



**THE CITY OF WINNIPEG**

# **TENDER**

**TENDER NO. 496-2020**

**NATURALIZATION OF STORMWATER RETENTION BASIN 5-46 IN ST BONIFACE  
INDUSTRIAL PARK**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 NATURALIZATION OF STORMWATER RETENTION BASIN 5-46 IN ST BONIFACE INDUSTRIAL PARK

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, August 19, 2020.

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

### **B3. SITE INVESTIGATION**

B3.1 Further to C3.1, the Contract Administrator or an authorized representative will be available at the Site at 9am on August 7, 2020 to provide Bidders access to the Site.

B3.2 The Bidder is advised that Attending the Site Investigation is strongly recommended

B3.3 The Bidder shall not be entitled to rely on any information or interpretation received at the Site investigation unless that information or interpretation is the Bidder's direct observation or is provided by the Contract Administrator in writing.

B3.4 Further to C3.1, the Bidder may make arrangements to view the Site unaccompanied by contacting the Contract Administrator.

### **B4. ENQUIRIES**

B4.1 All enquiries shall be directed to the Contract Administrator identified in D6.1.

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 the 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](http://www.merx.com).

B6.4 The Bidder is responsible for ensuring that he/she has 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 D6.

## **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 his/her 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 he/she wishes 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 his/her 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 B18.
- 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;
  - (c) Form G1: Bid Bond and Agreement to Bond.
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely.
- B8.4 The Bid shall be submitted electronically through MERX at [www.merx.com](http://www.merx.com).
- B8.4.1 Bids will **only** be accepted electronically through MERX.
- B8.5 Bidders are advised that inclusion of terms and conditions inconsistent with the Tender document, including the General Conditions, will be evaluated in accordance with B18.1(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 his/her own name, his/her name shall be inserted;
  - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
  - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;

- (d) if the Bidder is carrying on business under a name other than his/her 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 his/her own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
- (d) if the Bidder is carrying on business under a name other than his/her 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.

B9.5 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 Notwithstanding C12.2.3(c), prices on Form B: Prices shall not include the Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.

B10.1.2 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 D33. Any such costs shall be determined in accordance with D33.

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 B18.4 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) N/A

B11.3 Additional Material:

(a) N/A

## **B12. CONFLICT OF INTEREST AND GOOD FAITH**

B12.1 Further to C3.2, 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 its 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 its 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 its 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 its 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 its 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 its sole discretion:



- (a) disqualify a Bidder that fails to disclose a perceived, potential or actual Conflict of Interest of the Bidder or any of its 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 its 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 its 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 its 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, Materials Management 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. Bidders to submit project examples including photos of Three (3) projects completed over the last Seven (7) years; 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);

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:

- (i) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) in the form of:
  - (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
- (ii) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>).

B13.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B13.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

#### **B14. BID SECURITY**

B14.1 The Bidder shall include in its Bid Submission bid security in the form of a digital bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in Form G1: Bid Bond and Agreement to Bond, available on The City of Winnipeg, Corporate Finance, Materials Management Division website at <https://www.winnipeg.ca/MatMgt/templates/files/eBidsecurity.pdf>.

B14.2 Bid security shall be submitted in a digital format meeting the following criteria:

- (a) The version submitted by the Bidder must have valid digital signatures and seals;
- (b) The version submitted by the Bidder 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 B14.2(a).

B14.3 Bonds failing the verification process will not be considered to be valid and the bid shall be determined to be non-responsive in accordance with B18.1(a).

B14.4 Bonds passing the verification process will be treated as original and authentic.

B14.4.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.

B14.5 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly formed with the successful Bidder and the contract securities are furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.

B14.6 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Tender.

## **B15. OPENING OF BIDS AND RELEASE OF INFORMATION**

- B15.1 Bids will not be opened publicly.
- B15.2 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](http://www.merx.com).
- B15.3 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](http://www.merx.com).
- B15.4 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).
- B15.4.1 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.

## **B16. IRREVOCABLE BID**

- B16.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid/Proposal.
- B16.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly formed and the contract securities have been furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid/Proposal.

## **B17. WITHDRAWAL OF BIDS**

- B17.1 A Bidder may withdraw his/her Bid without penalty at any time prior to the Submission Deadline.

## **B18. EVALUATION OF BIDS**

- B18.1 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 there from (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.
- B18.2 Further to B18.1(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.
- B18.3 Further to B18.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is qualified.
- B18.4 Further to B18.1(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.
- B18.4.1 Bidders are advised that the calculation indicated in B18.4 will prevail over the Total Bid Price entered in MERX.

**B19. AWARD OF CONTRACT**

- B19.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B19.2 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.
- B19.2.1 Without limiting the generality of B19.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
  - (b) the prices are materially in excess of the prices received for similar work in the past;
  - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
  - (d) only one Bid is received; or
  - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B19.3 The Work of this Contract is contingent upon Council approval of sufficient funding in the Capital Budget. If the Capital Budget approved by Council does not include sufficient funding for the Work, the City will have no obligation to award a Contract.
- B19.4 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 D33 shall immediately take effect upon confirmation of such funding, regardless of when funding is confirmed.
- B19.5 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 B18.
- B19.5.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

## **PART C - GENERAL CONDITIONS**

### **C0. GENERAL CONDITIONS**

- C0.1 The *General Conditions for Construction* (Revision 2020-01-31) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at [http://www.winnipeg.ca/matmgt/gen\\_cond.stm](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. BACKGROUND AND PROJECT INFORMATION

D2.1 The project involves the naturalization of the constructed stormwater retention basin (SRB 5-46) in the St Boniface Industrial Park. The SRB is in the process of being expanded to its final intended size and is intended to accommodate runoff from the adjacent lands. The Industrial Park subdivision encompasses roughly 93.65 hectares and is located within South Transcona Drainage Area. The proposed subdivision lands and 0.012 hectares of runoff from the aqueduct bridges will flow to SRB 5-46 that will have a normal water level set at 227.4. The development will utilize land drainage sewers and surface ditches to convey water to the proposed retention pond. From there the water will outlet to the north to SRB 5-1 in the St. Boniface Industrial Park where it will be pumped to the Dugald ditch. The site is located at the Southeast corner of Mazenod Road and Black Diamond Boulevard and to the North of the CN Symington Yard in Winnipeg, Manitoba.



Figure 1. May 2018 Aerial Photo of an earlier phase of SRB 5-46 in the St Boniface Industrial Park. (pond area has been expanded significantly since this photo was taken.)

- D2.2 Existing above and below grade utilities are located in R.O.W's adjacent this site.
- (a) Includes but not limited to: overhead and underground Power, water, storm and sanitary sewer, and telecommunications. The Contractor will be required to coordinate their efforts and activities to accommodate all existing utilities.
    - (i) Bidders should not assume that the utilities are not present in working areas.
    - (ii) In all cases, a Call Before You Dig inquiry must be undertaken by the contractor prior to commencing any work.
    - (iii) All service utilities including water, sewer must be located prior to commencing any work.

### D3. FORM OF CONTRACT DOCUMENTS

- D3.1 Notwithstanding C4.1(c) and C4.4, the Contract Documents will be provided to the Contractor electronically and there will be no requirement for execution and return to the City by the Contractor. Accordingly, the provisions under C4.4(a) and C4.4(b) are no longer applicable.

### D4. SCOPE OF WORK

- D4.1 The Work to be done under the Contract shall consist of Naturalized planting of both wetland and upland areas at the SRB.
- D4.2 The major components of the Work are as follows:
- (a) Supply and install of topsoil to depths described in the drawings and specifications
  - (b) Supply and install of native seed mixes as described in the drawings and specifications.
  - (c) Supply and install of goose and wildlife deterrents.
  - (d) The controlled application of pesticides, fertilizers, and other chemical additives to facilitate the establishment of naturalized plantings.
  - (e) Removal of the existing soft berm at the top of the lake.
  - (f) Control of water levels by pumping and draw downs.
  - (g) A Five (5) year maintenance period to ensure the establishment of naturalized plantings
  - (h) An O&M manual at the conclusion of the work.
- D4.3 The following shall apply to the Work:
- (a) Universal Design Policy  
<http://clkapps.winnipeg.ca/DMIS/DocExt/ViewDoc.asp?DocumentTypeId=2&DocId=3604>

### D5. DEFINITIONS

- D5.1 When used in this Tender:
- (a) **"St Boniface Industrial Park"** means the lands bound between the Canadian National Railway Line to the south, Dugald Road to the north, Debaets Street and Plessis Road to the east and Lagimodiere Boulevard to the west. The area includes land owned by the City, Canadian National Railway and Manitoba Hydro, as well as private land owners;
  - (b) **"Stormwater Retention Basin"** or **"SRB"** means a constructed pond for the purpose of attenuating stormwater runoff, which for the Contract may mean the St Boniface Stormwater Retention Basin.
  - (c) **"Land Drainage System"** or **"LDS"** means a system of single pipes that carries rainfall and snow melt runoff from urban areas to the river system.



- (d) **“Normal Water Level”** or **“NWL”** means the most prevalent water level in a watercourse or retention basin. In this particular case the designed NWL of the SRB is 227.4 m.
- (e) **“High Water Level”** or **“HWL”** means the engineered design high water level for a watercourse or retention basin. In this particular case the designed HWL of the SRB is 229.378 m.
- (f) **“Stormwater”** means all surface water runoff from rainfall and snowmelt, predominantly in urban drainage areas. Such areas may include rural residential zones.

#### **D6. CONTRACT ADMINISTRATOR**

D6.1 The Contract Administrator is Stantec Consulting, represented by:

David Bodnarchuk, MALA, SALA, CSLA  
Senior Landscape Architect

Telephone No. 204 928 8839

Email Address David.Bodnarchuk@stantec.com

D6.2 At the pre-construction meeting, the Contract Administrator may identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

#### **D7. CONTRACTOR'S SUPERVISOR**

D7.1 At the pre-construction meeting, the Contractor shall identify his/her designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

#### **D8. NOTICES**

D8.1 Except as provided for in C22.4, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid/Proposal.

D8.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D8.3 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator identified in D6.

D8.3 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:

The City of Winnipeg  
Legal Services Department  
Attn: Director of Legal Services

Facsimile No.: 204 947-9155

#### **D9. FURNISHING OF DOCUMENTS**

D9.1 Upon award of the Contract, the Contractor will be provided with 'issued for construction' Contract Documents electronically, including Drawings in PDF format only.



## SUBMISSIONS

### D10. AUTHORITY TO CARRY ON BUSINESS

D10.1 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.

### D11. SAFE WORK PLAN

D11.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.

D11.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

D11.3 Notwithstanding B13.4 at any time during the term of the Contract, the City may, at its 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.

### D12. INSURANCE

D12.1 The Contractor shall provide and maintain the following insurance coverage:

- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with the City added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, misapplication and drift coverage with respect to chemical and herbicide application in the minimum amount of \$25,000, broad form property damage cover and products and completed operations, to remain in place at all times during the performance of the Work and throughout the 5 year maintenance and warranty period;
- (b) 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) an 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.
- (d) contractor's pollution liability insurance in the amount of at least five hundred thousand dollars (\$500,000) per occurrence and one million dollars (\$1,000,000) annual aggregate insuring against claims covering third party injury and property damage claims, and including clean-up costs and transported cargo as a result of pollution conditions arising suddenly or gradually from the Contractor or subcontractor operations and completed operations. Such policy to name the City as an additional insured and remain in place for a minimum of twelve (12) months following Total Performance.

D12.2 Deductibles shall be borne by the Contractor.

D12.3 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.

- D12.4 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, as applicable.
- D12.5 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 Contract Administrator.

### **D13. CONTRACT SECURITY**

- D13.1 The Contractor shall provide and maintain the performance bond and the labour and material payment bond until the expiration of the warranty period in the form of:
- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; and
  - (b) a labour and material payment bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H2: Labour and Material Payment Bond), in an amount equal to fifty percent (50%) of the Contract Price.
- D13.2 The Contractor shall provide the City Solicitor with the required performance and labour and material payment bonds within seven (7) Calendar Days of notification of the award of the Contract by way of an award letter and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.
- D13.3 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 D13.1(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.

### **D14. SEED AND PLANT SUPPLIERS LIST**

- D14.1 The Contractor shall provide upon award, a list of seed and plant suppliers for each seed or plant including the following information:
- (a) company name
  - (b) general source location(s)

### **D15. EROSION CONTROL PLAN**

- D15.1 The Contractor shall provide upon award, an erosion control plan that will demonstrate knowledge and understanding of erosion control practices.
- D15.2 Erosion can happen on an ongoing and unpredictable basis. Furthermore, damage caused by erosion can be either mitigated or exacerbated by both high and low quality control methods respectively, it is anticipated that the erosion control plan will include adaptive strategies to deal with yet unforeseen circumstances.
- D15.3 Plan may include but shall not be limited to strategies such as:
- (a) Cover cropping
  - (b) Erosion control blankets
  - (c) Straw stenlogs and wattles
  - (d) Silt Fence

## **D16. WATER LEVEL MANAGEMENT PLAN**

D16.1 The Contractor shall provide upon award, a plan for water level management that will demonstrate knowledge and understanding of the pumping and dewatering process for the SRB. This knowledge must include both the management of water levels to the necessary elevation for proper plant growth as well as more major pumping events that arise. Major pumping events will be required to lower SRB levels after large rain events and after the annual high water level that occurs after snow melt each spring. The water level management plan will be included as part of the 5 Year Maintenance Plan in D18 and shall be based on the information provided in Section E14 and the Water Level Management drawings provided in Appendix A.

## **D17. GOOSE AND WILDLIFE DETERRENT PLAN**

D17.1 The Contractor shall provide upon award, a goose and wildlife deterrent plan that identifies potential risks from waterfowl and rodent infestation as well as prescribing methods of countering. All control methods requiring specific licences in this jurisdiction must be identified and confirmation provided if licence is possessed on the Bidding Team.

- (a) Potential Risks
- (b) Preferred methods of countering
- (c) Possession of required licences within all jurisdictions

D17.2 Methods deemed to be inhumane will not be acceptable as valid control options.

D17.3 Methods not permitted within the Federal, Provincial and/or Municipal jurisdiction will not be acceptable as valid control options.

## **D18. 5 YEAR MAINTENANCE PLAN**

D18.1 The Contractor shall provide a projected schedule detailing the monthly activities over a Five (5) year period that outlines the general seasonal activities to be carried out as part of the ongoing maintenance. This plan is intended to demonstrate an understanding of the level and frequency of maintenance required. The plan should include responses to, but not be limited by the following issues:

- (a) Typical monitoring frequency
- (b) Seeding and over-seeding windows
- (c) Cover cropping
- (d) Water-level monitoring
- (e) Invasive plant species control
  - (i) Chemical control
  - (ii) Physical control (mowing, hand pulling, controlled burn)
  - (iii) Toxic algae control
- (f) Identifying and addressing lack of plant diversity
- (g) Addressing abnormal increases / decreases in water level
- (h) Addressing elevated salinity in water and soils

D18.2 It is anticipated that this plan be viewed as a framework and not a prescriptive schedule as it must adapt to real time and world conditions.

D18.3 Maintenance Plans are subject to review and approval by the contract administrator.

## **D19. SUBCONTRACTOR LIST**

- D19.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List).
- D19.2 Post Award changes to Form J must be submitted for evaluation at least Ten (10) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the General Conditions for the return of the executed Contract Documents, if applicable.

## **SCHEDULE OF WORK**

### **D20. COMMENCEMENT**

- D20.1 The Contractor shall not commence any Work until he/she is in receipt of an award letter from the Award Authority authorizing the commencement of the Work.
- D20.2 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 D10;
    - (ii) evidence of the workers compensation coverage specified in C6.15;
    - (iii) the Safe Work Plan specified in D11;
    - (iv) evidence of the insurance specified in D12;
    - (v) the contract security specified in D13;
    - (vi) The Seed and Plant Suppliers List as specified in D14;
    - (vii) The Erosion Control Plan as specified in D15;
    - (viii) The Water Level Management Plan as specified in D16;
    - (ix) The Goose and Wildlife Deterrent Plan as specified in D17;
    - (x) Maintenance Plan as specified in D18; and,
    - (xi) Sub Contractor List as specified in D19 and Form J.
  - (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.
- D20.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the award letter.
- D20.3 The City intends to award this Contract by September 4th, 2020.
- D20.3.1 If the actual date of award is later than the intended date, the dates specified for Critical Stages, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

### **D21. CRITICAL STAGES**

- D21.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:
- (a) Critical Stage 1 – September 25<sup>th</sup>, 2020: Drawdown of pond water level, Addition of topsoil to all required areas, Herbicide Treatment of all required areas, Seeding of permanent and/or cover crop and/or both for wetland and upland areas.
  - (b) Critical Stage 2 – June 15<sup>th</sup>, 2021: Drawdown of pond water level, Seeding / Over-seeding of permanent crop for wetland and upland areas.
  - (c) Critical Stage 3 – September 15<sup>th</sup>, 2021: Installation of all vegetated areas, satisfying acceptance criteria as described in E11 and E12 to initiate maintenance phase.

- D21.2 Seasonal seeding windows must be observed in order to ensure germination and survival through challenging seasons.
- (a) All spring seeding must be installed after May 20 and prior to June 15 of any given year in order to encourage survival through summer drought periods.
  - (b) All fall seeding must be installed after September 1 and prior to September 15 of any given year in order to encourage survival through winter freeze up.
  - (c) Dormant Seeding may occur later in the Fall but will not be considered “complete” until germination can be confirmed in the following spring.

## **D22. SUBSTANTIAL PERFORMANCE**

- D22.1 The Contractor shall achieve Substantial Performance by September 22<sup>nd</sup>, 2021.
- D22.2 Substantial Performance will be assessed on Phase 1 Works and will not consider the complete establishment of Wetland Planting and the works associated with Native Grass Planting.
- D22.3 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 re-inspected.
- D22.4 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.

## **D23. TOTAL PERFORMANCE**

- D23.1 The Contractor shall achieve Total Performance by September 19<sup>th</sup>, 2025.
- D23.2 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 re-inspected.
- D23.3 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.

## **D24. LIQUIDATED DAMAGES**

- D24.1 If the Contractor fails to achieve, Critical Stages, Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Calendar Day for each and every Calendar Day following the days fixed herein for same during which such failure continues:
- (a) Critical Stage 1 - two thousand dollars (\$2,000)
  - (b) Critical Stage 2 - two thousand dollars (\$2,000)
  - (c) Critical Stage 3 - one thousand five hundred dollars (\$1,500)
  - (d) Substantial Performance – five hundred dollars (\$500)
  - (e) Total Performance – five hundred dollars (\$500).
- D24.2 The amount specified for liquidated damages in D24.1 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.

D24.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

## **D25. COVID-19 SCHEDULE DELAYS**

D25.1 The City acknowledges that the schedule for this Contract may be impacted by the COVID-19 pandemic. Commencement and progress of the Work shall be performed by the Contractor with due consideration to the health and safety of workers and the public, directives from health authorities and various levels of government and in close consultation with the Contract Administrator.

D25.2 If the Contractor is delayed in the performance of the Work by reason of the COVID-19 pandemic, the Work schedule may be adjusted by a period of time equal to the time lost due to such delay and costs related to such delay will be determined as identified herein.

D25.3 A minimum of seven (7) Calendar Days prior to the commencement of Work, the Contractor shall declare whether COVID-19 will affect the start date. The Contractor shall provide sufficient evidence that the delay is directly related to COVID-19, including but not limited to evidence related to availability of staff, availability of Material or work by others.

D25.4 For any delay related to COVID-19 and identified after Work has commenced, the Contractor shall within seven (7) Calendar Days of becoming aware of the anticipated delay declare the additional delay and shall provide sufficient evidence as indicated in D25.3. Failure to provide this notice will result in no additional time delays being considered by the City.

D25.5 The Work schedule, including the durations identified in D21 to D23 where applicable, will be adjusted to reflect delays accepted by the Contract Administrator. No additional payment will be made for adjustment of schedules except where seasonal work, not previously identified in the Contract, is carried over to the following construction season.

D25.6 Where Work not previously identified is being carried over solely as a result of delays related to COVID-19, as confirmed by the Contract Administrator, the cost of temporary works to maintain the Work in a safe manner until Work recommences, will be considered by the Contract Administrator. Where the Work is carried over only partially due to COVID-19, a partial consideration of the cost of temporary works will be considered by the Contract Administrator.

D25.7 Any time or cost implications as a result of COVID-19 and in accordance with the above, as confirmed by the Contract Administrator, shall be documented in accordance with C7.

## **D26. SCHEDULED MAINTENANCE**

D26.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

- (a) Maintenance of Wetland Vegetation as specified in E11;
- (b) Maintenance of Native Grass Plantings as specified in E12;
- (c) All wildlife deterrent and erosion control components must be maintained on an on-going basis throughout the contract duration and may not be left in a state of disrepair for any duration. Consequential damage to soils, plantings or other elements due to disrepair of controls will be repaired or replaced at the Contractor's cost.
- (d) In addition, all ongoing maintenance during Five (5) year period as described in D18 and the submitted Maintenance Plan

D26.2 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**

### **D27. JOB MEETINGS**

- D27.1 At the discretion of the Contract Administrator, regular weekly review meetings may be held at the Site provided work performed warrants the practice. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the Contractor and if possible, one representative of the City. 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.
- D27.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

### **D28. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

- D28.1 Further to C6.26, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

### **D29. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS**

- D29.1 Further to B13.3(d), 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 its sole discretion and acting reasonably, require updated proof of compliance, as set out in B13.3(d).

### **D30. CONFINED SPACE ENTRY**

- D30.1 The Contractor's attention is drawn to the Province of Manitoba Workplace Safety and Health Act ("the Act"), and the Regulations and Guidelines there-under pertaining to Confined Entry Work, and in particular the requirements for conducting hazard/risk assessment and providing personal protective equipment (PPE).
- D30.2 The Contractor shall assist and provide Supplied Air Breathing Apparatus conforming to the requirements of the Act, Regulations and Guidelines for the use of the Contract Administrator where confined entry is required to allow for inspection of the Work.

## **MEASUREMENT AND PAYMENT**

### **D31. INVOICES**

- D31.1 In accordance with C12, all invoices are to be submitted to the Contract Administrator for review.

### **D32. PAYMENT**

- D32.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

## WARRANTY

### D33. WARRANTY

- D33.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire One (1) year thereafter unless extended pursuant to C13.2.2, in which case it shall expire when provided for thereunder.
- D33.2 Notwithstanding C13.2 or D33.1, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if:
- (a) a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.
  - (b) In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.
- D33.3 Warranty will cover any and all damage or deficiency related to poor workmanship, improper installation, incorrect material, deficient quantities or unauthorized substitutions whether by the Contractor or Sub Contractor. All costs in time, effort, equipment and materials to correct such deficiencies will be borne solely by the Contractor.

## THIRD PARTY AGREEMENTS

### D34. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

- D34.1 In the event that funding for the Work of the Contract is provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada, the following terms and conditions shall apply, as required by the applicable funding agreements.
- D34.2 Further to D33.1, in the event that the obligations in D33 apply, actual costs legitimately incurred by the Contractor as a direct result of these obligations ("Funding Costs") shall be determined by the actual cost to the Contractor and not by the valuation method(s) outlined in C7.4. In all other respects Funding Costs will be processed in accordance with Changes in Work under C7.
- D34.3 For the purposes of D33:
- (a) "**Government of Canada**" includes the authorized officials, auditors, and representatives of the Government of Canada; and
  - (b) "**Government of Manitoba**" includes the authorized officials, auditors, and representatives of the Government of Manitoba.
- D34.4 Modified Insurance Requirements
- D34.4.1 If not already required under the insurance requirements identified in D12, the Contractor will be required to provide wrap-up liability insurance in an amount of no less than two million dollars (\$2,000,000) inclusive per occurrence. Such policy will be written in the joint names of the City, Contractor, Consultants and all sub-contractors and sub-consultants and include twelve (12) months completed operations. The Government of Manitoba and its Ministers, officers, employees, and agents shall be added as additional insureds.
- D34.4.2 If not already required under the insurance requirements identified in D12, the Contractor will be required to provide builders' risk insurance (including boiler and machinery insurance, as applicable) providing all risks coverage at full replacement cost, or such lower level of insurance that the City may identify on a case-by-case basis, such as an installation floater.
- D34.4.3 The Contractor shall obtain and maintain third party liability insurance with minimum coverage of two million dollars (\$2,000,000.00) per occurrence on all licensed vehicles operated at the Site. In the event that this requirement conflicts with another licensed



vehicle insurance requirement in this Contract, then the requirement that provides the higher level of insurance shall apply.

- D34.4.4 Further to D12.4, insurers shall provide satisfactory Certificates of Insurance to the Government of Manitoba prior to commencement of Work as written evidence of the insurance required. The Certificates of Insurance must provide for a minimum of thirty (30) days' prior written notice to the Government of Manitoba in case of insurance cancellation.
- D34.4.5 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.
- D34.5 Indemnification By Contractor
- D34.5.1 In addition to the indemnity obligations outlined in C17 of the General Conditions for Construction, the Contractor agrees to indemnify and save harmless the Government of Canada and the Government of Manitoba and each of their respective Ministers, officers, servants, employees, and agents from and against all claims and demands, losses, costs, damages, actions, suit or other proceedings brought or pursued in any manner in respect of any matter caused by the Contractor or arising from this Contract or the Work, or from the goods or services provided or required to be provided by the Contractor, except those resulting from the negligence of any of the Government of Canada's or the Government of Manitoba's Ministers, officers, servants, employees, or agents, as the case may be.
- D34.6 Records Retention and Audits
- D34.6.1 The Contractor shall maintain and preserve accurate and complete records in respect of this Contract and the Work, including all accounting records, financial documents, copies of contracts with other parties and other records relating to this Contract and the Work during the term of the Contract and for at least six (6) years after Total Performance. Those records bearing original signatures or professional seals or stamps must be preserved in paper form; other records may be retained in electronic form.
- D34.6.2 In addition to the record keeping and inspection obligations outlined in C6 of the General Conditions for Construction, the Contractor shall keep available for inspection and audit at all reasonable times while this Contract is in effect and until at least six (6) years after Total Performance, all records, documents, and contracts referred to in D33.6.1 for inspection, copying and audit by the City of Winnipeg, the Government of Manitoba and/or the Government of Canada and their respective representatives and auditors, and to produce them on demand; to provide reasonable facilities for such inspections, copying and audits, to provide copies of and extracts from such records, documents, or contracts upon request by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada and their respective representatives and auditors, and to promptly provide such other information and explanations as may be reasonably requested by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada from time-to-time.
- D34.7 Other Obligations
- D34.7.1 The Contractor consents to the City providing a copy of the Contract Documents to the Government of Manitoba and/or the Government of Canada upon request from either entity.
- D34.7.2 If the Lobbyists Registration Act (Manitoba) applies to the Contractor, the Contractor represents and warrants that it has filed a return and is registered and in full compliance with the obligations of that Act, and covenants that it will continue to comply for the duration of this Contract.
- D34.7.3 The Contractor shall comply with all applicable legislation and standards, whether federal, provincial, or municipal, including (without limitation) labour, environmental, and human rights laws, in the course of providing the Work.
- D34.7.4 The Contractor shall properly account for the Work provided under this Contract and payment received in this respect, prepared in accordance with generally accepted accounting principles in effect in Canada, including those principles and standards

approved or recommended from time-to-time by the Chartered Professional Accountants of Canada or the Public Sector Accounting Board, as applicable, applied on a consistent basis.

**FORM H1: PERFORMANCE BOND**  
(See D13)

KNOW ALL MEN BY THESE PRESENTS THAT

\_\_\_\_\_ ,  
(hereinafter called the "Principal"), and

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

\_\_\_\_\_ dollars (\$\_\_\_\_\_.)

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

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

TENDER NO. 496-2020

**NATURALIZATION OF STORMWATER RETENTION BASIN 5-46 IN ST BONIFACE INDUSTRIAL PARK**

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

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

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

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

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

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

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

**SIGNED AND SEALED**  
in the presence of:

\_\_\_\_\_  
(Witness as to Principal if no seal)

\_\_\_\_\_  
(Name of Principal)

Per: \_\_\_\_\_ (Seal)

Per: \_\_\_\_\_

\_\_\_\_\_  
(Name of Surety)

By: \_\_\_\_\_ (Seal)  
(Attorney-in-Fact)

**FORM H2: LABOUR AND MATERIAL PAYMENT BOND**  
(See D13)

KNOW ALL MEN BY THESE PRESENTS THAT

\_\_\_\_\_  
his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Principal"), and

\_\_\_\_\_  
his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), for the use and benefit of claimants as herein below defined, in the amount of

\_\_\_\_\_ dollars (\$\_\_\_\_\_)

of lawful money of Canada, for the payment whereof we, the Principal and the Surety jointly and severally bind ourselves firmly by these presents.

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

TENDER NO. 496-2020

**NATURALIZATION OF STORMWATER RETENTION BASIN 5-46 IN ST BONIFACE INDUSTRIAL PARK**

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

NOW THEREFORE the condition of the above obligation is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labour, service and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void, otherwise it shall remain in full force and effect subject, however, to the following conditions:

- (a) A claimant is defined as one having a direct contract with the Principal for labour, service and material, or any of them, used or reasonably required for use in the performance of the contract, labour, service and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment (but excluding rent of equipment where the rent pursuant to an agreement is to be applied towards the purchase price thereof) directly applicable to the Contract;
- (b) The above-named Principal and Surety hereby jointly and severally agree with the Obligee that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work, labour or service was done or performed, or materials were furnished by such claimant, may sue on this bond, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon;
- (c) No suit or action shall be commenced hereunder by any claimant
  - (ii) unless claimant shall have given written notice to the Principal and the Surety above-named, within one hundred and twenty (120) days after such claimant did or performed the last of the work, labour or service, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work, labour or service was done or performed. Such notice shall be served by mailing the same by registered mail to the Principal, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the Province of Manitoba;

- (iii) after the expiration of one (1) year following the date on which Principal ceased work on said Contract; including work performed under the guarantees provided in the Contract;
  - (iv) other than in a court of competent jurisdiction in the Province of Manitoba.
- (d) The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.
- (e) The Surety shall not be liable for a greater sum than the specified penalty of this bond.

The Principal and Surety hereby agree that The Guarantors' Liability Act (Manitoba) shall apply to this Bond.

IN TESTIMONY WHEREOF, the Principal has hereunto set its hand affixed its seal, and the Surety has caused these presents to be sealed and with its corporate seal duly attested by the authorized signature of its signing authority this

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

SIGNED AND SEALED  
in the presence of:

\_\_\_\_\_  
(Witness as to Principal if no seal)

\_\_\_\_\_  
(Name of Principal)

Per: \_\_\_\_\_ (Seal)

Per: \_\_\_\_\_

\_\_\_\_\_  
(Name of Surety)

By: \_\_\_\_\_ (Seal)  
(Attorney-in-Fact)



## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

- E1.1 These Specifications shall apply to the Work.
- E1.2 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Spec/Default.stm>
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the 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>Drawing No.</u>	<u>Drawing Name/Title</u>
L-101	General Layout

#### E2. SOILS INVESTIGATION REPORT

- E2.1 Further to C3.1,
- Two (2) soil samples are to be taken on the currently sodded portions of the pond slopes. These samples will provide information on existing soil composition as well as nutrient levels. The intent is to inform the strategies for soil amendments. Samples will be provided in Appendix B as part of a later Addendum.
  - Bidders are responsible for any interpretation they place on the supplied information and are expected to undertake additional investigation of the soil at the Site as they feel necessary to complete their Bid.
  - Any additional sampling made by the Bidder shall be done in accordance with the requirements of the appropriate authority of the City of Winnipeg. Bidders shall notify the Contract Administrator prior to starting any soil boring operation.

### GENERAL REQUIREMENTS

#### E3. DANGEROUS WORK CONDITIONS

- E3.1 Further to C6.28, the Contractor shall be aware that underground chambers, manholes, and sewers are considered a confined space and shall follow the "Guidelines for Confined Entry Work" as published by the Manitoba Workplace Safety and Health Division.
- The Contractor shall be aware of the potential hazards that can be encountered in gate chambers, manholes and sewers such as explosive gases, toxic gases and oxygen deficiency.



- (b) The Contractor shall ensure any staff or sub contractor who enter a confined space will also be able to demonstrate they have taken the required confined space entry training.
- (c) The air in a confined space must be tested before entry and continuously during the time that personnel are inside the space. Equipment for continuous monitoring of gases must be explosion-proof and equipped with a visible and audible alarm. The principal tests are for oxygen deficiency, explosion range and toxic gases. Testing equipment must be calibrated in accordance with manufacturer's Specifications.
- (d) The Contractor shall ventilate all confined spaces including underground chambers, tunnels, pipes and shafts as required and approved by the Manitoba Workplace Safety and Health Act (the "Act"). If no ventilation is supplied, a Worker must wear a respirator or supplied air to enter the confined space.
- (e) Workers must wear a respirator or supplied air at all times when entering a chamber, manhole or sewer where live sewage is present.
- (f) The Contractor shall provide a photoionization detector (PID) on Site at all times to monitor potential hydrocarbon vapours in the confined spaces. The gas detector and safety equipment conforming to the Act shall be made available to the Contract Administrator for its use during inspections. In addition, the Contract Administrator shall collect discrete air samples for laboratory analysis.
- (g) The Contract Administrator may issue a Stop Work order to the Contractor if the above guidelines are not being followed. The Contractor shall not resume its operations until the Contract Administrator is satisfied the Contractor is following the appropriate procedures. The Contractor shall have no claim for extra time or costs due to the Stop Work order for not following these safety guidelines.

#### **E4. TRAFFIC MANAGEMENT**

##### **E4.1 Further to clause 3.7 of CW 1130:**

- (a) Maintain both lanes of traffic open on Mazenod Road, Black Diamond Boulevard and all other nearby residential streets during the Works.
- (b) Staging of hauling trucks must be managed so as not to block traffic flow on roadways as well as into and out of access roads to properties. If required, a staging area for trucks can be confirmed with the City prior to commencement of the Work.
- (c) No stockpiling of material will be permitted on the public roadway.
- (d) Intersecting street and private approach access shall be maintained at all times.
- (e) Should the Contractor be unable to maintain pedestrian or vehicular access to a residence or business, they shall review the planned disruption with the business or residence and the Contract Administrator, and take reasonable measures to minimize the impact. The Contractor shall provide a minimum of 24 hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.
- (f) Ambulance and emergency vehicle access on Mazenod Road, Black Diamond Boulevard and all other nearby residential streets must be maintained at all times.

##### **E4.2 Truck Haul Routes**

- (a) The Contractor shall only use truck haul routes as per the City of Winnipeg Traffic By-Law No. 1573/77, the published map "Truck Routes in the City of Winnipeg (2017 or latest available edition) and as approved by the City. The Contractor shall only use the following routes unless otherwise approved by the City:
  - (i) Mazenod Road (via Dugald Road)

##### **E4.3 Pumping and Dewatering**

- (a) Access to manholes and catch basins located within Street Right of Way may require temporary lane closure. The contractor must take all safety precautions required by all jurisdictions and acquire all required permits and permissions prior to carrying out the work.

- (b) Hoses that are laid on streets or access roads during pumping and dewatering must be protected from traffic at all times.

#### E4.4 Payment

- (a) No separate pay item exists for this work. All work associated with Traffic Management is considered incidental to the Contract.

### E5. TRUCK WEIGHT LIMITS

- E5.1 Spring weight restrictions may apply to streets within the area of Work. The City shall not pay for any portion of material which results in the vehicle exceeding the maximum gross vehicle weight allowed under The City of Winnipeg Traffic By-Law, unless such vehicle is operating under special permit.

### E6. SITE RESTORATION

#### E6.1 Description

- (a) This Specification shall cover all aspects of the Site Development and Restoration Work, including but not limited to the restoration of the Site after completion of works by stage.

#### E6.2 Materials & Equipment

- (a) All equipment, implements, tools and facilities used shall be of a size and type as required to complete the Work in a reasonable time, approved by the Contract Administrator. The Contractor shall keep all equipment in good Working order, and have sufficient standby equipment available at all times, as required.

#### E6.3 Construction Methods

- (a) Site Access

- (i) The Site access shall be developed from the northwest corner of the Site via Mazenod Road.
- (ii) An additional access for lighter equipment may be gained from the abandoned Right of Way on the west side of the site. However, this access may not be suitable for heavy construction vehicles, or hauling of any excavated materials.
- (iii) Under no circumstances shall excavated material or any additional materials be placed as fill at the crest of the bank.
- (iv) The Contractor is responsible for obtaining and paying for all required permits and permissions that are necessary for Site access.
- (v) The locations of the Contractor's construction access roads, where necessary, shall be restored to the same condition or better than it was prior to the initiation of any Work.
- (vi) The Contractor is responsible for maintaining the cleanliness of all roadways that their hauling trucks and equipment will be using during the course of the Work,
- (vii) Construction materials, soils and debris shall be prevented from accumulating on local roadways, public and private lands, when tracked out of the Site (specifically, but not limited to trucks hauling excavated materials).
- (viii) Due to the high number of trucks expected to be entering and leaving the Site daily the Contractor must ensure that public roads in the vicinity of the Site are kept clean from tracked out sediment.
  - (i) The Contractor shall provide regular road cleaning services (e.g. grader, streetsweeper) to the satisfaction of the Contract Administrator. If the Contractor does not adequately maintain road cleanliness the City will clean the affected roadways and cost borne by the City will be withheld from progress payments.

#### E6.3.1 Flow Diversion

- (a) Flows such as snowmelt, rainfall, a watermain break, or any other flow traveling back up through the downstream LDS pipes shall be diverted during construction.
- (b) Flow control measures shall include but not be limited to diversions, flumes and bypass pumping as described in Section D16.

E6.3.2 Flow Control

- (a) The contractor shall control water within the project Site as described in Section D16 (Water Level Management Plan)

E6.3.3 Safety/Construction Fence and Gates

- (a) The Contractor shall erect and maintain for the duration of the project a safety fence, acceptable to the Contract Administrator, to restrict access to the Site. The fencing shall secure the Site with appropriate gates or openings that are closed at the end of each Work day. Upon completion of the Work, the fence shall be removed and disposed of off-Site.

E6.3.4 Environmental Regulations

- (a) The Contractor shall adhere to all relevant Federal, Provincial and Municipal environmental regulations and the requirements listed in E15.
- (b) The Contractor shall supply, in writing, prior to commencement of Work on-Site, a detailed plan for sediment and erosion control on this project.
- (c) The Contractor shall ensure that a sufficient supply of suitable spill kits is on-Site to cleanup minor spills, should they occur. The Contractor shall supply the name, address and phone number of a local supplier, where additional kits are available on short notice.

E6.3.5 General Site Cleanup and Restoration

- (a) All areas of the construction Site shall be restored to a condition at least equivalent to its original condition prior to completion of Work. This may include, but is not necessarily limited to the Contractor's lay down area, the removal of the existing soft berm and temporary drain pipe, the removal of all goose and wildlife deterrent systems, and removal of all temporary fencing and roadways.

E6.4 Method of Measurement and Payment

E6.4.1 Site Development and Restoration

- (a) The Site development and restoration will be measured and paid for at the Contract Lump Sum Price for "Site Restoration", which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the Work included in this Specification;
- (b) 40% of the Site Restoration unit price will be paid on completion of the removal of all wildlife deterrence mechanisms and other temporary installations.
- (c) 60% of the Site Restoration unit price will be paid subsequent to the completion of the restoration, removal of soft berms and piping as well as clean-up of the Site.

**E7. SILT FENCE**

E7.1 Description

E7.1.1 This Specification covers the erection of temporary silt fencing, which shall be installed and maintained to control runoff at all locations where runoff may either leave the Site and/or enter the City's LDS piping via the SRB and to control deposition of runoff material from impeding the growth of the wetland planting. The silt fencing will provide an additional benefit of creating a barrier for geese and pedestrians from disturbing the naturalized planting as during the establishment period.

E7.1.2 The scope of Work included in this Specification is as follows:

- (a) Supply and Install temporary silt fencing at locations as indicated by the Contract Administrator, in accordance with the drawing details provided, immediately upon completion of the grouted riprap placement and prior to undertaking any other activities on the Site where silt fencing is required.
- (b) Maintain the silt fencing in serviceable condition throughout the entire duration of activities at the Site where silt fencing is required, including final restoration and cleanup of the construction Site and the establishment period of the naturalized vegetation.
- (c) Upon establishment of the upland planting (or earlier, if directed by the Contract Administrator, remove the silt fencing and restore the area where the fencing was installed, without further disturbing the area and without releasing any deleterious substances into the newly excavated SRB.

**E7.2 Materials**

**E7.2.1 Fence Posts**

- (a) Fence posts shall be 100 mm diameter untreated wood posts or 50 mm diameter steel.

**E7.2.2 Filter Fabric**

- (a) Filter Fabric Shall be a woven geotextile material specifically designed for a silt fence applications, meeting the following minimum requirements:

<b>Property</b>	<b>Test Method</b>	<b>Value</b>
Grab Tensile Strength	ASTM D 4632	0.55 kN
Grab Tensile Elongation	ASTM D 4632	15%
Mullen Burst	ASTM D 4786	2060 kPa
Puncture	ASTM D 4833	0.285 kN
Trapezoid Tear	ASTM D 4533	0.285 kN
UV Resistance	ASTM D 435	5 80% @ 500 hrs
Apparent Opening Size (AOS)	ASTM D 4751	0.60 mm
Flow Rate	ASTM D 4491	4.405 l/min/m <sup>2</sup>

- (b) Acceptable Product: "Amoco 2130 Silt Fence Fabric" or approved equal in accordance with B7

**E7.2.3 Wire Mesh**

- (a) Wire mesh shall be galvanized or plain metal with wire gauge = 3.0 mm, wire spacing at 150 mm on centre.

**E7.2.4 Fencing Material Fasteners**

- (a) Staples or wire ties of sufficient strength and spacing to withstand 500 N (100 lbf) pull test at any point on the wire mesh.

**E7.3 Construction Methods**

**E7.3.1** Ensure that no deleterious substances are discharged into the adjacent watercourse at any time during construction activities.

**E7.3.2 Silt Fence Installation**

- (a) Excavate 150 x 150 mm anchor trench along alignment of silt fence as indicated.
- (b) Install fence posts as indicated. Ensure that fence posts are firmly driven into undisturbed soil, or are completely and firmly backfilled if installed via auger methods.

Attach wire mesh as support backing for silt fence filter fabric with fasteners as specified in E9.2.4. Attach silt fence filter fabric on top of wire mesh in similar fashion. Overlap any fence seams (wire mesh or filter fabric) by 450 mm minimum. Ensure that wire mesh and filter fabric are installed on the upslope side of the post and are fully laid in anchor trench as shown.

- (c) Install and compact impermeable excavated materials into anchor trench and slope as indicated. Compact to 95% of maximum dry density (ASTM D-698).

#### E7.3.3 Silt Fence Maintenance

- (a) Inspect silt fence daily, prior to starting any other construction activities. If fence posts are found loose or not upright, repair in accordance with installation procedure as specified in E9.3.2. If silt fence is found to be loose or torn, repair or replace as necessary to comply with E9.3.2.
- (b) If silt deposition at the fence is 300 mm or more in depth, carefully remove and dispose of silt off-Site without disturbing silt fence.

#### E7.3.4 Silt Fence Removal

- (a) The silt fence shall remain in place until new vegetation growth has established on the bank, as determined by the Contract Administrator.
- (b) Upon authorization of the Contract Administrator, remove all fence posts, wire mesh, fabric, and fasteners from Site.
- (c) Restore areas disturbed in accordance with E8 without releasing any deleterious substances to the adjacent watercourse.

#### E7.4 Measurement and Payment

E7.4.1 The supply, placement, and removal of silt fence shall be measured on a length basis and paid for at the Contract Unit Price per lineal metre for "Silt Fence". The length to be paid for shall be the total number of metres supplied and placed in accordance with this Specification, accepted and measured by the Contract Administrator. Payment of silt fence shall be in accordance with the following payment schedule:

- (a) Sixty percent (60%) of the Contract Unit Price per lineal metre for "Silt Fence" shall be paid following supply and installation;
- (b) Forty percent (40%) of the Contract Unit Price per lineal metre for "Silt Fence" shall be paid following final removal.

E7.4.2 Removal of accumulated sediment from the silt fence is considered incidental to the Work and no separate measurement or payment will be made.

### **E8. EROSION CONTROL**

#### E8.1 Description

E8.1.1 This Specification shall cover the supply and placement of erosion control blankets, Stenlogs and/or straw wattles to provide temporary erosion control in localized areas (as directed by the Contract Administrator).

#### E8.2 Materials

##### E8.2.1 Blankets

- (a) The blanket material shall consist of wheat or barley straw, coconut fibres, or other plants approved by the Contract Administrator. Acceptable products will be S32 Double Net Straw Blankets with photodegradable netting or approved alternative in accordance with B7. The blanket material shall be air dried, reasonably light in colour, and shall not be musty, mouldy, caked or otherwise of low quality. The blanket material shall be free of coarse (chaff) material and free of noxious weeds and/or seeds to prevent the introduction of weeds into previously seeded and planted areas.

#### E8.2.2 Stenlogs and Straw Wattles

- (a) The stenlogs shall consist of 100% straw, compacted into an elongated tube shape and wrapped in UV stabilized degradable tubular polypropylene plastic netting. Acceptable products shall be ECB Verdyl Erosion Stenlog, 6" diameter, or approved alternative in accordance with B7.

#### E8.3 Construction Methods

##### E8.3.1 General

- (a) The Contractor shall supply and place erosion control materials immediately after final grading is completed and seed installed.
- (b) Additional erosion control materials shall be supplied and placed in problematic areas until vegetation is sufficiently established.
- (c) Covered areas shall be inspected periodically and after runoff producing storm events. Damaged areas shall be repaired immediately as determined by the Contract Administrator. Areas requiring recovering will be completed by the Contractor as soon as possible.

##### E8.3.2 Installation

- (a) The erosion control blankets shall be installed as per the manufacturer's recommended procedures. Blankets shall be rolled out where required on smoothed out soils starting from the top of the slope. The Contractor is to start by stapling the blanket at the top of the slope in a 150 mm deep by 150mm wide trench. The trench will be backfilled and compacted so that water will flow evenly onto the blanket.
- (b) The Contractor shall roll the blankets down the slope insuring soil blanket contact. Edges are to be overlapped a minimum 50 mm with parallel blankets.
- (c) If more than one blanket is needed for the run down the slope then adjoining ends must be overlapped a minimum 100 mm shingle style. Overlapped areas are to be stapled with a staggered pattern of staples.
- (d) Stenlogs are to be installed along the contours or at the base of a slope to help reduce soil erosion and retain sediment. All installed stenlogs must allow runoff/water to penetrate through the fiber while reducing sediment migration.

##### E8.3.3 Removal

- (a) Immediately prior to placement of topsoil and sod and/or topsoil and seed all erosion control blankets shall be removed and disposed of off-Site.

#### E8.4 Measurement and Payment

E8.4.1 Supply, placement and removal of erosion control blankets will be measured on a lump sum basis and paid for at the Contract Unit Price for "Erosion Control".

- (a) 60% Payment shall be released following primary installation after seeding.
- (b) 40% payment shall be released after second growing season
- (c) After the second growing season, subsequent applications of erosion control should be unnecessary due to established vegetation.

### **E9. EXCAVATION AND DISPOSAL, SUBGRADE DE-COMPACTION, AND TOPSOIL PLACEMENT**

#### E9.1 General

E9.1.1 This Specification covers the Works relating to excavation and disposal, subgrade compaction, compaction and backfill.

E9.1.2 This Specification shall be used in conjunction with the relevant sections of CW 2030

- E9.1.3 The majority of the vegetation (trees and shrubs) were removed from site as part of a separate contract. Though unlikely, it is possible that stumps, boulders or other large debris could remain under existing soils and could be discovered during scarification. Any boulder, tree stump and root systems remaining within the excavation of the SRB are to be removed and are considered incidental to the work.
- E9.2 Related Specifications
- (a) Environmental protection, Section E15
  - (b) Allowance for Soil Testing Section E10
- E9.3 Materials
- E9.3.1 Definitions
- (a) Common excavation: excavation of materials of whatever nature, including topsoil, clay, dense tills, asphalt, gravel, hardpan, tree stumps, abandoned railway ties & rails, and frozen materials.
  - (b) Contaminated soils: soils with levels of contaminants in excess of the CCME Industrial standards.
- E9.4 Execution
- E9.4.1 Excavation and Disposal
- (a) Significant excavation is not anticipated to be required as part of the Naturalization.
- E9.4.2 Subgrade De-compaction
- (a) The contractor shall provide de-compaction of the subgrade as described below, for subgrade below all planted areas or as directed by the Contract Administrator.
  - (b) Remove stones and boulders exceeding 150 mm maximum dimension from the subgrade before or during de-compaction.
  - (c) Scarify (fracture) by disk or equivalent method the subgrade soils to a minimum depth of 300 mm but not more than 450 mm, prior to topsoil placement to the satisfaction of the Contract Administrator.
- E9.4.3 Sodded Areas
- (a) The West side of the pond was sodded in 2018. This sod still exists on site as well as 100mm of topsoil.
  - (b) Areas that are sodded and designated for Upland Planting will require a thorough herbicide treatment(s), fracturing and an additional 50mm of topsoil prior to seeding.
- E9.4.4 Placing Soil
- (a) Place topsoils as directed in E11 and E12 for each planting type.
- E9.4.5 Finishing and Tolerance
- (a) Blade finished surfaces in cut and fill areas free from ruts, depressions, rocks in excess of 50 mm and debris.
  - (b) Roll finished surfaces to a tight dense condition.
  - (c) Finished graded area to be within 30 mm of design elevations, but not uniformly high or low, unless otherwise indicated in the Specifications.
  - (d) Surfaces to be free from depressions exceeding 30 mm in 5 m.
  - (e) Finished surface to provide positive drainage, free from ponding water, except for the bottom of the SRB.
- E9.4.6 Weed Control
- (a) Properly timed weed control shall be undertaken in the seeded areas to facilitate grass seedling establishment. Two (2) to three (3) herbicide applications per year will

be undertaken during pre-plant Site preparation and during the post native grass planting maintenance and establishment periods.

- (b) Products, timing and rates will be supplied by a certified herbicide applicator with experience in weed control in native revegetation projects.
- (c) Weed control prescriptions shall be reviewed by the Contract Administrator prior to any weed control work.
- (d) Herbicide application shall be undertaken in accordance with GR 130.8.2.3.10 Environmental Protection Specifications.
- (e) Herbicide is to be applied in accordance with the manufacturer's instructions and the Manitoba Agriculture Guide to Crop Protection and Herbicide Recommendations for Landscape Applicators, latest editions.
- (f) Glyphosate cannot be used at any time following Native Seeding.
- (g) The Contractor shall not spray broad-leaf herbicide in areas seeded to native grass cover prior to native seedlings reaching the 2-3 leaf stage. Determination of 2-3 leaf stage shall be by the Contract Administrator. No herbicide application shall be undertaken without consent of the Contract Administrator.
- (h) Weed control techniques must eliminate spray drift to protect adjacent non-target plantings, flowers in flower patches, adjacent habitat and adjacent property.
- (i) The Contractor shall undertake all reasonable and permissible means of restricting seed-rain of invasive or otherwise problematic weed species from areas immediately adjacent to the Site for the duration of the Work.

#### E9.5 Measurement and Payment

##### E9.5.1 Subgrade De-Compaction

- (a) Subgrade De-Compaction will be considered incidental to the "Site Preparation" process.

##### E9.5.2 Pre-Plant Herbicide

- (a) Initial Pre-plant herbicide treatments are considered incidental to the "Site Preparation" process.
- (b) Subsequent herbicide treatments during and after establishment will be considered incidental to plant maintenance.

##### E9.5.3 Placing Soil

- (a) Fill material will be measured on a volume basis and paid for at the Contract Unit Price per cubic metre for "Topsoil Supply and Placement". Loading, hauling, placing and compaction of suitable Site material will be included in the payment for the placing suitable fill. The volume to be paid for will be the total number of cubic metres that are placed in accordance with the Drawings and Specifications, accepted and measured by the Contract Administrator.
- (b) No measurement or payment will be made for materials rejected by the Contract Administrator.

### **E10. ALLOWANCE FOR SOIL TESTING**

#### E10.1 General

##### E10.1.1 Description

- (a) This specification covers the environmental sampling and testing of soils from within the Site (if required).

#### E10.2 Methods



- E10.2.1 Soils should be tested after placement and annually in order to monitor levels of major nutrients including N,P,K, secondary nutrients and micro-elements, pH, salinity as well as the presence of contaminants.
- (a) Soil amendment strategies are to be developed by the Contractor based on test results.
- E10.2.2 If soil within the SRB are suspected of being contaminated, then the excavated soils will be subject to environmental testing at the discretion of the Contract Administrator.
- (a) Suspect soils will be stockpiled at an approved location within the site.
- (b) Work operations may continue in non-impacted areas.
- E10.2.3 The Contractor shall ensure that all soil material is sampled and sent for testing at an accredited laboratory. Sampling shall be undertaken in the presence of the Contract Administrator.
- E10.2.4 Environmental laboratory testing results are to be provided to the Contract Administrator for review.
- E10.3 Measurement and Payment
- E10.3.1 Environmental Sampling and Testing will be paid for under the Contract Price for "Allowance for Soil Sampling and Testing". Costs will be based on actual invoiced costs for sampling and testing with allowable mark-ups in accordance with the General Conditions.

## **E11. WETLAND VEGETATION**

### **E11.1 E31.1 General**

- E11.1.1 The work to be done by the Contractor under this Specification shall include the supply, installation, labour, equipment, tools and all other things necessary for and incidental to the satisfactory performance and completion of all work shown in the drawings and as hereinafter specified, including, but not necessarily confined to the following;
- (a) Harvesting and Processing seed material
- (b) Seeding
- (c) Establishment of wetland vegetation
- (d) Weed control
- (e) Erosion control
- (f) Wildlife deterrence
- E11.1.2 The Contractor shall ensure coordination with other Site works including upland native grass plantings.
- E11.1.3 Submittals
- (a) Detailed work schedule
- (b) Seed report for proposed seed including germination rates
- (c) Weed control plan
- (d) Herbicide applicator's license
- (e) Erosion control monitoring reports (monthly)
- (f) Report on plant material condition (monthly during wetland vegetation establishment period)

### **E11.2 Materials**

#### **E11.2.1 Wetland Plant seed**

- (a) Revegetation shall be by seed, procured or harvested and processed.

- (i) 75% Broad-leaved Cattail (*Typha latifolia*)
- (ii) 25% of the following species:
  - ◆ Bulrush (*Schoenoplectus* spp.)
  - ◆ Rush (*Juncus* spp.)
  - ◆ Sedge (*Carex* spp.)
- (b) Care must be taken not to introduce seed of Narrowleaf Cattail (*Typha angustifolia* L.) which is considered invasive to Manitoba.
- (c) Seed rates to ensure minimum 85% coverage by the end of the Maintenance Period.

#### E11.2.2 Topsoil

- (a) Topsoil shall consist of 60% organic matter, 30% Topsoil (clay textured), and 10% sand. Soil shall be free of roots and stones over 30 mm in diameter or subsoil clay lumps over 30 mm in diameter.
- (b) Salinity ratings shall be less than 1.0 mmhos/cm. The pH range shall be between 6.5 and 7.5.
- (c) Topsoil shall be free of residual chemical properties originating from past herbicide applications or other forms of contamination which can potentially negatively affect the growth and successful establishment of planted material as specified.
- (d) Topsoil shall not contain the roots of Quack grass (*Agropyron repens*), Smooth Brome (*Bromus inermis*), Canada thistle (*Cirsium arvense*), Sweet clover (*Melilotus officinale*, *M. alba*), Dandelion (*Taraxascum officinale*) roots or other noxious weeds.

#### E11.2.3 Erosion Control

- (a) As per the erosion control plan.
- (b) Responsive installation.

#### E11.2.4 Goose and wildlife Deterrence

- (a) Deterrent fencing shall be 13 mm diameter Rebar posts 1800 mm long, 6 m O.C., Stucco Wire Panel, 1.2 m high, includes baling wire knitted through top of panel, or approved equal to be approved at the discretion of the Contract Administrator.

### E11.3 Construction Methods

#### E11.3.1 Seeding

- (a) Broadcast seeding shall be at locations shown on drawing.

#### E11.3.2 Replacement of Wetland Plant Material

- (a) Replace wetland plant material which does not meet specified requirements during planting and establishment period.
- (b) Replacement wetland plant material shall be sourced and installed in accordance with the drawings and Specifications within one (1) year of notification of deficiency.

#### E11.3.3 Erosion Control

- (a) Contractor shall inspect all planted areas regularly and evaluate potential erosion risks.
- (b) Measures required to prevent, mitigate or repair erosion, shall be prescribed by the Contract Administrator.

#### E11.3.4 Wildlife Deterrence

- (a) Wildlife deterrent fencing shall be installed after planting and as soon as soil conditions allow. Fencing will be need to be re-moved and re-installed seasonally.
- (b) Goose nests shall have their eggs removed immediately upon discovery. A permit will be required to undertake this work.

- (c) Temporary fencing for Canada Geese around the inner and outer edges of establishing wetland vegetation will not limit muskrat damage. Trapping may need to be considered as a control measure. Municipal and provincial legislation around trapping must be adhered to prior to applying any control measures. Burrows can be sealed with bentonite clay material. Methods for controlling rodents such as Muskrat shall be applied.

#### E11.3.5 Water Manipulation

- (a) Wetland plant establishment shall be facilitated through appropriately timed water level manipulation (flood-up and draw down).
- (b) Wetland water levels to be manipulated as per D16 and E14.
- (c) Water levels to be monitored and manipulated by the Contractor after rainfall, as needed, to ensure desired levels as indicated by the Contract Administrator.

#### E11.3.6 Weed Control

- (a) Hand pulling or removal by mechanical means is preferred in wetland areas.
- (b) Herbicide is to be used only when deemed necessary and shall applied in accordance with the manufacturer's instructions and the Manitoba Agriculture Guide to Crop Protection and Herbicide Recommendations for Landscape Applicators, latest editions.
- (c) Properly timed and executed weed control measures shall be undertaken by the Contractor to control and eliminate noxious weeds including, but not limited to, Canada thistle (*Cirsium arvense*), Dandelion (*Taraxacum officinale*), Purple loosestrife (*Lythrum salicaria*), Reed-canary grass (*Phalaris arundinacea*) and Smooth brome (*Bromus inermis*);
  - (i) Noxious weeds are not permitted to establish on the wetland areas or on soil stockpiles.
  - (ii) Anticipated weed control measures shall be detailed in a Weed Control Plan. Any deviation from the Weed Control Plan shall be proposed to, and approved by the Contract Administrator with sufficient lead time to ensure weed control treatment efficacy is not impacted.

#### E11.4 Acceptance

##### E11.4.1 At least 70% of the planted wetland shall exhibit robust shoot emergence of wetland plant material by the end of the first full growing season

- (a) Any contiguous patch of the wetland area greater than three (3) m in either dimension that shows no signs of desirable growth at the end of the first full growing season shall receive remedial work, as directed and accepted by the Contract Administrator.
- (b) Remedial work will include replacement of wetland plant material, as described in E31.3.9, or re-enforcement seeding using appropriate wetland plant seed.
- (c) All remedial work to be approved by the Contract Administrator at the end of the second growing season.

#### E11.5 Maintenance

##### E11.5.1 After acceptance, all vegetation must be monitored and maintained for the remainder of the Five (5) year period. Typical maintenance activities to ensure healthy and vigorous growth shall include but not be limited to the following and shall adhere to the Maintenance Plan in D18.

- (a) Seeding and over-seeding
- (b) Water-level monitoring
- (c) Invasive plant species control
  - (i) Chemical control
  - (ii) Physical control (mowing, hand pulling, controlled burn)

- (iii) Toxic algae control
  - (d) Wildlife control
  - (e) Erosion control
- E11.5.2 Additional maintenance measures may be required that exceed the Maintenance Plan (D18) which the Contractor shall carry out at the direction of the Contract Administrator. The Contract Administrator reserves the right to extend the maintenance period until final acceptance criteria are met.
- E11.5.3 Any deficient, damaged or vandalized areas may have to be reseeded or repaired within three working days after receiving notification from the Contract Administrator and the area so reseeded, shall be further maintained by and at the expense of the Contractor in accordance with Maintenance of Seeded Area herein.
- E11.5.4 Final approval and acceptance is to be granted by the City of Winnipeg and the Contract Administrator.
- E11.6 Termination of Maintenance Period
  - E11.6.1 The Contract Administrator will terminate the maintenance period after the following criteria has been met:
    - (a) The seed sown meets the requirements specified in herein.
    - (b) The vegetated area is showing healthy and vigorous growth and has at least 85% coverage.
    - (c) The vegetated area is free of bare and dead spots exceeding 3m in any dimension.
    - (d) The vegetated area is free of invasive plant species.
    - (e) Final approval has been granted by the City of Winnipeg.
- E11.7 Measurement and Payment
  - E11.7.1 Supply, installation and establishment of wetland plant material will be measured on a linear metre basis. The area to be paid for shall be the total number of linear meters installed in accordance with this Specification and accepted by Contract Administrator.
  - E11.7.2 Quantities of units are based on the proposed design drawings as supplied by the Contract Administrator.
  - E11.7.3 Payment
    - (a) The Wetland Material Planting will be paid for at the lump sum unit price for item "Wetland Planting" on Form B: Prices and measured as specified herein. The prices shall be payment of 80% for the work upon completion of all soils placement and plant installation and accepted by Contract Administrator as meeting acceptance criteria as described in E11.4.
    - (b) The remaining 20% of the value of the contract shall be paid to The Contractor in equal 5% (overall) increments at the end of each growing season, (years 2 to 5 of the maintenance period) and as accepted by contract Administrator.

## **E12. NATIVE GRASS PLANTING**

### **E12.1 General**

- E12.1.1 The work to be done by the Contractor under this Specification shall include the supply, installation, labour, equipment, tools and all other things necessary for and incidental to the satisfactory performance and completion of all work shown in the drawings and as hereinafter specified, including, but not necessarily confined to the following:
  - (a) Site preparation (Growth Media Preparation)
  - (b) Weed control

- (c) Erosion Control
- (d) Supply and install topsoil
- (e) Ensure minimum 95% coverage in Mix A and B, and 85% in Mix C areas by the end of the Maintenance Period.
  - (i) Seed mixes will consist of pre-mixed, grass based native seed mixes with forb seed component. Three (3) mixes will be seeded;
    - ◆ Upland Planting - Medium height mix (Mix A)  
Initial seeding rate - Sow at 25 kgs/ ha
    - ◆ Upland Planting - Tall height mix (Mix B)  
Initial seeding rate - 12 kgs/ ha
    - ◆ Wet Meadow / Low Prairie mix (Mix C)  
Initial seeding rate - Sow at 25 kgs/ ha
- (f) Supply and install rooted specimens in Flower Patches

E12.1.2 The Contractor shall ensure coordination with other Site works including wetland vegetation planting.

E12.1.3 The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification. All materials shall be subject to inspection and testing by the Contract Administrator. There shall be no charge to the City for any materials taken by the Contract Administrator for inspection and testing purposes.

E12.1.4 Submittals

- (a) Detailed work schedule
- (b) Integrated weed and erosion control plan
- (c) Native seeding establishment plan
- (d) Herbicide applicator's license
- (e) Monthly written report of plant material condition during establishment period
- (f) Soil analysis report from accredited soil testing lab.

E12.2 Equipment

E12.2.1 The Contractor shall use a Truax Seed Drill, or approved equivalent in accordance with B7, for activities related to this Specification.

E12.3 Materials

E12.3.1 Seed Mixes

- (a) Upland Planting - Medium height mix (Mix A) Shall consist of minimum 15 of the following 23 species:
  - (i) Alkali grass Puccinellia spp.
  - (ii) American Vetch Vicia americana
  - (iii) Black-eyed Susan Rudbeckia hirta
  - (iv) Blue grama grass Bouteloua gracilis
  - (v) Buffalo grass Buchloe dactyloides
  - (vi) Canada wild rye Elymus canadensis
  - (vii) Dotted Blazing star Liatris punctata
  - (viii) Fringed brome grass Bromus ciliatus
  - (ix) Indian grass Sorghastrum nutans
  - (x) June grass Koeleria gracilis
  - (xi) Little bluestem Schizachyrium scoparium
  - (xii) Perennial rye grass Lolium perenne
  - (xiii) Prairie Crocus Anemone patens

(xiv)	Purple Coneflower	<i>Echinacea angustifolia</i>
(xv)	Purple Prairie clover	<i>Dalea purpurea</i>
(xvi)	Rough fescue	<i>Festuca hallii</i>
(xvii)	Salt grass	<i>Distichlis stricta</i>
(xviii)	Side-oats grama	<i>Bouteloua curtipendula</i>
(xix)	Sweetgrass	<i>Hierochloa odorata</i>
(xx)	Switch grass	<i>Panicum virgatum</i>
(xxi)	Tufted hair grass	<i>Deschampsia cespitosa</i>
(xxii)	Western wheatgrass	<i>Pascopyrum smithii</i>
(xxiii)	Whorled Milkweed	<i>Asclepias verticillata</i>

(b) Upland Planting - Tall height mix (Mix B) Shall consist of minimum 15 of the following 20 species:

(i)	Awned wheatgrass	<i>Agropyron subsecundum</i>
(ii)	Big bluestem	<i>Andropogon gerardii</i>
(iii)	Canada wild rye	<i>Elymus canadensis</i>
(iv)	Culvers Root	<i>Veronicastrum virginicum</i>
(v)	Green Needlegrass	<i>Stipa viridula</i>
(vi)	Indian grass	<i>Sorghastrum nutans</i>
(vii)	Little Bluestem	<i>Schizachyrium scoparium</i>
(viii)	Meadow Blazing Star	<i>Liatris ligulistylis</i>
(ix)	Narrow leaved Sunflower	<i>Helianthus decapetalus</i>
(x)	Northern wheatgrass	<i>Agropyron dasystachyum</i>
(xi)	Perennial rye grass	<i>Lolium perenne</i>
(xii)	Porcupine Needlegrass	<i>Stipa spartea</i>
(xiii)	Prairie Dropseed	<i>Sporobolus heterolepsis</i>
(xiv)	Slender wheatgrass	<i>Elymus trachycaulus</i>
(xv)	Stiff Goldenrod	<i>Solidago rigida</i>
(xvi)	Switch grass	<i>Panicum virgatum</i>
(xvii)	Western wheatgrass	<i>Pascopyrum smithii</i>
(xviii)	White Prairie clover	<i>Dalea candida</i>
(xix)	Wild Bergamot	<i>Monarda fistulosa</i>
(xx)	Yarrow	<i>Achillea millefolium</i>

(c) Wet Meadow / Low Prairie mix (Mix C) Shall consist of minimum 12 of the following 17 species:

(i)	Cordgrass	<i>Spartina pectinata</i>
(ii)	Hair grass	<i>Agrostis scabra</i>
(iii)	Manna grass	<i>Glyceria striata</i>
(iv)	Marsh-hedge nettle	<i>Stachys palustris</i>
(v)	Marsh reed grass	<i>Calamagrostis inexpansa.</i>
(vi)	Northern reed grass	<i>Calamagrostis canadensis</i>
(vii)	Rush	<i>Juncus spp.</i>
(viii)	Sedge	<i>Carex spp.</i>
(ix)	Slender wheatgrass	<i>Elymus trachycaulus</i>
(x)	Sloughgrass	<i>Beckmannia syzigachne</i>
(xi)	Spike rush	<i>Eleocharis sp.</i>
(xii)	Swamp Milkweed	<i>Asclepias incarnata</i>
(xiii)	Switch grass	<i>Panicum virgatum</i>
(xiv)	Ticklegrass	<i>Agrostis scabra</i>
(xv)	Tufted hairgrass	<i>Deschampsia cespitosa</i>
(xvi)	Wild mint	<i>Mentha spp.</i>
(xvii)	White top	<i>Scholocloa festucacea</i>

#### E12.3.2 Topsoil

- (a) Topsoil shall consist of 60% organic matter, 30% Topsoil (clay textured), and 10% sand. Soil shall be free of roots and stones over 30 mm in diameter or subsoil clay lumps over 30 mm in diameter.
- (b) Salinity ratings shall be less than 1.0 mmhos/cm. The pH range shall be between 6.5 and 7.5.
- (c) Topsoil shall be free of residual chemical properties originating from past herbicide applications or other forms of contamination which can potentially negatively affect the growth and successful establishment of planted material as specified.
- (d) Topsoil shall not contain the roots of Quack grass (*Agropyron repens*), Smooth Brome (*Bromus inermus*), Canada thistle (*Circium arvense*), Sweet clover (*Melilotus officinale*, *M. alba*), Dandelion (*Taraxascum officinale*) roots or other noxious weeds.

#### E12.3.3 Topsoil Testing

- (a) The Contractor shall inform the Contract Administrator of the proposed topsoil source. The Contract Administrator reserves the right to reject topsoil not conforming to the requirements of this Specification.
- (b) The Contractor will submit soil samples for review and approval by the Contract Administrator. Topsoil will be subject to tests for nitrate, phosphate, potassium, sulphate, pH, E.C. (salinity) and volume of organic matter by a testing laboratory designated by the Contract Administrator.

#### E12.3.4 Erosion Control

- (a) Cover crop of Common oats, Barley or Winter Wheat
- (b) Erosion control blankets as per E8.
- (c) Stenlogs and straw wattles as per E8

#### E12.3.5 Seed

- (a) Seed mixes will consist of pre-mixed, grass-based native seed mixes with a forb seed component. The contractor is to provide the seed mix information as well as seeding rates for each mix.
- (b) Seed mixes will be developed on a pure live seed per m<sup>2</sup> basis.
- (c) The Contractor will order seed mixes, properly store and deliver them to the work site when ready for seeding. The seed will be packaged in 25 kilogram labelled bags. The Contractor must supply all equipment and labour required to transport seed.
- (d) Storage for seed shall be in cool dry location. The Contractor shall provide secure, weather and rodent proof storage for the seed prior to planting.
- (e) Any seed lost or damaged while stored shall be replaced by The Contractor and will be considered incidental to the contract.

#### E12.4 Method of Construction

##### E12.4.1 Growth Media Preparation

##### E12.4.2 Subsoil

- (a) The subsoil shall be graded in accordance with Specifications, the Construction Drawings.
- (b) The subsoil grade on seeded areas shall be disked (fractured) as per section E9.4.2

##### E12.4.3 Topsoil

- (a) Prior to any work, the Contract Administration shall conduct an on-site field assessment to determine adherence to grade and identify any areas that are not at required elevations or contain excessive debris.
- (b) Topsoil shall be placed in a manner as to avoid compaction of disked subsoils.

- (c) Topsoil shall be incorporated evenly into disked subsoils to a maximum depth of 100 to 150 mm.
  - (i) The Contractor shall take care not to bury topsoil when incorporating into disked subsoils
- (d) Spring topsoil placement, incorporation and seedbed grooming/conditioning must be completed no later than June 8. Topsoil placement after June 8 shall be at the direction of the Contract Administrator.
- (e) The Contract Administrator shall review and approve all growth media preparation activities prior to seeding.

#### E12.4.4 Fine Grading

- (a) Topsoil and Finish Grading shall be as shown on the drawings.
- (b) The Contractor shall fine grade Topsoil, to eliminate rough spots, ruts or other similar low areas to ensure positive drainage and to facilitate consistent seed placement and seed rate during planting.
- (c) The incorporated Topsoil shall be rolled or harrow/packed in order to consolidate soil material and leave the surface smooth, firm and level to the satisfaction of the Contract Administrator.
- (d) All seeded areas are to be free of woody debris and rocks. The Contract Administrator shall advise the contractor of any debris clean-up requirements.

#### E12.4.5 Erosion Control

- (a) Cover crops shall be seeded for erosion control purposes during the pre-native planting preparation period. Cover crop shall be employed at all times prior to permanent cover planting to minimize the exposure of soils to erosion.
  - (i) Common oats to be seeded immediately after topsoil placement and seedbed preparation and no later than June 8.
- (b) Cover crop will be seeded at a rate of 45kg/ha or at the direction of the Contract Administrator.
- (c) Erosion control crop planted in spring or summer, must be managed to prevent excessive built-up of plant stock (trash) which could interfere with proper native seeding depth and seed-soil-contact.
- (d) The Contractor shall evaluate all seeded areas for potential soil erosion risks during the life of The Project and take appropriate mitigation measures.
- (e) Rutting or damage caused during seeding operation shall be repaired at the Contractor's cost to the satisfaction of the Contract Administrator.
- (f) Any erosion control blanketing shall be biodegradable, shall be permeable to cover crop and native grass/forb seedlings and shall be approved at the discretion of the Contract Administrator (as per E8).

#### E12.4.6 Weed Control

- (a) Properly timed weed control shall be undertaken in the seeded areas to facilitate grass seedling establishment. Two (2) to three (3) herbicide applications per year will be undertaken during pre-plant Site preparation and during the post native grass planting maintenance and establishment periods.
- (b) Products, timing and rates will be supplied by a certified herbicide applicator with experience in weed control in native revegetation projects.
- (c) Weed control prescriptions shall be reviewed by the Contract Administrator prior to any weed control work.
- (d) Herbicide application shall be undertaken in accordance with GR 130.8.2.3.10 Environmental Protection Specifications.



- (e) Herbicide is to be applied in accordance with the manufacturer's instructions and the Manitoba Agriculture Guide to Crop Protection and Herbicide Recommendations for Landscape Applicators, latest editions.
- (f) Glyphosate cannot be used at any time following Native Seeding.
- (g) The Contractor shall not spray broad-leaf herbicide in areas seeded to native grass cover prior to native seedlings reaching the 2-3 leaf stage. Determination of 2-3 leaf stage shall be by the Contract Administrator. No herbicide application shall be undertaken without consent of the Contract Administrator.
- (h) Weed control techniques must eliminate spray drift to protect adjacent non-target plantings, flowers in flower patches, adjacent habitat and adjacent property.
- (i) The Contractor shall undertake all reasonable and permissible means of restricting seed-rain of invasive or otherwise problematic weed species from areas immediately adjacent to the Site for the duration of the Work.

#### E12.4.7

##### Seeding

- (a) Prior to seeding permanent native grass cover, the seeding area shall be free of 1<sup>st</sup> degree and 2<sup>nd</sup> degree noxious perennial grassy and broadleaf weeds listed in the Manitoba Noxious Weed Act C.C.S.M. c. N110.
- (b) Prior to seeding permanent native grass cover seeding areas shall be free of weedy perennial species that may not be listed as noxious weeds but which will become invasive within the planting over time, including but not limited to, Quackgrass, Smooth brome, Sweet clover and Dandelion.
- (c) Annual weeds including green and yellow foxtail (*Setaria* spp.), Barnyard grass (*Echinochloa crus galli*) if present to be controlled to within levels that will not compromise short term or long term native grass stand establishment. Post native grass planting control of these species, and species with similar tendencies in native plantings, shall be at the direction of the Contract Administrator.
- (d) Seeding to be undertaken between May 20 and June 15 unless otherwise specified by The Contract Administrator.
- (e) Following seeding, The Contractor shall return to the Contract Administrator the shipment tags from each bag of seed planted on-Site.
- (f) Drill seeding shall be undertaken using a Truax, two or three box native seed drill with seed box agitators, on-row packers and depth bands, capable of uniformly applying the specified mixes to a depth of 5.0 - 12.0 mm (0.25" – 0.5").
- (g) A 1.8 – 2.4 m (6.0 – 8.0') three point hitch-mounted Truax native seed drill is preferred, or alternatively a low lbs/ft<sup>2</sup> configuration capable of delivering native seed at a consistently at the proper rate and depth as per seeding Specifications.
- (h) The Truax seed drill must be equipped with trash plows to prevent light debris from interfering with seed placement during native drill seeding.
- (i) The Contract Administrator shall supply all seeding rates for Native Seed Mixes and shall be provided on a bulk seeds per 1/10 square meter (approximately / ft<sup>2</sup>) basis.
- (j) Any supplementary broad-cast seeding shall be at the direction of The Contract Administrator. Broadcast seeding requires the same seedbed conditions outlined in Site preparation.
- (k) Broadcast seeding is preceded by one (1) or more harrow passes and is then followed by a second harrow pass once seed has been spread at a broadcast rate specified by The Contract Administrator.
- (l) An industrial fertilizer applicator may be used for broadcast seeding to facilitate consistency of seed flow. A manual broadcast seeder may be used for small areas requiring manual seeding.
- (m) Contour seeding must be employed to discourage down slope erosion on sloped areas.

- (n) While on-Site, seed requiring short-term storage shall be stored by the contractor and in communication with the contract administrator, in a secure, dry and rodent-free environment either at or below ambient outdoor temperatures.

#### E12.5 Acceptance

- E12.5.1 A minimum of 6 - 8 grass seedlings with permanent roots (4-leaf stage) have been documented per 0.1 square meter, by the end of the first growing season.

#### E12.6 Maintenance

- E12.6.1 After acceptance, all vegetation must be monitored and maintained for the remainder of the Five (5) year period. Typical maintenance activities to ensure healthy and vigorous growth shall include but not be limited to the following and shall adhere to the Maintenance Plan in D18.

- (a) Seeding and over-seeding
- (b) Fertilization
- (c) Invasive plant species control
  - (i) Chemical control
  - (ii) Physical control (mowing, hand pulling, controlled burn)
  - (iii) Toxic algae control
- (d) Wildlife control
- (e) Erosion control

- E12.6.2 Additional maintenance measures may be required that exceed the Maintenance Plan (D18) which the Contractor shall carry out at the direction of the Contract Administrator. The Contract Administrator reserves the right to extend the maintenance period until final acceptance criteria are met.

- E12.6.3 Any deficient, damaged or vandalized areas may have to be reseeded or repaired within three working days after receiving notification from the Contract Administrator and the area so reseeded, shall be further maintained by and at the expense of the Contractor in accordance with Maintenance of Seeded Area herein.

- E12.6.4 Final approval and acceptance is to be granted by the City of Winnipeg and the Contract Administrator.

#### E12.7 Termination of Maintenance Period

- E12.7.1 The Contract Administrator will terminate the maintenance period after the following criteria has been met:
  - (a) The seed sown meets the requirements specified in herein.
  - (b) The vegetated area is showing healthy and vigorous growth and has coverage as noted in 12.1.1 (e).
  - (c) The vegetated area is free of bare and dead spots and invasive plant species and broadleaf weeds, not more than ten (10) weeds per fifty (50) square metres.
  - (d) The vegetated area has a healthy floristic diversity, with at least 75% of the seed varieties present in that mature stand.
  - (e) Final approval has been granted by the City of Winnipeg.

#### E12.8 Measurement and Payment

- E12.8.1 Supply, placement and establishment of upland native grass will be measured on an area basis. The area to be paid for shall be the total number of square meters installed in accordance with this Specification and accepted by Contract Administrator.

- E12.8.2 Quantities of units are based on the proposed design drawings as supplied by the Contract Administrator.

### E12.8.3 Payment

- (a) Placement of seed, seed bed preparation and related Work specified herein will be measured on an Lump Sum basis and paid for at the Contract Unit Price for "Native Grass Planting" The payment shall be for all works and ancillary work in accordance with this Specification, accepted and measured by the Contract Administrator.  
Payment schedule as follows:
- (i) Upon installation of all top soils and cover crop as approved and accepted by the Contract Administrator: 40%
  - (ii) End of first year native seeding crop as approved and accepted by the Contract Administrator: 40%
  - (iii) The remaining 20% of the value of the contract shall be paid to The Contractor in equal 5% (overall) increments at the end of each growing season, (years 2 to 5 of the maintenance period) and as accepted by contract Administrator.

## E13. FINAL HANDOVER

E13.1 Operation and Management Document - As part of the handover process, the Contractor shall produce a summary document that details the establishment of naturalized plantings and provides advice and instruction for ongoing maintenance by The City of Winnipeg. The document shall include but not be limited to the following information:

- (a) Table of Contents
- (b) Introductory information
  - (i) Pond Location specifics
  - (ii) Stakeholders
  - (iii) Consultants
  - (iv) Photographs
- (c) Project Goals and Deliverables
- (d) Vegetation Monitoring Summary 2020 - 2025
  - (i) Monitoring shall be an ongoing process during the establishment and maintenance periods with reports produced after year 1, 3 and 5 (end of maintenance period / handover).
  - (ii) Both Upland and Wetland vegetation to be monitored using a recognized transect method
    - ◆ Plant diversity – List species present
    - ◆ Plant coverage (%)
    - ◆ New plant species to colonize via biotic or abiotic vectors
    - ◆ Invasive species observed
- (e) Summary of Water Level Control 2020 – 2025
  - (i) A complete history of filling, drawdowns and pumping activity including accurate volumes and dates
- (f) Summary of Wildlife Control Methods and Implementations 2020 - 2025
- (g) Summary of Soil and Water testing 2020 - 2025
- (h) Ongoing Maintenance Recommendations
- (i) Tables, Figures and Photos

## E14. WATER LEVEL MANAGEMENT

### E14.1 General

E14.1.1 This specification covers all works required to achieve the necessary water levels that the Contractor requires to properly complete the naturalization works. This includes all

pumping, monitoring of water elevation, installation, maintenance and removal of inflatable sewer pipe plugs, and traffic management related to pumping.

## E14.2 Background

### E14.2.1 Water Level Management Drawings

- (a) An additional set of drawings accompanies this Tender in Appendix A. The purpose of these drawings is to provide a representation of the SRB system and depict the pumping process required. The drawings are only an aid and the Contractor is required to provide their proposed pumping process in the water level management plan as per D16.
- (b) The drawings include:
  - (i) General Layout of SRB Network (Total of 1 page)
  - (ii) Record Drawings of Mazenod Road underground servicing from Bid Opportunity 1134-2015 "St. Boniface Industrial Park Phase 2 Stage 1" installed in 2016. (Total of 3 pages).

### E14.2.2 Normal Water Level

- (a) The normal water level (NWL) of SRB 5-46 is 227.400 and is regulated by the overflow/high-point manhole located on Mazenod Road. The overflow/high-point manhole is located at STA 12+30 on Mazenod Road and is shown in Appendix A. There is no weir mechanism involved in the SRB system. When the water level exceeds 227.400, the water will overflow and drain north towards SRB 5-1 located east of Mazenod Road between Camiel Sys Street and De Baets Street.

### E14.2.3 SRB 5-1

- (a) SRB 5-1 is an existing stormwater retention basin located east of Mazenod Road, between Camiel Sys Street and De Baets Street.
- (b) As mentioned in the previous section, SRB 5-1 is interconnected with SRB 5-46. Since there is no weir mechanism between these two ponds, the water level of SRB 5-46 will rise in conjunction with the level of SRB 5-1.
- (c) The water level of SRB 5-1 is only lowered via pumping to the Dugald Ditch, which is conducted by the City of Winnipeg 's Water and Waste Department.
- (d) Every spring, the water level in SRB 5-1 (and thus SRB 5-46) rises to levels above the NWL of 227.400 and remains at this level until the City of Winnipeg considers the Dugald Ditch dry enough to pump into. The pond level is typically lowered to NWL before May 1<sup>st</sup>, but in years that are very wet or have late snowmelt, it is possible that the level can remain high past May 1<sup>st</sup>.

## E14.3 Construction Methods

### E14.3.1 Background

- (a) The work to be done by the Contractor under this Specification shall include the supply, installation, labour, equipment, tools and all other things necessary for and incidental to the satisfactory management of the water level in SRB 5-46 as required to achieve all plant growth necessary to properly execute the Tender. This water level management by the Contractor must be upheld until the Tender has reached Total Performance.

### E14.3.2 Inflatable Sewer Pipe Plug

- (a) To properly lower the water level in SRB 5-46 the Contractor will first be required to install and maintain an inflatable sewer pipe plug in the LDS manhole located at STA 10+28 on Mazenod Road (see Water Level Management drawings in Appendix A). The plug shall be installed in the southeast 1200 mm pipe that drains towards SRB-46.
- (b) The Contractor is responsible for the maintenance of the plug to ensure that it does not blow out. This includes monitoring of minimum air pressure within the plug.

(c) Contractor to adhere to the Confined Space Entry requirements as per D29.

**E14.3.3 Pumping**

(a) Once the plug is safely installed in the 1200 mm pipe, the Contractor can then pump upstream of the manhole into the catch basin approximately 40 metres north of the manhole. The approximate distance from the NWL of the SRB to this catch basin is 120 metres.

(b) All pumping equipment must be protected from traffic as per section E4.3 of this specification.

**E14.3.4 Filling of SRB 5-46 with Water**

(a) The Contractor is forbidden from using the City of Winnipeg water supply to facilitate filling of SRB 5-46.

**E14.4 Materials**

**E14.4.1** All pumping equipment, inflatable sewer pipe plugs, and any materials used for traffic management must be approved by the Contract Administrator prior to pumping.

**E14.5 Measurement and Payment**

**E14.5.1** All works necessary to properly carry out the Contractor's water level management plan shall be measured on a lump sum basis and paid for at the Contract Unit Price for "Water Level Management". This price shall include all labour and material costs in connection with pumping, water level monitoring, inflatable sewer pipe plugs (installation, maintenance and removal), and traffic management to protect pumping operations. These costs must cover water level management for all the time until Total Performance is reached.

**E15. PROVISIONAL ITEMS**

**E15.1** If required, Provisional Items shall be listed on Form B: Prices are part of the Contract.

**E15.2** The Contractor shall not perform Work included in the Provisional Items without prior authorization from the Contract Administrator. All Work included in the Provisional Items will be carried out within the construction areas shown on the Drawings.

**E15.3** Notwithstanding GC:7, the City reserves the right to diminish all or any portion of the items of work listed in the Provisional Items and no claim shall be made for damages on the grounds of loss of anticipated profit or for any other reason.

**E16. ENVIRONMENTAL PROTECTION PLAN**

**E16.1** The Contractor shall plan and implement the Work of this Contract strictly in accordance with the requirements of the Environmental Protection Plan as herein specified.

**E16.2** The Contractor is advised that at least the following Acts, Regulations, and By-laws apply to the Work and are available for viewing at the office of the Contract Administrator.

(a) Federal

- (i) Canadian Environmental Assessment Act (CEAA) c.37
- (ii) Transportation of Dangerous Goods Act and Regulations c.34
- (iii) The Fisheries Act
- (iv) Navigable Waters Protection Act

(b) Provincial

- (i) The Dangerous Goods Handling and Transportation Act D12
- (ii) The Endangered Species Act E111
- (iii) The Environment Act c.E125
- (iv) The Fire Prevention Act F80

- (v) The Manitoba Heritage Resources Act H39.1
  - (vi) The Manitoba Noxious Weeds Act N110
  - (vii) The Manitoba Nuisance Act N120
  - (viii) The Public Health Act c.P210
  - (ix) The Workplace Safety and Health Act W210
  - (x) And current applicable associated regulations.
  - (xi) (Note: Provincial regulations updated as of September 1999)
- (c) Municipal
- (i) The City of Winnipeg By-law No. 1/2008
  - (ii) And any other applicable Acts, Regulations, and By-Laws.

E16.3 The Contractor is advised that the following environmental protection measures apply to the Work.

(a) Materials Handling and Storage

- (i) Construction materials and debris shall be prevented from entering the Red River via the 1200 mm diameter land drainage system pipe on the downstream side of the proposed inlet chamber. In the event that materials and/or debris inadvertently enter the watercourse via the 1200 mm diameter land drainage pipe, the Contractor shall be required to remove the material and restore the watercourse to its original condition.
- (ii) Construction materials and debris shall also be prevented from accumulating on local roadways and sidewalks when tracked out of the Site by trucks hauling excavated materials.
- (iii) It is highly recommended that the Contractor provide on-Site measures to mitigate the tracking of sediment off-Site and therefore reduce the amount of street cleaning required. These measures may take the form of a truck wheel wash (automated or manually operated) or other measures as approved by the Contract Administrator.

(b) Fuel Handling and Storage

- (i) The Contractor shall obtain all necessary permits from Manitoba Conservation for the handling and storage of fuel products and shall provide copies to the Contract Administrator.
- (ii) All fuel handling and storage facilities shall comply with The Dangerous Goods and Transportation Act Storage and Handling of Petroleum Products Regulation and any local land use permits.
- (iii) Fuels, lubricants, and other potentially hazardous materials as defined in The Dangerous Goods and Transportation Act shall be stored and handled within the approved storage areas.
- (iv) The Contractor shall ensure that all fuel storage containers are inspected daily for leaks and spillage.
- (v) Products transferred from the fuel storage area(s) to specific Work Sites shall not exceed the daily usage requirement.
- (vi) When servicing requires the drainage or pumping of fuels, lubricating oils or other fluids from equipment, a groundsheet of suitable material (such as HDPE) and size shall be spread on the ground to catch the fluid in the event of a leak or spill.
- (vii) Refuelling of mobile equipment and vehicles shall take place at least 100 metres from a watercourse or the upstream end of the 1200 mm pipe downstream of the proposed inlet chamber.
- (viii) The area around storage sites and fuel lines shall be distinctly marked and kept clear of snow and debris to allow for routine inspection and leak detection.
- (ix) A sufficient supply of materials, such as absorbent material and plastic oil booms, to clean up minor spills shall be stored nearby on-Site. The Contractor shall ensure that additional material can be made available on short notice.

- (c) Waste Handling and Disposal
  - (i) The construction area shall be kept clean and orderly at all times during and at completion of construction.
  - (ii) At no time during construction shall personal or construction waste be permitted to accumulate for more than one day at any location on the construction Site, other than at a dedicated storage area as may be approved by the Contract Administrator.
  - (iii) All resulting debris shall be deposited at a Waste Disposal Ground operating under the authority of Manitoba Regulation #150/91. Exceptions are liquid industrial and hazardous wastes which may require special disposal methods (see SC:21.4 D).
  - (iv) Indiscriminate dumping, littering, or abandonment shall not take place.
  - (v) No on-Site burning of waste is permitted.
  - (vi) Waste storage areas shall not be located so as to block natural drainage.
  - (vii) Run-off from a waste storage area shall not be allowed to cause siltation of a watercourse.
  - (viii) Waste storage areas shall be left in a neat and finished appearance and/or restored to their original condition to the satisfaction of the Contract Administrator.
  - (ix) Equipment shall not be cleaned near watercourses; contaminated water from onshore cleaning operations shall not be permitted to enter watercourses.
- (d) Dangerous Goods/Hazardous Waste Handling and Disposal
  - (i) Dangerous goods/hazardous wastes are identified by, and shall be handled according to, The Dangerous Goods Handling and Transportation Act and Regulations.
  - (ii) The Contractor shall be familiar with The Dangerous Goods Handling and Transportation Act and Regulations.
  - (iii) The Contractor shall have on-Site staff that is trained and certified in the handling of the dangerous/hazardous goods, when said dangerous/hazardous goods are being utilized on-Site for the performance of the Work.
  - (iv) Different waste streams shall not be mixed.
  - (v) Disposal of dangerous goods/hazardous wastes shall be at approved hazardous waste facilities.
  - (vi) Liquid hydrocarbons shall not be stored or disposed of in earthen pits on-Site.
  - (vii) Used oils shall be stored in appropriate drums, or tankage, until shipment to waste oil recycling centres, incinerators, or secure disposal facilities approved for such wastes.
  - (viii) Used oil filters shall be drained, placed in suitable storage containers, and buried or incinerated at approved hazardous waste treatment and disposal facilities.
  - (ix) Dangerous goods/hazardous waste storage areas shall be located at least 100 metres away from the high water line and be dyked.
  - (x) Dangerous goods/hazardous waste storage areas shall not be located so as to block natural drainage.
  - (xi) Run-off from a dangerous goods/hazardous waste storage area shall not be allowed to cause siltation of a watercourse.
  - (xii) Dangerous goods/hazardous waste storage areas shall be left in a neat and finished appearance and/or restored to their original condition to the satisfaction of the Contract Administrator.
- (e) Emergency Response
  - (i) The Contractor shall ensure that due care and caution is taken to prevent spills.
  - (ii) The Contractor shall report all major spills of petroleum products or other hazardous substances with significant impact on the environment and threat to human health and safety (as defined in Table 1 below) to Manitoba Conservation, immediately after occurrence of the environmental accident, by calling the 24-hour emergency phone number (204) 945-4888. The Contract Administrator shall also be notified.

- (iii) The Contractor shall designate a qualified supervisor as the on-Site emergency response coordinator for the project. The emergency response coordinator shall have the authority to redirect manpower in order to respond in the event of a spill.
- (iv) The following actions shall be taken by the person in charge of the spilled material or the first person(s) arriving at the scene of a hazardous material accident or the on-Site emergency response coordinator:
  - (i) Notify emergency-response coordinator of the accident:
    - ◆ identify exact location and time of accident
    - ◆ indicate injuries, if any
    - ◆ request assistance as required by magnitude of accident (Manitoba Conservation 24-hour Spill Response Line (204) 945-4888, Police, Fire Department, Ambulance, company backup)
  - (ii) Attend to public safety:
    - ◆ stop traffic, roadblock/cordon off the immediate danger area
    - ◆ eliminate ignition sources
    - ◆ initiate evacuation procedures if necessary
  - (iii) Assess situation and gather information on the status of the situation, noting:
    - ◆ personnel on-Site
    - ◆ cause and effect of spill
    - ◆ estimated extent of damage
    - ◆ amount and type of material involved
    - ◆ proximity to waterways, sewers, and manholes
  - (iv) If safe to do so, try to stop the dispersion or flow of spill material:
    - ◆ approach from upwind
    - ◆ stop or reduce leak if safe to do so
    - ◆ dike spill material with dry, inert sorbet material or dry clay soil or sand
    - ◆ prevent spill material from entering waterways and utilities by diking
    - ◆ prevent spill material from entering manholes and other openings by covering with rubber spill mats or diking. Resume any effective action to contain, clean up, or stop the flow of the spilled product.
  - (v) The emergency response coordinator shall ensure that all environmental accidents involving contaminants shall be documented and reported to Manitoba Conservation according to The Dangerous Goods Handling and Transportation Act Environmental Accident Report Regulation 439/87.
  - (vi) When dangerous goods are used on-Site, materials for containment and cleanup of spill material (e.g. absorbent materials, plastic oil booms, and oversized recovery drums) shall be available on-Site.
  - (vii) Minor spills of such substances that may be contained on land with no significant impact on the environment may be responded to with in-house resources without formal notification to Manitoba Environment.
  - (viii) City emergency response, 9-1-1, shall be used if other means are not available.
  - (ix) The on-Site emergency response coordinator shall contact The Canadian Coast Guard, Selkirk (204) 785-6030, if the spill material reaches and is on or in the Red or Assiniboine Rivers.

**Table 1 Spills that must be reported to the Manitoba Conservation as Environmental Accidents**

CLASSIFICATION	HAZARD	REPORTABLE QUANTITY/LEVEL
1	Explosives	All
2.1	Compressed Gas (flammable)	100 L*
2.2	Compressed Gas	100 L*



2.3	Compressed Gas (toxic)	All
2.4	Compressed Gas (corrosive)	All
3	Flammable Liquids	100 L
4	Flammable Solids	1 kg
5.1 PG** I & II	Oxidizer	1 kg or 1 L
5.1 PG III	Oxidizer	50 kg or 50 L
5.2	Organic Peroxide	1 kg or 1 L
6.1 PG I	Acute Toxic	1 kg or 1 L
6.1 PG II & III	Acute Toxic	5 kg or 5 L
6.2	Infectious	All
7	Radioactive	Any discharge or radiation level exceeding 10 mSv/h at the package surface and 200 uSv/h at 1 m from the package surface
8	Corrosive	5 kg or 5 L
9.1	Miscellaneous	50 kg (except PCB Mixtures)
9.1	PCB Mixtures	500 g
9.2	Aquatic Toxic	1 kg or 1 L
9.3	Wastes (Chronic Toxic)	5 kg or 5 L

\*Container capacity (refers to container water capacity)

\*\*PG = Packing Group(s)

(f) Vegetation

- (i) Vegetation shall not be distributed without written permission of the Contract Administrator. The Contractor shall protect plants or trees which may be at risk of accidental damage. Such measures may include protective fencing or signage and shall be approved in advance by the Contractor Administrator.
  - (ii) Trees damaged during construction activities shall be examined by bonded tree care professionals; viable trees damaged during construction activities shall be pruned according to good practise by bonded tree care professionals. Damaged trees which are not viable shall be replaced at the expense of the Contractor.
  - (iii) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400 millimetre wood planks, or suitably protected as approved by the Contract Administrator.
  - (iv) Herbicides and pesticides shall not be used adjacent to any surface watercourses.
  - (v) All landowners adjacent to the area of application of herbicides or pesticides shall be notified prior to the Work.
  - (vi) Trees or shrubs shall not be felled into watercourses.
- (g) Areas where vegetation is removed during clearing, construction, and decommissioning activities, shall be revegetated as soon as possible in accordance with the landscaping plans forming part of the contract, or as directed by the Contract Administrator.

E16.4 Method of Measurement and Payment

- (a) Adherence to the laws that govern the requirements for environmental protection is considered incidental to the contract.