



THE CITY OF WINNIPEG

TENDER

TENDER NO. 289-2020

2020 STREETS MAINTENANCE PRESERVATION PROGRAM

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 2020 STREETS MAINTENANCE PRESERVATION PROGRAM

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, May 13, 2020.

B2.2 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 Tender, 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 Tender 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 Tender 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.

B4.6 Any enquiries concerning submitting through MERX should be addressed to:

MERX Customer Support
Phone: 1-800-964-6379
Email: merx@merx.com

B5. CONFIDENTIALITY

B5.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:

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

B5.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Tender to the media or any member of the public without the prior written authorization of the Contract Administrator.

B6. ADDENDA

B6.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Tender, or clarifying the meaning or intent of any provision therein.

B6.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

B6.3 Addenda will be available on the MERX website at www.merx.com.

B6.4 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the MERX website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B6.5 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid/Proposal. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6.6 Notwithstanding B4, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D3.

B7. SUBSTITUTES

B7.1 The Work is based on the Plant, Materials and methods specified in the Tender.

B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.

B7.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.

B7.4 The Bidder shall ensure that any and all requests for approval of a substitute:

- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
- (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
- (c) identify any anticipated cost or time savings that may be associated with the substitute;
- (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
- (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.

- B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B7.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B18.
- B7.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B8. BID COMPONENTS

- B8.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices; and
 - (c) Form G1: Bid Bond and Agreement to Bond.
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely.
- B8.4 The Bid shall be submitted electronically through MERX at www.merx.com.
- B8.4.1 Bids will **only** be accepted electronically through MERX.
- B8.5 Bidders are advised that inclusion of terms and conditions inconsistent with the Tender document, including the General Conditions, will be evaluated in accordance with B18.1(a).

B9. BID

- B9.1 The Bidder shall complete Form A: Bid/Proposal, making all required entries.
- B9.2 Paragraph 2 of Form A: Bid/Proposal shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted; or
 - (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B9.2.1 If a Bid is submitted jointly by two (2) or more persons, each and all such persons shall identify themselves in accordance with B9.2.

B9.3 In Paragraph 3 of Form A: Bid/Proposal, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B9.4 Paragraph 13 of Form A: Bid/Proposal shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers; or
- (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B9.4.1 The name and official capacity of all individuals signing Form A: Bid/Proposal should be entered below such signatures.

B9.5 If a Bid is submitted jointly by (2) two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B10. PRICES

B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B10.1.1 Prices stated on Form B: Prices shall not include any costs which may be incurred by the Contractor with respect to any applicable funding agreement obligations as outlined in D27. Any such costs shall be determined in accordance with D27.

B10.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

B10.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B10.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B10.5 The Bidder shall enter the Total Bid Price from Form B: Prices into the Total Bid Price field in MERX.

B10.5.1 Bidders are advised that the calculation indicated in B18.4 will prevail over the Total Bid Price entered in MERX.

B11. DISCLOSURE

B11.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B11.2 The Persons are:

- (a) N/A

B12. CONFLICT OF INTEREST AND GOOD FAITH

- B12.1 Further to C3.2, Bidders, by responding to this Tender, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.
- B12.2 Conflict of Interest means any situation or circumstance where a Bidder or employee of the Bidder proposed for the Work has:
- (a) other commitments;
 - (b) relationships;
 - (c) financial interests; or
 - (d) involvement in ongoing litigation;
- that could or would be seen to:
- (i) exercise an improper influence over the objective, unbiased and impartial exercise of the independent judgment of the City with respect to the evaluation of Bids or award of the Contract; or
 - (ii) compromise, impair or be incompatible with the effective performance of a Bidder's obligations under the Contract;
- (e) has contractual or other obligations to the City that could or would be seen to have been compromised or impaired as a result of its participation in the Tender process or the Work; or
 - (f) has knowledge of confidential information (other than confidential information disclosed by the City in the normal course of the Tender process) of strategic and/or material relevance to the Tender process or to the Work that is not available to other bidders and that could or would be seen to give that Bidder an unfair competitive advantage.
- B12.3 In connection with its Bid, each entity identified in B12.2 shall:
- (a) avoid any perceived, potential or actual Conflict of Interest in relation to the procurement process and the Work;
 - (b) upon discovering any perceived, potential or actual Conflict of Interest at any time during the Tender process, promptly disclose a detailed description of the Conflict of Interest to the City in a written statement to the Contract Administrator; and
 - (c) provide the City with the proposed means to avoid or mitigate, to the greatest extent practicable, any perceived, potential or actual Conflict of Interest and shall submit any additional information to the City that the City considers necessary to properly assess the perceived, potential or actual Conflict of Interest.
- B12.4 Without limiting B12.3, the City may, in its sole discretion, waive any and all perceived, potential or actual Conflicts of Interest. The City's waiver may be based upon such terms and conditions as the City, in its sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately avoided or mitigated, including requiring the Bidder to put into place such policies, procedures, measures and other safeguards as may be required by and be acceptable to the City, in its sole discretion, to avoid or mitigate the impact of such Conflict of Interest.
- B12.5 Without limiting B12.3, and in addition to all contractual or other rights or rights at law or in equity or legislation that may be available to the City, the City may, in its sole discretion:
- (a) disqualify a Bidder that fails to disclose a perceived, potential or actual Conflict of Interest of the Bidder or any of its employees proposed for the Work;
 - (b) require the removal or replacement of any employees proposed for the Work that has a perceived, actual or potential Conflict of Interest that the City, in its sole discretion, determines cannot be avoided or mitigated;

- (c) disqualify a Bidder or employees proposed for the Work that fails to comply with any requirements prescribed by the City pursuant to B12.4 to avoid or mitigate a Conflict of Interest; and
- (d) disqualify a Bidder if the Bidder, or one of its employees proposed for the Work, has a perceived, potential or actual Conflict of Interest that, in the City's sole discretion, cannot be avoided or mitigated, or otherwise resolved.

B12.6 The final determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in its sole discretion.

B13. QUALIFICATION

B13.1 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.

B13.2 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 <https://www.winnipeg.ca/matmgt/Templates/files/debar.pdf>

B13.3 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;
- (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);

B13.4 Further to B13.3(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) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) in the form of:
 - (i) a copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Certificate of Recognition (COR) Program administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
 - (ii) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
- (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/>).

B13.5 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.

B13.6 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.

B14. BID SECURITY

B14.1 The Bidder shall include in its Bid Submission bid security in the form of a digital 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 Form G1: Bid Bond and Agreement to Bond, available on The City of Winnipeg, Corporate Finance, Materials Management Division website at <https://www.winnipeg.ca/MatMgt/templates/files/eBidsecurity.pdf>.

B14.2 Bid security shall be submitted in a digital format meeting the following criteria:

- (a) The version submitted by the Bidder must have valid digital signatures and seals;
- (b) The version submitted by the Bidder must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company.
- (c) The version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf.
- (d) The verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees.
- (e) The results of the verification must provide a clear, immediate and printable indication of pass or fail regarding B14.2(a).

B14.3 Bonds failing the verification process will not be considered to be valid and the bid shall be determined to be non-responsive in accordance with B18.1(a).

B14.4 Bonds passing the verification process will be treated as original and authentic.

B14.4.1 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.

B14.5 The bid security of the successful Bidder and the next two (2) lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly formed with the successful Bidder and the contract securities are furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.

B14.6 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 Tender.

B15. OPENING OF BIDS AND RELEASE OF INFORMATION

B15.1 Bids will not be opened publicly.

B15.2 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 MERX website at www.merx.com.

B15.3 After award of Contract, the name(s) of the successful Bidder(s) and their Contract amount(s) will be available on the MERX website at www.merx.com.

B15.4 The Bidder is advised that any information contained in any Bid may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).

B15.4.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Bid Submission identified by the Bidder as such in accordance with and by reference to Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.

B16. IRREVOCABLE BID

B16.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid/Proposal.

B16.2 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 formed and the contract securities have been 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/Proposal.

B17. WITHDRAWAL OF BIDS

B17.1 A Bidder may withdraw his/her Bid without penalty prior to the Submission Deadline.

B18. EVALUATION OF BIDS

B18.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Tender, or acceptable deviation therefrom (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B13 (pass/fail);
- (c) Total Bid Price; and
- (d) economic analysis of any approved alternative pursuant to B7.

B18.2 Further to B18.1(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.

B18.3 Further to B18.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is qualified.

B18.4 Further to B18.1(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.

B18.4.1 Further to B18.1(a), in the event that a unit price is not provided on Form B: Prices, the City may determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B18.4.2 Bidders are advised that the calculation indicated in B18.4 will prevail over the Total Bid Price entered in MERX.

B19. AWARD OF CONTRACT

- B19.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B19.2 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 qualified, and the Bids are determined to be responsive.
- B19.2.1 Without limiting the generality of B19.2, 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.
- B19.3 If funding for the Work is provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada, Bidders are advised that the terms D27 shall immediately take effect upon confirmation of such funding, regardless of when funding is confirmed.
- B19.4 Where an award of Contract is made by the City, the award shall be made to the qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B18.
- B19.4.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction (Revision 2020-01-31)* 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 Tender to a section, clause or subclause with the prefix “C” designates a section, clause or subclause in the *General Conditions for Construction*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

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

- (a) Concrete Pavement Preservation
 - (i) N/B Brookside Boulevard from Inkster Boulevard to Mollard Road;
 - (ii) S/B Kenaston Boulevard from Taylor Avenue to Sterling Lyon Parkway;
 - (iii) N/B Kenaston Boulevard from Sterling Lyon Parkway to Taylor Avenue;
 - (iv) W/B Bishop Grandin Boulevard from Pembina Highway On-Ramp to New Rapid Transit Corridor Overpass;
 - (v) S/B Dakota Street from Abbotsford Crescent to South limit of College Jeanne-Suave; and
 - (vi) N/B Dakota Street from Southglen Boulevard to Hyatt Place.
- (b) Asphalt Mill and Fill
 - (i) S/B Moray Street from Ness Avenue to Portage Avenue.
- (c) Asphalt Shoulder Reconstruction
 - (i) E/B Bishop Grandin Boulevard from St. Annes Road to Boulevard de la Seigneurie.

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

- (a) Concrete Pavement Preservation
 - (i) Renewal of existing concrete slabs and joints with full depth concrete repairs;
 - (ii) Partial depth repairs of existing joints;
 - (iii) Miscellaneous curb, splash strip and median repairs;
 - (iv) Joint sealing;
 - (v) Diamond Grinding (N/B Brookside Boulevard, S/B Kenaston Boulevard, N/B Kenaston Boulevard, W/B Bishop Grandin Boulevard); and
 - (vi) Cross Stitching (S/B Dakota Street, N/B Dakota Street).
- (b) Asphalt Mill and Fill
 - (i) Asphalt milling (average thickness 50 mm);
 - (ii) Minor curb and splash strip renewals;
 - (iii) Asphalt patching
 - (iv) Placement of asphalt overlay (average thickness 50 mm); and
 - (v) Reflective crack sealing.
- (c) Asphalt Shoulder Reconstruction
 - (i) Excavation
 - (ii) Rock placement;
 - (iii) Minor pavement and curb repairs adjacent to roadway shoulder;
 - (iv) Asphalt pavement; and
 - (v) Topsoil and seed.

D3. CONTRACT ADMINISTRATOR

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

Taran J. Peters, P.Eng.
Project Manager

Telephone No. 204 453 2301
Email Address tpeters@dillon.ca

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/her 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 C22.4, 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/Proposal.

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 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator identified in D3.

D5.3 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:

The City of Winnipeg
Legal Services Department
Attn: Director of Legal Services
Facsimile No.: 204-947-9155

D6. FURNISHING OF DOCUMENTS

D6.1 Upon award of the Contract, the Contractor will be provided with five (5) complete sets of the Tender. If the Contractor requires additional sets of the Tender, they will be supplied to him/her 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 Documents, if applicable.
- 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>
- D8.3 Notwithstanding B13.4 at any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require an updated COR Certificate or Annual Letter of good Standing. A Contractor, who fails to provide a satisfactory COR Certificate or Annual Letter of good Standing, will not be permitted to continue to perform any Work.

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) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than two million dollars (\$2,000,000.00) inclusive for loss or damage including personal injuries and death resulting from any one (1) accident or occurrence; and
 - (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 Documents, as applicable.
- 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. CONTRACT SECURITY

- D10.1 The Contractor shall provide and maintain the performance bond and the labour and material payment bond 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; and
 - (b) a labour and material payment bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H2: Labour and Material Payment Bond), in an amount equal to fifty percent (50%) of the Contract Price.

- D10.2 The Contractor shall provide the City Solicitor with the required performance and labour and material payment bonds within seven (7) Calendar Days of notification of the award of the Contract by way of an award letter 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 Documents, if applicable.
- D10.3 The Contractor shall, as soon as practicable after entering into a contract with a Subcontractor:
- (a) give the Subcontractor written notice of the existence of the labour and material payment bond in D10.1(b); and
 - (b) post a notice of the bond and/or a copy of that bond in a conspicuous location at the Site of the Work.

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 Documents, if applicable.

D12. DETAILED WORK SCHEDULE

- D12.1 The Contractor shall provide the Contract Administrator with a 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 Documents, as applicable.
- D12.2 The detailed work schedule shall consist of the following:
- (a) a Gantt chart for the Work acceptable to the Contract Administrator.
- D12.3 Further to D12.2(a), the C.P.M. schedule shall clearly identify the start and completion dates of all of the following activities/tasks making up the Work as well as showing those activities/tasks on the critical path:

SCHEDULE OF WORK

D13. COMMENCEMENT

- D13.1 The Contractor shall not commence any Work until he/she is in receipt of an award letter 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 contract security specified in D10;
 - (vii) the Subcontractor List specified in D11: and
 - (viii) the Detailed Work Schedule specified in D12
 - (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 commence the Work on the Site within seven (7) Working Days of receipt of the award letter.

D13.4 The City intends to award this Contract by June 3, 2020.

D13.4.1 If the actual date of award is later than the intended date, the dates specified for Substantial Performance and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D14. RESTRICTED WORK HOURS

D14.1 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.

D15. WORK BY OTHERS

D15.1 Work by others on or near the Site will include but not necessarily be limited to:

- (a) City of Winnipeg Traffic Services Department – Provide necessary regulatory signs and replacement of signs and paint lines. The Contractor is expected to cooperate with the City of Winnipeg.
- (b) City of Winnipeg Traffic Signals – Traffic signal loops may require decommissioning and reinstallation. The Contractor is expected to cooperate with the City of Winnipeg;
- (c) Winnipeg Transit – The Contractor will be required to coordinate with Winnipeg Transit to maintain service and minimize disruption during construction;
- (d) Manitoba Hydro – Manhole adjustments. The Contractor is expected to coordinate with Manitoba Hydro for the adjustment of any hydro manholes or required riser rings;
- (e) BellMTS – Manhole adjustments. The Contractor is expected to coordinate with BellMTS for the adjustment of any manholes or required riser rings;
- (f) CP Railway – The Contractor is expected to cooperate with CP Railway for any proposed work within the CP right of way; and
- (g) CN Railway – The Contractor is expected to cooperate with CN Railway for any proposed work within the CN right of way.

D16. SEQUENCE OF WORK

D16.1 Further to C6.1, the sequence of work shall be as follows and any modifications or alternatives must be approved by the Contract Administrator:

D16.1.1 Construction activity is to be limited to one lane of the roadway at a time. No construction shall commence on the subsequent lanes 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 grow the work zone as the construction progresses in order to maintain as much roadway to vehicular traffic as possible.

D16.1.3 The partial depth concrete repairs are to be commenced prior to the full depth concrete repairs and at all times shall precede the full depth concrete repairs within the work zone.

D16.1.4 Asphalt placement will be sequenced as to prevent longitudinal asphalt cold joints.

- (a) The Contractor shall provide one (1) week notice to the Contract Administrator prior to placing the final lift of asphalt.

D16.1.5 No pavement drop-offs will be permitted overnight.

D16.1.6 Placing of topsoil and finished grading shall be completed prior to commencing construction of asphaltic concrete overlays, including scratch courses.

- D16.1.7 The construction limits of E/B Bishop Grandin Boulevard includes a CP railway crossings. It is anticipated that the Contractor should not have any Work within the CP Right of Way. Should any work be required within the Right of Way, advance notice of four (4) weeks will be required to allow time for the Contract Administrator to coordinate appropriate flagging and track control with the respective railway.
- D16.1.8 Required approvals, flagging and track control must be in place prior to commencing any work within the rail right of ways. CN and CP procedures and guidelines will be followed at all times while working within their respective right of ways.
- D16.1.9 Access to all public and private approaches is to be maintained throughout construction in all project locations unless a closure has been approved by the Contract Administrator.
- D16.2 Further to C6.1, the sequence of work shall comply with the following:
- D16.2.1 Providing that the Work on each street is completed in a similar order to the order that the Work was commenced in, the Contractor will be permitted to have a maximum of three (3) streets under construction at any one time. Completion of a street means that all of the necessary concrete, asphalt including approaches and landscaping Work is completed to the satisfaction of the Contract Administrator.
- D16.2.2 Where the Contractor utilizes two (2) or more crews that work independently on the same major component of the Work as identified in D2, the Contract Administrator may approve an increase to the maximum number of streets under construction at any time.
- D16.2.3 Placing the topsoil and finished grading of all boulevard and median areas shall be completed prior to commencing construction of asphaltic concrete overlays, including scratch courses.

D17. SUBSTANTIAL PERFORMANCE

- D17.1 The Contractor shall achieve Substantial Performance by September 4, 2020.
- 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 by September 11, 2020.
- 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 or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Calendar Day for each and every Calendar Day following the days fixed herein for same during which such failure continues:

- (a) Substantial Performance – Two Thousand three hundred dollars (\$2,300.00);
- (b) Total Performance – One Thousand three hundred dollars (\$1,300.00).

D19.2 The amounts specified for liquidated damages in D19.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Substantial Performance or Total Performance by the days fixed herein for same.

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

D20. COVID-19 SCHEDULE DELAYS

D20.1 The City acknowledges that the schedule for this Contract may be impacted by the COVID-19 pandemic. Commencement and progress of the Work shall be performed by the Contractor with due consideration to the health and safety of workers and the public and directives from health authorities and various levels of government, and in close consultation with the Contract Administrator.

D20.2 If the Contractor is delayed in the performance of the Work by reason of the COVID-19 pandemic, the Work schedule may be adjusted by a period of time equal to the time lost due to such delay and costs related to such delay will be determined as identified herein.

D20.3 A minimum of seven (7) Calendar Days prior to the commencement of Work, the Contractor shall declare whether COVID-19 will affect the start date. If the Contractor declares that COVID-19 will affect the start date, the Contractor shall provide sufficient evidence that the delay is directly related to COVID-19, including but not limited to evidence related to availability of staff, availability of Material or work by others.

D20.4 For any delay related to COVID-19 and identified after Work has commenced, the Contractor shall within seven (7) Calendar Days of becoming aware of the anticipated delay the additional delay and shall provide sufficient evidence as indicated in D20.3. Failure to provide this notice will result in no additional time delays being considered by the City.

D20.5 The Work schedule, including the durations identified in D17 to D18 where applicable, will be adjusted to reflect delays accepted by the Contract Administrator. No additional payment will be made for adjustment of schedules except where seasonal work, not previously identified in the Contract, is carried over to the following construction season.

D20.6 Where Work not previously identified is being carried over solely as a result of delays related to COVID-19, as confirmed by the Contract Administrator, the cost of temporary works to maintain the Work in a safe manner until Work recommences, will be considered by the Contract Administrator. Where the Work is carried over only partially due to COVID-19, a partial consideration of the cost of temporary works will be considered by the Contract Administrator.

D20.7 Any time or cost implications as a result of COVID-19 and in accordance with the above, as confirmed by the Contract Administrator, shall be documented in accordance with C7.

D21. SCHEDULED MAINTENANCE

D21.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Reflective Crack Maintenance as specified in CW3250 R7;

(b) Seeding maintenance as specified in CW3520 R7.

D21.2 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

D22. JOB MEETINGS

D22.1 Regular weekly job meetings will be held at the Site[at the Site or specify location]. These meetings shall be attended by a minimum of one (1) representative of the Contract Administrator, one (1) representative of the City [one representative of the City]and one (1) representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City [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.

D22.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D23. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D23.1 Further to C6.26, 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).

D24. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

D24.1 Further to B13.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B13.4.

MEASUREMENT AND PAYMENT

D25. PAYMENT

D25.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D26. WARRANTY

D26.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

D26.2 Notwithstanding C13.2 or D26.1, 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.

D26.2.1 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.

THIRD PARTY AGREEMENTS

D27. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

D27.1 In the event that funding for the Work of the Contract is provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada, the following terms and conditions shall apply, as required by the applicable funding agreements.

D27.2 Further to D27.1, in the event that the obligations in D27 apply, actual costs legitimately incurred by the Contractor as a direct result of these obligations ("Funding Costs") shall be determined by the actual cost to the Contractor and not by the valuation method(s) outlined in C7.4. In all other respects Funding Costs will be processed in accordance with Changes in Work under C7.

D27.3 For the purposes of D27:

- (a) "**Government of Canada**" includes the authorized officials, auditors, and representatives of the Government of Canada; and
- (b) "**Government of Manitoba**" includes the authorized officials, auditors, and representatives of the Government of Manitoba.

D27.4 Modified Insurance Requirements

D27.4.1 If not already required under the insurance requirements identified in D9, the Contractor will be required to provide wrap-up liability insurance in an amount of no less than two million dollars (\$2,000,000) inclusive per occurrence. Such policy will be written in the joint names of the City, Contractor, Consultants and all sub-contractors and sub-consultants and include twelve (12) months completed operations. The Government of Manitoba and its Ministers, officers, employees, and agents shall be added as additional insureds.

D27.4.2 If not already required under the insurance requirements identified in D9, the Contractor will be required to provide builders' risk insurance (including boiler and machinery insurance, as applicable) providing all risks coverage at full replacement cost, or such lower level of insurance that the City may identify on a case-by-case basis, such as an installation floater.

D27.4.3 The Contractor shall obtain and maintain third party liability insurance with minimum coverage of two million dollars (\$2,000,000.00) per occurrence on all licensed vehicles operated at the Site. In the event that this requirement conflicts with another licensed vehicle insurance requirement in this Contract, then the requirement that provides the higher level of insurance shall apply.

D27.4.4 Further to D9.3, insurers shall provide satisfactory Certificates of Insurance to the Government of Manitoba prior to commencement of Work as written evidence of the insurance required. The Certificates of Insurance must provide for a minimum of thirty (30) days' prior written notice to the Government of Manitoba in case of insurance cancellation.

D27.4.5 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.

D27.5 Indemnification By Contractor

D27.5.1 In addition to the indemnity obligations outlined in C17 of the General Conditions for Construction, the Contractor agrees to indemnify and save harmless the Government of Canada and the Government of Manitoba and each of their respective Ministers, officers, servants, employees, and agents from and against all claims and demands, losses, costs, damages, actions, suit or other proceedings brought or pursued in any manner in respect of any matter caused by the Contractor or arising from this Contract or the Work, or from the goods or services provided or required to be provided by the Contractor, except those

resulting from the negligence of any of the Government of Canada's or the Government of Manitoba's Ministers, officers, servants, employees, or agents, as the case may be.

D27.6 Records Retention and Audits

D27.6.1 The Contractor shall maintain and preserve accurate and complete records in respect of this Contract and the Work, including all accounting records, financial documents, copies of contracts with other parties and other records relating to this Contract and the Work during the term of the Contract and for at least six (6) years after Total Performance. Those records bearing original signatures or professional seals or stamps must be preserved in paper form; other records may be retained in electronic form.

D27.6.2 In addition to the record keeping and inspection obligations outlined in C6 of the General Conditions for Construction, the Contractor shall keep available for inspection and audit at all reasonable times while this Contract is in effect and until at least six (6) years after Total Performance, all records, documents, and contracts referred to in D27.6.1 for inspection, copying and audit by the City of Winnipeg, the Government of Manitoba and/or the Government of Canada and their respective representatives and auditors, and to produce them on demand; to provide reasonable facilities for such inspections, copying and audits, to provide copies of and extracts from such records, documents, or contracts upon request by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada and their respective representatives and auditors, and to promptly provide such other information and explanations as may be reasonably requested by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada from time-to-time.

D27.7 Other Obligations

D27.7.1 The Contractor consents to the City providing a copy of the Contract Documents to the Government of Manitoba and/or the Government of Canada upon request from either entity.

D27.7.2 If the Lobbyists Registration Act (Manitoba) applies to the Contractor, the Contractor represents and warrants that it has filed a return and is registered and in full compliance with the obligations of that Act, and covenants that it will continue to comply for the duration of this Contract.

D27.7.3 The Contractor shall comply with all applicable legislation and standards, whether federal, provincial, or municipal, including (without limitation) labour, environmental, and human rights laws, in the course of providing the Work.

D27.7.4 The Contractor shall properly account for the Work provided under this Contract and payment received in this respect, prepared in accordance with generally accepted accounting principles in effect in Canada, including those principles and standards approved or recommended from time-to-time by the Chartered Professional Accountants of Canada or the Public Sector Accounting Board, as applicable, applied on a consistent basis.

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

TENDER NO.289-2020

2020 STREETS MAINTENANCE PRESERVATION PROGRAM

which is by reference made part hereof and is hereinafter referred to as the "Contract".

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

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

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

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

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

_____ day of _____, 20____ .

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

FORM H2: LABOUR AND MATERIAL PAYMENT BOND
(See D10)

KNOW ALL MEN BY THESE PRESENTS THAT

his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Principal"), and

his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), for the use and benefit of claimants as herein below defined, in the amount of

_____ dollars (\$_____)

of lawful money of Canada, for the payment whereof we, the Principal and the Surety jointly and severally bind ourselves firmly by these presents.

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

TENDER NO. 289-2020

2020 STREETS MAINTENANCE PRESERVATION PROGRAM

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 promptly make payment to all claimants as hereinafter defined, for all labour, service and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void, otherwise it shall remain in full force and effect subject, however, to the following conditions:

- (a) A claimant is defined as one having a direct contract with the Principal for labour, service and material, or any of them, used or reasonably required for use in the performance of the contract, labour, service and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment (but excluding rent of equipment where the rent pursuant to an agreement is to be applied towards the purchase price thereof) directly applicable to the Contract;
- (b) The above-named Principal and Surety hereby jointly and severally agree with the Obligee that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work, labour or service was done or performed, or materials were furnished by such claimant, may sue on this bond, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon;
- (c) No suit or action shall be commenced hereunder by any claimant
 - (i) unless claimant shall have given written notice to the Principal and the Surety above-named, within one hundred and twenty (120) days after such claimant did or performed the last of the work, labour or service, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work, labour or service was done or performed. Such notice shall be served by mailing the same by registered mail to the Principal, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the Province of Manitoba;

- (ii) after the expiration of one (1) year following the date on which Principal ceased work on said Contract; including work performed under the guarantees provided in the Contract;
 - (iii) other than in a court of competent jurisdiction in the Province of Manitoba.
- (d) The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.
- (e) The Surety shall not be liable for a greater sum than the specified penalty of this bond.

The Principal and Surety hereby agree that The Guarantors' Liability Act (Manitoba) shall apply to this Bond.

IN TESTIMONY WHEREOF, the Principal has hereunto set its hand affixed its seal, and the Surety has caused these presents to be sealed and with its corporate seal duly attested by the authorized signature of its signing authority this

_____ 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)

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 Tender shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B7. In every instance where a brand name or design specification is used, the City will also consider approved equals and/or approved alternatives in accordance with B7.
- E1.4 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
00	COVER SHEET	11x17
01	NORTHBOUND BROOKSIDE BOULEVARD - FROM INKSTER BOULEVARD TO MOLLARD ROAD START TO STA 1+300	11x17
02	NORTHBOUND BROOKSIDE BOULEVARD - FROM INKSTER BOULEVARD TO MOLLARD ROAD STA. 1+300 TO STA 1+680	11x17
03	NORTHBOUND BROOKSIDE BOULEVARD – FROM INKSTER BOULEVARD TO MOLLARD ROAD STA. 1+680 TO STA. 2+060	11x17
04	NORTHBOUND BROOKSIDE BOULEVARD – FROM INKSTER BOULEVARD TO MOLLARD ROAD STA. 2+060 TO STA. 2+440	11x17
05	NORTHBOUND BROOKSIDE BOULEVARD – FROM INKSTER BOULEVARD TO MOLLARD ROAD STA. 2+440 TO STA. 2+820	11x17
06	NORTHBOUND BROOKSIDE BOULEVARD – FROM INKSTER BOULEVARD TO MOLLARD ROAD STA. 2+820 TO STA. 3+200	11x17
07	NORTHBOUND BROOKSIDE BOULEVARD – FROM INKSTER BOULEVARD TO MOLLARD ROAD STA. 3+200 TO STA. 3+580	11x17
08	NORTHBOUND BROOKSIDE BOULEVARD – FROM INKSTER BOULEVARD TO MOLLARD ROAD STA. 3+580 TO STA. 3+960	11x17
09	NORTHBOUND BROOKSIDE BOULEVARD – FROM INKSTER BOULEVARD TO MOLLARD ROAD STA. 3+960 TO END	11x17
10	SOUTHBOUND KENASTON AVENUE – FROM STERLING LYON PARKWAY TO TAYLOR AVENUE START TO STA. 1+385	11x17

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
11	SOUTHBOUND KENASTON AVENUE – FROM STERLING LYON PARKWAY TO TAYLOR AVENUE STA. 1+385 TO STA. 1+780	11x17
12	SOUTHBOUND KENASTON AVENUE – FROM STERLING LYON PARKWAY TO TAYLOR AVENUE STA. 1+780 TO END	11x17
13	NORTHBOUND KENASTON AVENUE – FROM STERLING LYON PARKWAY TO TAYLOR AVENUE START TO STA. 1+390	11x17
14	NORTHBOUND KENASTON AVENUE – FROM STERLING LYON PARKWAY TO TAYLOR AVENUE STA. 1+390 TO STA. 1+780	11x17
15	NORTHBOUND KENASTON AVENUE – FROM STERLING LYON PARKWAY TO TAYLOR AVENUE STA. 1+780 TO END	11x17
16	WESTBOUND BISHOP GRANDIN BOULEVARD – FROM PEMBINA HIGHWAY ON-RAMP TO TRANSIT OVERPASS START TO STA. 1+395	11x17
17	WESTBOUND BISHOP GRANDIN BOULEVARD – FROM PEMBINA HIGHWAY ON-RAMP TO TRANSIT OVERPASS STA. 1+395 TO STA. 1+775	11x17
18	WESTBOUND BISHOP GRANDIN BOULEVARD – FROM PEMBINA HIGHWAY ON-RAMP TO TRANSIT OVERPASS STA. 1+775 TO END	11x17
19	SOUTHBOUND DAKOTA STREET – FROM ABBOTSFORD CRESCENT TO COLLEGE JEANNE SUAVE START TO STA. 1+875	11x17
20	SOUTHBOUND DAKOTA STREET – FROM ABBOTSFORD CRESCENT TO COLLEGE JEANNE SUAVE STA. 1+875 TO STA. 2+255	11x17
21	SOUTHBOUND DAKOTA STREET – FROM ABBOTSFORD CRESCENT TO COLLEGE JEANNE SUAVE STA. 2+255 TO END	11x17
22	NORTHBOUND DAKOTA STREET – FROM SOUTHGLEN BOULEVARD TO HYATT PLACE START TO STA. 1+380	11x17
23	NORTHBOUND DAKOTA STREET – FROM SOUTHGLEN BOULEVARD TO HYATT PLACE STA. 1+380 TO END	11x17
24	SOUTHBOUND MORAY STREET – FROM NESS AVENUE TO PORTAGE AVENUE START TO STA. 1+370	11x17
25	SOUTHBOUND MORAY STREET – FROM NESS AVENUE TO PORTAGE AVENUE STA 1+370 TO STA. 1+750	11x17
26	SOUTHBOUND MORAY STREET – FROM NESS AVENUE TO PORTAGE AVENUE STA 1+750 TO END	11x17
27	EASTBOUND BISHOP GRANDIN BOULEVARD – FROM ST ANNES ROAD TO ISLAND SHORE BOULEVARD STA. 1+000 TO STA. 1+145	11x17
28	EASTBOUND BISHOP GRANDIN BOULEVARD – FROM ST ANNES ROAD TO ISLAND SHORE BOULEVARD STA. 1+145 TO STA. 1+335	11x17
29	EASTBOUND BISHOP GRANDIN BOULEVARD – FROM ST ANNES ROAD TO ISLAND SHORE BOULEVARD STA. 1+335 TO STA. 1+525	11x17

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
30	EASTBOUND BISHOP GRANDIN BOULEVARD – FROM ST ANNES ROAD TO ISLAND SHORE BOULEVARD STA. 1+525 TO STA. 1+715	11x17
31	EASTBOUND BISHOP GRANDIN BOULEVARD – FROM ST ANNES ROAD TO ISLAND SHORE BOULEVARD STA. 1+715 TO STA. 2+065	11x17
32	EASTBOUND BISHOP GRANDIN BOULEVARD – FROM ST ANNES ROAD TO ISLAND SHORE BOULEVARD STA. 2+065 TO STA. 2+255	11x17
33	EASTBOUND BISHOP GRANDIN BOULEVARD – FROM ST ANNES ROAD TO ISLAND SHORE BOULEVARD STA. 2+255 TO STA. 3+060	11x17
34	EASTBOUND BISHOP GRANDIN BOULEVARD – FROM ST ANNES ROAD TO ISLAND SHORE BOULEVARD STA. 3+060 TO STA. 3+250	11x17
35	EASTBOUND BISHOP GRANDIN BOULEVARD – FROM ST ANNES ROAD TO ISLAND SHORE BOULEVARD STA. 3+250 TO STA. 3+440	11x17
36	EASTBOUND BISHOP GRANDIN BOULEVARD – FROM ST ANNES ROAD TO ISLAND SHORE BOULEVARD STA. 3+440 TO STA. 3+630	11x17
37	EASTBOUND BISHOP GRANDIN BOULEVARD – FROM ST ANNES ROAD TO ISLAND SHORE BOULEVARD STA. 3+630 TO END	11x17

E2. MOBILIZATION AND DEMOBILIZATION PAYMENT

DESCRIPTION

- E2.1 This Specification shall cover all operations relating to the mobilization and demobilization of the Contractor to the project location(s).
- E2.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.
- E2.3 The inclusion of a payment item for the Work under this Specification shall not release or reduce the responsibilities of the Contractor under any other specification in this Contract.

SCOPE OF WORK

- E2.4 Further to C12 of the General Conditions, where Mobilization and Demobilization is included as a bid item, it shall consist of the following, as applicable:
- (a) Mobilization shall include, but not be limited to:
 - (i) All activities and associated costs for transportation of the Contractor's personnel, equipment, and operating supplies to the site, and/or sites, and/or between sites;
 - (ii) Establishment of offices, buildings, other necessary general facilities and equipment parking/staging areas for the Contractor's operations at the site or sites;
 - (iii) Premiums paid for performance and payment bonds including coinsurance and reinsurance agreements as applicable;
 - (iv) General cleanup and housekeeping needed maintain a neat and orderly project site and/or sites; and
 - (v) Other job related items.
 - (b) Demobilization shall include, but not be limited to:

- (i) All activities and costs for transportation of personnel, equipment, and supplies not used in the project from the site, and/or sites, and/or between sites;
- (ii) Disassembly, removal, and site cleanup and restoration of offices, buildings, and other facilities assembled on the site and/or sites;
- (iii) Repair of access roads, temporary haul roads, and equipment parking areas leaving the project site in the same or better condition than at the start of the project; and
- (iv) General cleanup and housekeeping needed to restore a neat and orderly project site.

E2.5 Access to the site, equipment parking, and staging areas are limited to that shown on the drawings or as approved by the Contract Administrator.

MEASUREMENT AND PAYMENT

E2.6 The lump-sum price for the Mobilization and Demobilization bid item shall not exceed five percent (5%) of the total bid price for the Contract.

E2.6.1 Further to B10, B18, C12 and E2.6, should the lump sum price exceed five percent (5%) of the Total Bid Price the lump sum price will be reduced to five percent (5%) of the Total Bid Price, the Total Bid Price will be determined using the reduced lump sum price and payment will be based on the reduced lump sum price.

E2.7 Payment for Mobilization:

- (a) Sixty percent (60%) of the lump sum price will be paid to the contractor for Mobilization on the first Progress Estimate for the Contract.

E2.8 Payment for Demobilization:

- (a) The remaining forty percent (40%) of the lump sum price will be paid upon:
 - (i) Restoration of the site and/or sites to the satisfaction of the Contract Administrator;
 - (ii) Distribution of the Declaration of Total Performance.

E2.9 Mobilization and Demobilization will be paid only once (to a maximum of one hundred percent (100%)), regardless of the number of times the Contractor mobilizes to the site and/or sites.

E3. BLANK CLAUSE

E3.1 This clause left intentionally blank

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 two (2) metres of trees.
- (b) Trees identified to be at risk by the Contract Administrator are to be strapped with twenty-five (25) x one hundred (100) x twenty-four hundred (2,400) mm 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 one and half (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/her 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, 3.7 and 3.8 of CW 1130:

- (a) Where directed by the Contract Administrator, 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 on City Streets (MTTC), the Contractor ("Construction Agency" in the manual) shall be responsible for placing, maintaining and removing the appropriate temporary traffic control devices as specified by the MTTC or by the Traffic Management Branch of the City of Winnipeg Public Works Department. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by their own forces or subcontractor.

E5.2 Notwithstanding E5.1, in accordance with the MTTC, the Contract Administrator shall make arrangements with the Traffic Services Branch of the City of Winnipeg to place, maintain and remove all regulatory signs and traffic control devices authorized and/or required by the Traffic Management Branch in the following situations:

- (a) Parking restrictions;
- (b) Stopping restrictions;
- (c) Turn restrictions;
- (d) Diamond lane removal;
- (e) Full or directional closures on a Regional Street;
- (f) Traffic routed across a median;
- (g) Full or directional closure of a non-regional street where there is a requirement for regulatory signs (turn restrictions, bus stop relocations, etc.) to implement the closure; and
- (h) Approved Designated Construction Zones with a temporary posted speed limit reduction. Traffic Services will be responsible for placing all of the advance signs and 'Construction Ends' (TC-4) signs. The Contractor is still responsible for all other temporary traffic control including but not limited to barricades, barrels and tall cones.
 - (i) An exception to E5.2 is the 'KEEP RIGHT/KEEP LEFT' sign (RB-25 / RB-25L) which shall be supplied, installed, and maintained by the Contractor at their own expense.
 - (ii) Further to E5.2, where the Contract Administrator has determined that the services of the Traffic Services Branch are required, the City shall bear the 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:

- (a) Single lane closures on intersecting and/or adjoining Regional Streets shall only be permitted during non-peak periods when required for construction activities when approved by the Traffic Management Branch. Storage/parking of materials, equipment or vehicles is not permitted on Regional Streets at any time unless approved by the Contract Administrator, in consultation with the Traffic Management Branch.

E6.1.1 The Contractor shall adhere to the following restrictions:

- (a) All construction activities on Southbound Dakota must be completed before August 31, 2020;
- (b) All construction activities on Westbound Bishop Grandin at Pembina must not commence until July 13, 2020; and
- (c) Maximum of three (3) streets can be constructed at one time with the approval of the Contract Administrator.

E6.1.2 Maintain a minimum of one (1) lane in each direction during their respective construction times, including during paving and milling operations. When no work is being performed on site, non-essential lane closures will not be permitted.

E6.1.3 Further to E6.1.1, when no work is being performed on a portion of the site more than three hundred and fifty (350) m in length, the Contractor shall maintain two (2) lanes in the area where no Work is being performed. Depending on what tasks are being performed, the Contractor shall manage traffic around their crews with a moving or growing protected Work zone as best as possible to minimize the length of the closure to the best of their ability.

E6.1.4 In areas where more than two (2) lanes exist, the Contractor will not be permitted to close the adjacent lane to the one under construction for the entire length of the project if a work activity is only taking place at one end. Closure will only be permitted next to the work activities taking place, and approved by the Contract Administrator.

E6.1.5 Maintain a minimum of two (2) northbound lanes of traffic on Kenaston Boulevard during the morning and afternoon peak periods between (07:00 to 09:00 & 15:30 to 17:30) and maintain a minimum of two (2) southbound lanes of traffic on Kenaston Boulevard during the morning and afternoon peak period between (07:00 to 09:00 & 15:30 to 17:30).

E6.1.6 Where left turn lanes exist, an additional lane to accommodate the left turn storage lane shall be maintained at all times.

E6.1.7 Intersecting local street, median opening and private approach access shall be maintained at all times unless joint/slab repairs or planing/paving operations require temporary closure. Temporary closures are to be staggered such that consecutive intersections are not closed at the same time. Traffic on intersecting regional/collector streets (list streets) shall be maintained at all times unless planing/paving operations require temporary complete closures. Temporary complete closures shall be no longer than ten (10) minutes during asphalt planing/paving operations and shall be completed during off peak hours.

E6.1.8 The Contractor is to provide two (2) weeks' notice to the City and the Contract Administrator prior to commencing any construction activity on street that would require a speed reduction so that any required regulatory and DCZ signage can be prepared and coordinated.

E6.1.9 Flag persons may be necessary to maintain the flow of traffic during certain work operations.

E6.1.10 Should the Contractor be unable to maintain pedestrian or vehicular access to a residence or business, he/she 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 twenty-four (24) hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.

- E6.1.11 Pedestrian access must be maintained at all times.
- E6.1.12 Ambulance/emergency vehicle access must be maintained at all times.

E7. PEDESTRIAN SAFETY

- E7.1 During the project, the Contractor shall erect any signage necessary for properly directing pedestrian traffic within the construction zone safely away from any construction work or to the opposite side of the street. The Contractor shall also be responsible for erecting and maintaining any fencing and barricades necessary for protecting pedestrians from any hazards within the construction zone. No measurement for payment shall be made for this work.

E8. WATER OBTAINED FROM THE CITY

- E8.1 Further to Clause 3.7 of CW 1120, the Contractor shall pay for all costs, including sewer charges, associated with obtaining water from the City in accordance with the Waterworks and Sewer By-laws.

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. SALT TOLERANT GRASS SEEDING

DESCRIPTION

- E10.1 Further to CW 3520 and CW3540, this specification shall cover sub-grade preparation and the supply and placement of Salt Tolerant Grass Seed.

MATERIALS

- E10.2 Salt Tolerant Grass Seed

- E10.2.1 Salt Tolerant Grass Seed for regional and collector boulevards, medians and interchange areas shall be a mixture composed of:
 - (a) Seventy percent (70%) Fults or Nuttalls Alkaligrass (*Puccinellia* spp.), twenty percent (20%) Audubon or Aberdeen Creeping Red Fescue and ten percent (10%) Perennial Ryegrass.

EQUIPMENT

- E10.3 Scarification equipment shall be suitable for the area being scarified, shall be capable of scarifying the sub-grade to the specified depth and shall be accepted by the Contract Administrator. For confined areas a toothed bucket may be acceptable. For larger areas tilling equipment may be required.

CONSTRUCTION METHODS

- E10.4 Preparation of Existing Grade

- E10.4.1 Prior to placing topsoil, in areas to be seeded greater in width than 600 mm, prepare the existing sub-grade by scarifying to a minimum depth of 75 mm and to a maximum depth of 100 mm to the satisfaction of the Contract Administrator.
- E10.4.2 Scarification shall consist of breaking up and loosening the sub-grade. No scarification shall occur within the edge of a tree canopy (or drip line).

E10.5 Salt Tolerant Grass Seeding

E10.5.1 Salt Tolerant Grass Seed shall be sown at a rate of two point two (2.2) kilograms per one hundred (100) square meters.

MEASUREMENT AND PAYMENT

E10.6 Supply, placement and maintenance of Salt Tolerant Grass Seed will be paid for at the Contract Unit Price per square metre for "Salt Tolerant Grass Seeding", measured as specified herein, which price shall be payment in full for supplying all materials and for completing all operations herein described and all other items incidental to the work included in this Specification. Payment for Salt Tolerant Grass Seeding shall be in accordance with the following:

- (a) Sixty five (65%) percent of quantity following supply and placement; and
- (b) Remaining thirty five (35%) percent of quantity following termination of the Maintenance Period.

E11. PARTIAL DEPTH CONCRETE REPAIR

DESCRIPTION

E11.1 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.

E11.2 Referenced Standard Construction Specifications

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

MATERIAL

E11.3 Patching Material to be used for the partial depth repairs is Five Star Highway Patch or VersaSpeed. This material shall be covered and kept out of direct sunlight when being stored. No substitutions are allowed for this material.

E11.3.1 Patching Material Mix Design (Alternative 1)

- (a) Mixing water used for batching cementitious patching material will be clean and potable water. Water used for mixing must not exceed twenty-five (25) degrees Celsius.
- (b) The cementitious patching material may be extended by the addition of coarse aggregate meeting the gradation requirements of the table below. The material may be extended to a maximum of fifty percent (50%) by weight of cementitious material.
- (c) Batching of material to be conducted as per manufacturers instruction

E11.3.2 Patching Material Mix Design (Alternative 2)

- (a) Alternative Patching Material Mix Design to Alternative 1 meeting all of the requirements listed below will be considered and reviewed by the Project Manager for acceptance as a Patching Material.
 - (i) The Alternate Patching Material Mix Design shall be performed by a certified third party laboratory according to CSA A23.1 Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practice for Concrete.
 - (ii) The proportioning, volumetric and physical properties of the Mix Design will be submitted to the Project Manager for review prior to acceptance.
 - (iii) Aggregates must conform to Table 12 of CSA A23.1 Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practice for Concrete.

E11.4 Curing Compound

- (a) The Curing Compound will be Type 2, white-pigmented and water based liquid membrane forming curing in accordance with ASTM C309.

E11.5 Bond Breaker

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

EQUIPMENT

E11.6 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.

E11.7 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
- (b) Acceptable sand blasting equipment:
 - (i) Clemco Model 1042 using fine silica sand at an operating pressure of 100 PSI.

E11.8 An oil free jetted air compressor shall be used to blow out repairs, vacuum will not be acceptable.

E11.9 Quickie Saw, capable of holding two (2") to fourteen (14") inch diamond tip blades and must be used in conjunction with a cart to make long straight cuts.

E11.10 A mason's hammer for sounding concrete.

E11.11 Calibrated 3 litre (2.84 quart) water container.

CONSTRUCTION METHODS

E11.12 Remove any existing AMZ or asphaltic material if applicable from the concrete surface adjacent to the area to be repaired.

E11.13 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.

E11.14 Remove existing sealant 100 mm beyond the ends of the repair.

E11.15 Remove all loose or deteriorated concrete with either and 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° degree angle down to the joint. A new sawcut is not required.

E11.16 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.

E11.17 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 5 mm;
- (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.
- E11.18 Sawcut 6 mm wide along the existing joint, to a depth of 10 mm 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.
- E11.19 Sandblast the concrete surface of the repair area, the saw cut run-outs and 25 mm 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.
- E11.20 Use compressed air that has an oil free air jet having sufficient volume and pressure to remove dust and loose particles.
- E11.21 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.
- E11.22 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 twenty-five (25°) degrees Celsius and must be clean and potable. If the mix temperature is greater than twenty-five (25°) degrees 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.
- E11.23 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.
- E11.24 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.

- E11.25 Saw cut run-outs shall be filled with concrete repair material.
- E11.26 Uniformly apply water based white pigmented curing compound once the material has set up.
- E11.27 Sawcut the width and depth to match the existing pavement joint reservoir and reseal.

MEASUREMENT AND PAYMENT

- E11.28 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 Project Manager, 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.

E12. DIAMOND GRINDING

DESCRIPTION

- E12.1 This specification covers the Diamond Grinding of existing concrete pavements.

EQUIPMENT

- E12.2 Grinding Machine

- (a) The grinding machine shall be self-propelled complete with a mounted grinding head with diamond blades capable of grinding a minimum width of 1.2 m (meters) designed for grinding and texturing pavement. The machine shall have a minimum total weight of 15,876 kg (kilograms) (including the grinding head) and an effective wheel base of no less than 3.65 m (meters).
- (b) The grinding machine shall have a positive means of vacuuming the grinding slurry residue from the pavement surface, leaving the pavement surface in a clean, near-dry condition.
- (c) All equipment shall be maintained to ensure it is in proper working order. The "roundness" of the match and depth control wheels of the grinding machine shall be regularly monitored; any wheels found to be out of round shall be immediately replaced.
- (d) Any equipment that causes ravelling, aggregate fractures or disturbance to the pavement joints shall not be permitted.

- E12.3 Inertial Profiler

- (a) The Inertial Profiler shall conform to the Class 1 requirements in accordance with the latest revision of ASTM E-950.
- (b) The Inertial Profiler must be properly calibrated and certified for use for the current construction season. Acceptable certification shall be Mn/DOT or as approved by the Project Manager.
- (c) Documentation of the certification must be provided to Project Manager prior to commencement of any measurements.

CONSTRUCTION METHODS

- E12.4 Pavement Grinding

- (a) The pavement grinding shall be scheduled and completed on the mainline pavement lanes in a manner that produces a neat, uniform finished surface.
- (b) The pavement grinding shall not commence on until the Partial and Full-Depth Repairs have been completed.

- (c) The pavement shall be ground in the longitudinal direction parallel to the pavement center line.
- (d) The pavement grinding shall commence on the low side of the pavement.
- (e) Passes of the grinding head shall not overlap more than 25 mm.
- (f) For pavements with existing curbs, grinding shall be completed to within 150 mm of the face of curb.
- (g) Grinding shall be completed in a manner that removes joint or crack faults and maintains lateral drainage and constant cross slope. The maximum allowable difference between the adjacent sides of the joints and cracks shall be 2 mm.
- (h) The maximum average grinding depth shall not exceed 20 mm.
- (i) The Contractor shall be responsible for arranging and supplying all water required for the project. Water obtained for the City of Winnipeg shall be in accordance with E4.
- (j) The edges of adjacent pavement shoulders and auxiliary lanes shall be feathered along the edge of the mainline grinding as required to provide drainage. Feathering shall be required when the mainline grinding leaves a vertical lip greater than 5 mm to the adjacent pavement surface
- (k) Existing structures such as manholes, curb and gutter inlets and water valves shall be feathered to the satisfaction of the Project Manager.
- (l) When directed by the Project Manager, the grinding shall extend 5 meters into an existing asphalt surface.

E12.5 Final Surface Finish

E12.6 The grinding process shall produce a pavement surface that is true in grade and uniform in appearance with a longitudinal line-type texture. The line-type texture shall contain grooves that are parallel to the centerline and present a narrow ridge corduroy type appearance. The peaks of ridges shall be a minimum 1.5 mm to a maximum 3.0 mm higher than the ground pavement surface. The finished grooves shall be evenly spaced 2 to 3 mm apart.

- (a) The grinding process shall produce a longitudinal line-type texture that is straight and free of deviations. Any deviation from a straight longitudinal line-type texture, identified at the sole discretion of the Project Manager, shall be re-ground at the expense of the Contractor.
- (b) The Contractor shall be responsible for the selection of the number and type of blades to be used to provide the proper surface finish for the aggregate type present. Unbroken fins shall be removed to the satisfaction of the Project Manager.
- (c) The Contractor shall be responsible to determine the proper sequence of operations to meet the specification. Multiple passes may be required to meet the specifications.
- (d) A minimum of ninety-eight percent (98%) of the pavement surface area shall be ground or textured.
- (e) Localized depressed pavement areas will be exempt from texture and smoothness requirements. Additional grinding of these areas may be required and will be as directed by the Project Manager.

E12.7 Slurry Removal

- (a) The Contractor shall remove and dispose of all grinding slurry from the operations in a manner and at a location to satisfy environmental regulations.
- (b) All slurry removal operations shall be approved by the Project Manager.
- (c) No grinding slurry shall be allowed to flow across lanes occupied by traffic or enter into closed drainage systems.

E12.8 Slurry Handling

- (a) The grinding slurry to be removed from the site shall be collected in water-tight haul units and transported to disposal facilities as listed in E5.9 of this specification.

E12.9 Slurry Disposal Sites

- (a) The Contractor shall dispose of grinding slurry at the designated disposal sites provided by the City of Winnipeg. The disposal sites are as follows;
 - (i) City of Winnipeg South End Pollution Control Centre snow dump site.
 - (ii) City of Winnipeg McPhillips Street snow dump site.
 - (iii) City of Winnipeg Wilkes Avenue snow dump site.
- (b) The Contractor shall contact the Streets Maintenance Division Area Supervisor to obtain access. The Contractor shall ensure that these sites are only utilized for disposal of the material from this project. The sites shall be secured at all times.
- (c) Prior to grinding operations the Contractor shall be responsible for installing temporary barriers at the disposal site in order to hold back slurry from meander throughout the site. The Project Manager and the Contractor will develop a layout of the barriers. The cost of supplying and installing the barrier system will be at the expense of the Contractor.
- (d) At completion of the grinding disposal operations, the Contractor shall clean up the disposal sites to the satisfaction of the Project Manager.
- (e) The site clean-up shall include removal of excess water, removal of remaining grinding solids and regrading of the site to original condition prior to commencement of the grinding disposal operations.

E12.10 Smoothness Requirements

- (a) The Contractor shall be responsible for all profile testing to meet the requirements of this contract.
- (b) All testing shall be continuous and be run in the direction of the traffic. Stationing shall be provided by the Project Manager and for all testing.
- (c) The Profiler shall be operated at optimum speed as defined by the manufacturer.
- (d) Prior to performing any grinding work, the Contractor shall provide a control profilograph trace. The control trace will be used to identify the required smoothness for the project
- (e) All testing shall be reported in 100 m (meter) segments complete with a summary of all dip and bump measurements and locations.
- (f) Upon completion of the grinding operations, acceptance measurements shall be completed.
- (g) The Contractor shall run the profile in both wheel paths of each individual lane and average the resulting IRI results to determine acceptance. The profiles shall be run 0.9 meters from each lane line. A guide shall be used to ensure proper alignment of the profile. The Project Manager will have a representative present during all testing periods.
- (h) The finished surface smoothness requirements shall be as follows;
 - (i) 70 km/hr or greater Posted Speed Locations – IRI equal to or less than 1.20 m/km.
 - (ii) 50 km/hr Posted Speed Locations – IRI equal to or less than 1.60 m/km.
 - (iii) Each lane will be evaluated separately in 100 m (meter) segments.
- (i) The Contractor shall regrind, at no additional cost, any areas found not meeting the smoothness requirements.

- (j) The finished surface smoothness requirements shall not include any localized bumps exceeding 10 mm in 7.5 m (meters) where the areas have reached the maximum removal depth. These areas shall be reviewed and approved by the Project Manager.
- (k) Areas of depressed pavement due to subsidence or other localized causes where the areas have reached the maximum removal depth will also be excluded from the finished surface smoothness requirements. These areas shall be reviewed and approved by the Project Manager.
- (l) The Contractor shall provide a print out of all smoothness measurements, a profilogram and a copy of the raw profile data in an unfiltered ERD file format.

MEASUREMENT AND PAYMENT

- E12.11 Diamond Grinding will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Diamond Grinding". The area to be paid for will be the total number of square metres of pavement surface ground, textured and grinding slurry hauled and disposed of off-site in accordance with this specification, accepted and measured by the Project Manager.
- E12.12 Diamond Grinding with slurry deposited on the pavement side slopes will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Diamond Grinding with Slurry Deposited on the Pavement Side Slopes". The area to be paid for will be the total number of square metres of pavement surface ground, textured and grinding slurry deposited on the pavement side slopes in accordance with this specification, accepted and measured by the Project Manager.
- E12.13 Pavement edges of adjacent pavement shoulders and auxiliary lanes identified by the Project Manager to be feathered will be measured and included in payment at one metre width regardless of actual grinding width required to feather the lip. The minimum length of feather pass will be 30 m (meters).
- E12.14 No additional measurement or payment will be made if multiple passes of the grinding equipment are required to meet the smoothness requirements. The area of the pavement ground will only be considered for payment once unless regrinding is directed by the Project Manager.
- E12.15 No additional measurement or payment will be for testing to net the smoothness requirements of this contract.

E13. CROSS STITCHING

DESCRIPTION

- E13.1 Cross stitching is a preservation method designed to strengthen nonworking longitudinal joints and cracks that are in relatively good condition. The construction process consists of grouting tie-bars into holes drilled across the joint or crack at angles of thirty-five (35°) degrees to forty-five (45°) degrees to the pavement surface. This process is effective at preventing vertical and horizontal movement or widening of the crack or joint, thereby keeping the crack or joint tight, maintaining good load transfer, and slowing the rate of deterioration.

PURPOSE OF TREATMENT

- E13.2 Cross stitching is applicable for strengthening longitudinal cracks in slabs to prevent slab migration and to maintain aggregate interlock.
- E13.3 Mitigating the issue of tie-bars being omitted from longitudinal contraction joints (due to construction error).
- E13.4 Tying roadway lanes or shoulders that are separating and causing a maintenance problem. (Cross stitching should not be used, however, to tie any new traffic lanes that are added to an existing roadway.)

E13.5 Tying centerline longitudinal joints that are starting to fault.

SELECTION CRITERIA

E13.6 Pavement Condition

E13.6.1 General Condition – Fair to Good.

E13.6.2 Fair to Good Ride.

CONSTRUCTION METHOD SUMMARY

E13.7 Cross Stitching

E13.7.1 Drill holes at an angle (thirty-five (35°) to forty-five (45°) degree angle) to the pavement so that they intersect the joint or crack at mid-depth in the concrete slab. It is important to start drilling the hole at a consistent distance from the joint or crack to consistently cross the joint or crack at mid-depth. Select a drill that minimizes damage to the concrete surface and select a drill no more than 9.5 mm (0.375" inches) larger than the tie-bar diameter.

E13.7.2 Tie-bar Diameter shall be 19 mm (0.75" inches) when used in pavement thicknesses ranging from 200 mm to 300 mm.

E13.7.3 Tie-bar spacing shall be spaced at intervals ranging between 500 to 750 mm (20" to 30" inches), 750 mm spacing recommended for light traffic.

E13.7.4 Length of tie-bar shall be 240 mm (9.5" inches) in length when used in 200 mm thick concrete pavements and 275 mm (11" inches) in length when used in 230 mm concrete pavements.

E13.7.5 Drilled holes shall be alternated on either side of the joint or crack when drilling.

E13.7.6 Holes shall be drilled to a minimum of 25 mm (1" inch) from bottom of concrete pavement. Holes shall not be drilled through the bottom of the concrete pavement structure.

E13.7.7 Blow air into the holes to remove dust and debris after drilling.

E13.7.8 Pour epoxy into the hole, leaving some volume for the bar to occupy the hole.

E13.7.9 Insert the tie-bar, remove excess epoxy, and finish flush with the pavement surface. The pavement may be reopened to traffic as soon as the epoxy has fully set.

EQUIPMENT

E13.8 Hydraulic Powered Drill Mounted on stand (recommended)

E13.9 Oil Free Jetted Air Compressor shall be used to blow out drilled tie-bar holes, vacuum will not be acceptable.

MEASUREMENT AND PAYMENT

E13.10 Cross Stitching will be measured on a Linear Meter basis and paid for at the Contract Unit Price per linear meter for "Cross Stitching". The area to be paid for will be the total number of Linear Meters of pavement cross stitched, tie-bars and epoxy shall be inclusive to "Cross Stitching" payment in accordance with this specification, accepted and measured by the Project Manager.

E14. SKEWED JOINTS

DESCRIPTION

E14.1 Further to CW 3230 and CW 3310, this specification covers the requirement for any tie bars, dowels, and dowel assemblies on skewed joints.

MATERIALS

E14.2 Tie Bars

E14.2.1 As per City of Winnipeg Specifications, CW 3230.

E14.3 Dowels

E14.3.1 As per City of Winnipeg Specifications, CW 3230.

E14.4 Skewed Dowel Assemblies

E14.4.1 Dowel assemblies will be supplied as per City of Winnipeg Specifications, CW 3310, and will be skewed such that dowels placed in the assembly are parallel the travel direction of the lane.

CONSTRUCTION METHODS

E14.5 Skewed joints will be identified on site by the Contract Administrator.

E14.6 For full depth concrete patches and slabs tied into existing pavement drilled holes for tie bars or dowels will be drilled parallel the travel direction for the lane.

E14.7 For consecutive slab repairs requiring joints at 5 meter intervals or less skewed dowel assemblies will be installed. The Contractor shall ensure that the assembly is skewed to match the joint line and the dowels are parallel the travel direction of the lane.

MEASUREMENT AND PAYMENT

E14.8 Drilled tie bars on a skewed joint will be measured and paid for as per City of Winnipeg Specifications, CW 3230 for "Drilled Tie Bars".

E14.9 Drilled dowels on a skewed joint will be measured and paid for as per City of Winnipeg Specifications, CW 3230 for "Drilled Dowels".

E14.10 Skewed dowel assemblies will be measured and paid for as per City of Winnipeg Specifications, CW 3310 for "Supply and Installation of Dowel Assemblies".

E15. COORDINATION OF CONSTRUCTION WITH RAILWAY COMPANIES

E15.1 General Requirements

E15.2 The Contractor shall be responsible to meet all railway companies, CN and CPR, constraints, requirements, and safety measures.

E15.3 Prior to the Contractor commencing work within railway property, the contractor will provide an advance notice of four (4) weeks prior to the commencement of work.

E15.4 Railway Flagging Costs

E15.4.1 The railway companies will provide a Protecting Foreman for the protection of the railway's plant and equipment and no cost shall be borne by the Contractor.

E15.5 CP Requirements

E15.5.1 CP Requirements are included in Appendix A. The Contractor is advised that these requirements are applicable to all of the Contractor's personnel and equipment crossing CP tracks and property.

E15.6 E12.4 CN Requirements

E15.6.1 While not included within these specifications, all CNR requirements shall be followed by the Contractor. The Contractor is responsible to ensure compliance with these

requirements by all parties operating under his direction. Detailed information will be available prior to start of construction. While not directly applicable to CNR property and trackage, the CP requirements should be considered as guidelines.

E16. MODIFIED ASPHALT REPAIR SEALING

DESCRIPTION

E16.1 This specification covers the supply and installation of polymer modified asphalt pavement repair.

MATERIAL

E16.2 The polymer modified asphalt pavement repair shall be Mastic OneMT.

E16.3 Manuals

E16.3.1 Attached Manual; Crafc0® Inc. Mastic OneMT Installation Instructions.

E16.4 Preparation and Installation

E16.4.1 Prepare the surface in accordance with Manufacturer's installation instructions - See Appendix 'C'.

MEASUREMENT AND PAYMENT

E16.5 Modified Asphalt Repair Sealing will be measured on a length basis and paid for at the Contract Unit Price per metre for "Modified Asphalt Repair Sealing". The length to be paid for will be the total number of metres of Modified Asphalt Repair Sealing installed in accordance with this specification, accepted and measured by the Contract Administrator.

E16.6 Preparation of the surface for modified asphalt repair sealing shall be included in the cost of "Modified Asphalt Repair Sealing" and no separate measurement and payment will be made.

E17. SUPPLY AND INSTALL HATELIT "BL"

DESCRIPTION

E17.1 General

E17.1.1 This specification covers the supply and installation of HaTelit "BL" in any areas required by the Contract Administrator.

MATERIAL

E17.2 General

E17.2.1 Refer to Appendix 'B' – HaTelit BL

CONSTRUCTION METHODS

E17.3 General

E17.3.1 Refer to Appendix 'B' – HaTelit BL

MEASUREMENT AND PAYMENT

E17.4 The supply and installation of the HaTelit BL will be measured on an area basis and paid for at the Contract Unit Price per square metre for Supply and Install HaTelit "BL". The area to be paid for will be the total number of square metres of HaTelit BL supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.

APPENDIX 'A'

CPR SAFETY REQUIREMENTS

APPENDIX 'B'

HATELIT BL PRODUCT INFORMATION

APPENDIX 'C'

MASTIC ONE INSTALLATION INSTRUCTIONS