straightest possible course for installation.

- (vii) Pavers shall be cut with a saw only, to obtain true even undamaged edges. Chipped pavers are unacceptable.
- (viii) Crews shall Work on installed paving stone and brick, not on sand layer.
- (ix) Spread and fine grade brick sand over paving surface and sweep into joints, in several directions.
- (x) Compact paving stones with vibratory plate compactor having mass of at least 113 kg.
- (xi) Sweep remaining sand over all paving stone areas and remove from Site.
- (xii) Replace at no extra cost all whole or cut stones marked as unacceptable.
- (xiii) Remove cracked, chipped, broken or otherwise damaged paving materials from Site immediately.
- (xiv) Upon completion, clean in accordance with manufacturer's recommendations.
- (xv) Grout in place all paving stones smaller than 2" x 4".
- (xvi) In the area of all sidewalk ramps cut paving stones as required so that they lay flush with no edges extending above finished grade of ramp surface. Ensure that all cuts are made in a logically and aesthetically pleasing manner as approved by Contract Administrator on Site.

#### E13.6 Measurement and Payment

E13.6.1 Unit Paver Insert for Bus Stops will be measured and paid for at the contract unit price per square meter as follows:

- (a) Supply and Install Holland Stone Paving – Transit Blue (60 mm)
- (b) Supply and Install Holland Stone Paving – Natural (60 mm)

The area to be measured as specified herein, which price shall be payment in full for completing all operations herein described and all other items incidental to the Work included in this specification. The area to be paid shall be the total number of square meters in accordance with this Specification and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator.

### **E14. ELECTRICAL WORKS**

#### **General Provisions**

- E14.1 Refer also to Drawings.
- E14.2 Disconnect all shelters and signs on Site to be relocated or removed. Coordinate with signage and site works contractors for timing of work and site access requirements.
- E14.3 All sites to be left in a safe manner for installation of new Work.
- E14.4 Furnish all labour, new material, equipment and services for the complete installation of the electrical Work as shown on the plans and specified. Complete system to operate to total satisfaction of the responsible professional engineer.
- E14.5 Conform with all Codes and pay all permits and Fees. Upon completion, present a "Certificate of Approval" for electrical Work from the Inspection Department.
- E14.6 Examine the Site and local conditions affecting the Work under this contract.
- E14.7 Install all Work promptly and in advance of concrete pouring and/or construction.
- E14.8 The Contractor shall be responsible to make good all "Cutting and Patching" required by his section of the Contract. Include all trenching, backfilling and surface repair. Contractor to push wires where possible at all locations.

- E14.9 All Work shall be executed in a first class and workmanlike manner. All supports, hangers, and securing devices shall be solid and substantial. All Work shall be laid out neatly in its mechanical appearance. It shall be logically arranged for simplicity of installation and accessibility.
- E14.10 Provide corrected "as-built" drawings on completion of the project. All underground services shall be indicated on as-builts and dimensioned.
- E14.11 Provide shop drawings for approval of all major electrical items. Provide three (3) copies of manufacturers maintenance instructions bound in hard covered book for each piece of major electrical equipment.
- E14.12 Identify circuits/equipment with lamacoid nameplates.
- E14.13 All electrical apparatus shall be properly grounded according to the latest edition of the "Canadian Electrical Code"
- E14.14 All equipment, wiring, conduit, grounding, seals, etc., shall be in compliance with the latest edition of the "Canadian Electrical" and local "Codes". Wiring in finished grade shall be in rigid PVC conduits, complete with ground conductor.
- E14.15 Wiring shall be copper, RWU-90, insulated, minimum #12 AWG.
- E14.16 Wire and connect to signs and shelters where indicted. Provide lockable, weatherproof disconnect switches for each sign as shown on the drawings. Locate as directed on Site.
- E14.17 Co-ordinate installation with Manitoba Hydro and City of Winnipeg. Installation to conform with all utility requirements.
- E14.18 Obtain all permits and inspections. Provide copies of all paperwork to the Contract Administrator prior to completion of the Work.
- E14.19 The concrete bases for the pedestals, shelters and signs will be provided under separate contract. Contractor to co-ordinate location of sleeves.
- E14.20 Installation of signs and shelters will be provided under separate contract. Coordinate for electrical connection requirements and timing of installation.
- E14.21 Provide ground rod and grounding connections to suit Manitoba Hydro and City of Winnipeg Inspection Department.
- E14.22 All distribution equipment to be weather proof.
- E14.23 The Contractor shall carefully examine all drawings relating to the Work, to be certain that the Work under this Contract can be carried out and, prior to the submission of his/her Bid in accordance with B4, report at once to the Contract Administrator any defect, discrepancy, omission or interference affecting the work of this section or the guarantee of same.
- E14.24 The Contractor shall be responsible for any damage caused the City or their Contractors by improperly carrying out this contract.
- E14.25 The Contractor shall guarantee the satisfactory operation of all work and apparatus included and installed under this section for a period of twelve (12) calendar months after the final acceptance of the project.
- E14.26 Measurement and Payment
- E14.26.1 Electrical Work for each location will be measured and paid on a lump sum basis which price shall be payment in full for completing all operations herein described and all other items incidental to the Work included in this Specification.