



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 76-2008

HENTELEFF PARK – DETAILED DESIGN FOR FRONT ENTRY

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 HENTELEFF PARK – DETAILED DESIGN FOR FRONT ENTRY

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, March 07, 2008.

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 all sites should be viewed prior to submitting a bid to familiarize the Bidder with the nature of the work areas and site access restrictions. The Bidder shall note that existing trees are to be protected, and proximity of trees to the construction areas may limit the type of construction equipment utilized. The Bidder is made aware of the City Naturalist and Forestry Department will require financial compensation for trees or plant material damaged by the Contractor or his/her Subcontractors. Note that safe public use of the sites must be provided for by the Contractor.

B4. ENQUIRIES

B4.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.

B4.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.

B4.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

B5. ADDENDA

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

B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet site for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.2.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 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 B14.

B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B7. BID COMPONENTS

B7.1 The Bid shall consist of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices;

B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.

B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.

B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.

B7.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.

B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.

B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, may result in the Bid being determined to be non-responsive.

B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B7.8 Bids shall be submitted to:

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

B8. BID

B8.1 The Bidder shall complete Form A: Bid, making all required entries.

B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
- (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.

- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 10 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;
 - (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid shall be printed below such signatures.
- B8.4.2 All signatures shall be original.
- 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 Notwithstanding C12.2.3(c), prices on Form B: Prices shall not include the Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B10. QUALIFICATION

- B10.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
 - (b) be financially capable of carrying out the terms of the Contract; and
 - (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B10.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) be responsible and not be suspended, debarred or in default of any obligations to the City (a list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt.>)
- 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 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.

B10.5 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. OPENING OF BIDS AND RELEASE OF INFORMATION

B11.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Branch, or in such other office as may be designated by the Manager of Materials.

B11.1.1 Bidders or their representatives may attend.

B11.2 Following the Submission Deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B11.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B11.4 The Bidder is advised that any information contained in any Bid may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), or by other authorities having jurisdiction, or by law.

B12. IRREVOCABLE BID

B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.

B12.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 9 of Form A: Bid.

B13. WITHDRAWAL OF BIDS

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

B13.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.

B13.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

B13.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:

- (a) retain the Bid until after the Submission Deadline has elapsed;

- (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.

B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

B14. EVALUATION OF BIDS

B14.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Bid Opportunity (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.

B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.

B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.

B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

B15. AWARD OF CONTRACT

B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B15.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.

B15.2.1 Without limiting the generality of B15.2, the City will have no obligation to award a Contract where:

- (a) the prices exceed the available City funds for the Work;
- (b) the prices are materially in excess of the prices received for similar work in the past;
- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
- (d) only one Bid is received; or
- (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.

- B15.3 Subject to B15.2, where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid.
- B15.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.
- B15.4 Notwithstanding C4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B15.5 The Contract, as defined in C1.1, in their entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of landscape improvements to Henteleff Park.

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

- (a) Wooden fencing and signage
- (b) Planting bed preparation
- (c) Installation of shrubs and sod plus maintenance
- (d) Gravel path Installation

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is:

Cynthia Cohlmeier
Cynthia Cohlmeier Landscape Architect
359 McDermot Avenue, Winnipeg, Manitoba, R3A 0A6
Telephone No. (204) 943-1394
Facsimile No. (204) 942-4426

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

D4. CONTRACTOR'S SUPERVISOR

D4.1 At the pre-construction meeting, the Contractor shall identify his designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D5. NOTICES

D5.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.

D5.3 All notices of appeal to the Chief Administrative Officer shall be sent to the following address or facsimile number:

The City of Winnipeg
Chief Administrative Officer Secretariat

Attn: Chief Administrative Officer
Administration Building, 3rd Floor
510 Main Street
Winnipeg MB R3B 1B9

Facsimile No.: (204) 949-1174

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

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

Facsimile No.: (204) 947-9155

SUBMISSIONS

D6. AUTHORITY TO CARRY ON BUSINESS

- D6.1 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.

D7. INSURANCE

- D7.1 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 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;
- D7.2 Deductibles shall be borne by the Contractor.
- D7.3 The Contractor shall provide the Contract Administrator 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 seven (7) Calendar Days from notification of the award of contract by Purchase Order.
- D7.4 The Contractor shall not cancel, materially alter, or cause the policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

SCHEDULE OF WORK

D8. COMMENCEMENT

- D8.1 The Contractor shall not commence any Work until he is in receipt of a notice of award from the Award Authority authorizing the commencement of the Work.
- D8.2 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 D6;
 - (ii) evidence of the workers compensation coverage specified in C6.15; and
 - (iii) evidence of the insurance specified in D7.
 - (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.
- D8.3 The Contractor shall commence the Work on the Site no later than May 15th, 2008, or as soon thereafter as weather permits.
- D8.3.1 The Contractor shall obtain materials in a timely manner to provide for the start-up date of May 15, 2008.

D9. SUBSTANTIAL PERFORMANCE

- D9.1 The Contractor shall achieve Substantial Performance within fifteen (15) consecutive Working Days of the commencement of the Work as specified in D8.
- D9.2 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.
- D9.3 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.

D10. TOTAL PERFORMANCE

- D10.1 The Contractor shall achieve Total Performance within twenty (20) consecutive Working Days of the commencement of the Work as specified in D8.
- D10.2 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.
- D10.3 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.

D11. LIQUIDATED DAMAGES

- D11.1 If the Contractor fails to achieve Substantial Performance in accordance with the Contract by the day fixed herein for Substantial Performance, the Contractor shall pay the City four hundred dollars (\$400.00) per Working Day for each and every Working Day following the day fixed herein for Substantial Performance during which such failure continues.

D11.2 The amount specified for liquidated damages in D11.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.

D11.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D12. SCHEDULED MAINTENANCE

D12.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Maintenance of trees and shrubs as specified in E13;
- (b) Maintenance of sod as specified in CW3510-R8.

D12.2 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

D13. JOB MEETINGS

D13.1 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.

D13.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

D14. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D14.1 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

D15. PAYMENT

D15.1 Further to C12, effective January 1, 2007 the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

D16. PAYMENT SCHEDULE

D16.1 Further to C12, payment shall be in accordance with the following payment schedule:

- (a) Following completion and acceptance of fencing and sign.

WARRANTY

D17. WARRANTY

- D17.1 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.
- D17.2 Notwithstanding C13.2 or D17.1, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if:
- (a) a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.
- D17.2.2 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
L-1	Entrance Area Layout
L-2	Fence Layout Planting & Path Details
L-3	Fence & Sign Details

- E1.4 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B6.

E2. TRUCK WEIGHT LIMITS

- E2.1 The City shall not pay for any portion of Material which results in the vehicle exceeding the maximum gross vehicle weight allowed under *The City of Winnipeg Traffic By-Law*, unless such vehicle is operating under special permit.

E3. PROTECTION OF THE SURVEY INFRASTRUCTURE

- E3.1 Notwithstanding Clause 4 "Protection of Survey bars" of the Standard Provisions:

Current legislation, The Surveys Act, places the onus on those undertaking construction to protect the Survey Infrastructure from damage as a result of their activity.
- E3.2 Further to GC:6.28(g), at least 72 hours prior to the commencement of the On-Site Work the Contractor shall contact the City of Winnipeg, Geomatics Services Branch at 986-4826 (8:00 a.m. to 4:00 p.m. Monday to Friday, excluding holidays) to obtain underground clearance. Geomatics Services will locate and mark all known outline survey monuments and geodetic control monuments and confirm the physical condition of those monuments upon completion of construction, at no cost to the Contractor.
- E3.3 Where a survey post, bar or control monument lies in the line of the proposed Work and must be disturbed, the Contract shall provide the Contract Administrator with 48 hours notice to permit referencing for future replacement, at no cost to the Contractor. Failure to provide the specified notice shall result in the Contractor paying for all costs associated with replacing or relocating the disturbed outline survey monuments and geodetic control monuments.

E3.4 Outline survey monuments and geodetic control monument at our adjacent to the Site not in the line of the proposed construction that are damaged or disturbed by the Contractor shall be replaced or relocated by the City or its agent and all associated costs shall be paid for by the Contractor. An approximate estimate of the costs involved to restore a legal survey monument is \$1,000 per bar and \$3,000 per control monument. Contractors must ensure their landscaping and other subcontractors are aware of this clearance procedure and the potential restoration costs.

E3.5 Where possible, amounts owned to the City in accordance with the above will be deducted from any payments to be made by the City to the Contractor.

E4. EXISTING SURVEY INFORMATION

E4.1 Drawing L-1 is based on a survey supplied by Phillips & Stevens Surveyors of Winnipeg.

E5. SITE ACCESS

E5.1 Access to the Work areas shall be:

E5.1.1 For all Work to be completed inside the park, access is to be from St. Mary's Road.

E5.1.2 Staging and storage is to take place on the proposed parking lot shown on L-1. Work is to cause as little disturbance as possible, and cause no danger to users of the park.

E6. PROTECTION OF EXISTING TREES

E6.1 Description

- (a) The Specification covers the protection of all existing trees. The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work hereinafter specified.

E6.2 Execution

E6.2.1 Preservation

- (a) Existing trees shall be protected and preserved as is.

E6.2.2 Trunk Protection

- (a) All trees have a 1000mm (minimum) radius protective zone calculated from the circumference at the base of the trunk which will remain free of digging, trenching, grade changes, stock piling of materials and soil compaction throughout the duration of the Contract. Protective fencing around these areas is required. All trees within and immediately adjacent to, proposed construction areas will require 1 x 6 x 8" wood planks strapped to the tree trunk to completely protect the tree trunk from impact damage. (smaller trees will be similarly protected using proportionally sized wood planks).

E6.2.3 Overhead Branch and Limb Protection

- (a) Tree limbs and branches overhanging the construction area shall not be damaged. The Contractor shall be responsible for ensuring that the above ground portions of trees are not damaged during Work.

E6.2.4 Excavation

- (a) During all excavation a representative from the City of Winnipeg Forestry Branch shall be present at all times unless otherwise agreed upon by the Contract Administrator, Forestry Branch and Contractor prior to commencement of construction.

E6.2.5 Notification

- (a) The Contract Administrator is to be notified 48 hours in advance of any large equipment working in the vicinity of existing trees. The Contractor shall provide adequate personnel on foot to supervise equipment operators in the vicinity of the trees to ensure that no damage occurs.
- (b) Special care is required during excavation to ensure existing tree root structure is not damaged. Should root pruning be required the Contractor must ensure proper root pruning techniques are employed by a licensed arbourist.

E6.3 Method of Measurement

- (a) No measurement will be made for protection of existing trees.

E6.4 Basis for Payment

- (a) No separate payment will be made for protection of existing trees.

E7. LAYOUT OF WORK

E7.1 The Contractor shall set control lines and bench marks by means of stakes, buoys or marks and the Contractor shall make the completed works conform to the lines and marks thus indicated. The Contractor shall furnish all other lines and levels required. The Contractor shall be responsible for the careful preservation of all stakes and marks. Care must be taken that the Contract Administrator be notified immediately of the disturbance of any such stakes or marks; the cost of correcting any errors arising out of neglect of the Contractor or his agent or his employees, to so notify the Contract Administrator shall be borne entirely by the Contractor, as well as the cost of replacing any disturbed stakes or marks.

E7.2 All layout Work shall be inspected and approved by the Contract Administrator prior to construction.

E7.2.1 Layout of the gravel path is to be done by the Contractor with the Contract Administrator on Site.

E7.3 Before commencing Work the Contractor shall satisfy himself as to the meaning and correctness of all stake and marks and no claims shall be entertained by the City of Winnipeg on account of any alleged inaccuracies. If any error is suspected in the plans, specifications or the directions of the Contract Administrator, Work shall be discontinued until the errors are rectified, but no claims shall be made on account of any delay occasioned thereby.

E7.4 The Contractor shall locate and protect all underground utilities prior to commencing construction.

E8. GRAVEL PATH

E8.1 General Description

E8.1.1 This Specification shall cover the construction of crushed limestone paths.

E8.1.2 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 other things necessary for and incidental to the satisfactory performance and completion of all Work as specified herein and in accordance with CW 3110-R5.

E8.2 Materials

E8.2.1 Excavation, sub-grade preparation and granular base materials shall conform to CW 3110-R5. Limestone dust topping shall conform to the requirements of the following gradation:

- (a) Sieve Number Percent Passing
 - (i) 9.5 mm 100
 - (ii) 4.75 mm 50 – 100
 - (iii) 1.18 mm 20 – 55

- (iv) 0.30 mm 10 – 30
- (v) 0.075 mm 0 - 12

E8.3 Construction Method

- E8.3.1 Construct path at location and to details as shown on the Drawings and as directed by the Contract Administrator
- E8.3.2 Construction to the requirements of CW 3110-R5
- E8.3.3 Excavated fill is to be disposed of on Site as directed by the Contract Administrator.

E8.4 Method of Measurement

- E8.4.1 Crushed limestone path will be measured on a Surface Area Basis. The surface area to be paid for shall be the number of square meters constructed in accordance with this Specification and accepted by the Contract Administrator, as computed by measurements made by the Contract Administrator.
- E8.4.2 Price for crushed limestone surfacing shall include all clearing, excavation, compaction, base construction and topping required for this item of Work.

E8.5 Basis of Payment

- E8.5.1 The supply and installation of "Gravel Path" will be paid for at the Contract Unit Price per square meter measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this Specification.

E9. FENCING

- E9.1 This Specification shall cover the supply and installation of:

- (a) Wood fencing and sign structure.
- (b) Lettering specifications appear on drawing L-3.

- E9.1.2 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 Work as specified herein.

E9.2 Reference Standards

- E9.2.1 Canadian Standards Association (CSA)
 - (a) CSA B111-[74(R1998)], Wire Nails, Spikes and Staples.
 - (b) CAN/CSA-G164-[M92(R1998)], Hot Dip Galvanizing of Irregularly Shaped Articles.
 - (c) CAN/CSA 0141-[91(RR1999)], Softwood Lumber.
 - (d) CSA 080-2-97(R2002), Pressure Treatment of Lumber, Timber, Bridge, Ties and Mine Ties.
- E9.2.2 National Lumber Grades Authority (NLGA)
 - (a) Standard Grading Rules for Canadian Lumber [2000]
- E9.2.3 American Wood Protection Association Use Category System (AWPA-UCS)

E9.3 Materials

- E9.3.1 Softwood lumber to CSA 0141 and NLGA requirements with maximum moisture content of 19%
 - (a) Kiln dried Douglas fir, No.2, sizes and profiles as shown on drawings.
- E9.3.2 Pressure treated lumber to CSA 080.2

(a) UC4B PT pine, No.2, sizes and profiles as shown on drawings.

E9.3.3 Bolts and anchor bolts: stainless steel.

E9.3.4 Aluminum letters, as shown and described on drawing L-3.

E9.4 Construction Methods

E9.4.1 All Work is to be located and installed in accordance with the Drawings

E9.4.2 The Contractor shall confirm proposed location of fencing with Contract Administrator prior to fabrication.

E9.4.3 All furnishings and fixtures to be installed plumb and true to correct elevations and location, as directed by the Contract Administrator.

E9.4.4 Build work square, true and accurate to required size with joints closely fitted and properly secured.

E9.4.5 Where possible, Work to be fitted and shop assembled, ready for erection.

E9.5 Method of Measurement

E9.5.1 The installation of wood fencing, complete with signage shall be measured on a Lump Sum Basis.

E9.6 Basis of Payment

E9.6.1 The installation of wood fencing, complete with signage shall be paid for at the Contract Lump Sum Price "Wooden fencing and signage", which price shall be payment in full for supplying all materials and performing all operation herein described and all other items incidental to the Work included in this Specification.

E10. FINISH GRADE AND TOPSOIL

E10.1 General Description

E10.1.1 This Specification shall supplement CW 3540 and shall cover the supply and placing of topsoil under sodded areas and in planting areas as indicated on the Drawings.

E10.1.2 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 other things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified and in accordance with CW 3540-R3.

E10.2 Materials

E10.2.1 Topsoil: Topsoil is to conform to the requirements of CW 3540-R3 and with a pH range of 6.0 to 8.0 and a salinity rating of less than 4 mmhos/cm.

E10.2.2 Soil Mixture for Planting Beds: 30% coarse sand, 30% composted manure, 30% peat moss.

E10.2.3 Fertilizer: Complete commercial synthetic fertilizer with minimum 35% water soluble nitrogen. Formulation ratio: as recommended by approved soil test analysis. Obtain Contract Administrator's approval of proposed fertilizer prior to delivery to Site.

E10.3 Construction Methods

E10.3.1 Placing and Spreading of Topsoil for Sodding

(a) Place and spread topsoil for sodding in accordance with CW 3510-R8 "Sodding". Schedule placement of topsoil and finish grading to permit sodding operations under optimum Conditions. Place topsoil after Contract Administrator has inspected and approved subgrade. Spread topsoil with adequate moisture in uniform layers over

unfrozen subgrade free of standing water. Apply topsoil to 100 mm compacted depth for sod. Manually spread topsoil around obstacles.

E10.3.2 Placing and Spreading Soil Mixture for Planting Beds

- (a) Excavate beds as indicated by Drawing L-2. Dispose of excavated soil on Site as directed by Contract Administrator.
- (b) Scarify the bottom of the excavated bed. Mix the first 150 mm of existing soil with the Soil Mixture. Fill in 150 mm lifts, compacting lightly after each addition of soil. On completion, the bed surface is to be level with surrounding grade.

E10.3.3 Finish Grading

- (a) The area shall be fine graded and the topsoil loosened. Eliminate rough spots and low areas to ensure positive drainage. Prepare loose friable bed by means of cultivation and subsequent raking. Topsoil shall be rolled with 50 kg roller, minimum 900 mm wide, to consolidate it in areas to be sodded, leaving the surface smooth, uniform, firm against deep foot printing, and with a fine loose texture to the approval of the Contract Administrator.

E10.3.4 Site Clean-Up

- (a) The Site shall be kept clean during operations and all excess material and debris shall be disposed of off Site.

E10.4 Method of Measurement

E10.4.1 Supply and Installation of Topsoil for Sodding

- (a) There shall be no separate measurement for the Work associated with supply and installation of topsoil for sodding. This Work shall be incidental to Sodding (E11). No separate measurement or payment will be made.

E10.4.2 Supply and Installation of Topsoil for Planting Beds

- (a) Supply and installation of Topsoil for planting beds will be measured on a Surface Area Basis. This area to be paid for shall be the total number of square meters placed in accordance with this specification and accepted by the Contract Administrator, as calculated from measurements made by the Contract Administrator.

E10.4.3 Supply and Installation of Topsoil in Shrub Planting

- (a) There shall be no separate measurement for the Work associated with supply and installation of topsoil for shrub planting. This Work shall be incidental to Shrubs (E12). No separate measurement or payment will be made.

E10.5 Basis of Payment

E10.5.1 Supply and Installation of Topsoil for Sodding

- (a) Supply and installation of topsoil for sodding is incidental to the supply and installation of sod, which price shall be included in the price for sodding. No separate payment for topsoil for sodding shall be made.

E10.5.2 Supply and Installation of Topsoil for Planting Beds

- (a) Supply and installation of Topsoil for Planting Beds will be paid for at the Contract Unit Price per square meter for Supply and Installation of Planting Beds 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.

E10.5.3 Supply and Installation of Topsoil in Shrub Planting

- (a) Supply and Installation of topsoil in shrub planting is incidental to the supply and installation of shrubs, which price shall be included in the price for trees and shrubs. No separate payment for topsoil in shrub planting shall be made.

E11. SODDING

E11.1 General Description

E11.1.1 This Specification shall cover the supply and installation of cultivated mineral sod and shall conform to CW 3510-R8.

E11.1.2 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 other things necessary for an incidental to the satisfactory performance and completion of all Work as hereinafter specified and in accordance with CW 3540-R3.

E11.2 Materials

E11.2.1 Topsoil as specified E10

E11.2.2 Sod

- (a) The Contractor shall supply mineral based sod that has been sown and cultivated in nursery fields as a turf grass crop and in accordance with the following certified seed mixtures:
- (b) 100% Canada No.1 Kentucky Bluegrass or a mixture containing not less than 60% Canada No.1 Kentucky Bluegrass with the 40% remaining proportion Creeping Red Fescue.
- (c) Nursery sod containing any other grass species, strains or cultivars than specified herein will not be accepted.

E11.3 Construction Method

E11.3.1 Construction method shall conform to CW 3510-R8.

E11.4 Method of Measurement

E11.4.1 Sodding will be measured on an Area Basis. The area to be paid for shall be the total number of square meters placed in accordance with this Specification and accepted by the Contract Administrator, as calculated from measurements made by the Contract Administrator.

E11.5 Basis of Payment

E11.5.1 Sodding will be paid for at the Contract Unit Price per square meter for "Sod, c/w 30 day maintenance" measured 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.

E12. SHRUBS

E12.1 Description

E12.1.1 This Specification shall cover the supply and installation of plant material as specified herein and as indicated on the Drawings.

E12.1.2 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 other things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified and in accordance with CW 3540-R3.

E12.2 Source Quality Control

E12.2.1 Obtain Approval of plant material at source. Notify Contract Administrator of source of material at least seven (7) days in advance of shipment. No Work under this section is to proceed without approval. Acceptance of plant material at its source does not prevent rejection on Site prior to or after planting operations.

E12.2.2 Shrubs are to be grown in nurseries under proper horticultural practices as recommended by the Canadian Nursery Trades Association.

E12.2.3 Only those shrubs will be accepted which have been grown for at least the last four (4) previous years in nurseries located in an Agriculture Canada Plant Hardiness Zone designation of 2 (a or b) or 3 (a or b). Trees and shrubs that have grown in Plant Hardiness Zone 4 or greater will be rejected.

E12.3 Shipment and Pre-Planting Care

E12.3.1 Coordinate shipping of plants and excavation of holes to ensure minimum time lapse between digging and planting

E12.3.2 Tie branches of shrubs securely and protect plant material against abrasion, exposure and extreme temperature change during transit. Avoid binding of planting stock with rope or wire which damage bark, break branches or destroy natural shape of plant. Give full support to rootball of shrubs during lifting.

E12.3.3 Cover plant foliage with tarpaulin and protect bare roots by means of dampened straw, peatmoss, sawdust or other acceptable material to prevent loss of moisture during transit and storage.

E12.3.4 Remove broken and damaged roots with sharp pruning shears. Make clean cuts.

E12.3.5 Keep roots moist and protected from sun and wind. Heel-in trees which cannot be planted immediately in shaded areas and water well.

E12.4 Warranty

E12.4.1 Further to Article X of GC, the Contractor agrees and warrants to replace and replant any nursery stock found dead or in poor condition for a period of two (2) years from date of Certificate of Total Performance without cost to the City. "Poor Condition" shall be interpreted as meaning nursery stock on which branches are dead or dying, or have not shown satisfactory growth in leaves. Exempted is nursery stock damaged by accidental causes or vandalism, which stock shall be replaced at the cost of the City.

E12.4.2 All required replacements shall be by plants of at least the same size and species as specified, and shall be supplied and planted in accordance with the original Drawings and Specifications, and the replaced plant material shall carry an additional two (2) year guarantee. Should the replaced plant material not survive, the Contractor will be responsible to replace it a third time and guarantee it for an additional two (2) years unless it is determined that unique Site conditions or inadequate maintenance causes the death of plants.

E12.4.3 An end-of-warranty inspection will be conducted.

E12.4.4 Contract Administrator reserves the right to extend Contractor's warranty responsibilities for an additional two (2) years if, at the end of warranty period, leaf development and growth is not sufficient to ensure future survival.

E12.5 Replacements

E12.5.1 During guarantee period, remove from Site any plant material that has died or failed to grow satisfactory as determined by Contract Administrator.

E12.5.2 Replace plant material as soon as possible and as directed by the Contract Administrator.

E12.5.3 Extend guarantee on replacement plant material for a period equal to the original guarantee period.

E12.5.4 Continue such replacement guarantee until plant material is accepted.

E12.6 Materials

E12.6.1 Topsoil: E10.2.1

- E12.6.2 Water: Portable and free of minerals which may be detrimental to plant growth.
- E12.6.3 Anti-Desiccant: Wax-like emulsion to provide film over plant surfaces reducing evaporation but permeable enough to permit transpiration. Use only on advice by the City Forestry Branch.
- E12.6.4 Fertilizer: Slow release formulation of low nitrogen, high phosphorous (eg. 10-50-12). Apply at rate in accordance with manufacturers written instructions. Use only on advice by the City Forestry Branch.
- E12.6.5 Woodchip Mulch: Woodchips from hardwood, trees, free of bark, branches, and leaves varying in size from 1/4" to 3/4" (6-20 mm) thick.
- E12.6.6 Horticultural Bonemeal: Raw Bonemeal finely ground with minimum analysis of 3% nitrogen and 10% phosphoric acid.
- E12.7 Plant Material
- E12.7.1 Quality and Source: Comply with Guide Specification for Nursery Stock, latest edition, of Canadian Nursery Trades Association (CNTA) referring to size and development of plant materials and rootball. Height and spread dimensions refer to main body of plant and not from branch tip to branch tip.
- E12.7.2 Nomenclature of specified plants is to conform to the International Code of Nomenclature for Cultivated Plants and is to be in accordance with the approved scientific names given in the latest edition of "Standardized Plant Names".
- E12.7.3 All parts of plant material are to be moist and show live, green cambium, tissue when cut.
- E12.7.4 Container Grown Stock: Acceptable if container is large enough for root development. Shrubs must have grown in container for minimum of one growing season but no longer than two. Root system must be able to "hold" soil when removed from container. Plants that have become root bound are not acceptable.
- E12.7.5 Collected or Native Plant Material: Any nursery stock dug from native stands, wood lots, orchards or neglected nurseries and which have not received proper Association, shall be designated as "collected plants". The use of "collected plants" will not be permitted unless approved by Contract Administrator.
- E12.7.6 Cold Storage: Approval required for plant material which has been held in cold storage.
- E12.7.7 Substitutions to plant material as indicated on planting plan are not permitted unless written approval has been obtained as to type, variety and size. Plant substitutions must be of similar species and of equal size as those originally specified.
- E12.8 Equipment
- E12.8.1 All equipment shall be of a type approved by the Contract Administrator and shall be kept in good working order.
- E12.9 Construction Methods
- E12.9.1 General
- (a) Coordinate operations. Do not leave excavated holes open over night. Keep Site clean and planting holes drained. Immediately remove soil or debris spilled onto street pavement, grass or walks.
- E12.9.2 Planting Time
- (a) Plant only under conditions that are conducive to health and physical conditions of plants. Provide planting schedule. Extending planting operations over long period using limited crew will not be accepted. Install trees and shrubs within 48 hours of removal from the nursery.
- E12.9.3 Excavation

- (a) Excavated planting holes as indicated on L-2. Distribute excavated topsoil on Site. Dispose of excavated clay soils off Site.
- (b) Protection bottom of excavations against freezing. Remove water which enters excavations prior to planting. Ensure source of water is not ground water or from a broken water pipe.

E12.9.4 Planting

- (a) Loosen sides of planting holes to a depth of 100 to 150 mm as indicated on Detail on Drawing L-2. Cover bottom of each excavation with Bonemeal in amount recommended by manufacturer.
- (b) Orient plant material to give best appearance in relation to structure, roads, and walks.
- (c) Place plant material to equal depth they were originally growing in nursery.
- (d) With ballad and burlapped rootballs, loosen burlap and remove maximum of 1/3 of the top burlap from rootball without disturbing the rootball. Do not pull burlap or rope from under rootball. With container stock, remove entire container without disturbing rootball. Non-biodegradable wrapping must be removed.
- (e) Tamp planting soil around root system in layers of 150 mm, eliminating air voids. Frozen or saturated planting soil is unacceptable. When 2/3 of planting soil has been placed, fill hole with water. After water has completely penetrated into soil, complete backfilling.

E12.9.5 Fertilizing

- (a) When planting is completed, give surface of planting saucer dressing of fertilizer meeting the requirements of E12.6.4. Mix fertilizer thoroughly with top layer of planting soil and water in well.

E12.9.6 Mulching

- (a) Obtain approval of planting before mulching material is applied. Loosen soil in planting beds and pits and remove debris and weeds. Spread mulch to minimum thickness of 75 mm (3") or as indicated on drawing. Mulch material susceptible to blowing must be moistened and mixed with topsoil before applying. When mulching is placed in fall, place immediately after planting. When mulch is placed in spring, wait until soil has warmed.

E12.9.7 Maintenance and Guarantee of Nursery Stock

- (a) The Contractor shall provide all watering, weeding, tightening and repairing tree stakes and rings, removal of dead material and all repairing tree stakes and rings, removal of dead material and all other maintenance operations required for two years after the date of the Certificate of Total Performance. See E10 for additional information.
- (b) The Contractor shall agree and guarantee to replace and replant nursery stock found dead and/or in poor condition two years from the date of the Certificate of Total Performance, at his cost. "Poor condition" shall be interpreted as meaning nursery stock on which branches are dying, or have not shown satisfactory growth of leaves.
- (c) Exempted is nursery stock damaged by accidental cause or vandalism, which stock shall be replaced at the cost of the City.
- (d) If required replacements shall be by plants of at least the same size and species as specified, and shall be supplied and planted in accordance with the original drawings and Specifications, and the replaced material shall carry an additional two-year guarantee and maintenance period.

E12.10 Method of Measurement

E12.10.1 Shrubs

- (a) Plant Material will be measured on a unit basis. The number to be paid for shall be the total number of each type and size of tree supplied and installed in accordance with the Specification and accepted by the Contract Administration.

E12.11 Basis of Payment

- E12.11.1 The supply and installation of shrubs will be paid for at the Contract unit price for each plant, measured as specified herein, which prices shall be payment in full including all costs for the plant, pruning, two year maintenance, and all other items incidental to the Work included in this Specification.
- E12.11.2 Twenty-five (25) % of the value of all plant material, as itemized on the unit price forms, shall be held back to pay for the two year maintenance period. See E13.20 and D12.2 for payment during two year maintenance period.
- E12.11.3 Seventy five (75) % of the value of all plant material, as itemized on the unit price forms, will be paid for when the plant material complies with the supply and installation sections of the specification requirements.

E12.12 Plant Specification List

no.	name common/scientific	size	comments
Shrubs:			
7	HIGHBUSH CRANBERRY Viburnum trilobum	#3 container	Specimen
24	MEYER LILAC Syringa meyeri	#2 container	Min 4 canes of 250mm ht

E13. SHRUB MAINTENANCE SCHEDULE

- E13.1 Description
- E13.2 This Specification shall cover the landscape maintenance requirements for all trees and shrubs and associated planting operations.
- E13.3 Related Work
- E13.4 Plant material and planting pits are specified elsewhere in this Specification and form an integral part to all Work described herein.
- E13.5 Maintenance Period
- E13.6 Undertake maintenance from the date of installation for a period of two years past the date of Total Performance.
- E13.7 Description of Work
- E13.7.1 Maintain shrubs shown on the drawings, to the satisfaction of the Contract.
- E13.7.2 Work includes:
- Fertilizing
 - Watering
 - Weed Control of tree pits, planting beds, and wood chip mulch areas
 - Pest and disease control
 - Pruning

- Mulching
- Winter protection

E13.8 Protection

E13.8.1 Prevent damage to fencing, other trees, landscaping, bench marks, building, pavement, surface and underground utility facilities.

E13.9 Materials

E13.9.1 Materials are to conform to the requirements of related specification.

E13.10 Maintenance Requirements

E13.10.1 Condition of Equipment

- (a) Prior to commencement of shrub planting, the Contractor will be required to arrange to have the equipment to be supplied under this Contract inspected by the Contract Administrator to verify that the equipment is in good operating condition and meets the requirements of the Specifications.

E13.10.2 Replacement Equipment

- (a) The supply of replacement equipment of equal or larger size, if regular units are under repair, will be the responsibility of the Contractor.

E13.10.3 General Workmanship

- (a) Program timing of operations to growth, weather conditions and use of Site. Do each operation continuously and complete within reasonable time period. Store equipment and materials off Site. Collect and dispose of debris or excess material on daily basis.

E13.11 Fertilizing

E13.11.1 Apply fertilizer no later than May 30th of each maintenance year.

E13.12 Watering

E13.12.1 The Contractor shall acquire and pay for all water.

E13.12.2 Apply water as required to supplement rainfall and to maintain optimum growing conditions. In general, water once a week to achieve rates as indicated below. Allow soil to dry adequately between watering to prevent over-saturation without creating water stress.

E13.12.3 Subject to the requirements above, the Contractor must water at least once a week inclusive between May 1st and October 30th. A complete record is to be kept of each series of waterings for all shrubs, noting: 1) location, and 2) date of watering. This record is to be given to the Contact Administrator when requested.

E13.12.4 Apply 4 litres of water per shrub per application. The water stream must not gouge out a hole in the soil and mulch.

E13.13 Weed Control

E13.13.1 Maintain surface of shrub bed and mulched areas, free of weeds. Do not allow weeds to establish for a period longer than one (1) week.

E13.13.2 Do not use dicamba and picloram solutions.

E13.14 Pests and Diseases

E13.14.1 Obtain written approval of Contract Administrator prior to using and pesticide.

E13.14.2 Control pests and disease through pruning or application of pesticides. Use species specific pesticides where possible. Use only pesticides of low mammalian toxicity. Strictly follow manufacturer's written instructions.

E13.15 Pruning

E13.15.1 Prune shrubs as required to remove dead, broken or damaged limbs. Prune back to healthy growth while maintaining balanced crown shape.

E13.15.2 Employ clean sharp tools. Make cuts coincident with the branch collar near the main stem or branch. Cuts must be smooth and sloping to prevent accumulation of water on cut. Do not leave little stumps ("horns") on trunks or main branches.

E13.16 Mulching

E13.16.1 Add mulch as required to maintain 75 mm thickness.

E13.17 Winter Protection

E13.17.1 Ensure adequate moisture in root zones prior to freeze-up.

E13.18 Maintenance Schedule

E13.18.1 The Contractor shall provide a complete written maintenance schedule to the Contract Administrator prior to the commencement of the two year maintenance period, and must provide weekly reports of all maintenance to the City of Winnipeg, Forestry Department, within one week of the maintenance being provided.

E13.19 Cost of Two Year Maintenance Period

E13.19.1 The cost for the Two Year Plant Maintenance Period will be twenty-five (25) % of the total cost of all shrubs, as shown in Form B: Prices, items one (1) to three (3) inclusive. The remaining seventy five (75) % value will be paid on a per unit basis, for each plant properly installed, and which plant complies with the specification requirements.

E13.19.2 Where the plant material has been replaced and is covered under the extended warranty period, a proportional amount of holdback will be further maintained, until the plant has survived for a full two years and is accepted.

E13.20 Payment of Two Year Maintenance Period

E13.20.1 The basis of payment cost, will be based on a pro rate basis, based on each full month of maintenance, and the respective proportion of the total twelve (12) months. Progress payments will be made once a year at the end of each growing season.

E13.20.2 Accepted maintenance for shrubs shall be paid for in two (2) instalments. The first payment shall occur at the end of the first year and the second payment shall occur at the end of the second year, provided that the shrubs have been accepted and maintenance has been approved by the Contract Administrator.