



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**142-2007 BID OPPORTUNITY**

**DISRAELI BRIDGE & OVERPASS – STRUCTURAL STEEL DECK REPAIRS**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 DISRAELI BRIDGE & OVERPASS – STRUCTURAL STEEL DECK REPAIRS

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, March 28, 2007.

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 Branch internet site 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 Branch internet site for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B6. SUBSTITUTES**

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
  - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
  - (c) identify any anticipated cost or time savings that may be associated with the substitute;
  - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
  - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his 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 B15.
- 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.

## **B7. BID COMPONENTS**

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices;

- (c) Form G1: Bid Bond and Agreement to Bond, or  
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or  
a certified cheque or draft;
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.
- B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, may result in the Bid being determined to be non-responsive.
- B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.8 Bids shall be submitted to:  
The City of Winnipeg  
Corporate Finance Department  
Materials Management Branch  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1
- B8. BID**
- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his 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 12 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his 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 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 shall be printed below such signatures.

B8.4.2 All signatures should be witnessed, except where a corporate seal has been affixed.

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

## **B9. PRICES**

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

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

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

## **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/or 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 Branch internet site at <http://www.winnipeg.ca/matmgt>); and
- (b) have successfully carried out work similar in nature, scope and value to the Work; and
- (c) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
- (d) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba);

B10.3 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 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. BID SECURITY**

B11.1 The Bidder shall provide bid security in the form of:

- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
- (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or
- (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.

B11.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.

B11.1.2 All signatures on bid securities shall be original, and shall be witnessed or sealed as required.

B11.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.

B11.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B11.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.

B11.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.

B11.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Bid Opportunity.

## **B12. OPENING OF BIDS AND RELEASE OF INFORMATION**

B12.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Branch, or in such other office as may be designated by the Manager of Materials.

B12.1.1 Bidders or their representatives may attend.

B12.1.2 Bids determined by the Manager of Materials, or his designate, to not include the bid security specified in B11 will not be read out.

B12.2 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 Branch internet site at <http://www.winnipeg.ca/matmgt>.



B12.3 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 Branch internet site at <http://www.winnipeg.ca/matmgt>.

B12.4 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.

### **B13. IRREVOCABLE BID**

B13.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.

B13.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid.

### **B14. WITHDRAWAL OF BIDS**

B14.1 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.

B14.1.1 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.

B14.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

B14.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:

- (a) retain the Bid until after the Submission Deadline has elapsed;
- (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Bid withdrawn.

B14.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B13.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

### **B15. EVALUATION OF BIDS**

B15.1 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 (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.

B15.2 Further to B15.1(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.

B15.3 Further to B15.1(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.

B15.4 Further to B15.1(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.

B15.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

## **B16. AWARD OF CONTRACT**

B16.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B16.2 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.

B16.2.1 Without limiting the generality of B16.2, 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.

B16.3 Subject to B16.2, 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.

B16.3.1 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.

## **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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- 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 structural steel repairs to the deck channels supporting the deck and sidewalk.

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

(a) Structural Steel Repairs

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

D3.1 The Contract Administrator is:

Brad Neirinck, P. Eng  
Bridge Planning & Operations Engineer  
106-1155 Pacific Avenue  
Winnipeg, Manitoba, R3E 3P1

Telephone No. (204) 986-7950

Facsimile No. (204) 986-5302

D3.2 At the pre-construction meeting, the Contract Administrator 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 All notices of appeal to the Chief Administrative Officer shall be sent to the following address or facsimile number:

The City of Winnipeg  
Chief Administrative Officer Secretariat  
Attn: Chief Administrative Officer  
Administration Building, 3rd Floor  
510 Main Street  
Winnipeg MB R3B 1B9  
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  
Corporate Services Department  
Legal Services Division  
Attn: City Solicitor  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

#### **D6. FURNISHING OF DOCUMENTS**

- D6.1 Upon award of the Contract, the Contractor will be provided with five (5) complete sets of the Bid Opportunity. If the Contractor requires additional sets of the Bid Opportunity, they will be supplied to him at cost.

#### **SUBMISSIONS**

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

- D7.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

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

- D8.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D8.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

#### **D9. INSURANCE**

- D9.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain a 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;

D9.2 Deductibles shall be borne by the Contractor.

D9.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract.

D9.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

## **D10. PERFORMANCE SECURITY**

D10.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:

- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
- (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
- (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.

D10.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D10.2 If the bid security provided in his Bid was not a certified cheque or draft pursuant to B11.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

## **D11. SUBCONTRACTOR LIST**

D11.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

## **SCHEDULE OF WORK**

### **D12. COMMENCEMENT**

D12.1 The Contractor shall not commence any Work until he is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.

D12.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:

- (i) evidence of authority to carry on business specified in D7;
  - (ii) evidence of the workers compensation coverage specified in C6.15;
  - (iii) the Safe Work Plan specified in D8;
  - (iv) evidence of the insurance specified in D9;
  - (v) the performance security specified in D10;
  - (vi) the Subcontractor list specified in D11;
- (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.

D12.3 The Contractor shall not commence the Work on the Site before April 15, 2007.

### **D13. SUBSTANTIAL PERFORMANCE**

D13.1 The Contractor shall achieve Substantial Performance by June 29, 2007.

D13.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D13.3 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.

### **D14. TOTAL PERFORMANCE**

D14.1 The Contractor shall achieve Total Performance by July 6, 2007.

D14.2 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.

D14.3 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.

### **D15. LIQUIDATED DAMAGES**

D15.1 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 (\$500.00) per Calendar Day for each and every Calendar Day following the day fixed herein for Total Performance during which such failure continues.

D15.2 The amount specified for liquidated damages in D15.1 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.

D15.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

## **CONTROL OF WORK**

### **D16. JOB MEETINGS**

- D16.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.
- D16.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

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

- D17.1 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).

### **D18. AUTHORIZED WORK ON PRIVATE PROPERTY**

- D18.1 The Contractor shall confine his works to the right of way or easements as much as possible. Where Work is required to be done on or accessed through private property, the Contractor shall obtain written permission from the property owner and provide a copy to the Contract Administrator.
- D18.2 The Contractor shall limit his operations to the minimum area necessary for undertaking the private property work and he shall be responsible for all damages outside the limits of the authorized work, resulting from his work on private property. Particular care shall be taken to prevent damage to buildings, vehicles, trees and plants.

### **D19. LAYOUT OF WORK**

- D19.1 The Contract Administrator will provide the basic centrelines and Limits of the Works.
- D19.2 The Contractor shall be responsible for the true and proper laying out of the Work and for the correctness of the location, levels, dimensions and alignment of all aspects of the Work. He shall provide all required instruments and competent personnel for performing all layouts.
- D19.3 The Contract Administrator shall be notified at least one (1) Working Day prior to any Work being commenced in order to have the option to check and review all elevations and layouts at his discretion.
- D19.4 The Contractor shall carefully protect and preserve all benchmarks, stakes and other items of the basic data supplied by the Contract Administrator. Any such benchmarks or stakes removed or destroyed by the Contractor, without the consent of the Contract Administrator, shall be replaced by the Contract Administrator at the expense of the Contractor.

### **D20. COOPERATION WITH OTHERS**

- D20.1 The Contractor's attention is directed to the fact that other Contractors, the personnel of Utilities, and the staff of the City may be working on the approach roadways, adjacent roadways, or rights of way. The activities of these agencies may coincide with the Contractor's execution of the Work, and it will be the Contractor's responsibility to cooperate to the fullest extent with other personnel working in the area, and such cooperation is an obligation of the Contractor under the terms of this Contract.



**D21. ENVIRONMENTAL PLANNING**

- D21.1 The Contractor shall conduct his operations in accordance with all current federal, provincial or other regulations concerning environmental protection and pollution control. It shall be the Contractor's responsibility to familiarize himself with all applicable regulations and to obtain all necessary approvals and permits for his operations.

**MEASUREMENT AND PAYMENT**

**D22. PAYMENT**

- D22.1 Further to C12, effective January 1, 2007 the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

**WARRANTY**

**D23. WARRANTY**

- D23.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

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

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

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

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

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

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, for:

BID OPPORTUNITY NO. 142-2007

DISRAELI BRIDGE & OVERPASS – STRUCTURAL STEEL DECK REPAIRS

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)

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

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

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

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

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

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT  
(PERFORMANCE SECURITY)**  
(See D10)

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

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 142-2007

DISRAELI BRIDGE & OVERPASS – STRUCTURAL STEEL DECK REPAIRS

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 Branch internet site at <http://www.winnipeg.ca/matmgt>.
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
B111/112-07-01	Disraeli Bridge & Overpass Structural Steel Deck Repairs – General Elevations
B111/112-07-02	Disraeli Bridge & Overpass Structural Steel Deck Repairs – Repair Schedule & Summary
B111/112-07-03	Disraeli Bridge & Overpass Structural Steel Deck Repairs – Elevations, Details & Sections (Sheet 1 of 2)
B111/112-07-04	Disraeli Bridge & Overpass Structural Steel Deck Repairs – Elevations, Details & Sections (Sheet 2 of 2)
B111/112-07-05	Disraeli Bridge & Overpass Structural Steel Deck Repairs – Miscellaneous Metal

#### E2. TRAFFIC AND PEDESTRIAN CONTROL

- E2.1 General
- (a) The Work covered under this item shall include all items relating to traffic and pedestrian control at the Site.
- (b) 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.
- E2.2 Construction Methods
- (a) Traffic control shall be carried out in accordance with the latest edition of the "Manual of Temporary Traffic Control in Work Areas on City Streets," issued by the City of Winnipeg and as specified herein.
- (b) Traffic lane and sidewalk closures on the Disraeli Freeway shall only be undertaken if necessary as approved by the Contract Administrator.
- (c) If necessary, the Contractor will be allowed single curb lane closures on the Disraeli Freeway outside of normal weekday rush hours to access the repair areas. No lane closures will be permitted between 6:30 to 9:00 a.m. in the southbound direction. Nor between 3:00 to 6:00 p.m. in the northbound direction.
- (d) If necessary, the Contractor may restrict pedestrian access to sidewalks affected by the deck repair operations. Temporary sidewalk closures shall be signed at each end of the bridge as well as at the pedestrian overpass to the south.
- E2.3 Measurement and Payment

Traffic and pedestrian control will be considered incidental to the Works of this Specification and no additional measurement or payment will be made.

### **E3. STRUCTURAL STEEL REPAIRS**

#### **E3.1 Description**

- (a) This Specification shall cover the preparation of the existing structural steel; the supply, fabrication and installation of new structural steel; and coating of the final repairs as specified herein.
- (b) The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplied and all things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

#### **E3.2 Materials**

##### **E3.2.1 General**

- (a) All Materials supplied under this Specification shall be of a type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.
- (b) The Contractor shall be responsible for the safe removal and disposal of the existing severely corroded steel and for the supply, safe storage and handling of all Materials as set forth in the Specification. All Materials shall be handled in a careful and workman like manner, to the satisfaction of the Contract Administrator.

##### **E3.2.2 Structural Steel**

- (a) All general structural steel shall conform to the requirements of CSA Standard CAN/CSA-G40.21-M-92, Grade 300W.

##### **E3.2.3 High Strength Bolts, Nuts and Washers**

- (a) High strength bolts shall conform to the requirements of ASTM Specification A325, Type 1. Nuts shall conform to the requirements of ASTM Specification A563, Grade DH. Washers shall conform to the requirements of ASTM Specification F436, Type 1.

##### **E3.2.4 Self-Priming Topcoat**

- (a) Self-priming topcoat shall be Termarust Series 2100 (RAVCS) as manufactured by Termarust Technologies.

##### **E3.2.5 Abrasive for Blast Cleaning**

- (a) The blast cleaning abrasive shall be free of corrosion-producing contaminants. Silica or other sand will not be permitted. Slag abrasives shall contain no more than 0.1% oil by weight. The blast-cleaning abrasives and grit size employed shall be capable of achieving a surface anchor-tooth profile having a peak-to-valley height of 2 to 4 mils.

##### **E3.2.6 Incidental Materials**

- (a) All incidental and miscellaneous materials required for the undertaking the works of this Specification shall be as approved by the Contract Administrator.

#### **E3.3 Construction Methods**

##### **E3.3.1 Scope of Work**

- (a) The scope of Work shall include the following items:
  - (i) Installation and removal of access to all repair areas identified on the Drawings.
  - (ii) Surface preparation of the existing structural steel.
  - (iii) Fabrication, surface preparation, and installation of new structural steel.
  - (iv) Field coating of final repair.



### E3.3.2 Methods and Scheduling

- (a) At least five (5) days prior to the commencement of any scheduled Work on the Site, the Contractor shall submit to the Contract Administrator for review and approval, a proposed schedule, including methods and sequence of operations.

### E3.3.3 Details of Existing Structure

- (a) The applicable details and structure dimensions of the existing structure are shown on the Drawings for the information of the Contractor in establishing the methods and limits of removal and determining the cost of the Work from his examination of the Site.
- (b) The information shown has been obtained from existing drawings, measurements, and observations at the Site. The accuracy of this information is not guaranteed and the Contractor must verify all information before commencing Work.

### E3.3.4 Access and Scaffolding

- (a) The Contractor shall submit access methods for men and equipment to the repair areas at least five (5) days prior to the commencement of Work on the Site.
- (b) All scaffolding, platforms, and swing-stages shall be designed, constructed, erected and operated in accordance with Workplace Safety and Health Act, applicable Regulations and as approved by the Contract Administrator.
- (c) The Contractor is advised that repairs located from Spans 10 to 15 of Disraeli Overpass may only be accessed through private property at 90 Sutherland Avenue. The Contract Administrator will provide a contact for coordination by the Contractor. Access through private property shall be in accordance with Clause D18.
- (d) All access routes shall be restored to the pre-construction condition or better incidental to the Works of this Specification.

### E3.3.5 Surface Preparation of Existing Structural Steel

#### (a) General

- (i) All surfaces of the existing deck channels shall be prepared and coated a minimum of 300 mm beyond the new structural steel repairs. Existing coatings beyond the identified repair areas that are damaged by the Contractor's operations shall be repaired at the Contractor's expense to the satisfaction of the Contract Administrator.
- (ii) The Contractor is advised that paint samples from the main bridge girders have been tested for lead content. A copy of the report is included as Appendix A. Lead was found in all six samples.
- (iii) The Contractor shall comply with all applicable environmental, health, and safety regulations related to the surface preparation and coating of the existing structural steel. As a minimum, the Contractor shall collect all spent blasting abrasives, cleaned off paint residue, and new coating material overspray from the work area. All such materials shall be disposed of off and away from the site by the Contractor in accordance with the appropriate regulations to the satisfaction of the Contract Administrator.

#### (b) Surface Cleaning

- (i) Before any blast cleaning operations or coating applications commence, the following surface cleaning operations shall be undertaken on all structural steel designated to receive coating.
- (ii) All organic materials such as bird droppings, nests and other non-structural obstructions or pollutants attached to the steel are to be removed by hand cleaning operations.
- (iii) All oil and grease shall be removed manually with solvent cleaning as per SSPC Specification SP1.
- (iv) The entire area shall be washed clean of road salt using high pressure washing.

(c) Blast Cleaning Operation

- (i) The Contractor shall prepare the structural steel immediately prior to, by blast cleaning in accordance with SSPC Specification SP 10/NACE No. 2 – “Near White Metal Blast Cleaning.”
- (ii) The Contractor shall ensure that the amount of blasting medium used for blast cleaning is kept to the absolute minimum by conscientious efforts of his workforce and by the efficient use of equipment.
- (iii) No rust scale shall remain in the designated areas.
- (iv) The blasting shall be performed so as not to damage or contaminate any previously coated areas.
- (v) New structural steel shall be installed on freshly prepared steel and shall be coated as quickly as practical thereafter. However, if the freshly prepared steel begins to rust prior to the application of the coating, the steel must be re-blasted to meet the specified SSPC Specification.

(d) Blast Clean-up Operations

- (i) Following all blast cleaning operations and prior to the Contract Administrator's inspection, all surfaces involved shall be blown off with compressed air or cleaned by vacuum for the purpose of removing any and all traces of blast products from the surface, and for the removal of abrasion from all pocket and corners. Following surface preparation cleanup operations, the Contractor shall immediately notify the Contract Administrator so that testing and inspection can be undertaken prior to the application of any coating.

(e) Surface Testing and Inspection

- (i) The Contractor shall provide the Contract Administrator with access and notice to allow for testing and inspection of prepared surfaces.
- (ii) Immediately following blast cleaning and clean-up operations, the Contractor shall notify the Contract Administrator in order that a chemical analysis of the blasted steel and a surface profile inspection can be carried out. No structural steel installation shall take place until the prepared surface is approved by the Contract Administrator.
- (iii) The Contract Administrator may analyze the blasted steel surface for chloride ion content.
- (iv) New structural steel shall not be installed over existing steel surfaces where the chloride ion content exceeds an average of 30 milligrams per square metre, based on three readings taken from three separate areas of 150 mm x 150 mm each, or any one reading that exceeds 50 milligrams per square metre of chloride ion content. Any area that exceeds these upper limits shall be high pressure washed clean to flush off the chloride ions and re-blasted by the Contractor at his own cost incidental to the surface preparation operations. These areas will then be retested by the Contract Administrator.

E3.3.6 Fabrication and Installation of New Structural Steel

(a) General

- (i) Except as otherwise specified herein, steelwork shall be fabricated in accordance with the latest A.W.S. Specification D1.1 and subsequent revisions.
- (ii) No fabrication shall commence until permission to do so has been received from the Contract Administration.
- (iii) The repair of any members damaged during fabrication shall be approved by the Contract Administrator.

- (b) Submissions
  - (i) At five (5) Working days prior to the scheduled commencement of any fabrication, the operator's qualifications, the shop drawings and mill certificates shall be submitted to the Contract Administrator for his approval.
- (c) Shop Drawings
  - (i) No shop drawings are required for this project.
- (d) Preparation of Material
  - (i) Prior to being used in fabrication, all structural steel shall be straight and free from kinks or bends. If straightening is necessary, it shall be done by methods that will not injure the metal. The steel shall not be heated unless permission is given by the Contract Administrator. Sharp kinks and bends will be cause for rejection of the steel.
  - (ii) Steel may be cut to size by sawing, shearing, flame-cutting or machining. All steel after cutting shall be marked by a method agreed to by the Contract Administrator so that it's specification may be immediately identified.
  - (iii) Sheared edges of plates more than 16mm in thickness shall be planed to a depth of 6mm.
  - (iv) Special attention shall be given to the cutting of cover plates or flange plates. Occasional gouges not in excess of 6mm deep will be accepted in areas of low stress at the discretion of the Contract Administrator. The repair or removal of such gouges shall be to the Contract Administrator's instructions.
  - (v) Edges of flame cut edges shall be ground to a radius of 2mm. Re-entrant cuts shall be filleted to a radius of not less than 19mm.
- (e) Bolt Holes
  - (i) All bolt holes for high strength bolts shall be drilled and shall be of a nominal diameter not more than 2mm in excess of the nominal bolt diameter.
  - (ii) Drilling shall be done with twist drills. Burrs on the outside surface shall be removed.
  - (iii) Poor matching of holes will be cause for rejection.
- (f) Surface Preparation of New Structural Steel
  - (i) All surfaces of new prepared structural steel shall be thoroughly shop cleaned to SSPC-SP6/NACE No. 3, Commercial Blast Cleaning or equivalent as approved by the Contract Administrator.
- (g) Field Assembly
  - (i) The new structural steel channels shall be snug tight to the underside of the steel plate or steel deck grating. Steel shims shall be installed where necessary as shown on the Drawings. The new channels shall be used as a template to drill bolt holes in the existing steel channels.
  - (ii) All field connections shall be bolted with high strength bolts. Bolting with high strength bolts shall be carried out in accordance with "AASHTO Standard Specifications for Highway Bridges-1996 Division II, Clause 11.5-Assembly – turn of nut method."
- (h) Straightening of Bent Material
  - (i) The straightening of plates and angles or other shapes shall be done by methods that will not produce fracture or injury. The metal shall not be heated unless permitted by the Contract Administrator, in which case the heating shall not be a higher temperature than that producing a "dark cherry red" colour. After heating, the metal shall be cooled as slowly as possible.
  - (ii) Following the straightening of a bend or buckle, the surface of the metal shall be carefully inspected for evidence of fractures and if necessary, replaced or repaired to the satisfaction of the Contract Administrator.

(i) Misfits

- (i) The correction of minor misfits involving harmless amounts of reaming, cutting and chipping as determined by the Contract Administrator will be considered a legitimate part of erection. However, any error in shop fabrication, which prevents the proper assembling and fitting up of parts by the moderate use of drift pins or by a moderate amount of reaming and slight chipping or cutting, shall be the responsibility of the Contractor.

E3.3.7 Coating of Existing and New Structural Steel

- (a) In areas where prepared steel is not coated on a timely basis, the steel may need to be flushed and re-blasted.
- (b) All exposed surfaces of the existing deck channels and new structural steel within the repair areas shall be coated with Termarust Series 2100 (RAVCS) to the Recommended DFT (Dry Film Thickness) of 250 – 300 microns (10 – 12 mils) in accordance with the manufacturer's recommendations.
- (c) The coating shall not be applied at temperatures below 2°C. In addition, there must be a 2°C spread between the temperature and the dew point. The relative humidity must be no greater than 99% and the steel should be free of surface moisture.

E3.4 Quality Control

E3.4.1 Inspection

- (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 specified Work. The Contractor shall be wholly responsible for the control of all operations incidental thereto notwithstanding any inspection or acceptance 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.

E3.4.2 Access

- (a) The Contractor shall allow the Contract Administrator free access to all parts of the Work at all times. The Contractor shall supply samples to the Contract Administrator or his inspector for testing purposes as required. There will be no charge to the City for samples taken.

E3.4.3 Material Storage and Care

- (a) Structural steel, either plain or fabricated shall be stored on above the ground platforms, skids or other supports. It shall be kept free from dirt and other foreign matter, and shall be protected, as far as practical, from corrosion. Long members shall be supported on skids placed near enough together to prevent injury from deflection.
- (b) Prior to fabrication, all steel shall be marked for identification by heat number and specification by a marking system approved by the Contract Administrator.

### E3.5 Measurement and Payment

- (a) Structural steel repairs will be measured on a unit basis and paid for at the Contract Unit Price for the "Items of Work" listed here below. The item to be paid for will be the total number of each type of repairs that are completed in accordance with this Specification, accepted and measured by the Contract Administrator.

(i) **Items of Work:**

Cantilevered Deck Channel Reinforcement Over Exterior Girder (Type 1 Repair)

Regular Deck Channel Reinforcement Over Exterior Girder (Type 2 Repair)

Deck Channel Reinforcement Over Interior Girder (Type 3 Repair)

Channel to Channel Connection (Type 4 Repair)