

THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 111-2011

MARJ EDEY PARK AND ANDERSON PARK - PARKING LOT IMPROVEMENTS AND ASSOCIATED WORKS

TABLE OF CONTENTS

| PART A - BID SUBMISSION | |
|--|---|
| Form A: Bid Form B: Prices Form G1: Bid Bond and Agreement to Bond Form G2: Irrevocable Standby Letter of Credit and Undertaking | 1 4 10 12 |
| PART B - BIDDING PROCEDURES | |
| B1. Contract Title B2. Submission Deadline B3. Site Investigation B4. Enquiries B5. Addenda B6. Substitutes B7. Bid Components B8. Bid B9. Prices B10. Qualification B11. Bid Security B12. Opening of Bids and Release of Information B13. Irrevocable Bid B14. Withdrawal of Bids B15. Evaluation of Bids B16. Award of Contract | 1 1 1 1 1 2 3 4 4 5 5 6 6 7 7 |
| PART C - GENERAL CONDITIONS | |
| C0. General Conditions | 1 |
| PART D - SUPPLEMENTAL CONDITIONS | |
| General D1. General Conditions D2. Scope of Work D3. Contract Administrator D4. Contractor's Supervisor D5. Notices D6. Furnishing of Documents | 1 1 2 2 2 2 3 |
| Submissions D7. Authority to Carry on Business D8. Safe Work Plan D9. Insurance D10. Performance Security D11. Subcontractor List D12. Detailed Work Schedule | 3 3 3 4 4 4 |
| Schedule of Work D13. Commencement D14. Working Days D15. Restricted Work Hours D16. Work By Others D17. Substantial Performance D18. Total Performance D19. Liquidated Damages D20. Scheduled Maintenance Control of Work | 4 5 5 5 5 6 6 |
| D21. Job Meetings | 6 |

| D22. Prime Contractor – The Workplace Safety and Health Act (Manitoba) | 7 |
|--|---|
| Measurement and Payment D23. Payment | 7 |
| Warranty D24. Warranty | 7 |
| Form H1: Performance Bond Form H2: Irrevocable Standby Letter of Credit Form J: Subcontractor List | 8 10 12 |
| PART E - SPECIFICATIONS | |
| E1. Applicable Specifications and Drawings E2. Geotechnical Report E3. Protection Of Existing Trees E4. Traffic Control E5. Pedestrian Safety E6. Water Obtained From the City E7. Line Painting of Parking Stalls E8. Salvage and Re-installation of Precast Concrete Curbs E9. Construction of Reinforced Concrete Curb and Gutter E10. Salvage Existing Bollards E11. Supply of Bollards E12. Installation of Bollards E13. Supply and Install Chain Gate E14. Inlet Control Device E15. Disabled Parking Space Sign E16. Install Curb Inlet Frame and Concrete Spillway E17. Supply and Installation of Precast Concrete Curbs E18. Supply and Installation of Precast Concrete Curbs E18. Supply and Install Parking Lot Lighting E19. Speed Bumps E20. Supply and Install Wood Chips | 1 1 1 2 2 2 2 2 3 3 3 3 4 4 5 5 5 6 6 8 8 8 8 |

Appendix 'A' - Geotechnical Report

PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 MARJ EDEY PARK AND ANDERSON PARK - PARKING LOT IMPROVEMENTS AND ASSOCIATED WORKS

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, April 15th, 2011.
- 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 Contract Administrator or an authorized representative will be available at Marj Edey Park 4230 Ridgewood Avenue from 10:00 to 13:00 on April 11th, 2011 to provide Bidders access to the Site.
- B3.2 The Bidder is advised that the parking lot lighting is to be wired to existing circuit made spare from deletion of existing lights. The Contractor shall visit the site and ascertain that all work indicated can be carried out without additional cost to the City of Winnipeg.
- B3.3 The Bidder shall not be entitled to rely on any information or interpretation received at the Site investigation unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

B4. ENQUIRIES

- B4.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.
- B4.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.
- B4.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.
- B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.
- B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

B5. ADDENDA

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

- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/bidopp.asp
- B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6. SUBSTITUTES

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
 - (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative:
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance:
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an "approved equal", any Bidder may use the approved equal in place of the specified item.

- B6.8 If the Contract Administrator approves a substitute as an "approved alternative", any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B15.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B6.10 Notwithstanding B6.2 to B6.9, in accordance with B7.6, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B15.1(a).

B7. BID COMPONENTS

- B7.1 The Bid shall consist of the following components:
 - (a) Form A: Bid;
 - (b) Form B: Prices, hard copy;
 - (c) Bid Security;
 - Form G1: Bid Bond and Agreement to Bond, or Form G2: Irrevocable Standby Letter of Credit and Undertaking, or a certified cheque or draft;
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.
- B7.4.2 A hard copy of Form B: Prices must be submitted with the Bid. If there is any discrepancy between the Adobe PDF version of Form B: Prices and the Microsoft Excel version of Form B: Prices, the PDF version shall take precedence.
- B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B15.1(a).
- B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.8 Bids shall be submitted to:

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

B8. BID

- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
 - (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted:
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 12 of Form A: Bid shall be signed in accordance with the following requirements:
 - (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder:
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, shall be affixed;
 - (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 For the convenience of Bidders, and pursuant to B7.4.2 and B15.4.3, an electronic spreadsheet Form B: Prices in Microsoft Excel (.xls) format is available along with the Adobe PDF documents for this Bid Opportunity on the Bid Opportunities page at the Materials Management Division website at http://www.winnipeg.ca/matmgt
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B10. QUALIFICATION

B10.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B10.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
 - (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/debar.stm
- B10.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
 - (a) have successfully carried out work similar in nature, scope and value to the Work; and
 - (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
 - (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba);
- B10.4 Further to B10.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
 - (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
 - (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt)
- B10.5 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.
- B10.6 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.

B11. BID SECURITY

- B11.1 The Bidder shall provide bid security in the form of:
 - (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
 - (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form

- included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or
- (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.
- B11.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.
- B11.1.2 All signatures on bid securities shall be original.
- B11.1.3 The Bidder shall sign the Bid Bond.
- B11.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.
- B11.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.
- B11.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B11.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.
- B11.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.
- B11.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Bid Opportunity.

B12. OPENING OF BIDS AND RELEASE OF INFORMATION

- B12.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.
- B12.1.1 Bidders or their representatives may attend.
- B12.1.2 Bids determined by the Manager of Materials, or his designate, to not include the bid security specified in B11 will not be read out.
- B12.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt
- B12.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt
- B12.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B13. IRREVOCABLE BID

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

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

B14. WITHDRAWAL OF BIDS

- B14.1 A Bidder may withdraw his Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B14.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B14.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B14.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
 - (a) retain the Bid until after the Submission Deadline has elapsed;
 - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Bid withdrawn.
- B14.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B13.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

B15. EVALUATION OF BIDS

- B15.1 Award of the Contract shall be based on the following bid evaluation criteria:
 - (a) compliance by the Bidder with the requirements of the Bid Opportunity, or acceptable deviation therefrom (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B6.
- B15.2 Further to B15.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and gualified.
- B15.4 Further to B15.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B15.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

- B15.4.2 Further to B15.1(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.
- B15.4.3 The electronic Form B: Prices and the formulas imbedded in that spreadsheet are only provided for the convenience of Bidders. The City makes no representations or warranties as to the correctness of the imbedded formulas. It is the Bidder's responsibility to ensure the extensions of the unit prices and the sum of Total Bid Price performed as a function of the formulas within the electronic Form B: Prices are correct.

B16. AWARD OF CONTRACT

- B16.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B16.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B16.2.1 Without limiting the generality of B16.2, the City will have no obligation to award a Contract where:
 - (a) the prices exceed the available City funds for the Work;
 - (b) the prices are materially in excess of the prices received for similar work in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
 - (d) only one Bid is received; or
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B16.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B15.
- B16.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

CO. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

- D2.1 The Work to be done under the Contract shall consist of:
 - (a) Parking Lot Improvements
 - (i) Anderson Park 900 Raleigh Street
 - (ii) Marj Edey Park 4230 Ridgewood Avenue
- D2.2 The major components of the Work are as follows:
 - (a) Parking Lot Improvements
 - (i) Removal of existing wood bollards (Anderson Park)
 - (ii) Removal of existing pavement (Marj Edey)
 - (iii) Excavation
 - (iv) Compaction of existing sub-grade
 - (v) Installation of 300mm PVC land drainage sewer (Anderson Park)
 - (vi) Installation of catch basins and sewer service pipes (Anderson Park)
 - (vii) Installation of manhole's (Anderson Park)
 - (viii) Ditch excavation and grading (Anderson Park)
 - (ix) Installation of subdrains (Anderson Park)
 - (x) Remove and replace culverts (Marj Edey Park)
 - (xi) Installation of Parking Lot Lighting (Marj Edey Park)
 - (xii) Placement of separation geotextile fabric
 - (xiii) Placement of sub-base and base course material
 - (xiv) Installation of parking lot lighting including all electrical connections, trenches, conduit and lamp standard bases (Marj Edey Park)
 - (xv) Construct curb and gutter (Marj Edey Park)
 - (xvi) Construct monolithic median slabs (Marj Edey Park)
 - (xvii) Construct 200mm reinforced approach (Anderson Park)
 - (xviii) Renewal of existing concrete sidewalk (Anderson Park)
 - (xix) Construction of concrete sidewalk
 - (xx) Construct 75mm asphaltic concrete pavement
 - (xxi) Paint parking stall lines
 - (xxii) Ditch Grading
 - (xxiii) Install topsoil and sod

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is:

Colin Titchkosky, CET Technologist III 106-1155 Pacific Avenue Winnipeg, MB R3E 3P1

Telephone No. (204) 794-4375 Facsimile No. (204) 986-5302

D3.2 At the pre-construction meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D4. CONTRACTOR'S SUPERVISOR

- D4.1 At the pre-construction meeting, the Contractor shall identify his designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.
- D4.2 At least two (2) business days prior to the commencement of any Work on the site, the Contractor shall provide the Contract Administrator with a phone number where the supervisor identified in D4.1 or an alternate can be contacted twenty-four (24) hours a day to respond to an emergency.

D5. NOTICES

- D5.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.
- D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.
- D5.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:

The City of Winnipeg Chief Financial Officer

Facsimile No.: (204) 949-1174

D5.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:

The City of Winnipeg Legal Services Department Attn: Director of Legal Services 185 King Street, 3rd Floor Winnipeg MB R3B 1J1

Facsimile No.: (204) 947-9155

D6. FURNISHING OF DOCUMENTS

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

SUBMISSIONS

D7. AUTHORITY TO CARRY ON BUSINESS

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

D8. SAFE WORK PLAN

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

D9. INSURANCE

- D9.1 The Contractor shall provide and maintain the following insurance coverage:
 - (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
 - (c) an all risks Installation Floater carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.
- D9.2 Deductibles shall be borne by the Contractor.
- D9.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in the C4.1 for the return of the executed Contract.
- D9.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D10. PERFORMANCE SECURITY

- D10.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:
 - (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
 - (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
 - (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.
- D10.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.
- D10.2 If the bid security provided in his Bid was not a certified cheque or draft pursuant to B11.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site and in no event later than the date specified in the C4.1 for the return of the executed Contract.

D11. SUBCONTRACTOR LIST

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

D12. DETAILED WORK SCHEDULE

- D12.1 The Contractor shall provide the Contract Administrator with a detailed work schedule 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.
- 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 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

D13. COMMENCEMENT

- D13.1 The Contractor shall not commence any Work until he is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.
- D13.2 The Contractor shall not commence any Work on the Site until:
 - (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D7;
 - (ii) evidence of the workers compensation coverage specified in C6.15;

- (iii) the twenty-four (24) hour emergency response phone number specified in D4.2.
- (iv) the Safe Work Plan specified in D8;
- (v) evidence of the insurance specified in D9;
- (vi) the performance security specified in D10;
- (vii) the subcontractor list specified in D11;
- (viii) the detailed work schedule specified in D12; and
- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.
- D13.3 The Contractor shall not commence the Work on the Site before July 4, 2011, and shall commence the Work on Site no later than July 8, 2011, as directed by the Contract Administrator and weather permitting.

D14. WORKING DAYS

- D14.1 Further to C1.1(gg);
- D14.1.1 The Contract Administrator will determine daily if a Working Day has elapsed and will record his assessment. On a weekly basis the Contract Administrator will provide the Contractor with a record of the Working Days assessed for the preceding week. The Contractor shall sign each report signifying that he agrees with the Contract Administrator's determination of the Working Days assessed for the report period.
- D14.1.2 Work done to restore the Site to a condition suitable for Work, shall not be considered "work" as defined in the definition of a Working Day.
- D14.1.3 When the Work includes two or more major types of Work that can be performed under different atmospheric conditions, the Contract Administrator shall consider all major types of Work in determining whether the Contractor was able to work in assessing Working Days.

D15. RESTRICTED WORK HOURS

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

D16. WORK BY OTHERS

- D16.1 Work by others on or near the Site will include but not necessarily be limited to:
 - (a) Relocation of guy wire by Manitoba Hydro (Anderson Park);
 - (b) Removal of play structure equipment by the Parks and Open Spaces Division (Anderson Park).

D17. SUBSTANTIAL PERFORMANCE

- D17.1 The Contractor shall achieve Substantial Performance within 35 (thirty-five) consecutive Working Days of the commencement of the Work as specified in D13.
- D17.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.

D17.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D18. TOTAL PERFORMANCE

- D18.1 The Contractor shall achieve Total Performance within 40 (forty) consecutive Working Days of the commencement of the Work as specified in D13.
- D18.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D18.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D19. LIQUIDATED DAMAGES

- D19.1 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City one thousand dollars (\$1000.00) per Working Day for each and every Working Day following the day fixed herein for Total Performance during which such failure continues.
- D19.2 The amount specified for liquidated damages in D19.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Total Performance by the day fixed herein for same.
- D19.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D20. SCHEDULED MAINTENANCE

- D20.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
 - (a) Sod Maintenance as specified in CW 3510-R9.
- D20.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

CONTROL OF WORK

D21. JOB MEETINGS

- D21.1 Regular weekly job meetings will be held at the Site or location agreed to by the Contract Administrator and the Contractor. These meetings shall be attended by a minimum of one representative of the Contract Administrator and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.
- D21.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

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

D22.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

MEASUREMENT AND PAYMENT

D23. PAYMENT

D23.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D24. WARRANTY

D24.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

FORM H1: PERFORMANCE BOND (See D10)

| KNOW ALL MEN BY THESE PRESENTS THAT |
|--|
| (hereinafter called the "Principal"), and |
| (hereinafter called the "Surety"), are held and firmly bound unto THE CITY OF WINNIPEG (hereinarcalled 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 wh sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors assigns, jointly and severally, firmly by these presents. |
| WHEREAS the Principal has entered into a written contract with the Obligee for |
| BID OPPORTUNITY NO. 111-2011 |
| MARJ EDEY PARK AND ANDERSON PARK - PARKING LOT IMPROVEMENTS AND ASSOCIATED WORKS 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 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 Contract; and (e) indemnify and save harmless the Obligee against and from all loss, costs, damages, claims, a demands of every description as set forth in the Contract, and from all penalties, assessment claims, actions for loss, damages or compensation whether arising under "The Work Compensation Act", or any other Act or otherwise arising out of or in any way connected with performance or non-performance of the Contract or any part thereof during the term of Contract and the warranty period provided for therein; |
| THEN THIS OBLIGATION SHALL BE VOID, but otherwise shall remain in full force and effect. The Sur 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 t 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 contraction notwithstanding. |
| IN WITNESS WHEREOF the Principal and Surety have signed and sealed this bond the |

_____ day of _____ , 20____ .

The City of Winnipeg Bid Opportunity No. 111-2011 Supplemental Conditions Page 9 of 13

Template Version: C420110107 - RW

| SIGNED AND SEALED in the presence of: | (Name of Principal) Per: | (Seal) |
|---------------------------------------|--|--------|
| (Witness as to Principal if no seal) | Per: | (Ocal) |
| | (Name of Surety) By: (Attorney-in-Fact) | (Seal) |

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

| (Date) | |
|---|--------------------------|
| The City of Winnipeg Legal Services Department 185 King Street, 3rd Floor Winnipeg MB R3B 1J1 | |
| RE: PERFORMANCE SECURITY – BID OPPORTUNITY NO. 111-2011 | |
| MARJ EDEY PARK AND ANDERSON PARK - PARKING LOT IMPROVEMENTS AND ASSOCIATED WORKS | |
| Pursuant to the request of and for the account of our customer, | |
| (Name of Contractor) | , |
| (Address of Contractor) | |
| WE HEREBY ESTABLISH in your favour our irrevocable Standby Letter of Credit for a sum not exce in the aggregate | eding |
| Canadian do | ıllars. |
| This Standby Letter of Credit may be drawn on by you at any time and from time to time upon videmand for payment made upon us by you. It is understood that we are obligated under this Statetter of Credit for the payment of monies only and we hereby agree that we shall honour your dema payment without inquiring whether you have a right as between yourself and our customer to make demand and without recognizing any claim of our customer or objection by the customer to payment by | andby ind for such |
| The amount of this Standby Letter of Credit may be reduced from time to time only by amounts drawn it by you or by formal notice in writing given to us by you if you desire such reduction or are willing that made. | |
| Partial drawings are permitted. | |
| We engage with you that all demands for payment made within the terms and currency of this Stateter of Credit will be duly honoured if presented to us at: | andby |
| (Address) | |
| and we confirm and hereby undertake to ensure that all demands for payment will be duly honoured by | y us. |

| All demands for | navment shall | specifically state | that they are | drawn under th | is Standby | Letter of Credit |
|-------------------|---------------|--------------------|-------------------|-----------------|-------------|-------------------|
| All delliands for | payment snan | specifically state | e iliai iliey ale | urawii unuei in | is stariuby | Letter of Credit. |

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

| (Date) | | | |
|--------|--|--|--|

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

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

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

| Name | e of bank or financial institution) |
|------|-------------------------------------|
| ⊃er: | |
| | (Authorized Signing Officer) |
| Per: | |
| | (Authorized Signing Officer) |

FORM J: SUBCONTRACTOR LIST

(See D11)

MARJ EDEY PARK AND ANDERSON PARK - PARKING LOT IMPROVEMENTS AND ASSOCIATED WORKS

| Portion of the Work | <u>Name</u> | <u>Address</u> | |
|-------------------------------------|-------------------------|----------------|--|
| SURFACE WORKS: | | | |
| Supply of Materials: | | | |
| Geotextile Fabric | | | |
| Sub-base Material and Base Course | Material | | |
| Concrete | | | |
| Asphalt | | | |
| Soil and Sod | | | |
| Reinforcing Steel | | | |
| Installation/Placement: | | | |
| Geotextile Fabrics | | | |
| Sub-base Material and Base Course | Material | | |
| Concrete | | | |
| Asphalt | | | |
| Soil and Sod | | | |
| Reinforcing Steel | | | |
| UNDERGROUND WORKS: | | | |
| Supply of Materials: | | | |
| Pre-cast Concrete Catch Basins/Rise | ers/Manhole | | |
| Catch Basin/Manhole Frames and C | overs | | |
| Drainage Connection Pipes/Sewer S | Service Pipes/Subdrains | | |
| Inlet Control Device | | | |
| Installation/Placement | | | |
| Pre-cast Concrete Catch Basin/Rise | rs/Manhole | | |
| Catch Basin/Manhole Frame and Co | ver | | |
| Drainage Connection Pipes/Sewer S | Service Pipes/Subdrains | | |
| Inlet Control Device | | | |
| | | | |
| | | | |

| PARKING LOT LIGHTING WORKS: |
|-----------------------------|
| Supply of Materials: |
| Wiring |
| Conduit |
| Poles |
| Steel Reinforcing |
| Lighting Fixtures |
| Installation/Placement |
| Wiring |
| Conduit |
| Concrete Bases |
| Poles |
| Lighting Fixtures |

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

| Drawing No. | Drawing Name/Title | <u>Drawing</u> |
|-------------|--|------------------|
| | | (Original) Sheet |
| | | <u>Size</u> |
| | Cover Sheet | A1 |
| SE-11-16 | Anderson Park – Asphalt Parking Lot Expansion and | A1 |
| | Associated Works | |
| SE-11-17 | Anderson Park – Asphalt Parking Lot Expansion and | A1 |
| | Associated Works | |
| SE-11-18 | Marj Edey Park – Asphalt Parking Lot and Associated Works | A1 |
| SE-11-21 | Marj Edey Park – Parking Lot Lighting and Associated Works | A1 |

E2. GEOTECHNICAL REPORT

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

E3. PROTECTION OF EXISTING TREES

- E3.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing boulevard trees within the limits of the construction area:
 - (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.
 - (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator.
 - (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
 - (d) Operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.

- (e) Work on-site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.
- E3.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his designate.
- E3.3 No separate measurement or payment will be made for the protection of trees.
- E3.4 Except as required in clause E3.1(c) and E3.1(e), Elm trees shall not be pruned at any time between April 1 and July 31.

E4. TRAFFIC CONTROL

- E4.1 Further to clauses 3.6 and 3.7 of CW 1130:
 - (a) Where directed, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions such as manholes and planing drop-offs to the satisfaction of the Contract Administrator. Payment shall be in accordance with CW3410.
 - (b) In accordance with the Manual of Temporary Traffic Control in Work Areas on City Streets, the Contractor ("Agency" in the manual) shall make arrangements with the Traffic Services Branch of the City of Winnipeg to place all temporary regulatory signs. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by the Traffic Services Branch of the City of Winnipeg in connection with the works undertaken by the Contractor.
 - (c) The Contractor shall maintain fire lane access to the front entrance to Varsity View Sportsplex(4230 Ridgewood Avenue) at all times.

E5. PEDESTRIAN SAFETY

E5.1 During the project, Parking Lot Construction of Anderson Park, temporary snow fences shall be installed surrounding the construction area of the parking lot expansion and between the existing soccer fields and the proposed ditch/swale to prevent pedestrian access into the work site to the satisfaction of the Contract Administrator. The Contractor shall be responsible for maintaining the snow fence in a proper working condition. No measurement for payment shall be made for this work.

E6. WATER OBTAINED FROM THE CITY

E6.1 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.

E7. LINE PAINTING OF PARKING STALLS

- E7.1 Work under this section shall include all labour, materials, equipment and services necessary for Line Painting of Parking Stalls as described herein.
- E7.2 The paints supplied shall be high gloss Traffic Paint approved by the Contract Administrator.
- E7.3 Following construction of the asphalt to the satisfaction of the Contract Administrator, the Contractor shall paint the parking stalls on the asphalt pavement as per manufacturer's specifications and as shown on the Drawings and be responsible for all asphalt cleaning, layout, painting and clean up required.
- E7.4 Each line shall be 75 mm wide and 5.639 long.
- E7.5 The paint shall be applied evenly at a rate of 3m²/L by an approved pressure type mobile distributor having a positive shut-off.

E7.6 All paint marking shall be painted within plus or minus 20 mm.

E7.7 Method of Measurement and Basis of Payment

E7.7.1 Line Painting will not be measured but will include all line painting and handicap parking stall symbols and will be paid for at the Contract Unit Price per single (1) lump sum item for "Line Painting", in accordance with this specification, and accepted by the Contract Administrator.

E8. SALVAGE AND RE-INSTALLATION OF PRECAST CONCRETE CURBS

- E8.1 Precast concrete parking curbs shall be removed and stock piled on site for re-installation.
- E8.2 The curbs shall be reinstalled on top of new asphalt at locations directed by the Contract Administrator with two (2) driven deformed dowels each. Prior to installation the dowels a hole slightly smaller than the dowel diameter shall be drilled in the asphalt pavement. The dowels shall be coated with sealant and driven into the asphalt and base course extending a minimum of 300 mm below the surface of the asphalt. All dowels shall be flush with the top of the precast concrete curb following installation.

E8.3 Method of Measurement

E8.3.1 Salvage and re-installation of precast concrete parking curbs will be measured on a unit basis. The number to be paid for shall be the total number of curbs installed in accordance with the Specification and accepted by the Contract Administrator.

E8.4 Basis of Payment

E8.4.1 Salvage and re-installation of precast concrete parking curbs will be paid for at the Contract Unit Price for "Salvage and Re-installation of Precast Concrete Curbs", measurement as specified herein which price shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the work included in this Specification.

E9. CONSTRUCTION OF REINFORCED CONCRETE CURB AND GUTTER

E9.1 Further to CW 3240, this specification shall cover the supply and installation of continuous reinforcement of the curb and gutter as per the details found on Drawing SE-11-18.

E9.2 Measurement and Payment

E9.2.1 The supply and installation of continuous reinforcement of the curb and gutter is incidental to the Works and no separate measurement or payment will be made.

E10. SALVAGE EXISTING BOLLARDS

E10.1 This specification covers the removal and storage of existing wood bollards for re-installation surrounding the new parking lot area.

E10.2 Measurement and Payment

E10.2.1 Salvage of existing bollards will be paid for at the Contract Unit Price for "Salvaging Existing Bollards", measurement will be measured on a unit basis. The unit price will include all operations herein described and all other items incidental to the work included in this Specification.

E11. SUPPLY OF BOLLARDS

E11.1 This specification shall cover the supply of bollards for installation surrounding the parking lot area.

E11.2 Materials

- (a) Wood post shall be 1800mm in length and 190mm to 230mm diameter pressure treated (ACQ) rough post, dimensions shown on Drawing SE-11-17
- (b) Wood post are to include a 50mm chamfer as shown on Drawing SE-11-17

E11.3 Measurement and Payment

E11.3.1 Supply of Bollards shall be paid for at the Contract Unit Price for "Supply of Bollards", measurement will be measured on a unit basis. The unit price will include all incidentals to the supply of materials included in the specification.

E12. INSTALLATION OF BOLLARDS

E12.1 This specification shall cover the installation of bollards surrounding the parking lot area.

E12.2 Materials

(a) Granular backfill shall be 6mm diameter crushed limestone.

E12.3 Construction Method

- E12.3.1 A 300mm diameter hole shall be augured into the ground to a 1000mm depth. Backfill post hole with approximately a 100mm depth of granular base material. Position the post and hold accurately in place in the hole, place granular base course backfill material and compact around the post to within 75mm of the finished grade. After the granular material has been satisfactorily compacted, 75mm of compacted limestone base course is to be placed on top measuring 1.0 m wide by the entire length of the bollards.
- E12.3.2 The grade of the post must be averaged over irregularities in the grade at the site in order to ensure a smooth and uniform grade. The post shall be set so that they are 900mm above finished grade.

E12.4 Measurement and Payment

E12.4.1 Installation of Bollards shall be paid for at the Contract Unit Price for "Installation of Bollards", measurement will be measured on a unit basis. The unit price will include all operations herein described and all other items incidental to the work included in the specification.

E13. SUPPLY AND INSTALL CHAIN GATE

E13.1 This Specification shall cover the installation of a 3.0m chain fence for vehicular access at the designated location on Drawing SE-11-16.

E13.2 Materials

- (a) 3.5m x 25mm x 6mm galvanized chain
- (b) Galvanized Spike

E13.3 Construction Method

E13.3.1 Drill hole thru post sized to accept passing of chain. Drive galvanized spike into top of posts to secure galvanized chain in place at dimensions shown on Drawing SE-11-17. Chain is to be cut and lock supplied by others to be installed as shown on Drawing SE-11-17.

E13.4 Measurement and Payment

E13.4.1 Supply and Install chain gate will not be measured but will include all operations herein described and all other items incidental to the work included in the specification and will be paid for at the Contract Unit Price per single (1) lump sum item for "Installation of 3.0m"

Chain Gate", in accordance with this specification, and accepted by the Contract Administrator

E14. INLET CONTROL DEVICE

- E14.1 This specification shall cover the inlet control device to be installed at the location shown on Drawing SE-11-16.
- E14.2 Inlet Control Device shall be inserted in the outlet pipe from the manhole, held in place by friction and hydrostatic pressure. The inlet control device shall fit a 300mm pipe, be made of PVC material and have a flow restriction area of 0.33m² and approved equal by the Contract Administrator.

E14.3 Measurement and Payment

E14.3.1 Supply and Installation of inlet control devices will be included in the payment for "Land Drainage Sewer" and no additional payment will be made.

E15. DISABLED PARKING SPACE SIGN

- E15.1 This Specification shall cover the supply and installation of disabled parking signs at designated disabled parking stalls.
- E15.2 Sign shall meet the Manual of Uniform Traffic Control Devices for Canada
- E15.3 Be at least 300mm wide and 450mm high; and
- E15.4 Be installed at a height of 1500mm to 2500mm from the ground surface to the centre line of the sign, as approved by the Contract Administrator.
- E15.5 Installed on 50mm diameter pipe extending 1.0m below asphalt surface.

E15.6 Measurement and Payment

Supply and Install disabled parking space sign shall be paid for at the Contract Unit Price for "Supply and Install Disabled Parking Space Sign", measurement will be measured on a unit basis. The unit price will include all operations herein described and all other items incidental to the work included in the specification.

E16. INSTALL CURB INLET FRAME AND CONCRETE SPILLWAY

- E16.1 Further to CW 3210, this specification covers installation of curb inlet frame with concrete spillway.
- E16.2 Referenced Standard Construction Specifications;
 - CW 3110
 - CW 3210
 - CW 3230
 - CW 3310

E16.3 Construction Method

- E16.3.1 Excavate area behind curb designated for the spillway to accommodate a minimum of 50 millimetre base course construction.
- E16.3.2 Place base course and compact in accordance with Specification CW 3110.
- E16.3.3 Install curb inlet frame to grade as designated by the Contract Administrator.

- E16.3.4 Place concrete in accordance with Specification CW 3310.
- E16.3.5 Construct curb inlet frame integral with the spillway concrete pavement.

E16.4 Measurement and Payment

E16.4.1 Install Curb Inlet Frame and Concrete Spillway will not be measured but will include all operations herein described and all other items incidental to the work included in the specification and will be paid for at the Contract Unit Price per single (1) lump sum item for "Install Curb Inlet Frame and Concrete Spillway", in accordance with this specification, and accepted by the Contract Administrator

E17. SUPPLY AND INSTALLATION OF PRECAST CONCRETE CURBS

- E17.1 Precast concrete parking curbs shall be Barkman 150mm high x 2400mm Bumper Curb or approved equal complete with 450mm minimum length anchor dowels.
- E17.2 The curbs shall be installed on top of new asphalt at locations directed by the Contract Administrator with two (2) driven deformed dowels each. Prior to installation the dowels a hole slightly smaller than the dowel diameter shall be drilled in the asphalt pavement. The dowels shall be coated with sealant and driven into the asphalt and base course extending a minimum of 300 mm below the surface of the asphalt. All dowels shall be flush with the top of the precast concrete curb following installation.

E17.3 Method of Measurement

E17.3.1 Supply and installation of precast concrete curbs will be measured on a unit basis. The number to be paid for shall be the total number of curbs installed in accordance with the Specification and accepted by the Contract Administrator.

E17.4 Basis of Payment

E17.4.1 Supply and installation of precast concrete curbs will be paid for at the Contract Unit Price for "Supply and Installation of Precast Concrete Curbs", measurement as specified herein which price shall be payment in full for supplying all materials and performing all operations herein described and all other items incidental to the work included in this Specification.

E18. SUPPLY AND INSTALL PARKING LOT LIGHTING

- E18.1 This Specification shall cover the furnishing of labour, new material, equipment and services necessary and reasonably implied and incidental to the complete installation of electrical work shown on the plans and specification including, but not limited to:
 - (a) Wiring, trenching, backfilling and surface repair
 - (b) Poles
 - (c) Lighting Fixtures, mounting attachments and lamps.
- E18.2 Supply and Install all devices required for the complete approved system, operating to the complete satisfaction of the Contract Administrator.
- E18.3 Contractor is to be responsible for any damage caused the City by improperly carrying out this contract.
- E18.4 Refer to drawing SE-11-21
- E18.5 Trenching, backfilling and surface repair to CW 2030
- E18.6 Contractor shall submit shop drawings to Contract Administrator for review prior to ordering equipment.

E18.7 Construction Methods

E18.7.1 Co-ordinate locations of all light fixtures and trenches with Contract Administrator prior to construction. E18.7.2 The entire electrical installation shall comply with the latest edition of The Canadian Electrical Code and with all provincial and municipal laws; rules and ordinances. Prepare and submit to the proper authorities all necessary permits and pay all permit fees. E18.7.3 Grounding shall be in accordance with the latest edition of The Canadian Electrical Code. E18.7.4 The Contractor shall carefully examine all drawings relating to the work, to be certain that the work under this contract can be carried out and, prior to the submission of his tender, report at once to the Contract Administrator any defect, discrepancy, omission or interference affecting the work of this section or the guarantee of same. E18.7.5 The Contractor shall visit the site and ascertain that all work indicated can be carried out without additional cost to the City of Winnipeg. E18.7.6 Trenching, backfilling and surface repair to CW 2030. E18.7.7 Prepare and submit to the proper authorities all necessary permits and pay all fees. E18.7.8 Pay all utility contributions. Provide all accessories. E18.7.9 All new distribution equipment to match existing. E18.7.10 Fixtures are to be installed to manufacturer's specifications. E18.7.11 Supply and install, wire and connect all luminaries (to be complete with lamps) as indicated. E18.7.12 Max. 2.5% voltage drop for all wiring. E18.7.13 Make all arrangements to store and unload equipment. E18.7.14 Provide a complete "as-built" drawing set to the City of Winnipeg at completion of project, including all trench locations, etc. E18.7.15 Electrical installation including electrical equipment supplied, installed or connected shall be tested in the presence of the Contract Administrator on completion of work. E18.7.16 Conduits in direct contact with earth or in concrete shall be rigid PVC. Conduits shall be concealed unless otherwise noted on the drawings. Conduits shall not be exposed in any area where concealed work is required without prior written approval. All wiring shall be in conduit. E18.7.17 Junction boxes shall be of size and type to suit the requirements of the application. Junction boxes shall be accessible. E18.7.18 The Contractor is to provide wiring to CSA standard and electrical poles. Wire and cable shall be copper of standard AWG sizes with 600V (90 Degree C) insulation. Insulation shall be X-Link Polyethylene unless other wise noted on drawings or prohibited by regulations. Aluminum conductors will not be accepted. Minimum wire size shall be #10 AWG. E18.7.19 Circuit breakers shall be bolt-in, moulded-case, thermal and magnetic trip and match existing manufacturer. Trip values as shown on drawing. Two or three pole breakers shall have common trip units. Mount a typewritten directory behind a plastic shield on the inside of panel board doors. All distribution equipment to be sprinkler-proof and match existing. E18.7.20 Any cutting and patching in existing walls or floors required for the addition or relocation of electrical equipment shall be the responsibility of the Electrical Contractor. E18.7.21 Equipment and material shall be installed as specified. Requests for equal status shall be submitted to Contract Administrator 7 days prior to tender submission. No requests will be accepted past the 7 day deadline. Only one request will be considered from each supplier.

If rejected for any reason, no substitutes from the same supplier will be reviewed.

- Upon completion and before final payment is made, present the City of Winnipeg a Certificate of Approval for all electrical work from the inspection department having iurisdiction.
- E18.7.23 The Contractor shall guarantee the satisfactory operation of all work and apparatus included and installed under this section for a period of twelve (12) calendar months after the date of Total Performance.
- The Contractor shall provide 3 copies of Operation and Maintenance (O & M) Manuals. The O & M manuals shall be in accordance with the requirements of Technical Bulletin #15 issued by the joint MAA/WCA committee and the contract General Conditions. The Contractor shall submit one preliminary copy at the completion of work, revise as directed, and submit the final copies to the Contract Administrator.

E18.8 Measurement and Payment

E18.8.1 Supply and Install Parking Lot Lighting will not be measured but will include supply of all materials and performing all operations herein described and for all other items incidental to the work included in this Specification, and will be paid for at the Contract Unit Price per single (1) lump sum item for "Supply and Install Parking Lot Lighting", in accordance with this specification, and accepted by the Contract Administrator

E19. SPEED BUMPS

E19.1 Supply and install Speed Bumps as per detail found on Drawing SE-11-18.

E19.2 Measurement and Payment

E19.2.1 Supply and Install Speed Bumps will be paid for at the Contract Unit Price for "Speed Bump", measurement will be measured on a unit basis. The unit price will include all operations herein described and all other items incidental to the work included in the specification.

E20. SUPPLY AND INSTALL WOOD CHIPS

E20.1 Supply and install wood chips as per detail found on Drawing SE-11-18.

E20.2 Measurement and Payment

E20.2.1 Supply and Install Wood Chips will be paid for at the Contract Unit Price for "Supply and Install Wood Chips", measurement will be measured on a cubic meter basis. The unit price will include all operations herein described and all other items incidental to the work included in this Specification.

APPENDIX 'A' GEOTECHNICAL REPORT

APPENDIX 'A' - GEOTECHNICAL REPORT

GEOTECHNICAL REPORT FOR:

- i) Anderson Park
- ii) Marj Edey Park(Varsity View Arena Parking Lot)

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



GEOTECHNICAL INVESTIGATION ANDERSON PARK PARKING LOT

Prepared for

CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
106-1155 PACIFIC AVENUE
WINNIPEG, MANITOBA
R3E 3P1

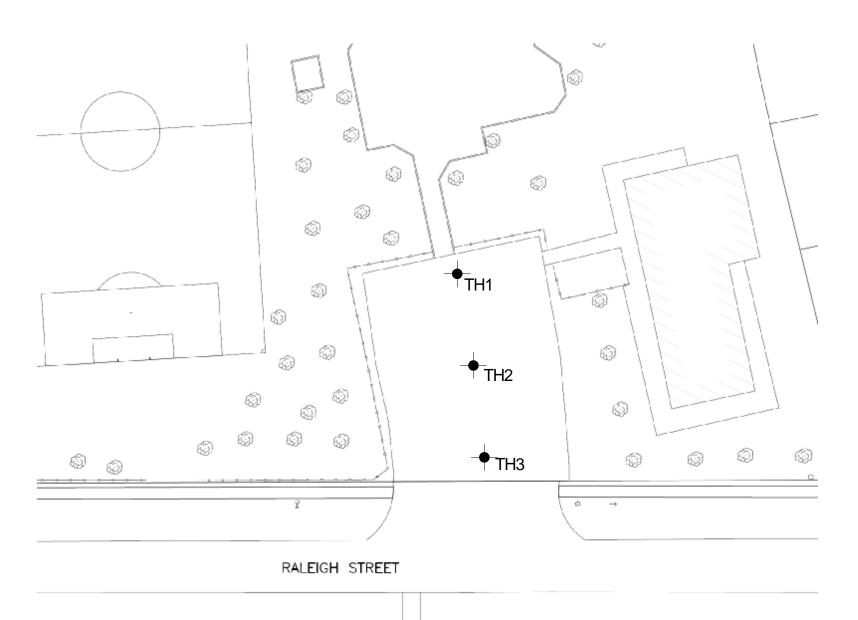
Prepared by

THE NATIONAL TESTING LABORATORIES LIMITED
199 HENLOW BAY
WINNIPEG, MANITOBA
R3Y 1G4

GEOTECHNICAL INVESTIGATION ANDERSON PARK PARKING LOT

| Testhole | Testhole Location | Pavement S | urface | Soil | Sample Moisture | | Р | Particle Size Analysis | | | | Atterberg Limits | | | |
|----------|-----------------------------|----------------------------|-------------------|-------------|-----------------|-------------|---------------|------------------------|-------------|-------------|-----------------|------------------|---------------------|----|--|
| ID | (GPS Coordinates) | Туре | Thickness (mm) | Description | Depth (m) | Content (%) | Gravel (%) | Sand (%) | Silt (%) | Clay (%) | Liquid Limit | Plastic Limit | Plasticity Index | | |
| TH1 | 5532253 m E, 638122 m N | 20 mm Crushed | | Silty Clay | 0.6 | 35.2 | 1.0 | 9.5 | 36.4 | 53.1 | 75 | 20 | 55 | | |
| 1111 | 3332233 III E, 030122 III N | limestone | limestone | 100 | Clayey Silt | 1.2 | 26.9 | 0.1 | 2.8 | 64.7 | 32.4 | 35 | 18 | 17 | |
| TH2 | 5532243 m E, 638132 m N | 20 mm Crushed limestone | 150 | | | | | | | | | | | | |
| TH3 | 5532237 m E, 638142 m N | 20 mm Crushed limestone | 200 | | | | | | | | | | | | |





| Estatu ished in 1923 |
|----------------------|
|----------------------|

| Project No.COW-1101 | Drawn by: FL | Figure: 1 |
|---------------------|-----------------|------------|
| Date:Feb 10, 2011 | Reviewed by: GL | Scale: NTS |

Testhole Location Plan Anderson Park Parking Lot Winnipeg, Manitoba



Project Name: Anderson Park Parking Lot

Client: City of Winnipeg

Drilling Contractor: Active Drilling & Piling

Testhole Location: 14 U 5532253 m E, 638122 m N

| | | Subsurface Profile | | | l | abora | tory T | estin | g | | |
|--------------|-------------|--|---------|-------------|---------|---------------|-----------|------------|----------|----------|----------|
| Depth (m) | Symbol | Description | PL 0 | Water 25 | r Conte | ent (%) 75 | LL 100 | Gravel (%) | Sand (%) | Silt (%) | Clay (%) |
| 0.0 | | Ground Surface | | | | | | | | | |
| 0.0- | 000 000 v | Crushed Limestone - 20 mm maximum aggregate size |] | 10 | | | | | | | |
| 0.5 | | Clay Fill - grey, stiff, moist, high plasticity - silty - with fine to medium gravel | | 31 | 5 | | | 1.0 | 9.5 | 36.4 | 53.1 |
| 1.0- | - - - | Clayey Silt - tan, soft, moist, low plasticity | | 27 | 44 | | | | | | |
| 1.5- | | ,,,, | | 23 | | | | 0.1 | 2.8 | 64.7 | 32.4 |
| 2.0 | | Clay - brown, stiff, moist, high plasticity | | 34 | 43 | | | | | | |
| 2.5 | - | No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Soil frozen to a depth of 1.1 m. Testhole terminated at a depth of 2.1 m. | | | | | | | | | |
| 3.0- | | | | | | | | | | | |

THE NATIONAL IISTING LABORATORIES LIMITED

Project Name: Anderson Park Parking Lot

Client: City of Winnipeg

Drilling Contractor: Active Drilling & Piling

Drilling Method: 125 mm Auger

Location: 14 U 5532243 m E, 638132 m N

| | Subsurface Profile | Laboratory Testing |
|------------------------------------|--|--|
| ymbol | Description | Water Content (%) 0 20 40 60 80 10 |
| | Ground Surface | |
| 00 400 4 000 000 4 000 000 4 | Crushed Limestone - 20 mm maximum aggregate size | 5 |
| | Clay Fill - grey, stiff, moist, high plasticity - silty - with fine to medium gravel | 35 |
| | Clay - brown, stiff, moist, high plasticity | 36 34 32 40 |
| | No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Soil frozen to a depth of 1.5 m. Testhole terminated at a depth of 2.1 m. | |
| 0 | 24024 S.A.S. | Crushed Limestone - 20 mm maximum aggregate size Clay Fill - grey, stiff, moist, high plasticity - silty - with fine to medium gravel Clay - brown, stiff, moist, high plasticity • No groundwater seepage or soil sloughing was observed during or upon completion of drilling. • Soil frozen to a depth of 1.5 m. |

THE NATIONAL IISTING LABORATORIES LIMITED

Project Name: Anderson Park Parking Lot

Client: City of Winnipeg

Drilling Contractor: Active Drilling & Piling

Drilling Method: 125 mm Auger

Location: 14 U 5532237 m E, 638142m N

| Laboratory Testing |
|-------------------------------------|
| Water Content (%) 0 20 40 60 80 100 |
| |
| 6 |
| 33 |
| 33 33 39 |
| |
| |



GEOTECHNICAL INVESTIGATION VARSITY VIEW ARENA PARKING LOT

Prepared for

CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT 106-1155 PACIFIC AVENUE WINNIPEG, MANITOBA R3E 3P1

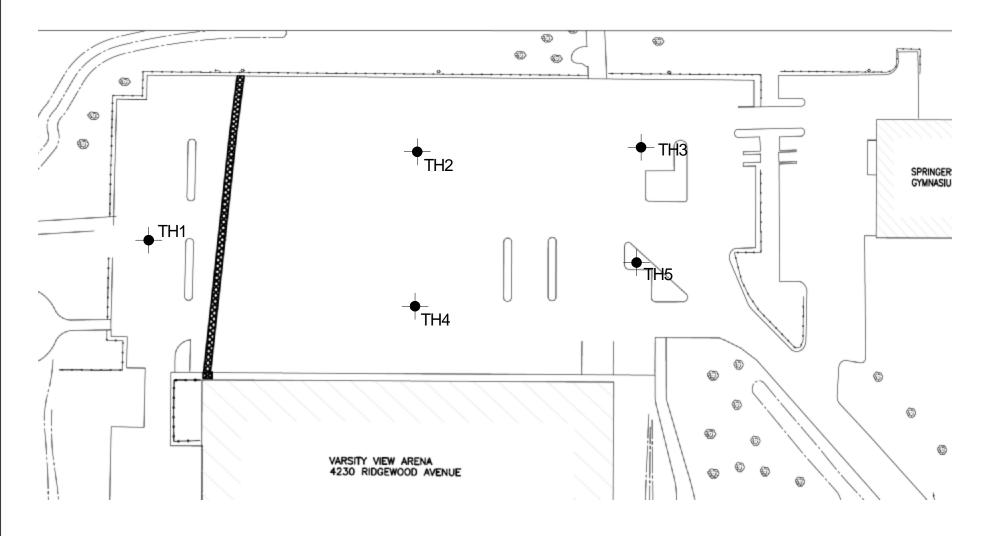
Prepared by

THE NATIONAL TESTING LABORATORIES LIMITED
199 HENLOW BAY
WINNIPEG, MANITOBA
R3Y 1G4

GEOTECHNICAL INVESTIGATION VARSITY VIEW ARENA PARKING LOT

| Testhole | Testhole Location | Pavement Surface | | Pavement Stru | | | Pavement Structure Material | | Sample | Moisture | Pa | article Siz | ze Analysi | s | A | tterberg Li | mits |
|----------|------------------------------|------------------|-------------------|----------------------------|-------------------|---------------------|-----------------------------|-------------|---------------|-------------|-------------|-------------|-----------------|------------------|---------------------|-------------|------|
| ID | (GPS Coordinates) | Туре | Thickness (mm) | Туре | Thickness (mm) | Soil Description | | Content (%) | Gravel (%) | Sand (%) | Silt (%) | Clay (%) | Liquid Limit | Plastic Limit | Plasticity Index | | |
| TH1 | 5522598 m E, 624267 m N | Asphalt | 70 | 20 mm Crushed limestone | 550 | _ | _ | | | | | _ | | | | | |
| TH2 | 5522643 m E, 624256 m N | Asphalt | 35 | 20 mm Crushed limestone | 50 | _ | _ | | | | | | | | | | |
| TH3 | 5522697 m E, 624250 m N | Asphalt | 40 | N/A | N/A | silty clay | 0.6 | 38.1 | 0 | 4.3 | 35.0 | 60.7 | 68 | 22 | 46 | | |
| 1110 | 3322337 III E, 024230 III IV | Nopriait | 40 | 14// | | IV/A | clay | 1.2 | 39.3 | 0 | 0.5 | 19.2 | 80.3 | 88 | 28 | 60 | |
| TH4 | 5522643 m E, 624282 m N | Asphalt | 50 | 20 mm Crushed limestone | 100 | _ | | _ | | | | | | | | | |
| TH5 | 5522699 m E, 624274 m N | Asphalt | 80 | 20 mm Crushed limestone | 875 | | _ | | | _ | | | | _ | | | |





| THE NATIONAL TESTING LABORATORIES LIMITED Established in 1902 |
|---|
| Established in 1923 |

| Project No.COW-1101 | Drawn by: FL | Figure: 1 |
|---------------------|-----------------|------------|
| Date:Feb 10 2011 | Reviewed by: GL | Scale: NTS |

Testhole Location Plan Varsity View Arena Parking Lot Winnipeg, Manitoba

THE NATIONAL IESTING LABORATORIES LIMITED

Project Name: Varsity View Arena Parking Lot

Client: City of Winnipeg

Drilling Contractor: Active Drilling & Piling

Drilling Method: 125 mm Auger

Location: 14 U 5522598 m E, 624267 m N

| | | Subsurface Profile | | Lal | bor | ator | y Te | sting |
|------------------|---|--|----|-----|-----|------|-------|--------------|
| Depth (m) | Symbol | Description | 0 | | Wa | | Conte | ent 80 10 |
| | | Ground Surface | + | | | | | |
| 0.0 | SPECIES SE | Asphalt | Ji | | Ī | | | |
| - | 100 100 100 100 100 100 100 100 100 100 | Crushed Limestone - 20 mm maximum aggregate size | | 7 | | | | |
| 1.0- | | Clay Fill - grey, stiff, moist, high plasticity - silty - with fine to medium gravel | | \ | | 35 | | |
| - | | Clay - brown, stiff, moist, high plasticity | | | | 36 | | |
| 2.0- | | | | | | 40 | | |
| - - - - | | No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Soil frozen to a depth of 1.5 m. Testhole terminated at a depth of 2.1 m. | | | | | | |
| 3.0- | - | | | | | | | |

THE NATIONAL TESTING LABORATORIES LIMITED

Project Name: Varsity View Arena Parking Lot

Client: City of Winnipeg

Drilling Contractor: Active Drilling & Piling

Drilling Method: 125 mm Auger

Location: 14 U 5522643 m E, 624256 m N

| | Subsurface Profile | L | Labo | rator | y Te | sting |
|-----------|--|--|--|-----------------------------|--|--|
| Symbol | Description | 0 | W | | %) | ent 80 10 |
| | Ground Surface | | | | | |
| Log Log L | Asphalt | | | | | |
| | Crushed Limestone - 20 mm maximum aggregate size | 1 | | 32 | | |
| | - grey, stiff, moist, high plasticity - silty | | | • | | |
| | - with fine to medium gravel | | | 38 | | |
| | Clay - brown, stiff, moist, high plasticity | | | 38 • | | |
| | | | | 39 | | |
| | No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Soil frozen to a depth of 1.5 m. Testhole terminated at a depth of 2.1 m. | | | | | |
| | Symbol | Symbol Ground Surface Asphalt Crushed Limestone - 20 mm maximum aggregate size Clay Fill - grey, stiff, moist, high plasticity - silty - with fine to medium gravel Clay - brown, stiff, moist, high plasticity * No groundwater seepage or soil sloughing was observed during or upon completion of drilling Soil frozen to a depth of 1.5 m. | Ground Surface Asphalt Crushed Limestone - 20 mm maximum aggregate size Clay Fill - grey, stiff, moist, high plasticity - silty - with fine to medium gravel Clay - brown, stiff, moist, high plasticity • No groundwater seepage or soil sloughing was observed during or upon completion of drilling Soil frozen to a depth of 1.5 m. | Symbol Description O 20 | Symbol Description Ground Surface Asphalt Crushed Limestone - 20 mm maximum aggregate size Clay Fill - grey, stiff, moist, high plasticity - silty - with fine to medium gravel Clay - brown, stiff, moist, high plasticity * * * * * * * * * * * * * | Symbol Description Ground Surface Asphalt Crushed Limestone - 20 mm maximum aggregate size Clay Fill grey, stiff, moist, high plasticity - silty - with fine to medium gravel Clay Clay - brown, stiff, moist, high plasticity ** ** ** ** ** ** ** ** ** |

THE SATIONAL DISTING LABORATORIES LABORATORIES

Project Name: Varsity View Arena Parking Lot

Client: City of Winnipeg

Drilling Contractor: Active Drilling & Piling Testhole Location: 14 U 5522697 m E, 624250 m N

| | | Subsurface Profile | | L | aboratory 1 | estin | g | | |
|--------------|--------|--|------|-------------|------------------------|------------|----------|----------|----------|
| Depth (m) | Symbol | Description | PL · | Water Conte | nt (%) LL 75 100 | Gravel (%) | Sand (%) | Silt (%) | Clay (%) |
| 0.0- | | Ground Surface | | | | | | | |
| | | Asphalt Clay Fill - grey, stiff, moist, high plasticity - silty - with fine gravel | | 36 | | | | | |
| 0.5- | - | | | 38 40 | → | 0.0 | 4.3 | 35.0 | 60.7 |
| 1.0- | - | Clay - brown, stiff, moist, high plasticity | | 39 | | 0.0 | 0.5 | 19.2 | 80.3 |
| 1.5- | | | | 40 | | | | | |
| 2.0- | | | | 44 | | | | | |
| 2.5- | - | No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Soil frozen to a depth of 1.5 m. Testhole terminated at a depth of 2.1 m. | | | | | | | |
| 3.0- | | | | | | | | | |

Project Name: Varsity View Arena Parking Lot

Client: City of Winnipeg

Drilling Contractor: Active Drilling & Piling

Drilling Method: 125 mm Auger

Location: 14 U 5522643 m E, 624282 m N



| Subsurface Profile | | | | | Laboratory Testing | | | | | | | |
|--------------------|--------------|--|----------|---|--------------------|----|-------|--------------|--|--|--|--|
| Depth (m) | Symbol | Description | | 0 | W 20 | | Conte | ent 80 10 | | | | |
| 0.0 | | Ground Surface | | | | | | | | | | |
| 0.0 | mod mod m | Asphalt | 1 | | 11 | | | | | | | |
| | nOtar Otar L | Crushed Limestone | A | | ١. | | | | | | | |
| | | - 20 mm maximum aggregate size | | | 2 | 5 | | | | | | |
| | | Clay Fill - brown, stiff, moist, high plasticity | | | 1 | | | | | | | |
| | | - silty | | | | \ | | | | | | |
| | | - with fine to medium gravel | | | | 34 | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | 37 | | | | | | |
| 4.0 | | | | | | • | | | | | | |
| 1.0- | | | | | | | | | | | | |
| | | Clay | | | | | | | | | | |
| | | - brown, stiff, moist, high plasticity | | | | 38 | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | 37 | | | | | | |
| | | | | | | • | | | | | | |
| - | | | | | | | | | | | | |
| - | | | | | | 36 | | | | | | |
| - | | | | | | * | | | | | | |
| | | | | | | 42 | | | | | | |
| 2.0- | | | | | | • | | | | | | |
| | //////// | | \dashv | | | | | | | | | |
| | | No groundwater seepage or soil sloughing was observed during | | | | | | | | | | |
| | - | or upon completion of drilling. • Soil frozen to a depth of 1.5 m. | | | | | | | | | | |
| - | - | Testhole terminated at a depth of 2.1 m. | | | | | | | | | | |
| - | - | | | | | | | | | | | |
| | - | | | | | | | | | | | |
| | - | | | | | | | | | | | |
| - | - | | | | | | | | | | | |
| | - | | | | | | | | | | | |
| 3.0- | | | | | | | | | | | | |

THE NATIONAL TESTING LABORATORIES LIMITED

Project Name: Varsity View Arena Parkng Lot

Client: City of Winnipeg

Drilling Contractor: Active Drilling & Piling

Drilling Method: 125 mm Auger

Location: 14 U 5522699 m E, 624274 m N

| Subsurface Profile | | | | | or | ator | y Tes | stin | g |
|-------------------------------------|--------|--|----------|----|-----|-------------|-------|------|-----|
| Depth (m) | Symbol | Description | 0 | | Wat | ter C (% | onte | | 100 |
| | | Ground Surface | \dashv | | | | | | _ |
| 0.0 | | Asphalt | | | | | T | T | |
| | | Crushed Limestone - 20 mm maximum aggregate size | | 11 | | | | | |
| 1.0- | HSAS. | Clay Fill - brown, stiff, moist, high plasticity - silty - with fine gravel | | \ | 33 | 2 | | | |
| | | Clay - brown, stiff, moist, high plasticity | | | | 41 | | | |
| 2.0 - - - - - - - | | No groundwater seepage or soil sloughing was observed during or upon completion of drilling. Soil frozen to a depth of 1.8 m. Testhole terminated at a depth of 2.1 m. | | | | | | | |





Core sample for Testhole TH1



Core sample for **Testhole** TH2





Core Sample from Testhole TH3



Core sample from Testhole TH4





Core Sample from Testhole TH5