

THE CITY OF WINNIPEG

TENDER

TENDER NO. 380-2019

552 PLINGUET STREET REFUELLING STATION PAVEMENT AND EQUIPMENT REHABILITATION

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 552 PLINGUET STREET REFUELLING STATION PAVEMENT AND EQUIPMENT REHABILITATION

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, May 14, 2019.
- B2.2 Bids determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.
- B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. SITE INVESTIGATION

- B3.1 Further to C3.1, the Bidder may view the Site without making an appointment.
- B3.2 The Bidder is advised that the existing fuel site at 552 Plinguet Street will be in use until construction related to this project commences. Any site investigations that are done shall not interrupt the regular workings of the existing site.

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.

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 Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/bidopp.asp
- B6.4 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B6.5 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.
- B6.6 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.

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- 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;
 - (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 enclosed and sealed in an envelope clearly marked with the Tender number and the Bidder's name and address.
- B8.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Tender number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.
- B8.5 Bidders are advised not to include any information/literature except as requested in accordance with B8.1.
- B8.6 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).
- B8.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B8.8 Bids shall be submitted to:

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

B9. BID

- B9.1 The Bidder shall complete Form A: Bid, making all required entries.
- B9.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
 - (a) if the Bidder is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B9.2.1 If a Bid is submitted jointly by two 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, 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 shall be signed in accordance with the following requirements:
 - (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
 - (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B9.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B9.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

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 D24. Any such costs shall be determined in accordance with D24.
- 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).

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) Absolute Petroleum Ltd.
 - (i) Reviewed potential work required during preliminary stages of the project and provided recommendations on work required.
- (b) Petro Tech Petroleum Services Ltd.
 - (i) Reviewed Tender Document prior to posting on behalf of the Winnipeg Fleet Management Agency.

B12. CONFLICT OF INTEREST AND GOOD FAITH

- B12.1 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:

- 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;
- 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

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:

City, in its sole discretion, to avoid or mitigate the impact of such Conflict of Interest.

- (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 http://www.winnipeg.ca/matmgt/debar.stm
- 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; and
 - (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
 - (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba);
 - (d) be a Licensed Petroleum Technician (LPT) for any work regulated by the Province of Manitoba, requiring a Licensed Petroleum Technician for specific work functions.
- 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 provide bid security in the form of a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond).
- B14.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.
- B14.1.2 All signatures on bid securities shall be original.
- B14.1.3 The Bidder shall sign the Bid Bond.
- B14.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.
- B14.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the contract securities are furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.
- B14.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Tender.

B15. OPENING OF BIDS AND RELEASE OF INFORMATION

- B15.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.
- B15.1.1 Bidders or their representatives may attend.
- 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 Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at

The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/default.stm

- B15.3 After award of Contract, the name(s) of the successful Bidder(s), their address(es) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/default.stm
- 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.
- 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 executed 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.

B17. WITHDRAWAL OF BIDS

- B17.1 A Bidder may withdraw his/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B17.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B17.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 13 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B17.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
 - (a) retain the Bid until after the Submission Deadline has elapsed:
 - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 13 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B17.1.3(b), declare the Bid withdrawn.
- B17.2 A Bidder who withdraws his/her Bid after the Submission Deadline but before his/her Bid has been released or has lapsed as provided for in B16.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

B18. EVALUATION OF BIDS

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

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 - (a) compliance by the Bidder with the requirements of the Tender, or acceptable deviation there from (pass/fail);

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- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B13 (pass/fail);
- (c) Total Bid Price;
- (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 will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

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:
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract; or
 - (f) Environmental testing indicates the existing geomembrane is leaking.
- 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 of D24 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

CO. GENERAL CONDITIONS

- C0.1 The General Conditions for Construction (Revision 2019 01 15) are applicable to the Work of the Contract.
- C0.1.1 The General Conditions for Construction are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/gen_cond.stm
- C0.2 A reference in the 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 Rehabilitation of the Pavement and Equipment at the 552 Plinguet Street Refuelling Station.
- D2.2 The major components of the Work are as follows:
 - (a) Rehabilitation of the 250 mm reinforced concrete slab; and
 - (b) Replacing/repairing of damaged equipment and infrastructure.
- D2.3 The site will be closed to regular vehicle traffic for the duration of the project.

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is AECOM Canada Ltd., represented by:

Thomas Findlay, P. Eng.

Civil Engineer

Telephone No. 204 928-8438

Email Address Thomas.Findlay@aecom.com

D3.2 At the pre-construction meeting, Thomas Findlay 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.

D5. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

- D5.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.
- D5.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.
- D5.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;
 - (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
 - (b) the Contract, all deliverables produced or developed; and
 - (c) any statement of fact or opinion regarding any aspect of the Contract.
- D5.4 A Contractor who violates any provision of D5 may be determined to be in breach of Contract.

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D6. NOTICES

- D6.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.
- D6.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D6.3, D6.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator identified in D3.
- D6.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following:

The City of Winnipeg Attn: Chief Financial Officer Office of the Chief Administrative Officer Susan A. Thompson Building 2nd Floor, 510 Main Street Winnipeg MB R3B 1B9

D6.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:

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

D6.5 Bids Submissions must not be submitted to the above facsimile number. Bids must be submitted in accordance with B8.

D7. FURNISHING OF DOCUMENTS

D7.1 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

D8. AUTHORITY TO CARRY ON BUSINESS

D8.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

D9. SAFE WORK PLAN

- D9.1 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.
- D9.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg,

Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/Safety/default.stm

D9.3 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.

D10. INSURANCE

- D10.1 The Contractor shall provide and maintain the following insurance coverage:
 - (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (b) automobile liability insurance 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 \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence.
 - (c) 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.
- D10.2 Deductibles shall be borne by the Contractor.
- D10.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D10.4 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.

D11. CONTRACT SECURITY

- D11.1 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.
- D11.2 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 letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D11.3 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 D11.1(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.

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D12. SUBCONTRACTOR LIST

D12.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D13. DETAILED WORK SCHEDULE

- D13.1 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 C4.1 for the return of the executed Contract.
- D13.2 The detailed work schedule shall consist of the following:
 - (a) a critical path method (C.P.M.) schedule for the Work;
 - (b) a Gantt chart for the Work based on the C.P.M. schedule;
 - all acceptable to the Contract Administrator.
- D13.3 Further to D13.2(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:
- D13.4 Further to D13.2(b), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.

SCHEDULE OF WORK

D14. COMMENCEMENT

- D14.1 The Contractor shall not commence any Work until he/she is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.
- D14.2 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 D8;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified in D9;
 - (iv) evidence of the insurance specified in D10;
 - (v) the contract security specified in D11;
 - (vi) the Subcontractor list specified in D12; and
 - (vii) the detailed work schedule specified in D13.
 - (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.
- D14.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.
- D14.4 The City intends to award this Contract by May 27th, 2019.

D15. WORKING DAYS

D15.1 Further to C1.1(ii), the Contract Administrator's determination of whether or not atmospheric and Site conditions are such that a Working Day is deemed to have elapsed may be based at one time on one type of work while at another time a Working Day may be based on another

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- type of work. When more than one type of major work is involved, the quantity of equipment that must be able to work in order to meet the requirements of a Working Day may vary considerably from that specified in the General Conditions.
- D15.2 In the event that incidental work is behind schedule which, in the opinion of the Contract Administrator, should have been or could have been carried out by the Contractor in conjunction with or immediately following work of a major type, the City hereby reserves the right to charge Working Days on the incidental work until such time as it is up to schedule.
- D15.3 When the major type of work involves restoration of the site to the condition it was prior to rainfall, Working Days shall not be charged.
- D15.4 The Contract Administrator will furnish the Contractor with a daily record for each major type of work showing various information concerning the equipment, the time it worked, could have worked and Working Days charged. This report is to be signed each day by an authorized representative of the Contractor.

D16. SUBSTANTIAL PERFORMANCE

- D16.1 The Contractor shall achieve Substantial Performance within Thirty (30) consecutive Working Days of the commencement of the Work as specified in D14.
- D16.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D16.3 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.

D17. TOTAL PERFORMANCE

- D17.1 The Contractor shall achieve Total Performance within Thirty-Five (35) consecutive Working Days of the commencement of the Work as specified in D14.
- D17.2 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 reinspected.
- D17.3 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.

D18. LIQUIDATED DAMAGES

- D18.1 If the Contractor fails to achieve Critical Stages, 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 Working Day for each and every Working Day following the days fixed herein for same during which such failure continues:
 - (a) Substantial Performance One Thousand Five Hundred dollars (\$1,500.00);
 - (b) Total Performance Seven Hundred Fifty dollars (\$750.00).
- D18.2 The amounts specified for liquidated damages in D18.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve critical stages, Substantial Performance or Total Performance by the days fixed herein for same.

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D18.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

CONTROL OF WORK

D19. JOB MEETINGS

- D19.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.
- D19.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D20. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D20.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

D21. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

D21.1 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

D22. PAYMENT

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

WARRANTY

D23. WARRANTY

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

THIRD PARTY AGREEMENTS

D24. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

- D24.1 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.
- D24.2 Further to D24.1, in the event that the obligations in D24 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.

D24.3 For the purposes of D24:

- (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.

D24.4 Modified Insurance Requirements

- D24.4.1 If not already required under the insurance requirements identified in D10, 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.
- D24.4.2 If not already required under the insurance requirements identified in D10, 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.
- D24.4.3 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.
- D24.4.4 Further to D10.3, 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.
- D24.4.5 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.

D24.5 Indemnification By Contractor

D24.5.1 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.

D24.6 Records Retention and Audits

- D24.6.1 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.
- D24.6.2 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 D24.6.1 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.

D24.7 Other Obligations

- D24.7.1 The Contractor consents to the City providing a copy of the Contract to the Government of Manitoba and/or the Government of Canada upon request from either entity.
- D24.7.2 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.
- D24.7.3 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.
- D24.7.4 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 D11)

KNO(M)	MENI DV THECE	DDECENTO THAT

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
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552 PLINGUET STREET REFUELLING STATION PAVEMENT AND EQUIPMENT REHABILITATION
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:
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; perform the Work in a good, proper, workmanlike manner; make all the payments whether to the Obligee or to others as therein provided; in every other respect comply with the conditions and perform the covenants contained in the Contract; and 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___ .

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SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)	
Per:	(Seal)
Per:	
<u> </u>	
(Name of Surety)	
By:(Attorney-in-Fact)	(Seal)

FORM H2: LABOUR AND MATERIAL PAYMENT BOND (See D11)

KNOW ALL MEN BY THESE PRESENTS THAT

his/its heirs, executors, administrators, successors or assigns (hereinafter called the "F	rincipal"), and
his/its heirs, executors, administrators, successors or assigns (hereinafter called the and firmly bound unto THE CITY OF WINNIPEG (hereinafter called the "Obligee"), for 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. 380-2019

552 PLINGUET STREET REFUELLING STATION PAVEMENT AND EQUIPMENT REHABILITATION

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
 - (ii) 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;

- (iii) 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;
- (iv) 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.

	al has hereunto set its hand affixed its seal, and with its corporate seal duly attested by the authorise.	
day of	, 20	
SIGNED AND SEALED in the presence of: (Witness as to Principal if no seal)	(Name of Principal) Per: Per:	(Seal)
	(Name of Surety) By: (Attorney-in-Fact)	(Seal)

FORM J: SUBCONTRACTOR LIST

(See D12)

552 PLINGUET STREET REFUELLING STATION PAVEMENT AND EQUIPMENT REHABILITATION

<u>Name</u>	<u>Address</u>
	-

PART E - SPECIFICATIONS

GENERAL

E	1	ΔΡΡ	IIIC	ΔRI	F	SP	FC	IFI(`Δ1	ION	IS.	AND	DR	ΔW	ING	9

- 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:

Drawing No.	Drawing Name/Title
CT-00	Cover Sheet
CT-01	Site Plan
CT-02	Pavement and Equipment Rehabilitation
CS-01	Structural Drawing

GENERAL REQUIREMENTS

E2. REMOVAL OF EXISTING 250 MM REINFORCED CONCRETE SLAB

DESCRIPTION

- E2.1 General
- E2.1.1 Further to CW 3110, this specification shall cover the removal of the existing 250mm reinforced concrete slab the 552 Plinguet Street Underground Fuel Storage Tank area and any additional concrete to be removed adjacent to the area.
- E2.1.2 Any damage to the underground storage tanks or existing equipment during construction shall be repaired at the cost of the Contractor.
- E2.2 Definitions
- E2.2.1 250 mm Reinforced Concrete Slab The 250mm thick, 18.0m by 13.6m concrete area that surrounds the existing fuel dispensers at 552 Plinguet Street
- E2.3 Referenced Standard Construction Specifications
- E2.3.1 CW 1130 Work Site Requirements.
- E2.3.2 CW 3110 Sub-Grade, Sub-Base and Base Course Construction.
- E2.3.3 CW 3230 Full-Depth Patching of Existing Pavement Slabs and Joints.

- E2.4 Saw-Cutting of Existing Pavement
- E2.4.1 Further to CW 3230, the Contractor will be required to saw-cut the existing 250mm reinforced concrete slab to near full depth. Saw-Cut pavement into sections.
- E2.4.2 The Contractor shall exercise extreme caution when saw-cutting existing concrete to avoid damage to any underlying Underground Fuel Storage Tank equipment.
- E2.5 Removal of Existing 250 mm Reinforced Concrete Slab
- E2.5.1 The Contractor shall remove the existing concrete by lifting off the sections of existing concrete pavement. Use of pneumatic concrete breakers will be prohibited on the existing 250 mm reinforced concrete slab.
- E2.5.2 The Contractor shall dispose of material in accordance with Section 3.4 of CW 1130 and in accordance with E4.

MEASUREMENT AND PAYMENT

- E2.6 Removal of Existing 250 mm reinforced Concrete Slab
- E2.6.1 Removal of Existing 250 mm Reinforced Concrete Slab shall be measured on a square metre basis and paid for at the Contract Unit Price for "Removal of 250 mm reinforced Concrete Slab", which price shall be payment in full for completing all operations herein described and all other items incidental to the work included in this Specification, accepted and measured by the Contract Administrator.

E3. HYDRO EXCAVATION

DESCRIPTION

- E3.1 General
- E3.1.1 This specification shall cover the removal of granular material immediately adjacent to the underground fuel storage tanks by means of controlled pressure water spray, the recovery of evacuated material by vacuum type means or equivalent method as approved by the Contract Administrator and the disposal of contaminated material in accordance with E4.
- E3.2 Equipment
- E3.2.1 Hydro excavation unit shall be capable of maintaining a minimum working pressure of 10,000 psi, at a rate of flow of 10 to 12 gallons per minute. Unit should be adjustable, so as to provide adequate pressure to remove earthen material identified by the Contract Administrator without damaging existing underground fuel storage equipment.
- E3.2.2 Spray head shall be equipped with a rotating type nozzle, in order to provide a wider path of cut.

- E3.3 Hydro-Removal of Granular Material
- E3.3.1 Granular material adjacent to the underground fuel storage tanks shall be sprayed with controlled pressure water so as to remove all material identified by the contract documents and ensure no damage to the existing fuel storage infrastructure.
- E3.4 Recovery of Excavated Material
- E3.4.1 The recovery of excavated material shall be done using vacuum type method, or other type method as approved by the Contract Administrator.
- E3.4.2 The recovery of material shall follow immediately behind the excavation, to avoid excavated areas from filling with excavated material.
- E3.4.3 The use of mechanical sweepers will not be allowed.

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- E3.4.4 The Contractor shall dispose of material in accordance with Section 3.4 of CW 1130 and in accordance with E4.
- E3.5 Backfill of Hydro Excavated Material
- E3.5.1 The Contractor shall be responsible for the backfill of the hydro excavated area upon the completion of the Work described herein, to the approval of the Contract Administrator.

MEASUREMENT AND PAYMENT

- E3.6 Hydro Excavation
- E3.6.1 Hydro Excavation of earthen material will be measured on a volume basis and paid for at the Contract Unit Price per Cubic Meter for "Hydro Excavation". The volume to be paid for will be the total number of cubic meters of Hydro Excavation in accordance with this specification, accepted and measured by the Contract Administrator. Travel to and from the Site will not be accounted for in the payment of this item.

E4. DISPOSAL OF CONTAMINATED MATERIAL

DESCRIPTION

- E4.1 General
- E4.1.1 This Specification covers all operations relating to the disposal of contaminated material and disposal of contaminated water. All material removed from the 552 Plinguet Street site is to be deemed contaminated.
- E4.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.
- E4.2 This Specification shall supplement the COW Specification for Earthwork and Grading CW 3170.

MATERIALS

- E4.3 General
- E4.3.1 The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification. All materials supplied under this Specification shall be subject to inspection and acceptance by the Contract Administrator.
- E4.4 Suitable site material as per City of Winnipeg CW 3170.

- E4.5 Excavation
- E4.5.1 As per City of Winnipeg Specification CW 3170 and E3.
- E4.6 Disposal of Contaminated Material and Contaminated Water
- E4.6.1 Contaminated material and water is to be treated and disposed of in accordance with all Federal, Provincial and Municipal laws, regulations, and by-laws. Do not discharge dewatered groundwater or other water which may have come into contact with potentially contaminated material, off-site or to municipal sewers.
- E4.6.2 The Contractor is to provide written receipts to the Contract Administrator for evidence of compliance with this specification.

MEASUREMENT AND PAYMENT

E4.7 Disposal of Contaminated Materials

E4.7.1 Removal and Disposal of Contaminated Materials will be considered incidental to the Works of E2 Removal of Existing 250 mm Reinforced Concrete Slab and E3Hydro Excavation. No measurement and payment will be made for these Items of Work.

E5. REPAIR AND REPLACEMENT OF EXISTING UNDERGROUND FUEL STORAGE EQUIPMENT

DESCRIPTION

- E5.1 General
- E5.1.1 This Specification covers all operations relating to the repair and replacement of existing damaged underground fuel storage equipment, as noted on the drawings.
- E5.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labor, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.

MATERIALS

- E5.2 Fibreglass Containment Sumps
- E5.2.1 The existing Fiberglass containment sumps for tank turbine enclosure and dispensers are currently leaking. The fibre glass sumps are to be exposed and repaired, including replacement of the flex piping entry boots (APT FEB-150-SC) and flex electrical entry boots (APT FEB-075-D). There are two containment sumps located on each underground storage tank.
- E5.3 Replacement Underground Fuel Storage Equipment
- E5.3.1 Tank Turbine and sensors within the containment sumps
 - (a) The equipment and sensors located within the leaking containments sumps are badly damaged. All equipment and sensors located within the containment sumps are to be replaced with equal or equivalent, in accordance with B7 as approved by the Contract Administrator.
- E5.3.2 Composite Manhole Frame and Cover
 - (a) Composite Manhole Frame and Cover to be OPW Conquistador Duratuff product number 44CD-WT10 or equivalent in accordance with B7 as approved by the Contract Administrator. A link to the manufacturers' specifications is provided:

 https://www.opwglobal.com/docs/libraries/retail-fueling/product-catalogs/underground-equipment/opw_conquistador_plus_composite_cover_manholes.pdf
- E5.3.3 Probe Access Manhole Frame and Cover
 - (a) Probe Access Manhole Frame and Cover to be Franklin Fueling Systems product number 20URTATG or equivalent in accordance with B7 as approved by the Contract Administrator. A link to the manufacturers' specifications is provided: http://www.franklinfueling.com/media/500897/ffs-0294-probe-access-manhole-datasheet-08-14.pdf
- E5.3.4 Spill Containment Manhole Frame and Covers
 - (a) Spill Containment Manholes Frame and Cover to be OPW 1-2100 Series product number 1C-2100 or equivalent in accordance with B7 as approved by the Contract Administrator. A link to the manufacturers' specifications is provided: https://www.opwglobal.com/docs/libraries/retail-fueling/product-catalogs/2018-retail-fueling-catalogs/indvidual-pages/opw-1-2100-series-2018

SUBMITTALS

- E5.4 Prior to construction submit the following to the Contract Administrator
- E5.4.1 Material data sheets for the products proposed to be supplied and installed.

CONSTRUCTION METHODS

- E5.5 Repair of Fibreglass Containment Sumps
- E5.5.1 Fibreglass containment sumps are to be carefully exposed and checked for existing leaks.

 Repair Fibreglass Sumps as per: www.franklinfueling.com/media/357692/tb0409-05-r2-sump-repair.pdf or equivalent method as approved by the Contract Administrator.
- E5.6 Installation of Replacement Underground Fuel Storage Equipment
- E5.6.1 Install equipment in accordance with Manufacturer's instructions.
- E5.6.2 Any damage done to the Underground Fuel Storage Equipment shall be rectified at the Contractor's expense.

MEASUREMENT AND PAYMENT

- E5.7 Repair of Fibreglass Containment Sumps shall be measured on a unit basis and will be paid for at the contract Unit Price for the number of "Repair of Fibreglass Containment Sumps" supplied and installed in accordance with this specification and accepted and measured by the Contract Administrator.
- E5.8 Replacement of Flex Piping Entry Boots (APT FEB-150-SC) shall be measured on a unit basis and will be paid for at the contract Unit Price for the number of "Replacement of Flex Piping Entry Boots (APT FEB-150-SC)" supplied and installed in accordance with this specification and accepted and measured by the Contract Administrator.
- E5.9 Replacement of Flex Electrical Entry Boots (APT FEB-075-D) shall be measured on a unit basis and will be paid for at the contract Unit Price for the number of "Replacement of Flex Electrical Entry Boots (APT FEB-075-D)" supplied and installed in accordance with this specification and accepted and measured by the Contract Administrator.
- E5.10 Replacement of Tank Turbine and Sensors within the containment sumps shall be measured on a unit basis and will be paid for at the contract Unit Price for the number of "Replacement of Tank Turbine and sensors" supplied and installed in accordance with this specification and accepted and measured by the Contract Administrator.
- E5.11 Replacement of Composite Manhole Frame and Cover shall be measured on a unit basis and will be paid for at the contract Unit Price for the number of "Composite Manhole Frame and Cover" supplied and installed in accordance with this specification and accepted and measured by the Contract Administrator.
- E5.12 Replacement of Probe Access Manhole Frame and Cover shall be measured on a unit basis and will be paid for at the contract Unit Price for the number of "Probe Access Manhole Frame and Cover" supplied and installed in accordance with this specification and accepted and measured by the Contract Administrator.
- E5.13 Replacement of Spill Containment Manhole Frame and Cover shall be measured on a unit basis and will be paid for at the contract Unit Price for the number of "Spill Containment Manhole Frame and Cover" supplied and installed in accordance with this specification and accepted and measured by the Contract Administrator.

E6. OPERATING CONSTRAINTS FOR WORK IN CLOSE PROXIMITY TO THE BRANCH I AQUEDUCT

E6.1 Description

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- E6.1.1 This Section details operating constraints for all work to be carried out in close proximity to Branch I Aqueduct. Close proximity shall be deemed to be any construction activity within a 5 m offset from the centreline of the Aqueduct.
- E6.2 General Considerations for Work in Close Proximity to Branch 1 Aqueduct
- E6.2.1 The Branch I Aqueduct is a critical component of the City of Winnipeg Regional Water Supply System and work in close proximity to the pipeline shall be undertaken with an abundance of caution. The pipe cannot be taken out of service to facilitate construction and inadvertent damage caused to the pipe would likely have catastrophic consequences.
- Work around the Aqueduct shall be planned and implemented to minimize the time period that work is carried out in close proximity to the pipe and to ensure that the pipeline is not subjected to excessive construction related loads, including excessive vibrations and/or concentrated or asymmetrical lateral loads during backfill placement.
- E6.2.3 The Branch I Aqueduct was constructed between 1917 and 1919 from 1676 mm precast reinforced concrete pipe pressure pipe. The pipeline has crimped copper water stop joints which can manifest themselves leaks if subjected to excessive vibration.
- E6.2.4 Large diameter pressure pipe generally has limited ability to withstand increased earth and live loading. Therefore, every precaution must be undertaken to ensure that applied loading during all phases of construction is within accepted loading parameters.
- E6.2.5 Loading limitations and calculated loads associated with typical construction equipment are attached to this specification as Appendix A for illustrative purposes. The loading calculations shall be interpreted with caution, however, as many factors can cause applied loads to increase considerably, such as unbalanced loading, variations in wheel base or track width, payload, impact factors due to excessive speed or vibration, etc.
- E6.3 Submittals
- E6.3.1 Submit proposed construction equipment specifications to the Contract Administrator for review seven (7) days prior to construction. The submissions need to include sufficient data on operational weights, dimensions, and payloads to facilitate assessment that the proposed construction equipment is not in excess of the typical construction loading that this assessment was based on. Submittal shall include:
 - (a) Equipment operating weight and dimensions including wheel or track base, track length or axle spacing, track widths or wheel configurations
 - (i) Payload weights
 - (ii) Load distributions in the intended operating configuration
- E6.3.2 Submit a Construction Method Statement with proposed construction plan including haul routes, excavation equipment locations, loading positioning and base construction sequencing, to the Contract Administrator for review seven (7) days prior to construction. Do not commence construction until the Construction Method Statement has been reviewed and accepted by the Contract Administrator.
- E6.4 Protection of the Branch 1 Aqueduct During Construction
- E6.4.1 The Branch I Aqueduct runs directly through the construction site from the air release chamber at the east side of the site to the corner of McTavish and Plinguet Street.
- E6.4.2 Contractors carrying out repair work or working in close proximity to Branch I Aqueduct shall meet the following conditions and technical requirements:
 - (a) Pre-Work, Planning and General Execution
 - (i) No work shall commence at the site until the Equipment Specifications and Construction Method Statement have been submitted and accepted, and feedermain locations have been clearly delineated in the field. Work over feedermains shall only be carried out with equipment that has been reviewed and quantified in terms of its loading implications on the pipe. All proposed

- construction equipment must be submitted to Contract Administrator for review prior to construction. Work in areas in close proximity to Branch I Aqueduct shall only be carried out with equipment that has been reviewed and quantified in terms of its loading implications by the Contract Administrator.
- (ii) Notify the Contract Administrator well in advance of construction to coordinate required service interruptions
- (iii) Where work is in close proximity to the Branch I Aqueduct, utilize construction practices and procedures that do not impart excessive vibration loads on the pipeline or that would cause settlement of the subgrade below the pipeline.
- (iv) Crossing the Aqueduct is prohibited in the time period from removal of existing roadway structure until the completion of granular base construction. At all times prior to completion of final paving; reduce equipment speeds to levels that minimize the effects of impact loading to the pipe
- (v) For construction work activities either longitudinally or transverse to the alignment of the Aqueduct, work only with equipment and in the manner stipulated in the accepted Construction Method Statement and the supplemental requirements noted herein.
- (vi) The Aqueduct elevation relative to the proposed work shall be adequately verified. Deviations from the elevations noted herein shall be reported to Contract Administrator for review prior to construction of the subgrade. Confirmation of the pipeline elevation at the air release chamber on the east side of site will be considered adequate.
- (vii) Construction operations should be staged in such a manner as to limit multiple construction loads at one time, (e.g. offset crossings sufficiently from each other, rollers should remain a sufficient distance behind spreaders to limit loads. A reasonable offset distance is 3m between loads).
- (viii) The Contractor shall fully acquaint himself with all conditions and work constraints and formally brief all site supervisory personnel and equipment operators to ensure that they are fully cognizant of the associated restrictions, constraints, and risks associated with working adjacent to and over this pipeline. New personnel introduced after commencement of the project need to be formally orientated as to the significance and constraints associated with working over the Branch I Aqueduct.

(b) Demolition and Excavation

- (i) Use of pneumatic concrete breakers within 5 metres of the Branch I Aqueduct is prohibited. Pavement shall be full depth sawcut and carefully removed. Use of hand held jackhammers for pavement removal will be allowed.
- (ii) Where there is less than 1.6 metres of earth cover over the Aqueduct and further excavation is required either adjacent to or over the feedermain, utilize only smooth edged excavation buckets, soft excavation or hand excavation techniques. Where there is less than 1 metre of cover over the Aqueduct, carefully expose the pipe by hand excavation to delineate the location and depth of the main, and provide full time supervision of the excavation.
- (iii) Offset backhoe or excavation equipment from the Aqueduct a minimum of 3 m from centerline, to carry out excavations.
- (iv) Equipment should not be allowed to operate while positioned directly over the Aqueduct.
- (v) If Aqueduct inspection is required, expose the top 1/3 of the Aqueduct by hand excavation, for a minimum length of 1 metre, to allow City to inspect condition of the pipe. Notify City a minimum of 24 hours in advance of exposure, and allow a minimum of 2 hours for City to complete inspection works. Backfill test excavation with bedding sand upon completion.

(c) Subgrade Construction

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- (i) Subgrade compaction shall be prohibited within 3 metres of the Aqueduct. Subgrade compaction within 5 metres of the Aqueduct shall be limited to non vibratory methods only.
- (ii) Subgrade, sub-base and base course construction shall be kept in a rut free condition at all times. Construction equipment is prohibited from crossing the Aqueduct if the grade is insufficient to support the equipment without rutting.
- (iii) Subgrade conditions should be inspected by personnel with competent geotechnical experience (i.e. ability to adequately visually classify soils and competency of subgrade, subbase, and base course materials). In the event of encountering unsuitable subgrade materials above the Aqueduct, proposed design revisions shall be submitted to the contract Administrator for review to obtain approval from the Water and Waste Department relative to any change in conditions.
- (iv) Construction operations shall be staged to minimize the time period between excavation to subgrade and placement of granular subbase materials. Should bare subgrade be left overnight, measures shall be implemented to protect the subgrade against inadvertent travel over it and to minimize the impact of wet weather.
- (d) Subbase and Base Course Construction
 - (i) Granular material, construction material, soil or other material shall not be stockpiled on the Aqueduct or within 5 metres of the pipe centerline.
 - (ii) Subbase or base course materials shall not be dumped directly on the Aqueduct but shall be stockpiled outside of close proximity to the Aqueduct and shall be carefully bladed in-place.
 - (iii) Subbase compaction within 5 metres of the centreline of the Aqueduct shall be either carried out by static methods (without vibration) or with smaller approved equipment such as hand held plate packers or smaller roller equipment.

E7. INSTALLATION OF PERFORATED PVC DRAINAGE SUMP

DESCRIPTION

E7.1 General

- E7.1.1 Further to CW 3120 Installation of Subdrains, this specification shall cover the installation of a perforated PVC drainage Sump at the two locations noted on the Contract drawings for the 552 Plinguet Street Underground Fuel Storage Tank area.
- E7.1.2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.
- E7.2 Referenced Standard Construction Specifications
- E7.2.1 CW 3120 Installation of Subdrains

MATERIALS

- E7.3 As per CW 3120 Installation of Subdrains, Use only those materials listed as Approved Products for Surface Works. The Approved Products are available in Adobe Acrobat (.pdf) format at the City of Winnipeg, Corporate Finance, Material Management Internet site at: http://www.winnipeg.ca/matmgt/info.stm .
- E7.3.1 Casing Pipe shall consist of 4m of solid open ended PVC pipe with a diameter of 450mm.
- Perforated PVC Drainage Sump shall consist up to 4m of solid open ended PVC pipe of diameter 300mm, the pipe shall be perforated with 10mm holes 100mm oc for the bottom 1.5m of the pipe. The pipe will be capped with an approved and permanent end cap on one end and wrapped with geotextile fabric for the bottom 2m of the PVC pipe.

- Probe Access Manhole Frame and Cover shall be Franklin Fueling Systems product number 20URTATG or equivalent in accordance with B7 as approved by the Contract Administrator. A link to the manufacturers' specifications is provided:

 http://www.franklinfueling.com/media/500897/ffs-0294-probe-access-manhole-datasheet-08-14.pdf
- E7.4 The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification. All materials supplied under this Specification shall be subject to inspection and acceptance by the Contract Administrator.

CONSTRUCTION METHODS

- E7.5 Hydro Excavation to install 450 mm casing pipe
- E7.5.1 The 450mm PVC casing pipe shall be placed at the locations noted on the contract drawings, in conjunction with Hydro Excavation methods to remove the material from inside the 450mm PVC casing pipe. Granular material is to be removed carefully to ensure the existing underground fuel storage tanks are not disturbed. The casing pipe installed to a depth where the bottom of the pipe is within 300mm of the bottom of the existing liner.
- E7.6 Installation of the Perforated PVC Drainage Sump
- E7.6.1 The 300 mm Perforated PVC pipe covered with geotextile wrap will be installed inside the 450mm casing to a depth where the bottom of the pipe is within 300mm of the bottom of the existing liner, as per the photographs in Appendix B. Remove the 450 mm PVC casing pipe and tamp the granular material around the 300 mm Perforated PVC pipe.
- E7.7 Installation of a Probe Access Manhole Frame and Cover
- E7.8 The top of the 300 mm Perforated PVC pipe will be trimmed to match the elevation of the proposed concrete pavement and the Probe Access manholes are to be installed as per manufactures recommendations.

MEASUREMENT AND PAYMENT

- E7.9 Installation of Perforated PVC Drainage Sump
- E7.10 Installation of Perforated PVC Drainage Sump shall be measured on a unit basis and paid for at the Contract Unit Price for "Installation of Perforated PVC Drainage Sump", which price shall be payment in full for completing all operations herein described and all other items incidental to the work included in this Specification, accepted and measured by the Contract Administrator. The Supply and Installation of the Probe Access Manhole Frame, Hydro Excavation and Covers relating to the Perforated PVC Drainage Sump will be considered incidental to this work.

E8. 250 MM CONCRETE PAVEMENT (REINFORCED)

DESCRIPTION

- E8.1 General
- E8.1.1 Further to CW 3230 Full Depth Patching of Existing Pavement Slabs and Joints and CW3310 Portland Cement Concrete Pavement Works, this specification shall cover the installation of the 250 mm Concrete Pavement (Reinforced).
- E8.1.2 The 250 mm Concrete Pavement (Reinforced) is to be installed on top of 150mm Limestone Base Course Material installed as per CW 3110-R19.
- E8.1.3 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.
- E8.2 Referenced Standard Construction Specifications

- (a) CW 3230 Full Depth Patching of Existing Pavement Slabs and Joints
- (b) CW3310 Portland Cement Concrete Pavement Works

MATERIALS

- E8.3 Further to CW 3310, Section 6.2 a) i) the concrete shall be Class of Exposure: C-1
- E8.4 Further to CW 3310 and CW 3230 all reinforcing steel, dowels and tie bars are to be Grade 400.

E9. DRAINAGE MATERIAL

DESCRIPTION

- E9.1 General
- E9.1.1 The material placed under the 250mm Concrete Pavement (Reinforced) cw/ 150mm of limestone base course shall be "Drainage Material" as per CW 3120-R4.
- E9.2 Referenced Standard Construction Specifications
 - (a) CW 3120 Installation of Subdrains

MATERIALS

E9.3 Gradation and type of Material to be placed around the existing underground storage tanks as per CW3120-R4 Section 2.3.

- E9.4 Placement of Drainage Material
- E9.4.1 Drainage Material to be placed using end dump methods off of existing concrete, ensure material is not dumped directly over underground storage tanks. Spread material by hand and complete compaction using a small vibrator plate compactor to the satisfaction of the Contract Administrator.