



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 238-2014

THE SUPPLY AND DELIVERY OF STRAIGHT SHAFT POLES

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. Enquiries	1
B4. Confidentiality	1
B5. Addenda	1
B6. Substitutes	2
B7. Bid Submission	3
B8. Bid	3
B9. Prices	4
B10. Qualification	5
B11. Opening of Bids and Release of Information	6
B12. Irrevocable Bid	6
B13. Withdrawal of Bids	6
B14. Evaluation of Bids	7
B15. Award of Contract	7

PART C - GENERAL CONDITIONS

C0. General Conditions	1
------------------------	---

PART D - SUPPLEMENTAL CONDITIONS

General

D1. General Conditions	1
D2. Scope of Work	1
D3. Definitions	1
D4. Contract Administrator	1
D5. Ownership of Information, Confidentiality and Non Disclosure	1
D6. Returned goods	2
D7. Notices	2

Submissions

D8. Authority to Carry on Business	2
------------------------------------	---

Schedule of Work

D9. Commencement	3
D10. Delivery	3
D11. Liquidated Damages	3
D12. Orders	4
D13. Records	4

Measurement and Payment

D14. Invoices	4
D15. Payment	4
D16. Purchasing Card	5

Warranty

D17. Warranty	5
---------------	---

PART E - SPECIFICATIONS

General

E1. Applicable Specifications and Drawings	1
E2. Goods	2
E3. General	2
E4. Materials	2

E5. Components	3
E6. Construction Methods	5
E7. Quality Assurance	8

PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 THE SUPPLY AND DELIVERY OF STRAIGHT SHAFT POLES

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, March 28, 2014.

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

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

B3. ENQUIRIES

B3.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.1.

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

B3.3 If the Bidder is unsure of the meaning or intent of any provision therein, the Bidder should request clarification as to the meaning or intent prior to the Submission Deadline.

B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B3.5 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B3.6 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

B4. CONFIDENTIALITY

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

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

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

B5. ADDENDA

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

- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>
- B5.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 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 materials, equipment, methods and products 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 seven (7) 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 material, equipment, method or product 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 Contract;
 - (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 Contract.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, 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/she wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.

- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B6.9 No later claim by the Contractor for an addition to the price(s) 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 SUBMISSION

- 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.

- B7.9 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/her own name, his/her name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 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/her own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
 - (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 Prices on Form B: Prices shall include:
- (a) duty;
 - (b) freight and cartage;
 - (c) Provincial and Federal taxes [except the Goods and Services Tax (GST) and Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable] and all charges governmental or otherwise paid;
 - (d) profit and all compensation which shall be due to the Contractor for the Work and all risks and contingencies connected therewith.
- B9.1.2 Prices on Form B: Prices shall not include Environmental Handling Charges (EHC) or fees, which shall be extra where applicable.
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

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, or if the Bidder does not carry on business in Manitoba, in the jurisdiction where the Bidder does carry on business; 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); and
- (d) be a Regular Member of the American Galvanizers Association, Inc.; and
- (e) be a fully approved plant by CWB to the requirements of CSA W47.1 Division 2.1 for welding of steel structures; and
- (f) have demonstrated the ability to supply and deliver work(s) with quality control and assurance standards according to past contracted delivery requirements and timelines; and
- (g) have demonstrated the resources, facilities, and capabilities to quickly and efficiently effect repairs or remediation to the satisfaction of the Contract Administrators, or other customers, on issues with Work(s) on previous contract(s) to meet the specifications and requirements of the supplied Work, regardless of time of year, or environmental conditions.

B10.4 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.

B10.4.1 The Bidder, on the request of the Contract Administrator, shall provide representative samples of the goods offered.

B10.4.2 Unsolicited samples will be returned at Bidders expense.

B10.5 Further to B10.4.1, the Bidder shall provide, on the request of the Contract Administrator, one (1) sample unit, and/or components of each item as described in E2 for detailed inspection and approval. Failure to supply the sample unit(s) within thirty (30) business days may result in a failure to demonstrate that the Contractor is responsible and qualified to perform this contract.

B10.6 Should the Bidder not submit a sample that meets the approval of the Contract Administrator, the bid may be determined to be non-responsive.

- (a) The Bidder shall be responsible for all freight costs associated with the delivery and return of samples.

B10.7 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 or evaluated prices) 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>

B11.3 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/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B13.1.1 Notwithstanding C21, 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/her Bid after the Submission Deadline but before his/her 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 therefrom (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 Submission 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/her Bid or in other information required to be submitted, that he/she is responsible and qualified.
- B14.4 Further to B14.1(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.
- B14.5 This Contract will be awarded as a whole.

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/her Bid upon written request to the Contract Administrator.
- B15.4 Notwithstanding C4 and Paragraph 6 of Form A:Bid, the City will issue a purchase order to the successful Bidder in lieu of the execution of a Contract.
- B15.5 The Contract Documents, as defined in C1.1(n)(ii), in their entirety shall be deemed to be incorporated in and to form a part of the purchase order notwithstanding that they are not necessarily attached to or accompany said purchase order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for the Supply of Goods* (Revision 2008 05 26) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for the Supply of Goods* 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
- 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 Supply of Goods*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of the supply and delivery of straight shaft poles for the period from the date of award until March 31, 2015, with the option of four (4) mutually agreed upon one (1) year extensions.

D2.1.1 The City may negotiate the extension option with the Contractor within sixty (60) Calendar Days prior to the expiry date of the Contract. The City shall incur no liability to the Contractor as a result of such negotiations.

D2.1.2 Changes resulting from such negotiations shall become effective on April 1st of the respective year. Changes to the Contract shall not be implemented by the Contractor without written approval by the Contract Administrator.

D2.2 The Work shall be done on an "as required" basis during the term of the Contract.

D2.2.1 The type and quantity of Work to be performed under this Contract shall be as authorized from time to time by the Contract Administrator and/or Users.

D2.2.2 Notwithstanding C7, the City shall have no obligation under the Contract to purchase any quantity of any item in excess of its actual operational requirements.

D3. DEFINITIONS

D3.1 When used in this Bid Opportunity:

- (a) "**AASHTO**" means American Association of State Highway Transportation Officials;
- (b) "**ASME**" means American Society of Mechanical Engineers;
- (c) "**ASTM**" means American Society for Testing and Materials;
- (d) "**CSA**" means Canadian Standards Association;
- (e) "**CWB**" means Canadian Welding Bureau;
- (f) "**SSPC**" means The Society for Protective Coatings.

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:

Jordan V. Morgan, C.E.T.
Traffic Signals Maintenance Analyst
Telephone No.: 204- 986-4191

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. RETURNED GOODS

- D6.1 Further to C.7 and C.11, The Contract Administrator or his/her designate shall inform the Contractor of the item(s) being returned and the reason for the return. The Contractor shall provide the Contract Administrator with Return Material Authorization (RMA) including shipping instructions, within five (5) Calendar Days of the request.
- D6.1.1 The Contractor shall be responsible for all transportation charges on returned goods and further to C.8 the goods will be held at the Contractor's risk pending instruction.
- D6.2 Further to D6.1(above) the RMA shall include the following information, as a minimum:
- (a) Company name, if different than Contractor, and ship to addresses;
 - (b) Written authorization for the return and for a collect shipment;
 - (c) Preference of carrier / shipping method, a contact person with either a local Winnipeg telephone number or a toll-free telephone number;
 - (d) A contact person, responsible for the returned goods, with a toll-free telephone number.
- D6.3 The Contract Administrator shall provide, as a minimum:
- (a) The City department returning the goods, including an address and contact information for pick up;
 - (b) The City account number; if applicable;
 - (c) The City of Winnipeg's Department and address;
 - (d) Two (2) copies of the written authorization / RMA, one (1) copy on the outside and (1) one within the package;
 - (e) Total number of packages, weight and dimensions.

D7. NOTICES

- D7.1 Notwithstanding C21.3, 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

SUBMISSIONS

D8. AUTHORITY TO CARRY ON BUSINESS

- D8.1 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.

SCHEDULE OF WORK

D9. COMMENCEMENT

- D9.1 The Contractor shall not commence any Work until he/she is in receipt of a notice of award from the City authorizing the commencement of the Work.
- D9.2 The Contractor shall not commence any Work until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D8;
 - (ii) shop drawings for all manufactured components
 - (iii) welding procedures for all welded components.
 - (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.
 - (c) mill test certificates have been received and approved by the Contract Administrator for all steel utilized.
 - (d) a purchase order has been received from The City of Winnipeg Public Works Stores personnel noting quantity of material required.

D10. DELIVERY

- D10.1 Goods shall be delivered on an "as required" basis during the term of the Contract, f.o.b. destination, freight prepaid, to:
- Public Works Stores
1277 Pacific Avenue
Winnipeg, MB
- D10.1.1 Goods shall be delivered within sixty (60) Calendar Day(s) of the placing of an order, unless otherwise allowed by the User at the time of ordering.
- D10.2 The Contractor shall confirm each delivery with the Contract Administrator or his/her designate, at least two (2) Business Days before delivery.
- D10.3 Good shall be delivered between 8:30 a.m. and 2:30 p.m. on Business Days.
- D10.4 If required, a bill of lading shall be prepared by the Contractor and clearly identify all components being delivered.
- D10.5 The Contractor shall off load goods as directed at the delivery location. If the goods cannot be unloaded by an 8000 lb capacity forklift / lift truck the Contractor shall supply all necessary equipment and personnel to offload the goods as directed.
- D10.6 The traffic signal poles shall be shipped in a suitable manner to avoid damage during delivery, grouped by structure type, and each group clearly marked.
- D10.7 Components shall be inspected by the Contract Administrator or designated representative upon receipt.
- ### **D11. LIQUIDATED DAMAGES**
- D11.1 If the Contractor fails to achieve delivery of the goods within the time specified in D9.1. Delivery the Contractor shall pay the City seven hundred eight dollars (\$708) per Calendar Day for each and every Calendar Day until the goods have been delivered.
- D11.2 The amount specified for liquidated damages in D11.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve delivery by the day fixed herein for same.

D11.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D12. ORDERS

D12.1 The Contractor shall provide a local Winnipeg telephone number or a toll-free telephone number at which orders for delivery may be placed.

D12.2 It is anticipated the City will place orders for no less than 10 pieces, applicable taxes to be extra.

D13. RECORDS

D13.1 The Contractor shall keep detailed records of the goods supplied under the Contract.

D13.2 The Contractor shall record, as a minimum, for each item listed on Form B: Prices:

- (a) user name(s) and addresses;
- (b) order date(s);
- (c) delivery date(s); and
- (d) description and quantity of goods supplied.

D13.3 The Contractor shall provide the Contract Administrator with a copy of the records for each quarter year within fifteen (15) Calendar Days of a request of the Contract Administrator.

MEASUREMENT AND PAYMENT

D14. INVOICES

D14.1 Further to C10, the Contractor shall submit an invoice for each order delivered 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

D14.2 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, MRST, and any applicable environmental handling charges/fees identified and shown as separate amounts; and
- (f) the Contractor's GST registration number.

D14.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D14.4 Bids Submissions must be submitted to the address in B7.5

D15. PAYMENT

D15.1 Further to C10, payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.

D15.2 Further to C10, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

D16. PURCHASING CARD

D16.1 The Contractor shall allow Users to charge items to their purchasing cards at no extra cost.

D16.2 The Contractor's credit card website/gateway shall have appropriate current Payment Card Industry Data Security standards (PCI DSS) certification, (<https://www.pcisecuritystandards.org/index.shtml>). The credit card gateway shall meet the credit card data security requirements outlined by the Payment Card Industry Security Standards Council (PCI SSC) for service providers and/or software vendors.

WARRANTY

D17. WARRANTY

D17.1 Notwithstanding C11, the warranty period for each item of Work supplied shall begin on the date of successful delivery and expire two (2) years thereafter unless extended pursuant to C11.3, in which case it shall expire when provided for thereunder.

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

E1.1 These Specifications shall apply to the Work.

E1.2 The following are applicable to the Work:

<u>Specification No.</u>	<u>Specification Title</u>
	AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals 2009
ASME B18.2.2	Nuts for General Applications: Machine Screw Nuts, Hex, Square, Hex Flange, and Coupling Nuts (Inch Series)
ASTM A123	Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A143	Standard Practice For Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement
ASTM A325	Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 KSI Minimum Tensile Strength
ASTM B209	Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
ASTM F436	Standard Specification for Hardened Steel Washers
ASTM A563	Standard Specification for Carbon and Alloy Steel Nuts
ASTM F593	Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs
ASTM F2329	Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, And Special Threaded Fasteners
SSPC SP6	Commercial Blast Cleaning
ASTM A780	Standard Practice For Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
CSA G40.21M	General Requirements for Rolled or Welded Structural Quality Steel/ Structural Quality Steel
CSA W47	Certification of Companies for Fusion Welding Of Steel
CSA W48	Filler Metals and Allied Materials for Metal Arc Welding
CSA W59	Welded Steel Construction (Metal Arc Welding)

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
	<i>Excerpts from City of Winnipeg Standard Drawings for Traffic Signal Structures</i>
	238-2014_Drawing_Cover_Sheet_1-R3.pdf
	238-2014_Drawing_Base_Load_Tables_Sheet_2-R2.pdf
	238-2014_Drawing_Attachment_Configurations_Sheet_3-R1.pdf
	238-2014_Drawing_3.05m_(10')_Straight_Pole_Sheet_14-R2.pdf
	238-2014_Drawing_5.49m_(18')_Straight_Pole_Sheet_16-R2.pdf
	238-2014_Drawing_Access_Panel_Details_Sheet_17-R2.pdf

E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B6.

E2. GOODS

E2.1 The Contractor shall supply and deliver traffic signal straight poles in accordance with the requirements hereinafter specified.

E2.2 **Item No.1** – 3.048 m (10') Straight Pole shall consist of:

(a) One (1) 3.048 m (10') Straight Pole including all associated hardware as per Sections E2.3(a)(i) to E7.5 inclusive, and 238-2014_Drawing_3.05m_(10')_Straight_Pole_Sheet_14-R2.pdf dated Feb 24, 2014 and 238-2014_Drawing_Access_Panel_Details_Sheet_17-R2.pdf dated Jan 10, 2014.

(i) Notwithstanding Note 5 on 238-2014_Drawing_Access_Panel_Details_Sheet_17-R2.pdf, this Contract shall include the supply and delivery of non-metallic access panel covers, in accordance with details provided in part E5.2 of this Specification.

E2.3 **Item No.2** – 5.486 m (18') Straight Pole shall consist of:

(a) One (1) 5.486 m (18') Straight Pole including all associated hardware as per Sections E2.3(a)(i) to E7.5 inclusive, and 238-2014_Drawing_5.49m_(18')_Straight_Pole_Sheet_16-R2.pdf dated Feb 24, 2014 and 238-2014_Drawing_Access_Panel_Details_Sheet_17-R2.pdf dated Jan 10, 2014.

(i) Notwithstanding Note 5 on 238-2014_Drawing_Access_Panel_Details_Sheet_17-R2.pdf, this Contract shall include the supply and delivery of non-metallic access panel covers, in accordance with details provided in part E5.2 of this Specification.

E3. GENERAL

E3.1 Description

E3.1.1 The Work covered under this item shall include all operations related to the supply, fabrication, and delivery of new steel traffic signal support structures and associated components including non-metallic access panel covers.

E3.1.2 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 the Work as hereinafter specified.

E3.1.3 All equipment used by the Contractor shall be of a type approved by the Contract Administrator and shall be kept in good working order.

E4. MATERIALS

E4.1 General

E4.1.1 The Contractor shall be responsible for the supply, safe storage, and handling of all materials set forth in this Specification.

E4.1.2 All materials used for fabrication of traffic signal support structures shall be new, previously unused material.

E4.2 Handling and Storage of Materials

E4.2.1 All materials shall be handled in a careful and workmanship-like manner, to the satisfaction of the Contract Administrator.

E4.3 Structural Steel

- E4.3.1 Structural steel for all components of the traffic signal support structures shall be in accordance with CSA Standard G40.21 M (latest edition).
- E4.3.2 The grade supplied shall be in accordance with the grades shown on the drawings.
- E4.3.3 For purposes of hot-dip galvanizing, the silicon content in the steel shall be controlled as follows:
- (a) For monotubular steel shafts, to within 0 to 0.03%, or from 0.15 to 0.22%.
 - (b) For base plates and other miscellaneous steel, below 0.30%.
- E4.3.4 The Contractor is advised that copies of mill test certificates showing the chemical and physical properties of all structural steel to be supplied under this Specification must be supplied to the Contract Administrator and be found acceptable prior to commencement of fabrication.
- E4.3.5 Steel shall not be acceptable unless the mill test certificate states the grade to be in accordance with the grades stated on the drawings. Lower grade steel shall not be acceptable (despite favourable published mill test results). Items fabricated without steel certification shall be rejected.
- E4.3.6 All costs resulting from any changes or due to failure to have submissions reviewed shall be borne by the Contractor.

E4.4 Hot-Dip Galvanizing

- E4.4.1 Hot-dip galvanizing of structural steel shall be in accordance with ASTM A123 (latest edition) for a minimum net retention of 610 g/m².
- E4.4.2 Flange Bolts, Nuts and Washers shall be hot-dip galvanized in accordance with ASTM F2329 (latest edition).

E4.5 Galvanizing Touch-up and Repair

- E4.5.1 Galvanizing repair materials shall meet the requirements of Section E6.8 of this Specification. Zinc paint shall be Zinga or equal as approved by the Contract Administrator.

E4.6 Welding Consumables

- E4.6.1 The selection, supply, storage and maintenance of electrodes and fluxes for all processes shall be according to CSA W59 requirements (latest edition) and CSA W48 (latest edition). Only controlled hydrogen designation electrodes and low hydrogen wire consumables shall be used for the SMAW and flux-cored arc welding processes, respectively.

E5. COMPONENTS

E5.1 Miscellaneous Fasteners

- E5.1.1 Miscellaneous fasteners shall be in accordance with the type and dimensions shown on the drawings.

E5.2 Non-Metallic Access Cover Panel

- E5.2.1 The "non-metal" type access panel cover shall be strong, durable, ultraviolet stabilized, tamper proof and not subject to breakage or deformation under temperatures ranging from -50° C to +50° C.
- E5.2.2 The access panel cover material shall be a homogenous colour throughout. The cover material colour shall be similar to the galvanized pole. Painted covers are not acceptable.
- E5.2.3 The intended function of the handhole cover is to:
- (a) Prevent access to the interior of the handhole when secured with the supplied hex head bolts.

- (b) Prevent/limit the ingress of water, snow, or items.
- (c) Withstand acts of vandalism caused by impact, or prying.
- (d) Provide a service lifetime similar to the pole.
- (e) Must maintain integrity and intended function of the cover when bolts tightly fasten the handhole cover to the pole.

E5.2.4 The access panel cover shall have a smooth and continuous circumferential perimeter flange. When mounted, the flange shall overlap the outside edge of the access panel ring sufficient to prevent driven snow or rain entry into the access panel. The flange shall be located no greater than 1/4 inch (6 mm) from the outside edge of the access panel ring. The flange depth shall be a minimum of 3/4 inch (19 mm) on the left and right sides (greater is preferred) and 7/16 inch (11 mm) on the top and bottom (greater is preferred). Flat covers will be rejected;

E5.2.5 The cover shall have a smooth and continuous internally extruded ring. The ring shall be located between 1/8 inch (3 mm) and 1/4 inch (6 mm) from the inside of the clear opening of the pole's access panel ring. The width and depth of the internal ring extrusion shall be sufficient as to provide rigidity to the cover, to channel rogue moisture away from the terminal strip, and not interfere with the mounting of the access cover. The ring shall have a maximum 5/8 inch (16 mm) width and a maximum depth of 3/8 inch (10 mm) and not less than 1/4 inch (6 mm) depth.

E5.2.6 Any additional extrusions into the pole access opening shall be limited to 3/8 inch (10 mm). Extrusions exterior to the plane of the access panel's opening shall be limited to 3/4 inch (19 mm) and shall be functional.

E5.2.7 The cover shall bear down onto the access panel ring and lay flush against the entire perimeter of the access panel ring when the cover is attached;

E5.2.8 The cover shall be fabricated of material with a minimum thickness of 1/8 inch (3 mm).

E5.2.9 All edges on the cover shall be smooth;

E5.2.10 The cover shall be secured to the access panel by two 3/8 inch (10 mm) diameter by 2.5 inches (63.5 mm) long, fully threaded hexagonal head Type 316 stainless steel bolts (hex head bolts, 9/16 inch across flats).

E5.2.11 The two holes in the cover for the mounting bolts shall be circular, 1/2 inch (13 mm) diameter and centred over the upper and lower bracket mounting holes both vertically and horizontally as shown in the drawings.

E5.3 Cover Identification

- (a) A label identifying the manufacturer and year of manufacture shall be permanently formed or etched into the inside face of the access panel cover with a minimum 10 mm character height. The format is as follows:
- (b) "XX – YR" where "XX" shall be the abbreviation or logo of the Contractor's firm, followed by "dash", followed by "YR" which shall be the last two (2) digits of the year of manufacture
- (c) No other logos or wordings shall be permitted on the exterior faces of the cover.

E5.3.2 The Contractor shall install the access panel covers prior to final delivery

E5.3.3 A sample of the proposed alternate cover shall be provided to the Contract Administrator for inspection prior to approval in accordance with B10.5.

E5.3.4 Handhole Cover Impact Testing: The impact test represents a potential act of vandalism. The impact test involves dropping a pendulum consisting of a 10 lb weight, 6 foot arm, through a 90 degree arc to its lowest vertical resting point. The handhole cover will be cold soaked for 4 hours at - 30 degrees Celsius prior to testing. The 10 lb weight will move through the 6 foot radial arc and impact the centre of the handhole cover face which is affixed to the handhole opening on the signal pole using the supplied hex bolts (as illustrated in Drawings). After being struck one time, the handhole cover will be examined

for deformation or cracking. The sample will be found unacceptable if cracking appears, or deformation occurs that affects the required functionality as per E5.2.3.

E5.4 Access Panel Cover Fasteners

E5.4.1 Hex Bolts for securing the access panel covers shall be in accordance with ASTM F593 Type 316 stainless steel, fully threaded.

E5.4.2 The Tamper Proof Cup Washer shall be in aluminum in accordance with ASTM B209 Grade 3003-H14.

E5.5 Miscellaneous Materials

E5.5.1 Miscellaneous material incidental to this Work shall be as approved by the Contract Administrator.

E6. CONSTRUCTION METHODS

E6.1 General Requirements

E6.1.1 Sufficient reinforced handholes and wiring holes shall be provided for wiring of the structures as shown on the drawings.

E6.2 Shop Drawings

E6.2.1 The Contractor shall submit to the Contract Administrator, shop drawings sealed by a Professional Engineer, registered or licensed to practice in the Province of Manitoba, in triplicate for approval prior to any fabrication. Shop drawings shall be complete and shall include all information such as material specifications, weld sizes, bills of material, welding procedures, design criteria, etc. within one week from award of Contract.

E6.2.2 Approval of shop drawings by the Contract Administrator will be for general agreement only and in no case will the Contractor be relieved of the responsibility for completeness or adequacy of fabrication materials and procedures.

E6.2.3 No fabrication shall commence until shop drawings have been reviewed, approved and returned to the Contractor. All costs resulting from any changes or due to failure to have shop drawings so reviewed shall be borne by the Contractor.

E6.2.4 Shop drawings shall indicate the total weight and center of gravity of each component for lifting and rigging purposes.

E6.3 Structure Identification

E6.3.1 Each signal support structure shall be provided with a raised structure identification number with a welding electrode. The signal support structure identification number shall be placed before hot-dip galvanizing.

E6.3.2 The format of the raised structure identification shall conform to the following format "XX – YR – ST – ###" where:

- (a) "XX" shall be the abbreviation or logo of the Contractor's firm.
- (b) "YR" shall be the last two (2) digits of the year of manufacture.
- (c) "ST" shall be the structure type code as indicated on the drawings.
- (d) "###" shall be a unique item number starting with "001" and proceeding consecutively for each additional component of that type during the year of manufacture.

E6.3.3 Each character of the raised structure identification number shall be approximately 25 mm wide by 40 mm tall, with a 10 mm space between each character. The weld profile shall be a smooth half round bead approximately 2 mm tall by 3 mm wide.

E6.3.4 For straight pole components, the raised structure identification number shall be provided approximately 500 mm from the base plate and located on the same side as the access panel.

E6.4 Fabrication

- E6.4.1 All fabrication shall be carried out in accordance with this Specification and the Contract drawings, as well as AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals - 2009 - 5th Edition, plus all subsequent revisions.
- E6.4.2 Dimensions and fabrication details that control the field matching of parts shall receive careful attention.
- E6.4.3 All portions of the Work shall be neatly finished. Shearing, cutting, clipping, and machining shall be done neatly and accurately. Finished members shall be true to line, free from twists, bends, sharp corners, and edges.
- E6.4.4 Cut edges shall be true and smooth and free from excessive burrs or ragged breaks. Re-entrant cuts shall be avoided wherever possible. If used, they shall be filleted by drilling prior to cutting.
- E6.4.5 All holes shall be free of burrs and rough edges for inner and outer faces.
- E6.4.6 The punching of identification marks on the members will not be allowed.
- E6.4.7 Any damage to members during fabrication shall be drawn to the attention of the Contract Administrator in order that the Contract Administrator may approve remedial measures.

E6.5 Welding

- E6.5.1 Welding of steel structures shall be in accordance with CSA W59, "Welded Steel Construction."
- E6.5.2 All seams shall be continuously welded and free from any slag, splatter and excess weld material. Longitudinal welds shall be a minimum of 60% penetration, except where noted on the drawings, which shall be 100% penetration. All circumferential groove welds shall be 100% penetration with an internal backup strip provided.
- E6.5.3 Welds joining monotubular column elements to base plates shall be unequal leg welds, with the long leg of the weld along the column. The termination of the longer weld leg shall contact the shaft's surface at approximately a 30° angle.
- E6.5.4 All welds shall be ground smooth and flush with the adjacent surface prior to hot-dip galvanizing.

E6.6 Surface Preparation and Cleaning

- E6.6.1 Surface preparation and cleaning of materials prior to hot-dip galvanizing shall be in accordance with SSPC Specification SP6, "Commercial Blast Cleaning," unless otherwise specified herein.
- E6.6.2 The Contractor shall ensure that all exterior surfaces are blast cleaned prior to pickling to achieve the minimum zinc coating mass of 610 g/m². All welding and provision of holes is to be completed prior to surface preparation and cleaning, except where shown on the drawings.
- E6.6.3 The sandblasting and cleaning of signal structures shall be done in the shop.

E6.7 Hot-Dip Galvanizing

- E6.7.1 All exterior surfaces of the structures shall be hot-dip galvanized in accordance with the requirements of this Specification.
- E6.7.2 The hot-dip galvanizing plant shall be a Regular Member of the American Galvanizers Association, Inc.
- E6.7.3 Hot-dip galvanizing of structural steel shall be in accordance with ASTM A123 (latest edition) for a minimum net retention of 610 g/m².
- E6.7.4 The contractor shall safeguard against embrittlement of the fabricated steel in accordance with ASTM A143 (latest edition) "Standard Practice for Safeguarding against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement".

- E6.7.5 Adequate venting and drainage holes shall be provided in enclosed sections for hot-dip galvanizing. The galvanizing facilities shall be consulted regarding the size and location of these holes. Holes shall be provided by drilling not burning. The location and size of all venting and drainage holes shall be shown on the Contractor's shop drawings. All venting and drainage holes for hot-dip galvanizing shall be plugged with non-corroding tapered plugs after the galvanizing process.
- E6.7.6 Prior to fabrication, the dimensional limitations on the size and shape imposed by the galvanizing facilities shall be determined for hot-dip galvanizing the signal structures.
- E6.7.7 The galvanizing coating on outside surfaces of signal structures shall be generally smooth and free of blisters, lumpiness and runs. In particular, the outside surfaces of the bottom 2.5 m of the vertical support members shall have a smooth finish equal to the finish on hot-dipped galvanized handrails.
- E6.7.8 After hot dip galvanizing, all sharp edges and shards of galvanizing material on the exterior of shafts shall be removed. The same standard of care shall apply to all accessible interior surfaces.
- E6.7.9 In addition to the provision of corrosion protection by the galvanized coating, the aesthetic appearance of the structure after hot-dip galvanizing will be a criterion in the acceptance or rejection of the galvanized coating. The galvanized coating on the entire structure shall have a uniform "silver" colour and lustre. Galvanizing with parts of the structure having dull grey coating or streaks or mottled appearance will not be acceptable. If the galvanizing is rejected for aesthetic reasons, the Contractor shall rectify the appearance by applying spray-on molten zinc metallizing with 85/15 zinc/aluminum alloy. The metallizing shall be carried out in the shop before the structure is delivered.
- E6.7.10 The Contractor shall verify the thickness of galvanized coatings as directed by the Contract Administrator and have these readings available for review.
- E6.7.11 All threaded components shall be re-threaded after the structures have been hot-dip galvanized.
- E6.7.12 The structures shall be stored on timber blocking after hot-dip galvanizing.
- E6.7.13 Hot-dip galvanized structures in storage shall be arranged in such a way to allow adequate venting of the bundle and minimize the presence of moisture in contact with the structures.
- E6.8 Hot-Dip Galvanizing Defect Repair
- E6.8.1 In the event that repairs to the galvanizing coating are required, repair materials and practices shall be supplied and performed in accordance with ASTM A780 (latest edition) "Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings".
- E6.8.2 Other defects and contaminants in the galvanizing coating, such as heavy dross protrusions, flux inclusions and ash inclusions shall be grounds for rejection of the galvanizing coating system.
- E6.9 Transportation and Delivery
- E6.9.1 The structures shall be lifted and secured with nylon ropes or other approved methods. Use of steel chains and steel hooks against hot-dip galvanized surfaces will not be permitted. The structure components shall be placed on timber blocking and secured with nylon ropes during their transportation.
- E6.9.2 Cap plates, bolts, and pipe penetration plugs shall be installed hand-tight to applicable components prior to delivery.
- E6.9.3 The access panel cover shall be installed and complete in every respect. All access panel cover fasteners shall be installed hand-tight prior to delivery.
- E6.9.4 The Contractor shall contact the Contract Administrator a minimum of 48 hours prior to delivery to arrange a suitable time.

E7. QUALITY ASSURANCE

E7.1 General

E7.1.1 In addition to the Contractor's own Quality Control testing, all materials, welding procedures and steel fabrication including hot-dip galvanizing shall be inspected and tested for compliance with the Specifications and drawings.

E7.1.2 The Contractor shall hire an independent testing agency certified by the Canadian Welding Bureau to carry out shop fabrication inspection and testing of the coating system before the structures are approved ready for installation. The inspector shall have access to all of the fabricator's normal quality control records for this Contract, specified herein.

E7.2 Inspection and Testing

E7.2.1 Inspection and testing shall include:

- (a) Visual inspection of 100 percent of welds.
- (b) Ultrasonic testing of 100 percent of full penetration sections of longitudinal seam welds and circumferential butt welds.
- (c) Magnetic particle testing of a random 10 percent of partial penetration sections of longitudinal seam welds.
- (d) Ultrasonic testing of 25 percent of base plate welds.
- (e) Inspection of surface preparation prior to shipping for hot-dip galvanizing.
- (f) Inspection of hot-dip galvanizing and coating thickness prior to shipping to City stores.

E7.3 Unacceptable Work

E7.3.1 Welds that are found by any of the inspection and testing methods to be inadequate and unsatisfactory shall be repaired in accordance with CSA W59 and then retested. The cost of the repairs and the cost of the retest shall be paid for by the Contractor.

E7.3.2 Defects in hot-dip galvanizing shall be rectified as directed by the Contract Administrator in accordance with Section E4.5.

E7.3.3 No repair shall be made until agreed to by the Contract Administrator.

E7.4 Reporting

E7.4.1 The independent testing agency shall prepare an inspection report that shall be sent to the Contract Administrator with delivery which includes the following information and features:

- (a) Summary of inspection dates
- (b) Description of items inspected
- (c) Scope of inspections
- (d) Specifications governing inspection
- (e) Description of test methods
- (f) Summary of inspection results
- (g) Photographs representative of inspection findings
 - (i) Signed and sealed by a Level III Canadian Welding Bureau Certified Welding Inspector

E7.5 Quality Control

E7.5.1 General

- (a) All workmanship and all materials furnished and supplied under this Specification are subject to 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 approval that may have been previously given. The Contract Administrator reserves the right to reject any materials or Works that are not in accordance with the requirements of this Specification.

- (b) The Contractor shall be responsible for making a thorough inspection of materials to be supplied under this Contract. All material shall be free of surface imperfections and other defects.