



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 12-2010

**2010 CONCRETE PAVEMENT PRESERVATION PROGRAM – BISHOP GRANDIN
BOULEVARD WESTBOUND – LAGIMODIERE BOULEVARD TO LAKEWOOD
BOULEVARD**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

- B1.1 2010 Concrete Pavement Preservation Program – Bishop Grandin Boulevard Westbound – Lagimodiere Boulevard to Lakewood Boulevard

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, March 5, 2010.
- 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.
- B3.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.
- B3.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.
- B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.
- B3.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

B4. ADDENDA

- B4.1 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.
- B4.2 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.
- B4.2.1 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>
- B4.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B4.3 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.

B5. SUBSTITUTES

- B5.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B5.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B5.3 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.
- B5.4 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.
- B5.5 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.
- B5.6 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.
- B5.6.1 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.
- B5.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B5.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B5.9 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.
- B5.10 Notwithstanding B5.2 to B5.9, in accordance with B6.6, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

B6. BID COMPONENTS

B6.1 The Bid shall consist of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices, hard copy;
- (c) Bid Security;
 - (i) Form G1: Bid Bond and Agreement to Bond, or
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or
a certified cheque or draft;

B6.2 Further to B6.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B5.

B6.3 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.

B6.4 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.

B6.4.1 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.

B6.4.2 A hard copy of Form B: Prices must be submitted with the Bid. If there is any discrepancy between the Adobe PDF version of Form B: Prices and the Microsoft Excel version of Form B: Prices, the PDF version shall take precedence.

B6.5 Bidders are advised not to include any information/literature except as requested in accordance with B6.1.

B6.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B14.1(a).

B6.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B6.8 Bids shall be submitted to:

The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B7. BID

B7.1 The Bidder shall complete Form A: Bid, making all required entries.

B7.2 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.

- B7.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B7.2.
- B7.3 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.
- B7.4 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, shall 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.
- B7.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B7.5 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.

B8. PRICES

- B8.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B8.1.1 For the convenience of Bidders, and pursuant to B6.4.2 and B14.4.3, an electronic spreadsheet Form B: Prices in Microsoft Excel (.xls) format is available along with the Adobe PDF documents for this Bid Opportunity on the Bid Opportunities page at the Materials Management Division website at <http://www.winnipeg.ca/matmgt>
- B8.2 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.
- B8.3 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.
- B8.4 Prices from Non-Resident Bidders are subject to a Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B9. QUALIFICATION

- B9.1 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.
- B9.2 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>
- B9.3 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);
- B9.4 Further to B9.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
- (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
 - (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>)
- B9.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.
- B9.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B10. BID SECURITY

- B10.1 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.
- B10.1.1 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.
- B10.1.2 All signatures on bid securities shall be original.
- B10.1.3 The Bidder shall sign the Bid Bond.

- B10.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.
- B10.2 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.
- B10.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B10.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.
- B10.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.
- B10.3 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.

B11. OPENING OF BIDS AND RELEASE OF INFORMATION

- B11.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.
- B11.1.1 Bidders or their representatives may attend.
- B11.1.2 Bids determined by the Manager of Materials, or his designate, to not include the bid security specified in B10 will not be read out.
- B11.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>
- 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 11 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 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.

B13. WITHDRAWAL OF BIDS

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

- B13.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B13.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 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 12 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.
- B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

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 B9 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B5.
- B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.
- B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B14.4.1 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.
- B14.4.2 Further to B14.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.
- B14.4.3 The electronic Form B: Prices and the formulas imbedded in that spreadsheet are only provided for the convenience of Bidders. The City makes no representations or warranties as to the correctness of the imbedded formulas. It is the Bidder's responsibility to ensure the extensions of the unit prices and the sum of Total Bid Price performed as a function of the formulas within the electronic Form B: Prices are correct.

B15. AWARD OF CONTRACT

- B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B15.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B15.2.1 Without limiting the generality of B15.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
 - (b) the prices are materially in excess of the prices received for similar work in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
 - (d) only one Bid is received; or
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B15.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B14.
- B15.3.1 Following the award of Contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of:

- (a) Pavement Rehabilitation
 - (i) Bishop Grandin Boulevard from Lagimodiere Boulevard to Lakewood Boulevard, Westbound lanes
- (b) Asphalt Shoulder Reconstruction
 - (i) Bishop Grandin Boulevard from Lagimodiere Boulevard to Lakewood Boulevard, Westbound lanes

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

- (a) Pavement Rehabilitation
 - (i) Renewal of existing concrete joints through partial joint repair methods;
 - (ii) Renewal of existing concrete slabs and joints through full depth repairs;
 - (iii) Renewal of existing sidewalk and curbs as required.
 - (iv) Reset existing manhole/catchbasin frame and covers as required.
 - (v) Placement of an Asphalt overlay at the intersections as required.
 - (vi) Topsoil and seed as required.
- (b) Asphalt Shoulder Reconstruction
 - (i) Excavation of shoulder
 - (ii) Installation of geotextile
 - (iii) Placement of base course material
 - (iv) Placement of asphalt material (average thickness – 75 mm)

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is Dillon Consulting Limited, represented by:

Taran J. Peters, P.Eng.
Project Manager
Suite 200-895 Waverley Street
Winnipeg, Manitoba R3T 5P4

Telephone No. (204) 453-2301
Facsimile No. (204) 452-4412

D3.2 At the pre-construction meeting, Taran J. Peters, P.Eng. 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.
- D4.2 At least two (2) business days prior to the commencement of any Work on the Site, the Contractor shall provide the Contract Administrator with a phone number where the supervisor identified in D4.1 or an alternate can be contacted twenty-four (24) hours a day to respond to an emergency.

D5. NOTICES

- D5.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.
- D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.
- D5.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following address or facsimile number:
The City of Winnipeg
Chief Financial 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
Internal 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 shall be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/safety/default.stm>

D9. INSURANCE

- D9.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (b) 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;
 - (c) an all risks Installation Floater carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.
- 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 the 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 thirty (30) 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 B10.1(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 and in no event later than the date specified in the 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 or prior to a pre-construction meeting, or at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the C4.1 for the return of the executed Contract.

D12. DETAILED WORK SCHEDULE

D12.1 The Contractor shall provide the Contract Administrator with a detailed work schedule (Form L: Detailed Work Schedule) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the General Conditions for the return of the executed Contract.

SCHEDULE OF WORK

D13. COMMENCEMENT

D13.1 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.

D13.2 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 twenty-four (24) hour emergency response phone number specified in D4.2.
 - (iv) the Safe Work Plan specified in D8;
 - (v) evidence of the insurance specified in D9;
 - (vi) the performance security specified in D10;
 - (vii) the Subcontractor list specified in D11;
 - (viii) the detailed work schedule specified in D12; and
- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.

D13.3 The Contractor shall not commence the Work on the Site before May 17, 2010, and shall commence the Work on Site no later than May 25, 2010, as directed by the Contract Administrator and weather permitting.

D14. WORKING DAYS

D14.1 Further to C1.1(gg);

D14.1.1 The Contract Administrator will determine daily if a Working Day has elapsed and will record his assessment. On a weekly basis the Contract Administrator will provide the Contractor with a record of the Working Days assessed for the preceding week. The Contractor shall sign each report signifying that he agrees with the Contract Administrator's determination of the Working Days assessed for the report period.

D14.1.2 Work done to restore the Site to a condition suitable for Work, shall not be considered "work" as defined in the definition of a Working Day.

D14.1.3 When the Work includes two or more major types of Work that can be performed under different atmospheric conditions, the Contract Administrator shall consider all major types of Work in determining whether the Contractor was able to work in assessing Working Days.

D15. RESTRICTED WORK HOURS

D15.1 Further to clause 3.10 of CW 1130, the Contractor shall require written permission forty-eight (48) hours in advance from the Contract Administrator for any work to be performed between 2000 hours and 0700 hours, or on Saturdays, Sundays, Statutory Holidays and or Civic Holidays.

D16. SEQUENCE OF WORK

D16.1 Further to C6.1, the sequence of Work shall be as follows:

D16.1.1 Construction activities on Bishop Grandin Boulevard are to be limited to one lane of the roadway at a time. No construction shall commence on the adjacent lane until all work is completed on the lane under construction, or as otherwise approved by the Contract Administrator..

D16.1.2 The Contractor will be required to start construction activities in the median lane of Bishop Grandin, and upon completing the work from Lagimodiere to Lakewood, will be permitted to start the construction activities in the curb lane of Bishop Grandin from Lagimodiere to Lakewood, or as otherwise approved by the Contract Administrator. During the time of the Work taking place in the curb lane, the Contractor will also perform the Work on the shoulder as described in D2.2 (b).

D16.1.3 The Contractor will be required to grow the work zone as the project progresses in order to maintain as much roadway available to vehicular traffic as possible.

D16.1.4 The Partial Depth repairs to be completed shall commence prior to the full depth concrete pavement repairs and at all times precede the full depth concrete pavement repairs within the work zone.

D16.1.5 Immediately following the completion of each Stage of Work, the Contractor shall clean up the Site and remove all plant, surplus material, waste and debris, other than that left by the City or other Contractors.

D17. SUBSTANTIAL PERFORMANCE

D17.1 The Contractor shall achieve Substantial Performance within forty (40) consecutive Working Days of the commencement of the Work as specified in D13.

D17.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D17.3 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.

D18. TOTAL PERFORMANCE

D18.1 The Contractor shall achieve Total Performance within forty five (45) consecutive Working Days of the commencement of the Work as specified in D13.

D18.2 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.

D18.3 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.

D19. LIQUIDATED DAMAGES

D19.1 If the Contractor fails to achieve Substantial Performance in accordance with the Contract by the day fixed herein for Substantial Performance, the Contractor shall pay the City one thousand five hundred dollars (\$1500) per Working Day for each and every Working Day following the day fixed herein for Substantial Performance during which such failure continues.

D19.2 The amount specified for liquidated damages in D19.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.

D19.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D20. SCHEDULED MAINTENANCE

D20.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Seeding (maintenance period) as specified in CW 3520;
- (b) Reflective Crack Maintenance as specified in CW 3250;

D20.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

CONTROL OF WORK

D21. JOB MEETINGS

D21.1 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.

D21.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

D22. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D22.1 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).

WARRANTY

D23. WARRANTY

- D23.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D23.2 Notwithstanding C13.2 or D23.1, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if:
- (a) a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.
- D23.2.1 In such case the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

FORM H1: PERFORMANCE BOND
(See D10)

KNOW ALL MEN BY THESE PRESENTS THAT

_____ ,
(hereinafter called the "Principal"), and

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

_____ dollars (\$ _____)

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

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

BID OPPORTUNITY NO. 12-2010

2010 Concrete Pavement Preservation Program – Bishop Grandin Boulevard Westbound – Lagimodiere Boulevard to Lakewood Boulevard
which is by reference made part hereof and is hereinafter referred to as the "Contract".

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

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

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

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

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

_____ day of _____, 20____ .

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

By: _____ (Seal)
(Attorney-in-Fact)

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

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

(Date)

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

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

This credit is subject to the Uniform Customs and Practice for Documentary Credit (1993 Revision), International Chamber of Commerce Publication Number 500.

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

FORM L: DETAILED WORK SCHEDULE
 (See D12)

2010 Concrete Pavement Preservation Program – Bishop Grandin Boulevard Westbound – Lagimodiere Boulevard to Lakewood Boulevard

For each item of Work, indicate the cumulative percentage proposed to be completed by the end of each time period until 100% completion is achieved.					
Items of Work	Time Period in Working Days				
	10	20	30	40	45
Bishop Grandin Boulevard Westbound median lane from Lagimodiere Boulevard to Lakewood Boulevard					
Bishop Grandin Boulevard Westbound curb lane from Lagimodiere Boulevard to Lakewood Boulevard					
Bishop Grandin Boulevard Westbound shoulder from Lagimodiere Boulevard to Lakewood Boulevard					

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

E2. GEOTECHNICAL REPORT

- E2.1 Further to C3.1, the geotechnical report is provided to aid the Contractor's evaluation of the pavement structure and/or existing soil conditions. The geotechnical report is contained in Appendix 'A'.

E3. OFFICE FACILITIES

- E3.1 The Contractor shall supply office facilities meeting the following requirements:
- (a) The field office shall be for the exclusive use of the Contract Administrator.
 - (b) The building shall be conveniently located near the Site of the Work.
 - (c) The building shall have a minimum floor area of 25 square metres, with two windows and a door entrance with a suitable lock.
 - (d) The building shall be suitable for all weather use. It shall be equipped with an electric heater and air conditioner so that the room temperature can be maintained between either 16-18°C or 24-25°C.
 - (e) The building shall be adequately lighted with fluorescent fixtures and have a minimum of three wall outlets.
 - (f) The building shall be furnished with one desk, one table, and six chairs.
 - (g) A portable toilet shall be located near the field office building. The toilet shall have a locking door and be for the exclusive use of the Contract Administrator and other personnel from the City.
 - (h) The field office building and the portable toilet shall be cleaned on a weekly basis immediately prior to each site meeting. The Contract Administrator may request additional cleaning when he deems it necessary.
- E3.2 The Contractor shall be responsible for all installation and removal costs, all operating costs, and the general maintenance of the office facilities.
- E3.3 The office facilities will be provided from the date of the commencement of the Work to the date of Total Performance.

E4. PROTECTION OF EXISTING TREES

- E4.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing boulevard trees within the limits of the construction area:

- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.
- (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator.
- (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
- (d) Operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
- (e) Work on-site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.

E4.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his designate.

E4.3 No separate measurement or payment will be made for the protection of trees.

E4.4 Except as required in clause E4.1(c) and E4.1(e), Elm trees shall not be pruned at any time between April 1 and July 31.

E5. TRAFFIC CONTROL

E5.1 Further to clauses 3.6 and 3.7 of CW 1130:

- (a) Where directed, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions such as manholes and planing drop-offs to the satisfaction of the Contract Administrator. Payment shall be in accordance with CW3410.
- (b) In accordance with the Manual of Temporary Traffic Control in Work Areas on City Streets, the Contractor ("Agency" in the manual) shall make arrangements with the Traffic Services Branch of the City of Winnipeg to place all temporary regulatory signs. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by the Traffic Services Branch of the City of Winnipeg in connection with the works undertaken by the Contractor.

E6. TRAFFIC MANAGEMENT

E6.1 Further to clause 3.7 of CW 1130:

- E6.1.1 Maintain a minimum of one lane of traffic on Bishop Grandin Boulevard westbound during all construction activities;
- E6.1.2 Where left turn lanes exist, an additional lane to accommodate the left turn storage lane shall be maintained at all times.
- E6.1.3 Where right turn lanes exist, an additional lane to accommodate the right turn storage lane shall be maintained at all times.
- E6.1.4 Intersecting street and private approach access shall be maintained at all times.
- E6.1.5 Should the Contractor be unable to maintain pedestrian or vehicular access to a residence or business, he shall review the planned disruption with the business or residence and the Contract Administrator, and take reasonable measures to minimize the impact. The

Contractor shall provide a minimum of 24 hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.

E6.1.6 Pedestrian and ambulance/emergency vehicle access must be maintained at all times.

E7. PEDESTRIAN SAFETY

E7.1 During the project, a temporary snow fence shall be installed if necessary. . The Contractor shall be responsible for maintaining the snow fence in a proper working condition. No measurement for payment shall be made for this work.

E8. WATER USED BY CONTRACTOR

E8.1 Further to clause 3.7 of CW 1120, the Contractor shall pay for all costs associated with obtaining water in accordance with the Waterworks By-law. Sewer charges will not be assessed for water obtained from a hydrant.

E9. SURFACE RESTORATIONS

E9.1 Further to clause 3.3 of CW 1130, when Total Performance is not achieved in the year the Contract is commenced, the Contractor shall temporarily repair any Work commenced and not completed to the satisfaction of the Contract Administrator. The Contractor shall maintain the temporary repairs in a safe condition as determined by the Contract Administrator until permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

E10. RECYCLED CONCRETE BASE COURSE MATERIAL

DESCRIPTION

E10.1 General

E10.1.1 Further to CW 3110, this specification covers supply and placement of recycled concrete base course material for Full-Depth Partial Slab Patches (Class A, B, C, & D), miscellaneous concrete slabs and sidewalks.

E10.2 Definitions

E10.2.1 Deleterious material – are materials such as vegetation, organic material, wood, glass, plastic, metal, reinforcing steel, building rubble, brick, salvaged asphalt materials, clay, shale, and friable particles.

E10.3 Referenced Standard Construction Specifications

- (a) CW 3110 – Sub-Grade. Sub-Base and Base Course Construction.
- (b) CW 3230 – Full-Depth Patching of Existing Pavement Slabs and Joints.
- (c) CW 3235 – Renewal of Existing Miscellaneous Concrete Slabs.
- (d) CW 3325 – Portland Cement Concrete Sidewalk.

MATERIALS

E10.4 Recycled Concrete Base Course Material

E10.4.1 Recycled concrete base course material when used for Full-Depth Partial Slab Patches (Class A, B, C, & D), miscellaneous concrete slabs and sidewalks will be considered equal to granular or limestone base course material specified in Section 2.2 of CW 3110.

E10.4.2 Recycled concrete base course material will be approved by the Contract Administrator.

E10.4.3 Recycled concrete base course material will consist of sound durable particles produced by crushing, screening, and grading of recovered concrete materials, free from soft material that would disintegrate through decay or weathering.

E10.4.4 The recycled concrete base course material will be well graded and conform to the following grading requirements:

Recycled Concrete Base Course Material Grading Requirements

CANADIAN METRIC SIEVE SIZE	PERCENT OF TOTAL DRY WEIGHT PASSING EACH SIEVE
20 000	100%
5 000	40% - 70%
2 500	25% - 60%
315	8% - 25%
80	6% - 17%

E10.4.5 Recycled concrete base course material when subjected to the abrasion test will have a loss of not more than 35% when tested in accordance with grading B of ASTM C131, Test for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.

E10.4.6 The amount of deleterious material will be limited to a maximum of two percent of the total dry weight.

CONSTRUCTION METHODS

E10.5 Placement of Recycled Concrete Base Course Material

E10.5.1 Place and compact recycled concrete base course material as a levelling course to a maximum thickness of 50 millimetres.

E10.5.2 Spread materials uniformly to avoid segregation free of pockets of fine and coarse material.

E10.5.3 Level and compact to the finished elevation. Compact to 100% Standard Proctor Density for Full-Depth Partial Slab Patches (Class A, B, C, & D) and 90% Standard Proctor Density for miscellaneous concrete slabs and sidewalks.

E10.5.4 Maintain the finished material until the pavement or sidewalk is placed.

MEASUREMENT AND PAYMENT

E10.6 Recycled Concrete Base Course Material

E10.6.1 The supplying, placing and compaction of recycled concrete base course material will be measured on a volume basis and paid for at the Contract Unit Price per cubic metre for the "Supplying and Placing Base Course Material" as specified in accordance with CW 3110.

E10.6.2 No measurement or payment will be made for material placed as a levelling course under miscellaneous concrete slabs and sidewalks where the costs are included in accordance with CW 3235 and CW 3325.

E10.6.3 No measurement or payment will be made for materials rejected by the Contract Administrator.

E11. DOUBLE CUTTING OF CONCRETE PAVEMENT

E11.1 Description

E11.1.1 General

(a) Further to CW 3230 and CW 3235, this specification covers double cutting of concrete pavement.

E11.1.2 Referenced Standard Construction Specifications

- (a) CW 3230 – Full-Depth Patching of Existing Pavement Slabs and Joints.
- (b) CW 3235 – Renewal of Existing Miscellaneous Concrete Slabs.

E11.2 Materials

E11.2.1 As per City of Winnipeg Specifications, CW 3230 and CW 3235.

E11.3 Construction Methods

E11.3.1 In addition to City of Winnipeg Specifications, CW 3230 Section 9.1 and CW 3235 Section 3.1, the Contractor shall double cut each joint.

E11.3.2 The Contractor shall cut, to full depth, two cuts 150 mm apart at every concrete joint to ensure that no chipping, spalling, or other damage to adjacent pavement occurs during removal, to the Contract Administrator's satisfaction.

E11.3.3 Should the adjacent pavement chip, spall or otherwise be damaged, the Contractor shall re-saw cut the pavement edge and remove the damaged concrete, to the Contract Administrator's satisfaction.

E11.4 Measurement and Payment

E11.4.1 There will be no measurement or payment for double cutting of concrete pavement as described in this specification.

E12. CONCRETE FINISHING TOLERANCES

E12.1 Description

E12.1.1 General

- (a) Further to CW 3310, this specification covers the tolerances of concrete pavement.

E12.1.2 Referenced Standard Construction Specifications

- (a) CW 3310 – Portland Cement Concrete Pavement Works.

E12.2 Materials

E12.2.1 As per City of Winnipeg Specifications, CW 3310.

E12.3 Construction Methods

E12.3.1 In addition to City of Winnipeg Specifications, CW 3310 Section 9.5, the Contractor shall ensure that the tolerances for the finishing of concrete pavements are met.

E12.3.2 The Contractor shall ensure that the finished grade of a concrete joint and/or slab is within an accuracy of plus or minus 5 mm with a rounded shape 3.0 metre long metal straight edge on every joint and slab.

E12.3.3 Since these pavements are not scheduled for an overlay nor diamond grinding, if upon curing, the old pavement to new joint or slab fall outside the tolerances mentioned in this specification the concrete pavement repair will be removed and replaced to the Contract Administrator's satisfaction, at the Contractor's expense.

E12.4 Measurement and Payment

E12.4.1 There will be no measurement or payment for ensuring the concrete finishing tolerances within this specification are met.

E13. PARTIAL DEPTH CONCRETE REPAIRS

E13.1 Description

E13.1.1 General

- (a) This Specification shall cover all operations relating to partial depth concrete repairs of concrete pavement joints. The work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

E13.1.2 Referenced Standard Construction Specifications

- (a) CW 3310 – Portland Cement Concrete Pavement Works.

E13.2 Materials

E13.2.1 Concrete Repair Materials

- (a) Acceptable material to be used for the partial depth repairs is Five Star Highway Patch. This material shall be covered and kept out of direct sunlight when being stored. No substitutions are allowed for this material.
- (b) Clean and potable water is to be used for mixing of the patching material. Water used for mixing must not exceed 25° Celsius.
- (c) 10 mm gravel in accordance with the following gradation:
- | <u>Sieve</u> | <u>% Passing</u> |
|--------------|------------------|
| 10 | 100% |
| 5 | 0 – 15% |
| 2.5 | 0 – 5% |
| 80 micron | 0 – 1% |
- (d) Curing Compound will be Type 2, white-pigmented and water based liquid membrane-forming curing in accordance with ASTM C309.

E13.2.2 Bond Breaker

- (a) Bond Breaker shall be Styrofoam (6.5 ± .5 mm thick) or waxed cardboard or other suitable product approved by the Contract Administrator.

E13.3 Equipment

E13.3.1 Chipping hammers shall be either Hilti TE 905 electric driven or if using air driven hammers, shall be less than or equal to 13.5 kg, combined with sharp chipping tempered hammer bits.

E13.3.2 Sand blasting equipment shall be air compressor operated with a nozzle size matched to the air compressor pressure. Preferred equipment is:

- (a) Clemco Model 2020 with a #4 nozzle on a dolly using Black Diamond 20/40 grit at an operating pressure of 110 PSI.

Acceptable sand blasting equipment is:

- (b) Clemco Model 1042 using fine silica sand at an operating pressure of 100 PSI.

E13.3.3 An oil free jetted air compressor shall be used to blow out repairs, vacuum will not be acceptable.

E13.3.4 Quickie Saw, capable of holding 2-14" diamond tip blades and must be used in conjunction with a cart to make long straight cuts.

E13.3.5 A mason's hammer for sounding concrete.

E13.3.6 Calibrated 3 litre (2.84 quart) water container.

E13.4 Construction Methods

- E13.4.1 Remove any existing AMZ or asphaltic material if applicable from the concrete surface adjacent to the area to be repaired.
- E13.4.2 Sawcut the repair edge a minimum width of 25 mm beyond the edge of the deteriorated concrete, to a minimum depth of 25 mm. Sawcuts shall be made parallel to the joint. No diagonal cuts are allowed. For pavements where deterioration is observed 50 mm or less in depth, a 12 mm edge sawcut can be utilized.
- E13.4.3 Remove existing sealant 100 mm beyond the ends of the repair
- E13.4.4 Remove all loose or deteriorated concrete with either an electric or air driven 13.5 kg chipping hammer without damaging the saw cut or existing joint. If during removal, damage occurs beyond the sawcut, remove the concrete at a 45° angle down to the joint. A new sawcut is not required.
- E13.4.5 Sound the concrete using sight, sound and feel with a mason's hammer to determine the presence of additional deteriorated concrete. Complete additional removal of any unsound concrete, as stated above.
- E13.4.6 If any of the following conditions are present in a concrete joint, repairs should be completed as a full depth repair:
- (a) Vertical displacement of the concrete slab by more than 5mm.
 - (b) Corrosion of the tie bars or dowels.
 - (c) Concrete deterioration is present to the bottom or around the existing tie bars or dowels.
 - (d) Improper layout of original pavement joints.
- E13.4.7 Sawcut 6 mm wide along the existing joint, to a depth of 10mm below the deepest part of the deteriorated concrete or to the depth of the steel. The saw cut shall extend the full length of the repair area. Do not cut the steel.
- E13.4.8 Sandblast the concrete surface of the repair area, the saw cut run-outs and 25mm beyond the perimeter of the repair area to ensure that the concrete surface is rough and clean. The Contractor shall be responsible for protecting traffic during sandblasting.
- E13.4.9 Use compressed air that has an oil free air jet having sufficient volume and pressure to remove dust and loose particles.
- E13.4.10 Place a 6 mm bond breaker to the full length and depth of the saw cut to match the pavement surface. The bond breaker shall extend 50 mm beyond the edge of the repair.
- E13.4.11 Mix the concrete repair material in accordance with the manufacturer's guidelines and according to the following instructions:
- (a) Material and water are to be stored in an enclosed vehicle or facility.
 - (b) Water for mixing must be no more than 25° Celsius and must be clean and potable. If the mix temperature is greater than 25° Celsius bags of cubed ice shall be used for mixing in the water. Bags shall remain intact to keep the ice cubes from mixing in the water.
 - (c) Remove old mix material from the pail by scraping the bucket after every batch.
- E13.4.12 The existing concrete surface shall be misted until immediately prior to placement of the repair material. If the temperature of the concrete is too high place ice in the hand sprayer to reduce the temperature.
- E13.4.13 Place the concrete repair material according to the following instructions:
- (a) Place the repair material on both sides of the bond breaker at the same time. The bond breaker must remain straight during placement of the repair material.
 - (b) Start placing repair material on the high side of the joint if possible. Plan the placement so there will be a minimum number of ends of active material where continuous placement is happening.

- (c) Do not do partial fill with a layer on the bottom between batches. Only bulkhead a cold joint. If a cold joint is placed, sand blast before butting new material against the bulkhead. Create a cold joint by striking off vertically and removing excess repair material. To keep more than one joint active when more than one head of material is being worked on, use part of each succeeding batch to extend the working time of each active repair material head.
- (d) To finish a repair, strike off material with the edge of a trowel flush with the existing concrete and finish with a steel trowel.
- (e) Do not add additional water during mixing or after mixing as it will result in strength loss of the repair material.
- (f) Use minimal motions to finish the surface. Overworking will result in scaling or spalling of the repair surface.
- (g) The finished concrete shall be flush with the adjacent existing concrete with a tolerance of 6 mm high and 0 mm low

E13.4.14 Saw cut run-outs shall be filled with concrete repair material.

E13.4.15 Uniformly apply water based white pigmented curing compound once the material has set up.

E13.4.16 Sawcut the width and depth to match the existing pavement joint reservoir and reseal.

E13.5 Measurement & Payment

E13.6 Partial Depth Concrete Repairs

E13.6.1 Construction of Partial Depth Concrete Repairs will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Partial Depth Concrete Repairs". The area to be paid for will be the total number of square meters of partial depth concrete repairs supplied and placed in accordance with this specification and accepted by the Contract Administrator, including all materials and operations herein described and all other items incidental to the Work included in this Specification. Any partial depth repair that is less than 0.03 m² shall be measured as 0.03 m².

APPENDIX 'A'

GEOTECHNICAL REPORT

APPENDIX 'A' - GEOTECHNICAL REPORT

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The geotechnical report is provided to aid in the Contractor's evaluation of the existing pavement structure and/or soil conditions. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling. However, variations in pavement structure and/or soil conditions may exist between test holes and fluctuations in groundwater levels can be expected seasonally and may occur as a result of construction activities. The nature and extent of variations may not become evident until construction commences.

Geotechnical Report for 2010 Concrete Pavement Preservation Program – Bishop Grandin Boulevard – Lagimodiere Boulevard to Lake wood Boulevard

Test Hole Locations



Summary of Core Samples



TBT Engineering Limited
 110 Paramount Road, Winnipeg, MB R2X 2W3
 PH: (204) 633-6008 FAX: (204) 633-6620
 E-Mail: hmanalo@tbte.ca

Natural Moisture Content Determination												
To: Dillon Consulting Limited						TBT Project No.: 09-637						
895 Waverly Street, Suite 200												
Winnipeg, Manitoba R3T 5P4												
Attn: Jeff Short, EIT												
Project: Geotechnical Investigation - Street Reconstruction												
Bishop Grandin, Lagimodiere Blvd to St. Anne's Road, Winnipeg, Manitoba												
Borehole:	1	1	1	1	1	1	1	1	1	1		
Sample ID:	1	2	3	4	5	6	7	8	9	10		
Depth:	0.2	0.6	0.9	1.2	1.5	1.8	2.1	2.5	2.8	3		
% Moisture	4.2	3.9	32.1	35.0	29.7	29.0	34.0	36.6	22.7	43.9		
Borehole:	2	2	2	2	2	2	2	2	2	2	2	2
Sample ID:	1	2	3	4	5	6	7	8	9	10	11	12
Depth:	0.1	0.3	0.6	0.9	1.1	1.3	1.5	1.8	2.1	2.4	2.7	3
% Moisture	3.9	19.8	35.9	26.1	21.6	32.7	28.0	30.6	34.7	22.1	36.6	44.0
Borehole:	3	3	3	3	3	3	3	3	3	3		
Sample ID:	1	2	3	4	5	6	7	8	9	10		
Depth:	0.1	0.5	1.0	1.3	1.5	1.8	2.0	2.4	2.7	3.0		
% Moisture	4.5	34.4	32.7	30.9	29.7	34.5	38.6	27.1	41.8	45.6		

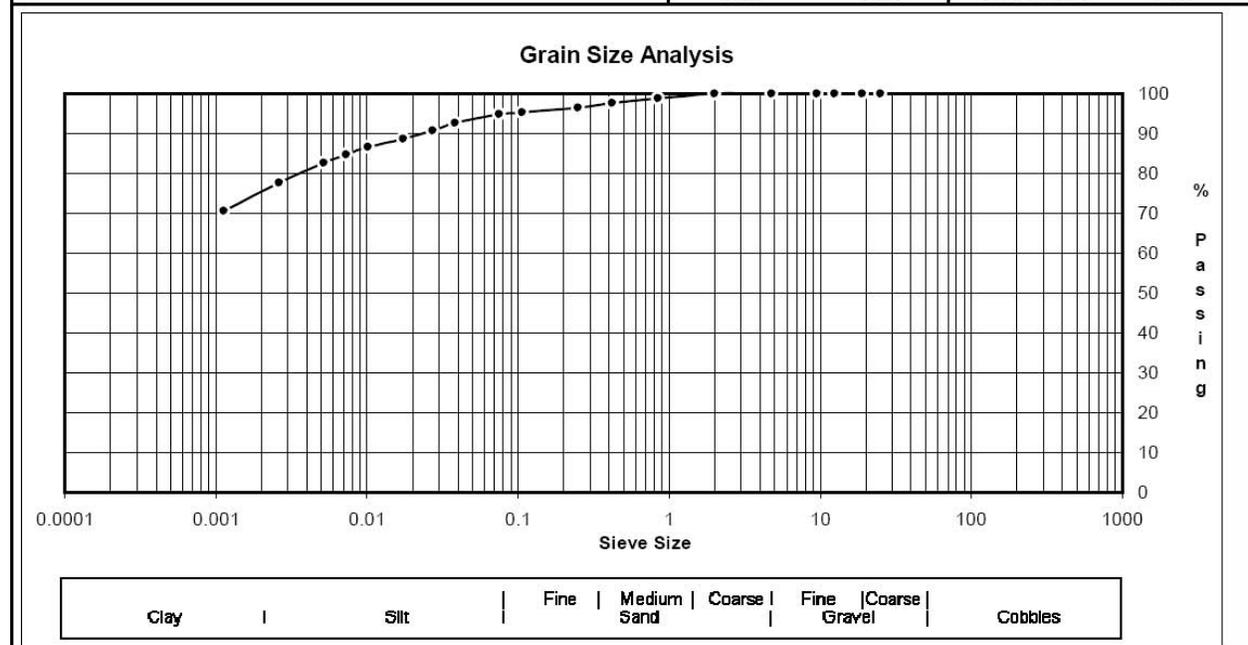


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 110 Paramount Road, Winnipeg, MB R2X 2W3
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 E-Mail: hmanalo@tbt.ca

Particle Size Analysis of Soils Test Report

To: Dillon Consulting Limited 895 Waverly Street, Suite 200 Winnipeg, Manitoba R3T 5P4 Attention: Jeff Short, EIT Project: Geotechnical Investigation - Street Reconstruction Bishop Grandin, Lagimodiere Blvd to St. Anne's Road, Winnipeg, Manitoba	TBTE Project No.: 09-637 Lab Sample No. 10-03
--	--

Date Sampled:	Date Received:	Sieve Analysis		Hydrometer Analysis	
Sampled By:	Date Tested:	Sieve(mm)	% Passing	Diameter	% Finer
06-Jan-10	06-Jan-10	37.5	100.0	0.106	95.3
PB-TBTE	21-Jan-10	25	100.0	0.075	94.8
Material Identification		19	100.0	0.038135	92.7
B.H./T.H. No.	BH 3	12.5	100.0	0.027223	90.7
Sample No.	-	9.5	100.0	0.0173787	88.7
Depth	1 m	4.75	100.0	0.0101259	86.7
Specific Gravity of Material:	2.65	2	100.0	0.0072667	84.7
		0.841	98.8	0.005154	82.6
		0.42	97.6	0.0026098	77.6
		0.25	96.4	0.0011255	70.5



Soil Classification	% Composition		D10	0
	0	Gravel	D30	0
Clay	5.2	Sand	D60	0
	19.8	Silt	Cu	-
	75.0	Clay	Cc	-

Test Method: ASTM D422, D2216, D4318, D2487
 TBT Technician: Elena Oberez
REVIEWED BY: **Hermie Manalo**



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Atterberg Limits

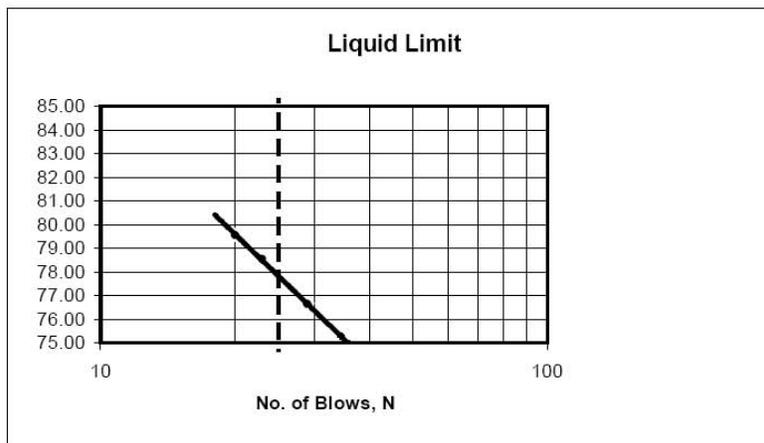
To: Dillon Consulting Limited
 895 Waverly Street, Suite 200
 Winnipeg, Manitoba R3T 5P4

TBT Project No.: 09-637
 Lab Sample No.: 10-03

Attn: Jeff Short, EIT
 Project: Geotechnical Investigation - Street Reconstruction
 Bishop Grandin, Lagimodiere Blvd to St. Anne's Road, Winnipeg, Manitoba

Liquid Limit Determination

Dish No.:	13	12	23		Liquid Limit 25 Blows
Wet Soil + Dish:	37.02	32.9	36.5		78
Dry Soil + Dish:	29.31	26.82	28.95		
Moisture:	7.71	6.08	7.55		
Dish:	19.25	19.08	19.46		
Dry Soil:	10.06	7.74	9.49		
% Moisture:	76.64	78.55	79.56		
No. of Blows:	29	23	20		



Material Identification:

Date Received: 06-Jan-10
 Date Tested: 21-Jan-10
 B.H./T.P. No.: TH3
 Sample No.: 3
 Depth: 1 m

Liquid Limit, %: 78
Plastic Limit, %: 29
Plasticity Index: 49

Plastic Limit Determination

Dish No.:	22	100			
Wet Soil + Dish:	21.64	33.38			
Dry Soil + Dish:	21.13	30.9			
Moisture:	0.51	2.48			
Dish:	19.36	22.3			
Dry Soil:	1.77	8.6			
% Moisture:	28.81	28.84			
Average:					29

Test Method : ASTM: D4318, D2216

TBTE Technician: Elena Oberez

Remarks: High Plastic Clay, CH

REVIEWED BY: Hermie Manalo

Test Hole Log for Borehole 1

LOG OF BOREHOLE 1

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	DEPTH SCALE	CPT (kPa)		PLASTIC LIMIT w _p	NATURAL MOISTURE CONTENT w	LIQUID LIMIT w _L	REMARKS
DEPTH	ELEV.	DESCRIPTION	STRAT PLOT	% RECOVERY			TYPE	"N" VALUES				
		LIMESTONE - 20 mm Crushed										Dry on completion.
		LIMESTONE - 80 mm Crushed			AS							
		CLAY - trace organics, black			AS							
1		----- - brown			AS							
					AS							
2					AS							
		SILT - Clayey, brown			AS							
		CLAY - brown			AS							
3		End of Borehole @ 3.2 m.			AS							Location: 2.5 m North from edge of concrete pavement. UTM: 14U 639909 5522742
4												

W:TBTBOREHOLE 2 09-637.GPJ TBT.GDT 10/21



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 110 Paramount Road
 Winnipeg, Manitoba R2X 2W3
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SAMPLE TYPE LEGEND

AS	Auger Sample	RC	Rock Core
SS	Split Spoon Sample	PS	Ponar Sample
TW	70mm Thin Wall Tube	SD	Side Sample
CC	Concrete Core		

ENCLOSURE 1

Test Hole Log for Borehole 2

LOG OF BOREHOLE 2

SOIL PROFILE				SAMPLES			CPT (kPa)				REMARKS				
DEPTH	ELEV.	DESCRIPTION	STRAT PLOT	% RECOVERY	TYPE	"N" VALUES	GROUND WATER CONDITIONS	CPT (kPa)				PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT W	LIQUID LIMIT W _L	GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
								×	⊗	◆	■				
		LIMESTONE - 20 mm Crushed			AS										Dry on completion.
		GRAVEL - 20 mm			AS										
		CLAY - trace organics, black			AS										
					AS										
1		SILT - Clayey, brown			AS										
		CLAY - trace silt, brown			AS										
					AS										
					AS										
2					AS										
		SILT - Clayey, brown			AS										
		CLAY - grey/brown			AS										
					AS										
3					AS										
		End of Borehole @ 3.2 m.												Location: 2.5 m North from edge of concrete pavement. UTM: 14U 639432 5522746	
4															

WTBT BOREHOLE 2 09-637 GPJ TBT GDT 10/21



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SAMPLE TYPE LEGEND

- | | | | |
|----|---------------------|----|--------------|
| AS | Auger Sample | RC | Rock Core |
| SS | Split Spoon Sample | PS | Ponar Sample |
| TW | 70mm Thin Wall Tube | SD | Side Sample |
| CC | Concrete Core | | |

ENCLOSURE 2

Test Hole Log for Borehole 3

LOG OF BOREHOLE 3

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	DEPTH SCALE	CPT (kPa)		PLASTIC LIMIT W _p	NATURAL MOISTURE CONTENT W	LIQUID LIMIT W _L	REMARKS
DEPTH	ELEV.	DESCRIPTION	STRAT PLOT	% RECOVERY			TYPE	"N" VALUES				
		LIMESTONE - 20 mm Crushed										Dry on completion.
		CLAY FILL - trace gravel, brown			AS							
		CLAY - trace organics, black			AS							
1		CLAY - brown			AS							
		CLAY - brown			AS							
		CLAY - brown			AS							
2		SILT - trace clay, trace sand, brown			AS							
		CLAY - trace silt, brown			AS							
		CLAY - trace silt, brown			AS							
3		End of Borehole @ 3.2 m.			AS							
4												

WTBT BOREHOLE 2_09-637.GPJ_TBT.GDT_10/21



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SAMPLE TYPE LEGEND

- | | | | |
|----|---------------------|----|--------------|
| AS | Auger Sample | RC | Rock Core |
| SS | Split Spoon Sample | PS | Ponar Sample |
| TW | 70mm Thin Wall Tube | SD | Side Sample |
| CC | Concrete Core | | |

ENCLOSURE 3