



THE CITY OF WINNIPEG

TENDER

TENDER NO. 334-2026

**CINDY KLASSEN RECREATION COMPLEX SPORT COURTS AND VALOUR C.C.
BASKETBALL COURT REPAIR**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 Cindy Klassen Recreation Complex Sport Courts and Valour C.C. Basketball Court Repair

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, June 16, 2026.

B2.2 The Contract Administrator or the Manager of Purchasing may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. SITE INVESTIGATION

B3.1 Further to C3.1, the Bidder may view the Site without making an appointment.

B3.2 The Bidder is responsible for inspecting the Site, the nature of the Work to be done and all conditions that might affect their Bid or their performance of the Work and shall assume all risk for conditions existing or arising in the course of the Work which have been or could have been determined through such inspection.

B4. ENQUIRIES

B4.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.

B4.2 If the Bidder finds errors, discrepancies or omissions in the Tender, 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 Tender 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 Tender 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.

B4.6 Any enquiries concerning submitting through MERX should be addressed to:
MERX Customer Support
Phone: 1-800-964-6379
Email: merx@merx.com

B5. CONFIDENTIALITY

B5.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of confidential information shall not apply to information which:

- (a) was known to the Bidder before receipt hereof; or
- (b) becomes publicly known other than through the Bidder; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

- B5.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Tender to the media or any member of the public without the prior written authorization of the Contract Administrator.

B6. ADDENDA

- B6.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Tender, or clarifying the meaning or intent of any provision therein.
- B6.2 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.
- B6.3 Addenda will be available on the MERX website at www.merx.com.
- B6.4 The Bidder is responsible for ensuring that they have received all addenda and is advised to check the MERX website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B6.5 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid/Proposal. Failure to acknowledge receipt of an addendum may render a Bid non-responsive
- B6.6 Notwithstanding B4, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D4.

B7. SUBSTITUTES

- B7.1 The Work is based on the Plant, Materials and methods specified in the Tender.
- B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B7.3 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.
- B7.4 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.

- B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in their 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.
- B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B7.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons they wish to inform.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base their 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 B17.
- B7.9 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.

B8. BID COMPONENTS

- B8.1 The Bid shall consist of the following components:
- (a) Form A: Bid/Proposal;
 - (b) Form B: Prices.
- B8.2 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.
- B8.3 The Bid shall be submitted electronically through MERX at www.merx.com.
- B8.3.1 Bids will **only** be accepted electronically through MERX.
- B8.4 Bidders are advised that inclusion of terms and conditions inconsistent with the Tender document, including the General Conditions, will be evaluated in accordance with B17.1(a).

B9. BID

- B9.1 The Bidder shall complete Form A: Bid/Proposal, making all required entries.
- B9.2 Paragraph 2 of Form A: Bid/Proposal shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in their own name, their 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 their own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.
- B9.3 In Paragraph 3 of Form A: Bid/Proposal, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

- B9.4 Paragraph 13 of Form A: Bid/Proposal shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in their 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 their duly authorized officer or officers;
 - (d) if the Bidder is carrying on business under a name other than their 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.
- B9.4.1 The name and official capacity of all individuals signing Form A: Bid/Proposal should be entered below such signatures.
- B9.4.2 All signatures shall be original.
- B9.5 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.

B10. PRICES

- B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B10.1.1 Prices stated on Form B: Prices shall not include any costs which may be incurred by the Contractor with respect to any applicable funding agreement obligations as outlined in C24. Any such costs shall be determined in accordance with C24.
- B10.2 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.
- B10.3 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.
- B10.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).
- B10.5 The Bidder shall enter the Total Bid Price from Form B: Prices into the Total Bid Price field in MERX.
- B10.5.1 Bidders are advised that the calculation indicated in B17.4 will prevail over the Total Bid Price entered in MERX.

B11. DISCLOSURE

- B11.1 Various Persons provided information or services with respect to [this Work](#). In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.
- B11.2 The Persons are:
- (a) Shape Industries for information regarding fabrication of entry feature.
 - (i) Shape Industries Inc., 255 Hutchings Street, Winnipeg.
 - (b) Primary Engineering for electrical information.
 - (i) Primary Engineering, 1460 Chevrier Blvd, Winnipeg.
 - (c) RDS Lighting for lighting information.

- (i) RDS Lighting 104-120 Fort Street, Winnipeg.
- (d) Prairie Pole for protective light cages
 - (i) Prairie Pole Inc., E-92 PTH 52 W, Steinbach.

B12. CONFLICT OF INTEREST AND GOOD FAITH

B12.1 Further to C3.3, Bidders, by responding to this Tender, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.

B12.2 Conflict of Interest means any situation or circumstance where a Bidder or employee of the Bidder proposed for the Work has:

- (a) other commitments;
- (b) relationships;
- (c) financial interests; or
- (d) involvement in ongoing litigation;

that could or would be seen to:

- (i) exercise an improper influence over the objective, unbiased and impartial exercise of the independent judgment of the City with respect to the evaluation of Bids or award of the Contract; or
- (ii) compromise, impair or be incompatible with the effective performance of a Bidder's obligations under the Contract.
- (e) has contractual or other obligations to the City that could or would be seen to have been compromised or impaired as a result of their participation in the Tender process or the Work; or
- (f) has knowledge of confidential information (other than confidential information ~~disclosed~~ by the City in the normal course of the Tender process) of strategic and/or material relevance to the Tender process or to the Work that is not available to other bidders and that could or would be seen to give that Bidder an unfair competitive advantage.

B12.3 In connection with their Bid, each entity identified in B12.2 shall:

- (a) avoid any perceived, potential or actual Conflict of Interest in relation to the procurement process and the Work;
- (b) upon discovering any perceived, potential or actual Conflict of Interest at any time during the Tender process, promptly disclose a detailed description of the Conflict of Interest to the City in a written statement to the Contract Administrator; and
- (c) provide the City with the proposed means to avoid or mitigate, to the greatest extent practicable, any perceived, potential or actual Conflict of Interest and shall submit any additional information to the City that the City considers necessary to properly assess the perceived, potential or actual Conflict of Interest.

B12.4 Without limiting B12.3, the City may, in their sole discretion, waive any and all perceived, potential or actual Conflicts of Interest. The City's waiver may be based upon such terms and conditions as the City, in their sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately avoided or mitigated, including requiring the Bidder to put into place such policies, procedures, measures and other safeguards as may be required by and be acceptable to the City, in their sole discretion, to avoid or mitigate the impact of such Conflict of Interest.

B12.5 Without limiting B12.3, and in addition to all contractual or other rights or rights at law or in equity or legislation that may be available to the City, the City may, in their sole discretion:

- (a) disqualify a Bidder that fails to disclose a perceived, potential or actual Conflict of Interest of the Bidder or any of their employees proposed for the Work;

- (b) require the removal or replacement of any employees proposed for the Work that has a perceived, actual or potential Conflict of Interest that the City, in their sole discretion, determines cannot be avoided or mitigated;
- (c) disqualify a Bidder or employees proposed for the Work that fails to comply with any requirements prescribed by the City pursuant to B12.4 to avoid or mitigate a Conflict of Interest; and
- (d) disqualify a Bidder if the Bidder, or one of their employees proposed for the Work, has a perceived, potential or actual Conflict of Interest that, in the City's sole discretion, cannot be avoided or mitigated, or otherwise resolved.

B12.6 The final determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in their sole discretion.

B13. QUALIFICATION

B13.1 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.

B13.2 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, Purchasing Division website at <https://www.winnipeg.ca/matmgt/Templates/files/debar.pdf>

B13.3 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);
- (d) have completed the Accessible Customer Service online training required by the Accessibility for Manitobans Act (AMA) (see B13.5 and C6.19).

B13.4 Further to B13.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:

- (a) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) or
 - (i) a copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Certificate of Recognition (COR) Program administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
 - (ii) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) administered by the Construction Safety

Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ 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 at <http://www.winnipeg.ca/matmgt/Safety/default.stm>.

B13.5 Further to B13.3(d), the Bidder acknowledges that they and all Subcontractors have obtained training required by the Accessibility for Manitobans Act (AMA) available at <https://accessibilitymb.ca/resources-events-and-training/online-training.html> for anyone that may have any interaction with the public on behalf of the City of Winnipeg.

B13.6 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.

B13.7 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.

B14. OPENING OF BIDS AND RELEASE OF INFORMATION

B14.1 Bids will not be opened publicly.

B14.2 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 MERX website at www.merx.com.

B14.3 After award of Contract, the name(s) of the successful Bidder(s) and their Contract amount(s) will be available on the MERX website at www.merx.com.

B14.4 The Bidder is advised that any information contained in any Bid may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).

B14.4.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Bid Submission identified by the Bidder as such in accordance with and by reference to Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.

B15. IRREVOCABLE BID

B15.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid/Proposal.

B15.2 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 11 of Form A: Bid/Proposal.

B16. WITHDRAWAL OF BIDS

B16.1 A Bidder may withdraw their Bid without penalty prior to the Submission Deadline.

B17. EVALUATION OF BIDS

B17.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Tender or acceptable deviation therefrom (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B13 (pass/fail);

- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B7.

- B17.2 Further to B17.1(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.
- B17.3 Further to B17.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in their Bid or in other information required to be submitted, that they are qualified.
- B17.4 Further to B17.1(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 adjusted, if necessary, as follows:
- (a) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder is within the budgetary provision for the Work, no adjustment will be made to the Total Bid Price; or
 - (b) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder exceeds the budgetary provision for the Work, the Total Bid Prices of all responsive Bids submitted by responsible and qualified Bidders will be adjusted by progressively deducting item(s) 52, 47-51 inclusive, 12 and 23 in the order listed, until a Total Bid Price within the budgetary provision is achieved.
- B17.4.1 Further to B17.1(a), in the event that a unit price is not provided on Form B: Prices, the City may determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.
- B17.4.2 Where MRST is shown on Form B as a separate line item, if that Line item is not completed, the MRST shall be considered to be included in the Total Bid Price.
- B17.4.3 Bidders are advised that the calculation indicated in B17.4 will prevail over the Total Bid Price entered in MERX.

B18. AWARD OF CONTRACT

- B18.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B18.2 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 qualified, and the Bids are determined to be responsive.
- B18.2.1 Without limiting the generality of B18.2, 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 their 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.
- B18.3 If funding for the Work is provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada, Bidders are advised that the terms of C24 shall immediately take effect upon confirmation of such funding, regardless of when funding is confirmed.
- B18.4 Where an award of Contract is made by the City, the award shall be made to the qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B17.

- B18.5 Further to Paragraph 7 of Form A: Bid/Proposal and C4, the City may issue a purchase order to the successful Bidder in lieu of the execution of a Contract.
- B18.5.1 The Contract Documents, as defined in C1.1(p), in their entirety shall be deemed to be incorporated in and to form a part of the purchase order notwithstanding that they are not necessarily attached to or accompany said purchase order.
- B18.6 Following the award of contract, a Bidder will be provided with information related to the evaluation of their Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction* (Revision 2025-11-01) 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, Purchasing Division website at http://www.winnipeg.ca/matmgt/gen_cond.stm
- C0.2 A reference in the Tender 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 Supply and installation of earthwork and grading, asphalt sport courts, pathways and seating areas plus landscaping, site furniture and custom entry feature.
- D2.2 The major components of the Work are as follows:
- (a) Removals
 - (b) Excavation and grading
 - (c) Asphalt pickleball courts with acrylic surfacing
 - (d) Half basketball court with acrylic surfacing
 - (e) Asphalt pathway and seating areas
 - (f) Catch basins w/ connection to combined sewer
 - (g) Subsurface drainage
 - (h) Trenching and rough in of electrical for site lighting
 - (i) Fencing
 - (j) Site Furniture
 - (k) Planting beds
 - (l) Custom entry feature and associated lighting
 - (m) Sport court asphalt repair and resurfacing at Valour Community Centre.
- D2.3 The funds available for this contract are \$670,000.00.

D3. DEFINITIONS

- D3.1 When used in this Tender:
- (a) “**CW**” means City of Winnipeg Standard Construction Specification;
 - (b) “**SCD**” means City of Winnipeg Parks Planning Standard Construction Detail Drawings;
 - (c) “**SD**” means City of Winnipeg Standard Construction Detail;

D4. CONTRACT ADMINISTRATOR

- D4.1 The Contract Administrator is:
- Ian Macdonald
Landscape Architect
Telephone No. 204 451-3069
Email Address imacdonald@winnipeg.ca
- D4.2 At the pre-construction meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D5. CONTRACTOR'S SUPERVISOR

- D5.1 At the pre-construction meeting, the Contractor shall identify their designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

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.
- 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, Purchasing Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>
- D7.3 Notwithstanding B13.4 at any time during the term of the Contract, the City may, at their sole discretion and acting reasonably, require an updated COR Certificate or Annual Letter of good Standing. A Contractor, who fails to provide a satisfactory COR Certificate or Annual Letter of good Standing, will not be permitted to continue to perform any Work.

D8. INSURANCE

- D8.1 The Contractor shall provide and maintain the insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, contractual liability, unlicensed motor vehicle liability (contractor's equipment), non-owned automobile liability and products and completed operations endorsement, to remain in place at all times during the performance of the Work and throughout the Warranty period;
 - (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence;
 - (c) all risks installation floater, carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.
- D8.2 Deductibles shall be borne by the Contractor.
- D8.3 All policies shall be taken out with insurers licensed to carry on business in the Province of Manitoba.
- D8.4 The Contractor shall provide:
- (a) The certificate of insurance, in a form satisfactory to the Supervisor of Insurance, to:

The City of Winnipeg
Risk Management
Insurance Section
185 King Street, 3rd Floor
Winnipeg, MB R3B 1J1

- (b) The Contract Administrator with a copy of the certificate of insurance.

At least two (2) Business Days of notification of the award of the Contract and prior to the commencement of any Work on the Site.

- D8.5 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 Supervisor of Insurance.

D9. CONTRACT SECURITY

- D9.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), the Contractor shall provide and maintain contract 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 amount of fifty percent (50%) of the Contract Price; and
- (b) labour and material payment bond of a company registered to conduct the business of a surety in Manitoba, in an amount equal to fifty percent (50%) of the Contract Price.
- (c) 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 amount of fifty percent (50%) of the Contract Price; or
- (d) 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 Bonds are available at:

- (a) Performance Bond <https://www.winnipeg.ca/media/4928/>
 - (i) Performance Bond – Schedule A - Form of Notice
<https://www.winnipeg.ca/media/4831/>
 - (ii) Performance Bond – Schedule B – Surety's Acknowledgement
<https://www.winnipeg.ca/media/4832/>
 - (iii) Performance Bond – Schedule C – Surety's Position
<https://www.winnipeg.ca/media/4833/>
- (b) Labour & Material Payment Bond <https://www.winnipeg.ca/media/4930/>
 - (i) L&M Bond – Schedule A – Notice of Claim
<https://www.winnipeg.ca/media/4834/>
 - (ii) L&M Bond – Schedule B – Acknowledgement of a Notice
<https://www.winnipeg.ca/media/4835/>
 - (iii) L&M Bond – Schedule C – Surety's Position
<https://www.winnipeg.ca/media/4836/>
- (c) Irrevocable Standby Letter of Credit <https://www.winnipeg.ca/media/4931/>

- D9.1.2 Where the contract security is a performance bond, it may be submitted in hard copy or digital format. If submitted in digital format the contract security must meet the following criteria:

- (a) the version submitted by the Contractor must have valid digital signatures and seals;
- (b) the version submitted by the Contractor must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company.

- (c) the version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf.
- (d) the verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees.
- (e) the results of the verification must provide a clear, immediate and printable indication of pass or fail regarding D9.1.2(b).

D9.1.3 Digital bonds failing the verification process will not be considered to be valid and may be determined to be an event of default in accordance with C18.1. If a digital bond fails the verification process, the Contractor may provide a replacement bond (in hard copy or digital format) within seven (7) Calendar Days of the City's request or within such greater period of time as the City in their discretion, exercised reasonably, allows.

D9.1.4 Digital bonds passing the verification process will be treated as original and authentic.

D9.1.5 Where the contract 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 contract security.

D9.2 The Contractor shall provide:

- (a) the required Contract Security to:

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

- (b) The Contract Administrator with copies of the required Contract Security at minimum seven (7) Calendar Days prior to the commencement of any Work on the Site.

D9.3 Where the Contract Security is provided in accordance with D9.1(a) and D9.1(b), the Contractor shall, as soon as practicable after entering into a contract with a Subcontractor:

- (a) give the Subcontractor written notice of the existence of the labour and material payment bond in D9.1(b); and
- (b) post a notice of the bond and/or a copy of that bond in a conspicuous location at the Site of the Work.

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.

D11. SHOP DRAWINGS AND RECORD DRAWINGS

D11.1 Shop Drawings will be reviewed by the Contract Administrator and the City for general conformance to the City's requirements and the design intent only.

D11.2 Shop Drawings are to be reviewed by the Contractor's responsible design personnel for the design prior to submission to the Contract Administrator.

D11.3 Shop drawings shall be sealed by a professional engineer registered to practice in the Province of Manitoba.

D11.4 The level of detail and scope of information provided on the shop drawings shall be sufficient to satisfy construction needs and permitting requirements.

- D11.5 Shop Drawings submitted shall be as per CW 1110.
- D11.6 Detailed drawings. All detailed drawings shall be drawn to a suitable scale and include the following information:
- (a) Complete construction details, including dimensions, elevations and appropriate cross sections.
- D11.7 The Contractor shall provide within thirty (30) Calendar Days of award, at minimum the following Shop Drawings:
- (a) Entry feature drawings including foundation.
 - (b) Electrical drawings including:
 - (i) Trenching detail;
 - (ii) Flood lights for entry feature, and;
 - (iii) Stub-ups for rough-in for pole lights and connection into the building.
 - (c) Foundation drawings for Cool Toppers Single Post Pyramid Shade Structures.
- D11.8 The Contractor shall maintain, during construction, a complete set of Drawings including the original Bid Opportunity Drawings, any Drawings released by addenda or change order, and the Contractors Shop Drawings.
- (a) These drawings shall have any deviations between the actual built Work and the Drawings noted on them in red as well as the reason for the deviation including incorporating all as built geodetic surveyed grades
 - (b) These drawings shall be made available to the Contract Administrator for review in pdf and CAD compatible format upon request during the Construction phase of the project.
 - (c) These drawings shall be provided to the Contract Administrator at the date of Substantial Performance as As-Built drawings.
- D11.9 There shall be no separate measurement or payment for Shop Drawings or Record Drawings.

D12. DETAILED WORK SCHEDULE

- D12.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) Business Days prior to the commencement of any Work on the Site.
- D12.2 The detailed work schedule shall consist of the following:
- (a) a Gantt chart for the Work based on the C.P.M. schedule; acceptable to the Contract Administrator.
- D12.3 Further to D12.2(a), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.

D13. REQUIREMENTS FOR SITE ACCESSIBILITY PLAN

- D13.1 The Contractor shall provide the Contract Administrator with an Accessibility Plan at least five (5) Business Days prior to the commencement of any Work on the Site.
- D13.2 The Accessibility Plan shall demonstrate how the Contractor will accommodate the safe passage of pedestrians and cyclists in accordance with the Manual of Temporary Traffic Control, the Contract Drawings, Staging Plans, and Streets By-Law No. 1481/77 at all times for the duration of the Construction. Unless noted in the Contract, the Accessibility Plan must include a written plan for the following:
- (a) How the Contractor will maintain at least one crossing in each direction for each intersection (one north/south crosswalk and one east/west crosswalk).

- (b) How the Contractor will maintain access to bus stops within the site.
 - (c) How the Contractor will maintain access to pedestrian corridors and half signals.
 - (d) How the Contractor will maintain access to residents and businesses unless otherwise noted in the Contract.
 - (e) Any required detour signage at adjacent crossings to facilitate sidewalk or active transportation pathway closures.
- D13.3 The Accessibility Plan may also include figures, sketches, or drawings to demonstrate the proposed plan.
- D13.4 The Accessibility Plan shall include written details on how the Contractor intends to review, maintain, and document all items related to the Accessibility Plan on-site during Construction, including, but not limited to:
 - (a) Signage
 - (b) Temporary Ramping
 - (c) Transit Stops
 - (d) Detour Signage
- D13.5 At minimum, the Contractor shall review the site conditions on a daily basis to ensure that all features related to the Accessibility Plan are in place. The site review is intended to correct deficiencies as a result of unforeseen events such as wind, traffic, or the general public. Deficiencies that are direct result of the Contractors actions must be corrected immediately.
- D13.6 Any changes to the Accessibility Plan must be approved by the Contract Administrator.
- D13.7 Upon request from the Contract Administrator, the Contractor shall provide records demonstrating that the site has been maintained.
- D13.8 Deficiencies as a direct result of actions by the Contractor that are not immediately corrected and/or failure to produce records that demonstrate that the site was maintained in compliance with the Accessibility Plan may result in a pay adjustment via the monthly Progress Payment. The rate of pay adjustment will be as per the following schedule:
 - (a) First Offence – A warning will be issued and documented in the weekly or bi-weekly site meeting.
 - (b) Second Offence – A field instruction to immediately correct the site will be issued by the Contract Administrator.
- D13.9 Third and subsequent Offences – A pay reduction will be issued in the amount of \$250.00 per instance and per day.

SCHEDULE OF WORK

D14. COMMENCEMENT

- D14.1 The Contractor shall not commence any Work until they are in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.
- D14.2 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 C6.17;
 - (iii) the Safe Work Plan specified in D7;
 - (iv) evidence of the insurance specified in D8;
 - (v) evidence of the contract security specified in D9;

- (vi) the Subcontractor list specified in D10;
 - (vii) the detailed work schedule specified in D12;
 - (viii) the Requirements for Site Accessibility Plan as specified in D13 and
 - (ix) the direct deposit application form specified in C12.20.
- (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.

D14.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.

D15. SUBSTANTIAL PERFORMANCE

D15.1 The Contractor shall achieve Substantial Performance within thirty-five (35) consecutive Working Days of the commencement of the Work as specified in D14.

D15.2 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.

D15.3 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.

D16. TOTAL PERFORMANCE

D16.1 The Contractor shall achieve Total Performance within forty (40) consecutive Working Days of the commencement of the Work as specified in D14.

D16.2 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.

D16.3 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.

D17. LIQUIDATED DAMAGES

D17.1 If the Contractor fails to achieve Substantial Performance in accordance with the Contract by the day fixed herein for Substantial Performance, the Contractor shall pay the City Five Hundred dollars (\$500) per Working Day for each and every Working Day following the day fixed herein for Substantial Performance during which such failure continues.

D17.2 The amount specified for liquidated damages in D17.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.

D17.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D18. SCHEDULED MAINTENANCE

D18.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

(a) Sod as specified in E28.

D18.2 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

D19. JOB MEETINGS

D19.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.

D19.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever they deem it necessary.

D20. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

D20.1 Further to C6.27, 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).

D21. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

D21.1 Further to B13.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at their sole discretion and acting reasonably, require updated proof of compliance, as set out in B13.4.

WARRANTY

D22. WARRANTY

D22.1 Warranty is as stated in C13.

INDEMNITY

D23. INDEMNITY

D23.1 Indemnity shall be as stated in C17.

(See D10)

COURT REPAIR

[illegible]

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 their 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, Purchasing 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 Tender shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B7. In every instance where a brand name or design specification is used, the City will also consider approved equals and/or approved alternatives in accordance with B7.

- E1.4 The following are applicable to the Work:

<u>Specification No.</u>	<u>Specification Title</u>
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CW-1110	General Instructions
CW-1130	Site Requirements
CW-2030	Excavation Bedding and Backfill
CW-2130	Gravity Sewers
CW-2160	Concrete Underground Structures and Works
CW-3010	Clearing and Grubbing
CW-3110	Sub-Grade, Sub-Base and Base Course Construction
CW-3120	Installation of Sub Drains
CW 3130	Supply and Installation of Geotextile Fabrics
CW-3135	Supply and Installation of Geogrid
CW-3170	Earthwork and Grading
CW-3310	Portland Cement Concrete Pavement Works
CW-3410	Asphaltic Concrete Pavement Works
CW-3510	Sodding
CW-3540	Topsoil and Finish Grading for Establishment of Turf Areas
CW-3550	Chain Link and Drift Control Fence

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
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C.80-B.1	Existing Conditions and Removals Plan
C.80-B.2	Materials Plan
C.80-B.3	Planting Plan and Details
C.80-B.4	Floodlight Details
C.80-B.5	Entry Feature Details
C.80-B.6	Section/ Elevation A1
C.80-B.7	Layout Plan A
C.80-B.8	Layout Plan B
C.22-K1	Valour CC Clifton Site – Proposed Repairs
C01	Site Servicing and Grading Plan
SCD 119	Waste Receptacle Side Opening Metal Slat Type
SCD 121D	Tache Backless Bench Composite with Arms – Surface Mount
SCD 121E	Tache Bench Composite with Arms – Surface Mount
SCD-123	Rendezvous Metal Frame Picnic Table
SCD-123A	Rendezvous Accessible Metal Frame Picnic Table

SCD-153	English Park Sign with Address
SCD-300	Basketball Standard Concrete Pile Detail
SCD-301	Tennis/Pickleball Net Post Concrete Pile Detail
SCD-304	Tennis and Basketball Fencing and Gate Detail
SCD-305	Sport Courts Typical Pavement Section
SCD-320	High School Basketball
SCD-340	Sports Standard Court Asphalt Tennis Area with Pickleball Lines
SCD-341	Tennis Court with Multiple Pickleball Courts
SCD-342	Single Pickleball Court Specifications
SCD-501	Preparation of Planting Area
SCD-515	Coniferous Tree Planting Parks
SCD-648	Park Pathway Asphalt
SCD-661	Perforated Pipe w/ Filter Cloth Drainage System
SCD-662	100mm (4") Thick Concrete Path??
SCD-668	Drain Basin
SD-243	Sodding Details

E2. HAZARDOUS MATERIALS

- E2.1 If asbestos or other hazardous materials are encountered during the Work of the Contract, the Contractor shall stop all work and notify the Contract Administrator immediately. Removal of hazardous materials shall be dealt with by the City and the Contractor shall await further instruction by the Contract Administrator.

E3. TRAFFIC CONTROL

- E3.1 In accordance with the Manual of Temporary Traffic Control on City Streets (MTTC), the Contract Administrator shall make arrangements with the Traffic Services Branch of the City of Winnipeg to place, maintain, and remove all regulatory signs and traffic control devices authorized and/or required by the Traffic Management Branch in the following situations:
- (a) Parking restrictions,
 - (b) Stopping restrictions,
 - (c) Full or directional closures on a Regional Street,
 - (d) Approved Designated Construction Zones with a temporary posted speed limit reduction. Traffic Services will be responsible for placing all of the advance signs and 'Construction Ends' (TC-4) signs. The Contractor is still responsible for all other temporary traffic control including but not limited to barricades, barrels and tall cones.
- E3.2 Further to E5.1, the Contractor shall make arrangement with the Traffic Services Branch of the City of Winnipeg to supply regulatory signs as required.
- E3.3 Upon request from the Contract Administrator, the Contractor shall provide records demonstrating that the Site has been maintained.
- E3.4 Further to E5.1 the Contractor shall make arrangements with the Traffic Services Branch of the City of Winnipeg to reinstall the permanent regulatory signs after the Contract Work is complete. At this time the Contractor shall make arrangements to drop off the stockpiled materials to Traffic Services at 495 Archibald Street.
- E3.5 Any changes to the approved traffic management plan must be submitted to the Contract Administrator a minimum of (five) 5 Working Days prior to the required change for approval.
- E3.6 If the Contract Administrator determines that the Contractor is not performing Traffic Control in accordance with this specification, Traffic Services Branch may be engaged to perform the Traffic Control. In this event the Contractor shall bear the costs associated charged to the project by the Traffic Services Branch of the City of Winnipeg in connection with the required Works undertaken by the Contractor.

E4. ACCESS TO SITE

- E4.1 Access to the Site as required by the Contractor shall be provided and maintained by the Contractor at their own expense and approved by the Contract Administrator.
- E4.2 The Contractor's operations shall be limited to the minimum area necessary for undertaking the Work and they shall be responsible for all damage resulting from their Work on private property.

E5. PERMITS, NOTICES, LICENSES, CERTIFICATES, LAWS AND RULES

- E5.1 **Further to C6.13, 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.
- (a) A copy of all required Permits shall be given to the Contract Administrator before Work on site occurs.
- E5.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work.
- E5.3 All notices, consents, approvals, statements, authorizations, documents or other communications to the City shall be submitted to the Contract Administrator.
- E5.4 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Act.
- E5.5 All Work shall be performed in compliance with the Manitoba Workplace Health and Safety Fall Protection guidelines.
- E5.6 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 their encountering of suspected hazardous material during their course of Work.

E6. DAMAGE TO EXISTING STRUCTURES, TREES AND PROPERTY

- E6.1 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 in the performance of the Work (either directly or indirectly), the Contractor shall either replace and repair such damage, whichever may be deemed necessary in the opinion of, and acceptable to City of Winnipeg Contract Administrator, and the cost of which shall be borne entirely by the Contractor. The Contractor shall also indemnify and save harmless the City from all claims made directly or indirectly against it in respect to any such damage.
- E6.2 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing park trees within the limits of the construction area:
- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment within 2 metres of trees.
- (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25x100x2400 wood planks, or suitable protection as approved by the Contract Administrator.
- (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.

- (d) Operation of equipment within the drip line of the trees shall be kept to a minimum required to perform the Work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the drip lines of trees. The drip line of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.

E6.3 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or their designate.

E6.4 No separate measurement or payment will be made for the protection of trees.

E7. PEDESTRIAN SAFETY AND TRAFFIC MANAGEMENT

E7.1 Further to CW 1130, the Contractor shall take such measures as are necessary to ensure safe and convenient pedestrian ingress and egress is maintained to private properties while they are working near them. Any damage caused by the negligence of the Contractor or their Sub-Contractors to the adjacent Works or properties, shall be promptly repaired by him at their own expense, to the satisfaction of the Contract Administrator.

E7.2 Ambulance/ Emergency vehicle access must be maintained at all times.

E8. PROTECTION OF THE SURVEY INFRASTRUCTURE

E8.1 Notwithstanding clause 4 "Persons and municipalities to protect Outline Monuments"; under [The Surveys Act](#), of Manitoba, the Contractor shall be responsible to protect the Survey Infrastructure from damage as a result of the Work.

E8.2 Further to C6.26 (g), at least 72 hours prior to the commencement of the On-Site Work the Contractor shall contact the City of Winnipeg, Geomatics Services Branch at 204-918-1360 (8:00 am to 4:00 pm Monday to Friday, excluding holidays) to obtain underground clearance. Geomatics Services will locate and mark all known outline survey monuments and geodetic control monuments and confirm the physical condition of those monuments upon completion of construction, at no cost to the Contractor.

E8.3 Where a survey post, bar or control monument lies in the line of the proposed Work and must be disturbed, the Contractor shall provide the Contract Administrator with 48 hours' notice to permit referencing for future replacement, at no cost to the Contractor. Failure to provide the specified notice shall result in the Contractor paying for all costs associated with replacing or relocating the disturbed outline survey monuments and geodetic control monuments. Survey monuments and geodetic control monuments at or adjacent to the Site, not in the line of the proposed construction that are damaged or disturbed by the Contractor shall be replaced or relocated by the City or their agent and all associated costs shall be paid for by the Contractor.

E8.4 An approximate estimate of the cost to restore a legal survey monument is \$1,000 per bar and \$3,000 per control monument. Contractors shall ensure their landscaping and other subcontractors are aware of this clearance procedure and the potential restoration costs. Where possible, amounts owed to the City in accordance with the above will be deducted from payments to be made by the City to the Contractor.

E9. SITE ENCLOSURES

E9.1 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.

E9.2 Site enclosures shall be considered incidental to the Contract Work.

SITE DEVELOPMENT

E10. REMOVALS

E10.1 This Specification shall cover the removal of existing chain link fencing, selected light standards and footings, site furniture, log retaining wall, concrete sidewalk, concrete junction box and lumber lawn bowling edge as identified by the Contract Administrator and as per the drawings.

E10.2 The Work to be done by the Contractor under this specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to satisfactory performance and completion of all Work as shown on the drawings as herein specified.

E10.3 Construction methods

E10.3.1 The removal of any items shall not occur until after permission to proceed has been received by the Contract Administrator.

E10.3.2 Contractor shall establish tree protection fences prior to beginning demolition.

E10.3.3 Contractor is to ensure existing electrical service is disconnected from the light standards prior to demolition.

E10.3.4 Concrete, fencing, site furniture, wood, metal and excavated earthen material is to be removed from the Site and disposed of in a legally acceptable manner.

E10.3.5 Footings that cannot be completely removed shall be broken off min. 600mm below finished grade.

E10.3.6 Voids from concrete footings shall be filled and sufficiently compacted with clean fill.

E10.4 Method of Measurement

E10.4.1 Method of Measurement shall be as follows:

- (a) Removals shall be measured on a lump sum basis for:
 - (i) "Remove & legally dispose of existing log retaining wall", and;
 - (ii) "Remove existing concrete junction box" on Form B: Prices.
- (b) Removals shall be measured on a square metre basis for:
 - (i) "Remove existing concrete sidewalk" on Form B: Prices.
- (c) Removals shall be measured on a linear metre basis for:
 - (i) "Remove existing chain link fence", and;
 - (ii) "Remove existing lumber lawn bowling edge" on Form B: Prices.
- (d) Removals shall be measured on a per unit basis for:
 - (i) "Remove existing lights and footings", and;
 - (ii) "Remove existing benches" on Form B: Prices.

E10.5 Basis of Payment

E10.5.1 Basis of Payment shall be as follows:

- (a) Removals will be paid for at the Contract Unit Prices on Form B: Prices. The amount to be paid for shall be the total number of units, measured as specified herein, which price shall be for full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.
- (b) No separate payment shall be made for filling footing holes with fill material as this work is incidental herein.

E11. CLEARING AND GRUBBING

E11.1 General Description

E11.1.1 This Specification shall amend and supplement CW 3010. It shall cover the removal of existing shrubs and small trees as indicated on the Drawings.

E11.1.2 All extraneous materials are to be removed from the Site and disposed of in a safe and legal manner.

E11.1.3 The Work to be completed by the Contractor under this Specification shall include the supply of all materials, and the furnishings of all superintendence, overhead, labour, equipment, tools, and all other things necessary for and incidental to the satisfactory completion of all the Work shown on the Drawings and specified herein.

E11.2 Construction Methods

E11.3 Clearing and grubbing as per CW-3010.

E11.4 Method of Measurement and Basis of Payment

E11.4.1 Method of Measurement shall be as follows:

- (a) Clearing and Grubbing shall be measured on a square metre basis for:
 - (i) "Clearing and grubbing" on Form B: Prices.

E11.4.2 Basis of Payment shall be as follows:

- (a) Clearing and grubbing will be paid for at the Contract Unit Prices on the Bid Form B: Prices. The amount to be paid for shall be the total number of units, measured as specified herein, which price shall be for full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E12. EXCAVATION AND GRADING

E12.1 General Description

E12.1.1 This Specification shall amend and supplement CW 3110 and CW 3170. It shall cover the excavation and legal disposal of existing asphalt, base material, earthen materials and site grading.

E12.1.2 If required by the Contract Administrator, layout and grades shall be established by a professional land surveyor.

E12.1.3 Excavation includes the removal of items (i.e., earthen materials) as indicated on the Drawings and as directed by the Contract Administrator. Work includes the satisfactory disposal of unsuitable Site material such as clays susceptible to frost-heaving, silts, rock, rubble, rubbish and any surplus suitable Site material.

E12.1.4 Work shall include but not be limited to the following:

- (a) Excavation & disposal of existing earthen material;
- (b) Excavation & disposal of existing earthen material; and
- (c) Grading as shown on Drawings.

E12.1.5 Excavate, add clean fill if necessary, and grade to the limits shown on Drawings to the depths necessary to achieve finish grades indicated in the Drawings.

E12.1.6 All extraneous materials are to be removed from the Site and disposed of in a safe and legal manner.

E12.1.7 The Work to be completed by the Contractor under this Specification shall include the supply of all materials, and the furnishings of all superintendence, overhead, labour, equipment, tools, and all other things necessary for and incidental to the satisfactory completion of all the Work shown on the Drawings and specified herein.

E12.2 Construction Methods

E12.2.1 Excavation

- (a) If required to achieve finished grades, stockpile suitable, approved material on Site for reuse (clean topsoil, clean earth fill,) in a secure location to the satisfaction of the Contract Administrator. Remove and dispose of unsuitable material.
- (b) Disposal of material shall be understood to mean the hauling of all unsuitable material from the Site and the unloading in a legal manner acceptable to the Contract Administrator. If arrangements are made in advance, excavated material may be disposed of on Site at a location designated by the Contract Administrator.
- (c) The Contractor must coordinate with the Contract Administrator to ensure all removals have occurred.
- (d) Excavate to the limits shown and as necessary to achieve finish grades as indicated on the Drawings. Where design grades are not shown, the new surface materials shall be installed to meet flush with surrounding grades and sloped so as not to impede the existing drainage pattern.
- (e) The Contractor shall construct all sub-grades in accordance with CW 3110. This shall include the use of suitable compaction equipment as approved by the Contract Administrator to achieve a minimum compaction of 98% Standard Proctor Density below all paved areas (asphalt, concrete, stone chip and limestone paving), and 90% Standard Proctor Density in all other areas disturbed under this Contract unless otherwise indicated. Lifts shall not exceed a compacted thickness of 150 mm.
- (f) Where new sod will meet existing, employ a vertical shearing operation, such as using a sharp spade or edger, along the outside edges of the excavation to create a clean and definite line for the new sod to abut flush to.

E12.2.2 Grading

- (a) Site grading shall be as per the Drawings.
- (b) The design grade shall be the straight grade between finished design elevations shown. Changes in grade at swales or where it meets existing sod shall be gently contoured to allow for ease of grass mowing operations.
- (c) Contractor to ensure site grading does not create tripping hazards and no areas of standing water remain.
- (d) If necessary, the Contractor shall import clean fill to achieve grades as per the Drawings.
- (e) Backfill shall be placed in a dry, thawed condition and shall be maintained free of moisture or frost.
- (f) In fill areas where the difference between the existing ground elevation and the new finished design elevation is less than 300 mm, the Contractor shall scarify the existing ground to a minimum depth of 50 mm prior to placement of any fill.
- (g) In areas where new grades are greater than 75 mm than existing grades, clean fill shall be used to achieve finished subgrade levels. Suitable clean fill can be used from On-Site grading operations. If additional clean fill is required, it must be hauled in from Off-Site. All costs in connection with importing clean clay fill are incidental and shall be included in the unit price bid for construction of the basketball court or site drainage areas.

E12.2.3 Finish Grading

- (a) Following earthmoving, rough grading and compaction, the Work areas shall be finish graded to provide a maximum deviation of 50 mm in 10 meters from the design grade with no low areas that hold water. The finished surface of all disturbed areas shall be dragged and smoothed in such a manner that there are no loose soil particles greater than 50 mm.
- (b) When grading for a field or swale, the grading work must be undertaken using earthmoving equipment that is guided by laser or GPS controlled data. Visual grade

stakes shall also be installed to supplement the electronic data, unless otherwise agreed to by Contract Administrator.

- (c) All surplus fill material shall be removed and legally disposed off-site.
- (d) Do not disturb adjacent items designated to remain in place.

E12.3 Method of Measurement and Basis of Payment

E12.3.1 Method of Measurement shall be as follows:

- (a) Excavation and Grading shall be measured on a cubic metre basis for:
 - (i) "Excavate & legally dispose of earthen material" on Form B: Prices.
- (b) Excavation and Grading shall be measured on a square metre basis for:
 - (i) "Rough grading" on the Bid Form: B Prices.
- (c) If required by the Contract Administrator, no separate measurement will be made for retaining services relating to survey of layout and establishing grades as these items are incidental to the Work herein.
- (d) No separate measurement will be made for excavation or grading for the following items as these items are incidental to the Work therein:
 - (i) Excavation for planting beds;
 - (ii) Excavation for soil and sod outside of areas of rough grading;
 - (iii) Excavation for asphalt paths where measurement and payment are made on a square metre basis;
 - (iv) Import of clean fill to achieve rough grading grades and earthwork and site grading grades.

E12.3.2 Basis of Payment shall be as follows:

- (a) Excavation and Grading will be paid for at the Contract Unit Prices on the Bid Form B: Prices. The amount to be paid for shall be the total number of units, measured as specified herein, which price shall be for full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.
- (b) If required by the Contract Administrator, no additional payment will be made for retaining services relating to survey of layout and establishing grades as these items are incidental to the Work herein.
- (c) No additional payment will be made for excavation or grading for the following items as these items are incidental to the Work therein:
 - (i) Excavation for planting beds;
 - (ii) Excavation for soil and sod outside of areas of rough grading;
 - (iii) Excavation for asphalt where measurement and payment are made on a square metre basis;
 - (iv) Import of clean fill to achieve rough grading grades and earthwork and site grading grades.

E12.3.3 Method of Measurement **at Valour C.C.** shall be as follows:

- (a) Excavation and Grading shall be measured on a cubic metre basis for:
 - (i) "Excavate & legally dispose of existing asphalt and base in designated repair area" on Form B: Prices.
- (b) No additional payment will be made for double sawcut of existing asphalt as this item is incidental to the Work herein.

E12.3.4 Basis of Payment **at Valour C.C** shall be as follows:

- (a) Excavation of existing asphalt and base will be paid for at the Contract Unit Prices on the Bid Form B: Prices. The amount to be paid for shall be the total number of units, measured as specified herein, which price shall be for full payment for supplying all

labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

- (b) No additional payment will be made for double sawcut of existing asphalt as this item is incidental to the Work herein.

E13. ELECTRICAL ROUGH-IN AND SITE LIGHTING

E13.1 Description

E13.1.1 This Specification shall cover the furnishing of labour, new material, equipment and services necessary for the supply and installation of trenching and associated conduit and wiring and light fixtures as shown on Drawings.

E13.1.2 The major components of the Work under Site Lighting include, but are not limited to, the following:

- (a) Supply and install of electrical cable
- (b) Supply and installation of lighting fixtures, mounting, attachments and lamps
- (c) Rough-in and stub-ups for future connection to existing pole lights and into the building.

E13.2 General

E13.2.1 Electrical Contractor is to provide CSA approved wiring and conduit in accordance with the Canadian Electrical Code.

E13.2.2 Trenching and conduit installation shall be done in accordance with the current edition of the Canadian Electrical Code, Provincial, and Municipal and other codes and regulations. Municipal and Provincial codes and regulations will take precedence over all other codes.

E13.2.3 Grounding shall be done in accordance with the latest edition of the Canadian Electrical Code.

E13.2.4 The Contractor shall prepare and submit to the proper authorities having jurisdiction all necessary permits and pay all permit fees.

E13.2.5 Upon completion of trenching, cabling and site lighting work, and before final payment is made, the Contractor shall submit a Certificate of Approval to the Contract Administrator from the Authorities Having Jurisdiction verifying that all electrical work has been inspected and approved.

E13.2.6 The Contractor shall install designatory lettering on all electrical equipment.

E13.2.7 Fixtures are to be installed as per Manufacturer's written specifications.

E13.3 Shop Drawings

- (a) **Stamped, dated, and initialed Shop Drawings by an Electrical Engineer licenced to work in the Province of Manitoba detailing trenching, wiring, stub-ups and light fixtures are to be submitted in accordance with this Specification and as directed by the Contract Administrator.**

(i) Shop Drawings shall be in accordance with the current version of CW 1110.

E13.4 Materials

E13.4.1 Electrical cable and conduit

- (a) Conduit shall be in 38 mm low density polyethylene conduit for outdoor use.
- (b) The contractor shall use NMWU, Teck 90 or other equivalent cable approved by the Contract Administrator and which is suitable for direct burial outdoors.
- (c) Wire size shall be chosen based off a maximum permitted voltage drop of 3% on each circuit. Contractor shall submit voltage drop calculation and wire type and sizing to Contract Administrator prior to construction. Minimum wire size shall be #12 CU AWG.

- (d) Wire and cable shall be copper of standard AWG sizes with 600V (90° C) insulation. Insulation shall be X-Link Polyethylene unless otherwise noted on Drawings or prohibited by regulations. Aluminum conductors will not be accepted. Underground splicing of wire will not be permitted

E13.4.2 Light fixtures and cages

(a) Flood Light

- (i) Manufacturer: Lithonia Lighting D-Series Size 1 LED Flood Luminaire
- (ii) Product Code: DSXF1 LED P1 40K WFL MVOLT YKC62 DDBXD
- (iii) Supplier:
 - ◆ RD Sales
 - ◆ Contact: Christine Simmons
 - ◆ Phone: 204-480-6886
 - ◆ Email: csimmons@rdsales.com
 - ◆ Website: <https://www.rdsales.ca/>
- (iv) Specifications:
https://img.acuitybrands.com/public-assets/catalog/216443/dsxf1_.pdf?abl_version=04%2f09%2f2026+12%3a49%3a54&DOC_Type=SPEC_SHEET
- (v) Or approved substitution in accordance with B7

E13.4.3 Flood Light Cage

(a) Cage

- (i) Manufacturer: Prairie Pole Inc.
 - ◆ Contact: Brad Lagimodiere
 - ◆ Phone: 204-326-9988
 - ◆ Email: info@prairiepole.com
 - ◆ Website: <http://prairiepole.com/>
 - ◆ Specifications: as per Prairie Pole Inc. Drawing WG1 – St. Vital Wire Guard
- (ii) Or approved substitution in accordance with B7.

E13.5 Construction Methods

E13.5.1 Trenching and conduit

- (a) Depth of trenching and trench construction to be as per the current version of the Manitoba Electrical Code. Maintain accurate locations of trenching for inclusion on as-built drawings.
- (b) Contractor to coordinate trenching with Contract Administrator. Contractor to provide soil compaction to 95% Standard Proctor Density. Re-sod as required to return area to original condition.
- (c) The Contractor shall inform the Contract Administrator to verify locations and witness processes. The Contractor to also inform the Contract Administrator at least five days in advance of the trenching to allow the Contract Administrator to witness the process.
- (d) At fixture locations and at entry point into building, Contractor to provide additional temporary 600mm stub-ups for future connection into building and to existing pole lights.
 - (i) Shop drawing submittal is to include stub-up detail.

E13.5.2 Wire and cable

- (a) The contractor shall use NMWU, Teck 90 or other equivalent cable approved by the Contract Administrator and which is suitable for direct burial outdoors as per the current version of the Manitoba Electrical Code.

- (b) Wire size shall be chosen based off a maximum permitted voltage drop of 3% on each circuit. Contractor shall submit voltage drop calculation and wire type and sizing to Contract Administrator prior to construction. Minimum wire size shall be #12 CU AWG.
- (c) Wire and cable shall be copper of standard AWG sizes with 600V (90 Degree C) insulation. Insulation shall be X-Link Polyethylene unless otherwise noted on Shop Drawings or prohibited by regulations. Aluminium conductors will not be accepted. Minimum wire size shall be #12 CU and underground splicing of wire will not be permitted.
- (d) Conduit shall be Polyethylene and minimum 38 mm in diameter.

E13.5.3 Light fixtures and cages

- (a) Install as per Manufacturer's written instructions and the Drawings.
- (b) Fixture to be angled and aimed at Park Sign for maximum sign illumination.

E13.5.4 CIP concrete bases

- (a) As per E20.

E13.6 Method of Measurement and Basis of Payment

E13.6.1 Method of Measurement Shall be as follows:

- (a) The supply and installation of electrical rough-in will be measured on a linear metre basis for:
 - (i) "Lighting - Trenching and cabling" on Form B: Prices.
- (b) The supply and installation of flood lights will be measured on a per unit basis for:
 - (i) "Lighting - Supply and install floodlights c/w protective cages" on Form B: Prices.
- (c) No separate measurement will be made for additional cable and conduit for stub-ups, as this item is incidental to the work herein.
- (d) No separate measurement will be made for concrete bases, as this item is incidental to the work herein.
- (e) No separate measurement will be made for stamped Shop Drawings, as this item is incidental to the work herein.

E13.6.2 Basis of Payment Shall be as follows:

- (a) The supply and installation of trenching and cabling will be paid for at the Contract Unit Prices as indicated on Form B: Prices. The amount to be paid for shall be the total number of units on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.
- (b) No separate payment will be made for additional cable and conduit for stub-ups, as this item is incidental to the work herein.
- (c) No separate payment will be made for concrete bases, as this item is incidental to the work herein.
- (d) No separate payment will be made for stamped Shop Drawings, as this item is incidental to the work herein.

E14. LAND DRAINAGE SEWER PIPE

E14.1 Description

- E14.1.1 This Specification shall amend and supplement CW 2030 – "Excavation Bedding and Backfill" and CW 2130 "Gravity Sewers" and shall cover the supply and installation of land drainage sewer pipe, couplings, elbows, bends, tees and saddles associated with connections to proposed drain basins and the land drainage sewer.

E14.1.2 The Work to be completed by the Contractor under this Specification shall include the supply of all materials, and the furnishings of all superintendence, overhead, labour, equipment, tools, materials testing and all other things necessary for and incidental to the satisfactory completion of all the Work shown on the Drawings and specified herein.

E14.2 Materials

- (a) PVC SDR35 or 250mm (10") Dia. ADS Dual-wall HDPE Rigid Pipe c/w all gaskets and fittings specified by the Manufacturer and CW2130 according to the lengths shown on the Drawings.
- (b) Or approved substitute as per B7.
 - (i) **Pipe for connection from the Drain Basin to the Sewer System must be PVC SDR35**

E14.3 Construction Methods

- (a) Trenching and land drainage pipes are to be installed as per CW 2030 – "Excavation Bedding and Backfill", CW 2130 "Gravity Sewers" and as shown on the Drawings.
- (b) The layout of the land drainage pipes shall be marked out on Site and reviewed by the Contract Administrator.
- (c) **Land drainage pipe under existing or proposed paved areas must use trenchless methods as per CW 2130.**
- (d) Trenches shall be excavated as shown on the Drawings and in accordance with CW 2030 and CW 2130. 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 drainage pipe that can be installed and backfilled prior to the end of each Working Day.
- (e) The bottoms of trenches are to be free of loose materials and shall have a constant slope as indicated on the Drawings. Over excavation of the trench shall be backfilled to the correct grade with compacted excavated material prior to placement of the land drainage pipe.
- (f) Trench bedding and backfill in accordance with CW 2030 and CW 2130 and SD-001, SD-002 and SD-003.
- (g) The grades of the bottom of the trench are to be reviewed by the Contract Administrator prior to the installation of land drainage pipe.
- (h) Any damaged portion of the land drainage pipes shall be replaced or repaired by splicing in an undamaged section of like material at the Contractor's expense.
- (i) Land Drainage Pipes shall be connected to each drain basin then finally, to the existing sewer system as per Manufacturer's specifications, CW2130 and the Drawings.
- (j) Land Drainage Pipe Restrictors shall be supplied and installed in accordance with Drawing C-01 and SD-025B. Diameter sizes as per C-01.
- (k) **After the land drainage pipe has been installed and connections made to drain basins and manholes, the Contractor shall clean out the sewer pipes and supply the Contract Administrator with a video inspection of the interior of the entire length of all land drainage pipes.**

E14.4 Method of Measurement and Basis of Payment

E14.4.1 Method of Measurement shall be as follows:

- (a) Land drainage pipes will be measured on a linear metre basis for:
 - (i) "Supply and install land drainage pipe", and;
 - (ii) "Supply and install land drainage pipe using trenchless methods" on Form B: Prices.
- (b) Land drainage pipes will be measured on a lump sum basis for:
 - (i) "Connection to existing 750mm combined sewer" on Form B: Prices.

- (c) No separate measurement shall be made for restrictors as this work is incidental to the Work herein
- (d) No separate measurement shall be made for drain basin connections as this work is incidental to the Work herein.
- (e) No separate measurement shall be made for all procuring necessary permits, repair/restoration of road and boulevard for connection to combined sewer as this work is incidental to the Work herein.
- (f) No separate measurement shall be made for sewer cleaning and video inspection as this work is incidental to the Work herein.

E14.4.2 Basis of Payment shall be as follows:

- (a) Supply and install Land Drainage Pipe will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.
- (b) Price will also include all restoration work required, sewer cleaning and video inspection.

E15. DRAIN BASINS

E15.1 Description

- (a) This Specification shall cover the supply and installation of two (2) drain basins, frames, **lockable** covers and any associated fittings or accessories and appurtenances as well as any necessary repairs to sidewalks, turf or otherwise.

E15.2 Materials

- (a) Two (2) 600 mm diameter Nyloplast 2824AG Drain Basin, 900mm base c/w lockable Standard Ductile Iron Grate and Frame, 600 mm sump depth and all required fittings specified by the Manufacturer and as shown on the Drawings.

E15.3 Construction Methods

- (a) Drain basins are to be installed in the locations and to the design elevations shown on the Drawings.
- (b) The location of the drain basins shall be marked out on Site and reviewed by the Contract Administrator prior to installation.
- (c) Excavations at any time shall not exceed the amount of drain basins that can be installed and backfilled prior to the end of each Working Day.
- (d) Drain basin bedding and backfill in accordance with the Drawings, SCD-668, CW 2030 and SD-001 and SD-002.
- (e) The grades of the bottom of the drain basin are to be reviewed by the Contract Administrator prior to the installation of drain basin.
- (f) Non-woven filter fabric, as shown on the Drawings shall be supplied and installed in accordance with CW 3130.
- (g) Land Drainage Pipes shall be connected to each drain basin then finally, to the land drainage sewer as per CW 2130 and the Drawings.

E15.4 Method of Measurement and Basis of Payment

E15.4.1 Method of Measurement shall be as follows:

- (a) (a) Drain basins will be measured on a lump sum basis for:
 - (i) "Supply & install 600mm drain basin c/w frame, lockable cover, 900mm base and 600mm sump," on Form B: Prices.

- (b) No separate measurement shall be made for connections to drainage pipe as this work is incidental to the Work herein.

E15.4.2 Basis of Payment shall be as follows:

- (a) Supply and install drain basins will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator

E16. SPORT COURT COMPACTED GRANULAR BASE

E16.1 Description

E16.1.1 This Specification shall amend and supplement CW 3110 and shall cover the supply and installation of compacted granular sub-base and base for the Sport Court.

E16.1.2 The Work to be completed by the Contractor under this Specification shall include the supply of all materials, and the furnishings of all superintendence, overhead, labour, equipment, tools, materials testing and all other things necessary for and incidental to the satisfactory completion of all the Work shown on the Drawings and specified herein.

E16.2 General Instructions

E16.2.1 Quality Control

- (a) Testing and Approval of Materials
 - (i) Further to Section 10, Quality Control, of CW 3110 and CW 3410, the Contractor shall obtain a qualified independent testing lab to conduct tests on materials to determine the acceptability of the sub-grade, sub-base, base course and asphaltic concrete as placed by the Contractor in accordance with the requirements of this Specification.
 - (ii) The Contractor shall not proceed with each granular fill placement until test results have been reviewed and approval to proceed is granted by the Contract Administrator.
 - (iii) The Contract Administrator will conduct a survey of the operation to verify installation of specified layer thickness.
 - (iv) Non-conformity with the specified test requirements or compacted layer thickness will constitute sufficient grounds for rejection of the Work.

E16.2.2 Submittals

- (a) Samples
 - (i) Material samples may be required, at the discretion of the Contract Administrator, for materials supplied under this Specification.

E16.3 Excavation

E16.3.1 Description

- (a) This Specification shall be done in accordance with E12, CW 3170, CW 3110, and as indicated on the Drawings.
- (b) Excavation shall be understood to include all removal of existing insitu material necessary to achieve finished grade and as indicated and instructed on the Drawings and in accordance with E12.
- (c) The Contractor shall survey and stake out the proposed court area prior to the start of construction as shown on the construction drawings. Layout shall be checked and confirmed with Contract Administrator prior to construction.

E16.3.2 Construction Methods

- (a) Excavation shall be performed as per E12 and as outlined in Section 3.2 of CW 3310.

- (b) In locations where, existing tree root systems intersect with the pavement area, excavation shall be done carefully so as not to damage or sever any roots of the trees.
- (c) If any pavement exists at the limits of the designated area of removal, these shall be saw cut for the full depth of the pavement prior to the demolition and removal operations. All costs in connection with saw cutting are incidental and shall be included in the unit price bid for excavation.

E16.4 Sub-Grade Compaction

E16.4.1 Construction Methods

- (a) Sub-grade compaction shall be performed as outlined in Section 3.3 of CW 3110.
- (b) Sub-grade shall be free of any fibrous organics, softened and disturbed soil.
- (c) Compact areas of suitable sub-grade material for the full width of the excavation, to a minimum compaction of 98% Standard Proctor Density below all asphalt paved areas, and 90% Standard Proctor Density in all other areas disturbed under this Contract. If the sub-grade material cannot be compacted to the required density, the Contractor shall proceed as directed by the Contract Administrator.
- (d) The prepared sub-grade shall be proof rolled with a heavy sheep's foot roller (minimum 25 passes) and inspected by the Contract Administrator to detect for any soft spots prior to the placement of overlying granular fills.

E16.5 Geogrid/Geotextile Composite

E16.5.1 Description

- (a) Geogrid/Geotextile Composite shall be supplied in accordance with CW 3135.

E16.5.2 Materials

- (a) Geogrid/Geotextile Composite shall be Naue Combigrid 30/30; Titan Swamp Grid 30 or approved equal as per B7 and shall be supplied and placed in accordance with CW3135.
- (b) Geogrid/Geotextile Composite shall conform to the Products Approved as listed in City of Winnipeg Specification for Approved Products for Surface Works.
 - (i) https://legacy.winnipeg.ca/finance/findata/matmgt/std_const_spec/current/Docs/Revision2019-05-27.pdf

E16.5.3 Construction Methods

- (a) Separation/reinforcement Geogrid/Geotextile Composite shall be installed as outlined in Section 3.0 of CW 3135.

E16.6 Crushed Limestone Materials

E16.6.1 Description

- (a) Crushed limestone Sub-base and Base Course material shall be supplied and installed in accordance with CW 3110 and as per the Drawings.

E16.6.2 Materials – Crushed Limestone

- (a) 300 mm layer of 50 mm down Sub-base course crushed limestone Granular C material as per CW 3110.
- (b) 150 mm layer of Base Course crushed limestone Granular C material as per CW 3110.
- (c) Notwithstanding current CW 3110 Section 1.2 Clause 1.2.7, Granular A, Granular B, and recycled aggregates or materials will not be accepted.

E16.6.3 Construction Methods

- (a) All limestone material shall be placed and compacted as specified to finished thickness as stated herein and as shown on the Drawings.

- (b) Sub-base and Base Course shall be compacted to a minimum of one hundred percent (100%) of Standard Proctor Density.

E16.7 Method of Measurement and Basis of Payment

E16.7.1 Basis of Measurement shall be as follows:

- (a) Method of Measurement and Basis of Payment for Sub-base Course crushed limestone shall be measured on a per tonne basis for:
 - (i) "Supply and install crushed sub-base course material for sport courts" on Form B: Prices.
- (b) Method of Measurement and Basis of Payment for Base Course crushed limestone shall be measured on a cubic metre basis for:
 - (i) "Supply and install crushed base course material for sport courts" on Form B: Prices.
- (c) Method of Measurement and Basis of Payment for Geogrid/Geotextile Composite and geotextile fabric shall be measured on a square metre basis for:
 - (i) "Supply & install separation geogrid/geotextile composite for sport courts" on Form B: Prices.
- (d) No measurement will be made for material testing as this item is incidental to the Work herein.

E16.7.2 Basis of Payment shall be as follows:

- (a) Crushed Limestone Sub-base and Base Course and Separation Geotextile shall be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E16.8 Method of Measurement and Basis of Payment at Valour C.C.

E16.8.1 Basis of Measurement at Valour C.C. shall be as follows:

- (a) Method of Measurement and Basis of Payment for Sub-base Course crushed limestone shall be measured on a per tonne basis for:
 - (i) "Supply and install crushed sub-base course material for basketball court repair" on Form B: Prices.
- (b) Method of Measurement and Basis of Payment for Base Course crushed limestone shall be measured on a cubic metre basis for:
 - (i) "Supply and install crushed base course material for basketball court repair" on Form B: Prices.
- (c) Method of Measurement and Basis of Payment for Geogrid/Geotextile Composite and geotextile fabric shall be measured on a square metre basis for:
 - (i) "Supply & install separation geogrid/geotextile composite for basketball court repair" on Form B: Prices.
- (d) No measurement will be made for material testing as this item is incidental to the Work herein.

E16.8.2 Basis of Payment at Valour C.C. shall be as follows:

- (a) Crushed Limestone Sub-base and Base Course and Separation Geotextile shall be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

- (b) No separate measurement will be made for retainment of services by the Contractor relating to survey or layout and establishing grades as these items are incidental to the Work herein.
- (c) No payment will be made for material testing as this item is incidental to the Work herein.

E17. SPORT COURT ASPHALTIC CONCRETE PAVEMENT WORKS

E17.1 Asphaltic Pavement

E17.1.1 Description

- (a) Sport Court Asphaltic Concrete Pavement Works shall be supplied and installed in accordance with City of Winnipeg Standard Construction Specification CW 3410, "Asphaltic Concrete Pavement Works."
- (b) The Work to be completed by the Contractor under this Specification shall include the supply of all materials, and the furnishings of all superintendence, overhead, labour, equipment, tools, material testing and all other things necessary for and incidental to the satisfactory completion of all the Work shown on the Drawings and specified herein.

E17.1.2 Materials

- (a) Asphaltic Concrete shall be a modified Type 1A (Sport Court Mix) as specified below and to a compacted thickness of 75mm as shown on the Drawing.

(i) Sport Court Mix Gradation:

Sieve Size	% Passing
16.0 mm	99.3
14.0 mm	97.7
12.5 mm	94.2
10.0 mm	89.2
5.0 mm	73.7
2.5 mm	63.1
1.25 mm	52.8
630 µm	38.6
425 µm	27.1
315 µm	18.8
160 µm	9.0
80 µm	6.8

(ii) Or approved gradation by the Contract Administrator.

E17.1.3 Construction Methods

- (a) Sport Court Asphaltic Concrete shall be supplied and installed in accordance with the lines, grades and thickness shown on the Drawings, this specification and to City of Winnipeg Construction Specification CW 3410.
- (b) Sub-base and Base Course shall be compacted to a minimum of one hundred percent (100%) of Standard Proctor Density.

E17.1.4 Crack Repairs

E17.1.5 As a warranty requirement, the Contractor shall repair and seal any and all cracks which may appear in the Sport Court areas during the warranty period. Patching mix for use in cracks and other imperfections in the asphalt surface shall be supplied and installed in accordance E18, the Manufacturer's written specifications and to the satisfaction of the Contract Administrator.

- (a) All crack repairs shall also be recoated with colour matched sports court surfacing material as per E18.

- (b) Repaired area shall remain true to grade.
- (c) No separate payment will be made for these items as it is considered a warranty issue and shall fall under G.C.13- Warranty.

E17.1.6 Quality Control for Hard Surfaced Areas

- (a) Further to Section 10, Quality Control, of CW 3110 and CW 3410, the Contractor shall obtain a qualified independent testing lab to conduct tests on materials to determine the acceptability of the sub-grade, sub-base, base course and asphaltic concrete as placed by the Contractor in accordance with the requirements of this Specification.
- (b) The Contractor shall not proceed with each granular fill placement or asphalt installation until compaction has reviewed and approval to proceed by the Contract Administrator.
- (c) The Contract Administrator will conduct a survey of the operation to verify installation of specified layer thickness.
- (d) Non-conformity with the specified test requirements or compacted layer thickness will constitute sufficient grounds for rejection of the Work.
- (e) The Contractor shall flood the asphalt court surface prior to applying sport court surfacing to ensure there are no depressions deeper than 2mm.

E17.2 Method of Measurement and Basis of Payment

E17.2.1 Basis of Payment shall be as follows

- (a) Sport Court Asphaltic Concrete Pavement Works shall be measured on a per tonne basis for:
 - (i) "Supply and install sport court asphaltic concrete pavement" on Form B: Prices.

E17.2.2 Basis of Payment shall be as follows:

- (a) Sport Court Asphaltic Concrete Pavement Works will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for sport court asphaltic concrete pavement works including supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E17.3 Method of Measurement and Basis of Payment at Valour C.C.

E17.3.1 Basis of Measurement at Valour C.C. shall be as follows

- (a) Sport Court Asphaltic Concrete Pavement Works shall be measured on a per tonne basis for:
 - (i) "Supply and install sport court asphaltic concrete pavement for basketball court repair" on Form B: Prices.

E17.3.2 Basis of Payment shall be as follows:

- (a) Sport Court Asphaltic Concrete Pavement Works will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for sport court asphaltic concrete pavement works including supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E18. SPORT COURT SURFACING

E18.1 General Description

- (a) This Specification shall cover the supply and installation of acrylic sports court surfacing **c/w fiberglass reinforcing mesh** on asphalt and line painting of court markers.

E18.2 Materials

E18.2.1 Fiberglass Overlay Mesh

- (a) Sport Court Fiberglass Overlay Mesh to be placed on top of Asphaltic Concrete and before Sport Court Surfacing is installed.

E18.2.2 Fiberglass Overlay Mesh shall be:

- (a) California Surfaces Plexibond-Fiberglass System:
 - (i) Manufacturer: California Sports Surfaces
 - (ii) Specifications: [CSS Fiberglass 5621 TDS](#); [CSS Plexibond 0821 TDS](#)
 - (iii) Supplier & Installer:
 - ◆ Cords Park Mark Ltd.
3 Swann Drive
Winnipeg, MB R3R 3T9
Ph: (204) 895-1471
Fax: (204) 897-0576
- (b) Laykold Fiberglass Overlay System
 - (i) Manufacturer: Laykold
 - (ii) Specifications: [Microsoft Word - Laykold Asphalt Fortification System Rev 0 WB 020421.doc](#)
 - (iii) Supplier & Installer:
 - ◆ Prairie Surfaces
45 Froese Crescent
Winnipeg, MB R4H 0E6
Ph: (204) 295-6910
- (c) Polypave Court Shield
 - (i) Manufacturer: Polypave Court Shield
 - (ii) Specifications: [Polypave Court Shield | Surface Crack-Prevention](#)
 - (iii) Supplier & Installer:
 - ◆ Promark Linepainting Inc.
Winnipeg, MB
Ph: (204) 999-2008
- (d) Or approved substitute.

E18.2.3 Patching mix for use in cracks, holes, depressions and other imperfections in the asphalt surface. This material will be used in accordance with the Manufacturer's written specifications with regard to sand sizes, prime coats, and depth of depression, hole or crack.

E18.2.4 Patching crack filler: for use in fine cracks and for minor cosmetic thin repairs and fills prior to filler course.

E18.2.5 100% Acrylic Filler Course shall be:

- (a) Acrylic Resurfacer
 - (i) Manufacturer: California Sports Surfaces – Acrylotex
 - (ii) Specifications: <https://plexipave.files.wordpress.com/2015/07/10-25acrylotexsystem-1.pdf>
 - (iii) Supplier & Installer:
 - ◆ Cords Park Mark Ltd.
3 Swann Drive
Winnipeg, MB R3R 3T9
Ph: (204) 895-1471

Fax: (204) 897-0576

- (b) Acrylic Resurfacer
 - (i) Manufacturer: Laykold - Advantage
 - (ii) Specifications: https://ebinder.sportsbyapt.com/wp-content/uploads/2020/04/Laykold-Acrylic-Resurfacer-TDS_041520.pdf [\(prairiesurfaces.ca\)](http://LAYKOLD Acrylic Sport & Recreational Surfaces (prairiesurfaces.ca))
 - (iii) Supplier & Installer:
 - ◆ Prairie Surfaces
45 Froese Crescent
Winnipeg, MB R4H 0E6
Ph: (204) 295-6910
- (c) Novacrylic Combination Surface
 - (i) Manufacturer: Nova Sports USA
 - (ii) Specifications: [Combination Surface | Nova Sports U.S.A.](#)
 - (iii) Supplier & Installer:
 - ◆ Promark Linepainting Inc.
Winnipeg, MB
Ph: (204) 999-2008
- (d) Or approved substitute.

E18.2.6 Acrylic Color Playing Surface

- (a) Acrylic Color Playing Surface shall be:
 - (i) Manufacturer: California Sports Surfaces - Acrylotex
 - (ii) Specifications: <https://plexipave.files.wordpress.com/2015/07/10-25acrylotexsystem-1.pdf>
 - (iii) Supplier & Installer:
 - ◆ Cords Park Mark Ltd.
3 Swann Drive
Winnipeg, MB R3R 3T9
Ph: (204) 895-1471
Fax: (204) 897-0576
- (b) Acrylic Color Playing Surface shall be:
 - (i) Manufacturer: Laykold - Advantage
 - (ii) Specifications: [\(prairiesurfaces.ca\)](http://LAYKOLD Acrylic Sport & Recreational Surfaces (prairiesurfaces.ca))
 - (iii) Supplier & Installer:
 - ◆ Prairie Surfaces
45 Froese Crescent
Headingley, MB R4H 0E6
Ph: (204) 295-6910
- (c) Novacrylic Combination Surface
 - (i) Manufacturer: Nova Sports USA
 - (ii) Specifications: [Combination Surface | Nova Sports U.S.A.](#)
 - (iii) Supplier & Installer:
 - ◆ Promark Linepainting Inc.
Winnipeg, MB

Ph: (204) 999-2008

- (d) Or approved substitute as per B7.
- (e) Court lines and colours as per the Drawings.

E18.2.7 Line Paint

- (a) 100% acrylic resin containing no alkyds or vinyl constituents. Texturing shall be rounded silica sand. Percent solids by weight (minimum) 60.5.%. Weight: 12-12.3 lbs/gallon.
- (b) White colour for basketball and pickleball court lines and court colours as per the Drawings.

E18.3 Construction Methods

- E18.3.1 Clean all asphalt surfaces of loose dirt, oil, grease, leaves and other debris in strict accordance with Manufacturer's written specifications and to the satisfaction of the Contract Administrator.
- E18.3.2 Asphalt surface must be inspected and approved by the Contract Administrator prior to applying the Sport Court Surfacing.
- E18.3.3 Clean all holes and cracks.
- E18.3.4 Depressions holding enough water to cover a flat one-dollar coin ("Loonie") shall be filled with patch mix. This step shall be accomplished prior to the squeegee draining. Define and mark all areas holding enough water to cover a twenty-five-cent coin. Spread court patch mix true to grade using a straight edge for strike off. Steel trowel or wood float patch so that the texture matches the surrounding area. Never add water to the mix. Light misting on surfaces and edges to feather in allowed as needed to maintain workability. All areas should be allowed to dry thoroughly and cure.
- E18.3.5 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 metres per litre 915 to 20 square yards per gallon) based on the material prior to dilution. Acrylic resurfacer may be used to pre-coat depressions and crack/hole repairs to achieve better planarity prior to filler course application.
- E18.3.6 Fiberglass mesh shall be rolled out into the filler course and stretched tightly over the entire surface. Adjacent panels shall be overlapped a minimum of 3" (7.5cm). Wrinkles in the fiberglass membrane shall be corrected prior to application of the acrylic resurfacer.
- E18.3.7 Over a properly prepared surface of asphalt apply one coat of acrylic resurfacer according to the Manufacturer's written specifications.
- E18.3.8 Allow the application of acrylic resurfacer to dry thoroughly. Scrape off all edges and rough spots prior to the subsequent application of acrylic resurfacer or subsequent cushion or color playing surface system.
- E18.3.9 Line paint shall be 50 mm wide unless otherwise noted on the drawings. Lines shall be carefully laid out as per the Drawings. The area to be marked shall be taped to insure a crisp line edge. Line paint shall have a texture similar to the surrounding play surface. Application shall be made by brush or roller at the rate of recommended by the Manufacturer.

E18.4 Method of Measurement and Basis of Payment

- E18.4.1 Method of Measurement shall be as follows:
 - (a) Supply and install Sport Court Surfacing will be measured on a square metre basis for:
 - (i) "Supply and install fiberglass mesh reinforced sport court surfacing w/ basketball and pickleball lines" on Form B: Prices.
- E18.4.2 Basis of Payment shall be as follows:

- (a) Sports Court Surfacing will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on the Bid Form. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E18.5 Method of Measurement and Basis of Payment at Valour C.C.

E18.5.1 Method of Measurement at Valour C.C. shall be as follows:

- (a) Supply and install Sport Court Surfacing will be measured on a square metre basis for:
 - (i) "Supply and install fiberglass mesh reinforced sport court surfacing w/ basketball and pickleball lines" on Form B: Prices.

E18.5.2 Basis of Payment shall be as follows:

- (a) Sports Court Surfacing will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on the Bid Form. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E19. ASPHALT PATHWAY

E19.1 General Description

E19.1.1 This Specification shall supplement CW 3110, CW 3130, and 3410 and shall cover the supply and installation of asphalt pathways adjacent to the sport courts.

E19.1.2 The Work to be completed by the Contractor under this Specification shall include the supply of all materials, and the furnishings of all superintendence, overhead, labour, equipment, tools, and all other things necessary for and incidental to the satisfactory completion of all the Work shown on the Drawings and specified herein.

E19.1.3 The use of recycled concrete as a base material will not be permitted.

E19.2 General Instructions

E19.2.1 Quality Control

- (a) Testing and Approval of Materials
 - (i) Material testing will be required as per this Specification and as directed by the Contract Administrator.

E19.2.2 Submittals

- (a) Samples
 - (i) Material samples may be required, at the discretion of the Contract Administrator, for materials supplied under this Specification.

E19.3 Excavation

E19.3.1 Description

- (a) This specification shall be done in accordance with the Drawings, CW 3170, CW 3110, and as per SCD-648 as indicated on the Drawings.
- (b) Excavation shall be understood to include all removal of existing insitu material necessary to achieve finished grade and as indicated on the Drawings.
- (c) The Contractor shall survey and stake out the proposed asphalt pathway and court approach area prior to the start of construction as shown on the construction drawings. Layout shall be checked and confirmed with Contract Administrator prior to construction.

E19.3.2 Construction Methods

- (a) Excavation shall be done in accordance with SCD-648 and as outlined in Section 3.2 of CW 3110.
- (b) In locations where existing tree root systems intersect with the pavement area, excavation shall be done carefully so as not to damage or sever any roots of the trees.
- (c) If any pavement exists at the limits of the designated area of removal, these shall be saw cut for the full depth of the pavement prior to the demolition and removal operations. All costs in connection with saw cutting are incidental and shall be included in the unit price bid for excavation.
- (d) All excavated material shall be removed, hauled, and legally disposed of off-site to the satisfaction of the Contract Administrator.

E19.4 Sub-Grade Compaction

E19.4.1 Construction Methods

- (a) Sub-grade compaction shall be performed as outlined in Section 3.3 of CW 3110.
- (b) Sub-grade shall be free of any fibrous organics, softened and disturbed soil. The prepared sub-grade shall be proof rolled with a heavy sheep's foot roller (minimum 25 passes) and inspected by the Contract Administrator to detect for any soft spots prior to the placement of overlying granular fills.

E19.5 Geotextile Fabric

E19.5.1 Description

- (a) Geotextile Fabric shall be placed in accordance with CW 3130.

E19.5.2 Materials

- (a) The separation/ reinforcement non-woven geotextile fabric shall conform to the Products Approved as listed in City of Winnipeg Specification for Approved Products for Surface Works.
 - (i) https://legacy.winnipeg.ca/finance/findata/matmgt/std_const_spec/current/Docs/Revision2019-05-27.pdf

E19.5.3 Construction Methods

- (a) Separation/ Reinforcement geotextile fabric shall be installed as outlined in Section 3.1 of CW 3110.

E19.6 Crushed Limestone Sub-base and Base Course Material

E19.6.1 Description

- (a) Crushed limestone Sub-base and Base course material shall be supplied and installed in accordance with CW 3110 and SCD-648.

E19.6.2 Materials

- (a) Sub-Base Course: 150 mm layer of Sub-base Course crushed limestone Granular C material as per SCD-648 and CW 3110.
- (b) Base Course: 50 mm layer of Base Course crushed limestone Granular C material as per SCD-648 and CW 3110.

E19.6.3 Construction Methods

- (a) Crushed limestone sub-base and base material shall be supplied and installed as outlined in CW 3110.
- (b) All limestone sub-base and base material shall be placed and compacted as specified to a finished thickness as shown on the Drawings and SCD-648.

E19.7 Asphaltic Pavement

E19.7.1 Description

- (a) Asphaltic Pavement for the pathway and court approach area shall be supplied and installed in accordance with City of Winnipeg Standard Construction Specification CW 3410 "Asphaltic Concrete Pavement Works".

E19.7.2 This Specification shall supplement the Drawings and SCD-648 and shall cover the supply and installation of asphaltic concrete pavement.

E19.7.3 The Work to be completed by the Contractor under this Specification shall include the supply of all materials, and the furnishings of all superintendence, overhead, labour, equipment, tools, material testing and all other things necessary for and incidental to the satisfactory completion of all the Work shown on the Drawings and specified herein.

E19.8 Materials

E19.8.1 Asphaltic Concrete shall be Type 1A as specified and to a compacted thickness of 75mm (3") as shown on the Drawings.

E19.9 Crack Sealing

- (a) As a Warranty requirement, the Contractor shall rout and seal any and all cracks which may appear in the pathways during the one-year warranty period. Crack sealing shall conform to the requirements of City of Winnipeg Standard Construction CW 3250.
- (b) No separate payment will be made for this item as it is considered a warranty issue and shall fall under GC.13- Warranty.

E19.10 Quality Control for Hard Surfaced Areas

- (a) Further to Section 10, Quality Control, of CW 3110 and CW 3410, the Contractor shall obtain a qualified independent testing lab to conduct tests on materials to determine the acceptability of the sub-grade, sub-base, base course and asphaltic concrete as placed by the Contractor in accordance with the requirements of this Specification.
- (b) The Contractor shall not proceed with asphalt installation until test results have been reviewed and approval to proceed is granted by the Contract Administrator.
- (c) The Contract Administrator will conduct a survey of the operation to verify installation of specified layer thickness.
- (d) Non-conformity with the specified test requirements or compacted layer thickness will constitute sufficient grounds for rejection of the Work.

E19.11 Method of Measurement and Basis of Payment

E19.11.1 Method of Measurement shall be as follows:

- (a) Supply and installation of asphalt pathway will be measured on a square metre basis for:
 - (i) "Supply and install asphalt pathway" on Form B: Prices.
- (b) No measurement will be made for excavation and grading of pathway areas, importation of clean clay fill if required, material testing, sub-grade compaction, non-woven geotextile, sub-base and base course crushed limestone, as these items are incidental to the Work herein.

E19.11.2 Basis of Payment shall be as follows:

- (a) Asphalt pathway works will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for "Supply and install asphalt pathway," including excavation and grading, importation of clean clay fill if required, material testing, sub-grade compaction, non-woven geotextile, sub-base and base course crushed limestone, asphalt pavement as per SCD-648 supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E20. CAST-IN-PLACE CONCRETE FOUNDATIONS

E20.1 General Description

E20.1.1 This Specification shall supplement CW 2160 and cover the supply and installation of cast-in-place concrete foundations for lighting, site furnishings and custom entry feature.

E20.1.2 The Work to be completed by the Contractor under this Specification shall include the supply of all materials, and the furnishings of all superintendence, overhead, labour, equipment, tools, and all other things necessary for and incidental to the satisfactory completion of all the Work shown on the Drawings and specified herein.

E20.2 General Instructions

E20.2.1 Testing and Approval of Materials

- (a) Material testing may be required as per CW 2160 and as directed by the Contract Administrator.

E20.3 Materials

E20.3.1 All materials as per CW 2160.

E20.3.2 Concrete Design Mix as per CW 2160, Structure Type A.

E20.4 Construction Methods

- (a) Construction Methods as per CW 2160, and as indicated on the Drawings.
- (b) If Concrete testing is required, do not place concrete until material testing is performed and reviewed by the Contract Administrator.
- (c) Holes for concrete footings must be inspected and approved by the Contract Administrator prior to installation of concrete. Contractor to provide min. two (2) business days' notice for inspection.
- (d) **Lighting and Entry Feature cast-in-place concrete foundations are to be installed as per the Shop Drawings supplied and stamped by a professional engineer licensed to practice in the Province of Manitoba.**

E20.4.2 Cold Weather Concreting

- (a) Shall be as per section 3.9 of CW 2160, CSA A23.1 and as per below:
 - (i) All material and equipment needed for adequate protection and curing shall be on hand and ready to be used before concrete placement is started.
 - (ii) Before concrete is placed all ice, snow and frost shall be removed from formwork and all surfaces against which concrete will be placed.
 - (iii) Temperatures of adjacent surfaces shall be raised to and maintained at 5° C minimum, prior to and during concreting.
 - (iv) Calcium chloride or other de-icing salts shall not be used as a de-icing agent in the forms.
 - (v) Heating equipment and enclosures shall be per CW 2160 and CSA A23.1.

E20.5 Method of Measurement and Basis of Payment

- (a) No separate measurement or payment will be made for Cast-in-Place Concrete Foundations as Foundations are incidental to the Works therein.

E21. ENTRY FEATURE

E21.1 Description

E21.1.1 This specification shall cover the supply and installation of a powder-coated aluminum Entry Feature c/w CIP concrete pedestal as per the Drawings. Manufacturer to provide Shop Drawings.

E21.2 Workmanship

- E21.2.1 Metal Work shall be finished straight, even and smooth and free of any defects to sizes specified and required.
- E21.2.2 Work shall include all necessary items necessary for the complete installation of the Work.
- E21.2.3 Welding is to be neat, symmetrical, clean and unobtrusive in appearance.
- E21.2.4 Powder coat is to be smooth, free of bubbles, chips, bumps and other imperfections.
- E21.2.5 Manufacturer's nameplates on sign surface locations visible in completed work will not be considered acceptable.

E21.3 Reference Standards

- E21.3.1 Aluminum Association Inc. (AA).
- E21.3.2 American Society for Testing and Materials (ASTM)
- E21.3.3 Canadian Standards Association (CSA)

E21.4 Submittals

- E21.4.1 Samples of any Components, requested by the Contract Administrator, shall be submitted prior to fabrication.

E21.5 Shop Drawings

- E21.5.1 Entry feature shall be manufactured and installed as per stamped and approved Shop Drawings by Professional Structural Engineer licenced to work in the Province of Manitoba and associated schedule and specifications.**

(a) Shop Drawings shall be in accordance with the current version of CW 1110.

E21.6 Materials

- E21.6.1 Materials for the entrance feature to be as shown on Drawings.
- E21.6.2 Orange Powder coat Colour to be: RAL# 2003 "Pastel Orange"
 - (i) Repair kit with colour RAL# 2003 "Pastel Orange" shall be provided to the Public Works Department, Parks and Open Space Division for purposes of future touch-up.
- E21.6.3 Grey Powder coat Colour to be: RAL# 7015 "Slate Grey"
 - (i) Repair kit with colour RAL# 7015 "Slate Grey" shall be provided to the Public Works Department, Parks and Open Space Division for purposes of future touch-up.

E21.7 Fabrication

- E21.7.1 Shop Drawings detailing Entry Feature to be provided by the Contractor to the Contract Administrator prior to manufacture.
- E21.7.2 Weld joints tight, flush, and grind smooth, in true planes with base materials. Make welds continuous.
- E21.7.3 Contractor shall supply and install Entry Feature to be manufactured by Shape Industries Inc. as shown on the Drawings.
 - (a) Contact for Entry Feature:
 - (i) Shape Industries
 - ◆ Attn: Riel Gregory
 - ◆ Shape Industries Inc
 - ◆ 255 Hutchings Street
 - ◆ Winnipeg, MB R2X 2R4

- ◆ (204) 947-0409
 - ◆ Email: gregoryr@shapeinc.com
- (ii) Or approved substitute in accordance with B7.

E21.8 Installation

- E21.8.1 CIP concrete foundation as per E20 and the Drawings.
- E21.8.2 Installation shall be as per the Drawings. Install work plumb, true, square, level, straight and accurately and tightly fitted together and to surrounding Work.
- E21.8.3 Entry feature pieces are to be fitted together in the fabrication shop to ensure a proper fit and product, prior to shipment to the Site. Final connections shall be made on Site.
- E21.8.4 Care shall be taken to ensure that no scratches, dents or other imperfections appear as a result of installation.
- E21.8.5 Concrete foundation and base shall be as per the Drawings, CW 3110 and CW 3310.

E21.9 Method of Measurement and Basis of Payment

- E21.9.1 Method of Measurement shall be as follows:
- (a) Entry Feature shall be measured on a lump sum basis for:
 - (i) "Supply and install custom entry feature" on Form B: Prices.
 - (b) No measurement will be made for stamped Shop Drawings, as these items are incidental to the Work herein.
 - (c) No measurement will be made for base and concrete foundation, as these items are incidental to the Work herein.
- E21.9.2 Basis of Payment shall be as follows:
- (a) Entry Feature shall be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. Said payment shall be understood to include all items.
 - (b) No payment will be made for stamped Shop Drawings, as these items are incidental to the Work herein.
 - (c) No payment will be made for base and concrete foundation, as these items are incidental to the Work herein.

E22. SITE FURNISHINGS

E22.1 General Description

- E22.1.1 This Specification shall cover the **supply and installation** of City of Winnipeg supplied site furniture and supply and installation of Adirondack chairs, shade toppers and bicycle racks as per the Drawings.
- E22.1.2 The Work to be completed by the Contractor under this Specification shall include the supply of all materials, and the furnishings of all superintendence, overhead, labour, equipment, tools, and all other things necessary for and incidental to the satisfactory completion of all the Work shown on the Drawings and specified herein.

E22.2 Materials

- E22.2.1 All materials supplied under this specification shall be of a type approved by the Contract Administrator, and subject to inspection and testing by the Contract Administrator.
- E22.2.2 All site furnishings shall be as per the Drawings.
- E22.2.3 Ordering
- (a) To order City of Winnipeg supplied site furnishings email: pwd-cps-orderdesk@winnipeg.ca

E22.2.4 City of Winnipeg Supplied Site Furnishings:

- (a) Tache Surface Mount Backless Bench Composite with Arms x 4 **Cost \$1066.00 + taxes**
 - (i) Product Number: 52501115GLV
 - (ii) Finish:
 - ◆ Composite Slats: Cedar Tone Finish
 - ◆ Metal: Galvanized
 - (iii) Specification:
 - ◆ SCD-121D
- (b) Tache Surface Mount Bench Composite with Arms x 2 **Cost \$1501 + taxes**
 - (i) Product Number: 52501071GLV
 - (ii) Finish:
 - ◆ Composite Slats: Cedar Tone Finish
 - ◆ Metal: Galvanized
 - (iii) Specification:
 - ◆ SCD-121E
- (c) Waste Receptacle – Side Opening Metal Slat Type x 3 **Cost \$731 + taxes**
 - (i) Product Numbers: 52501063GLV and 52501063GLVi
 - (ii) Finish:
 - ◆ Metal – Galvanized
 - (iii) Specification:
 - ◆ SCD-119
- (d) Rendezvous Accessible Picnic Table x 2 **Cost \$3223 + taxes**
 - (i) Product Number: RENDEZ-3A-GLV
 - (ii) Finish:
 - ◆ Wood: Stained fir
 - ◆ Metal: Galvanized
- (e) Rendezvous Picnic Table x 3 **Cost \$3819 + taxes**
 - (i) Product Number: RENDEZ-4GLV
 - (ii) Finish:
 - Wood: Stained fir
 - Metal: Galvanized
- (f) Double-sided Parks Sign (English) **Cost \$1632 + taxes**
 - (i) Product Number: 52501103
 - (ii) Specification:
 - ◆ SCD-153

E22.2.5 Contractor supplied site furnishings

- (a) Rackworks Aluminum Hoop Bike Rack x 3
 - (i) Finish: Galvanized
 - (ii) Colour: Metallic
 - (iii) Mounting: Surface mount on concrete pad.
 - (iv) Contact to order:
 - ◆ Woodcock Cycle Works
 - ◆ 433 St Mary's Road
 - ◆ Winnipeg, MB.

- ◆ (204) 253-5896
- (v) Or approved substitute as per B7.
- (vi) Concrete pad for bike racks as per SCD-662, CW 3325 and CW 3110
- (b) Wishbone – Jem Lounge Chair x 6
 - (i) Finish: Powder coated aluminum frame w/ recycled plastic slats
 - (ii) Colour: Frame Orange Pastel, Slats Walnut
 - (iii) Mounting: Surface mount on concrete pad.
 - (iv) Contact to order:
 - ◆ Ronay Shelton
 - ◆ Wishbone Site Furnishings
 - ◆ ronay@wishboneltd.com
 - ◆ (250) 808-1145
 - (v) Or approved substitute as per B7
 - (vi) Concrete pad for chairs as per Drawings, SCD-662, CW 3325 and CW 3110
- (c) Landscape Structures Cool Topper Single Post Pyramid 12' x 12', Model #154397 x 2
 - (i) Fabric: Polyethylene. Orange colour. **Each supplied with one extra set of fabrics.**
 - (ii) Posts: Embedment mount with an extended post to achieve a 2.92m clearance from finished grade ground to underside of fabric. Colour Cool Silver Matte.
 - (iii) Contact to order:
 - ◆ Matt Lacroix
 - ◆ Playgrounds-R-Us
 - ◆ matt@pru.ca
 - ◆ (204) 632-7000
 - (iv) Or approved substitute as per B7.

E22.3 Construction Methods

- E22.3.1 All Work is to be located and installed in accordance with the Drawings, and associated SCDs and/or Manufacturer's written instructions and specifications, using approved non-rusting, tamper resistant fasteners to ensure solid, durable, finished work suitable for the purpose intended. Fasteners and assembly hardware shall be incidental to the Work.
- E22.3.2 All furnishings and fixtures to be installed plumb and true to correct elevations and location, as directed by the Contract Administrator. The Contractor shall confirm proposed locations of all site furnishings with Contract Administrator prior to installation.
- E22.3.3 All furnishings and fixtures to be carefully handled so that no parts will be bent, broken or otherwise damaged. Hammering is prohibited.
 - (a) Damaged Site Furnishings will not be accepted.
- E22.3.4 Concrete Foundations
 - (a) Concrete foundation construction as per SCD-121C, SCD-119, CW 2160 and CW 3310.

E22.4 Method of Measurement and Basis of Payment

- E22.4.1 Method of Measurement shall be as follows:
 - (a) Supply and installation of Site Furnishings will be measured at the Contract Unit Price per unit for:
 - (i) "Supply and install Tache surface mount backless benches"
 - (ii) "Supply and install waste receptacles and inserts – side opening metal slat type"
 - (iii) "Supply and install Rendezvous accessible picnic table"

- (iv) "Supply and install Rendezvous picnic table"
 - (v) "Supply and install double-sided park sign"
 - (vi) "Supply and install Tache surface mount benches"
 - (vii) "Supply and install Adirondack chairs"
 - (viii) "Supply and install bike racks" and
 - (ix) "Supply and install shade topper c/w extra set of fabrics" on Form B: Prices.
- (b) No measurement will be made for concrete pads for surface mounting or footings, as these items are incidental to the Work herein.
- (c) No measurement will be made for extra set of shade topper fabrics, as this item is incidental to the Work herein.

E22.4.2 Basis of Payment shall be as follows:

- (a) Site Furnishings will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. The price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E23. BASKETBALL AND PICKLEBALL COURT ACCESSORIES

E23.1 General Description

- E23.1.1** This Specification shall cover the supply and installation of basketball and pickleball court accessories. The Work to be done by the Contractor shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified.

E23.2 Materials

- (a) Pickleball:
- (i) Pickleball Posts as manufactured by Douglas Sports Equipment, or approved substitute. Post model number: Premier XS-36 c/w plated steel gears, green colour.
 - (ii) Ground Sleeves for Premier XS-36 posts shall be Douglas Sports Equipment model number GS-24RD/AL.
 - (iii) Pickleball nets as manufactured by Douglas Sports Equipment, model number JTN-30 or approved substitute in accordance with B7. Nets may require modification by the manufacturer or Contractor to fit custom spacing between posts.
 - (iv) Pickleball center pipe net anchors as per SCD-301, ordered from the City of Winnipeg, Public Works East Yards Complex at 960 Thomas Ave, Winnipeg.
 - ◆ To order City of Winnipeg centre pipe net anchors, email: pwd-cps-orderdesk@winnipeg.ca
 - ◆ Product Number: SCD-301
 - ◆ Specification SCD-301.
- (b) Basketball:
- (i) Basketball galvanized gooseneck standard, rectangular backboard, rim and nylon net package shall be as manufactured by:
 - ◆ Douglas Sports Equipment model: Gooseneck 5-9/16" RST Basketball System, SKU 69459; or
 - ◆ Gared Performance Sports Systems model Heavy Duty 5-9/16" Gooseneck Basketball Package, Product Number PK6015.
 - (ii) or approved substitute in accordance with B7.

E23.3 Construction Methods

E23.3.1 General

- (a) All furnishings and fixtures to be installed plumb and true to correct elevations and location, as directed the Contract Administrator. The Contractor shall confirm proposed locations of all equipment with Contract Administrator prior to installation.
- (b) All equipment and fixtures to be carefully handled so that no parts will be bent, broken or otherwise damaged. Hammering, which will injure or distort fixture, is prohibited.
- (c) No concrete work shall commence until the excavation has been completed in accordance with the with the drawings, the current version of CW 3110 and inspected and approved by the Contract Administrator.

E23.3.2 Pickleball Posts, Ground Sleeves and Net

- (a) Pickleball posts to be installed into concrete pile c/w ground sleeve as per SCD-301 at locations shown on the drawings. Piles to be 400mm in diameter x 4500mm deep and reinforced with steel cage.
- (b) When installing post, use bottom collar to ensure post height is 914 mm above the court surface and in accordance with the manufacturer's specifications.
- (c) The pickleball post footings should be placed 300mm outside the court on each side.
- (d) Holes in the asphalt shall be cored for the installation of the Centre Pipe Net Anchors. Centre Pipe Net Anchors are to be driven in flush with the proposed finished surface with the hot rolled round bar pin installed parallel to the net line. Anchors are to be centered between pickleball net posts. Patch gaps between pipe and asphalt with a non-shrink construction grout prior to final surface application.
- (e) All concrete used in installation is to meet CW 2160.

E23.3.3 Basketball Post, Backboard, Hoop and Net

- (a) Basketball post to be installed into concrete pile as per SCD-300 at locations shown on the drawings. Piles to be 6.0 M depth, 400mm diameter reinforced as shown on the Drawings
- (b) All concrete used in installation is to meet CW 2160.

E23.3.4 Method of Measurement shall be as follows:

- (a) Sports Standards will be measured on a per unit basis for:
 - (i) "Supply & install pickleball nets, centre pipe net anchor and posts"; and,
 - (ii) "Supply & install basketball hoop assembly", on Form B: Prices.

E23.3.5 Basis of Payment shall be as follows:

- (a) Sports Standards will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on the Bid Form. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator. Each installation (set) shall include excavation and installation of concrete piles c/w reinforcing steel, posts, ground sleeves, centre pipe net anchor and net satisfactorily installed in accordance with this Specification, accepted and measured by the Contract Administrator.

E24. CHAIN LINK FENCING

E24.1 Description

E24.1.1 The Work to be done by the Contractor under this specification shall include the furnishing of all superintendence, overhead labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the following:

- (a) Supply and installation of 3m high basketball court chain link fencing;

- (b) Supply and installation of 3m high pickleball court chain link fencing c/w lockable pedestrian access gates, chain link vehicle access gate **and additional posts to support future windscreen**;
- (c) Supply and installation of 1.5m chain link park fencing; and
- (d) Supply and installation of 1.2m high chain link fence inside pickleball courts.

E24.1.2 This specification supplements and amends C.W. 3550 - Chain Link Fencing.

E24.2 Materials

E24.2.1 All materials, supplied under this specification shall be of a type approved by the Contract Administrator, and shall be subject to inspection and testing by the Contract Administrator.

E24.2.2 Chain link fencing and gate as specified in CW 3550 and on Drawings.

E24.2.3 All fencing and gates to have knuckled top and bottom fabric.

E24.2.4 Vehicle access gate shall have a double swing.

E24.2.5 Vehicle access gate shall include a pad lock protective box.

E24.2.6 Vehicle access gate shall include **solid** wheels.

E24.3 Construction Methods

E24.3.1 As per CW 3550 and the Drawings.

E24.3.2 Pickleball court perimeter fence to have posts spaced every 1.2 m to allow for future windscreen.

E24.3.3 Install lockable pedestrian access gate as per manufacturer's recommendation and CW 3550.

E24.3.4 Install vehicle access gate as per manufacturer's recommendation and CW 3550.

E24.4 Method of Measurement and Basis of Payment

E24.4.1 Method of Measurement shall be as follows:

- (a) Chain link fencing will be measured on a lineal meter basis for the following items:
 - (i) "Supply and install 3m (10') tall chain link fencing for basketball court";
 - (ii) "Supply and install 3m (10') tall chain link fencing c/w additional posts for pickleball court c/w lockable pedestrian access gates";
 - (iii) "Supply and install 1.5m (5') tall chain link fencing"; and
 - (iv) "Supply and Install 1.2m (4') tall chain link fence" on Form B: Prices.
- (b) Chain link vehicle access gate will be measured on a lump sum basis for the following items:
 - (i) "Supply and install chain link vehicle gate" on Form B: Prices.

E24.4.2 Basis of Payment shall be as follows:

- (a) Chain link fencing and gate will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.

E25. GRANITE LANDSCAPE BOULDERS AND BOULDER SLOPE STABILIZATION

E25.1 Description

E25.1.1 This Specification shall cover the supply and installation of a granite boulders, as shown on the Drawings.

- E25.1.2 The Work to be done by the Contractor under this specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to satisfactory performance and completion of all Work as shown on the drawings as specified herein.
- E25.2 Materials
- E25.2.1 All materials supplied under this specification shall be subject to approval by the Contract Administrator, and subject to inspection and testing by the Contract Administrator.
- E25.2.2 Supplier
- (a) Mariash Quarry
279 Vincent Rd, Stony Mountain, MB R0C 3A0
Ph:204-344-5115
Em: boulder@mts.net
Website: <https://www.mariashquarry.com/>
 - (b) Or approved substitute per B7.
- E25.2.3 Granite boulder approximate sizes:
- (a) Boulders in slope stabilization area:
 - (i) 1 x 1.0 m length x 1.0 m width x 600 - 750 mm ht.
 - (ii) 2 x 1.0 m length x 750 mm width x 600 – 750 mm ht.
 - (iii) 4 SM x 500 - 600 mm length x 500 - 600 mm width x 500 - 600 mm ht.
 - (b) Boulders in planting bed area:
 - (i) 5 x 750 mm length x 750 mm width x 600 – 750 mm ht.
 - (c) Granite boulder to be clean and free of dirt, etc.
- E25.2.4 Geotextile fabric shall be per CW 3130.
- E25.2.5 Aluminum landscape edging shall be Permaloc Cleanline 3/16 inch (4.8 mm) x 4" (100mm) or approved equal as per B7. Natural Mill Finish.
- E25.2.6 Granular base course
- (a) Base course shall be as per the Drawings.
- E25.3 Construction Methods
- E25.3.1 Compact sub-grade.
- E25.3.2 Excavate area, install granular pad & geotextile as per the Drawings.
- E25.3.3 Supply and install boulders as per Drawings.
- (a) Orient flat face of boulder to the top.
 - (i) Lift and move boulder with straps or chains without causing damage to the boulder or site and to allow for adjustment of position in field.
 - (ii) Do not drag boulder across site.
 - (iii) Where indicated in the Drawings, backfill with compacted granular base around boulders. Tamp down in 50 mm lifts and compact to 95% SPD.
- E25.3.4 Landscape Edging:
- (a) Set edging into trench with top at ½ inch (12.7 mm) above compacted finish grade on turf side with side having loops for stakes placed on opposite side of turf. Drive stakes through edging loops until locked in place. Requires 5 stakes evenly spaced for each 16 feet (4.88 meters) section, or 3 stakes evenly spaced for each 8 feet (2.44 meters) section with a total of 8 stake loops available in each 16 feet (4.88 meters) section if necessary. Provide additional stakes at approximately 24 inches apart, longer stakes, heavier gage stakes, or any combination of previously mentioned as necessary to firmly secure edging for permanent intended use.

- (b) Where edging sections turn at corners and at angled runs, cut edging partially up through its height from bottom and turn back to desired angle to form rounded exposed radius.
- (c) Backfilling and Cleanup: Backfill both sides of edging, confirm and adjust if necessary that sections are securely held together, and compact backfill material along edging to provide top of edging at 1/2 inch (12.7 mm) above turf finish grade. Cleanup and remove excess material from site.

E25.4 Method of Measurement and Basis of Payment

E25.4.1 Method of Measurement shall be as follows:

- (a) Granite Boulders shall be measured on a per unit basis for
 - (i) "Supply and install granite landscape boulders" on Form B: Prices.
- (b) Granite Boulders shall be measured on a square metre basis for
 - (i) "Supply and install granite boulder slope stabilization" on Form B: Prices.
- (c) No separate measurement shall be made for the supply and installation of landscape edging, base course material or geotextile as these items are incidental to the Work herein.

E25.4.2 Basis of Payment shall be as follows:

- (a) Granite Boulders will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.
- (b) No additional payment shall be made for the supply and installation of landscape edging, base course material or geotextile as these items are incidental to the Work herein.

E26. PLANTING BED

E26.1 Description

- E26.1.1 This specification shall cover the excavation of planting beds and the supply and installation of topsoil soil and woodchips.

E26.2 Materials

E26.2.1 Topsoil Mix

- (a) Planting soil shall consist of black topsoil, a fertile friable natural loam containing by volume not less than 4% and no more than 25% of organic matter for clay loams, and not less than 2% and no more than 25% for sandy loams, with an acidity value ranging from pH 6.0 to 8.0 and capable of sustaining vigorous plant growth. Topsoil is to be free of any mixture of subsoil, clay lumps and free of stones and other extraneous matter. It shall not contain couch or crab grass rhizomes.

E26.2.2 Woodchip Mulch

- (a) Mulch is to be a clean bark or wood chip mulch with chips not less than 15mm nor larger than 75mm in size and not more than 20mm thick. Mulch is to be free of leaves, branches and other extraneous matter.

E26.3 Construction Methods

E26.3.1 General

- (a) Layout of planting beds shall be as per Drawings

E26.3.2 Installation

- (a) Excavation shall be in accordance with the Drawings, SCD-501 and E12.

- (b) Upon excavation of the planting bed, the excavation shall be backfilled with a topsoil mixture to a depth to permit adequate installation and stabilization of the plant material. Topsoil shall be placed in accordance with City of Winnipeg Standard Construction Specification CW 3540-R5 to a 400mm depth. Woodchip Mulch to be placed on top of shrub bed in accordance with SCD-501R.

E26.4 Method of Measurement and Basis of Payment

E26.4.1 Method of Measurement shall be as follows:

- (a) Planting beds will be measured on a per square metre basis for:
 - (i) "Supply and install planting beds"; on Form B: Prices.
- (b) No separate measurement will be made for the supply and installation of wood chips as this item is incidental to the Work herein.

E26.4.2 Basis of Payment shall be as follows:

- (a) Planting Beds will be paid for at the Contract Unit Prices as indicated on Form B: Prices. The amount to be paid for shall be the total number of units on Form B: Prices. This price shall be payment in full including all costs for the excavation of the planting bed and supply and installation of the topsoil and woodchips. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.
- (b) No separate payment will be made for the supply and installation of wood chips as this item is incidental to the Work herein.

E27. PLANTING TREES, SHRUBS AND GRASSES

E27.1 Description:

E27.1.1 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all Work as shown on the Drawings and as hereinafter specified, including, but not necessarily confined to the following:

- (a) Supply and installation of plant material as per the Drawings.

E27.2 Materials

E27.2.1 General

- (a) All nursery stock supplied shall be Canadian prairie nursery grown, of the species and sizes indicated on the drawings. Quality shall be in accordance with the latest "Guide Specification for Nursery Stock of the Canadian Nursery Trades Association".
- (b) Any nursery stock dug from native stands, wood lots, orchards or neglected nurseries and which have not received proper cultural maintenance as advocated by the Canadian Nursery Trades Association shall be designated as "collected plants". The use of "collected plants" will not be permitted unless approved by the Contract Administrator.
- (c) The Contract Administrator reserves the right to inspect the plant material at their original source, and to instruct the supplier on root and branch pruning requirements.
- (d) Plants larger than specified may be used if approved by the Contract Administrator. The use of such plants shall not increase the Contract price.
- (e) All nursery stock shall be measured when the branches are in their normal position. Height and spread dimensions specified refer to the main body of the plant and not from branch tip.
- (f) All nursery stock shall be well branched, true to type, structurally sound, possess a well developed, undamaged root system and shall be free of disease, insect infestations, rodent damage, sunscald, frost cracks and other abrasion or scare to the

bark. All parts of the nursery stock shall be moist and show live, green cambium when cut.

- (g) At least one plant of each variety supplied shall bear a tag showing both the botanical and common name of the plant.

E27.2.2 Miscellaneous Materials

- (a) Water shall be potable and free of minerals which may be detrimental to plant growth.
- (b) Stakes shall be metal T-Bar, steel, 40x40x5x2440mm. Stakes must be adequately installed into sub-base as to ensure they are not easily removed by vandalism.
- (c) Guying Wire shall be 3mm diameter multi-strand galvanized steel cable.
- (d) Guying Collar shall be plastic tube, 13mm diameter, nylon reinforced.
- (e) Trunk Protection shall be plastic perforated spiraled strip.
- (f) Fertilizer shall be a slow-release formulation of low nitrogen and high phosphorus e.g. 10-50-12. Apply quantities at rates stated by product manufacturer.

E27.3 Planting Soil shall be as per E26.

- (a) Root Ball Burlap shall be 150 g Hessian burlap, biodegradable.
- (b) Wire Baskets shall be horticultural accepted product designed to carry the weight and to contain a burlap-covered root ball. Minimum diameter basket size is to conform to the same minimum diameter of the tree root ball for the respective minimum tree caliper sizes.

E27.3.2 Plant Quantity and Size

- (a) Trees, shrubs, perennials, grasses and ground covers are to be supplied and planted at the quantities and caliper listed on the Planting Lists which are shown on the drawings. Any variations to species, size or caliper of specified plants will require a request for approval from the Contract Administrator.
- (b) Any changes in planting locations will be determined on-site by the Contract Administrator.
- (c) Trees are to be measured when the branches are in their normal position. Height dimensions specified are to refer to the main body of the tree and not from branch tip to root base. Where trees have been measured by caliper or diameter, reference is to be made to the diameter of the trunk measured 15cm above the ground as the tree stands in the nursery prior to lifting. Caliper of tree shall be appropriately designed on a permanently fixed tag on one of the branches.

E27.3.3 Shipment and Pre-Planting Care

- (a) Coordinate shipping of trees and excavation of holes to ensure minimum time lapse between digging and planting.
- (b) Tie branches of trees securely, and protect trees against abrasion, exposure and extreme temperature change during transit. Avoid binding of trees with rope or wire which would damage bark, break branches or destroy natural shape of tree. Give full support to root ball of trees during lifting.
- (c) Cover tree 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.
- (d) Remove broken and damaged roots with sharp pruning shears. Make clean cuts and cover cuts over 10mm diameter with a tree wound dressing.
- (e) Keep roots moist and protected from sun and wind. Heel-in trees which cannot be planted immediately in shaded areas and water well.

E27.4 Construction Methods

E27.4.1 Workmanship

- (a) Location of trees will be staked out or painted on Site by the Contractor. Locations shall be approved by the Contract Administrator prior to installation.

E27.4.2 Excavation

- (a) Planting pits shall be excavated as per drawing SCD-501 for shrubs, perennials, grasses and ground covers and drawing SCD-517 for trees. Hand dig pits where required to protect underground utilities.
- (b) Protect bottom of excavations against freezing.
- (c) Remove water which enters excavations prior to planting. Ensure source of water is not ground water and notify Contract Administrator.

E27.4.3 Installation

- (a) Installation shall be as per Drawing SCD-501 for shrubs, perennials, grasses and ground covers and Drawing SCD-517 for trees.
- (b) Planting shall be done during periods of suitable weather conditions and in accordance with locally accepted practice.
- (c) Trees are to be planted within forty-eight (48) hours of excavation from the nursery.
- (d) No tree pit is to be left open at the end of the Contractor's Work Day. Planting program is to be planned to ensure that all approved trees delivered to the Site at designated planting locations are installed and thoroughly watered the same day as delivery.
- (e) With balled and burlapped root balls and root balls in wire baskets, burlap shall be loosened and cut away from the top 1/3 without disturbing root ball. Wire shall be cut away and removed from the top 1/3 of the root ball. Burlap or rope shall not be pulled from under root ball. Non-biodegradable wrapping shall be removed.
- (f) After inserting the tree and tamping the root system with topsoil in layer of 150mm, water shall be poured in until the pit is thoroughly soaked. Filling of the hole shall then be completed, and the fill-in soil shall be packed firmly around the roots, leaving a concave surface for convenient watering. After filling, the planting shall be watered at frequent intervals.
- (g) 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.
- (h) All nursery stock shall be set plumb in the centre of pits and at levels as shown on the planting details after settlement has taken place.
- (i) Nursery stock shall be faced to give the best appearance or relationship to adjacent structure and to the approval of the City of his representative. Trees shall be placed equal to depth they were originally growing in nursery.

E27.4.4 Fertilizing

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

E27.4.5 Protection of Stock

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

E27.4.6 Maintenance

- (a) The Contractor shall be responsible for the maintenance of the trees for a period of **two (2) years** from the date of Substantial Performance. Any areas planted after September 15th, the maintenance period will commence on May 15th of the following year, or such date as mutually agreed upon by all parties.
- (b) The Contractor shall be responsible for the maintenance of the shrubs and perennials for a period of one (1) year from the date of Substantial Performance. Any areas planted after September 15th, the maintenance period will commence on May 15th of the following year, or such date as mutually agreed upon by all parties.
- (c) Water to ensure soil moisture conditions for optimum growth and health of plant material. Ensure watering techniques do not cause erosion.
- (d) Reform damaged watering saucers.
- (e) Remove weeds bi-monthly.
- (f) Replace or re-spread damaged, missing or disturbed mulch.
- (g) If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal regulations. Obtain product approval from Contract Administrator prior to application.
- (h) Apply fertilizer as directed by manufacturer's specifications.
- (i) Remove dead, broken or hazardous branches from plant material.
- (j) Keep trunk protection and tree supports in proper repair and adjustment.
- (k) Remove trunk protection, tree supports and level watering saucers at end of warranty period.
- (l) Remove and replace dead plants and plants not in healthy growing condition. Make replacements in same manner as specified for original plantings.
- (m) At the request of the Contract Administrator, Contractor is to submit written report to Contract Administrator identifying:
 - (i) Maintenance work carried out.
 - (ii) Development and condition of plant material.
 - (iii) Preventative or corrective measures required which are outside Contractor's responsibility.

E27.4.7 Warranty

- (a) The Contractor shall, at his/her expense, warrant the Work against any and all defects or deficiencies resulting from insect infestation, disease and mechanical damage due to improper handling, installation or maintenance, for a period of two (2) years for trees and one (1) year for shrubs, perennials grasses and ground covers from the date of the Total Performance. Nursery stock damaged by vandalism or reasons beyond the control of the Contractor shall be replaced by the client.
- (b) End-of-Warranty inspection will be conducted by the Contract Administrator.
- (c) The Contract Administrator reserves the right to request material replacement or extend the Contractor's Maintenance responsibilities for an additional one (1) year if, at the end of the Warranty Period, leaf development and growth are not sufficient to ensure future survival of the plant material.

E27.4.8 Replacements

- (a) During the Maintenance Period, the Contractor shall remove from Site any plant material that has died or failed to grow satisfactorily as determined by the Contract Administrator and replace as per Specifications within a maximum ten (10) day period from notification.
- (b) Defective plants shall be replaced within three (3) days of notification to the Contractor.
- (c) The Contractor shall extend Maintenance and Warranty on replacement tree for a period equal to the original Maintenance and Warranty Periods.

- (d) The Contractor shall continue such replacement, Maintenance and Warranty until tree is acceptable.

E27.5 Method of Measurement and Basis of Payment

E27.5.1 Method of Measurement shall be as follows:

- (a) Trees, Shrubs and Perennials Planting will be measured on a per unit basis for:
 - (i) "Supply and install trees";
 - (ii) "Supply and install shrubs", and;
 - (iii) "Supply and install ornamental grasses" on Form B: Prices.

E27.5.2 Basis of Payment shall be as follows:

- (a) Plant Material will be paid for at the Contract unit price, which shall be payment in full including all costs for the trees, shrubs, perennials, extended maintenance, and all other items incidental to the Work included in this Specification.

E28. TOPSOIL AND SODDING

E28.1 General Description

E28.1.1 This Specification shall amend and supplement CW 3510, and CW 3540 and cover the supply and installation of topsoil and sodding.

- (a) The Contractor shall install mineral sod and a minimum 75 mm compacted thickness of topsoil, as required.

E28.1.2 The Work to be completed by the Contractor under this Specification shall include the supply of all materials, and the furnishings of all superintendence, overhead, labour, equipment, tools, and all other things necessary for and incidental to the satisfactory completion of all the Work shown on the Drawings and specified herein.

E28.2 General Instructions

E28.2.1 Quality Control

- (a) Testing and Approval of Materials
 - (i) Material testing may be required as per this Specification and as directed by the Contract Administrator.

E28.3 Materials and Construction Methods

E28.3.1 Topsoil shall be as per CW 3540.

E28.3.2 Sod shall be as per CW 3510.

E28.3.3 The Contractor shall install sod in locations as shown on Drawings to cover areas indicated on Drawings.

E28.3.4 Any areas damaged beyond the areas indicated on the Drawings shall be the responsibility of the Contractor to restore through use of topsoil and sod, unless otherwise approved by the Contract Administrator.

E28.3.5 Areas to be sodded are to be laid out on Site and approved by the Contract Administrator before commencing Work. Work outside the limit approved by the Contract Administrator will not be measured and will not be paid for under this section but considered incidental to the Work.

E28.3.6 Where new sod will meet existing, employ a vertical shearing operation, such as using a sharp spade or edger, along the outside edges of the excavation to create a clean and definite line for the new sod to abut flush to.

E28.3.7 Low Spots and/or Ruts

- (a) The Contractor shall install topsoil and seed in accordance with CW 3520 in areas where ruts and low spots presently exist. This shall be identified on Site by the Contract Administrator.

E28.3.8 Restoration shall be achieved using topsoil and sod unless otherwise directed by the Contract Administrator.

E28.4 Maintenance Period

E28.4.1 Thirty (30) day maintenance period on sod will commence at Total Performance and acceptance.

E28.4.2 Termination of maintenance period

- (a) Termination of maintenance period for sod per Section 9.10 of CW 3510.

E28.5 Method of Measurement and Basis of Payment

E28.5.1 Method of Measurement shall be as follows:

- (a) Topsoil and Sodding will be measured on a per square metre basis for:
 - (i) "Supply & install topsoil & sod" on the Bid Form B: Prices.

E28.5.2 Basis of Payment shall be as follows:

- (a) Topsoil and Sodding will be paid for at the Contract Unit Prices. The amount to be paid for shall be the total number of units, as indicated on the Bid Form B: Prices. This price shall be full payment for supplying all labour, equipment and materials, and performing all operations herein described and all other items incidental to the Work and as accepted by the Contract Administrator.