



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 393-2011

**BCI II – OLD KILDONAN WARD: RENOVATION OF SPORT COURTS AT THREE
SITES**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 BCI II – OLD KILDONAN WARD: RENOVATION OF SPORT COURTS AT THREE SITES

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, July 8, 2011.

B2.2 Bids determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.

B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. SITE INVESTIGATION

B3.1 Further to C3.1, the Bidder may view the Sites 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 Division website 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 Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B5.2.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6. SUBSTITUTES

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B6.10 Notwithstanding B6.2 to B6.9, and in accordance with B7.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B14.1(a).

B7. BID COMPONENTS

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

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

- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B7.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B7.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg, MB R3B 1J1
- B7.5.1 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.
- B7.6 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with B14.1(a).
- B7.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.
- B7.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.
- B7.8.2 Bids submitted by internet electronic mail (e-mail) will not be accepted.

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 should be printed below such signatures.
- B8.4.2 All signatures shall be original.
- B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 Notwithstanding C12.2.3©, prices on Form B: Prices shall include the Manitoba Retail Sales Tax (MRST, also known as PST).
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B10. QUALIFICATION

- B10.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
 - (b) be financially capable of carrying out the terms of the Contract; and
 - (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B10.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>
- B10.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) have successfully carried out work similar in nature, scope and value to the Work; and

- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
- (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba).

B10.4 Further to B10.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractors has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:

- (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
- (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>).

B10.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B10.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B11. OPENING OF BIDS AND RELEASE OF INFORMATION

B11.1 Bids will not be opened publicly.

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

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 Division website at <http://www.winnipeg.ca/matmgt>

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

B12. IRREVOCABLE BID

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

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

B13. WITHDRAWAL OF BIDS

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

- B13.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B13.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B13.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
 - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.
- B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

B14. EVALUATION OF BIDS

- B14.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Bid Opportunity or acceptable deviation there from (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B6.
- B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.
- B14.4 Further to B14.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B14.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.
- B14.4.2 Further to B14.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B15. 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, in accordance with B14.
- B15.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.
- B15.4 Notwithstanding C4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.
- B15.5 The Contract, as defined in C1.1, in 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

C0. GENERAL CONDITIONS

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

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of the renovation of sport courts at Maples Community Centre (Adsum), Garden City Collegiate and Elwick Park/School Site.

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

- (a) Removal of existing sport courts including basketball, handball, and tetherball.
- (b) Removal of existing asphalt paving, base materials, turf and other miscellaneous ground surfaces.
- (c) Removal of chain link fences.
- (d) Site excavation, grading, and drainage Works, including installation of catch basins.
- (e) Construction of new sport courts including asphalt paving, Plexipave surfacing, and line painting.
- (f) Supply and installation of basketball goals and tennis posts and nets, including 6 m deep concrete piles.
- (g) Supply and installation of chain link fencing, 3.05 m height, c/w gates.
- (h) Sodding
- (i) Supply and Installation of site furniture.

D2.3 The major components of the Work at Garden City Site are as follows:

- (a) Removal of existing tennis posts.
- (b) Planing of asphalt.
- (c) Construction of new tennis courts including asphalt paving and line painting.
- (d) Supply and installation of tennis posts and nets, including 6 m deep concrete piles.

D2.4 The major components of the Work at Elwick Site are as follows:

- (a) Removal of existing asphalt paving, base materials, baseball infield mix, turf and other miscellaneous ground surfaces.
- (b) Supply and installation of new asphalt paving.
- (c) Supply and installation of granular surfacing.
- (d) Site excavation, grading, and drainage Works, including renovation of swales and catch basins.
- (e) Supply and installation of basketball goals and construction of a long jump pit.
- (f) Sodding.

D3. CONTRACT ADMINISTRATOR

D3.1 The Contract Administrator is David Wagner Associates Inc., represented by:

David Wagner
Landscape Architect
4-430 River Ave.

Winnipeg, Mb
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 C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.
- D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or E-Mail identified in D3.1.
- D5.3 Notwithstanding C21., all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:
The City of Winnipeg
Chief Financial Officer
Facsimile No.: (204) 949-1174
- D5.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:
The City of Winnipeg
Legal Services Department
Attn: Director of Legal Services
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1
Facsimile No.: (204) 947-9155

SUBMISSIONS

D6. AUTHORITY TO CARRY ON BUSINESS

- D6.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

D7. SAFE WORK PLAN

- D7.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D7.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

D8. INSURANCE

- D8.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg and David Wagner Associates Inc. added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (b) automobile liability insurance for owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;
- D8.2 Deductibles shall be borne by the Contractor.
- D8.3 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than seven (7) Calendar Days from notification of the award of Contract by Purchase Order.
- D8.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D9. PERFORMANCE SECURITY

- D9.1 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.
- D9.1.1 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.
- D9.2 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.

D10. SUBCONTRACTOR LIST

- D10.1 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

D11. COMMENCEMENT

- D11.1 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.
- D11.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D6;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the Safe Work Plan specified in D7;
 - (iv) evidence of the insurance specified in D8;
 - (v) the performance security specified in D9; and
 - (vi) the Subcontractor list specified in D10.
 - (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.

D12. CRITICAL STAGES

- D12.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:
- (a) Critical Stage One - The Work at Elwick Site shall be completed by September 1, 2011.

D13. SUBSTANTIAL PERFORMANCE

- D13.1 The Contractor shall achieve Substantial Performance by September 30, 2011.
- D13.2 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.
- D13.3 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.

D14. TOTAL PERFORMANCE

- D14.1 The Contractor shall achieve Total Performance by October 14, 2011.
- D14.2 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.

D14.3 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.

D15. LIQUIDATED DAMAGES

D15.1 If the Contractor fails to achieve Critical Stages or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Working Day for each and every Working Day following the days fixed herein for same during which such failure continues:

- (a) Critical Stage One – five hundred dollars (\$500);
- (b) Total Performance - five hundred dollars (\$500).

D15.2 The amounts specified for liquidated damages in D15.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve critical stages, Substantial Performance or Total Performance by the days fixed herein for same.

D15.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D16. SCHEDULED MAINTENANCE

D16.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Sodding as specified in E20.3;
- (b) Swale Renovation as specified in E19.4.

D16.2 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

D17. JOB MEETINGS

D17.1 Job meetings will be held at the Site as required. 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.

D17.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

D18. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D18.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

MEASUREMENT AND PAYMENT

D19. PAYMENT

D19.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D20. WARRANTY

D20.1 Warranty is as stated in C13.

FORM H1: PERFORMANCE BOND
(See D9)

KNOW ALL MEN BY THESE PRESENTS THAT

_____ (hereinafter called the "Principal"), and

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

_____ dollars (\$_____)

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

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

BID OPPORTUNITY NO. 393-2011

BCI II – OLD KILDONAN WARD: RENOVATION OF SPORT COURTS AT THREE SITES

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;
- © 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 as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT
(PERFORMANCE SECURITY)**
(See D9)

(Date)

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

RE: PERFORMANCE SECURITY – BID OPPORTUNITY NO. 393-2011

BCI II – OLD KILDONAN WARD: RENOVATION OF SPORT COURTS AT THREE SITES

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)

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
L1	Maples Site - Survey Plan
L2	Maples Site - Removals Plan
L3	Maples Site - Development Plan
L4	Maples Site - Layout Plan
L5	Maples Site – Grading Schematic Plan
L6	Garden City Site – Survey Plan
L7	Garden City Site – Development Plan
L8	Elwick Site – Survey Plan
L9	Elwick Site – Removals Plan
L10	Elwick Site – Development Plan
L11	Elwick Site – Grading Schematic Plan
L12	Sport Court Details
L13	Construction Details
L14	Drainage Details

GENERAL REQUIREMENTS

E2. LOCATION OF WORK

- E2.1 The three Sites are:
- (a) Maples Site: Maples Community Centre, 434 Adsum Drive
 - (i) The Site is located in the area bounded by the Community Centre building, the indoor swimming pool, the outdoor hockey rinks and Maples Collegiate Institute.
 - (b) Garden City Site: Garden City Collegiate, 711 Jefferson Avenue
 - (i) The Site is the tennis courts off Sinclair Street.
 - (c) Elwick Site: Elwick Park/School Site, 30 Maberley Road
 - (i) The Site is behind Elwick School.

E3. SITE ACCESS

- E3.1 Access to the Sites will be determined at the pre-construction meeting. The access areas 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.

E3.3 Where access must be gained through existing fencing, the fences 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 C: 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 Manitoba Workplace Safety and Health.

E4.5 All Work shall be performed in compliance with Manitoba Workplace Safety and Health 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 Safety and Health 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. PROTECTION OF SURVEY INFRASTRUCTURE

E5.1 Further to CW1130, the three Sites have been cleared for survey monuments. The Geomatics Cleared Job Numbers are:

- (i) Maples Site – 11811.
- (ii) Garden City Site – 11809.
- (iii) Elwick Site – 11810.

E6. DAMAGE TO EXISTING STRUCTURES AND PROPERTY

E6.1 Further to C: 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, other existing facilities and equipment at the Sites 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 Contract Administrator and the owners thereof. The cost of which shall be borne entirely by the Contractor. The Contractor shall also indemnify and save harmless the City and David Wagner Associates Inc. from all claims made directly or indirectly against it in respect to any such damage.

E7. EXISTING SERVICES AND UTILITIES

E7.1 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 TREES

- 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 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.

E9. TEMPORARY UTILITIES

- E9.1 Further to C: 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. SITE ENCLOSURES

- E10.1 Temporary Site enclosures, if determined necessary at the pre-construction meeting, shall be erected and maintained as required for the duration of the construction period.
- E10.2 Temporary Site fencing shall be required at Elwick Site between the asphalt area and the school playground.
- E10.3 Site enclosures shall be considered incidental to the Contract Work.

E11. LAYOUT

- E11.1 The Contractor is responsible for the layout of all Work.
- E11.2 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.

E12. SITE RESTORATION

- E12.1 Total Performance of the Work shall not be attained until the Contractor has cleaned up the Site and has removed all 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.

WORKS

E13. CLEARING AND GRUBBING

- E13.1 General Description
- (a) Further to CW 3010, this specification shall cover the removal of trees and stumps as scheduled for removal and shown on the Drawings.
 - (i) Removal of Trees and Stumps
- E13.2 Removals
- (a) As per CW 3010.
- E13.3 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 clearing, grubbing, removal and proper disposal, and any associated Site restoration.
 - (b) Items of Work:
 - (i) Removal of Trees and Stumps

E14. REMOVALS

- E14.1 General Description
- (a) This specification shall cover the removal of bollards, posts, walls, fences and foundations as scheduled for removal and shown on the Drawings. It shall also cover any demolition and removal necessary to construct the project, which may be considered incidental to other items of Work.
- E14.2 Removals
- (a) Handball courts shall be removed including concrete walls, fences, and any foundations in their entirety.
 - (b) Existing bollards, basketball goal posts, tennis court posts, tetherball posts and any other posts are to be removed, including any foundations in their entirety.
 - (c) Existing chain link fences and gates are to be removed as directed on Site by the Contract Administrator. Where existing fences are to join new fences, the mesh is to be rolled back and protected until it can be reinstalled and connected to new posts.
 - (d) All materials, to be demolished and removed, are to be removed from the Site and disposed of in a safe and legal manner.
- E14.3 Site Restoration
- (a) Any holes left by the removal of posts or foundations shall be filled with compacted clean clay fill to meet the adjacent grades and be restored to match surrounding conditions to the satisfaction of the Contract Administrator.
 - (b) Any site restoration required due to removals, and not shown on the Drawings as areas for new development, shall be considered incidental to the removal Work.

E14.4 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 removal and proper disposal, and any associated Site restoration.
- (b) Items of Work:
 - (i) Removal of Bollards, Handball Court Walls, Basketball and Tetherball Posts, and Chain Link Fences, including Foundations
 - (ii) Removal of Basketball Posts, including Foundations
 - (iii) Removal of Tennis Court Posts , including Foundations

E15. GRADING, SUB-GRADE, SUB-BASE AND BASE COURSE CONSTRUCTION

E15.1 General Description

- (a) Further to CW 3110 and CW 3170, this specification shall cover all aspects of:
 - (i) the excavation and removal of existing asphalt surfacing and base materials as scheduled for removal and shown on the Drawings;
 - (ii) the excavation and removal of materials in the new asphalt sport court areas;
 - (iii) the supply and installation of granular materials in the new asphalt sport court areas, including site grading, preparation of sub-grade and compaction;
 - (iv) the removal of turf, baseball infield mix and other surface materials as necessary to construct the projects; and
 - (v) the grading and preparation of areas for topsoil and sodding.

E15.2 Materials

- (a) Clean clay fill material shall be used in areas requiring non-aggregate backfill or to replace unacceptable material excavated from the Site.
- (b) Granular Sub-base:
 - (i) 50mm down crushed limestone
- (c) Granular base:
 - (i) 20mm down crushed limestone
- (d) Granular Surfacing
 - (i) 20mm down crushed limestone
 - (ii) 6mm down crushed limestone topping
- (e) Geotextile Fabric:
 - (i) As per CW 3130, "Separation/Reinforcement Geotextile Fabric".

E15.3 Methods

- (a) Removal of Asphalt and Base
 - (i) As per CW3110.
 - (ii) Asphalt shall be sawcut to separate asphalt to remain from asphalt to be removed.
 - (iii) Asphalt is to be removed from areas designated on the Drawings, preserving adjacent asphalt that is to remain.
 - (iv) Base is to be removed only from areas designated on the Drawings.
 - (v) Excavated materials shall be recycled or legally disposed of off-site.
- (b) Excavations
 - (i) As per CW3110.
 - (ii) All rubble, stones, silt, rubbish and any surplus material shall be legally disposed of off-site.
- (c) Sub-Grade Preparation

- (i) As per CW3110.
 - (ii) Clean fill shall be compacted to 98% SPD where necessary to obtain required sub-grade elevations.
 - (iii) Geotextile Fabric: CW 3130, for areas to receive new asphalt paving and base materials.
- (d) Base Courses for New Asphalt at Maples Site
- (i) As per CW3110.
 - (ii) Sub-Base – 300mm depth, compacted.
 - (iii) Base – 75mm depth, compacted.
- (e) Base Courses for New Asphalt at Elwick Site
- (i) As per CW3110.
 - (ii) Sub-Base – 150mm depth, compacted.
 - (iii) Base – 50mm depth, compacted.
- (f) Granular Surfacing at Elwick Site
- (i) The existing granular base, from where the asphalt has been removed, shall be graded to level out any high or low areas. All unsuitable base material such as rocks over 75mm, soil, grass, debris and other extraneous materials shall be removed.
 - (ii) The sub-base shall be inspected by the Contract Administrator prior to the placement of the granular surfacing.
 - (iii) Further to CW 3110, the granular surfacing shall be placed to minimum depth of 75mm and compacted to a minimum of 95% SPD. The topping shall be placed to 25.4mm depth.
 - (iv) Site restoration of the surrounding turf shall be considered incidental to this Work.
- (g) Removal of Baseball Infield Mix at Elwick Site
- (i) Existing baseball infield mix shall be removed in its entirety and legally disposed of off-site.
- (h) Site Grading at Elwick Site
- (i) As per CW 3170.
 - (ii) The area in the vicinity of the removed baseball diamond shall be excavated or filled to provide finish elevations as shown on the Drawings, taking into account of finish material depths. The area is to be graded to achieve subgrade for topsoil and sodding.

E15.4 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 removal and proper disposal, supply and proper installation of sub-base and base materials, site grading and any associated Site restoration.
- (b) Items of Work:
 - (i) Removal of Existing Asphalt Paving and Base
 - (ii) Removal of Existing Asphalt Paving (Base to Remain)
 - (iii) Sub-base and Base Preparation for New Asphalt Paving
 - (iv) Granular Surfacing
 - (v) Removal of Baseball Infield Mix
 - (vi) Site Grading

E16. PLANING OF ASPHALT

E16.1 General Description

- (a) Further to CW 3450, this specification shall cover the planing of existing asphalt at Garden City Site, as shown on the Drawings.

E16.2 Methods

- (a) As per CW 3450.

E16.3 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 planing, removal and proper disposal and any associated Site restoration.
- (b) Items of Work:
 - (i) Planing of Existing Asphalt

E17. ASPHALT PAVING

E17.1 General Description

- (a) Further to CW 3410, this specification shall cover the supply and installation of asphalt as shown on the Drawings.

E17.2 Materials

- (a) As per CW 3410.
- (b) 10mm aggregate is to be used in the asphalt mix.

E17.3 Methods

- (a) As per CW 3410 and as shown on the Drawings.

E17.4 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 supplying and installing asphalt paving and any associated Site restoration.
- (b) Items of Work:
 - (i) Asphalt Paving
 - (ii) Asphalt Paving Overlay

E18. SUB-SURFACE DRAINAGE SYSTEM

E18.1 General Description

- (a) Further to CW 2030 and CW 2130 this Work shall include the supply and installation of complete sub-surface drainage systems, including:
 - (i) Supply and installation of a geocomposite prefabricated Multi-Flow drainage system at Elwick Site as shown on the Drawings. The drainage system 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.
 - (ii) Supply and installation of a Big 'O' drain system at Maples Site.
 - (iii) Supply and installation of a catch pit, including all piping and connections to the existing catch basin, at Maples Site.
 - (iv) Connection of the Multi-Flow drainage system to existing catch basins at Elwick Site.
 - (v) Connection of the Big 'O' drainage system to existing catch basin at Maples Site.

E18.2 Materials

- (a) Catch Pit
 - (i) 450mm catch pit as per CW 2130, pre-cast concrete sections as indicated on SD-023 to CSA A257.4 and ASTM Standard C 76 Class II and C 478 (circular sections).
 - (ii) Standard frame (AP-004) with grated cover (AP-006).
- (b) Adjustment Rings for Catch Basin
 - (i) Pre-cast concrete adjustment rings as per CW 2130.
- (c) Drainage Pipe to Connect New Catch Pit to Existing Catch basin
 - (i) 250mm Drainage Pipe as per CW 2130.
- (d) 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/ft ²	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.

- (e) Multi-Flow 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.
 - (ii) Inspection ports or clean-outs shall be installed at all locations of connections.
- (f) Big 'O' Drain System
 - (i) Big 'O' – 100mm high density polyethylene perforated corrugated tubing c/w sock, or approved substitute in accordance with B6.
 - (ii) Fittings as specified by the manufacturer.
- (g) Drain Outlets
 - (i) Pipe for drain outlets 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.
- (h) Granular Backfill
 - (i) Backfill for the trenches shall be 6mm clean washed stone.
- (i) Sand
 - (i) For backfill of Multi-Flow trenches in locations of existing turf only.
 - (ii) 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.
- (j) Geotextile Fabric to CW 3130.

E18.3 Methods

- (a) The layout of the sub-drain system is to be marked on Site and reviewed by the Contract Administrator.
- (b) The existing catch basins shall be inspected prior to having any work done on them and any damage found shall be reported to the Contract Administrator.
- (c) The new catch pit shall be installed as per CW 2030, CW 2130, SD-023 and as shown on the Drawings.
- (d) Existing catch basins are to be refurbished as indicated on the Drawings. Adjustment rings shall be used to achieve the new top elevations as shown on the Drawings.
- (e) Trenches are to be excavated with a trenching machine or by hand. Trenches are to be inspected by the Contract Administrator prior to backfilling. 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 and depth shall be as specified on the Drawings.
- (f) 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 or granular prior to the placement of the drain. Where 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.
- (g) The grades of the bottom of the trenches are to be reviewed by the Contract Administrator prior to installation of pipe.
- (h) Multi-Flow drain pipe is to be placed in the trench using a Multi-Flow centering device. Big 'O' drain pipe is to be installed as shown on the Drawings.

- (i) Trench is to be backfilled according to detail Drawings. Backfill shall be placed in maximum of 30 cm loose lifts. Backfill is to be lightly tamped into place to eliminate any voids.
- (j) Fittings for the drains shall be installed in accordance with manufacturer's recommendations.
- (k) Any damaged drain system shall be replaced or repaired by splicing in an undamaged section of like material at the Contractor's expense.
- (l) The Multi-Flow and Big 'O' drain systems are to be connected to a solid pipe in accordance with manufacturers' recommendations and the pipe is then connected to the catch basins as per CW 2130.
- (m) Connections to existing catch basins shall be below the ground surface and grouted into place as per CW 2130-R11 and SD-025. Prior to completion of the project the Contractor shall clean out the catch basin of all debris.
- (n) Trenches are to be covered depending on their situation, as specified in E19 and shown on the Drawings.
- (o) The Contractor shall be responsible for restoration of any damages caused during the Work under this section.

E18.4 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 excavation and trenching, material supply, fittings, proper material installation, backfill, Site restoration and all other items incidental to the Work.
- (b) Items of Work:
 - (i) New Catch Pit including Pipe and Connection to Existing Catch Basin
 - (ii) Big 'O' Drain System (\pm 53m of pipe) and Connection to Existing Catch Basin
 - (iii) Multi-Flow Drain System
 - (iv) Connection of Multi-Flow Drain System to Existing Catch Basin
 - (v) Refurbish Existing Catch Basin

E19. DRAINAGE SWALES

E19.1 General Description

- (a) Further to E16, this specification shall cover the construction and renovation of drainage swales as shown on the Drawings.

E19.2 Materials

- (a) Granular Drainage Strip
 - (i) 38mm Crushed Black Granite
- (b) Sand
 - (i) 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.
- (c) Growing Medium
 - (i) As per CW 3540.
 - (ii) 80-10-10 (sand-peat-topsoil).
- (d) Sodding
 - (i) As per CW 3510.
 - (ii) Sod shall be mineral base.
- (e) Geotextile Fabric to CW 3130.

E19.3 Method

- (a) Granular Drainage Strip at Maples Site
 - (i) To be installed in conjunction with Big 'O' Drain System and as shown on the Drawings.
 - (ii) Granular material is to be contained within the strip and not spread over the adjacent asphalt.
- (b) Swale Renovation at Elwick Site
 - (i) Swale renovation is to be done in conjunction with Multi-Flow Drain System.
 - (ii) The Multi-Flow Drain System is to follow the bottom of the existing swales. The top of the installed drainage trench shall be kept clear of soil, debris and other extraneous materials.
 - (iii) The existing turf is to be cut neatly in straight lines along the top edge of the swale renovation area and the existing turf removed to the depth required to install new growing medium and sod.
 - (iv) After the drain system is installed and the turf removed, the swale is to be cleared of any extraneous materials and the materials legally disposed of off-site.
 - (v) The swale is to be covered with geotextile fabric and sand as shown on the Drawings. The sand is to be tamped and watered into place.
 - (vi) The growing medium shall be installed to a depth of 75mm and as per CW3540.
 - (vii) The swale is to be sodded as per CW 3510 and new sod is to be installed to match the existing grades of the surrounding turf. Seams between new and old turf are to be topdressed, seeded and rolled.

E19.4 Maintenance Period for Swale Renovation

- (a) The Contractor shall maintain the sod for 30 Calendar Days after the completion of the installation or until such a time as the turf is established in accordance with CW 3510.

E19.5 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, sub-grade preparation, proper material installation, maintenance and all other items incidental to the Work.
- (b) Items of Work
 - (i) Granular Drainage Strip
 - (ii) Swale Renovation

E20. TOPSOIL AND SODDING

E20.1 General Description

- (a) This specification shall cover the supply and installation of topsoil and sod.

E20.2 Materials and Methods

- (a) Topsoil: As per CW 3540.
- (b) Sodding
 - (i) As per CW 3510.
 - (ii) Sod shall be mineral base.
- (c) Areas to be sodded shall be excavated and/or filled with clean fill to meet the grades required for the installation of topsoil and sod and as specified in E15.
- (d) Where new sodding meets existing turf, the edges are to be cut neatly in straight lines and new sod is to be installed to match the existing grades of the surrounding turf. Seams between new and old turf are to be topdressed, seeded and rolled.

- (e) Only those areas shown on the Drawings as requiring sodding shall be paid for under this section. All other Site restoration shall be considered incidental to other Works.

E20.3 Maintenance Period

- (a) The Contractor shall maintain the sod for 30 Calendar Days after the completion of the installation or until such a time as the turf is established in accordance with CW 3510.

E20.4 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, sub-grade preparation, proper material installation, maintenance and all other items incidental to the Work.
- (b) Items of Work
 - (i) Topsoil and Sodding

E21. PLEXIPAVE SURFACING AND LINE PAINTING

E21.1 General Description

- (a) This specification shall cover all aspects of the supply and installation of:
 - (i) Plexipave surfacing and Plexi-Colour Line Painting of the Maples Site basketball court;
 - (ii) Line Painting for tennis courts.

E21.2 Materials

- (a) Patching Mix (Court Patch Binder)
 - (i) For use in cracks, holes, depressions and other imperfections in the asphalt surface.
 - (ii) This material shall be used in accordance with the manufacturer's specifications with regard to sand sizes, prime coats and depth of depression, hole or crack.
- (b) Crack Filler: for use in fine cracks and for minor cosmetic thin repairs and fills prior to filler course.
- (c) 100% Acrylic Filler Course (Acrylic Resurfacer)
 - (i) The filler course shall be California Acrylic Resurfacer, or approved substitute in accordance with B6, and consist of a 100% acrylic emulsion binder containing no vinyl constituent and no asbestos fillers. The product shall contain no less than 4% attapulgite and have a pigment volume concentration not to exceed 9.5%.
- (d) Acrylic Colour Playing Surface
 - (i) Job Mixed Fortified Plexipave, a field-mixed combination of California Products Corporation's Plexichrome and Plexipave Colour Base, or approved substitute in accordance with B6, blended in accordance with the manufacturer's specifications, consisting of lightfast mineral oxide pigments and fillers uniformly dispersed in a non-oxidizing 100% acrylic base.
 - (ii) Basketball court colour to be Cape Grey with Blue key and centre circle as shown on the Drawings.
 - (iii) Plexi-Colour Line Paint – colour white.
- (e) Line Paint for Tennis Courts
 - (i) Line paint shall be to CGSB 1-GP-74M, alkyd traffic paint. Colour to CGSB 1-GP-12C, White 513-301.
 - (ii) Thinner to CGSB 1-GD-5M.
- (f) Samples
 - (i) Material samples shall be submitted at least 4 weeks prior to commencing painting Work.
 - (ii) Sampling shall be to CGSB 1-GP-71.

- (iii) Samples are to be marked with the name of project and location, paint manufacturer's name and address, name of paint, CGSB specification number, formulation number, and batch number.

E21.3 Methods - Plexipave Surfacing and Plexi-Colour Line Painting

- (a) Plexipave Surfacing and Plexi-Colour Line Painting shall be subject to inspection by the Contract Administrator. The Contractor shall supply the Contract Administrator with the manufacturer's specifications prior to commencing the Work.
- (b) New asphalt shall be allowed to cure a minimum of 14 days. The asphalt surfaces shall be cleaned of all loose dirt, oil, grease, leaves and other debris in strict accordance with the manufacturer's specifications. All holes and cracks are to be cleaned.
- (c) Prior to the application of surfacing materials, the entire surface should be flooded and checked for minor depressions or irregularities. Depressions holding water enough to cover a five cent piece shall be filled with Court Patch Binder. This step shall be accomplished prior to the squeegee draining. All areas holding water are to be marked and the court patch binder mix shall be spread over the areas true to grade using a straight edge for strike off. No water is to be added to the mix. Light misting on surface and edges, to feather in, is allowed as needed to maintain workability. All areas should be allowed to dry thoroughly and cure.
- (d) Filler course shall be applied to the clean underlying surface in one application to obtain a total quantity of not less than 47.3 to 63.2 square meters per litre (15 to 20 square yards per gallon) based on the material prior to any dilution. Acrylic resurfacer may be used to pre-coat depression and crack / hole repairs to achieve better planarity prior to filler course application.
- (e) One coat of Acrylic Resurfacer shall be applied over the properly prepared surface. It shall be mixed and applied to manufacturer's specifications. Application shall be with a 70 Durometer rubber blade squeegee. All edges and rough spots are to be scraped off prior to subsequent applications of Plexipave.
- (f) Two to three coats of Fortified Plexipave shall be mixed and applied according to manufacturer's specifications.
- (g) After the surface has thoroughly dried, the designated game lines shall be marked in accordance with the Drawings. The markings shall be made using Plexi-Colour Line Paint according to manufacturer's specifications.

E21.4 Methods - Line Painting

- (a) The asphalt pavement surface shall be dry, free from ponded water frost, ice, dust, oil grease or any other foreign materials. The surface shall be cleaned using a power broom or air-blower.
- (b) After the surface has been thoroughly cleaned, the designated game lines shall be marked in accordance with the Drawings.
- (c) Application of line painting is only to be done under conditions conducive to a clean and accurate installation. Unless otherwise approved by the Contract Administrator, paint is to be applied only when air temperature is above 10 degrees C. and no rain or wind is forecast.
- (d) The paint shall be applied evenly at a rate of 3 sq.m/L by an approved pressure type module distributor.
- (e) Tolerances: All paint markings shall be painted within 10mm, plus or minus. Lines are to be of uniform colour and density with sharp edges.
- (f) The line painting shall be protected until dry.

E21.5 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, proper material installation and all other items incidental to the Work.

- (b) Items of Work
 - (i) Basketball Court Plexipave Surfacing and Plexi-Colour Line Painting
 - (ii) Tennis Court Line Painting

E22. CHAIN LINK FENCING

E22.1 General Description

- (a) Further to CW 3550, this specification shall cover the supply and installation of chain link fencing as shown on the Drawings.

E22.2 Materials

- (a) Chain link fencing, 3.05 metres high, complete with gates as specified in CW 3550 and on Drawings.

E22.3 Methods

- (a) As per CW 3550 and the Drawings.
- (b) Terminal or end posts shall be installed as required where existing fences tie into new fences.

E22.4 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, proper material installation and all other items incidental to the Work.
- (b) Items of Work
 - (i) Chain Link Fencing c/w 3 Gates

E23. TENNIS POST CONCRETE PILES

E23.1 General Description

- (a) Further to CW 3310, this specification shall cover all aspects of the supply and installation of concrete piles for the tennis posts.

E23.2 Shop Drawings

- (a) Submit shop drawings for tennis post piles indicating reinforcing and connections for tennis posts.
- (b) Connections for posts are to be coordinated with post manufacturer's specifications for installation.

E23.3 Materials

- (a) Type (A) 32 MPa Concrete, minimum cementitious content 340 Kg/m³.
- (b) 6.0 metre deep, 400mm diameter reinforced concrete piles as shown on the Drawings.

E23.4 Methods

- (a) As per CW 3310 and the Drawings.

E23.5 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, proper material installation and all other items incidental to the Work.
- (b) Items of Work
 - (i) Tennis Post Concrete Piles

E24. TENNIS COURT POSTS AND NETS

E24.1 General Description

- (a) This specification shall cover all aspects of the supply and installation of tennis court posts and nets.

E24.2 Shop Drawings

- (a) Further to E23.2, submit shop drawings for tennis post installation in conjunction with shop drawings for tennis post piles.

E24.3 Materials

- (a) Douglas Tennis Post Premium XS tennis posts, 73mm (2 7/8") O.D. round 8-gauge steel, complete with welded lacing rods for securing nets to the posts. Caps and gear housings die-cast zinc: baked on polyester powder coat. Stainless steel gears #63034SS. Chrome finish hardware. Post colour to be black. Posts to include stainless steel anchor plates and anchor bolts, and heavy duty tennis net cable.
- (b) Douglas Championship Tennis Nets TN-36, tapered, Item # 20036T. Nets are to be 44.5mm (1 3/4") square mesh, fabricated with 3.5mm braided polyethylene netting. Vinyl-coated polyester 2-ply headband lock sewn with 4 runs of 32# white polyester thread. Weight 65 oz. Championship nets with 5-year limited warranty.

E24.4 Methods

- (a) Posts and nets are to be installed according to manufacturer's recommendations and as shown on the Drawings.

E24.5 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, proper material installation and all other items incidental to the Work.
- (b) Items of Work
 - (i) Tennis Court Posts and Nets

E25. BASKETBALL GOALS

E25.1 General Description

- (a) This specification shall cover all aspects of the supply and installation of pairs of basketball goals including post, backboard, goal and chain net.

E25.2 Materials

- (i) Sportsplay single heavy duty basketball standards, product # 541-616 , 114mm O.D. galvanized steel post, 1200mm extension, aluminum backboard, super goal (double rimmed) and chain net.

E25.3 Methods

- (i) Basketball standards are to be installed according to Drawings and manufacturer's specifications.

E25.4 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, proper material installation and all other items incidental to the Work.
- (b) Items of Work
 - (i) Basketball Goals

E26. SITE FURNITURE

E26.1 General Description

- (a) This specification shall cover all aspects of the supply and installation of site furniture.
- (b) Benches
 - (i) Benches: Tache Backless Bench Composite, Drawing No. SCD-142, Product # 52510169, 1.8 M length (6'), manufactured by the City of Winnipeg.
 - (ii) The contact is:
Aaron Lennon
Supervisor of Central Repair/Manufacturing Facility
City of Winnipeg
Fax No.: (204) 783-1248
Email: alennon@winnipeg.ca
 - (iii) For pricing enquiries and ordering of site furniture, please contact Aaron Lennon by email. If you do not have access to email, you may fax the information.
- (c) Bike Rack
 - (i) Madrax 9 Loop Heavy Duty Winder, product # HW238-11-SF-G, surface flange mount, hot-dipped galvanize finish.

E26.2 Methods

- (a) Benches are to be purchased from the City and installed according to Drawings and City specifications.
- (b) The bike rack is to be installed according to manufacturer's specifications.
- (c) Site furnishings are to be kept clean of any granular, concrete, asphalt or other materials. Any damaged surfaces shall be touched-up to the satisfaction of the Contract Administrator.

E26.3 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, proper material installation and all other items incidental to the Work.
- (b) Items of Work
 - (i) Benches
 - (ii) Bike Rack

E27. FOUNDATIONS

E27.1 All basketball standards and site furnishings are to be set in concrete footings or piles to ensure stability and prevent frost heaving. The current Standard Construction Specifications of the City of Winnipeg, CW 2160 – Concrete Underground Structures and Works, is to be utilized in the installation of the concrete works for all below ground components.

E27.2 The specific concrete requirements shall be;

- (a) Sulfate resistant, Type 50 Cement;
- (b) 28 day compressive strength of 30 Mpa;
- (c) maximum aggregate size of 20 mm, nominal;
- (d) slump 80 ±20 mm;
- (e) maximum water/cement ratio 0.49.

E27.3 Installation

- (a) Contractor shall notify the Contract Administrator at least 48 hours prior to installation of concrete, so that footings may be inspected in advance of concrete being poured.

- (b) Work under this section is considered incidental to the installation of basketball goals and site furniture.

E28. LONG JUMP PIT

E28.1 General Description

- (a) Further to CW 3110, this specification shall cover the supply and installation of the long jump pit as shown on the Drawings.

E28.2 Materials

- (a) Long Jump Running Surface
 - (i) Sub-base: 150 mm depth of 50 mm down crushed limestone compacted in two layers over compacted sub-grade.
 - (ii) Base: 50 mm depth of 20 mm down crushed limestone, compacted.
 - (iii) Top: 25.4 mm of 6 mm down crushed limestone, compacted.
- (b) Long Jump Sand Pit
 - (i) 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.

E28.3 Methods

- (i) The long jump pit location shall be reviewed on site with the Contract Administrator prior to installation.
- (ii) The existing turf shall be neatly cut out in the shape shown on the Drawings. The areas shall be excavated to the depths required to install the new materials and the surplus materials shall be legally disposed of off-site.
- (iii) The running surface and the pit shall be constructed as shown on the Drawings.
- (iv) Sand pit to be 450mm deep.
- (v) Site restoration of the surrounding turf shall be considered incidental to this Work.

E28.4 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 supplying and installing the long jump pit and any associated Site restoration.
- (b) Items of Work:
 - (i) Long Jump Pit