



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 706-2011**

**CONSTRUCTION OF ST. NORBERT GATEWAY SIGN STRUCTURES**

## TABLE OF CONTENTS

### PART A - BID SUBMISSION

Form A: Bid	1
Form B: Prices	3

### PART B - BIDDING PROCEDURES

B1. Contract Title	1
B2. Submission Deadline	1
B3. Site Investigation	1
B4. Enquiries	1
B5. Addenda	1
B6. Substitutes	2
B7. Bid Components	2
B8. Bid	3
B9. Prices	4
B10. Qualification	4
B11. Opening of Bids and Release of Information	5
B12. Irrevocable Bid	5
B13. Withdrawal of Bids	5
B14. Evaluation of Bids	6
B15. Award of Contract	6

### PART C - GENERAL CONDITIONS

C0. General Conditions	1
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### PART D - SUPPLEMENTAL CONDITIONS

#### General

D1. General Conditions	1
D2. Scope of Work	1
D3. Contract Administrator	1
D4. Contractor's Supervisor	1
D5. Notices	1

#### Submissions

D6. Authority to Carry on Business	2
D7. Safe Work Plan	2
D8. Insurance	2
D9. Performance Security	3
D10. Subcontractor List	3

#### Schedule of Work

D11. Commencement	3
D12. Substantial Performance	4
D13. Total Performance	4
D14. Liquidated Damages	4

#### Control of Work

D15. Job Meetings	4
D16. Prime Contractor – The Workplace Safety and Health Act (Manitoba)	5

#### Measurement and Payment

D17. Invoices	5
D18. Payment	5

#### Warranty

D19. Warranty	5
Form H1: Performance Bond	6
Form H2: Irrevocable Standby Letter of Credit	8
Form J: Subcontractor List	10

## **PART E - SPECIFICATIONS**

### **General**

E1. Applicable Specifications and Drawings	1
E2. Location of Work	1
E3. Layout of Work	1
E4. Pedestrian and Traffic Control	1
E5. Sitework Demolition and Removals	2
E6. Concrete Safety Curb	4
E7. Cast-in-Place Concrete	4
E8. Limestone Masonry	4
E9. Miscellaneous Metals	6
E10. Site Carpentry	7
E11. Retroreflective Aluminum Sign Plates	8
E12. Planting Medium	10

## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 CONSTRUCTION OF ST. NORBERT GATEWAY SIGN STRUCTURES

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, October 7, 2011.

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. 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>

B5.2.2 The Bidder is responsible for ensuring that he 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.

B5.2.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 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 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, only to the Bidder who requested approval of the substitute.
- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he 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 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 B14.
- 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 B7.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

## **B7. BID COMPONENTS**

- B7.1 The Bid shall consist of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices;

- 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 Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B7.5 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
- B7.5.1 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.
- B7.6 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.7 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 B14.1(a).
- B7.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.
- B7.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.
- B7.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

**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 own name, his 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 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 10 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 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 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.

B8.4.2 All signatures shall be original.

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 the lump sum price in Canadian funds for the Work on Form B: Prices.

B9.2 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B10. QUALIFICATION**

B10.1 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.

B10.2 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>

B10.3 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);

B10.4 Further to B10.3(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 valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
- (b) 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>).

B10.5 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.

B10.6 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.

### **B11. OPENING OF BIDS AND RELEASE OF INFORMATION**

B11.1 Bids will not be opened publicly.

B11.2 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>

B11.3 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>

B11.4 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.

### **B12. IRREVOCABLE BID**

B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.

B12.2 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 9 of Form A: Bid.

### **B13. WITHDRAWAL OF BIDS**

B13.1 A Bidder may withdraw his Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B13.1.1 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.

B13.1.2 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 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

B13.1.3 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 10 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.

B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 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.

#### **B14. EVALUATION OF BIDS**

B14.1 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 B10 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B6.

B14.2 Further to B14.1(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.

B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.

B14.4 Further to B14.1(c), the Total Bid Price shall be the lump sum price shown on Form B: Prices.

#### **B15. AWARD OF CONTRACT**

B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B15.2 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.

B15.2.1 Without limiting the generality of B15.2, 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.

B15.3 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 B14.

B15.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.

- B15.4 Notwithstanding C4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B15.5 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 construction of two (2) gateway sign structures in the median of Pembina Highway, St. Norbert, Winnipeg

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

- (a) Excavation
- (b) Reinforced concrete footing
- (c) Rough carpentry with oak timbers, including fabricated steel mounting plates
- (d) Supply and installation of retroreflective aluminum sign panels
- (e) Shrub bed preparation, including mulching
- (f) Timber edging

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

D3.1 The Contract Administrator is Hilderman Thomas Frank Cram, represented by:

Glen Manning  
Principal  
500-115 Bannatyne Avenue East  
Telephone No. (204) 475-9440  
Facsimile No. (204) 957-1467

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

#### **D4. CONTRACTOR'S SUPERVISOR**

D4.1 At the pre-construction meeting, the Contractor shall identify his designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

#### **D5. NOTICES**

D5.1 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.

D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.

D5.3 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

- D5.4 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 address or facsimile number:

The City of Winnipeg  
Legal Services Department  
Attn: Director of Legal Services  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

## **SUBMISSIONS**

### **D6. AUTHORITY TO CARRY ON BUSINESS**

- D6.1 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.

### **D7. SAFE WORK PLAN**

- D7.1 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.
- D7.2 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>

### **D8. INSURANCE**

- D8.1 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) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
- D8.2 Deductibles shall be borne by the Contractor.
- D8.3 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.

D8.4 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.

#### **D9. PERFORMANCE SECURITY**

D9.1 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.

D9.1.1 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.

D9.2 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.

#### **D10. SUBCONTRACTOR LIST**

D10.1 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 seven (7) Calendar Days from notification of the award of Contract.

### **SCHEDULE OF WORK**

#### **D11. COMMENCEMENT**

D11.1 The Contractor shall not commence any Work until he 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 D6;
  - (ii) evidence of the workers compensation coverage specified in C6.15;
  - (iii) the Safe Work Plan specified in D7;
  - (iv) evidence of the insurance specified in D8;
  - (v) the performance security specified in D9;
  - (vi) the Subcontractor list specified in D10; and
- (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.

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

## **D12. SUBSTANTIAL PERFORMANCE**

- D12.1 The Contractor shall achieve Substantial Performance within forty-five (45) consecutive Working Days of the commencement of the Work as specified in D11.
- 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 re-inspected.
- 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 June 6, 2012.
- 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 re-inspected.
- 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 five hundred dollars (\$500) 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 bi-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 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).

**MEASUREMENT AND PAYMENT**

**D17. INVOICES**

D17.1 Further to C12, the Contractor shall submit monthly invoices for all orders delivered during the previous month to:

The City of Winnipeg  
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)

D17.2 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 goods delivered;
- (e) the amount payable with GST and MRST shown as separate amounts; and
- (f) the Contractor's GST registration number.

D17.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D17.4 Bids Submissions must be submitted to the address in B7.5.

**D18. PAYMENT**

D18.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

**WARRANTY**

**D19. WARRANTY**

D19.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter, except where longer warranty periods are specified in the respective Specification sections, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

D19.1.1 For the purpose of Performance Security, the warranty period shall be one (1) year.

D19.2 Notwithstanding C13.2, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if 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.

D19.2.1 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 D9)

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. 706-2011

CONSTRUCTION OF ST. NORBERT GATEWAY SIGN STRUCTURES

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 D9)

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

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 706-2011  
CONSTRUCTION OF ST. NORBERT GATEWAY SIGN STRUCTURES

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 (1993 Revision), International Chamber of Commerce Publication Number 500.

\_\_\_\_\_  
(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 Drawings are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
L-1.0	Scope of Work
L-2.0	North Site - Layout
L-3.0	South Site - Layout
L-4.0	Details
S-1	Plan, Section, Elevations and Detail
RS-1	Revised South Side Footing

#### E2. LOCATION OF WORK

- E2.1 Work is located in the two locations within the median of Pembina Highway in St. Norbert. Refer to the Drawing L-1.0 for more detail.

#### E3. LAYOUT OF WORK

- E3.1 Further to CW 1130, Paragraph 3.15 - Stakes and Marks, the Contractor shall set all necessary control lines, benchmarks, survey elevation stakes and layout in consultation with the Contract Administrator as required.

#### E4. PEDESTRIAN AND TRAFFIC CONTROL

- E4.1 General Description
- E4.1.1 This Specification shall supplement Specification CW 1130 and shall cover the supply, installation, maintenance, and removal of temporary traffic and pedestrian control.
- E4.1.2 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 things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.
- E4.2 Materials
- E4.2.1 General

- .1 All barricades, signs, flashers, and other equipment shall be in accordance with the "Manual of Temporary Control in Work Areas on City Streets."

E4.2.2 Snow Fence

- .1 Plastic netting, UV stabilized, high density polyethylene, international orange colour, 1.22 m height, complete with steel stakes to suit size.

E4.3 Construction Methods

E4.3.1 General

- .1 Traffic control shall be provided and staged in accordance with the "Manual of Temporary Traffic control and Work Areas on City Streets" and this Specification. No more than two (2) blocks are to be under construction at one time, unless otherwise approved by the Contract Administrator.
- .2 The Contractor will be responsible for the placement of all required signing and barricades, for traffic control in the construction area.

E4.3.2 Snow Fencing

- .1 Erect snow fencing surrounding the areas under construction and any excavations deeper than 500 mm.
- .2 Snow fencing shall be placed so as to present no hazard to vehicles or pedestrians and shall be kept securely fastened and neat in appearance at all times.

E4.4 Quality Control

E4.4.1 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. 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. The Contract Administrator reserves the right to reject any materials or works which are not in accordance with the requirements of this Specification. The Contractor shall maintain all traffic control as specified herein.

E4.4.2 If, in the opinion of the Contract Administrator, the traffic control is not in accordance with this Specification, the Work in the affected area shall be stopped and shall not resume until such time as the traffic control deficiencies are corrected to the satisfaction of the Contract Administrator. No contract time extensions will be granted as a result of lost time due to work stoppages because of inadequate traffic control by Contractor.

**E5. SITEWORK DEMOLITION AND REMOVALS**

E5.1 General Description

E5.1.1 This Specification shall supplement CW 3010, CW 3110, CW 3235, and CW 3240 and shall cover the requirements for demolition, salvage, removal and disposal wholly or in part of various items designated to be removed or partially removed and for backfilling resulting trenches, holes and pits.

E5.1.2 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 things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.

E5.2 Equipment

E5.2.1 All equipment shall be of a type approved by the Contract Administrator and shall be kept in good working order.

E5.2.2 The size, weight, and destructive capabilities of the equipment shall be matched to the type of removal to be done.

### E5.3 Construction Methods

#### E5.3.1 Scope of Work

- .1 The Work under this Specification shall include the following items as shown within the limit of Work on the Drawings or otherwise directed by the Contract Administrator:
  - (a) Removal and disposal of turf and subgrade material (granular and clay);;
  - (b) Removal and disposal of sections of existing monolithic concrete curb (granular base to remain).

#### E5.3.2 Fees and Permits

- .1 The Contractor shall obtain and pay for all licenses and permits necessary for the demolition work.
- .2 The Contractor shall comply with all Municipal, Provincial, and Federal Government regulations relating to the demolition of structures.

#### E5.3.3 Safety Precautions

- .1 The Contractor shall provide flagmen, barricades, railings, and whenever necessary, warning signs at excavation holes, plywood access ramps and /or other construction necessary to secure the safety of workers, the public, and personnel alike and shall comply with all Provincial Statutes applicable to the Work of this nature. The Contractor shall provide all other protective measures as may be required by any law in force in Manitoba.

#### E5.3.4 Protection of Existing Structures

- .1 Protect existing items designated to remain and materials designated for salvage. In event of damage to such items, immediately replace or make repairs to approval of the City and at no cost to the City.

#### E5.3.5 Preparation of Site

- .1 Inspect Site and verify with Contract Administrator items designated for removal, disposal, salvage and items to remain.
- .2 Locate and protect utility lines. Preserve in operating condition active utilities traversing site.
- .3 **Notify utility companies before starting demolition. Utilities to provide clearance before any excavation is done.**
- .4 **Notify Geomatics Service Branch at 986-4826 to obtain clearance and mark survey infrastructure minimum of 72 hours before any excavation.**

#### E5.3.6 Removals

- .1 Remove items as indicated on the Drawings and as directed by the Contract Administrator. Do not disturb adjacent items designated to remain in place.
- .2 Remove monolithic curbs in accordance with CW 3235.
- .3 In removal of pavements:
  - (a) monolithic curbs designated for replacement shall be removed to the nearest control or construction joint;
  - (b) square up adjacent surface to remain in place by saw-cutting or other method approved by Contract Administrator;
  - (c) protect adjacent joints and load transfer devices; and
  - (d) protect underlying granular materials.

#### E5.3.7 Disposal of Materials

- .1 The Contractor shall promptly dispose of materials not designated for salvage or re-use in Work, off-site.
- .2 Trim disposal areas to approval of Contract Administrator.



- E5.3.8 Backfill
  - .1 Backfill in areas as indicated in accordance with Excavation Bedding and Backfill - CW 2030.
- E5.3.9 Restoration
  - .1 Restore areas and existing works outside areas of demolition to match condition of adjacent undisturbed areas.
- E5.3.10 Site Cleanup
  - .1 Upon completion of Work, remove debris, trim surfaces and leave Work Site clean.

## **E6. CONCRETE SAFETY CURB**

- E6.1 Description
  - E6.1.1 All Work in this section shall be to City of Winnipeg Specification CW 3240 Renewal of Existing Curbs.
- E6.2 Construction Methods
  - E6.2.1 Verify dimensions and layout prior to construction.
  - E6.2.2 Meet existing grades and slopes unless otherwise indicated on the Drawings. Notify the Contract Administrator where this requirement will not result in positive drainage.
  - E6.2.3 Provide flared transition between existing monolithic splash strip curb and new safety curb.

## **E7. CAST-IN-PLACE CONCRETE**

- E7.1 Description
  - E7.1.1 Refer to Structural Drawings for Specifications.

## **E8. LIMESTONE MASONRY**

- E8.1 Description
  - E8.1.1 Supply and installation of limestone veneer over concrete foundation.
  - E8.1.2 References
    - .1 CSA A179–M1976 Mortar and Grout for Unit Masonry.=
    - .2 CAN3–A371–M84 Masonry Construction for Buildings
  - E8.1.3 Samples
  - E8.1.4 Submit samples of stone and grout colour for approval. Approved stone sample may be used in the Work.

- E8.1.5 Product, Delivery, Storage and Handling
- .1 Deliver materials to job site in dry condition.
  - .2 Keep materials dry until use.
  - .3 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.
- E8.1.6 Cold Weather Requirements
- .1 Supplement Clause 5.15.2 of CAN3–A371 with following requirements: Maintain temperature of mortar between 5°C and 50°C until cured.
- E8.1.7 Hot Weather Requirements
- .1 Protect freshly laid masonry from drying too rapidly, by means of waterproof, non–staining coverings.
- E8.1.8 Protection
- .1 Keep masonry dry using waterproof, non–staining coverings that extend over walls and down sides sufficient to protect walls from wind-driven rain, until masonry work is completed and protected by flashings or other permanent construction.
  - .2 Protect masonry and other work from marking and other damage.
  - .3 Protect completed work from mortar droppings. Use non–staining coverings.
  - .4 Provide temporary bracing of masonry work during and after erection until permanent lateral support is in place.
- E8.2 Materials
- E8.2.1 General
- .1 Use name brands of material and of aggregate for entire project
- E8.2.2 Mortar
- .1 Mortar for stonework: Type N based on Proportion specifications. Colour to match limestone.
- E8.3 Construction Methods
- E8.3.1 Workmanship
- .1 Do masonry work in accordance with CAN3–A371 except where specified otherwise.
  - .2 Build masonry plumb, level, and true to line, with vertical joints in alignment
  - .3 Layout coursing and bond to achieve correct coursing heights, and continuity of bond above and below openings, with minimum of cutting.
- E8.3.2 Tolerances
- .1 Tolerances in notes to Clause 5.3 of CAN3–A371 apply
- E8.3.3 Exposed Masonry
- .1 Remove chipped, cracked, and otherwise damaged units in exposed masonry and replace with undamaged units
  - .2 Lay stone after mortar has set sufficiently to support weight.
  - .3 Remove mortar droppings and splashings from face of stone before mortar is set. Sponge stone free of mortar along joints as work progresses.
- E8.3.4 Jointing
- .1 Strike flush all joints.
- E8.3.5 Cutting
- .1 Make cuts straight, clean, and free from uneven edges
- E8.3.6 Testing
- .1 Inspection and testing will be carried out by Testing Laboratory designated by the

Contract Administrator.

- .1 Cost of testing will be paid by Contractor.

## **E9. MISCELLANEOUS METALS**

### **E9.1 Description**

E9.1.1 Work includes fabrication of metal supports for timber sign wall. Refer to Section E11 for Aluminum sign plates.

### **E9.1.2 References**

- .1 ASTM A53/A53M-[02], Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
- .2 ASTM A307-[02], Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
- .3 CAN/CGSB-1.40-[97], Anti-corrosive Structural Steel Alkyd Primer.
- .4 CAN/CGSB-1.181-[92], Ready-Mixed, Organic Zinc-Rich Coating.
- .5 CAN/CSA-G40.20/G40.21-[98], General Requirements for Rolled or Welded Structural Quality Steel.
- .6 CAN/CSA-G164-[M92(R1998)], Hot Dip Galvanizing of Irregularly Shaped Articles.
- .7 CAN/CSA-S16.1-[01], Limit States Design of Steel Structures.
- .8 CSA W48-[01], Filler Metals and Allied Materials for Metal Arc Welding (Developed in co-operation with the Canadian Welding Bureau).
- .9 CSA W59, Welded Steel Construction (Metal Arc Welding) (Imperial Version).

### **E9.1.3 Submittals**

- .1 Product Data:
  - .1 Submit manufacturer's printed product literature, specifications and data sheets.
- .2 Shop Drawings
  - .1 Submit shop drawings for fabricated elements, indicating materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.
- .2 Quality Assurance
  - .1 Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
  - .2 Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements.

### **E9.1.4 Delivery, Storage and Handling**

- .1 Deliver, store, handle and protect materials
- .2 Cover exposed stainless steel surfaces with pressure sensitive heavy protection paper or apply strippable plastic coating, before shipping to job site.
- .3 Leave protective covering in place until final cleaning of building. Provide instructions for removal of protective covering.

### **E9.2 Materials**

- .1 Steel sections and plates: to CAN/CSA-G40.20/G40.21, Grade 300W.
- .2 Welding materials: to CSA W59.
- .3 Welding electrodes: to CSA W48 Series.
- .4 Bolts and anchor bolts: to ASTM A307.

### **E9.3 Construction Methods**

- E9.3.1 Fabricate work square, true, straight and accurate to required size, with joints closely fitted and properly secured.
- E9.3.2 Where possible, fit and shop assemble work, ready for erection.
- E9.3.3 Do welding work in accordance with CSA W59 unless specified otherwise. Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.
- E9.3.4 Hot dip galvanize after fabrication. No welding, cutting or boring is permitted after galvanizing.
- E9.3.5 Finishes
- .1 Galvanizing: hot dipped galvanizing with zinc coating 600g/m<sup>2</sup> to CAN/CSA-G164.
- E9.3.6 Installation
- .1 Erect metalwork square, plumb, straight, and true, accurately fitted, with tight joints and intersections.
  - .2 Provide suitable means of anchorage acceptable to such as dowels, anchor clips, bar anchors, expansion bolts and shields, and toggles.
  - .3 Exposed fastening devices shall be tamper resistant, match finish and be compatible with material through which they pass.
  - .4 Make field connections with bolts to CAN/CSA-S16.1, or weld.
  - .5 Hand items over for casting into concrete or building into masonry to appropriate trades together with setting templates. Coordinate.
- E9.3.7 Cleaning
- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
  - .2 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

## **E10. SITE CARPENTRY**

### **E10.1 Description**

- E10.1.1 Work includes construction of salvaged oak timber sign backing and pressure treated wood planter edging.
- E10.1.2 Quality Assurance
- .1 Carpentry shall be performed by trained and qualified craftspeople with demonstrable experience sourcing and working with reclaimed timber. Acceptable subcontractor: WoodAnchor, 3375 Waverley Street Winnipeg, R3V 0B2, phone (204) 261-1913.
  - .2 Identify lumber by official grade mark continuing symbol of grading agency, mill number or name, grade of lumber, species or species grouping or combination designation, rules under which grade and conditions of seasoning at time of manufacture.
  - .2 For products treated with preservative by pressure impregnation, submit following information certified by authorized signing officer of treatment plant:
    - .1 Information listed in AWPA.M2 and revisions specified in CAN/CSA-080 Series, Supplementary Requirement to AWPA Standard M2 applicable to specified treatment.
    - .2 Moisture content after drying following treatment with water-borne preservative.
    - .3 Acceptable types of paint, stain and clear finishes that may be used over treated materials to be finished after treatment.

### **E10.1.3 Environmental Protection**

- .1 Collect and remove from site all waste pieces and sawdust from pressure treated wood materials.

## E10.2 Materials

- E10.2.1 Oak timbers (for sign): salvaged or reclaimed source, unfinished common white or burr oak, 'rustic' grade, or approved alternate. Surfaces should appear weathered.
- E10.2.2 Pressure treated timbers (for planter edging): to CSA 080, pressure treated pine or fir to National Lumber Grades Authority, select grade 2 and better, all dried to a maximum moisture content of 20% prior to treating. Non-incised, ACQ treatment to minimum retention of 4.0 kg/m<sup>3</sup> for above ground use and 6.4 kg/m<sup>3</sup> for ground contact.
- E10.2.3 All wood to be free of defects, any warped, checked or bent materials will be rejected.
- E10.2.4 Hardware: bolts, nuts, washers, lag screws, to be hot dipped galvanized, sizes to suit application.
- E10.2.5 Preservative: clear type to CSA080

## E10.3 Construction Methods

- E10.3.1 Obtain Contract Administrator's approval of rough grades and mounting surfaces prior to construction.
- E10.3.2 Handling and Use of Treated Lumber
- .1 Handle and use treated material in a manner which will avoid damage or field fabrication causing alteration in original treatment.
  - .2 Treat in field, cuts and damages to surface of treated material with an appropriate, clear preservative as described in CSA 080. Ensure that damaged areas such as abrasions, nail and spike holes, are thoroughly saturated with field treatment solutions as per CSA 080.
- E10.3.3 Workmanship
- .1 Construct all work according to details, using adequate fastening methods to ensure solid, durable finished work suitable for the purpose intended.
  - .2 Do all nailing and fastening neatly, evenly and thoroughly.
  - .3 Install all members true to line, levels and elevations. Set plumb and space uniformly.

## **E11. RETROREFLECTIVE ALUMINUM SIGN PLATES**

### E11.1 Description

- E11.1.1 This Specification shall cover the supply and installation of sign plates built up from aluminum sign stock, retroreflective decals, and laser-cut aluminum grillework.
- E11.1.2 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 things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified.

### E11.2 Materials

#### E11.2.1 Aluminum Sign Stock

- .1 Sign grade aluminum 5052 H32 1/8" (3mm) thick, or approved alternate. Surface shall be etched and dried to accept reflective sheeting. Remove all burrs and sharp edges. Provide mounting holes in locations indicated on the Drawings.

#### E11.2.2 Reflective Sheeting

- .1 3M Brand Scotchlite Series 3200 Engineering grade Reflective Sheeting, or approved alternate, complete with permanent pressure sensitive adhesive backing (Sheeting colour - 3290 White). Sheeting to comply with ASTM D4956-90.

#### E11.2.3 Fasteners

- .1 Approved tamper resistant stainless steel Type 316.

#### E11.2.4 Printing Inks

- .1 Digital or silkscreen printing are acceptable. Inks to be matched UV stable, waterproof transparent inks, 3M Scotchlite 700 Series enamel-based ink system or approved equal. Inks shall be compatible to comply with reflective sheeting manufacturer's warranty requirements.
- .2 Alternate methods to achieve retroreflective signs with accurate colour matching may be proposed.

#### E11.2.5 Artwork

- .1 Artwork to be provided in digital (EPS) format by the Contract Administrator. A full colour hard copy of the artwork will be provided on award of Contract.
- .2 This artwork shall not be reproduced in any other form or in excess of the amount contracted for, except by written approval of the Contract Administrator.

### E11.3 Construction Methods

#### E11.3.1 Workmanship

- .1 Fabrication, printing and application of sheeting shall be performed by trained and qualified workers with a minimum of 5 years experience, under controlled conditions. Acceptable supplier: Signex Manufacturing Inc., 986 Lorimer Blvd. Winnipeg, R3P 0Z8, Phone (204) 284-3332.
- .2 In accordance with ASTM D4956-90, ink transparency and retroreflectivity shall be such that signs appear at night as they appear in daylight.

#### E11.3.2 Aluminum Grille

E11.3.3 Aluminum grille over retroreflective sign may be CNC cut with plasma, water, laser, or approved alternate. Digital template to be provided by the Contract Administrator in .DWG or EPS format. Remove all burs and ease sharp edges.

#### E11.3.4 Colour Matching

- .1 Ink colours applied to a reflective surface shall match the samples provided by the Contract Administrator to the satisfaction of the Contract Administrator.

#### E11.3.5 Colour Schedule

- .1 Contractor shall submit colour samples on reflective sheeting for approval prior to commencing screen printing.

#### E11.3.6 Registration

- .1 The Contractor shall note that transparent inks are specified for this Work, and therefore accurate trapping settings and registration of all colours are critical to the appearance of the signs. Any sign that shows gaps between colour areas will be rejected.

#### E11.3.7 Surface Preparation

- .1 Ensure sign blades have been properly deburred, degreased, etched and all edges have been eased to accept reflective sheeting decals in accordance with decal manufacturer's recommendations.

#### E11.3.8 Application of Sheeting

- .1 Apply sheeting in accordance with manufacturer's written specifications. Decals shall be centred precisely on base plate. Trim sheeting to form clean, smooth edge along perimeter of base plates.

#### E11.3.9 Sample

- .1 The Contractor shall provide one full scale colour sample of the custom street sign blade to the Contract Administrator to ensure compliance with the Specifications and Drawings, and shall obtain written approval from the Contract Administrator prior to manufacture of full order. Sample must use specified inks and be printed on specified retroreflective sheeting.
- .2 Alternate proofing methods may be proposed by the Contractor, subject to approval by the Contract Administrator.

#### E11.3.10 Assembly

- .1 Layers shall be held together with approved stainless steel fasteners. Provide neoprene washers where galvanic reactions warrant.

#### E11.3.11 Installation

- .1 Fix sign plate assemblies to timber backing using approved stainless steel hardware and spacers.
- .2 Ensure layout and sign orientation is in accordance with the Drawings.

#### E11.3.12 Warranty

- .1 If, during the first five (5) years following installation of signs, under normal use as designed, any such sign fades to the extent that it is not effective for its intended purpose when viewed at normal viewing distances and speeds, the Contractor will remove the defective sign and install a new duplicate sign in exchange for the original at no cost to the City.
- .2 If, during the first ten (10) years following installation of signs, under normal use as designed, any such sign's decal integrity shows substantial peeling, cracking, flaking, or splitting, the Contractor will remove the defective sign and install a new duplicate sign in exchange for the original at no cost to the City.
- .3 Damage due to improper use, accidents, negligence, structure settlement, chemical damage, severe weather, improper repairs by others or vandalism will not be subject to warranty repair.

### **E12. PLANTING MEDIUM**

#### E12.1 General Description

- E12.1.1 This Specification shall cover the supply and installation of planting medium in planting beds.

#### E12.2 Protection

- E12.2.1 Protect elements surrounding the Work of this section from damage or disfiguration.
- E12.2.2 Protect landscaping and other features remaining as final Work.

#### E12.3 Source Quality Control

- E12.3.1 Inform Contract Administrator of proposed source of materials to be supplied and provide sample for review by Contract Administrator prior to installation.
- E12.3.2 Test topsoil for clay, sand and silt, NPK, Mg, soluble salt content, pH value, growth inhibitors and soil sterilants.

#### E12.4 Submittals

- E12.4.1 Submit 0.5 kg sample of topsoil to National Testing Laboratory or approved alternate and indicate present use and intended use. Prepare and ship sample in accordance with provincial regulations and testing laboratory requirements.
- E12.4.2 Submit two (2) copies of soil analysis and recommendations for corrections to Contract Administrator.
- E12.5 Delivery and Storage
- E12.5.1 Deliver and store fertilizer in waterproof bags accompanied in writing by weight, analysis and name of manufacturer.
- E12.6 Materials
- E12.6.1 Planting Medium for Trees: In accordance with CW 3540-R4, for topsoil, except organic matter shall be in the range of 5 to 10%.
- E12.6.2 Planting Medium for Perennial Beds: In accordance with C3540 for topsoil.
- E12.6.3 Fertilizer: synthetic slow release starter fertilizer with a N-P-K analysis of 12:36:15 ratio at a rate of 4 kg/100 m<sup>2</sup> (8 lb./100 sq.ft.).
- E12.6.4 Peatmoss: derived from partially decomposed fibrous or cellular stems and leaves of species of sphagnum mosses. Elastic and homogeneous, brown in colour. Free of wood and deleterious material that could prohibit growth. Shredded particle minimum size: 5 mm.
- E12.6.5 Sand: clean, hard, fine sand, well washed and free of impurities, chemical or organic matter.
- E12.6.6 Wood Mulch: shredded wood mulch, varying in size from 25 to 125 mm in length, uniform in colour and texture, free of CCA or creosote. Natural colour. Provide sample for approval prior to installation.
- E12.7 Construction Method
- E12.7.1 Stake out layout of beds and edging and obtain approval from Contract Administrator prior to excavation.
- E12.7.2 Excavation
- .1 Excavate shrub beds at locations indicated on the Drawings using equipment appropriate to the purpose and location. Dispose of all rock, clay soils and other deleterious materials off site.
  - .2 Coordinate work with other trades to optimize timing and avoid damage to prior construction.
  - .3 Protect bottom of excavations against freezing.
  - .4 Remove water which enters excavations prior to planting. Ensure source of water is not ground water or from a broken water pipe.
- E12.7.3 Planting Medium Placement
- .1 Place growing medium in uniform layers over approved, scarified unfrozen sub-grade, to the depth indicated on the Drawings.
  - .2 Eliminate rough spots and low areas. Prepare a loose, friable bed, boot firm and level.
- E12.7.4 Soil Amendments
- .1 Apply soil amendments at rate determined and recommended from planting medium sample test.
  - .2 Mix soil amendment well into full depth of planting medium prior to application of fertilizer.
- E12.7.5 Finish Grading



- .1 Fine grade entire soil area to elevations as indicated on the Drawings. Eliminate rough spots and low areas and prepare a loose, friable bed, with a smooth, uniform surface, firm against deep foot printing, and a fine loose texture.

#### E12.7.6 Mulching

- .1 Obtain approval of planting before mulching material is applied. Loosen soil in planting beds and pits and remove debris and weeds. Spread approved mulch to minimum thickness of 75 mm or as indicated on Drawing. Mulch material susceptible to blowing must be moistened and mixed with planting medium before applying.
- .2 When mulching is placed in fall, place immediately after shrub bed preparation is complete. When mulch is placed in spring, wait until soil has warmed up.

#### E12.7.7 Surplus Material

- .1 Dispose of unused planting medium off site in accordance with CW 1130.

#### E12.7.8 Site Cleanup

- .1 All sidewalks, streets, approaches, driveways and properties near the Work Site shall be kept clean at all times by the Contractor.
- .2 Upon completion of the project, the Contractor shall immediately remove all excess material and debris from the Work Site.