

THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 294-2005

LANDSCAPE DEVELOPMENT AT 478, 558 AND 586/588 ST. MARY'S ROAD

TABLE OF CONTENTS

PART A - BID SUBMISSION

Form A: Bid Form B: Prices	1 3
PART B - BIDDING PROCEDURES	
 B1. Project Title B2. Submission Deadline B3. Site Investigation B4. Enquiries B5. Addenda B6. Substitutes B7. Bid Submission B8. Bid B9. Prices B10. Qualification B11. Opening of Bids and Release of Information B12. Irrevocable Bid B13. Withdrawal of Bids B14. Evaluation of Bids B15. Award of Contract 	1 1 1 1 2 3 3 4 4 5 5 5 5 6 7
PART C - GENERAL CONDITIONS	
C1. General Conditions	1
PART D - SUPPLEMENTAL CONDITIONS	
General D1. General Conditions D2. Scope of Work D3. Contract Administrator D4. Contractor's Supervisor D5. Notices	1 1 2 2 2
Submissions D6. Insurance D7. Performance Security D8. Subcontractor List	3 3 4
Schedule of Work D9. Commencement D10. Substantial Performance D11. Total Performance D12. Liquidated Damages D13. Scheduled Maintenance	4 4 4 5 5
Control of Work D14. Job Meetings D15. Prime Contractor – The Workplace Safety and Health Act (Manitoba)	5
Form H1: Performance Bond Form H2: Irrevocable Standby Letter of Credit Form J: Subcontractor List	7 9 11

PART E - SPECIFICATIONS

General

	ble Specifications, Standard Details and Drawings	1
•	of work to be deleted	1
	y Others	1
E4. Layout (2
E5. Site Acc	Cess	2
E6. Permits,	, Notices, Licenses, Certificates, Laws And Rules	2
E7. Damage	e To Existing Structures And Property and Sevices and Utilities	3
E8. Protection	on of existing tree	3
	ary Utilities	4
	ion and Salvage	4
E11. Site Exc		5
E12. Earthwo	ork & Grading	5
	te Header for Shrub Bed	6
E14. Concret		6
E15. Concret		6
	and Installation of Site Furniture	8
•	Bed preparation	9
E18. Boulders	-	10
E19. Topsoil		11
E20. Tree and	d Plant Material	11
E21. Tree and	d Plant Maintenance Schedule	15
E22. Sod Mai	intenance	17
E23. Site Res	storation	17

The City of Winnipeg Bid Opportunity No. 294-2005

PART B

BIDDING PROCEDURES

PART B - BIDDING PROCEDURES

B1. PROJECT TITLE

B1.1 LANDSCAPE DEVELOPMENT AT 478, 558 AND 586/588 ST. MARY'S ROAD

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, June 7, 2005.
- B2.2 Bid Submissions 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 GC:3.1, the Bidder may view the Site without making an appointment.
- B3.2 The Bidder is advised that all Sites are to be viewed prior to submitting a bid to familiarize the Bidder with the nature of the work area, and Site access restrictions. Bidder shall note that existing trees are to be protected and proximity of trees to the construction area may limit the type of construction equipment utilized. The Bidder is made aware the City Naturalist and Forestry Department will require financial compensation for trees or plant material damaged by the construction area.

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 shortly before submitting his Bid.
- B5.3 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 shall 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 SUBMISSION

- B7.1 The Bid Submission consists of the following components:
 - (a) Form A: Bid;
 - (b) Form B: Prices;
- B7.2 The Bid Submission shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.2.1 Samples or other components of the Bid Submission 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 Submission.
- B7.3 Bid Submissions submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.4 Bid Submissions 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 Submission 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.
- B9.2 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 The Bidder shall state s separate price in Canadian funds for each of the following items of Work on Form B: Prices:
 - (a) Separate Price-Item No1 shall be the amount to be deducted from the total price if the Bench is changed from Victor Stanley "Steelsites" to 6' long Tache style bench with the back in accordance with E16.
 - (b) Separate Price-Item No.2 shall be the amount to be deducted from the total price if the Waste receptacle is changed from pre cast concrete to ornamental metal slat waste receptacle in accordance with E16..

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;
 - (b) be responsible and not be suspended, debarred or in default of any obligation to the City;
 - (c) be financially capable of carrying out the terms of the Contract;
 - (d) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract;
 - (e) have successfully carried out work, similar in nature, scope and value to the Work;
 - (f) employ only Subcontractors who:

- (i) are responsible and not suspended, debarred or in default of any obligation 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); and
- (ii) have successfully carried out work similar in nature, scope and value to the portion of the Work proposed to be subcontracted to them, and are fully capable of performing the Work required to be done in accordance with the terms of the Contract;
- (g) have a written workplace safety and health program in accordance with The Workplace Safety and Health Act (Manitoba);
- B10.2 The Bidder shall be prepared to 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.
- B10.3 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 Bid Submissions 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 After the public opening, the names of the Bidders and their Total Bid Prices as read out (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 Submission may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B12. IRREVOCABLE BID

- B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 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 GC:23.3, 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 shall:
 - (a) retain the Bid Submission until after the Submission Deadline has elapsed;
 - (b) open the Bid Submission 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 Submission 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 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 Submission 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.
 - (a) If the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder is within the budgetary provision for the Work, no adjustment will be made to the Total Bid Price; or
 - (b) If the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder exceeds the budgetary provision for the Work, the total bid prices of all responsive Bids submitted by responsible and qualified Bidders will be adjusted by progressively deducting separate prices in the order listed in B9.4 until a Total Bid Price within the budgetary provision is achieved, i.e. Final Total Bid Price= Total Bid price- Separate Price No 1-Separate Price No.2.
 - (c) The Bidder is made aware that even after the deduction of separate prices, if the budgetary constraints are not met, then deletions will be made to each Site The following lists the progressive order of deductions for each Site.

- (i) Item 5-b- Deletion of one deciduous tree
- (ii) Item 10- Removal of existing fence
- (iii) Item 12- Supply and Install Bench
- (iv) Item 20- Reduce shrubs from 42 to 25 and deletion of a deciduous tree.
- (v) Item 11- Remove existing approach and replace with concrete curb and sidewalk as per city specs.
- (vi) Item 23-Supply and install Tache style metal frame picnic table on granular base
- (vii) Item 31-1 year sod maintenance.
- 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 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.
- B15.4 Notwithstanding GC:4, 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 GC:1.1, in its 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

C1. GENERAL CONDITIONS

- C1.1 The *General Conditions for Construction Contracts* (Revision 2000 11 09) are applicable to the Work of the Contract.
- C1.1.1 The *General Conditions for Construction Contracts* 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.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

- D1.1 In addition to the *General Conditions for Construction Contracts*, these Supplemental Conditions are applicable to the Work of the Contract.
- D1.2 The General Conditions are amended by striking out "The City of Winnipeg Act" wherever it appears in the General Conditions and substituting "The City of Winnipeg Charter".
- D1.3 The General Conditions are amended by striking out "Tender Package" wherever it appears in the General Conditions and substituting "Bid Opportunity".
- D1.4 The General Conditions are amended by striking out "Tender Submission" wherever it appears in the General Conditions and substituting "Bid Submission".
- D1.5 The General Conditions are amended by deleting GC:6.16 and GC:6.17. The City of Winnipeg is now within the jurisdiction of the Manitoba Ombudsman pursuant to The Ombudsman Act.

D2. SCOPE OF WORK

- D2.1 The Work to be done under the Contract shall consist of landscape development at 3 vacant Sites along the St. Mary's Road.
- D2.2 The major components of the Work are as follows:
 - (a) 478 St. Mary's Rd
 - (i) Strip existing sod and stockpile topsoil on Site for later use.
 - (ii) Top Soil and Sodding
 - (iii) Create shrub beds and install boulders
 - (iv) Supply and installation of shrubs and trees
 - (b) 558 St. Mary's RD
 - (i) Disposal of granular surface
 - (ii) Earthwork and grading
 - (iii) Top Soil and Sodding
 - (iv) Removal of parking fence
 - (v) Supply and installation of Bench
 - (vi) Installation of concrete curb and sidewalk including removal of existing concrete approach.
 - (c) 586 St. Mary's Rd
 - (i) Disposal of granular surface
 - (ii) Earthwork and grading
 - (iii) Top Soil and Sodding
 - (iv) Supply and Installation of picnic table on granular base
 - (v) Installation of concrete curb and sidewalk including removal of existing concrete approach.
 - (vi) Creation of plaza including paving planting and site furniture as per drawing
 - (vii) Supply and installation of trees and shrubs including creation of shrub bed and installation of boulders.

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is:

Donna Beaton Urban Designer Planning, Property and Development Department 15-30 Fort Street Winnipeg, MB R3C 4X5

Telephone No. (204) 986 7436 Facsimile No. (204) 986 7524

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 GC:23.2.2, 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 attention of the Chief Financial Officer at the following address or facsimile number:

The City of Winnipeg Chief Administrative Officer Secretariat 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 185 King Street, 3rd Floor Winnipeg MB R3B 1J1 Facsimile No.: (204) 947-9155

SUBMISSIONS

D6. INSURANCE

- D6.1 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) all inclusive, with The City of Winnipeg being added as an additional insured, with a cross-liability clause, such liability policy to also contain a contractual liability, an unlicensed motor vehicle liability and a products and completed operations endorsement to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (b) automobile liability insurance for owned and non-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;
- D6.2 Deductibles shall be borne by the Contractor.
- D6.3 The Contractor shall provide the City Solicitor with a certificate of insurance of each policy, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.
- D6.3.1 The certificate of insurance for the commercial general liability insurance must clearly state "operations to include demolition work".
- D6.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

D7. PERFORMANCE SECURITY

- D7.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), 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.
- D7.1.1 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.
- D7.2 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 Purchase Order and prior to the commencement of any Work on the Site.

D8. SUBCONTRACTOR LIST

D8.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

SCHEDULE OF WORK

D9. COMMENCEMENT

- D9.1 The Contractor shall not commence any Work until he is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.
- D9.2 The Contractor shall not commence any Work on the Site until:
 - (a) the Contract Administrator has confirmed receipt and approval of:
 - evidence that the Contractor is 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;
 - (ii) evidence of the workers compensation coverage specified in GC:6.14;
 - (iii) evidence of the insurance specified in D6;
 - (iv) the performance security specified in D7;
 - (v) the Subcontractor list specified in D8; 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.
- D9.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.

D10. SUBSTANTIAL PERFORMANCE

- D10.1 The Contractor shall achieve Substantial Performance within fifteen (15) consecutive Working Days of the commencement of the Work as specified in D9.
- D10.2 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.
- D10.3 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.

D11. TOTAL PERFORMANCE

D11.1 The Contractor shall achieve Total Performance within thirty (30) consecutive Working Days of the commencement of the Work as specified in D9. The exception can be made to accommodate supply and installation of Victor Stanley "Steelsites" bench only if the delivery of the bench cannot be achieved within the timeframe. Contractor has to get approval on proposed completion date for this item with Contract Administrator.

- D11.2 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.
- D11.3 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.

D12. LIQUIDATED DAMAGES

- D12.1 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 five hundred dollars (\$500) per Working Day for each and every Working Day following the day fixed herein for Substantial Performance during which such failure continues.
- D12.2 The amount specified for liquidated damages in D12.1 is based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.
- D12.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D13. SCHEDULED MAINTENANCE

- D13.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:
 - (a) Two year tree and shrub maintenance as specified in E21;
 - (b) One year sod maintenance as specified in E22
- D13.2 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

D14. JOB MEETINGS

- D14.1 Regular bi-weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator or 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.
- D14.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

D15. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D15.1 Further to GC:6.26, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

FORM H1: PERFORMANCE BOND

(See D7)

KNOW ALL MEN BY THESE PRESENTS THAT

(hereinafter called the "Principal"), and

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

dollars (\$

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

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

____ day of _____ , 20____ , for:

BID OPPORTUNITY NO. 294-2005

LANDSCAPE DEVELOPMENT AT 478, 558 AND 586/588 ST. MARY'S ROAD

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

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

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

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

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

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

_____ day of _____ , 20____ .

SIGNED AND SEALED in the presence of:

(Witness)

(Name of Principal)	
Per:	(Seal)
Per:	
(Name of Surety)	
By: (Attorney-in-Fact)	(Seal)

FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT (PERFORMANCE SECURITY) (See D7)

(Date)

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 294-2005

LANDSCAPE DEVELOPMENT AT 478, 558 AND 586/588 ST. MARY'S ROAD

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 exceeding in the aggregate

Canadian dollars.

This Standby Letter of Credit may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you. It is understood that we are obligated under this Standby Letter of Credit for the payment of monies only and we hereby agree that we shall honour your demand for payment without inquiring whether you have a right as between yourself and our customer to make such demand and without recognizing any claim of our customer or objection by the customer to payment by us.

The amount of this Standby Letter of Credit may be reduced from time to time only by amounts drawn upon it by you or by formal notice in writing given to us by you if you desire such reduction or are willing that it be made.

Partial drawings are permitted.

We engage with you that all demands for payment made within the terms and currency of this Standby Letter of Credit will be duly honoured if presented to us at:

(Address)

and we confirm and hereby undertake to ensure that all demands for payment will be duly honoured by us.

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

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

(Date)

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

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

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

(Name of bank or financial institution)

Per:

(Authorized Signing Officer)

Per:

(Authorized Signing Officer)

FORM J: SUBCONTRACTOR LIST

(See D8)

LANDSCAPE DEVELOPMENT AT 478, 558 AND 586/588 ST. MARY'S ROAD

Name	Address

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS, STANDARD DETAILS AND DRAWINGS

- E1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.1.1 *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.
- E1.1.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.1.3 Further to GC:2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.2 The following attached Drawings are applicable to the Work:

	Drawing No.	Drawing	Name/Title
--	-------------	---------	------------

Cover Sheet

- L-1 Proposed Landscape Development at 478 St. Mary's Rd –Plan
- L-2 Proposed Landscape Development at 558 St. Mary's Rd- Plan
- L-3 Proposed Landscape Development at 586 St. Mary's Rd- Plan
- L-4 Proposed Landscape Development at 586 St. Mary's Rd- Grading Plan
- L-5 Proposed Landscape Development at 586 St. Mary's Rd- Plaza Area Details
- SCD-119 Waste Receptacle Metal Slat Type
- SCD 120 Tache Bench
- SCD-130A Wheelchair Tache Style Metal Frame Picnic Table
- SK-1 Deciduous Balled and Burlapped Tree Planting
- E1.3 The following is the list of *The City of Winnipeg Standard Construction Specifications* which should be red in conjunction with the specifications mentioned under this section.
- CW 3110-R6 Sub-Grade, Sub-Base and Base Course Construction
- CW 3170-R3 Earthwork and Grading
- CW 3540-R4 Topsoil and Finish Grading for establishment of Turf areas
- CW 3510-R8 Sodding
- CW 3240-R5 Renewal of Existing Curb
- CW 3325-R2 Portland Cement Concrete Walk

E2. SCOPE OF WORK TO BE DELETED

E2.1 The Contractor is made aware certain portions of the Work may be deleted from the Contract in order to meet the budgetary constraints. See section B14

E3. WORK BY OTHERS

E3.1 The Contractor is made aware the City of Winnipeg Department may undertake the work of removing existing approach and replacing with concrete curb and sidewalk at 558 and 586 St. Mary's Road. The City of Winnipeg Naturalist Department shall undertake work of naturalizing the area shown on the drawings. Contractor to coordinate the schedule of work.

E4. LAYOUT OF WORK

- E4.1 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 so set whether relating to his own or to other Work. 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 Contractor Administrator shall be borne entirely by the Contractor, as well as the cost of replacing any disturbed stakes or marks.
- E4.2 All layout Work shall be inspected and approved by the Contract Administrator prior to construction.
- E4.3 Before commencing Work the Contractor shall satisfy himself as to the meaning and correctness of all stakes 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.
- E4.4 All shapes laid out by the Contractor must be within the area allowance for all items shown in on Form B :Prices.
- E4.5 All proposed tree planting locations shall be staked with minimum 610 mm height vertical markers, and be approved by the Contract Administrator prior to excavating tree pit.
- E4.6 The Contractor shall locate and protect all underground utilities prior to commencing construction.

E5. SITE ACCESS

- E5.1 Access to the each Site will be determined at the pre-construction meeting. This access area shall be provided and maintained by the Contractor at his own expense and approved by the Contract Administrator.
- E5.2 The Contractor shall be restricted to the Site access location and route only so that there is a minimum of disturbance to the existing ground surface. Damage to areas beyond the marked route shall be repaired by and at the expense of the Contractor to the satisfaction of the Contract Administrator.

E6. PERMITS, NOTICES, LICENSES, CERTIFICATES, LAWS AND RULES

- E6.1 Further to GC:6.12, the Contractor shall give all necessary notices, obtain all necessary permits and pay all fees in order that the Work may be carried out. The Contractor shall submit all plans required by any inspection authority and obtain approval of same before proceeding with the Work, and pay any cost attached to the inspection of such plans.
- E6.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work.
- E6.3 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contract Administrator.
- E6.4 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Act.
- E6.5 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Fall Protection guidelines.

- E6.6 The Contractor and Sub-contractors must be fully aware of all Work involving hazardous materials. All Work must be performed in compliance with the Manitoba Department of Labour Workplace Health and Safety Guidelines and all other applicable codes. The Contractor is responsible for the immediate notification to the Contract Administrator of his/her encountering of suspected hazardous material during their course of Work.
- E6.7 <u>The Water Way Permit is already obtained by the City of Winnipeg.</u>

E7. DAMAGE TO EXISTING STRUCTURES AND PROPERTY AND SEVICES AND UTILITIES

- E7.1 Further to GC: 17, all necessary precautions shall be exercised by the Contractor so as not to remove, disturb, or damage any existing trees, shrubs, sod, pavements, streets, roads, boulevards, poles, hydrants, water pipes, gas pipes, electrical wires, cables, conduits, sewers or other existing facilities and equipment at the Site of the Work. For all damage incurred thereto in the performance of the Work, the Contractor shall upon instructions from and to the satisfaction of the Contract Administrator and the owners thereof, either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to, the Contractor. The Contractor shall also indemnify and save harmless the City from all claims made directly or indirectly against it in respect to any such damage.
- E7.2 The Contractor's operations shall be limited to the minimum area necessary for undertaking the Work and he shall be responsible for all damage resulting from his Work on private property. The Contractor shall take such measures as are necessary to ensure safe and convenient pedestrian ingress and egress is maintained to private properties while he is working near them. Any damage caused by the negligence of the Contractor or his Sub-contractors to the adjacent Works or properties, shall be promptly repaired by him at his own expense, to the satisfaction of the Contract administrator.
- E7.3 Existing Services and Utilities

No responsibility will be assumed by the Owner for correctness or completeness of the Drawings, when provided, with respect to the existing utilities, pipes or other objects either underground or on the surface; the Owner shall not be liable for the incorrectness and inadequacy thereof. It shall be the responsibility of the Contractor to determine the location of all such utilities, pipes and other objects and to make good any damage done to them.

E8. PROTECTION OF EXISTING TREE

- E8.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing trees within the limits of the construction area:
 - (a) Trees greater than 100mm diameter or trees identified to be at risk by the Contract Administrator are to be strapped with 25x100x2440 wood planks, or suitable protected as approved by the Contract Administrator. Do not use nails or other fasteners that penetrate the tree trunk. The width and length of strapping may be reduced to suit the tree being protected as approved by the Contract Administrator.
 - (b) 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, where 1 inch diameter equals 1 foot measured from the outside edge of the trunk of the tree at 6 inches above grade. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
 - (c) Operation of equipment within the drip line of the trees shall be kept to a 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 drip lines of trees. The drip line 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.

- (d) Repair, replace and maintain tree protection materials during construction until such time no equipment will be working in the area.
- (e) Remove safety fencing and strapping material without harming the trees as soon as the construction and restoration Work is complete.
- E8.2 Obtain approval from the Contract Administrator to excavate within 2.0 metres of a tree.
- E8.3 Excavate in a manner to minimize damage to the tree root systems. Keep exposed roots in excavations and trenches moist or shaded. If stockpiling of excavated soil material is required, stockpile in areas away from the tree roots if possible.
- E8.4 Prune exposed roots with equipment such as trencher, chain saws, root cutters or other methods acceptable to the Contract Administrator in a manner that will leave a neat, clean root end.
- E8.5 Take precautions to ensure tree limbs overhanging the Work area are not damaged by construction equipment. Contact the Forestry Branch for consultation or pruning of overhanging or damaged limbs and branches and other unanticipated problems with trees during the construction of the Works.
- E8.6 The City of Winnipeg Naturalist Branch, also has authority for Natural stands of forested/brush/native grass areas, and may also instruct the Contractor on protective measures to protect the riverbank vegetation.
- E8.7 Further to the Naturalist requirements the Contractor must set up a temporary orange safety fence to define the agreed upon Work area to ensure that additional damage does not occur to adjacent vegetation. Damage to vegetation and established trees beyond the defined Work will result in additional charges based on the Forestry Branch assessment of the tree valuation.
- E8.8 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 Forestry Branch. Damages must be repaired by an Individual with a Manitoba Arborist Licence or by the Forestry Branch.
- E8.9 Protection of existing trees, repair of trees and pruning of damaged limbs will not be measured for payment and is to be included with the Underground or Surface Works. Removal and replacement of existing trees by the Forestry Branch deemed to have died or that are dying due to damage from carelessness during construction, will be at the Contractor's cost. The Contractor will be invoiced for the cost, or have the cost deducted from any payments owing

E9. TEMPORARY UTILITIES

- E9.1 Further to GC:6.12, the Contractor shall make his own arrangements in connection with the temporary use of lighting, power, gas, sewer, water or other utilities, and pay all costs in connection therewith.
- E9.2 All necessary permits, fees and other like expenses as well as the cost of temporary connections to existing facilities shall be arranged and paid for by the Contractor.

E10. DEMOLITION AND SALVAGE

- E10.1 In general terms the scope of Work under and demolition/legal disposal and salvage phase of Work is as listed below for each Site
 - (a) 478 St. Mary's Road- Strip the existing lawn (0.1 m) and salvage topsoil for proposed sod. Contractor to make sure that the salvaged topsoil is free of weed and seeds before reuse.

- (b) Removal and disposal of existing parking fence. Contractor shall back fill all the holes created due to removal of fence posts.
- (c) Removal and disposal of existing sidewalk as shown on drawing L-5. The removal of existing concrete sidewalk should be done following the exact lines and shape shown on the drawing L-5. Contractor should get approval of the layout of plaza from the Contract Administrator before removing or cutting any concrete.
- E10.2 Basis of Payment

Demolition and salvage shall be paid for the Contract Unit Price per unit as mentioned in Form B: Prices, "Items of Work" listed below, measured as specified herein, 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.

Items of Work-

- Item no 1-Strip existing sod (approx. 0.1m) and stockpile topsoil on Site for later reuse.
- Item no 10-Removal of parking fence
- Item no 26- Removal of existing sidewalk as shown on drawing L-5.

E11. SITE EXCAVATION

- E11.1 Site Excavation shall be done in accordance with City of Winnipeg's Standard Construction Specification CW 3110 – R6 Sub-Grade, Sub-Base and Base Course Construction and CW 3170-R3 Earthwork and Grading
- E11.2 The Contractor shall excavate existing granular surface to 0.15m depth on 578 and 586 St. Mary's Road.
- E11.3 All unsuitable or surplus material as deemed by the Contract Administrator will be removed, hauled off Site and legally disposed of to the satisfaction of the Contract Administrator.
- E11.4 Basis of Payment

Excavation will be measured on a volume basis and paid at the Contract Unit Price per cubic metre for "Site Excavation." The volume to be paid for will be the total number of cubic metres of excavation in accordance with this specification, accepted and measured by the Contract Administrator.

E12. EARTHWORK & GRADING.

- E12.1 Earthwork and grading shall be done in accordance with City of Winnipeg's Standard Construction Specification CW 3170-R3 Earthwork and Grading
- E12.2 Grading shall be understood to mean the placing of suitable earth fill to obtain the required lines and grades shown on the drawings
- E12.3 Material shall be deposited and spread in uniform layers of specified thickness, Each layer shall be shaped to line and grade and thoroughly compacted before the succeeding layer is placed.
- E12.4 Each layer, including the existing sub-grade, shall be compacted to a minimum of 95% Standard proctor Density.
- E12.5 Earthwork and Grading will be measured on a volume basis and paid at the Contract Unit Price per cubic metre for "Earthwork and Grading." The volume to be paid for will be the total number

of cubic metres used for berm construction in accordance with this specification, accepted and measured by the Contract Administrator.

- E12.6 Any additional "Fill Material" if required for completion of Earthwork and Grading will be paid at the Contract Unit Price per cubic meter for "Earth Fill".
- E12.7 Backfill if required will consist of
 - (a) Low to medium plastic clays or mixtures of sand and clay, uniform in texture
 - (b) Free of wood, vegetation, concrete rubble or stones larger than 25 mm in diameter

E13. CONCRETE HEADER FOR SHRUB BED

E13.1 This specification covers the supply and installation of poured in place concrete header for planting bed at plaza at 586/588 St Mary's Rd.

E13.2 Materials

- (a) Concrete shall be 28 Mpa sulphate resistant.
- (b) Granular base shall be 19 mm diameter crushed limestone
- (c) Reinforcing steel shall be 1-10M horizontal
- E13.3 The Contractor shall confirm the layout of curb with Contract Administrator prior to installation. The Contractor shall install edging to the shape, size(150x150), and finish grade elevations shown on Drawing-L5
- E13.4 Trowel finish concrete and install saw cut control joints at maximum 1500 mm o.c., and at corners.
- E13.5 Basis of Payment

Payment for Work specified under this section shall be paid for at the Unit Price for 'Supply and install a concrete header', measured on a per lineal basis which price shall include concrete edge around the planter, and shall include all costs for the excavation, granular sub-base, reinforcing steel and concrete.

E14. CONCRETE SIDEWALK

- E14.1 Installation of Curb at the existing approach shall be in accordance with CW 3240-R5 Renewal of Existing curbs. and side walk as per CW 3325-R2 Portland Cement Concrete Walk at 558 and 586/588 St. Mary's Road including concrete sidewalk walk in plaza paving except concrete unit paving E15
- E14.2 Payment for Work specified under this section shall be paid for at the Unit Price for item 'Concrete sidewalk', measured on a lump sum basis which price shall include all costs for: removal of existing approach the excavation, granular sub-base, reinforcing steel and concrete, all the incidental work to above.

E15. CONCRETE PLAZA

E15.1 Description

This Specification shall cover the supply and installation of precast concrete unit paving as indicated on Drawings. For the concrete sidewalk refer to E14. 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 hereinafter specified.

E15.2 Materials

- (a) The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification.
- (b) "Holland Stone" Unit Pavers-

Pavers shall be Holland Stone rectangular bevel edge precast concrete unit pavers, 105 x 209 x 60 mm depth, "Desert Buff" colour, patterns as indicated on the Drawings, supplied by Barkman Concrete Ltd. Pavers shall conform with the requirements of CAN3-A231.2, Precast Concrete Pavers.

(c) "Stepping Stone" Pavers-

305 x 305 x 60 mm depth precast concrete stepping stones, colour "Desert Buff" and "Tan" Colour as supplied by Barkman Concrete Ltd. Paves shall conform with the requirements of CAN3-A231.2, Precast Concrete Pavers.

(d) Bedding Sand-

Bedding sand shall be fine aggregate as specified in Section 5.4.1 of Specification CW 3310, with the exception that the sand shall have a minimum of 30% of the particles larger than 3 mm.

(e) Joint Sand-

Joint sand shall have a maximum aggregate size of 3 mm.

- E15.3 Construction Method
 - (a) Preparation of Sand Bedding Install 15 mm layer of bedding sand in formed recesses in concrete sidewalk. The sand layer shall be spread and leveled so that the concrete unit pavers when installed are 5 mm higher than the finished grade. No more sand shall be spread than can be covered that day by concrete unit pavers. The bedding sand layer shall not be compacted prior to installation of the concrete unit pavers.
 - (b) No concrete unit pavers shall be placed until the construction of the underlying surface has been approved by the Contract Administrator.
 - (c) Installation of Concrete Unit Pavers-Concrete walk shall be formed and concrete unit pavers shall be installed such that spaces between joints do not exceed 3 mm. Spaces between concrete unit pavers shall be uniform and consistent while maintaining straight and true patterns
 - (d) Work shall commence with edge stones along the longest straight section of the formed recesses and work towards the opposite edge.
 - (e) If cutting of concrete unit pavers is required, the sawn or sheared edges shall be true, even and undamaged. Cuts shall occur at the end of rows and intersections of lines of paving only.
 - (f) Concrete unit pavers shall be compacted into the bedding sand layer using approved vibratory compactors until they are at the proper grade, uniformly level and free of any movement. Joint sand shall be swept into the joints until full.

E15.4 Quality Control

All workmanship and all materials furnished and supplied under this Specification are subject to close and systematic inspection and testing by the Contract Administrator including all operations, from the selection and projection of materials, through to final acceptance of the work. The Contractor shall by wholly responsible for the control of all operations incidental thereto notwithstanding any inspection of approval that may have been previously given. The Contract Administrator reserves the right to reject any materials or works that are not in accordance with the requirements of this Specification.

E15.5 Method of Measurement

The supply and installation of all the pavers shall be measured on a surface area basis. The surface area to be paid for shall be the number of square metres constructed in accordance with this Specification and accepted by the Contract Administrator, as computed for measurements made by the Contract Administrator.

E15.6 Basis of Payment

The supply and installation of all the Pavers shall be paid for at the Contract Unit Price per square metre for Pavers, measured as specified herein, 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.

E16. SUPPLY AND INSTALLATION OF SITE FURNITURE

E16.1 This specification will cover the supply and installation of benches, picnic table and associated granular bases and anchors and waste receptacle as indicated on the Drawings. The Bidder is made aware the quantity and type of site furnishing may vary depending on budgetary constraints.

E16.2 Materials

- (a) Benches
 - Victor Stanley 'Steelsites' arched back steel bench with arms Model No. RMFC-24 or approved equal. Only benches specifically designed for outdoor use shall be accepted. Surface mount with tamper proof bolts and levelling feet. Finish shall be powder coating. Distributed by Crosier Agenecies. (PH-774-6084) Colour shall be RAL-5005. Acceptable alternate manufacturer: Columbia Cascade Company Timber Form "Manor" series
 - 2. Tache style wood bench with a back. Drawing no -SCD 120, Product No- 52501068 (6') Contact -Bill Dowbyhuz (9865505)
- (b) Picnic Table

Tache style metal frame picnic table, Wheel chair accessible, Drawing no -SCD 130A, Product No- 52501108

Contact

Bill Dowbyhuz Supervisor of Central Repair/Manufacturing Facility City of Winnipeg Fleet Management Agency Division Public Works Department 215 Tecumseh St Winnipeg. MB R3E 3S4 Telephone No. (204) 986-5505 Facsimile No. (204) 986-1248

- (c) Waste Receptacle
 - Barkman Concrete Ltd. Precast concrete square waste container catalogue no 45-2600. Band colour and top to be blue to match colour to the existing Waste Receptacles on St. Mary's road
 - 2. Metal slat type Waste Receptacle . Drawing no -SCD 119, Product No- 52501062 Contact -Bill Dowbyhuz (9865505)
- (d) Anchors for picnic tables shall be Duckbill Anchor Model 68-ATI as manufactured by Foresight Products, LLC Tel: 1-800-325-5360.

(e) Granular base shall be 6 mm diameter crushed limestone on 19mm diameter crushed limestone.

E16.3 Construction Methods

- (a) All work is to be located and installed in accordance with the Drawings using approved non-rusting, vandal resistant fasteners to ensure solid, durable, finished work suitable for the purpose intended. Fasteners and assembly hardware shall be incidental to the work.
- (b) All furnishings and fixtures to be installed plumb and true to correct elevations and location, as directed the Contract Administrator. The Contractor shall confirm proposed locations of all site furnishings with Contract Administrator prior to installation.
- (c) All furnishings and fixtures to be carefully handled so that no parts will be bent, broken or otherwise damaged. Hammering, which will injure or distort fixture, is prohibited.
- (d) Install as per manufacturer's instructions.
- (e) Picnic tables shall be installed on gravel base to the shape shown on the Drawing. . Provide 150 mm depth granular base composed of 100 mm of well-compacted 19mm diameter crushed limestone with 50 mm of 6mm diameter crushed limestone on the top. Top of granular paving to be flush with sod.
- (f) Secure picnic table to grade with two duckbill anchors (on opposite legs) per picnic table

E16.4 Quality Control

All workmanship and all materials furnished and supplied under this Specification are subject to close and systematic inspection and testing by the Contract Administrator including all operations, from the selection and production of materials, through to final acceptance of the work. The Contractor shall be wholly responsible for the control of all operations incidental thereto notwithstanding any inspection of approval that may have been previously given. The Contract Administrator reserves the right to reject any materials or works that are not in accordance with the requirements of this Specifications.

E16.5 Method of Measurement

The supply and installation of all site furnishings shall be measured on a unit basis. The number of site furnishings to be paid for shall be the total number of furnishings that are installed in accordance with this Specification and accepted by the Contract Administrator.

E16.6 Basis of Payment

The supply and installation of all site furnishings shall be paid for at the Contract Unit Price per unit for the "Items of Work" listed below, measured as specified herein, which price shall be payment in full for supplying all materials and performing all operation herein described including granular base for picnic table and all other items incidental to the work included in this specification.

Items of Work-

- 1. Supply an install Victor Stanley 'Steelsites' bench
- 2. Supply and Install Tache style metal frame picnic table on granular base.
- 3. Supply and install pre cast Waste receptacle

E17. PLANTING BED PREPARATION

E17.1 Planting bed areas shall be excavated and material removed to a minimum depth of 375mm in area indicated on drawings. Topsoil shall be installed in accordance with City of Winnipeg Standard Construction Specification CW 3540 – R4. This spec covers topsoil for naturalisation area.

- E17.2 Planting soil shall consist of black top soil, a fertile friable natural loam containing by volume not less than 4% and no more than 25% of organic matter for clay loams, and not less than 2% and no more than 25% for sandy loams, with an acidity value ranging from pH 6.0 to 8.0 and capable of sustaining vigorous plant growth. Top soil is to be free of any mixture of subsoil, clay lumps and free of stones and other extraneous matter. It shall not contain couch or crab grass rhizomes.
- E17.3 Planting soil shall be installed to a depth of 300mm.for plant beds and 50 mm for naturalization area.
- E17.4 Mulch shall be a clean bark or wood chip mulch with chips not less than 15 mm nor larger than 75 mm in size and not less than 75 mm thick. Mulch shall be free of leaves, branches and other extraneous matter.
- E17.5 Planting bed preparation will be measured on an area basis and paid at the Contract Unit Price per square metre for "Planting Bed". The area to be paid for will be the total number of square metres placed and maintained in accordance with this Specification, accepted and measured by the Contract Administrator.
- E17.6 Payment for Work specified under this section shall be paid for at the Unit Price for "planting bed complete preparation" and topsoil for naturalization area, measured on a per area basis which price shall include all costs for the excavation, including all other items incidental to work.

E18. BOULDERS

- E18.1 General
 - (a) This specification shall cover the supply and installation of boulders as indicated on the drawings.
 - (b) 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 to the satisfaction of the Contract Administer.
- E18.2 Materials
 - (a) All materials supplied under this specification shall be of a type approved by the Contract Administrator and shall be subject to inspection and testing by the Contract Administrator.
 - (b) Boulders shall be granite fieldstone of random profile with diameters ranging from 600mm to 850mm.

E18.3 Installation

- (a) Contractor shall visit the Site and verify all data and dimensions and report any errors, omissions or discrepancies to the Contract Administrator prior to any installation.
- (b) Contractor shall get approval for exact location and layout of boulders from the Contract Administrator
- (c) Prepare compacted sub-grade to the lines and grades shown on Drawings. Contract Administrator is to review sub-grade preparation prior to placement of boulders.
- (d) The boulders shall be placed in such a way that height of the boulder from finished topsoil level shall be at least 700mm at one point. All boulders shall be stable and buried at least 50 mm /more below the finished level. The boulder placement shall prevent the vehicles, from adjacent parking lot, driving into the green space.
- E18.4 Basis of payment

Supply and installation of boulders shall be paid for the Contract Unit Price per unit as mentioned in Form B: Prices, for the Work mentioned above including all other items incidental to the Work

E19. TOPSOIL AND SODDING

Topsoil and finish grading and Sodding shall be done in accordance with City of Winnipeg's Standard Construction Specification CW3540-R4 Topsoil and Finish Grading for establishment of Turf areas and 3510 –R8 Sodding. The Contractor shall provide 100mm thick layer of topsoil for sodding.

Clause 9.8 - Maintenance of sodded area is changed from 30 days to one year. Please refer to E22 for sod maintenance

E20. TREE AND PLANT MATERIAL

- E20.1 Description: This specification shall cover only the supply and installation of nursery grown trees and shrubs Please refer to E21for tree and plant maintenance.
- E20.2 The City reserves the right to reduce the quantity of trees, shrubs and shrub beds installed in order to meet the budgetary constraints.
- E20.3 Materials
- E20.3.1 General
 - (a) Trees shall be the size and variety noted on the Plant List attached to the end of this specification section. Plant material which does not have the specified root ball diameter as mentioned in plant list, will be rejected.
 - (b) All nursery stock supplied shall be Canadian prairie nursery grown, of the species and sizes indicated on the drawings. Quality shall be in accordance with the latest "Guide Specification for Nursery Stock of the Canadian Nursery Trades Association".
 - (c) Any nursery stock dug from native stands, wood lots, orchards or neglected nurseries and which have not received proper cultural maintenance as advocated by the Canadian Nursery Trades Association, shall be designated as "collected plants". The use of "collected plants" will not be permitted unless approved by the Contract Administrator.
 - (d) The Contract Administrator reserves the right to inspect the plant material at their original source, and to instruct the supplier on root and branch pruning requirements.
 - (e) Nomenclature of specified nursery stock shall conform to the International Code of Nomenclature for Cultivated Plants and shall be in accordance with the approved scientific names given in the latest edition of standardized Plant Names. The names of varieties not names therein are generally in conformity with the names accepted in the nursery trades.
 - (f) Plants larger than specified may be used if approved by the Contract Administrator. The use of such plants shall not increase the Contract price.
 - (g) All nursery stock shall be measured when the branches are in their normal position. Height and spread dimensions specified refer to the main body of the plant and not from branch tip.
 - (h) Where trees are measured by calliper (cal.), reference is made to the diameter of the trunk measured 300 mm above ground as the tree stands in the nursery.
 - (i) All nursery stock shall be well branched, true to type, structurally sound, possess a well developed, undamaged root system and shall be free of disease, insect

infestations, rodent damage, sunscald, frost cracks and other abrasion or scare to the bark. All parts of the nursery stock shall be moist and show live, green cambium when cut.

(j) All trees shall have one only, sturdy, reasonably straight and vertical trunk and a well balanced crown with fully developed leader. All evergreens shall be symmetrically grown and branched from ground level up, and must be balled and burlapped unless noted otherwise on the plant list. At least one plant of each variety supplied shall bear a tag showing both the botanical and common name of the plant.

E20.3.2 Protection of Stock

- (a) All nursery stock shall be well protected from damage and drying out from the time of digging until the time of planting on Site. All roots shall be cleanly cut; split roots are not acceptable.
- (b) Nursery stock shall be transplanted with care to prevent damage. Branches shall be carefully tied in such a manner so as not to break or damage trunks. Points of contact with equipment shall be padded. All nursery stock, which cannot be planted immediately upon arrival at the Site, shall be well protected to prevent drying out and shall be kept moist until commencement of planting.

E20.3.3 Topsoil Backfill Mix

(a) Backfill mix shall be screened garden soil mixture of two parts black loam topsoil, one part milled peat moss and one part sharp sand.

E20.3.4 Stakes

(a) T-rail iron stakes 40 x 40 x 5 x 1540 mm long, primed with 1 brush coat of black zinc rich plant paint to CGSB 1-GP-181B. Paint section of stake above ground with 1 coat of green enamel paint.

E20.3.5 Wood Chip Mulch

- (a) Mulch shall be a clean bark or wood chip mulch with chips not less than 15 mm nor larger than 75 mm in size and not less than 75 mm thick. Mulch shall be free of leaves, branches and other extraneous matter.
- E20.4 Construction Methods

E20.4.1 General

(a) Planting pits shall be excavated as per detail drawing SK1. The excavated tree pits shall be refilled with backfill mix (E20.3.3). Hand dig pits where required to protect underground utilities.

E20.4.2 Installation

- (a) Upon excavation of the tree pits, and protection of any underground utility lines, the holes shall be backfilled with a topsoil mixture to a depth to permit adequate installation and stabilization of the plant material.
- (b) Each balled specimen shall be handled with great care, to ensure that the root balls will not be broken. Burlap shall be folded back only at the top and sides. Broken roots of deciduous stock shall be pruned back prior to planting.
- (c) After inserting the tree and filling the planting hole with topsoil, water shall be poured in until the pit is thoroughly soaked. Filling of the hole shall then be completed and the fill-in soil shall be packed firmly around the roots, leaving a concave surface for convenient watering 75 mm below rounding and grade elevation. After filling, the planting shall be watered at frequent intervals.

- (d) Planting shall be done during periods suitable to weather conditions and locally accepted practice. All nursery stock shall be set plumb in the centre of pits and at levels as shown on the planting detail drawing after settlement has taken place.
- (e) Nursery stock shall be faced to give the best appearance or relationship to adjacent structures and to the approval of the Contract Administrator.
- (f) Wood chip mulch shall be installed over the tree root ball as shown on the drawing SK1.

E20.4.3 Pruning

(a) All deciduous trees shall be pruned immediately after planting. The amount of pruning shall be limited to the minimum necessary to remove dead or injured branches and to compensate for the loss of roots as a result of transplanting operations. Pruning shall be done in such a manner as to preserve the natural character of the plants. Leaders shall not be removed. Only clean, sharp tools shall be used. All cuts shall be clean and flush, leaving no stubs. Cuts, bruises or scars on the bark shall be traced back to living tissue and removed. The affected areas shall be shaped so as not to retain water and all cuts of more than 25 mm in diameter shall be painted with approved tree paint.

E20.4.4 Staking (If required)

- (a) If required trees shall be staked using metal T-BAR stakes. Refer to drawing SK1.The tree trunk shall be completely encircled and protected with two rubber tree rings and secured to each tree stake. Top of each tree stake shall be at the same elevation above finished grade, approximately 1200 1500 mm height. At the end of the Two year maintenance period the Contractor is to remove the tree stakes and associated fasteners.
- E20.4.5 Guarantee of Nursery Stock

- (a) The Contractor shall agree and guarantee to replace and replant any nursery stock found dead and/or in poor condition within 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. All replacements plants shall be installed within from the date of notification from the City, unless the City extends the time period, as a result of seasonal or climatic considerations.
- (b) Exempted is nursery stock damaged by accidental causes or vandalism, which stock shall be replaced at the cost of the City.
- (c) 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 material shall carry an additional two-year guarantee and maintenance period. All trees must be in a healthy conditional for a full two years before the warranty on the year will be considered fulfilled.

E20.5 Basis of Payment

(a) The supply and installation of Plant Material itemized under "Supply and Install Plants" will be paid for at the Contract unit price for each tree and shrub, measured as specified herein, which price shall be payment in full including all costs for the tree, shrub, tree pit and topsoil backfill, tree stakes, pruning, and all other items incidental to the Work included in this Specification.

Quantity	Common Name/botanical name	Size / Remarks
1	American Basswood / Tilia americana	Min. 65 mm caliper, 3000mm ht. Single straight trunk. Specimen quality. Well branched head above 1830mm ht. Minimum 800 mm dia. rootball. Two stakes per tree.
2	Green Ash / Fraxinus pennsylvanica Ianceolata	Min. 65 mm caliper, 3000mm ht. Single straight trunk. Specimen quality. Well branched head above 1830mm ht. Minimum 800 mm dia. rootball. Two stakes per tree
1	Colorado Spruce / Picea pungens	1500 mm height, Specimen Quality. Minimum root ball size: 600 mm dia.;Two stakes per tree.
6	Meyer Dwarf Lilac / Syringa meyeri	Min. 10 major basal stems, each stem to be min. 400 mm height Container.3 Gallon
9	Dogwood (Red Twigged) / Cornus serica	Min. 8 major basal stems, each stem to be min. 1000 mm height. Container 5 Gallon
42	Pierrete Pavement Rose / <i>Rosa sp. 'Pierrete</i> <i>Pavement Rose'</i>	No. 1 Grade plants, 3or more strong canes, with at least 2 canes measuring a min. of 40cm in length and branched no higher than 10 cm above the bud union ,Container 2 Gallon

PLANT LIST

E21. TREE AND PLANT MAINTENANCE SCHEDULE

- E21.1 Description: This specification shall cover the landscape maintenance requirements for all trees and associated tree pits, shrubs and associated shrub beds.
- E21.2 Related Work: Plant material and tree pits are specified elsewhere in this Specification and form an integral part to all Work described herein.
- E21.3 Maintenance Period: Undertake maintenance from the date of installation for a period of two years past the date of Total Performance.
- E21.4 Description of Work
 - (a) Maintain trees shown on the drawings, to the satisfaction of the Contract Administrator
 - (b) Work includes:
 - Fertilizing
 - Watering
 - Weed Control of tree pits, wood chip mulch areas
 - Pest and disease control
 - Pruning
 - Mulching
 - Tree support and tie adjustment
 - Winter protection
- E21.5 Protection
 - (a) Prevent damage to fencing, other trees, landscaping, bench marks, building, pavement, surface and underground utility facilities.

E21.6 Materials

- (a) Materials are to conform to the requirements of related specifications.
- E21.7 Maintenance Requirements
 - (a) Condition of Equipment

Prior to the commencement of tree and 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.

(b) Replacement Equipment

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

(c) General Workmanship

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.

- E21.8 Fertilizing
 - (a) Apply fertilizer no later than May 30th of each maintenance year.
- E21.9 Watering
 - (a) 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.

- (b) 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 planted and transplanted trees, noting: 1) location, and 2) date of watering. This record is to be given to the Contract Administrator when requested.
- (c) Apply 40 litres of water per 25mm caliper, per application using deep root feeder or low pressure open flow nozzle and hose. The water stream must not gouge out a hole in the soil and mulch.
- (d) Apply 4 litres of water per shrub per application.
- E21.10 Weed Control
 - (a) Maintain surface of tree pit, shrub bed and mulched areas, free of weeds. Do not allow weeds to establish for a period longer than one (1) week.
 - (b) Do not use dicamba and picloram solutions near trees.
- E21.11 Pests and Diseases
 - (a) Obtain written approval of Contract Administrator prior to using any pesticide.
 - (b) 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.
- E21.12 Pruning
 - (a) The Contractor shall provide a person with a valid Manitoba tree Pruner's License for each Work crew or Work Site.
 - (b) Prune trees as required to remove dead, broken or damaged limbs. Prune back to healthy growth while maintaining balanced crown shape.
 - (c) 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 no leave little stumps ("horns") on trunks or main branches.
 - (d) Prune trees according to accepted horticultural practices as outlined in the Pruning Manual, Publication No. 1505 by Agriculture Canada.
- E21.13 Mulching

(a) Add mulch as required to maintain 75 mm thickness.

- E21.14 Tree Supports and Tie Adjustments
 - (a) Maintain tree supports and ties in proper repair.
 - (b) Remove supports and ties at end of two year maintenance period or earlier if directed by City.
 - (c) Straighten any tree, which is leaning.
- E21.15 Winter Protection
 - (a) Ensure adequate moisture in tree zones prior to freeze-up.
 - (b) Apply anti-desiccant to evergreen trees susceptible to winter desiccation as directed by Contract Administrator.
- E21.16 Maintenance Schedule
 - (a) 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.
- E21.17 Maintenance Period
 - (a) The two year maintenance period shall be based on a six month growing season per year. The two year maintenance program will consist of a total of 12 months of maintenance. In general the maintenance shall commence on May 1st and terminate on October 30th of

each year. In the event of any early spring, whereby the weather conditions are conducive to plant growth, the Contractor shall start the maintenance period at such time as they deem necessary. However, the City of Winnipeg, Forestry Branch, must be notified prior to commencing the maintenance period. Where the maintenance contract is started prior to May 1st, the actual number of days that the plant material is maintained prior to May 1st will be deducted from the October 30th completion period.

E21.18 Basis of Payment

The cost of tree and plant maintenance shall be paid for the Contract Unit Price per unit for the Work mentioned above including all other items incidental to the Work.

E22. SOD MAINTENANCE

- E22.1 Sod maintenance shall be done in accordance with the City of Winnipeg's Standard Construction Specification 3510 –R8 Sodding except the Thirty Day Maintenance Period is changed to One Year Maintenance Period
- E22.2 Basis of Payment-

The cost of sod maintenance shall be paid for the Contract Unit Price per unit under 'One year Sod Maintenance' for the Work mentioned above including all other items incidental to the Work

E23. SITE RESTORATION

E23.1 Total Performance of the Work shall not be attained until the Contractor has cleaned up the Site and has removed all plant, tools, equipment, waste, debris and surplus foundation earth to the satisfaction of the Contract Administrator. Unless otherwise specified, the Contractor shall restore all areas of the Site beyond the established limit of Work, which have been disturbed by the Contractor's operations to as good as or better than the original condition to the satisfaction of the Contract Administrator. The Contractor shall pay all costs associated with this Work.