



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 516-2006

PARK AND ATHLETIC FIELD RENOVATIONS

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PART B - BIDDING PROCEDURES

B1. PROJECT TITLE

B1.1 PARK AND ATHLETIC FIELD RENOVATIONS

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, August 23, 2006.

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.

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 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6. SUBSTITUTES

B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.

B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.

B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.

B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:

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

B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.

B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.

B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.

B6.7 If the Contract Administrator approves a substitute as an "approved equal", any Bidder may use the approved equal in place of the specified item.

B6.8 If the Contract Administrator approves a substitute as an "approved alternative", any Bidder bidding that approved alternative 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 B15.

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

B7. BID SUBMISSION

B7.1 The Bid Submission consists of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices;
- (c) Form G1: Bid Bond and Agreement to Bond, or
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or
a certified cheque or draft.

B7.2 All components of the Bid Submission 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 in ink, to constitute a responsive Bid.

B7.3 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.

B7.3.1 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.

B7.4 Bid Submissions submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B7.5 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 12 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
 - (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Bid shall be printed below such signatures.
- B8.4.2 All signatures shall be original and shall be witnessed except where a corporate seal has been affixed.
- 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.

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. BID SECURITY

B11.1 The Bidder shall provide bid security in the form of:

- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
- (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or
- (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.

B11.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.

B11.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.

B11.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B11.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.

B11.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.

B11.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Bid Opportunity.

B12. OPENING OF BIDS AND RELEASE OF INFORMATION

B12.1 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.

- B12.1.1 Bidders or their representatives may attend.
- B12.1.2 Bid Submissions determined by the Manager of Materials, or his designate, to not include the bid security specified in B11 will not be read out.
- B12.2 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>.
- B12.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- B12.4 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.

B13. IRREVOCABLE BID

- B13.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.
- B13.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid.

B14. WITHDRAWAL OF BIDS

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

all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

B15. EVALUATION OF BIDS

B15.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Bid Opportunity (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B6.

B15.2 Further to B15.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid 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.

B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid Submission or in other information required to be submitted, that he is responsible and qualified.

B15.4 Further to B15.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

B15.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

B16. AWARD OF CONTRACT

B16.1 The City will give notice of the award of the Contract by way of a letter of intent, or will give notice that no award will be made.

B16.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.

B16.2.1 Without limiting the generality of B16.2, the City will have no obligation to award a Contract where:

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

B16.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid.

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 the renovation of five parks and athletic fields.
- D2.2 The major components of the Work are as follows:
- (a) Field renovations including drainage systems, sodding, baseball infields, and granular surfacing.
 - (b) Planting of trees.
 - (c) Site furniture.
 - (d) Bollard fencing.

D3. CONTRACT ADMINISTRATOR

- D3.1 The Contract Administrator is David Wagner Associates Inc., represented by:
- David Wagner
Landscape Architect
4-430 River Avenue
Winnipeg, Manitoba
R3L 0C6
- Telephone No. (204) 452-2426
E-mail dwagner@dwla.ca
- D3.2 At the pre-construction meeting, David Wagner 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 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 and David Wagner Associates Inc. 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 the date specified in GC:4.1 for the return of the executed Contract.

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 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 If the bid security provided in his Bid Submission was not a certified cheque or draft pursuant to B11.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in GC:4.1 for the return of the executed Contract.

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 the date specified in the General Conditions for the return of the executed Contract.

SCHEDULE OF WORK

D9. COMMENCEMENT

D9.1 The Contractor shall not commence any Work until he is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.

D9.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) 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; and,
 - (v) the Subcontractor list specified in D8.

- (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 not commence the Work on the Site before September 25, 2006.

D9.4 The City intends to award this Contract by September 15, 2006.

D10. CRITICAL STAGES

D10.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- (a) All Work shall be completed by November 7, 2006, with the following exceptions.
- (b) Turf Renovation – Type II: sodding to be completed by June 15, 2007.
- (c) Turf Renovation – Type I: field aeration to be completed by October 15, 2006 and seeding and maintenance to be completed by July 15, 2007.

D11. SUBSTANTIAL PERFORMANCE

D11.1 The Contractor shall achieve Substantial Performance by July 15, 2007.

D11.2 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.

D11.3 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.

D12. TOTAL PERFORMANCE

D12.1 The Contractor shall achieve Total Performance by July 31, 2007.

D12.2 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.

D12.3 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.

D13. LIQUIDATED DAMAGES

D13.1 If the Contractor fails to achieve critical stages, Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Calendar Day for each and every Calendar Day following the days fixed herein for same during which such failure continues:

- (a) November 7, 2006 – five hundred dollars (\$500);
- (b) Total Performance – five hundred dollars (\$500).

D13.2 The amount specified for liquidated damages in D13.1 is based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Total Performance by the day fixed herein for same.

D13.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D14. SCHEDULED MAINTENANCE

D14.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Turf Renovation as specified in E16.4;
- (b) Plant Material as specified in E18.

D14.2 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

D15. JOB MEETINGS

D15.1 Job meetings will be held as required and determined by the Contract Administrator. 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.

D15.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

D16. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D16.1 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).

WARRANTY

D17. WARRANTY

D17.1 Notwithstanding GC:13.2, the warranty period shall begin on the date of Total Performance and shall expire one (1) year thereafter unless extended pursuant to GC:13.2.1 or GC:13.2.2, in which case it shall expire when provided for thereunder.

D17.2 Notwithstanding GC:13.2 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.

- D17.2.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in GC:13.2 for the warranty period to begin.
- D17.3 The warranty period for all Plant Material as specified in E17 shall begin on the date of Total Performance and shall expire two (2) years thereafter.
- D17.3.1 Any plant material, replaced during the warranty period, shall carry an additional two (2) year warranty and two (2) year maintenance period from the date of replacement.

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. 516-2006

PARK AND ATHLETIC FIELD RENOVATIONS

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

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)

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 Drawings are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
L1	Burton Cummings C.C.
L2	Northwood C.C.
L3	Weston C.C.
L4	Woodsworth Park
L5	River Bend Park
SCD-105A	Post & Chain Fencing

E2. LOCATIONS OF WORK

- E2.1 Work is at the following five Sites:
- (a) Burton Cummings Community Centre, Arlington Street at McDermot Avenue.
 - (b) Northwood Community Centre, Burrows Avenue at Sheppard Street.
 - (c) Weston Community Centre, Logan Avenue at Keewatin Street.
 - (d) Woodsworth Park, Hekla Avenue and Park Lane Avenue.
 - (e) River Bend Park, Vince Leah Drive and Red River Boulevard.

E3. SITE ACCESS

- E3.1 Access to the Sites will be determined at the pre-construction meeting. Each access area shall be maintained and restored by the Contractor at his own expense and approved by the Contract Administrator.
- E3.2 The Contractor shall be restricted to the Site access locations and routes only so that there is a minimum of disturbance to the existing ground surface. Damage to areas beyond the marked routes shall be repaired by and at the expense of the Contractor to the satisfaction of the Contract Administrator.

E4. PERMITS, NOTICES, LICENSES, CERTIFICATES, LAWS AND RULES

- E4.1 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.

- E4.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work.
- E4.3 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contract Administrator.
- E4.4 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Act.
- E4.5 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Fall Protection guidelines.
- E4.6 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.

E5. DAMAGE TO EXISTING STRUCTURES AND PROPERTY AND SERVICES AND UTILITIES

- E5.1 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 thereof, either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to, the Contract Administrator. The cost of which shall be borne entirely by the Contractor.
- E5.2 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.
- E5.3 Existing Services and Utilities
- No responsibility will be assumed by the City 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 City 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.

E6. PROTECTION OF EXISTING TREES

- E6.1 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 100 mm diameter or trees identified to be at risk by the Contract Administrator are to be strapped with 25x100x2440 mm wood planks, or other suitable protection 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) 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) Equipment shall not be operated within the drip line without written permission from the Contract Administrator. 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 entire ground surface located directly beneath the tree and radiating out to 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 the Project completion.
- (e) Carefully remove safety fencing and strapping material without harming the trees as soon as the construction and restoration Work is complete.

- E6.2 Obtain approval from the Contract Administrator to excavate within 2.0 M of a tree.
- E6.3 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.
- E6.4 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.
- E6.5 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.
- E6.6 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.
- E6.7 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.
- E6.8 All damage or pruning required 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.
- E6.9 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

E7. TEMPORARY UTILITIES

- E7.1 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.

E7.2 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.

E8. SITE ENCLOSURES

E8.1 Temporary Site enclosures, as determined necessary at the pre-construction meeting, shall be erected and maintained as required for the duration of the construction period.

E8.2 Site enclosures shall be considered incidental to the Contract Work.

E9. LAYOUT

E9.1 The Contractor is responsible for the layout of all Work.

E9.2 The Contract Administrator shall be advised of the staking of the layout at least twenty-four (24) hours in advance in order that the layout may be inspected and adjusted as required prior to construction.

E9.3 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 or the Contract Administrator on account of 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 through consultation with the Contract Administrator. No claims shall be made on account of any delay occasioned thereby.

WORK

E10. REMOVALS

E10.1 General Description

(a) This specification shall cover the removal of items such as site furniture and wooden bollards as specified on the Drawings.

E10.2 Location and Description of Work

(a) Woodsworth

(i) Removal of eight baseball players benches.

(b) River Bend

(i) Removal of one pair of soccer goal posts.

(c) Weston

(i) Removal of one set of concrete bleachers and a rubble pile.

(ii) Removal of wooden bollards.

(iii) Removal and relocation of baseball bleachers.

E10.3 Execution

(a) All removal items are to be removed including any bases or foundations in their entirety.

(b) All areas, where items have been removed, are to be restored to a clean, level and safe surface. Where required, the turf is to be restored using topsoil and sod as specified in CW 3540-R4 and CW 3510-R8. Site restoration shall be considered incidental to the Removals.

(c) All removed materials are to be disposed of off Site in a safe and legal manner.

(d) The removal and relocation of baseball bleachers during the construction at Weston Site are as specified in E12.3(b)(i).

E10.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a lump sum basis, for the Items of Work listed below, which price shall include all costs of removal, excavation, disposal and Site restoration.
- (b) Items of Work:
 - (i) Removals
 - (ii) Removal and Relocation of Baseball Bleachers

E11. SUB-SURFACE DRAINAGE

E11.1 General Description

- (a) This Work shall consist of providing and placing geocomposite prefabricated drainage systems as shown on the Drawings. The drainage systems shall be in accordance with these Specifications and in reasonably close conformity with the locations and dimensions as shown on the plans or as specified by the Contract Administrator. The quantities of drainage system materials as shown may be increased or decreased at the discretion of the Contract Administrator based on actual Site conditions that occur during construction. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the Work.
- (b) Location and Description of Work
 - (i) Burton Cummings: Multi Flow Drain System and one connection to existing manhole.
 - (ii) Northwood: Multi Flow Drain System and one connection to existing catch basin.
 - (iii) Weston: Multi Flow Drain System, raising elevation of one existing catch basin and four connections to existing catch basins.
 - (iv) Woodsworth: Multi Flow Drain System.

E11.2 Materials

- (a) Multi Flow Drain System
 - (i) Drainage pipe shall be Multi-Flow or approved substitute in accordance with B6. Size shall be 150mm as shown on Drawings. All fittings shall be sized to fit and approved for use with Multi-Flow or approved substitute by the manufacturer.
 - (ii) The drain conduit shall be of flexible, prefabricated, rounded rectangular shaped, composite product. The drain conduit shall be wrapped with a non-woven geotextile and shall be a non-woven needle-punched construction and consist of long-chain polymeric fibres composed of polypropylene, polyethylene or polyamide. The fibres shall be oriented into a multi-directional stable network whereby they retain their positions relative with each other and allow the passage of water as specified. The fabric shall be free of any chemical treatment or coating, which reduces permeability and shall be inert to chemicals commonly found in soil. The geotextile shall conform to the following minimum average roll values:

Weight	ASTM D-3776	3.0 – 4.0
Tensile Strength	ASTM D-4632	100 - 130
Elongation %	ASTM D-4632	50 - 70
Puncture, lb	ASTM D-751	35 - 60
Mullen Burst, psi	ASTM D-3786	110 - 215
Trapezoidal Tear, lb	ASTM D-4533	40 - 42

Coefficient of Permeability	ASTM D-4491	.2 - .4 cm/sec
Flow Rate, gpm/ft2	ASTM D-4491	100 - 140
Permittivity, 1/sec	ASTM D-4491	1.3 – 2.0
Apparent Opening Size	ASTM D-4751	60/70 Max. US Std Sieve Opening
Seam Strength, lb/ft	ASTM D-4595	100
Fungus	ASTM G-21	No Growth

- (iii) The drainage core shall be made of a high-density polyethylene. The core shall be constructed using interconnected corrugated pipes that define and provide the flow channels and structural integrity of the system. The geotextile shall function only as a filter. The core of the conduit shall conform to the following physical property requirements:

Thickness, inches	ASTM D-1777	1.0
Flow rate, gpm/ft***	ASTM D-4716	30
Compressive Strength, psf	ASTM D-1621 (modified sand method)	6000
Pipe Stiffness, pii	ASTM D-2412	100

*** At gradient = 0.1, pressure = 10 psi for 100 hours.

(b) Fittings

- (i) The fittings used with the drainage system shall be of a snap together design. In no case shall any product be joined without the use of the manufacturer's connector designed specifically for the purpose.

(c) Pipe

- (i) Pipe for drain outlet shall be either PVC pipe meeting the requirements of ASTM D-2729 or ASTM F-949, or high density polyethylene pipe meeting the requirements of AASHTO M252.2.4. A rodent screen made of 7.6 mm by 7.6 mm square opening size, 1,6 mm gauge, stainless steel or galvanized welded mesh shall be installed in each outlet line. When using galvanized welded wire mesh, the rodent screen shall be galvanized after it has been formed to the shape and dimensions required.

(d) Backfill for Trenches

- (i) Backfill shall be coarse sand whose particle size is defined as less than 5% retained on a #10 screen, and less than 5% passing through a #30 screen. (US Std Sieve) In no case shall more than 1% pass a #60 screen.

(e) Seed shall be as per CW 3520-R6.

E11.3 Methods

- (a) The layout of the sub-drain is to be marked on Site and approved by the Contract Administrator.
- (b) Trenches are to be excavated with a trenching machine or by hand. Locations, where the trench crosses existing utilities, irrigation pipes and all other sub-surface pipes or fixtures, are to be excavated by hand. The amount of trench excavated at any time shall not exceed the amount of drain that can be set and backfilled completely prior to the end of that Working Day. Trench width shall be as specified on the Drawings.
- (c) The bottom surface of the trench is to be free of looses particles and is to have the slope shown on the Drawings. Over excavation in the bottom of the trench shall be backfilled to the proper grade with the excavated material or sand prior to the placement of the drain. Where sand or excavated material is used to fill the trench to the proper elevation that

material shall be compacted to 95% of standard proctor density using appropriate means. Where the trench is to pass through an area of existing turf, the excavated material is not to remain on the grassed surface for a period of longer than 24 hours. All excavated material shall be removed from the Site daily and disposed of legally.

- (d) Multi-Flow drain pipe is to be placed in the trench using a Multi-Flow centering device. Trench is to be backfilled with coarse sand to the surface. Backfill shall be placed in maximum of 45 cm loose lifts. Backfill is to be lightly tamped into place and watered.
- (e) Refer to E12 for the installation of the Multi Flow pipe in the French Drain at Northwood Site.
- (f) Fittings for the drain shall be installed in accordance with manufacturer's recommendations.
- (g) Any damaged drain system shall be replaced or repaired by splicing in an undamaged section of like material at the Contractor's expense.
- (h) The sand backfill is to be seeded with grass seed.
- (i) Adjustments to existing catch basins and connections to existing catch basins and manholes as per CW 2130-R10, SD-025 and SD-010.
- (j) The Contractor shall be responsible for restoration of any surfaces damaged during the Work under this section.

E11.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a lineal metre or per unit basis, for the Items of Work listed below, which price shall include all costs of material supply, fittings, trenching, proper material installation, backfill, Site restoration and all other items incidental to the Work.
 - (i) Multi-Flow Drain – 150 mm
 - (ii) Connection to Existing Catch Basin or Manhole
 - (iii) Adjustment of Existing Catch Basin

E12. GRANULAR DRAINAGE AREAS

E12.1 General Description

- (a) This specification shall cover the supply and installation of granular drainage areas as follows:
 - (i) French Drain at Northwood Site
 - (ii) Granular Swales and Catch Basin Area at Weston Site.

E12.2 Materials

- (a) 19 mm Diameter Crushed Washed Granite
- (b) 38 mm Diameter Crushed Washed Stone
- (c) Geotextile: filter cloth
- (d) Wood Edging: Pressure treated 50x150mm boards c/w galvanized C clamp fasteners and butt joint plate connectors, sized to suit.

E12.3 Methods

- (a) French Drain (Northwood)
 - (i) The trench is to be excavated with a trenching machine or by hand. The amount of trench excavated at any time shall not exceed the amount of drain that can be set

- and backfilled completely prior to the end of that Working Day. Trench depth and width shall be as specified on the Drawings.
- (ii) The bottom surface of the trench is to be free of loose particles and is to have the slope shown on the Drawings. Over excavation in the bottom of the trench shall be backfilled to the proper grade with the excavated material prior to the placement of the drain. Where excavated material is used to fill the trench to the proper elevation that material shall be compacted to 95% of standard proctor density using appropriate means. Where the trench is to pass through an area of existing turf, the excavated material is not to remain on the grassed surface for a period of longer than 24 hours. Excavated material if not required as fill elsewhere on the Site shall be removed from the Site and disposed of legally.
 - (iii) French Drain is to be constructed in conjunction with the Multi Flow Drain System as shown on Drawings and as specified in E11. Multi-Flow 150 mm drain pipe is to be placed in the trench. Drain pipe is included in quantities in E11.
 - (iv) Trench is to be backfilled with granular materials in layers and depths shown on Drawings. Geotextile is to be placed between the layers of material with the edges well buried.
 - (v) The Contractor shall be responsible for restoration of any surfaces damaged during the Work under this section.
- (b) Granular Swales and Catch Basin Area (Weston)
- (i) The existing baseball bleachers are to be removed from between the baseball backstops and stored safely/secured by the Contractor during construction. They are to be replaced and levelled once the granular Work is completed. This Work is included in and specified as Removal and Relocation of Baseball Bleachers in E10.
 - (ii) Existing swales and grassed area between the baseball backstops are to be stripped of turf and regraded to drain towards the existing catch basin as shown on Drawings.
 - (iii) New swales, within the two areas between the diamonds, are to be graded to drain towards the existing catch basin as shown on Drawings.
 - (iv) Wood edging is to be installed along the baseball backstops and fences according to Drawing details. It is to be set at a level such that it separates the granular materials on either side. This Work shall be incidental to the granular Work.
 - (v) The granular drainage area is to be done in conjunction with the construction of the Multi Flow Drain System and connections to the existing catch basin. The top of the catch basin is to be raised to grades shown on Drawings. This Work is included in and specified in E11.
 - (vi) The area between the backstops is to be filled with 19 mm diameter crushed washed granite so that the area is level with the top of the new elevation of the catch basin and covers the exposed footings of the backstops. The swales are to be filled with the granular as shown on the Drawings.

E12.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a linear metre and a square metre basis, for the Items of Work listed below, which price shall include all costs of material supply, trenching, proper material installation, Site restoration, wood edging and all other items incidental to the Work. All Multi Flow Drainage Systems associated with this Work are included in E11.
- (i) French Drain
 - (ii) Granular Swales and Catch Basin Area

E13. GRANULAR PAVING

E13.1 General Description

- (a) Granular Paving – Type I, including sub-grade preparation:
 - (i) The renovation of existing baseball player's boxes at Burton Cummings, and Woodsworth Sites.
- (b) Granular Paving – Type II, including sub-grade preparation:
 - (i) The redevelopment of pathways at Woodsworth Site.
- (c) Granular Paving – Type III, including sub-grade preparation:
 - (i) The development of granular pads under benches at River Bend Site.
 - (ii) The development of new pathway over the swale crossing at Woodsworth Site.
 - (iii) The development of new pathway at Burton Cummings Site.

E13.2 Materials and Method - Granular Paving – Type I

- (a) Scarify existing baseball player's boxes. Remove weeds and any other extraneous matter.
- (b) Top up with 6 mm down crushed limestone and compact.
- (c) Grade to drain away from the infield or as shown on Drawings.
- (d) Cover any exposed concrete foundations.
- (e) Coordinate with installation of new benches where applicable.

E13.3 Materials and Method - Granular Paving – Type II

- (a) Layout of pathway to follow existing path.
- (b) Soil, turf, weeds and other extraneous materials shall be removed from existing path surface. Scarify path surface.
- (c) Renovate existing pathway to width shown on Drawings and to CW 3110-R9:
 - (i) Sub-base: Existing granular path surface.
 - (ii) Base: 75 mm depth of 19 mm down crushed limestone, compacted.
 - (iii) Top: 25 mm of 6mm down crushed limestone, compacted.
- (d) The uphill edge of the path shall be regraded and sodded for 2.4 M width as required to create a swale along that edge as shown on the Drawings. Payment for this regrading and sod shall be measured and paid for under Turf Renovation – Type II.
- (e) The granular paving must be constructed to function within existing drainage patterns and as shown on Drawings.
- (f) Site restoration shall be considered incidental to the Work.

E13.4 Materials and Method - Granular Paving – Type III

- (a) Layout of pathway and bench pads as shown on Drawings.
- (b) Construct to CW 3110-R9:
 - (i) Sub-base: 100mm depth of 50mm down crushed limestone compacted in two layers over compacted sub-grade.
 - (ii) Base: 50mm depth of 19mm down crushed limestone, compacted.
 - (iii) Top: 25mm of 6mm down crushed limestone, compacted.
- (c) The granular paving shall meet the existing paths in a neat and finished manner.
- (d) Coordinate with installation of swale crossing and new benches where applicable.
- (e) Site restoration shall be considered incidental to the Work.

E13.5 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a square metre basis, for the Items of Work listed below, which price shall include all costs of material supply, sub-grade preparation, proper material installation and site restoration.
- (b) Items of Work:
 - (i) Granular Paving – Type I
 - (ii) Granular Paving – Type II
 - (iii) Granular Paving – Type III

E14. SWALE CROSSING

E14.1 General Description

- (a) This specification shall cover the supply and installation of a culvert and precast concrete retaining wall system to serve as a swale crossing at Woodsworth Site.

E14.2 Materials

- (a) Culvert
 - (i) 300 mm corrugated steel pipe as per CW 3610-R3.
 - (ii) Bedding material as per CW 3610-R3.
- (b) Precast Concrete Retaining Wall
 - (i) Barkman Roman Pisa with Roman Coping, colour Sierra Grey.
- (c) Granular base
 - (i) To CW 3110-R5 for crushed limestone base course material and as per manufacturer's specifications.
- (d) Accessories
 - (i) Adhesive: Snap Edge, Bond-Loc All Weather Landscape Products Adhesive or approved equal.
 - (ii) GeoGrid: polyester grid as supplied by Barkman.

E14.3 Method

- (a) Wall layout and grading shall be subject to inspection by the Contract Administrator.
- (b) The swale shall be regraded to ensure positive drainage under the path area and to the lake as per E16.
- (c) The culvert shall be installed as per CW 3610-R3.
- (d) The path shall be regraded in the vicinity of the crossing to go over the culvert and the path shall be constructed in conjunction with the crossing.
- (e) Retaining walls, base, drainage system and GeoGrid shall be installed as per Drawings and according to manufacturer's specifications.
- (f) Subgrade preparation shall conform to levels and compaction required to allow for installation of granular base.
- (g) Base shall be compacted to 95% standard Proctor Density.
- (h) Retaining walls shall be installed true to grade such that the top of the finished wall is level across its entire length.
- (i) The base course stones shall be levelled and compacted with a mechanical plate vibrator using a 19mm thick plywood or neoprene pad under the plate. Stones are to be true to grade and free of movement.

- (j) The top two courses shall be fixed down with adhesive as the wall is being constructed, to the satisfaction of the Contract Administrator.
- (k) The path shall crown in a longitudinal direction over the crossing.

E14.4 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a lump sum basis, for the Items of Work listed below, which price shall include all costs of material supply including the granular, sub-grade preparation, and proper material installation. Site grading and culvert supply and installation shall be considered incidental to the Work.
- (b) Items of Work
 - (i) Swale Crossing

E15. TOPSOIL AND FINISH GRADING

E15.1 General Description

- (a) Further to CW 3540-R4, this specification shall cover the supply and installation of topsoil for the establishment of turf and plant material.

E15.2 Materials

- (a) Topsoil: As per CW 3540-R4.

E15.3 Methods

- (a) The topsoil and finish grading shall be installed as per CW3540-R4 or as directed by the Contract Administrator.

E15.4 Basis of Payment

- (a) Payment for Work specified under this section shall be included with the price for sod and plant material.

E16. TURF RENOVATION

E16.1 General Description

- (a) Turf Renovation – Type I:
 - (i) The renovation of existing athletic fields at Northwood, Burton Cummings, and River Bend Sites.
- (b) Turf Renovation – Type II, including regrading, sub-grade preparation and sodding:
 - (i) The redevelopment of swales and site grading at Woodsworth and Weston Sites.
 - (ii) The catch basin area at Burton Cummings Site.

E16.2 Scheduling

- (a) Turf Renovation – Type I shall commence after September 25, 2006 when the fields are no longer scheduled for use.
 - (i) Fields shall be aerated in the fall 2006.
 - (ii) Seeding and maintenance shall commence in Spring 2007.

E16.3 Materials and Method

- (a) Turf Renovation – Type I
 - (i) The areas of field renovation are shown on the Drawings.

- (ii) Existing irrigation systems, if applicable, are to be located and protected.
 - (iii) The perimeter of the area is to be marked out and the area is to be mowed, power raked and de-thatched if required.
 - (iv) The area is to be aerated with a "hollow tine" aerator to a minimum depth of 50mm and a maximum depth of 75 mm. Tines are to be 18mm, minimum, hole pattern to be 60 mm x 50 mm, maximum pattern to be 60 mm x 100 mm. Soil cores are to be removed.
 - (v) The area is to be seeded @ 100lbs. per acre using an approved "slit seeder". Seeding shall be in a cross and criss-cross direction.
 - (vi) Seed mix shall be "Pickseed", Fairway mix consisting of 20% Limousine Kentucky Blue Grass, 25% Crest Kentucky Blue Grass, 20% Touchdown Kentucky Blue Grass, 15% Quantum Leap Kentucky Blue Grass and 10% Fiesta II Perennial Ryegrass.
 - (vii) The area is to be top dressed using 2 mil masonry sand, quantity as required to fill punched holes and minor depressions. It is to be dragged level using "welcome" or "chain link" drag mats.
 - (viii) Starter fertilizer shall be applied at manufacturer's specified rates using 25-5-11 or approved equal and the area maintained for 30 days.
 - (ix) Trouble spots shall be spot seeded with slit seeder as above.
 - (x) A second application of fertilizer shall be applied at manufacturer's specified rates using 25-5-11 or approved equal, to the entire area and the area shall be maintained for another 30 days.
- (b) Fencing - Turf Renovation – Type I
- (i) The Contractor shall supply and erect snow fencing, complete with fence fabric and posts. The fencing shall be located such that the fields under renovation are rendered unplayable.
 - (ii) The fencing shall be maintained in place by the Contractor until end of maintenance, at which time it is to be removed in its entirety.
- (c) Turf Renovation – Type II
- (i) The areas of field renovation are shown on the Drawings. The perimeter of the area is to be marked out and the proposed grades are to be staked. Refer to E9.
 - (ii) Existing irrigation systems, if applicable, are to be located and protected.
 - (iii) The areas are to be regraded as shown on Drawings. Surplus material shall be disposed of off site.
 - (iv) Where new Work meets existing turf, the edges shall be cut out with a sod cutter in straight lines.
 - (v) The Work areas are to be cultivated / rottovated to 100 mm depth and raked. Turf clumps, sticks, stones and other debris over 50 mm are to be removed. The area is to be harrowed smooth, and fine graded to CW 3540-R4.
 - (vi) Topsoil as per CW 3540-R4.
 - (vii) The area shall be lightly rolled, fertilized and sodded.
 - (viii) Sodding:
 - (i) As per CW 3510-R8.
 - (ii) Sod shall be mineral base.
 - (iii) Big roll sod shall be used wherever possible.
 - (ix) Where new sod meets existing turf, the transition shall be such that it forms a uniform even surface and is level with adjoining grades. These joints shall be top dressed and seeded.

E16.4 Maintenance Period

- (a) Turf Renovation – Type I
 - (i) The Contractor shall maintain the turf for 60 days after the completion of the initial seeding installation or until such a time as the turf is accepted by the Contract Administrator.
- (b) Turf Renovation – Type II
 - (i) The Contractor shall maintain the sod for 30 days after the completion of the installation or until such a time as the turf is established in accordance with CW 3510-R8.

E16.5 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a square metre basis, for the Items of Work listed below, which price shall include all costs of material supply, sub-grade preparation, proper material installation, maintenance and all other items incidental to the Work. Payment for Turf Renovation – Type II shall be in accordance with the following:
 - (i) Seventy-five (75%) following supply and placement of sod and issuance of Certificate of Substantial Performance by the Contract Administrator.
 - (ii) Twenty-five (25%) following termination of the maintenance period.
- (b) Items of Work
 - (i) Turf Renovation – Type I
 - (ii) Turf Renovation – Type II

E17. PLANT MATERIAL

E17.1 General Description

- (a) This specification shall cover the supply and installation of trees and shrubs.

E17.2 Materials

- (a) Plant Material
 - (i) Quality and source is to comply with Canadian Standards for Nursery Stock, Seventh Edition of Canadian Nursery Landscape Association (C.N.L.A.) referring to size and development of plant material and root ball. Measure trees when branches are in their natural position. Height and spread dimensions refer to main body of trees and not from branch top to branch top. Use trees of No. 1 grade. Trees are to have only one, sturdy, reasonably straight and vertical trunk, and a well balanced crown with fully developed leader.
 - (ii) Trees are to be free of disease, insect infestation, rodent damage, sun scald, frost cracks, abrasions, unhealed scars, scars exceeding 5cm in diameter, major forks or crooks in the trunk, broken branches, or angled leaders. Trees having the above defects will not be accepted by the Contract Administrator.
 - (iii) Nursery stock is to be grown in nurseries under proper cultural practices as recommended by the C.N.L.A. Only nursery stock grown for at least the last four (4) years in nurseries located in an Agriculture Canada Plant Hardiness Zone of 2 (a or b) or 3 (a or b) will be accepted.
 - (iv) Plant Specification List – on Drawing L5.
- (b) Planting soil is to Specification E15.
- (c) Water is to be potable and free of minerals which may be detrimental to plant growth.

- (d) Fertilizer is to be a slow release formulation of low nitrogen and high phosphorus e.g. 10-50-12 Apply quantities at rates stated by product manufacturer.
- (e) Staking shall be as shown on Drawings.
- (f) Mulch shall be clean bark or wood chip mulch with chips not less than 15mm or larger than 75mm in size and not more than 20mm thick. Mulch shall be free of leaves, branches and other extraneous matter.

E17.3 Method

- (a) Trees are to be planted according to Details on Drawing L5.
- (b) The Contractor shall obtain all above and below ground clearances from all utilities. Clearances shall be obtained in a timely manner so as not to jeopardize the schedule of the complete planting operation.
- (c) Coordinate shipping of nursery stock and excavation of holes to ensure minimum time laps between digging and planting. Tie branches of nursery stock securely, and protect plants against abrasion, exposure and extreme temperature change during transit. Avoid binding of plants with rope or wire which would damage bark, break branches or destroy natural shape of plant. Give full support to root ball of nursery stock during lifting. Cover plant foliage with tarpaulin, and protect bare roots by means of dampened straw, peat moss, saw dust or other acceptable material to prevent loss of moisture during transit and storage. Remove broken and damaged roots with sharp pruning shears. Make clean cuts, and cover cuts over 10mm diameter with a tree wound dressing.
- (d) Location of nursery stock will be staked out or painted on Site by the Contractor and approved the Contract Administrator prior to planting. All trees shall be located a minimum of 3m from all paths, roads, play areas and parking lots. Trees with low branching habits shall be located such that their mature size shall not encroach on the same. No trees shall be planted in drainage swales.
- (e) The Contractor shall coordinate operations, keeping the Site clean and the planting holes drained. The Contractor shall immediately remove soil or debris spilled onto street pavement, grass or sidewalk.
- (f) Installation shall be done during periods of suitable weather conditions and in accordance with locally accepted practice. Trees are to be planted within forty-eight (48) hours of excavation from the nursery. No tree pit is to be left open at the end of the Contractor's Work Day. The planting program is to be planned to ensure that trees delivered to the Site at designated planting locations are installed and thoroughly watered the same day as delivery.
- (g) Loosen bottom of planting hole to depth of 100-150mm. Cover bottom of each excavation with minimum of 150 mm topsoil mixture, incorporate with sub-grade material.
- (h) Plant trees vertically. Orient trees and shrubs to give best appearance in relation to structure, roads and sidewalks. Place nursery stock to depth equal to depth they were originally growing in nursery. With balled and burlapped root balls and root balls in wire baskets, loosen burlap and cut away the top 1/3 without disturbing root ball. Do not pull burlap or rope from under root ball. Non-biodegradable wrapping must be removed. Tamp planting soil around root system in layers of 150mm 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.
- (i) Each tree is to have an earth saucer at its base having a diameter as large as the excavation with a 10cm lip formed at the perimeter of the saucer to retain water. When planting is completed, give surface of planting saucer dressing of fertilizer and mix fertilizer thoroughly with top layer of planting soil and water in well.
- (j) Trees are to be staked as per Details.

- (k) Each tree is to have wood chip mulch spread over the earth saucer to 75mm depth.

E17.4 Warranty

- (a) Refer to D17.3.

E17.5 Maintenance Period

- (a) Refer to E18.

E17.6 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a per unit basis, for the Items of Work listed below, which price shall include all costs of material supply, and proper material installation. The supply and installation of mulch shall be considered incidental to the Work.
- (b) Items of Work
 - (i) Colorado Blue Spruce
 - (ii) Tatarian Maple
 - (iii) Weeping Willow
 - (iv) American Basswood

E18. PLANT MATERIAL MAINTENANCE

E18.1 Maintenance Period

- (a) The Contractor shall undertake maintenance of all plant material for two (2) years from the date of Certificate of Total Performance.
- (b) Given Total Performance, the Superintendent of Landscape Development Services or his/her designate, shall monitor the Contractor's maintenance. Once completed, a Certificate of Acceptance shall be issued by the Superintendent of Landscape Development Services.
- (c) In general the maintenance shall not commence prior to May 1st and/or terminate after October 15th of each year. In the event of an early spring, whereby 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, Superintendent of Landscape Development Services, must be notified prior to commencing the maintenance period.
- (d) In the event that plant material requires replacement under the warranty period, a two (2) year maintenance period for the replaced material shall commence on the date of replacement.

E18.2 Description of Work

- (i) Irrigate weekly or as required during the growing season following installation by saturating the soil in the root zone area to a depth of 400mm. Water when rainfall is less than 25mm per week for more than three weeks. Irrigate prior freeze-up.
- (ii) Apply 2:1:2 soluble fertilizer to root zone of plants in the early spring not later than May 30th. Irrigate to saturate the soil in the root zone area to a depth of 500mm. Apply additional fertilizers as per standard horticultural practice. Apply at manufacturer's specified rates. Retain and submit material purchase records for all pertinent substances.
- (iii) Cultivate soil in earth saucer lightly at beginning of growing season and apply mulch to maintain installed depth of mulch. Weed as necessary during the entire growing season.
- (iv) Undertake disease and insect control programs as required to control known and serious pests. Obtain approval from Contract Administrator prior to using any

pesticide. The use of chemical pesticides is not permitted on City of Winnipeg properties. Retain and submit material purchase records for all pertinent substances.

- (v) Prune trees during dormant season if possible. Remove dead, diseased, crossing, weak, crowded and unsightly or unshapely branches. Do not head back or shear to control shape.
- (vi) Repair all damage to plant material immediately following the discovery of damage and check and re-secure stakes as required.
- (vii) Record all activities on a daily basis. Submit reports to the Contract Administrator on a monthly basis.

E18.3 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a per yearly basis, for the Items of Work listed below, which price shall include all costs of maintenance and material supply. The year shall start from the date of Certificate of Total Performance.
- (b) Items of Work
 - (i) Plant Material Maintenance

E19. BASEBALL INFIELD RENOVATION

E19.1 General Description

- (a) Infield Renovation – Type I
 - (i) Renovation to existing baseball diamond infields including the removal of turfed infield areas and the construction of larger infield mix areas.
 - (ii) Burton Cummings Site
- (b) Infield Renovation – Type II
 - (i) Renovation to existing baseball diamond infields
 - (ii) Weston and Woodsworth Sites

E19.2 Materials

- (a) The baseball diamond infield mix shall consist of natural sand and pink-red crushed limestone.
 - (i) The colour of the material is imperative as the material is being used to top up existing material.
 - (ii) A sample will be needed to match colour.
- (b) Fine Sand

Metric Sieve Size	% Passing
5000	100
2500	90-100
435	70-90
315	60-80
80	0-3
- (c) “Pink-Red” Crushed Limestone
 - (i) 6mm to dust “pink-red” crushed limestone with a minus 80 M.M.S. proportion not exceeding 35%.
- (d) Mixing Requirements

- (i) A mixture of 60% limestone and 40% sand in accordance to the gradation requirements.
- (ii) Thoroughly bucket mix the two materials at the stated ratio to create a uniform blend of sand products.
- (iii) After mixing is completed as stated all material must then be final screened through a 0.03mm (1/8") slotted screener, and the gradation requirements for the specified product is 100% passing for the screen.

E19.3 Method

(a) Infield Renovation – Type I

- (i) The turf is to be removed from the center of one diamond and the area between the baselines and the fences on both diamonds, as shown on Drawing L1 and as directed by the Contract Administrator.
- (ii) These areas are to be excavated to a minimum depth of 100 mm and the subgrade is to be inspected by the Contract Administrator. The subgrade is to be proof rolled to check for unstable areas. The areas are to be filled with infield mix.
- (iii) The existing infield areas are to be scarified to remove all weeds, debris and contaminates.
- (iv) All sod edges around and within the area are to be trimmed straight with a sod cutter.
- (v) The existing infield mix material shall be topped up as required and new material evenly spread for a total minimum depth of 100mm of infield mix. The infields shall be graded as required to achieve the desired grades as shown on the Drawings and as directed by the Contract Administrator.
- (vi) The entire infield shall be compacted to 95% standard proctor density.
- (vii) The pitcher's mound is to be topped up.

(b) Infield Renovation – Type II

- (i) Baseball granular area layout is to remain as existing.
- (ii) The existing granular infield is to be scarified to remove all weeds.
- (iii) The area is to be regraded as indicated on the Drawings and to remove any low areas as required.
- (iv) All sod edges are to be trimmed straight with a sod cutter.
- (v) The infield is to be harrowed and compacted.
- (vi) Infield granular mix is to be topped up and compacted as required.
- (vii) The pitcher's mound is to be topped up.

E19.4 Basis of Payment

- (i) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a square metre basis, for the Items of Work listed below, which price shall include all costs of material supply, sub-grade preparation, proper material installation.
- (b) Items of Work
 - (i) Infield Renovation – Type I
 - (ii) Infield Renovation – Type II

E20. BOLLARD FENCING

E20.1 General Description

- (a) This specification shall cover the supply and installation of wood bollards at the Weston Site.

E20.2 Materials and Method

- (a) Wood Bollard: round wood posts as specified on the Drawing and SCD-105A with no chains. Bollards are to be installed at 1.8m O.C. Bollards are to be installed plumb and in a straight line and height with each other.
- (b) Retain Site access opening as shown on Drawings and as determined on site with the Contract Administrator. Chain and lock will be supplied by others.

E20.3 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the unit price for the "Items of Work" listed below, which price shall include all costs of material supply, and proper material installation. Site restoration work shall be considered incidental to the Work.
- (b) Items of Work:
 - (i) Bollards

E21. SITE FURNITURE

E21.1 General Description

- (a) This specification shall cover the supply and installation of site furniture as follows:
 - (i) 1.8 m Benches at River Bend site.
 - (ii) Baseball Player's Benches at Woodsworth Site.
 - (iii) One complete pair of Soccer Goal Posts at River Bend Site.

E21.2 Materials and Method

- (a) 1.8 m Benches
 - (i) DuMor, Inc. Site Furnishings, Bench 88-60PL, recycled plastic. They shall be 1.8M (6') in length and have arm rests. They shall have the embedment support option S-1. Colour shall be Green for the metal and Redwood for the recycled plastic.
 - (ii) Benches are to be installed according to Drawings and manufacturer's specifications and in conjunction with the construction of granular pads as shown on the Drawings and specified in E13.
 - (iii) Tops of concrete footings are to be 200mm below finished grade. Site furnishings are to be kept clean of any granular, concrete or other materials. Any damaged surfaces shall be touched-up to the satisfaction of the Contract Administrator.
- (b) Baseball Player's Benches
 - (i) SportsPlay Equipment Inc., Player bench 601-114, 4.3 m length, aluminum seat boards with welded 48 mm (1 7/8") O.D. galvanized pipe legs, permanent inground installation.
 - (ii) Benches are to be installed according to Drawings and manufacturer's specifications and in conjunction with the restoration of granular player's boxes as shown on the Drawings and specified in E13.
 - (iii) Tops of concrete footings are to be 200mm below finished grade. Site furnishings are to be kept clean of any granular, concrete or other materials. Any damaged surfaces shall be touched-up to the satisfaction of the Contract Administrator.
- (c) Soccer Goal Posts
 - (i) City of Winnipeg Youth Soccer Nets 24' c/w hold downs, Products #72722004 and 72722003, available from Fleet Management Agency, City of Winnipeg, Central

Manufacturing/Repair Facility, 215 Tecumseh Street. Contact: Aaron Lennon, 986-5505.

- (ii) One pair of soccer goal posts are to be installed as per City's specifications in the location of the removed goal posts. Installation shall be done after the turf renovation and maintenance is complete.

E21.3 Basis of Payment

- (a) Payment for Work specified under this section shall be paid for at the Unit Price, measured on a per unit basis, for the Items of Work listed below, which price shall include all costs of material supply, and proper material installation. Site restoration work shall be considered incidental to the Work.
- (b) Items of Work:
 - (i) 1.8 m Benches
 - (ii) Baseball Player's Benches
 - (iii) Soccer Goal Posts (pair)